ARUP

Donegal County Council

# Donegal County Council - SWSIAR

## Strategic Water Status Impact Assessment Report – Draft County Donegal Development Plan 2024 to 2030

Reference: Donegal County Council – SWIAR

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# List of acronyms

| ACA | Architectural Conservation Areas |
|---|---|
| AER | Annual Environmental Report |
| AFAc | Areas for Further Action |
| AP | Area Plan |
| AWB | Artificial Water Body |
| CEMP | Construction Environmental Management Plan |
| CFRAM | Catchment-Based Flood Risk Assessment and Management |
| CSO | Combined Sewer Overflow |
| DCC | Donegal County Council |
| DHPLG | Department of Housing, Planning and Local Government |
| DWPA | Drinking Water Protected Area |
| FRMP | Flood risk management plan |
| FRS | Flood relief scheme |
| GSI | Geological Survey Ireland |
| HMWB | Heavily Modified Water Body |
| ICLRD | International Centre for Local and Regional Development |
| IRT | Inishowen Rivers Trust |
| LAWPRO | Local Authority Water Programme |
| NHA | National heritage Area |
| OPW | Office of Public Works |
| pNHA | Proposed National Heritage Area |
| RBMP | River Basin Management Plan |
| RoI | Republic of Ireland |
| RSES | Regional Spatial and Economic Strategy |
| SAC | Special Area of Conservation |
| SCS | Settlement Consolidation Sites |
| SPA | Special Protection Area |
| SRR | Strategic Residential Reserve |
| SWSIA | Strategic Water Status Impact Assessment |
| SWO | Storm Water Overflow |
| UWWT | Urban Wastewater Treatment Plant |
| TEN_T | Trans-European Transport Network |
| TRAC | Transitional and Coastal waterbodies |
| WFD | Water Framework Directive |
| WSIA | Water Status Impact Assessment |
| WWTP | Waste Water Treatment Plant |

# 1. Introduction

Donegal County Council (DCC) has formally commenced the preparation of the County Donegal Development Plan, 2024-2030. The new Development Plan will set planning policy at a County-wide level but will also include new Area Plans (AP) for the towns of Buncrana, Bundoran and Ballybofey/Stranorlar.

DCC requested Arup to complete a Strategic Water Status Impact Assessment (SWSIA) for the Draft County Donegal Development Plan and the LAPs for Bundoran, Buncrana and Ballybofey/Stranorlar.

The current guidance on SWSIAs prepared by RPS (2021) provides a methodology to determine the Water Status Impact Assessment (WSIA). The WSIA provides information to determine whether actions (including but not limited to zoning of land for development or approving applications for proposed development) will cause deterioration of the status of any water body or jeopardise it attaining or maintaining at least good status in compliance with the objectives of the WFD.

WSIAs for County and APs focus on the sub-catchments level and in some instances the water body where identified by the EPA. These results will consider and help inform new zoning proposals / development, help identify where they are not appropriate, and ensure that planning policy supports the long-term well-being of water bodies.

# 2. Methodology

The recommended approach to integrating Water Framework Directive (WFD) into forward planning is set out below:

- Stage 1: SWSIA Screening –to determine whether a plan requires further consideration. This process is outlined in Figure 1.
- Stage 2: SWSIA Scoping – to identify potential risks associated with a plan on the relevant water bodies and their water quality elements. The scoping checklist is shown for information below.
- Stage 3: SWSIA – to undertake a detailed assessment of water bodies, their quality elements and activities carried forward from the scoping stage.
- Stage 4: Justification or Exemption – if required. Rigorous examination of the appropriateness, or otherwise which for various reasons, are being considered despite failure to comply with the objectives of the WFD, as laid down in Art. 4(7).
- Stage 5: SWSIA Reporting – a stand-alone report summarising the findings of the assessment and how the assessment has influenced the plan.

The information collected should facilitate:

1. The identification and description of those aspects of the project that may affect a water body;
2. A description of the characteristics of relevant water body, including their WFD objectives and an understanding of factors which either maintain or threaten those objectives;
3. An assessment of the impact of the proposed development on the relevant objectives; and
4. To conclude whether the proposed development will: a. Cause or contribute to deterioration of status; or b. Jeopardise the water body achieving good status.

The SWSIA Screening process is summarised in Figure 2-1.

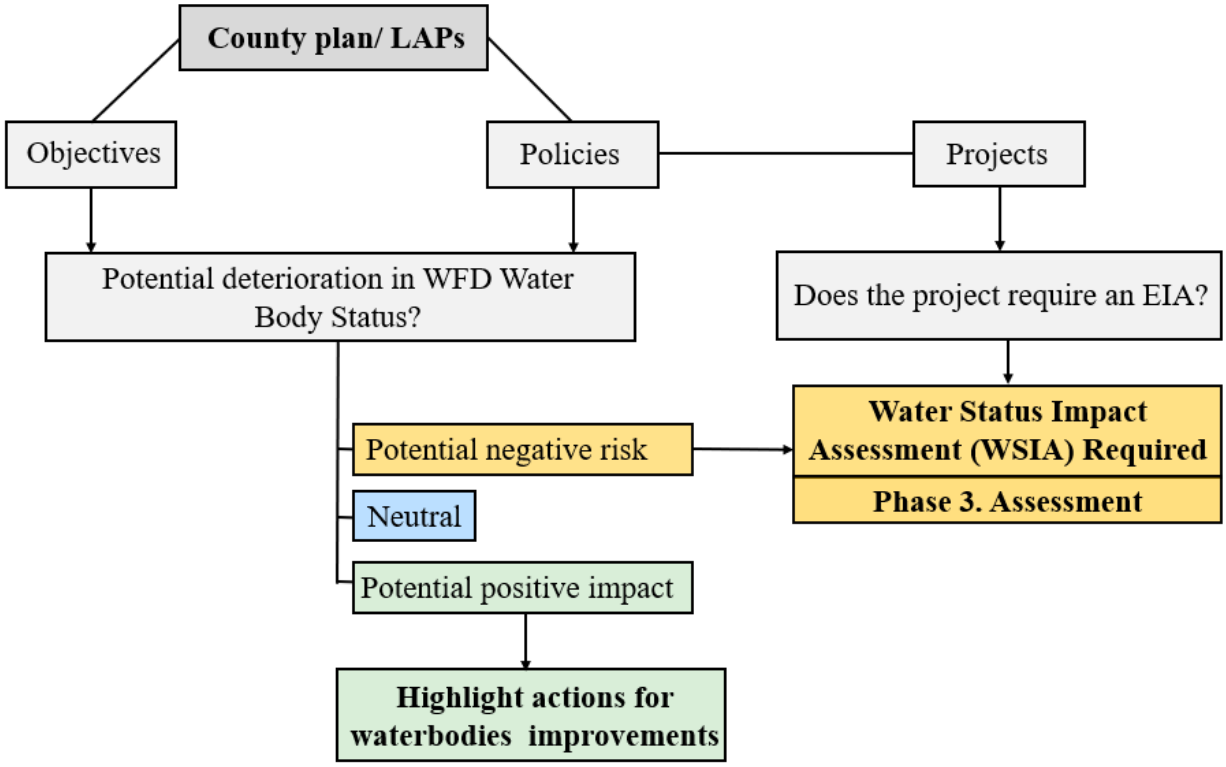



**Figure 2-1 SWSIA Screening process.**

In accordance with the SWSIA guidance (RPS 2021) for County Development and Area Plans the assessment focus' on the level of sub-catchments and in some instances (and in some cases water body where appropriate) identified by the EPA. The assessment considers and helps inform new zoning proposals / development, help identify where they are not appropriate, and ensure that planning policy supports the long-term well-being of water bodies. The level of assessment will differ for county and city development plans and may require the gathering of new information and model output for the area concerned.

## 2.1 SWSIA Screening methodology

An initial risk assessment (Figure 2-1) of the County and Local Area Developmental Plans' objectives and policies (Appendix A.1, A.2, A.3 and A.4) was carried out based on the categories below:

- **Potential Negative Risk:** There are actions within the objectives/policies that can cause deterioration of the water bodies status or prevent them from achieving the required environmental objectives.
- **Neutral:** There are no actions within the objectives/policies that can cause deterioration of the water bodies status or prevent them from achieving the required environmental objectives.
- **Potential positive impact:** The objectives/policies contain positive proactive elements to secure compliance with WFD and River Basin management Plan 32018-2021 (RBMP) objectives.

Proposed developments/projects which require an Environmental Impact Assessment (EIA) are screened in for SWIA as outlined in Section 5 (Parts 1 and 2) of the Planning and Development Regulations 2001 (S.I. No. 600/2001). If it is not clear if an EIA is required a conservative approach will be taken where there is a potential risk to waterbodies.

## 2.2 SWSIA Assessment methodology

The objectives, policies and zonings identified as presenting a potential negative risk at the screening stage are considered in more detail at the Assessment stage. The assessment methodology is based on the nature of the proposed objective/policy/zoning, the baseline condition of the receiving water environment highlighted at the scoping stage, the specific objectives of the WFD and RBMP.

The quantification of potential impacts, such as predicting discrete changes in water chemistry, ecology or hydromorphology is limited by the available information on the specific nature of future developments that could arise as a result of the objectives/policies/zonings within the plans. Therefore in most cases a risk based approach is adopted based on expert judgment, in accordance with Section 6.4 of the guidance (Ref).

The WSIA assesses the risk of impact to the water bodies, having regard to its specific elements and objectives. The assessment identifies if there is a risk of deterioration of any of the quality elements contributing to overall status classification as a result of the proposed objectives/policies/zoning.

Some of the key potential impacts on the water environment and the adopted approach are as follows:

- A semi-quantitative assessment is viable in the consideration of whether population projections will exceed the capacity of existing WWTP infrastructure. However, this is limited by the extent to which upgrades to the WWTP infrastructure will be developed by Uisce Éireann over the same period. For the purposes of the assessment it is assumed that the plants will remain at a similar performance/capacity over the period of the development plan. The most up to date information from WWTP AERs and WFD status assessments has been considered. The cumulative impacts from multiple WWTPs and other pressures is considered in terms of how these affect the current status and which pressures are deemed significant by the EPA.
- The increased urbanisation as a result of zoning has the potential to increase the potential impact from urban runoff on receiving water bodies. However, it is assumed that future developments will be completed in accordance with the SUDS objectives outlines in the Development Plan to maintain greenfield runoff rates and provide suitable levels of treatment to mitigate this impact.
- Waterfront developments in coastal areas can result in changes to the hydromorphology of transitional and coastal waterbodies. Such developments can result in sediment erosion and deposition due to changes in the water currents at the development. In the absence of specific development designs it is not possible to complete hydrodynamic modelling to determine the actual change in the flow/sediment regiment but the extent and scope of the zoning/policy can be assessed in the context of current status and sensitivity of the receiving water-body.

# 3. Relevant Guidance and Policy

This SWSIA is completed with reference to the following guidance and policy documents:

**Relevant Legislation**

- Directive 2000/60/EC Water Framework Directive (WFD).
- Directive 2006/118/EC Groundwater Directive.
- European Communities (Water Policy) Regulations 2014 (S.I. No. 350 of 2014).
- European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010), as amended by the European Communities Environmental Objectives (Groundwater) (Amendment) Regulations 2011 (S.I. No. 389 of 2011), the European Communities Environmental Objectives (Groundwater) (Amendment) Regulations 2012 (S.I. No. 149 of 2012) and the European Union Environmental Objectives (Groundwater) (Amendment) Regulations 2016 (S.I. No. 366 of 2016).
- European Communities Environmental Objectives (Surface Waters) Regulations 2009 (S.I. No. 272 of 2009) as amended by the European Communities Environmental Objectives (Surface Waters) (Amendment) Regulations 2012 (S.I. No. 327 of 2012).
- European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2015 (SI No. 386 of 2015).
- European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003) as amended by the European Communities (Water Policy) (Amendment) Regulations, 2005 (S.I. No. 413 of 2005).
- European Communities (Water Policy) (Amendment) Regulations, 2008 (S.I. No. 219 of 2008).
- European Communities (Water Policy) (Amendment) Regulations, 2010 (S.I. No. 93 of 2010).
- European Communities (Drinking Water) Regulations 2014 (S.I. No 122 of 2014), as amended by the European Union (Drinking Water) (Amendment) Regulations 2017 (S.I. No. 464 of 2017).
- European Communities (Quality of Salmonid Waters) Regulations 1988 (SI no. 293 of 1988).
- European Union (Water Policy) (Abstractions Registration) Regulations 2018 (SI no. 261 of 2018).
- Water Environment (Abstractions and Associated Impoundments) Act No. 48 of 2022.
- European Union (Drinking Water) Regulations 2023 (SI no. 99 of 2023).

**Guidance Documents**

- RPS (2021) Guidance for the Incorporation of the Water Framework Directive into the Planning System. Department of Housing, Local Government and Heritage.
- Environmental Protection Agency (2011) Evaluating the Influence of Groundwater Pressures on Groundwater-Dependent Wetlands. EPA Strive Programme 2007-2013.
- Environmental Protection Agency (2008) A Framework for the Assessment of Groundwater-Dependent Terrestrial Ecosystems under the Water Framework Directive. EPA Strive Programme 2007-2013.

# 4. Study Area

## 4.1 County Donegal

County Donegal is located in the northwest corner of Ireland with a population of 166,321[1] and a total area of 4,860km$^2$, making it the 4$^{th}$ largest county in the Republic of Ireland (RoI)[2]. The majority of Co. Donegal shares a border (~93%) with three counties in Northern Ireland, and a small portion with Co. Leitrim within the RoI.

There are six WFD Catchments in Co. Donegal, where the largest is Hydrometric Area (HA) No. 38 Gweebarra-Sheephaven located to the north-west of the county. HA 36 Erne catchment covers a small area in the north of Co. Donegal. Table 4-1 shows a summary of the catchments in Co. Donegal and their associated population density and Figure 4-1 present the location of each catchment.

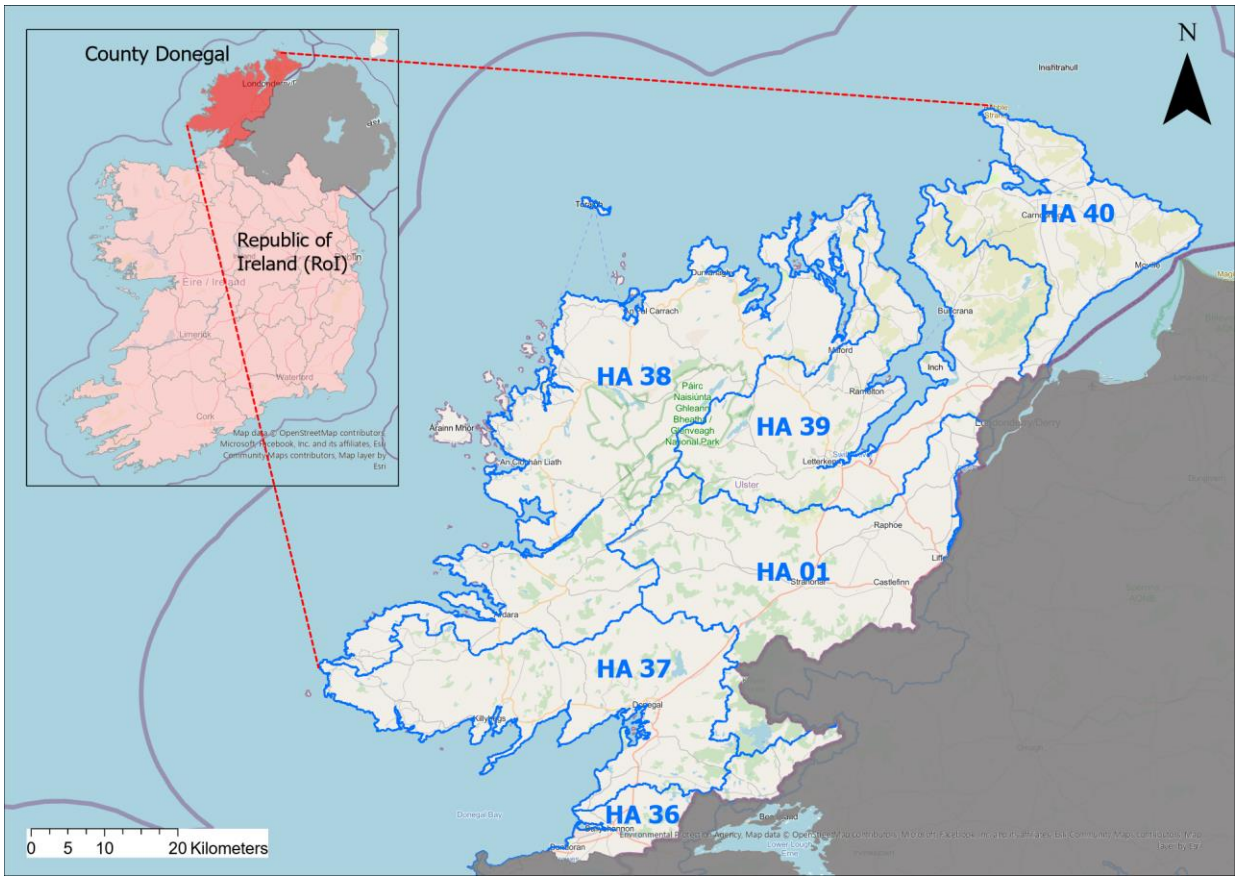



**Figure 4-1 Catchments within County Donegal.**

[1] Census 2022 Sapmap Area: County Donegal. Central Statistics Office (Ireland)

[2] GSI, 2009. County geology of Ireland: Donegal. Available online: < https://www.gsi.ie/en-ie/publications/Pages/Geoschol-Donegal-Geology.aspx>

**Table 4-1 Catchments in Co. Donegal.**

| Catchment | Area within Co. Donegal (km²) | Population density (people per km²) |
|---|---|---|
| HA 01 Foyle | 914 | 32 |
| HA 36 Erne | 2,512* | 34 |
| HA 37 Bay Donegal North | 804 | 23 |
| HA 38 Gweebarra-Sheephaven | 1,450 | 19 |
| HA 39 Lough Swilly | 965 | 57 |
| HA 40 Donagh-Moville | 507 | 36 |

* Total area within RoI

## 4.2 Buncrana Area

Buncrana is the second largest town in county Donegal with a population of 6,785 in 2016. This settlement is located in the Lough Swilly catchment (HA 39) (Figure 4-1) and sub-catchments Crana_SC_050 on the northern side and Burnfoot_SC_010 on the southern side (Figure 4-2).

The River Crana flows for 12km before entering Lough Swilly north of Buncrana, while the River Mill enters the bay south of Buncrana.

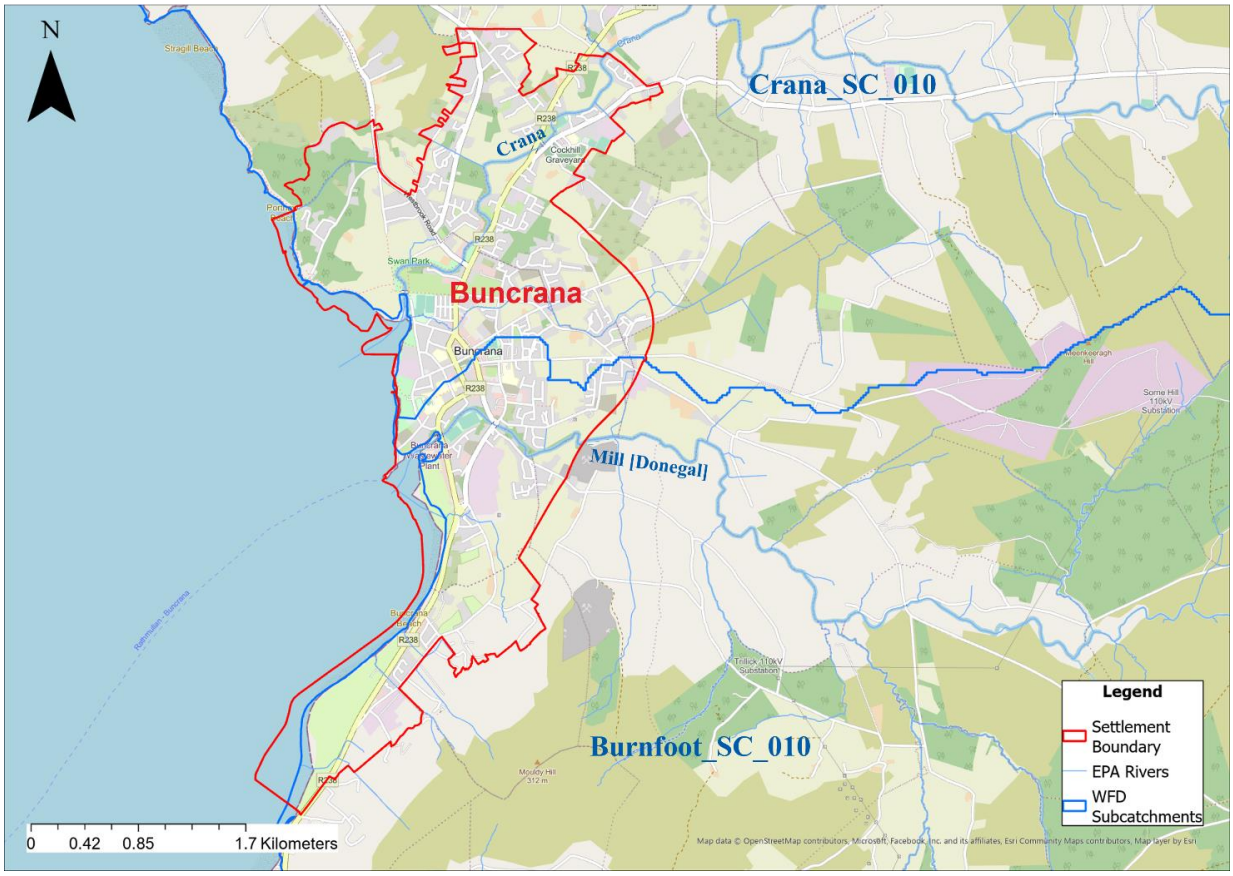



**Figure 4-2 Location of Buncrana in the Lough Swilly catchment and sub-catchments Crana_SC_010 and Burnfoot_SC_010.**

## 4.3 Ballybofey-Stranorlar Area

Ballybofey-Stranorlar is the third largest urban area in county Donegal with a population of 4,852 in 2016. They are known as the twin towns and are linked by an arched bridge over the River Finn. This settlement is

located in the Foyle catchment (HA 01) (Figure 4-1) and sub-catchments Finn [Donegal]_SC_030 on the northern side and Finn [Donegal]_SC_040 on the southern side (Figure 4-3).

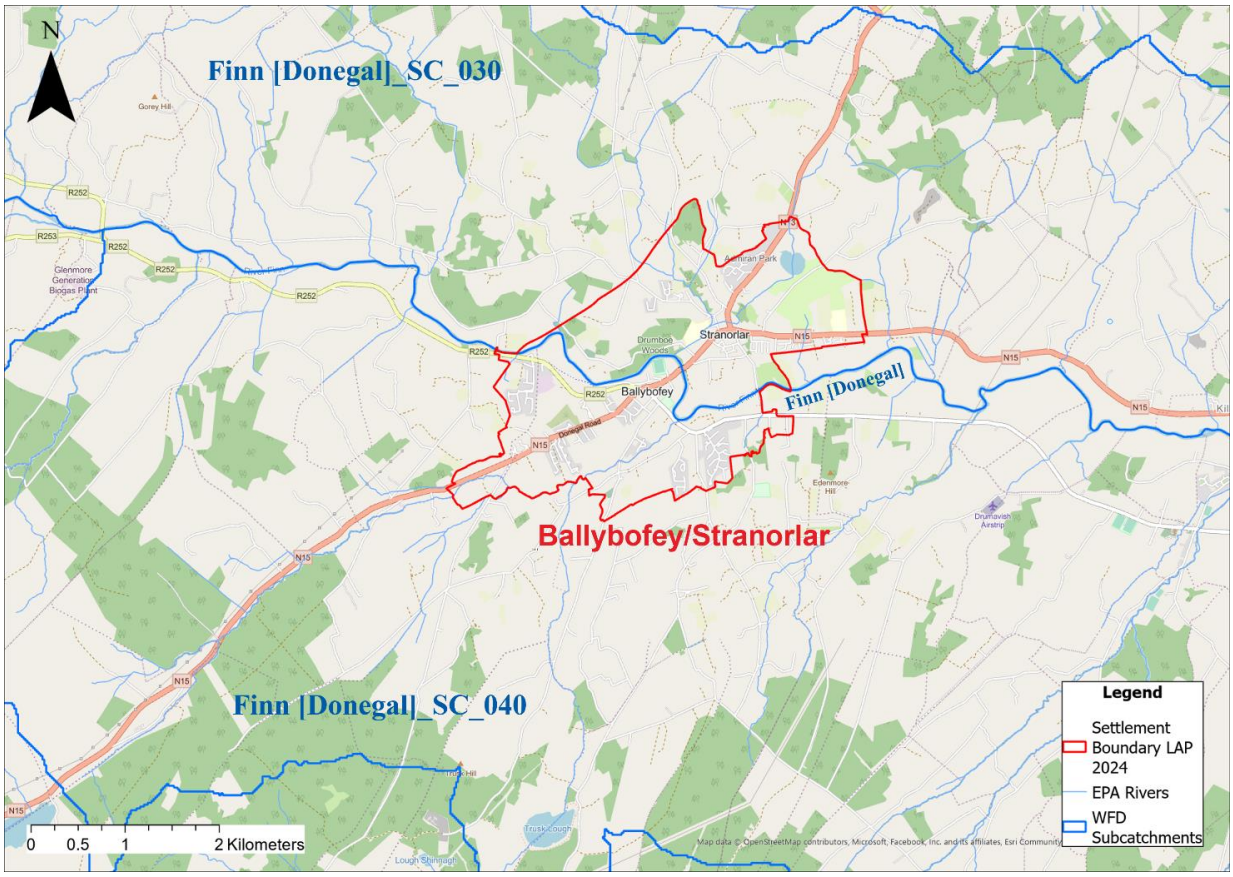



**Figure 4-3 Location of Ballybofey/Stranorlar in the Foyle catchment and sub-catchments Finn [Donegal]_SC_030 and Finn [Donegal]_SC_040**

## 4.4 Bundoran Area

Bundoran is the most southerly town in county Donegal, near the border with County Leitrim and close to the N15 road near Ballyshannon. In the 2016 census the population of Bundoran was 1,963. This settlement is located in the Erne catchment (HA 36) (Figure 4-1) and sub-catchments Erne_SC_050 on the northern side and Drowes_SC_010 on the southern side (Figure 4-4).

The River Bradoge passes under the Bradoge bridge, from where it marks the boundary between county Leitrim to the south and County Donegal to the north. The Bradoge River enters Donegal Bay at Bundoran.

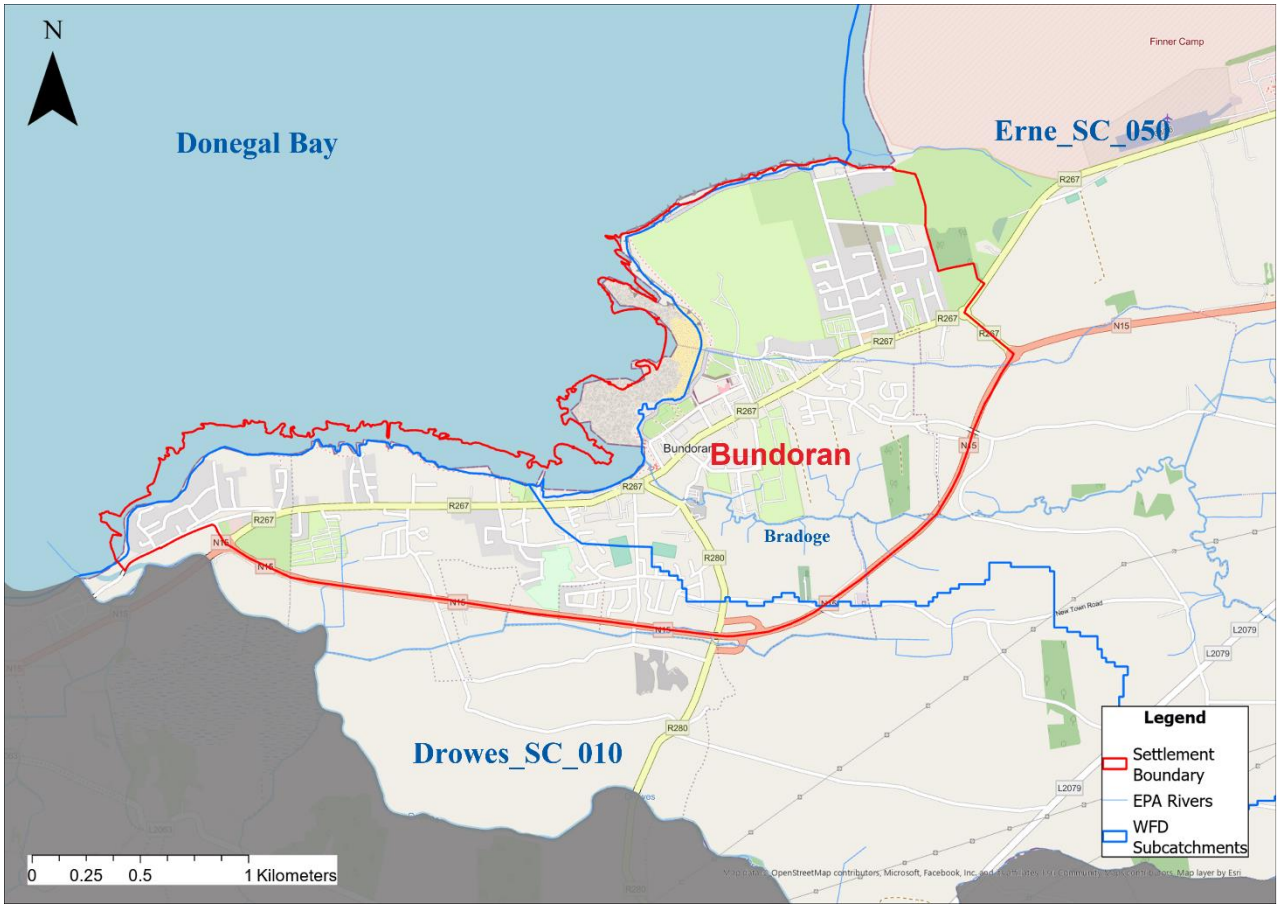



**Figure 4-4 Location of Bundoran in the Erne catchment and sub-catchments Drowes_SC_010 and Erne_SC_050**

# 5. SWSIA Screening

## 5.1 Donegal County Development Plan Screening

### 5.1.1 Proposed Donegal County Developmental Plan

The County Development Plan is the principal planning strategy document for County Donegal and sets out a vision for the sustainable future development of the County together with objectives and policies designed to achieve this vision. The Plan strives to sustainably balance the physical, social, economic and environmental needs of the County, and has been developed in the context of a number of national and regional strategies and initiatives, such as the National Planning Framework (NPF), the Regional Spatial and Economic Strategy (RSES) for the Northern and Western Region and the collaborative arrangements between Donegal County Council and Derry City & Strabane District Council under the umbrella term of the 'North West Strategic Growth Partnership'.

#### *5.1.1.1 Core strategy*

The core strategy gives spatial expression to the housing, population and employment provisions of the plan. It sets out a settlement hierarchy to deliver appropriate levels of growth (and associated housing targets and housing lands requirement) throughout Donegal, on a proportionate basis having regard to the particular characteristics and functions of settlements including Letterkenny (30%), County Growth Drivers (26%), Services Towns (11%), Rural Areas (8%) and Open Countryside (25%) based on an overall housing target of 7678 units.

#### *5.1.1.2 Development objectives and policies*

The plan contains a contextual narrative, objectives, polices on a wide range of development topics consistent with the Planning and Development Act 2000(as amended), Minister Planning Guidelines, and National and Regional Planning frameworks. These topics include Climate Change, Towns and Villages, Housing, Economic Development, Infrastructure, Flooding, Natural Resource Development, Tourism, Natura and Built Heritage, Biodiversity, Community Development, An Gaeltacht, Marine, Coastal Management and the Islands, Public Rights of Way and associated Technical Standard.

#### *5.1.1.3 Area Plans*

This County Developmental Plan includes objectives and policies an in a wide range of planning issues including climate change, town and villages, housing, economic development, transport, renewable energy, tourism, heritage, etc. In addition, Area Plans for the towns of Buncrana, Ballybofey-Stranorlar and Bundoran have been included. These Area Plans are consistent with the objectives of the County Development Plan but allow for more detailed consideration of local-level issues within the settlements concerned.

#### *5.1.1.4 Settlement frameworks*

The County Development Plan includes Settlement Frameworks for 53 No. areas. These are population centres that do not have a Area Plan but are considered in terms of the appropriate development in these areas and detailed mapping for the boundary of each area is provided in the plan which highlights, where relevant, regeneration priority areas, opportunity sites, amenity areas and town centres.

### 5.1.2 Plan objectives and policies screening

Table 5-1 presents a summary of the screening results. The objectives and policies classified as **Potential Negative Risk** were considered for further assessment in phase 3 (section 6.2).

**Table 5-1 Screening summary of objectives and policies of the Donegal County Developmental Plan.**

| Screening result | Objectives | Policies |
|---|---|---|
| Potential Negative Risk | Key Strategic Objectives of the County Development Plan: S-O-1<br>Core Strategic Objectives: CS-O-1; CS-O-2; CS-O-3; CS-O-6; CS-O-7;<br>Natural Resource Development/ Extractive Industry and geology: EXO-1<br>Tourism: TOU-O-1;<br>Community Development: CCG-O-2;<br>Marine resource, coastal management and the islands: MRCM-O-1 | Urban Housing Standards: UB-P-1<br>Rural Housing Policy: RH-P-3<br>Infrastructure/ Water and wastewater: WW-P-6;<br>Infrastructure/ Flooding: F-P-3;<br>Tourism: TOU-P-7;<br>An Gaeltacht: GAE-P-3; GAE-P-5<br>General Introduction AP-Housing: GEN-H-P-3 |
| Potential Positive Impact | Core Strategic Objectives: CS-O-4; CS-O-5<br>Climate Change: CA-O-2<br>Urban Housing: UB-O-2; UB-O-3<br>Rural Housing: RH-O-1, RH-O-2<br>Economic Development: ED-O-20<br>Infrastructure/ Water and wastewater infrastructure: WW-O-1; WW-O-2; WW-O-3<br>Infrastructure/ Flooding: F-O-1;<br>Natural Resource Development/Renewable Energy :E-O-5<br>Natural and Built Heritage/ Biodiversity: BIO-O-1<br>Natural and Built Heritage/ Landscape: L-O-1<br>Marine resource, coastal management and the islands: MRCM-O-2 | Core Policies: CS-P-3<br>Climate change; Climate Ready Donegal, Climate Change Adaptation Strategy 2019<br>Urban Housing Standards: UB-P-7<br>Rural Housing Standard: RH-P-9, RH-P-10<br>Economic Development: ED-P-10;<br>Infrastructure/ Water and wastewater: WW-P-1; WW-P-2; WW-P-3; WW-P-5; WW-P-7; WW-P-8; WW-P-10; WW-P-11; WW-P-12; WW-P-13<br>Infrastructure/ Flooding: F-P-1; F-P-2; F-P-4<br>Natural Resource Development/ Wind Energy WE-P-3; WE-P-9<br>Natural and Built Heritage/ Biodiversity: BIO-P-1; BIO-P-2; BIO-P-3<br>Technical Standards: TS-P-1<br>Marine Coastal and Island; MRCM-P-2; MRCM-P-9; MRCM-P-10. |

## 5.2 Buncrana AP Screening

A description of the proposed plan and the aspects of the plan considered to interface with achievement of WFD objectives are described in this section.

In 2020 the Strategic Strengths and Future Direction Study was commissioned by Donegal County Council and carried out by the International Centre for Local and Regional Development (ICLRD). This study was used as a main source of information to develop the Buncrana AP 2024-2030.

#### *5.2.1.1 Repowering Buncrana project*

The ‘Repowering Buncrana’ Rural Regeneration and Development project includes a series of measures that will work in an integrated way to strengthen the shore front, enhance walking and cycling, provide quality shore front amenities, integrate art and biodiversity into our urban landscape and critically work to counter the disconnect between Main Street and the shore front.

The project includes the following interventions:

1. A new iconic pedestrian bridge over the Mill River connecting the Inishowen Greenway Project and Amazing Grace Park to a transformed harbour/pier environment,

2. The creation of a high-performance promenade and Shore Front Green including enhanced walkways, beach access, public realm & festival gathering space and development of a new bespoke public/civic shore green users building,
3. Enhanced connectivity between the new Shore Front Green environment and the Main Street and commercial core of the town with targeted public realm improvements,
4. Enhanced Shore Front walkway and promenade along the Fishing Green, with dramatic re-imaging of the Amazing Grace viewing point,
5. Onwards connection of the promenade to Swan Park, Buncrana Castle and Cockhill Road, and
6. The repurposing and extension of a vacant heritage building to create bespoke office accommodation.

#### *5.2.1.2 Regeneration*

There are two former brownfield sites identified: in Ballymacarry the former Fruit of the Loom factory (SCS 1a), SCS 1 b and a site of a large former shirt factory known as 'Clubman' located in within the town core (Figure 5-1).

***Settlement Consolidation Site SCS1a (Ballymacarry)***[3]

This site (12.6 Ha) comprises the former Fruit of the Loom factory, a comparison goods outlet, administrative buildings and undeveloped lands. Approximately half of the site is currently occupied by a large-scale industrial coal cleaning and distribution operation. Adjacent uses are industry/enterprise and residential. The site benefits from key access on the southern side of the town to the Letterkenny – Derry economic corridor and also benefits from proximity to the Inner Relief Road. The remainder of this site may be appropriate for a mix of uses within the overall site including residential, light industrial, commercial and bulky goods retail. Developments should have regard to the existing adjacent road network and the residential amenities of adjoining properties. There are potential flooding issues associated within this large site arising from the steep hill to the east therefore any proposal will be required to comply with the Flood Risk Objectives and Policies of this Plan.

***Settlement Consolidation Site SCS1B***

This brownfield site located on the shorefront was the former Fruit of the Loom dyeing plant and remains as an unoccupied vacant commercial /industrial building of substantial size and scale. This site is prominent, coastal and resides between low-density residential lands to the north and east and a large public amenity area to the south. The western side forms part of a coastal walk from Buncrana pier through to Ned's Point , and further north along the coast. This site could lend itself to a mixed-use development of high architectural design that may include appropriate commercial, residential, retail and leisure uses that should harness the amenity, coastal and tourism elements at this prime location.

Any proposed development will be required to ensure to integrate with and protect the amenity shore walk and the SAC and NHA. Any proposal shall be of a massing and scale that respects the sensitive location, and the scale and massing of any surrounding properties. Any proposal may also be considered on a phased basis subject to proper planning and sustainable development of the area.

[3] Buncrana Local Action Plan 2024-2030 – Draft

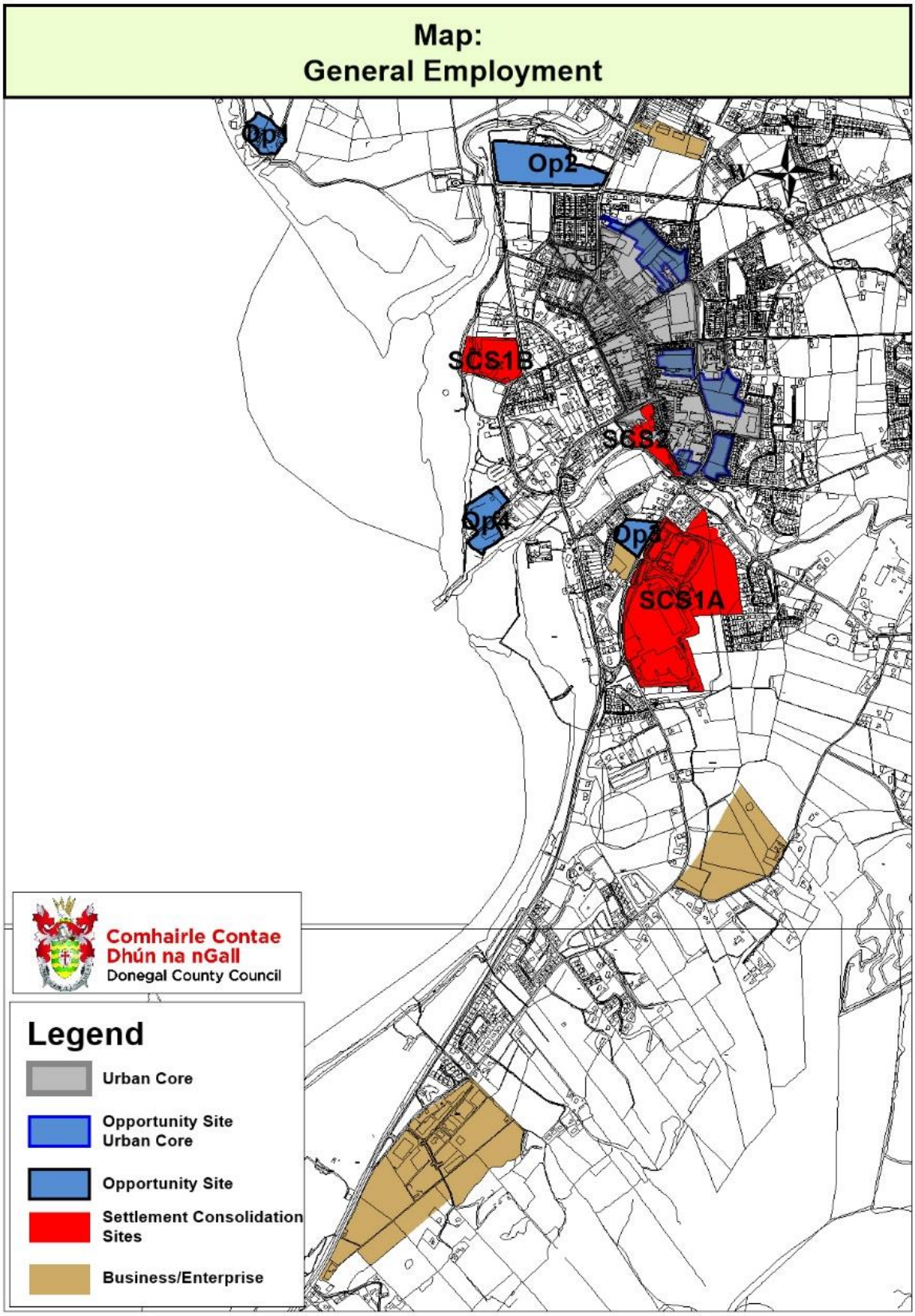



**Figure 5-1 General employment lands in the Buncrana region – SCS are brownfield sites and Op opportunity sites[4].**

[4] Buncrana Local Action Plan 2024-2030 – Draft

#### 5.2.1.3 Housing

The housing targets and zonings provisions of the Core Strategy as they relate to Buncrana are presented in Table 5-2.

**Table 5-2 Population and Housing Targets for Buncrana as set out in the Core Strategy.**

| Population and Housing | |
|---|---|
| Census 2016 Population | 6,785 |
| Census 2016 (% of total population) | 4.3% |
| Population Target 2030 | 7,678 |
| Housing Target (units) | 566 |
| Housing Target (%) | 9% |
| **Land Zoning Required** | |
| Existing Zoning (Ha) | 65 |
| Zoned Land Required (with additional surplus) (Ha) | 44 |
| Target Residential Density (units per Ha) | 30 |
| Minimum 30% infill lands (Ha) | 95% |
| Remaining 70% lands (non-infill) (Ha) | |
| Shortfall/Excess of Zoned Land | |

#### 5.2.1.4 Opportunity sites

The following opportunity sites have been identified in the Buncrana AP 2024-2030:

- **Ned's Point (Opp Site 1):** This scenic coastal site comprises a battery and ordnance ground with stone revetments, ditches and a low tower dating from 1812, a small pier, a deep-sea diving centre and RNLI lifeboat station and slipway within a small clearing in a wooded area on the shores of Lough Swilly. Part of the site is a SAC and pNHA. The Fort is historically and architecturally important (NIAH).
- **Cockhill Road (Opp Site 2):** This is an 'Edge of Town Centre' site located beside high-quality community and recreational facilities. A portion of the site is currently occupied and in use by McGonagle Bus company for their depot base, overnight parking and maintenance. The site is also close to Swan Park and the historic access to Buncrana Castle (a Protected Structure).
- **Greenfield Site, McCarter Road (Op Site 3 ):**This site occupies 1.4 ha and currently benefits from excellent road access directly fronting onto Looking Glass Brae, the completed section of the inner relief road. This site is adjoined by an existing light industrial use comprising builders' merchant and hardware store with predominantly established medium density residential immediately surrounding.

#### 5.2.1.5 Water and wastewater

There are currently two strategic Wastewater investment and improvement projects underway for Buncrana:

- Buncrana WWTP project which includes upgrading to a 17,700 PE with a 25 year design horizon to provide secondary treatment of effluent for the town including the environs of Ludden and Fahan. These works are proposed on the site of the existing waste-water treatment plant located within the town. Currently at detailed design stage it is anticipated that this project will commence construction in 2024.
- Uisce Éireann, working in partnership with Donegal County Council, plans to deliver the Buncrana Sewerage Scheme. This scheme includes upgrades to the sewer network to address flooding, overflow and capacity deficiencies. Stormwater storage holding tanks will be provided to reduce the risk of

overflows during storms and the scheme will result in improved water quality in the receiving waters. Other benefits will be ensuring compliance with Urban Wastewater Treatment Regulations 2001 and the EPA Wastewater Discharge Licencing and to provide for growth and development in Buncrana and the surrounding areas. This project is due to commence construction during 2023.

#### *5.2.1.6 Flooding*

The ICLRD Strategic Study on Buncrana reports that coastal communities, such as Buncrana are particularly vulnerable in the face of climate disruption and rising sea levels. The Office of Public Works (OPW) commissioned and completed Catchment and Flood Risk Management (CFRAM) studies covering the entire country with Buncrana being identified as a flood risk area. The plan also set out the measures and policies to be pursued to achieve the most cost effective and sustainable management of flood risk. Further information is presented in section 6.2.5.

### 5.2.2 Local Plan objectives and policies screening

Table 5-3 presents a summary of the screening results. The objectives and policies classified as **Potential Negative Risk** were considered for further assessment in phase 3 (section 7.2).

**Table 5-3 Screening summary of objectives and policies of the Buncrana LPA 2024-2030 with a potential negative risk to waterbodies.**

| Development ID | Theme | Justification for inclusion in Phase 2 - Scoping |
|---|---|---|
| BC-S-O-2/ BC-S-P-1 | Re-powering Buncrana | Proposed development may require EIA. The proposed development includes:<br>• Pedestrian bridge over the Mill River<br>• Shorefront development: marinas, jetties, facilities for outdoor water-based activities and harbour facilities for maritime leisure developments. |
| BC-TC-O-3 | Urban Design Quality | Development of brownfield sites may present a risk to water quality of waterbodies |
| BC-RG-O-1 /BC-SCS-P-1A/ BC-SCS-P-1B/ BC-SCS-P-2 | Regeneration | The proposed develop of the following brownfield sites present a risk for water quality and may require an EIA:<br>• Settlement Consolidation Site SCS1A – Ballymacarry<br>• Settlement Consolidation Site SCS1B<br>• Settlement Consolidation Site SCS2<br>• Swilly Road ( Opp Site 4) |
| BC-F-O-1 | Surface Water and Flooding | Flood relief works may present a risk to waterbodies and may require an EIA |
| BC-H-P-1 | Housing | Proposed development may require EIA<br>Detailed flood risk assessment may be required |

## 5.3 Ballybofey/Stranorlar Screening

A description of the proposed plan and the aspects of the plan considered to interface with achievement of WFD objectives are described in this section.

### 5.3.1 Key Planning Issues

The Ballybofey/Stranorlar AP 2024-2023 identified the main key planning issues based on information collected from public consultation, stakeholder engagement and ground and desktop. A brief description of the targets for each issue are described in this section.

#### *5.3.1.1 Housing*

The target is to have 537 units and an associated zoned land requirement of 17.9ha for Ballybofey/Stranorlar over the plan period 2024-2030. For this purpose, new residential land zones have been identified and opportunity sites 1, 2, 4 and 5 are zoned for a mixture of uses including housing (Figure 6-23).

#### *5.3.1.2 Economic development and employment*

A recent upgrade to the Ballybofey/Stranorlar wastewater treatment plant has increased its overall treatment capacity of 9,200 population equivalent which provides significant scope for additional economic development. This plan looks to capitalise the strengths and opportunities promoting new economic/employment generating/commercial developments in opportunity in sites 1 and 2 and zoned Business/Enterprise.

#### *5.3.1.3 Transport and sustainable mobility*

Currently transport provision in Ballybofey/Stranorlar is predominately road focused and suffers from several issues. Therefore, this plan focus on promoting safe, sustainable, functional and convenient transportation.

In particular the *Ballybofey/Stranorlar Regeneration Strategy and Action Plan* sets out a masterplan for the creation of an interconnected green arteries including:

- Along the old Donegal Town to Ballybofey railway line,
- Part of the Ballybofey/Stranorlar Railway line,
- Along the river corridor and through the Drumboe woods to Finn Valley College and
- A new pedestrian bridge over the River Finn to Drumboe Woods

#### *5.3.1.4 Flooding*

Ballybofey/Stranorlar lies within the catchment of the River Finn, which flows sinuously west to east through the urban area and is joined by a number of tributaries including notably the Burn Daurnett, the Backless/Kilross and the Mullaghgarry streams.

According to flooding map from floodinfo.ie, zones A (1:100 year/1% Annual Exceedance Probability flood risk area) and B (1:1000 year/1% Annual Exceedance Probability flood risk area) are identified in the Ballybofey/Stranorlar area. A flood Relief Scheme in the area is proposed to alleviate flood risk. Further information is presented in section 6.3.1.

#### *5.3.1.5 Urban regeneration and Town Centre Development*

There are a number of key urban regeneration/town centre challenges including vacancy and dereliction, traffic congestion, poor pedestrian urban environment, poor public realm, lack of urban green spaces, underutilised backlands and a lack of connectivity. There are several projects to tackle these issues:

- The SEED project. It is led by the Council's Regeneration and Development Team and comprises a new multiuse civic space, the restoration of the Old Ritz cinema (NIAH structure) and a new 2 storey replacement car park at Ballybofey shopping centre.
- The Council endorsed Ballybofey/Stranorlar and Regeneration Strategy and Action Plan provides an ambitious, long-term vision and conceptual framework for the regeneration of 7 key urban districts based on local placemaking strategies including many innovative proposals to address town centre issues and capitalise on local regeneration opportunities

It is recognised that the proposals within the strategy are conceptual in nature and will require further feasibility studies, public consultation with relevant stakeholders, and detailed design refinement.

#### *5.3.1.6 Recreation, Community and Natural Heritage*

There are several projects to support the creation of a liveable, healthy and sustainable environment as describe below:

- Donegal Community Stadium Project
- Multi-Use Sports Facility Project.
- The area to the south of Finn Valley Centre and the Donegal Community Stadium has been zoned as Open Space and Recreation
- Central urban public park on lands adjoining the Ballybofey Shopping Arcade and Aldi
- The Drumboe Woods and Environs area. The feasibility study identifies key priorities and options for the sustainable development of a wide area extending from Drumboe Woods to Creggan Woods. It sets out a sitewide strategy including: establishing biodiversity corridors, restoring habitats, a network of entrances and linkages, creating convenient car parks, celebrating/utilising heritage assets, managing biodiversity threats, protecting what already exists, connecting with the town, and extending the area's recreational.
- The River Finn Corridor. There is a significant opportunity to provide new riverside walks and adjoining parkland areas along the River Finn corridor subject to Appropriate Assessment vis-à-vis impact on the River Finn SAC. The development of such green infrastructure is therefore explicitly provided for in plan through both policy and zonings.
- The River Finn Special Area of Conservation (SAC). The River Finn SAC will be protected through the application of Policy BIO-P-1 of the wider development plan which requires all development proposals to comply with the requirements of the habitats directive including undertaking Appropriate Assessment as necessary and by the zoning framework of the AP which precludes significant development within the SAC.

#### *5.3.1.7 Opportunity Sites*

A number of Opportunity Sites have been identified which collectively can fulfil a variety of development roles including Business/Enterprise development, bulky retail, multiple residential development, expansion of St Joseph's Community Hospital or Ballybofey and Stranorlar Golf Club and sports/recreation or community development. Site specific policies are detailed in Appendix A.3.

### 5.3.2 AP 2024-2030 objectives and policies screening

An initial risk assessment of the AP objectives and policies (Appendix A.3) was carried out based on the categories below:

- **Potential Negative Risk:** There are actions within the objectives/policies that can cause deterioration of the water bodies status or prevent them from achieving the required environmental objectives.
- **Neutral:** There are no actions within the objectives/policies that can cause deterioration of the water bodies status or prevent them from achieving the required environmental objectives.
- **Potential positive impact:** The objectives/policies contain positive proactive elements to secure compliance with WFD and River Basin management Plan 32018-2021 (RBMP) objectives.

Table 5-4 presents a summary of the screening results. The objectives and policies classified as **Potential Negative Risk** were considered for further assessment in phase 3 (section 7.3).

**Table 5-4 Screening summary of objectives and policies of the Ballybofey/Stranorlar AP 2024-2030.**

| Development ID | Theme | Justification for inclusion in Phase 2 - Scoping |
|---|---|---|
| BS-T-O-1 and BS-T-P-1 | Transportation and sustainable mobility | An EIA is required for the TEN-T Priority Route Improvement Project, Donegal (TEN-T PRIPD) |
| BS-T-O-2 | Transportation and sustainable mobility | The proposed development includes a footbridge over the Burn Daurnett and off road car parking provision on Back Lane which may impact waterbodies |

| | | |
|---|---|---|
| BS-H-P-1 | Housing | 12 sites in Phase 1 and 3 sites in Phase 2 have been zoned for primarily residential development and may require an EIA. |
| BS-F-P-1 | Flooding | The Ballybofey/Stranorlar Flood Relief Scheme may present a risk to waterbodies and may require an EIA |
| BS-RCNH-P-2 | Recreation, Community and Natural Heritage | The development includes an extension to the existing graveyard which may present a risk to water quality. The graveyard is located near the River Finn SAC. |
| Opportunity sites: BS-OPP-P-1 (OPP Site 1); BS-OPP-P-2 (OPP Site 2); BS-OPP-P-4 (OPP Site 4); BS-OPP-P-5 (OPP Site 5) | Opportunity sites | The proposed development includes road, pedestrian and cycling infrastructure which may present a risk to water bodies. |

## 5.4 Bundoran AP Screening

A description of the proposed plan and the aspects of the plan considered to interface with achievement of WFD objectives are described in this section.

This plan sets out a planning policy framework to ensure that new development in Bundoran supports and enhances the town's special economic function as a tourism centre in an environmentally conscious and sustainable manner. The AP also identifies regeneration opportunities within the town as a means of addressing urban dereliction and stimulating new economic, cultural and residential development.

#### *5.4.1.1 Coastal Zones*

The entire coastal zone is designated as a High Amenity Area with the development of water-based proposals including enhancement of pier facilities, use of pier facilities for commercial and recreational purposes, facilities for outdoor water-based activities.

Regarding the area north of Atlantic Road, the Council will endeavour to prepare a master plan to guide future development in a manner that appropriately balances environmental, social and economic considerations in this sensitive coastal location.

#### *5.4.1.2 Housing*

The housing targets and zonings provisions of the CDP Core Strategy as they relate to Bundoran are reproduced in Table 5-5.

**Table 5-5 Population and Housing Targets for Bundoran as set out in the Core Strategy**

| **Population and Housing** | |
|---|---|
| Census 2016 Population | 1,963 |
| Census 2016 (% of total population) | 1.2 |
| Population Target 2030 | 2,296 |
| Housing Target (units) | 121 |
| Housing Target (%) | 1.57 |
| **Land Zoning Required** | |
| Existing Zoning (Ha) | 22.93 |
| Zoned Land Required (with additional surplus) (Ha) | 4 |

| Population and Housing | |
|---|---|
| Target Residential Density (units per Ha) | 30 |
| Minimum 30% infill lands (Ha) | 17.84 |
| Remaining 70% lands (non-infill) (Ha) | 5.09 |
| Shortfall/Excess of Zoned Land | +18.93 |

#### *5.4.1.3 Infrastructural assessment*

The four zones identified in the land-use zoning map of the Bundoran AP require assessment for infrastructural requirements. The Bundoran AP, Table 17.3 detail the requirements per site. In terms on water management the followings are included:

- Water and sewer availability (capacity assessment required)
- Water-sewer network connection
- Drainage assessment required.

#### *5.4.1.4 Opportunity sites*

Bundoran contains three large opportunity sites, located at both the western and eastern end of the plan area, that are under-utilised and present a wide range of development opportunities by reason of their scale and strategic location proximate to the national road network.

The Planning Authority is keen to maximise the potential of these sites and the text of the associated policies provide guidance as to the types of development that the Planning Authority would deem appropriate on each site.

#### *5.4.1.5 Water and wastewater infrastructure*

The completion of a new wastewater treatment plant for the town in 2018 has assured that ample wastewater treatment capacity will be available over the lifetime of the AP 2024-2030. According to the AER 2021, the organic capacity of the Bundoran WWTP is 12,000, and the organic capacity-collected load is 7,030 (peak week) for a remaining capacity of 4,970.

Irish water has advised that water supply capacity is available to meet project levels of growth within Bundoran.

#### *5.4.1.6 Flooding*

The Strategic Flood Risk Assessment prepared in support of the Bundoran AP has identified certain areas within the plan boundary as being at risk of flooding:

- An area on the eastern side of the town at Drumacrin/Finner
- A corridor adjoining the River Bradoge, which has its estuary in the town centre
- An area to the immediate north of the N15 bypass road.

Where areas of potential significant flood risk (i.e. Flood Zone A or B[5]) exist within particular zonings that would allow for highly vulnerable development (e.g. a 'New Residential' zoning), an 'Open Space and

[5] **Flood Zone A** is defined in the Planning System and Flood Risk Management Guidelines as being where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding). **Flood Zone B** is defined as being where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 year and 0.5% or 1 in 200 for coastal flooding).

Recreation' zoning has been put in place, thereby only allowing for development deemed to be 'water compatible' and therefore not at significant risk from flooding.

### 5.4.2 Local Plan objectives and policies screening

Table 5-6 presents a summary of the screening results. The objectives and policies classified as **Potential Negative Risk** were considered for further assessment in phase 3 (Section 7.4).

**Table 5-6 Screening summary of objectives and policies of the Bundoran AP 2024-2030 with a potential negative risk to waterbodies.**

| Development ID | Theme | Justification for inclusion in Phase 2 - Scoping |
|---|---|---|
| BN-CZ-P-1 | Coastal Zone | Potential for contamination of waterbodies from redevelopment of brownfield sites.<br>Proposed development may require EIA. |
| BD-H-P-1 | Housing (Key considerations for new residential sites) | Proposed development may require EIA<br>Detailed flood risk assessment may be required |
| BD-H-P-2 | Housing (Key considerations for new residential, phase 2 development lands) | Proposed development may require EIA |
| BN-OPP-P-1 | Opportunity sites: Opportunity Site 1 (Western Gateway) (4.3Ha) | Proposed development may require EIA |
| BN-OPP-P-2 | Opportunity sites: Opportunity Site 2 (2.7 Ha) | Proposed development may require EIA |
| BN-OPP-P-3 | Opportunity sites: Opportunity Site 3 (12.7 Ha) | Proposed development may require EIA |

# 6. SWSIA Scoping

## 6.1 Donegal County Development Plan Scoping

A baseline with the characteristics and conditions in Co. Donegal is included in this section. An initial general overview is given and then a more specific approach in each catchment is presented. In the catchments, the information presented includes status and risk categories of all waterbodies, details on protected areas, significant issues and pressures, load reduction assessments for nutrients where applicable, an overview of the 2nd Cycle Areas for Action.

The WFD Status Assessment and Risk are based on information available in the EPA catchments interactive Dashboard[6] as well as the WFD Status and WFD Risk 2016-2021 assessment[7]. 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.

### 6.1.1 Surface waterbodies

The principal rivers in Co. Donegal are the Foyle, the Swilly and the Erne. The Foyle River rises in Lough Fin, in the mountains of Branagh and under the name of Finwater proceeds to Lifford, where on its confluence with the Mourne from the east, the united stream takes the name of Foyle. The Swilly rises in the mountains of Glendore and passing by Letterkenny forms a large estuary between Ramelton and Newtown-Conyngham. The Erne flows from Lough Erne, enters the county at Belleek and after forms the harbour of Ballyshannon[8].

The WFD risk for rivers, lakes, transitional and coastal waterbodies in Co. Donegal is presented in Figure 6-1. The distribution of waterbodies among the different risk categories is as follow:

- There are 108 (39%) rivers *At Risk*, 87 (32%) under *Review* and 79 (29%) *Not at Risk*.
- There are 12 (10%) lakes *At Risk*, 20 (17%) under *Review* and 87 (73%) *Not at Risk*.
- There are 2 (10%) transitional waterbodies *At Risk*, 8 (38%) under *Review* and 11 (52%) *Not at Risk*. The largest transitional waterbody at risk is the Swilly Estuary (IE_NW_220_0100).
- There are 2 (9%) coastal waterbodies *At Risk*, 11 (50%) under *Review* and 9 (41%) *Not at Risk*.

The WFD Status for rivers, lakes, transitional and coastal waterbodies in Co. Donegal is presented in Figure 6-2. The distribution of waterbodies among the different risk categories is as follow:

- Rivers – 10% at High, 34% at Good, 32% Moderate, 24% Poor and no Bad status.
- Lakes – 0% at High, 79% at Good, 17% Moderate, 0% Poor and 3% Bad status.
- Transitional – 29% at High, 29% at Good, 14% Moderate, 29% Poor and no Bad status.
- Coastal – 56% at High, 33% at Good, 11% Moderate and no Poor or Bad status.

[6] EPA Catchments.ie. < Catchments.ie - Water, from source to sea.>

[7] Water Framework Directive-Data. Available online: < (6) WFD Application - Data Download (edenireland.ie)>

[8] Lewis, Samuel. 1837. Donegal Rivers. Available online: < https://www.libraryireland.com/topog/D/Donegal-Rivers.php>

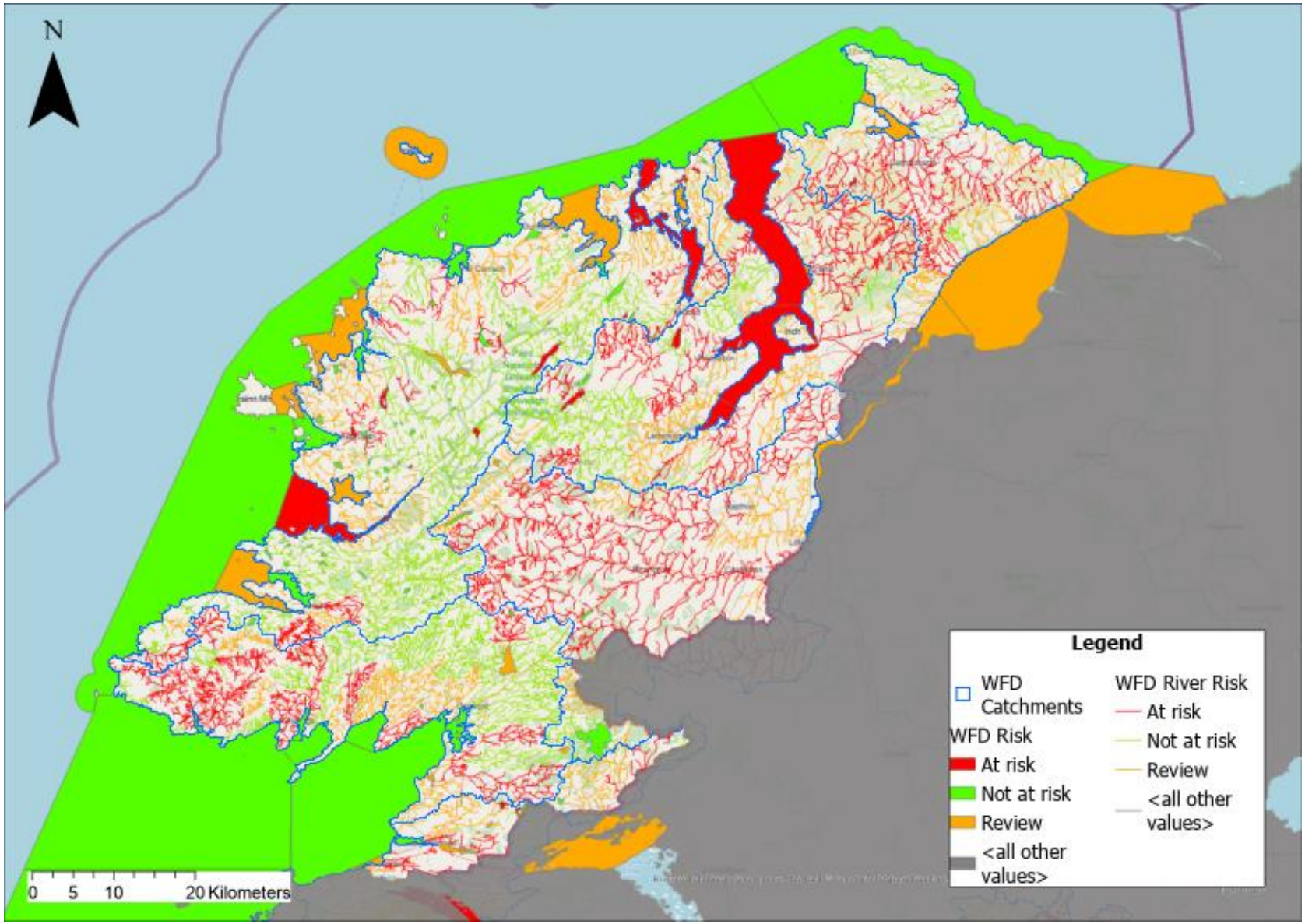



**Figure 6-1 WFD Risk 2016-2021 for Rivers, Lakes, Coastal and Transitional waterbodies.**

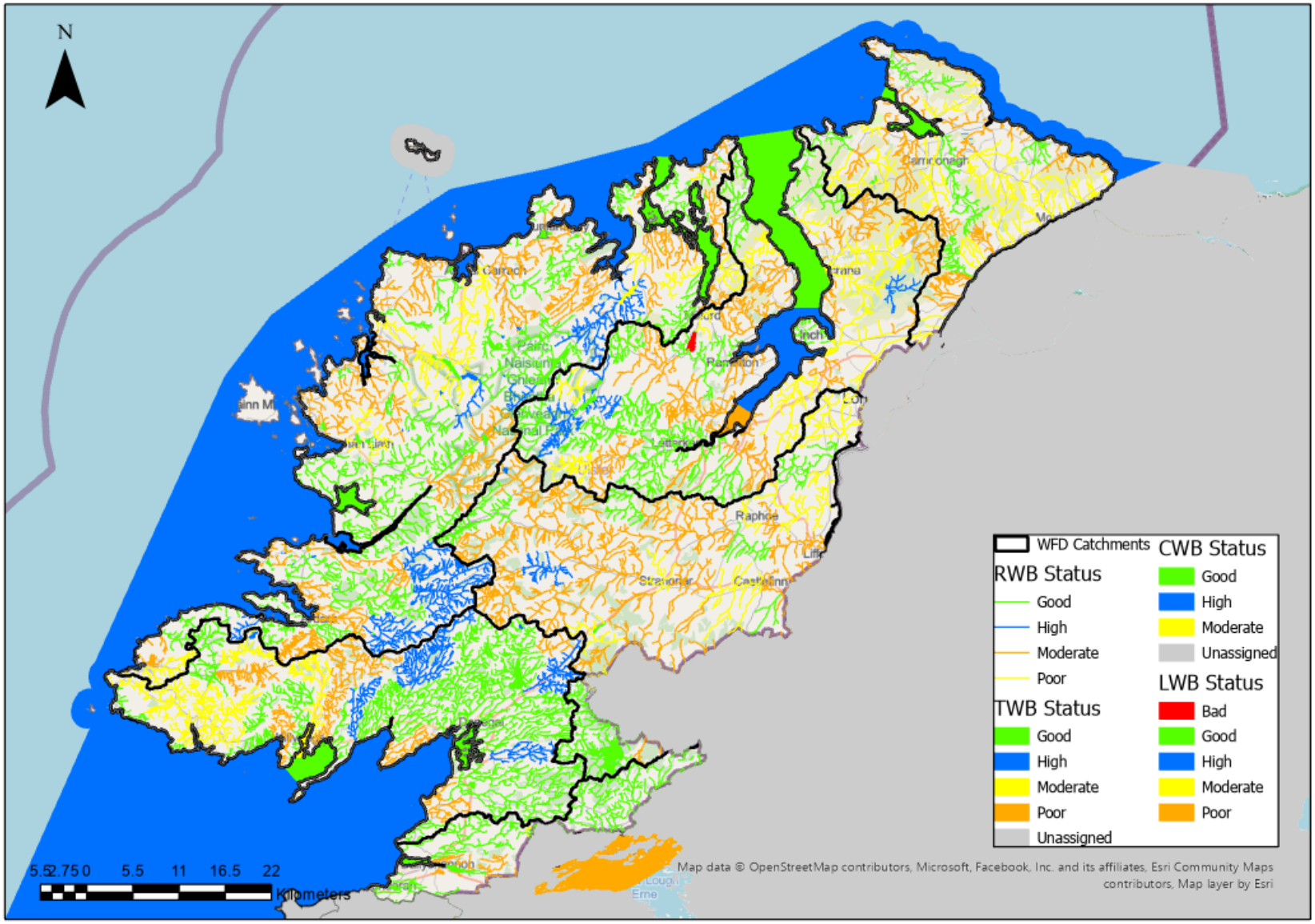



**Figure 6-2: WFD Status 2016- 2021 for Rivers, Lakes, Coastal and Transitional Waterbodies**

### 6.1.2 Groundwater

#### *6.1.2.1 Aquifer classification*

According to GSI and DCC (2004)[9] there are 60 different Precambrian rock units in county Donegal characterised by the absence of an inter-granular permeability, and low fissure permeability. The most permeable zones are at the top of the rock and decreases with depth, although groundwater flow may be slightly enhanced along large fault and axes of folds.

For the purpose of aquifer classification, the Precambrian units are divided into two broad groups of similar characteristics:

- **Precambrian Quartzites Gneisses and Schists** cover the majority of the county (70%) and comprises 50 individual rock units. These rocks dominate the eastern half of the county, north of the Derryveagh Mountains, and sweep across the centre of the county in a northeast-southwest trending band to Malin Bay, south of Glencolumbkille (Figure 6-3).
- The Precambrian quartzites, gneisses and schists group contains a large number of different units. Primarily on the basis of lithological characteristics, which is supported by the trend in the productivity data towards Class V and IV, the majority of these rocks are classified as Poor Aquifers, which are Generally Unproductive Except for Local Zones (Pl).
- **Precambrian Marbles** cover approximately 5% of the county. Aghyaran and Killygordon Limestone as the most extensive unit (4%), and large fractures have been recorded in these areas in Public Water Supply boreholes as well as in Culdaff Limestone (CU). The latter of which is possible solutionally enlarged.
- The more productive units are Culdaff Limestone Formation (CU), the main northern area of Aghyaran & Killygordon Limestone (DG) and its marble-rich member (DGmb), and the Falcarragh Limestone Formation (FL). These units have therefore been classified as Locally Important Aquifers, which are Moderately Productive only in Local Zones (Ll) (Figure 6-3).
- The remaining Precambrian marble units (Altan Limestone (AL), Cranford Limestone (CR), Glencolumbkille Limestone (GL), undifferentiated marble (mb), Clonmass Limestone (SCcl), Port Limestone (SCpl) and the southern outcrop of the Aghyaran & Killygordon Limestone (DG)) are classified as Poor Aquifers, which are Generally Unproductive except for Local Zones (Pl) (Figure 6-3).
- Where rock units consist solely of fine grained metamorphic rocks such as pelite or schist, they are likely to be more consistently unproductive than the coarse grained and more varied units. These rocks have therefore been classified as Poor Aquifers which are Generally Unproductive (Pu).

Other aquifers in the co. Donegal covering less than 3% of the county each include:

- Igneous aquifers categorised as a Poor Aquifers that are Generally Unproductive Except for Local Zones (Pl)
- Sandstone aquifers generally considered as Locally Important Aquifers that are Moderately Productive in Local Zones (Ll) (Figure 6-3). The Claragh (GH), Bangher (BG), Kilin (KG) and Muckross Sandstone (MK) are categorised as Locally Important Aquifers that Are Generally Moderately Productive (Lm) (Figure 6-3).
- Pure bedded limestone classified as mainly Locally Important Karst Aquifer (Lk).
- Dinantian Shales and Limestones and Dinantian Impure Limestones Aquifers which are Locally Important Aquifers that are Moderately Productive only in Local Zones (Ll).

[9] GSI & DCC, 2004. County Donegal Groundwater Protection Scheme. 83 p. Available online: <https://secure.dccae.gov.ie/GSI_DOWNLOAD/Groundwater/Reports/GWPS/DL_GWPS_MainReport_Jul2004.pdf>

- Sand and gravel aquifers. Although none of the mapped deposits are greater that 10km$^2$ or significant enough to be considered as regionally important aquifers, some of them can sustain 'good' to 'excellent' yields.

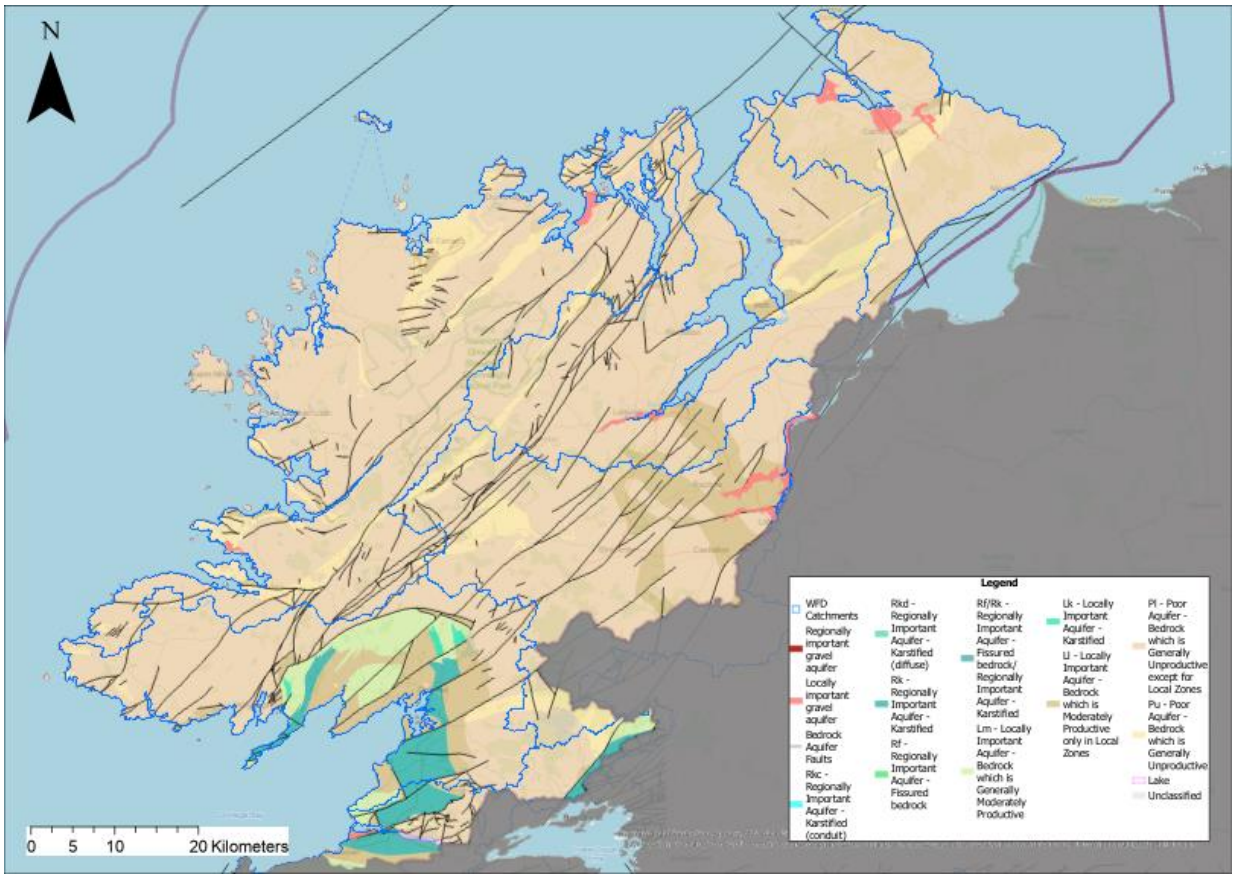



**Figure 6-3 Bedrock, sand and gravel aquifers**

### *6.1.2.2 Groundwater vulnerability*

The GSI vulnerability map[10] is derived by combining the contoured depth to the bedrock data with the subsoil permeability. Areas as assigned vulnerability classes of low, moderate, high or extreme. Figure 6-4 shows that a large proportion of the county is classed as having either extreme or high vulnerability while areas of moderate and low vulnerability are uncommon. Large areas of extreme vulnerability where rock is generally at, or close to, the surface are common throughout the county, due to the competency of the rock and the glacial history of this region.

Many small pockets of deeper subsoil are likely to exist even within areas where rock outcrop is common. This is particularly likely to be the case in southern Donegal, over karst limestone areas[11].

### *6.1.2.3 Groundwater risk*

Figure 6-7 shows the WFD Risk classification for the groundwater bodies for the period 2016-2021. There are six groundwater bodies, of which two are classified as *At Risk.* Waste Facility (W0062-01) (IE_NW_G_085) located in the Foyle catchment is *At Risk* due to ammonia pollution associated with the Churchtown Landfill and Waste Facility (W0024-03) (IE_NW_G_100) located in the Erne and Donegal Bay North catchments is *At Risk* due to ammonia pollution associated with the Ballynacarrick Landfill Site.

[10] GSI Map Viewer. Available online: < https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef>

[11] GSI & DCC, 2004. County Donegal Groundwater Protection Scheme. 83 p. Available online: <https://secure.dccae.gov.ie/GSI_DOWNLOAD/Groundwater/Reports/GWPS/DL_GWPS_MainReport_Jul2004.pdf>

The GWDTE-Dunmuckrum Turlough (SAC002303) located in the Erne catchment and the Carndonagh Gravels (IE_NW_G_078) in the Donagh-Moville catchment are under *Review*.

The Inver-Banagher Hill (Donegal Bay North catchment) and Northwest Donegal (Donegal Bay North, Foyle, Gweebarra Sheephaven and Lough Swilly catchments) are *Not at Risk*.

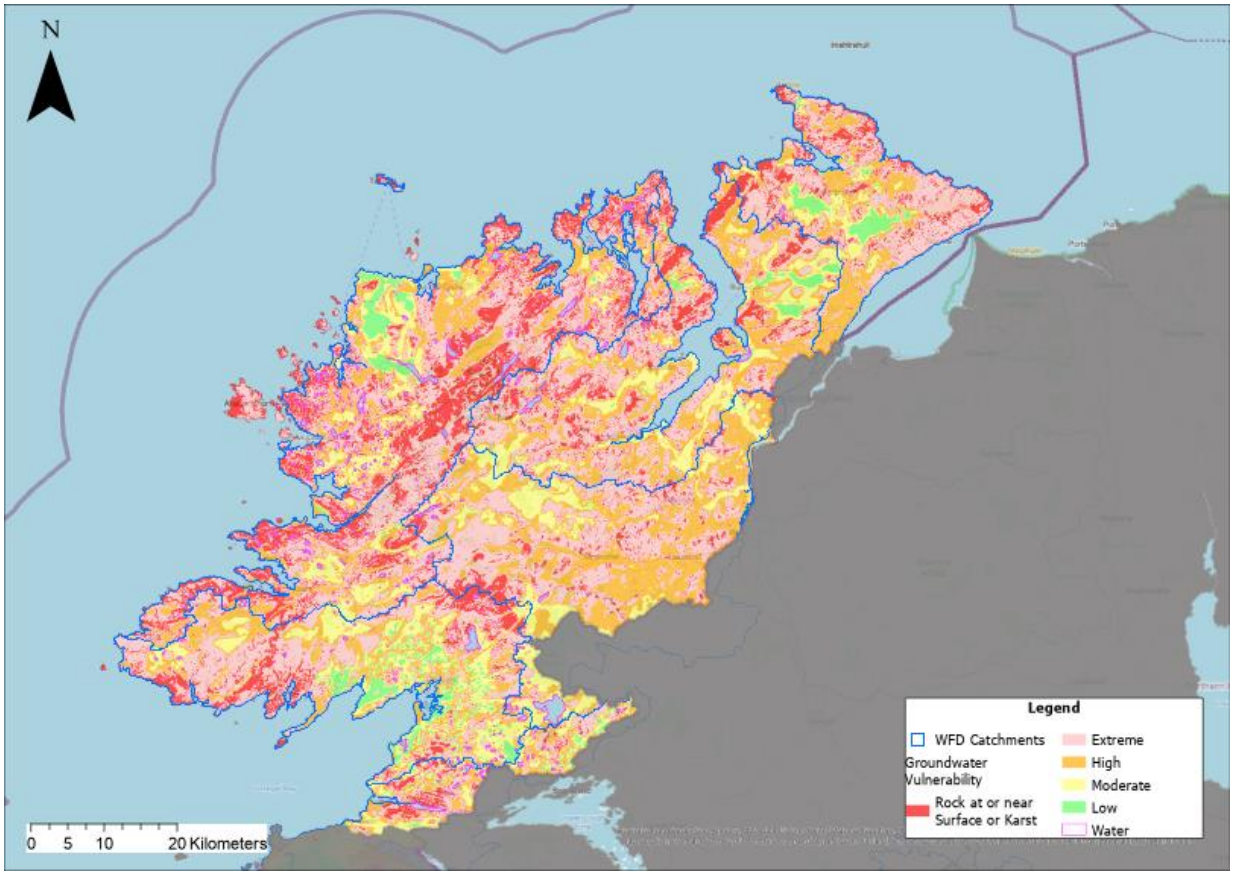



**Figure 6-4 Groundwater Vulnerability**

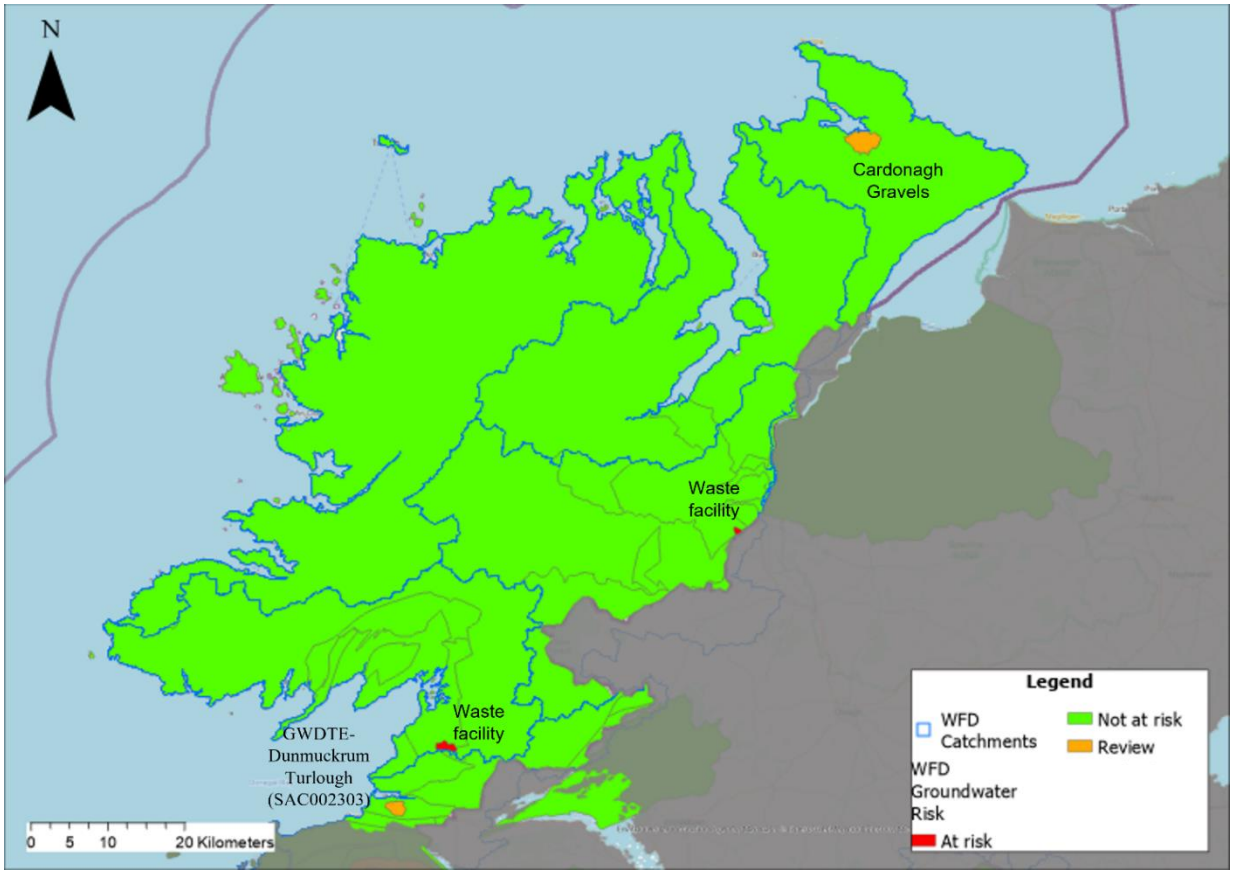



**Figure 6-5 WFD Groundwater Risk 2016-2021.**

### 6.1.3 Protected areas

Special Areas of Conservation (SAC), Special Areas of Protection (SPA), National Heritage Areas (NHA) and proposed National Heritage Areas (pNHA) in Co. Donegal are shown in Figure 6-6. There are 46 designated SACs, 21 SPAs and 12 NHA (bogs) in the county.

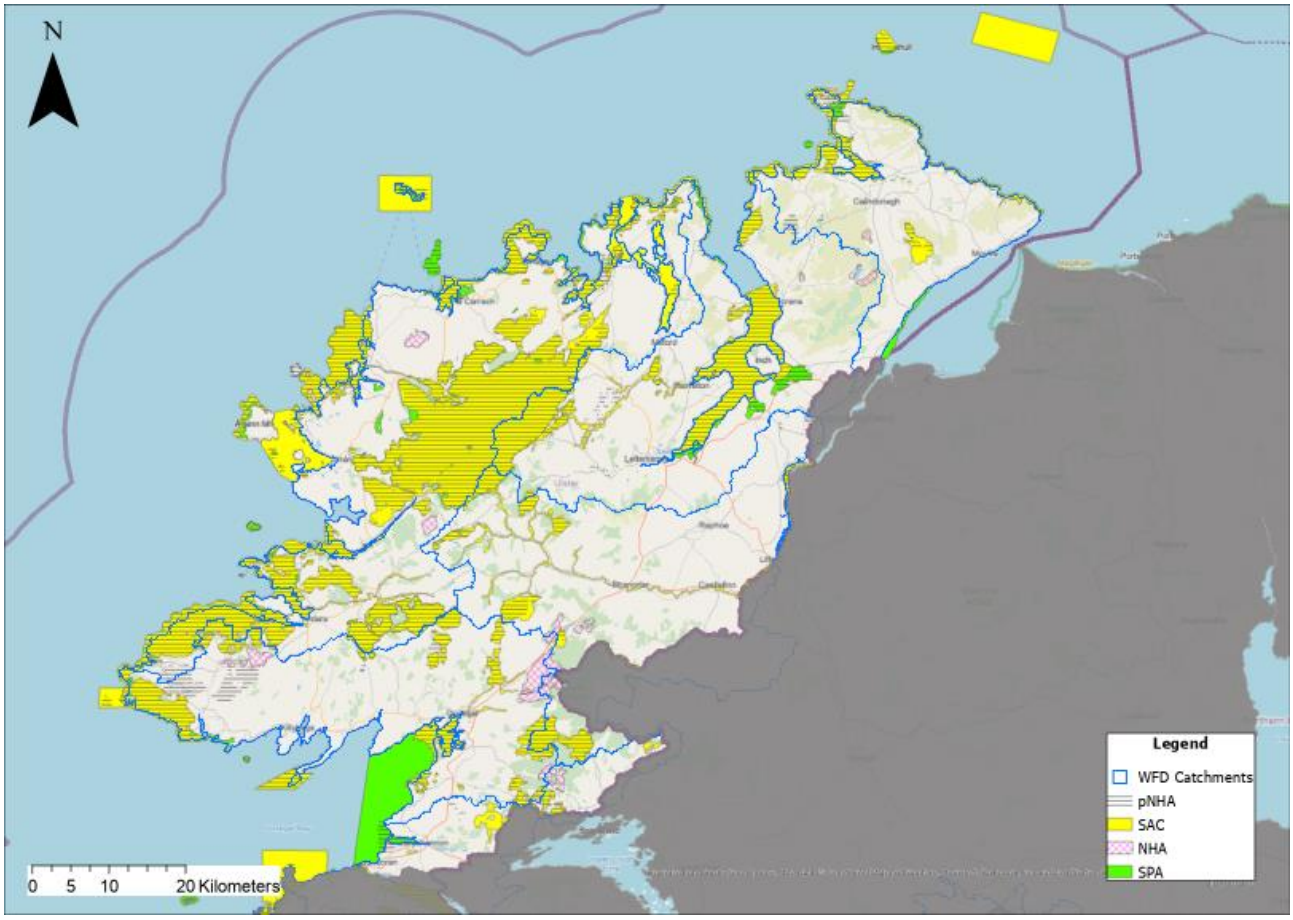



**Figure 6-6 WFD Register of Protected Areas**

### 6.1.4 Wastewater treatment plants

Figure 6-7 shows the location of the EPA licensed urban wastewater treatment plants (UWWT). An assessment of these plants per catchment is carried out in the following sections.

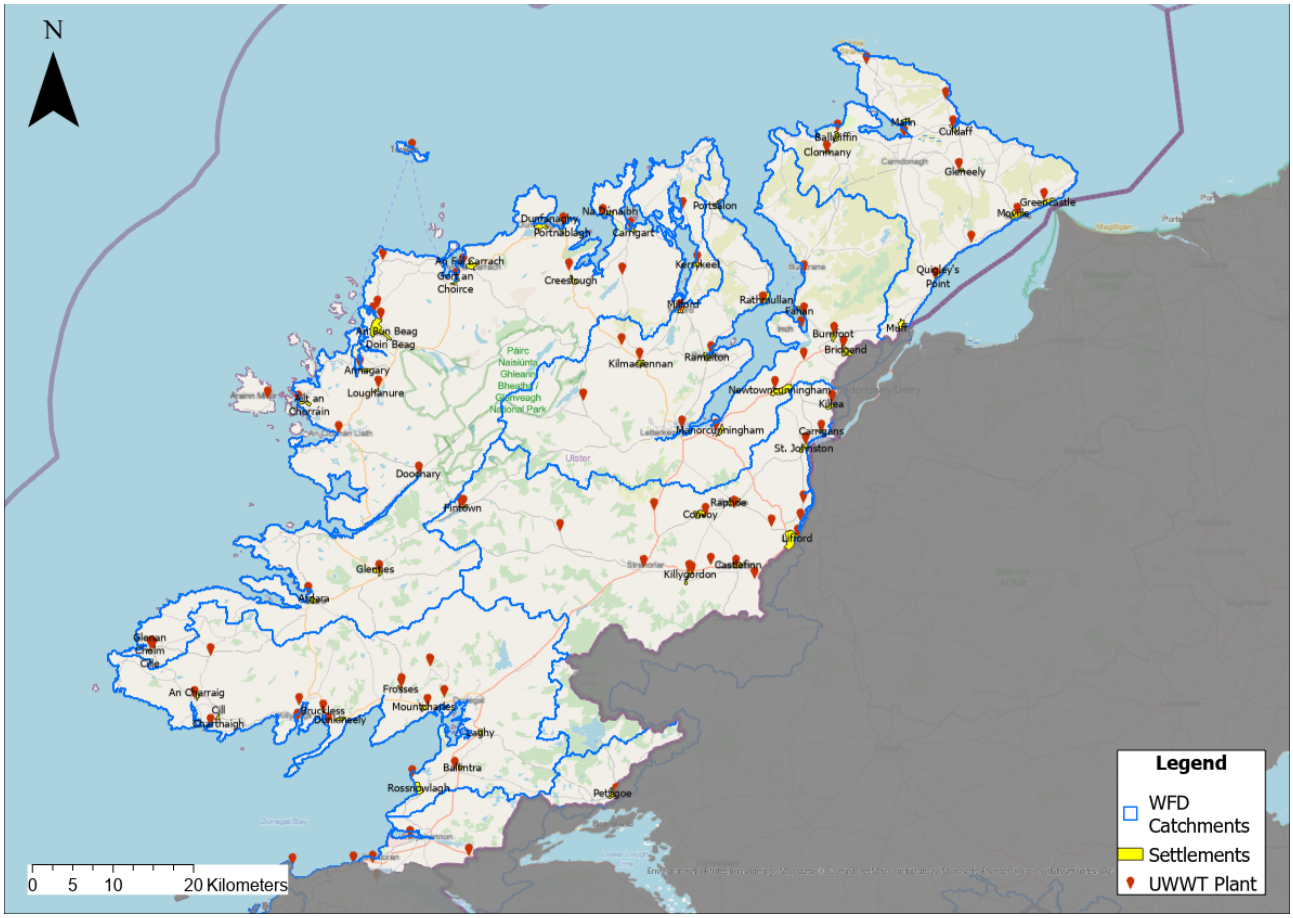



**Figure 6-7 Urban wastewater Treatment Plants location**

### 5.2.1. HA 01 Foyle catchment WFD assessment

The Foyle catchment is a cross border with a surface area of 2,919km$^2$, from which 914km$^2$ are located within the Republic of Ireland (RoI). The largest urban centres in the catchment are Ballybofey and Stranorlar. The population in the RoI is approximately 29,650, with a population density of 32 people per km$^2$. The part of the catchment located in Donegal is largely mountainous and is underlain by granites and metamorphic rocks of various types that are relatively poor aquifers [12].

The water quality assessment, risk, key issues and significant pressures for the Foyle catchment is summarize in the 3rd Cycle Draft Foyle Catchment report (2021)[13]. The catchment report was used as the main source of information for this section, however since the report is based on 2013-2018 data, the information was updated with the EPA catchments interactive Dashboard[14] as well as the WFD Status and WFD Risk 2016-2021assessment[15].

Foyle catchment comprises 9 subcatchments (Table 6-1), with 41 rivers, five lakes, one transitional waterbody and 14 groundwater bodies.

[12] EPA, 2021. 3rd Cycle Draft Foyle Catchment report. 35 P. Available online: <Foyle (catchments.ie) >

[13] EPA, 2021. 3rd Cycle Draft Foyle Catchment report. 35 P. Available online: <Foyle (catchments.ie) >

[14] EPA Catchments.ie. < Catchments.ie - Water, from source to sea.>

[15] Water Framework Directive-Data. Available online: < (6) WFD Application - Data Download (edenireland.ie)>

**Table 6-1 Subcatchments comprised in the Foyle catchment.**

| Subcatchment ID | Subcatchment Name |
|---|---|
| 01_1 | MourneBeg_SC_010 |
| 01_2 | Finn [Donegal]_SC_030 |
| 01_3 | Finn [Donegal]_SC_020 |
| 01_4 | MourneBeg_SC_020 |
| 01_5 | LeaghanyRiver_SC_010 |
| 01_6 | Deele [Donegal]_SC_010 |
| 01_7 | Finn [Donegal]_SC_040 |
| 01_8 | Finn [Donegal]_SC_010 |
| 01_9 | JohnstonStream_SC_010 |

#### *6.1.4.1 Risk*

In total there are 61 waterbodies in the Foyle Catchment and 28 (49%) are *At Risk*, 14 (23%) in Review and 19 (28%) are *Not at Risk*.

***Surface waters***

For the 41 river waterbodies in the catchment, three (7%) are *Not at Risk*, 11 (27%) are in *Review* and 27 (66%) are At Risk.

For the five lake waterbodies in the catchment, three (60%) are *Not at Risk* and two (40%) are in *Review*.

The only transitional waterbody (Foyle and Faughan Estuaries) in the catchment is in Review.

Overall there is an increase in three At Risk waterbodies, an increase of one Review waterbody, and a reduction of four *Not at Risk* waterbodies between Cycle 2 and Cycle 3.

***Groundwater***

In Cycle 3, for the 14 ground waterbodies, 13 (93%) are *Not at Risk* and one (7%) is *At Risk* (Waste Facility (W0062-01). The Waste Facility (W0062-01) groundwater body underlies a very small proportion of the Foyle Catchment (HA01).

In Cycle 2, there was one groundwater body (Waste Facility (W0062-01)) At Risk in this catchment, one in *Review* and 12 *Not At Risk*.

***High Status Objective Waterbodies***

There are no High Status objective waterbodies in this catchment.

#### *6.1.4.2 Significant issues and pressures in At Risk Waterbodies*

Excess nutrients and chemical impacts remain the most prevalent issues in the Foyle catchment with excess nutrients impacting 18 surface waterbodies in Cycle 3 and chemicals impacting 17 waterbodies in Cycle 3 (Figure 6-8). Morphology is impacting eight surface waterbodies, organics are impacting eight waterbodies while hydrology and other, are impacting five and one waterbodies, respectively and acidification is impacting three waterbodies.

For the one At Risk groundwater body (Waste Facility (W0062-01)) the significant issue is nutrient pollution.

The are no significant issues impacting lakes or transitional waterbodies.

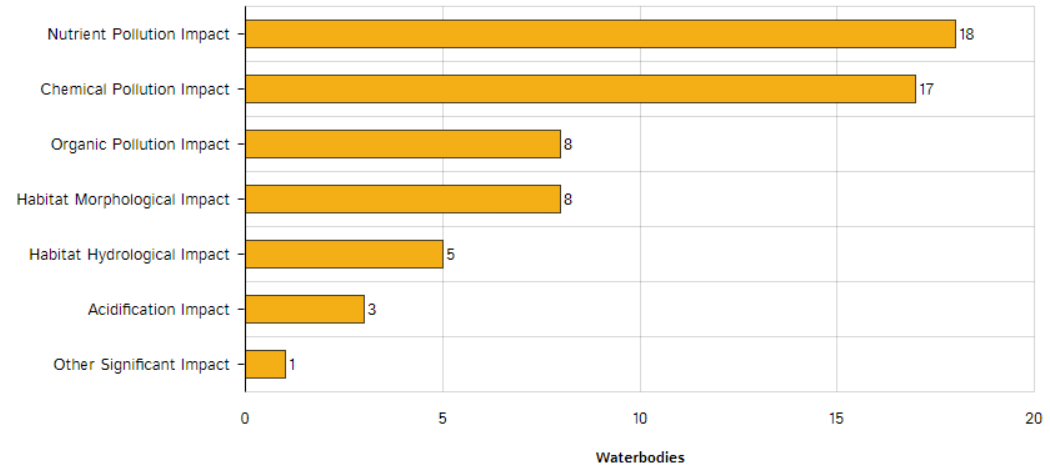



**Figure 6-8 Significant issues across At Risk surface WBs in the Foyle catchment in Cycle 3 (2016-2021)[16]**

Figure 6-9 shows a breakdown of the number of Risk waterbodies in each significant pressure category. Agriculture is the main pressure impacting water bodies in the Foyle catchment. The issues related to farming in this catchment are predominantly due to chemical impacts and phosphorous loss from pastures to surface waters. Pesticides have also been found in two water bodies (Finn River, Stranagoppoge_010).

For the one At Risk groundwater body (Waste Facility (W0062-01)) the significant pressure is ammonia from a waste licensed site (Churchtown Landfill).

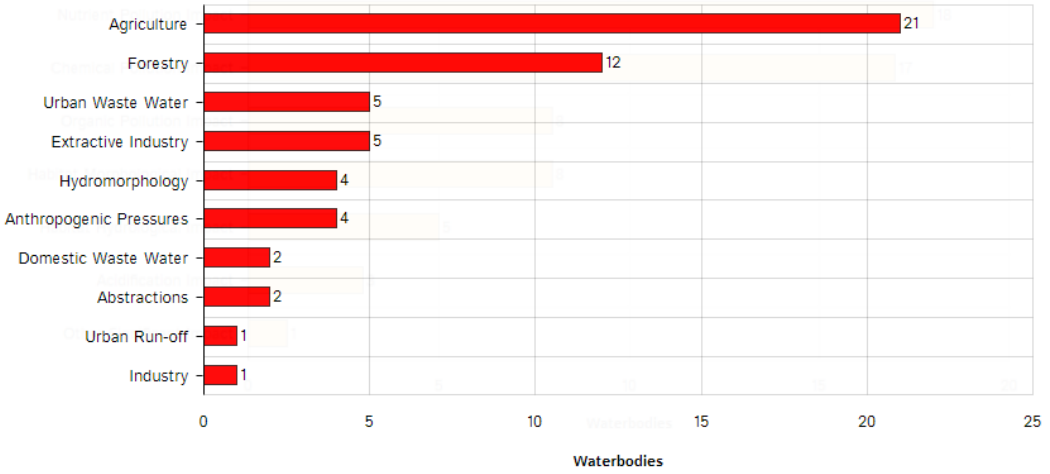



**Figure 6-9 Significant pressures across At Risk surface WBs in the Foyle catchment in Cycle 3 (2016-2021)[17]**

### *6.1.4.3 Load reduction assessment*

In the catchment pasture, forestry and arable land is responsible for 62%, 11% and 10% of the nitrogen load respectively while land in pasture, forestry and peat contribute 29%, 26% and 17% of the phosphorus loadings for the catchment respectively.

The national load reduction assessment indicated that 10 of the 46 catchments require N reductions to restore some transitional and coastal (TRAC) waterbodies. Nitrogen load reduction to meet TRAC WFD objectives are not required in the Foyle Catchment. For phosphorous, some areas (Figure 17 of the catchment report) where agricultural measures should be targeted have been identified. Further modelling work is required to determine precisely what load reduction is required.

[16] EPA, 2021. 3rd Cycle Draft Foyle Catchment report. 35 P. Available online: <Foyle (catchments.ie) >

[17] EPA, 2021. 3rd Cycle Draft Foyle Catchment report. 35 P. Available online: <Foyle (catchments.ie) >

### 6.1.4.4 *Protected areas*

***Drinking water***

There is one surface waterbody (Mourne DL) 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.

***Bathing Waters***

There are no bathing waters in the catchment identified under the Bathing Water Regulations 2008.

***Shellfish Areas***

There are no designated shellfish areas in the catchment.

***Natura 2000 sites***

There are 6 SACs in this catchment all of which have water dependent habitats or species (Figure 6-6). The SACs were assessed for associated water dependent habitats and species using their 2013-2018 status. The results are presented in Table 6-2.

**Table 6-2 Natura 2000 Network Assessment Summary – Foyle catchment**

| Water Body Type | Total No. | Meeting the Requirements | Did not meet the Requirements | Unknown* |
|---|---|---|---|---|
| Rivers | 24 | 2 | 14 | 8 |
| Lakes | 4 | 3 | 1 | 0 |
| Transitional & Coastal | 0 | 0 | 0 | 0 |

* Water body status unassigned

***Nutrient Sensitive Areas***

There are no designated Nutrient Sensitive Areas in the catchment.

### 6.1.4.5 *Heavily modified Waterbodies (HMWB) and Artificial Waterbodies (AWBs)*

There are currently no heavily modified water bodies (HMWBs) or artificial waterbodies present in the Foyle catchment.

### 6.1.4.6 *Further characterisation actions assigned at Cycle 2*

There were two Areas for Action (Fin (Donegal) and St Johnstons), comprising of 21 waterbodies, selected for further characterisation and action in the catchment for the 2nd Cycle River Basin Management Plan. Table 6-3 shows the subcatchment, number of water bodies and the reasons for selection.

**Table 6-3 2nd Cycle Areas for Action in the Foyle catchment[18].**

| 2nd Cycle Area for Action | Number of waterbodies | Sub-catchment | Local Authority | Reason for selection |
|---|---|---|---|---|
| Finn (Donegal) | 20 | 01_2, 01_3, 01_7, 01_8 | Donegal | • Five deteriorated water bodies.<br>• Three water bodies on the main channel only dropped to less than Good status in the last monitoring cycle.<br>• Starts at the Headwaters.<br>• Supports salmonid and SAC protected areas.<br>• Build on planned improvements in Ballybofey/Stranorlar WWTP upgrade. Cross Border Partnership with Loughs Agency ongoing.<br>• Supports improvement of the Foyle-Faughan estuary |

[18] EPA, 2021. 3rd Cycle Draft Foyle Catchment report. 35 P. Available online: <Foyle (catchments.ie) >

| 2nd Cycle Area for Action | Number of waterbodies | Sub-catchment | Local Authority | Reason for selection |
|---|---|---|---|---|
| St Johnstons | 1 | 01_9 | Donegal | • One deteriorated water body<br>• Build on completed St Johnstons WWTP improvements, restore 1 deteriorated WB.<br>• Possible quick win.<br>• Supports improvement of the Foyle-Faughan estuary. |

#### *6.1.4.7 WWTP status*

Urban Waste Water Treatment Agglomerations have been identified as a significant pressure in five At Risk river waterbodies (Finn (Donegal)_030, Finn (Donegal)_060, Finn (Donegal)_070, Finn (Donegal)_080 and Swilly Burn_010).

Domestic waste water has been identified as a significant pressure in two river waterbodies (Cummirk_020, Deele (Donegal)_030 and Finn (Donegal)_080). The significant issues arise from inadequate domestic waste water systems, many of which are sited on areas of high pollution impact potential/poorly draining soils, that result in enrichment and potential for microbial/organic contamination. The Finn (Donegal)_080 is being impacted by the Curragh Housing Scheme and Killygordon WWTP.

Cloghan/Brockagh (A0486), Killygordon (D0518) and Curragh Housing Scheme (A0364) have been added to the list of significant pressures in Cycle 3.

Table 6-4 presents a summary of the current status of the WWTPs and the corresponding receiving waterbodies.

**Table 6-4 WWTP current capacity and compliance, and receiving water quality in the HA 01 Foyle Catchment**

| WWTP Information | | | | | AER 2021 | | | | Receiving water body | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Settlement** | **Census pop. (2016)** | **Wastewater Treatment Plant (WWTP)** | **Reg #** | **Indication of Available Capacity (June 2022)** | **Organic capacity – As constructed** | **Organic capacity – collected load (peak week)** | **Organic capacity – Remaining** | **Compliance Status** | **Receiving water body** | **Ecological status (2016-2021)** | **WFD Risk (2016-2021)** |
| Ballybofey-Stranorlar | 4,852 (7,774 in 2022) | Ballybofey/Stranorlar WWTP | D0120 | • Green | 4,000 (9,200 recent upgrade*) | 6,167 | 0 | Non-Compliant | Finn (Donegal)_060 | Poor | At risk |
| Lifford | 1,626 | Lifford WWTP | D0352 | • Green | 1550 | 1806 | 0 | Non-compliant | Finn River | Moderate | At risk |
| Convoy | 1,526 | Convoy WWTP | D0344 | • Green | 3,500 | 1,575 | 1,925 | Non-Compliant | Deele (Donegal)_030 | Moderate | At Risk |
| Raphoe | 1,089 | Raphoe WWTP | D0209 | • Red | 800 | 1,759 | 0 | Non-Compliant | Swilly Burn_010 | Poor | At Risk |
| Castlefinn | 705 | Castlefinn WWTP | D0514 | • Red | 600 | 780 | 0 | Non-Compliant | Finn (Donegal)_080 | Poor | At Risk |
| Killygordon | 614 | Killygordon WWTP | D0518 | • Green | 600 | 347 | 253 | Compliant | Finn (Donegal)_070 | Moderate | At Risk |
| Killygordon | 614 | Killygordon WWTP | D0518 | • Green | 600 | 347 | 253 | Compliant | Finn (Donegal)_080 | Poor | At Risk |
| Kildrum | 534 | Killea WWTP | D0537 | • Amber | 800 | 527 | 273 | Non-compliant (2019) | Carrigans_010 | Poor | At Risk |
| St. Johnston | 523 | St. Johnston WWTP | D0538 | • Green | 1050 | 334 | 716 | Compliant (2019) No AER for 2021 | St Johnston_010 | Good | At Risk |
| Carrigan's | 331 | | A0307 | • Green | - | - | - | N/A | Carrigans_010 | Poor | At Risk |

| WWTP Information | | | | | AER 2021 | | | | Receiving water body | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Settlement** | **Census pop. (2016)** | **Wastewater Treatment Plant (WWTP)** | **Reg #** | **Indication of Available Capacity (June 2022)** | **Organic capacity – As constructed** | **Organic capacity – collected load (peak week)** | **Organic capacity – Remaining** | **Compliance Status** | **Receiving water body** | **Ecological status (2016-2021)** | **WFD Risk (2016-2021)** |
| Cloghan/Brockagh | Unavailable | Cloghan/Brockagh WWTP | A0486 | • Green | - | - | - | N/A | Finn (Donegal)_030 | Moderate | At Risk |
| Coolatee | Unavailable | - | A0525 | • Red | - | - | - | N/A | Swilly Burn_030 | Poor | Review |
| Drumkeen | 193 | Drumkeen WWTP | A0365 | • Green | - | - | - | N/A | Deele (Donegal)_020 | Moderate | At Risk |
| Curragh Housing Scheme | Unavailable | - | A0364-01 | | - | - | - | N/A | Finn (Donegal)_070 | Moderate | At risk |
| Curragh Housing Scheme | Unavailable | - | A0364-01 | | - | - | - | N/A | Finn (Donegal)_080 | Poor | At risk |
| Curragh Housing Scheme | Unavailable | - | A0364-01 | | - | - | - | N/A | Finn (Donegal)_070 | Moderate | At risk |
| Curragh Housing Scheme | Unavailable | - | A0364-01 | | - | - | - | N/A | Finn (Donegal)_080 | Poor | At risk |
| Doneyloop Housing Scheme | Unavailable | - | A0485-01 | | - | - | - | N/A | Dresnagh_010 | Good | Review |
| Fintown No. 2 Housing Scheme | Unavailable | - | A0492-01 | | - | - | - | N/A | Finn (Donegal)_010 | Good | Review |
| Fintown No.1 Housing Scheme | Unavailable | - | A0484-01 | | - | - | - | N/A | Finn (Donegal)_010 | Good | Review |
| Porthall Housing Scheme | Unavailable | - | A0472-01 | | - | - | - | N/A | Swilly Burn_030 | Poor | Review |

*AP Ballybofey/Stranorlar 2024 -2030-Draft

### 6.1.5 HA 36 Erne catchment WFD assessment

The Erne catchment is a cross border, with 2,512km$^2$ located within the RoI. The largest urban centre is Cavan Town and there are other main urban centres including Bundoran, Ballyshannon, Clones, Ballybay, Cootehill and Belturbet. The total population in the RoI is approximately 85,992 with a population density of 34 people per km².

The water quality assessment, risk, key issues and significant pressures for the Erne catchment is summarize in the 3rd Cycle Draft Erne Catchment report (2021)[19]. The catchment report was used as the main source of information for this section, however since the report is based on 2013-2018 data, the information was updated with the EPA catchments interactive Dashboard[20] as well as the WFD Status and WFD Risk 2016-2021assessment[21]. The information provided in this section refers only to the portion of the Erne catchment within Co. Donegal[22].

Erne catchment comprises 4 subcatchments (Table 6-6) within the Erne catchment within Co. Donegal boundaries, with six rivers, five lakes, two transitional, one coastal waterbody and two groundwater bodies.

**Table 6-5 Subcatchments comprised in the Erne catchment in Co. Donegal.**

| Subcatchment ID | Subcatchment Name |
|---|---|
| 36_20 | Drowes_SC_010 |
| 36_25 | Billary_SC_010 |
| 36_26 | TullynasiddaghLoughStream_SC_010 |
| 36_27 | Erne_SC_050 |

#### *6.1.5.1 Risk*

In total there are 16 waterbodies in the Erne Catchment within Co. Donegal and six (38%) are currently At Risk, 8 (50%) in Review and two (13%) are Not At Risk.

***Surface waters***

For the 14 rivers waterbodies, 9 (64%) are At Risk and 4 (36%) are in Review.

There are three lake and one coastal waterbody in Review. Two lakes, the Golagh (IE_NW_36_715) and Tullynassidagh (IE_NW_36_651) are At Risk due to forestry and extractive industry, respectively.

There are no transitional waterbodies in the catchment within Co. Donegal.

***Groundwater***

The groundwater body GWDTE-Dunmuckrum Turlough (SAC002303) is in Review and the Waste Facility (W0024-03) is At Risk. Groundwater contribution of phosphate coming from septic tanks has been identified as a potential pressure in the Dunmuckrum Turlough.

***Heavily modified Waterbodies (HMWB)***

Assaroe HMWB is currently in Review and Erne Estuary is Not at Risk of not meeting the Environmental Objective

[19] EPA, 2021. 3rd Cycle Draft Erne Catchment report. 35 P. Available online: <Erne (catchments.ie) >

[20] EPA Catchments.ie. < Catchments.ie - Water, from source to sea.>

[21] Water Framework Directive-Data. Available online: < (6) WFD Application - Data Download (edenireland.ie)>

[22] EPA, 2021. 3rd Cycle Draft Erne Catchment report. 35 P. Available online: <Erne (catchments.ie) >

***High Status Objective Waterbodies***

No high-Status Objective Waterbodies are located in Erne catchment in Co. Donegal.

### *6.1.5.2 Significant issues and pressures in At Risk Waterbodies*

Excess nutrients remain the most prevalent issues in the Erne catchment impacting four waterbodies in Cycle 3. Organic pollution is impacting two waterbodies. Chemical pollution is impacting Erne River, where 2-methyl-4-chlorophenoxyacetic acid (MCPA) detected in the river and in the lake which it flows into. Figure 6-10 shows an overview of the significant issues in all the Erne catchment.

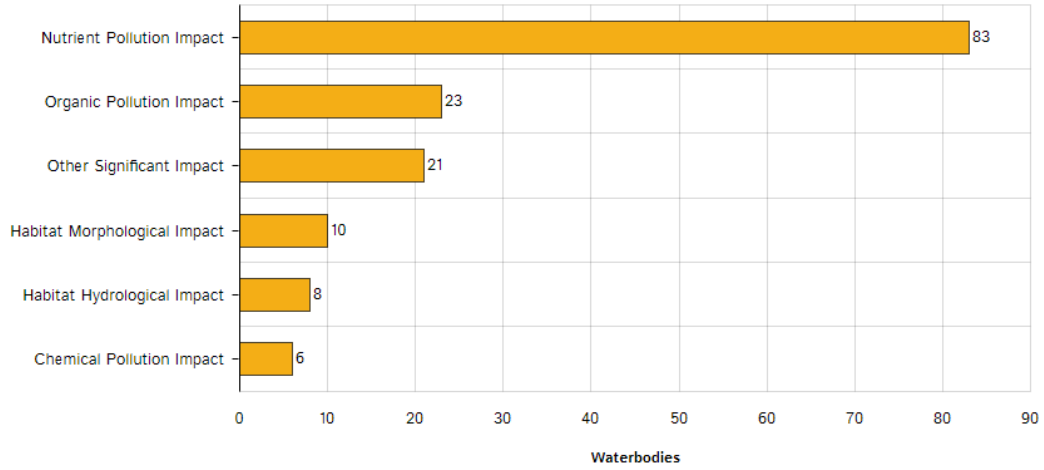



**Figure 6-10 Significant issues across all At Risk WBs in the Erne catchment in Cycle 3** [23]

Figure 6-11 shows a breakdown of the number of Risk waterbodies for all the Erne catchment in each significant pressure category, which is representative of the pressures of the Erne catchment in Co. Donegal. The significant pressure affecting the greatest number of waterbodies is agriculture, followed by, hydromorphology, urban run-off, urban waste water, domestic waste water, invasive species (other), forestry, industry and peat. The issues related to farming in this catchment are predominantly due to phosphorus (and ammonia) loss from pastures to surface waters from, for example, direct discharges, or runoff from yards, roadways or other compacted surfaces, or runoff from poorly draining soils. Sediment can also be a problem from land drainage works, bank erosion from animal access or stream crossings.

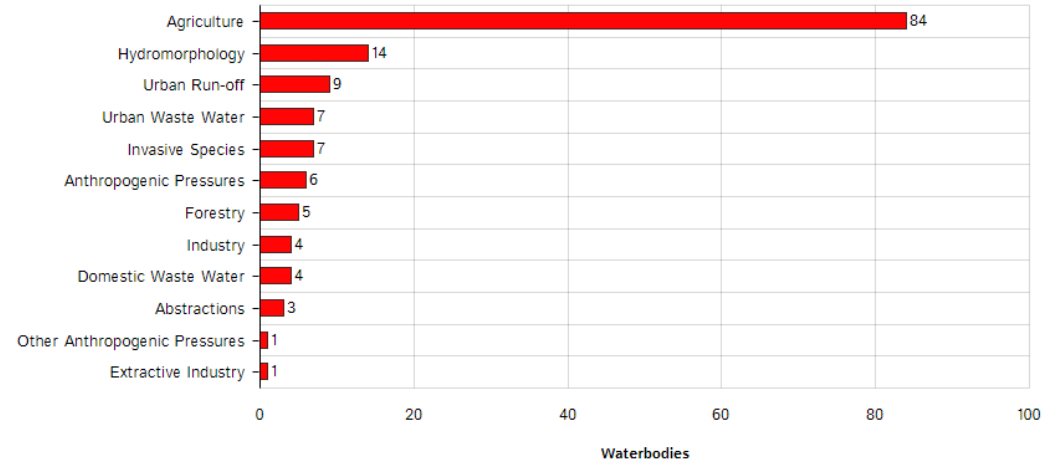



**Figure 6-11 Significant pressures across all At Risk WBs in the Erne catchment**[24]

[23] EPA, 2021. 3rd Cycle Draft Erne Catchment report. 35 P. Available online: <Erne (catchments.ie) >

[24] EPA, 2021. 3rd Cycle Draft Erne Catchment report. 35 P. Available online: <Erne (catchments.ie) >

#### *6.1.5.3 Load reduction assessment (all the Erne catchment)*

In the Erne (including county Donegal, Cavan and Monaghan) catchment pasture and deposition on water are responsible for 74% and 9% of the nitrogen load respectively while land in pasture, forestry and discharges from urban waste water contribute 48%, 13% and 10% of the phosphorus loadings for the catchment respectively.

The national load reduction assessment indicated that that 10 of the 46 catchments require N reductions to restore some TRAC waterbodies. Nitrogen load reduction to meet TRAC WFD objectives are not required in the Erne Catchment. For phosphorous further modelling work is required to determine precisely what load reduction are required. Some areas (Figure 18of the catchment report) where agricultural measures should be targeted have been identified. Further modelling work is required to determine precisely what load reduction is required.

#### *6.1.5.4 Heavily modified Waterbodies (HMWB) and Artificial Waterbodies (AWBs)*

There are currently two heavily modified water bodies (HMWBs) in the catchment in Co. Donegal due to power generation – Assaroe Lake and Erne Estuary. Ecological status was classified as good for both Assaroe Lake and Erne Estuary in 2016-2021.

There are no Artificial Waterbodies (AWBs) present in the Erne Catchment in Co. Donegal.

#### *6.1.5.5 Further characterisation actions assigned at Cycle 2*

No Areas for Action were identified for the Erne catchment within Co. Donegal.

#### *6.1.5.6 Protected Areas*

***Drinking water***

There are three 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: Columbike Lake (IE_NW_36_710), Unshin Lake (IE_NW_36_712) and Aghalough Lake (IE_NW_36_142).

One lake waterbody in the catchment did not meet the DWPA objective in 2019.

There are two groundwater protection Areas: Ballyshannon East (IEGBNI_NW_G_011) and Ballyshannon (IE_NW_G_072).

There are two Supply Source Protection Area: Ballyshannon PWS and Pettigo PWS.

***Bathing Waters***

There is one marine bathing waters in Bundoran which had an Excellent classification in 2020.

***Shellfish Areas***

There are no designated shellfish areas in the catchment.

***Natura 2000 sites***

There are 4 SACs in this catchment within Co. Donegal, 12 of which have water dependent habitats or species (Figure 6-6).

There is one groundwater body (GWDTE-Dunmuckrum Turlough (SAC002303)) delineated and assessed as Groundwater Dependent Terrestrial Ecosystems for this catchment. The groundwater body is at Good Status (2016-2021).

***Nutrient Sensitive Areas***

There are no Nutrient Sensitive Areas in the catchment within Co. Donegal boundary.

#### *6.1.5.7 WWTP status in the catchment*

Urban Waste Water Agglomerations have been identified as a significant pressure in three At Risk rivers: Erne (UKGBNI1NW363604085), Bradoge_020 (IE_NW_35B070200) and Termon River (Pettigoe) (UKGBNI1NW363604064). One of these At Risk waterbodies (Bradoge_020) is impacted by the Bundoran Agglomeration, which was upgraded 2018, however, further upgrades are scheduled in 2022. In addition, the Bradoge_020 River is also impacted by domestic waste water. The significant issues arise from inadequate domestic waste water systems, many of which are sited on areas of high pollution impact potential/poorly draining soils, that result in enrichment and potential for microbial/organic contamination.

Table 6-6 presents a summary of the current status of the WWTPs and the corresponding receiving waterbodies.

**Table 6-6 WWTP current capacity and compliance, and receiving water quality in the HA 36 Erne Catchment in Co. Donegal**

| WWTP Information | | | | | AER 2021 | | | | Receiving water body | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Settlement** | **Census pop. (2016)** | **Wastewater Treatment Plant (WWTP)** | **Reg #** | **Indication of Available Capacity (June 2022)** | **Organic capacity – As constructed** | **Organic capacity – collected load (peak week)** | **Organic capacity – Remaining** | **Compliance Status** | **Receiving water body** | **Ecological status (2016-2021)** | **WFD Risk (2016-2021)** |
| Ballyshannon | 2,299 (3,432 in 2022) | Ballyshannon WWTP | D0128 | • Green | 6,100 | 28,554 | 3,245 | Compliant | Erne | Moderate | At risk |
| Bundoran | 1,963 (3,296 in 2022; 2,296 is the projected for 2030*) | Bundoran WWTP | D0130 | • Green | 12,000 | 7,030 | 4,970 | Compliant | Bundoran Bay | High | Review |
| Bundoran | | Combine Sewer Overflows | D0130 | - | - | - | - | - | Bradoge_020 | Good | At Risk |
| Pettigo | 239 | Pettigo WWTP | A0461 | • Green | - | - | - | - | Termon River (Pettigoe) | Good | At Risk |
| Clyhore HS | - | - | A0488 | - | - | - | - | - | Erne | Moderate | At risk |

* Bundoran AP 2024-2030-Draft

### 6.1.6 HA 37 Donegal Bay North Catchment WFD assessment

The Donegal Bay North catchment includes the area drained by all streams entering tidal water between Kildoney Point and Rossan Point, draining a total area of 804km². The largest urban centre in the catchment is Donegal Town followed by Killybegs. The total population of the catchment is approximately 18,646 with a population density of 23 people per km².

This catchment comprises the rugged landscape surrounding the northern and eastern sides of Donegal Bay from the 600m high sea cliffs of Slieve League in the west to the southern slopes of the Bluestack Mountains in the northeast. A large proportion of the lowlands in the catchment are characterised by an extensive drumlin landscape which indicates the seaward movement of ice in this area during the last ice age[25].

The water quality assessment, risk, key issues and significant pressures for the Erne catchment is summarize in the 3rd Cycle Draft Donegal Bay North Catchment report (2021)[26]. The catchment report was used as the main source of information for this section, however since the report is based on 2013-2018 data, the information was updated with the EPA catchments interactive Dashboard[27] as well as the WFD Status and WFD Risk 2016-2021assessment[28].

Donegal Bay North catchment comprises five subcatchments (Table 6-7), with 50 rivers, 12 lakes, four transitional, six coastal waterbodies and eight groundwater bodies. There is one heavily modified water body (HMWB) in the catchment – Killybegs Harbour due to port facilities.

**Table 6-7 Subcatchments comprised in the Donegal Bay North catchment.**

| Subcatchment ID | Subcatchment Name |
|---|---|
| 37_1 | Ballintra_SC_010 |
| 37_2 | Eske_SC_010 |
| 37_3 | Stragar_SC_010 |
| 37_4 | Glen[Carrick]_SC_010 |
| 37_5 | Eany[Water]_SC_010 |

#### *6.1.6.1 Risk*

In total, there are 85 waterbodies in Donegal Bay North Catchment and 18 (22%) are currently At Risk, 15 (15%) in Review and 52 (62%) are Not At Risk.

***Surface waters***

For the 50 rivers waterbodies, 17 (34%) are At Risk, ten (20%) are in Review and 23 (46%) are Not At Risk.

For the 12 lake waterbodies, three (25%) are in Review and nine (75%) are Not At Risk. Eske, Croagh and Dunragh are the lake waterbodies in Review.

For the four transitional waterbodies, one (25%) is in Review (Durnesh Lough transitional waterbody) and three (75%) are Not At Risk.

From the coastal waterbodies there is one under Review (Killybegs Harbour) and three are Not At Risk.

[25] EPA, 2021. 3rd Cycle Draft Donegal Bay North Catchment report. 35 P. Available online: <Donegal Bay North (catchments.ie) >

[26] EPA, 2021. 3rd Cycle Draft Donegal Bay North Catchment report. 35 P. Available online: <Donegal Bay North (catchments.ie) >

[27] EPA Catchments.ie. < Catchments.ie - Water, from source to sea.>

[28] Water Framework Directive-Data. Available online: < (6) WFD Application - Data Download (edenireland.ie)>

***Groundwater***

For the 13 groundwater bodies, one (8%) is At Risk (Waste Facility (W0024-03)) and 12 (92%) are Not At Risk.

***Heavily modified waterbodies***

The catchment (Killybegs Harbour) was classified as being At Risk of not meeting its Environmental Objective in Cycle 2 but since the improvement in status it is now deemed Not At Risk for Cycle 3.

### *6.1.6.2 Significant issues and pressures in At Risk Waterbodies*

Excess nutrients and sediment impacts remain the most prevalent issues in the Donegal Bay North catchment (Figure 6-12) impacting 10 waterbodies. Chemical issues are impacting eight waterbodies, while morphological and hydrological issues are each impacting four waterbodies. For river waterbodies, the main significant issues are nutrient impacts (10), chemical pollution (8), organic pollution (5), morphological impacts (4), hydrological (4), and other impacts (7).

For the one At Risk groundwater body (Waste Facility (W0024-03)) the significant issue is nutrient pollution and Diminution of quality of associated surface waters for chemical reasons.

In Cycle 3 for High Status Objective waterbodies nutrient and other issues are each impacting two of the three High Status Objective waterbodies currently At Risk.

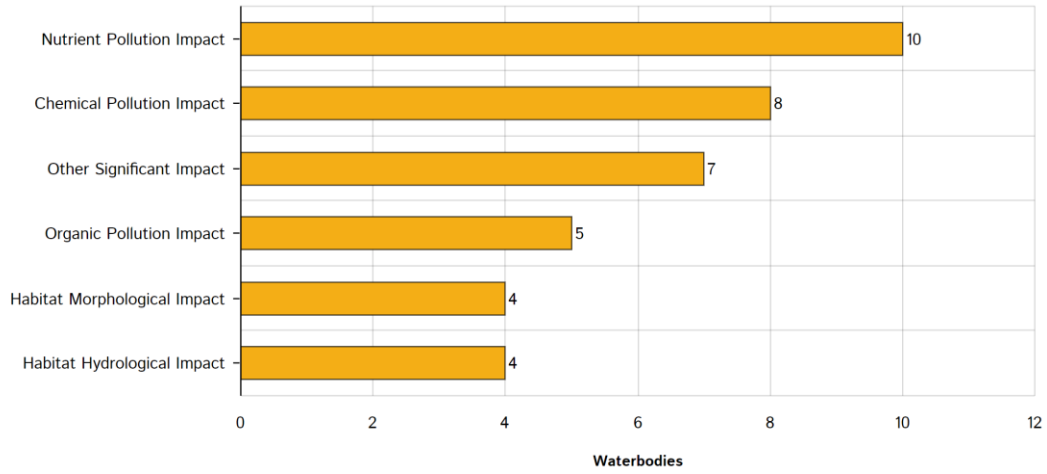



**Figure 6-12 Significant issues across all At Risk surface WBs in the Donegal Bay North catchment**

Figure 6-12 shows a breakdown of the number of Risk waterbodies in each significant pressure category. The significant pressure affecting the greatest number of waterbodies is agriculture followed by forestry, domestic waste water, hydromorphology, urban run-off, industry, mines and quarries and urban waste water. The primary issue related to farming in this catchment is diffuse phosphorus loss to water bodies in areas underlain by poorly draining soils and subsoils. There is also evidence of toxicity due to sheep dip (Cypermethrin) in several water bodies. Sediment is also an issue from land drainage works, bank erosion from animal access or stream crossings.

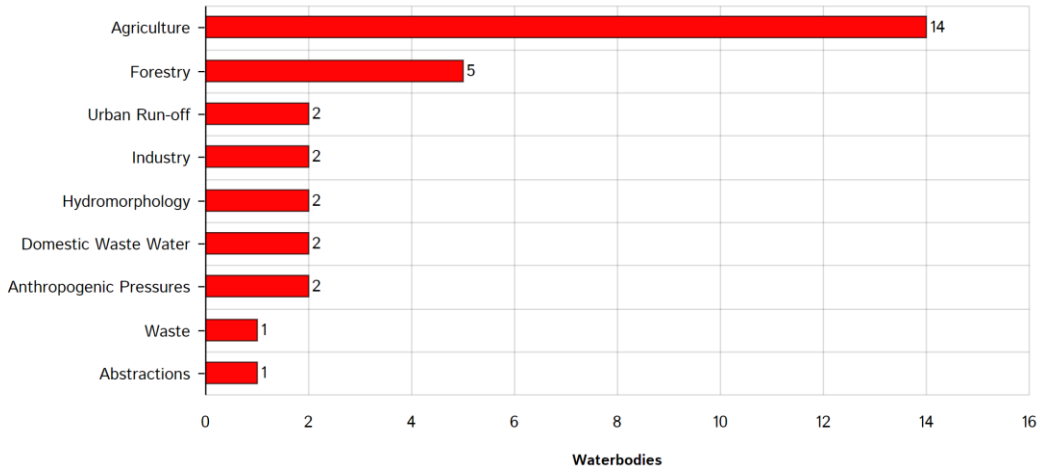



**Figure 6-13 Significant pressures across all At Risk WBs in the Donegal Bay North catchment**

### *6.1.6.3 Load reduction assessment*

In the catchment land in peat, forestry, discharges from urban waste water and pasture is responsible for 27%, 20%, 20% and 19% of the nitrogen load respectively while land in pasture, peat and discharges from urban waste water contribute 29%, 26% and 19% of the phosphorus loadings for the catchment respectively.

The national load reduction assessment indicated that 10 of the 46 catchments require N reductions to restore some TRAC waterbodies. Nitrogen load reduction to meet TRAC WFD objectives are not required in the Donegal Bay North Catchment. For phosphorous, some areas where agricultural measures should be targeted have been identified. Further modelling work is required to determine precisely what load reduction is required.

### *6.1.6.4 Protected Areas*

***Drinking water***

There are eight 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.

***Bathing Waters***

There are three marine bathing waters (Murvagh, Rossnowlagh & Fintra) in or directly adjacent to the catchment identified under the Bathing Water Regulations 2008. All three bathing water had an Excellent classification for 2021.

***Shellfish Areas***

There are three designated shellfish areas in the catchment: Inver Bay, Donegal Bay and McSwynes Bay.

***Natura 2000 sites***

There are 14 SACs in this catchment, 13 of which have water dependent habitats or species. The SACs were assessed for associated water dependent habitats and species using their 2013-2018 status. The results are presented in Table 6-8.

**Table 6-8 Natura 2000 Network Assessment Summary – Donegal Bay North catchment**

| Water Body Type | Total No. | Meeting the Requirements | Didi not meet the Requirements | Unknown* |
|---|---|---|---|---|
| Rivers | 8 | 5 | 3 | 0 |
| Lakes | 3 | 2 | 1 | 0 |
| Transitional & Coastal | 4 | 3 | 1 | 0 |

* Water body status unassigned

***Nutrient Sensitive Areas***

There are two NSAs in the catchment and these are downstream of two urban wastewater agglomerations: Killybegs Harbour and Bundoran Bay.

#### *6.1.6.5 Heavily modified Waterbodies (HMWB) and Artificial Waterbodies (AWBs)*

There is currently one designated heavily modified water body (HMWB) in the catchment (Killybegs Harbour) due to port facilities. It was classified as having Moderate Ecological Potential in 2010-2015, improved to Good in the 2016-2018 period. It is currently classified as Moderate according to 2016-2021 assessment.

#### *6.1.6.6 High Status Objective Waterbodies*

There are five At Risk High Status Objective waterbodies in the catchment for Cycle 3 (2016-2021). The main pressures impacting Bunlacky_010 river waterbody are agriculture, forestry and wastewater discharge from single houses and from Dunkineeley WWTP (A0556).

#### *6.1.6.7 Further characterisation actions assigned at Cycle 2*

There were three Areas for Action, comprising of 21 waterbodies, selected for further characterisation and action in the catchment for the 2nd Cycle River Basin Management Plan. The areas of action are Donegal SW & Murlins, Laghy Stream – Bridgetown and Lough Eske. Table 6-10 show the subcatchment, number of water bodies and the reasons for selection.

**Table 6-9 2nd Cycle Areas for Action in the Donegal Bay North catchment[29].**

| 2nd Cycle Area for Action | Number of waterbodies | Sub-catchment | Local Authority | Reason for selection |
|---|---|---|---|---|
| Donegal SW & Murlins | 10 | 37_4 | Donegal | • Eight deteriorated Water bodies.<br>• One of the deteriorated water bodies has a High Ecological Status objective that is not being met.<br>• Assess and develop strategies to mitigate toxic impacts that are likely to be from sheep dip<br>• Long term challenge requiring cross agency approach. |
| Laghy Stream – Bridgetown | 6 | 37_1, 37_2 (part) | Donegal | • One deteriorated High Ecological Status objective water body.<br>• Starting at the headwaters<br>• Multiple Pressures that can be examined at the same time.<br>• Assessing water quality of unassigned water bodies feeding into Durnesh Lough.<br>• Recent deterioration in two water bodies so might represent a quick win scenario. |

[29] EPA, 2021. 3rd Cycle Draft Donegal Bay North Catchment report. 35 P. Available online: <Donegal Bay North (catchments.ie) >

| 2nd Cycle Area for Action | Number of waterbodies | Sub-catchment | Local Authority | Reason for selection |
|---|---|---|---|---|
| Lough Eske | 5 | 37_2 | Donegal | • Five Deteriorated water bodies.<br>• One of the deteriorated river water bodies is a High Ecological Status objective water body.<br>• All deteriorated water bodies in this area for action have dropped in status in the last monitoring cycle and so there may be possibilities for quick wins.<br>• Same pressures in several the river water bodies feeding into the lake so similar investigations possible.<br>• MCPA in drinking water abstraction from Lough Eske linked with agricultural activity around the lake.<br>• Possibility to improve SAC. |

#### *6.1.6.8 WWTP status*

Urban Waste Water Agglomerations have been identified as a significant pressure in one At Risk waterbody (Ballintra_010).

Domestic waste water has been identified as a significant pressure in three river waterbodies (Bunlacky_010, Fintragh_010 & Mountcharles_010). Single house discharges as a source of nutrient and organic pollution were identified as significant pressures in Bunlacky_010 and Fintragh_010 whilst the significant issues have arisen from the discharge from a housing scheme in Mountcharles_010 which has resulted in elevated ammonia concentrations. The assimilative capacity of the receiving body (Mountcharles_010) is also an issue.

Table 6-10 presents a summary of the current status of the WWTPs and the corresponding receiving waterbodies.

**Table 6-10 WWTP current capacity and compliance, and receiving water quality status in Donegal Bay North catchment in County Donegal**

| WWTP Information | | | | | AER 2021 | | | | Receiving water body | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Settlement** | **Census pop. (2016)** | **Wastewater Treatment Plant (WWTP)** | **Reg #** | **Indication of Available Capacity (June 2022)** | **Organic capacity – As constructed** | **Organic capacity – collected load (peak week)** | **Organic capacity – Remaining** | **Compliance Status** | **Receiving water body** | **Ecological status (2016-2021)** | **WFD Risk (2016-2021)** |
| Donegal | 2,618 (4,133 in 2022) | Donegal Town WWTP | D0135 | • Green | 12,000 | 4972 | 7028 | Compliant | Inner Donegal Bay (Transitional) | Good | Not at risk |
| Killybegs | 1,236 (2,329 in 2022) | Killybegs WWTP | D0011 | • Green | 4,200 | 2267 | 1933 | Compliant | Killybegs Harbour | Moderate | Review |
| Mountcharles | 484 | Mountcharles WWTP | D0522 | • Red | 380 | 499 | 0 | Non-compliant (2019) | Leitrim Hill Stream_010 | Good | Review |
| Kilcar (Cill Charthaigh) | 258 | No treatment | D0520 | • Green | - | - | - | Non-compliant (2020) | Donegal Bay Northern (Coastal) | High | Not at risk |
| Rossnowlagh | - | Rossnowlagh WWTP | D0539 | • Amber | 1,000 | 1,522 | 0 | Non-compliant (2019) | Donegal Bay (Erne) (Coastal) | High | Not at risk |
| Ballintra | 191 | Ballintra WWTP | A0294 | • Green | - | - | - | N/A | Ballintra_010 | Good | At Risk |
| Carrick | 265 | Carrick WWTP | A0367 | • Red | - | - | - | N/A | Glen (Carrick)_030 | Poor | At Risk |
| Dunkineeley | 361 | Dunkineeley WWTP | A0556 | • Green | - | - | - | N/A | Bunlacky_010 | High | At Risk |
| Letterbarra Housing Scheme | - | - | A0478-01 | - | - | - | - | N/A | Eany Water_010 | Good | Review |

| WWTP Information | | | | | AER 2021 | | | | Receiving water body | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Settlement** | **Census pop. (2016)** | **Wastewater Treatment Plant (WWTP)** | **Reg #** | **Indication of Available Capacity (June 2022)** | **Organic capacity – As constructed** | **Organic capacity – collected load (peak week)** | **Organic capacity – Remaining** | **Compliance Status** | **Receiving water body** | **Ecological status (2016-2021)** | **WFD Risk (2016-2021)** |
| Letterbarra No. 2 Housing Scheme | - | - | A0476-01 | - | - | - | - | N/A | Eany Water_010 | Good | Review |
| Frosses Housing Scheme | - | - | A0453-01 | - | - | - | - | N/A | Eany Water_020 | Good | Review |
| Frosses No. 2 Housing Scheme | - | - | A0491-01 | - | - | - | - | N/A | Eany Water_020 | Good | Review |

### 6.1.7 HA 38 Gweebarra-Sheephaven catchment WFD assessment

The Gweebarra-Sheephaven catchment includes the area drained by all streams entering tidal water in Gweebarra River, Sheephaven Bay and between Rossan Point and Fanad Head, draining a total area of 1,450km². The largest urban centre in the catchment is Falcarragh, followed by Glenties, Dunglow, Dunfanaghy, Creeslough and Carrowkeel. The total population of the catchment is approximately 28,130 with a population density of 19 people per km²[30].

The water quality assessment, risk, key issues and significant pressures for the Gweebarra-Sheephaven catchment is summarize in the 3rd Cycle Draft Gweebarra-Sheephaven Catchment report (2021)[31]. The catchment report was used as the main source of information for this section, however since the report is based on 2013-2018 data, the information was updated with the EPA catchments interactive Dashboard[32] as well as the WFD Status and WFD Risk 2016-2021assessment[33].

Gweebarra-Sheephaven catchment comprises nine subcatchments (Table 6-11), with 88 rivers, 83 lakes, 10 transitional, 14 coastal waterbodies and five groundwater bodies.

**Table 6-11 Subcatchments comprised in the Gweebarra-Sheephaven catchment.**

| Subcatchment ID | Subcatchment Name |
|---|---|
| 38_1 | An_Céideadh_SC_010 |
| 38_2 | Gweebarra_SC_010 |
| 38_3 | Burnside_SC_010 |
| 38_4 | Owentocker_SC_010 |
| 38_5 | Lackagh_SC_010 |
| 38_6 | Tullaghobegly_SC_010 |
| 38_7 | Gweedore_SC_010 |
| 38_8 | Doire_Leac_Chonaill_Theas_SC_010 |
| 38_9 | Owenea_SC_010 |

#### *6.1.7.1 Risk*

In total, there are 200 waterbodies in the Gweebarra-Sheephaven Catchment and 36 (18%) are currently At Risk, 57 (29%) in Review and 107 (54%) are Not At Risk.

***Surface waters***

For the 88 rivers waterbodies, 24 (27%) are At Risk, 36 (41%) are in Review and 28 (32%) are Not At Risk.

For the 83 lake waterbodies, eight (10%) are At Risk, eight (10%) are in Review and 67 (81%) are Not At Risk.

For the 10 transitional waterbodies, one (10%) is At Risk, five (50%) are in Review and four (40%) are Not At Risk.

[30] EPA, 2021. 3rd Cycle Draft Gweebarra-Sheephaven Catchment report. 35 P. Available online: < Gweebarra-Sheephaven (catchments.ie) >

[31] EPA, 2021. 3rd Cycle Draft Gweebarra-Sheephaven Catchment report. 35 P. Available online: < Gweebarra-Sheephaven (catchments.ie) >

[32] EPA Catchments.ie. < Catchments.ie - Water, from source to sea.>

[33] Water Framework Directive-Data. Available online: < (6) WFD Application - Data Download (edenireland.ie)>

For the 14 coastal waterbodies, three (21%) is At Risk, eight (57%) are in Review and three (21%) are Not At Risk. Mulroy Bay Broadwater, Gweebarra Bay and Lough Swilly are the coastal waterbody At Risk in the catchment.

***Groundwater***

All the groundwater bodies in the catchment are Not At Risk.

***Heavily modified waterbodies***

Neither of the three designated heavily modified water bodies (HMWBs) in the catchment are At Risk– Nacung (Upper) and Dunlewy lake waterbodies are in Review and Salt lake waterbody is classed as Not At Risk.

### *6.1.7.2 Significant issues and pressures*

Excess nutrients remain the most prevalent issue in the Gweebarra-Sheephaven catchment (Figure 6-12) impacting 14 waterbodies in Cycle 3 (2016-2021). Morphological issues and other significant impacts are impacting eight waterbodies, while hydrological issues chemical pollution are all impacting seven waterbodies each.

For river waterbodies, the main significant issues are nutrient issues (9), morphological impacts (7), other significant impacts (6), organic pollution (5), chemical pollution (5) and habitat hydrological impact (4).

For lake waterbodies, the main significant issues are nutrient pollution (3), hydrological issues (3) and chemical pollution (2).

The coastal waterbodies are impacted by nutrient pollution. Domestic wastewater and urban runoff are impacting Swilly Estuary.

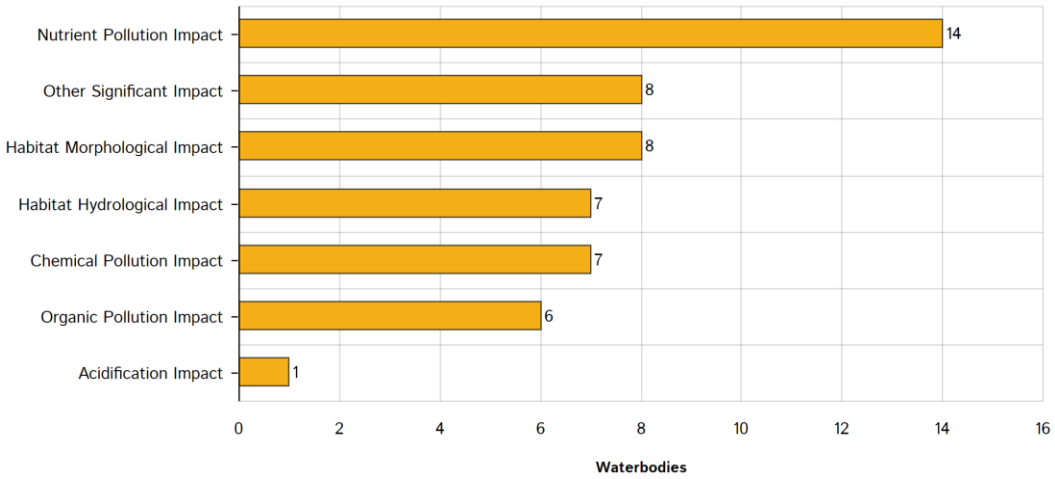



**Figure 6-14 Significant issues across all At Risk surface WBs in the Gweebarra-Sheephaven catchment**

In Cycle 3 for High Status Objective waterbodies organic and nutrient pollution, as well as hydrological issues and chemical pollution are impacting each two of the six High Status Objective waterbodies currently At Risk.

Figure 6-15 shows a breakdown of the number of Risk waterbodies in each significant pressure category. The significant pressure affecting the greatest number of waterbodies is other (Abstractions, aquaculture, atmospheric, anthropogenic pressures, historically polluted sites, waste, water treatment and invasive species), followed by agriculture, domestic waste water, hydromorphological pressures, forestry, peat, industry, urban run-off, mines and quarries and urban waste water.

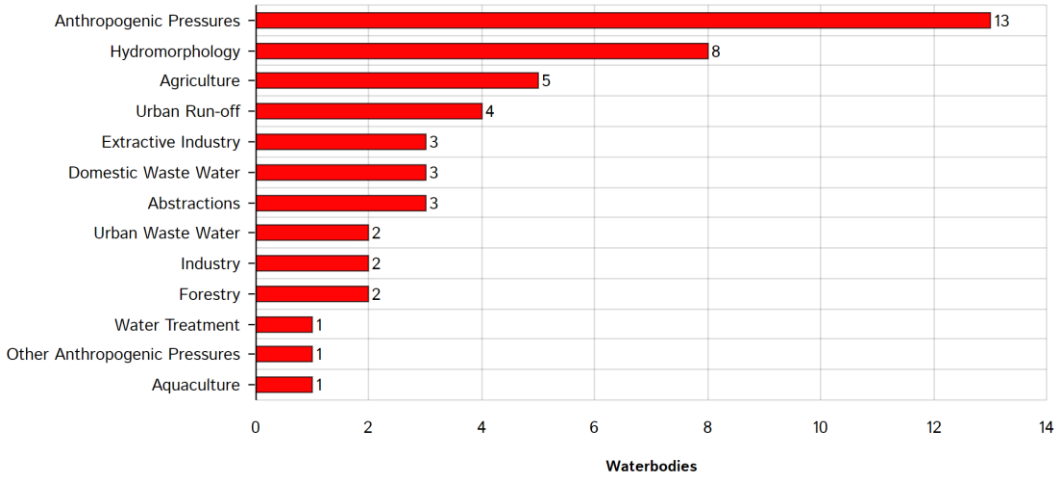



**Figure 6-15 Significant pressures across all At Risk surface WBs in the Gweebarra-Sheephaven catchment**

### *6.1.7.3 Load reduction assessment*

In the catchment peat, pasture and discharges from septic tanks are responsible for 35%, 25% and 13% of the nitrogen load respectively while peat, pasture and discharges from urban wastewater contribute 38%, 27% and 12% of the phosphorus loadings for the catchment respectively.

The national load reduction assessment indicated that 10 of the 46 catchments require N reductions to restore some TRAC waterbodies. Nitrogen load reduction to meet TRAC WFD objectives are not required in the Gweebarra-Sheephaven Catchment. For phosphorous, some areas where agricultural measures should be targeted have been identified. Further modelling work is required to determine precisely what load reduction is required.

### *6.1.7.4 Protected Areas*

***Drinking water***

There are 13 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.

The waterbody met the DWPA objective in 2019.

***Bathing Waters***

There are 11 bathing waters in or directly adjacent to the catchment identified under the Bathing Water Regulations 2008.

Portnarthur (Derrybeg) and Portnablagh had a Good and Excellent Classification for 2021, respectively. The remaining nine had an Excellent classification.

***Shellfish Areas***

There are seven designated shellfish areas in the catchment. Sheephaven (IEPA2_0041) shellfish area was not surveyed in 2018 and the Gweedore Bay (IEPA2_0040) did not meet the meet the objective for shellfish areas. Detail information can be found in Table 2 of the Catchment report.

***Natura 2000 sites***

There are 23 SACs in this catchment 22 of which have water dependent habitats or species. The SACs were assessed for associated water dependent habitats and species using their 2013-2018 status. The results are presented in Table 6-12.

**Table 6-12 Natura 2000 Network Assessment Summary – Gweebarra-Sheephaven catchment**

| Water Body Type | Total No. | Meeting the Requirements | Didi not meet the Requirements | Unknown* |
|---|---|---|---|---|
| Rivers | 68 | 28 | 14 | 26 |
| Lakes | 62 | 52 | 8 | 2 |
| Transitional & Coastal | 14 | 9 | 0 | 0 |

* Water body status unassigned

***Nutrient Sensitive Areas***

There are no designated Nutrient Sensitive Areas in the catchment.

### *6.1.7.5 Heavily modified Waterbodies (HMWB) and Artificial Waterbodies (AWBs)*

There are currently three designated heavily modified water bodies (HMWBs) in the catchment – Nacung (Upper) and Dunlewy lake waterbodies – due to power generation and Salt lake waterbody due to a drinking water abstraction. Dunlewy was classified as High Ecological Status (2016-2021), Nacung (Upper) was Unassigned and Salt Lake was classified as having Good Ecological Potential in 2010- 2015. There has been no change in Status in the 2016-2018 period.

There are no artificial bodies in the Gweebarra-Sheephaven catchment.

### *6.1.7.6 Further characterisation actions assigned at Cycle 2*

There were two Areas for Action (Glen Lackagh and Donegal SW & Murlins), comprising of nine waterbodies, selected for further characterisation and action in the catchment for the 2nd Cycle River Basin Management Plan. Table 6-15 show the subcatchment, number of water bodies and the reasons for selection.

**Table 6-13 2nd Cycle Areas for Action in the Gweebarra-Sheephaven catchment[34].**

| 2nd Cycle Area for Action | Number of waterbodies | Sub-catchment | Local Authority | Reason for selection |
|---|---|---|---|---|
| Glen Lackagh | 1 | 38_5 | Donegal | • One deteriorated River Water Body<br>• Single Pressure.<br>• Build on Improvement to Good noted at one of the monitoring locations so only small stretch driving status.<br>• Support FPM (not top 8) |
| Donegal SW & Murlins | 8 | 38_4 | Donegal | • Eight deteriorated Water bodies.<br>• One of the deteriorated water bodies has a High Ecological Status objective that is not being met.<br>• Assess and develop strategies to mitigate toxic impacts that are likely to be from sheep dip<br>• Long term challenge requiring cross agency approach. |

### *6.1.7.7 WWTP status in the catchment*

Urban Waste Water Treatment Agglomerations have been identified as a significant pressure in one At Risk river waterbody. The Kerrykeel agglomeration, which impacts Burnside_010, is scheduled to be upgraded in 2023.

Domestic waste water has been identified as a significant pressure in three river water bodies (Dungloe_020, Catheen_010 & Burnside_010), one lake (Anure) and one coastal waterbody (Lough Swilly) At Risk.

[34] EPA, 2021. 3rd Cycle Draft Gweebarra-Sheephaven Catchment report. 35 P. Available online: < Gweebarra-Sheephaven (catchments.ie) >

The significant issues arise from inadequate domestic waste water systems, many of which are sited on areas of high pollution impact potential/poorly draining soils, that result in enrichment and potential for microbial/organic contamination.

Table 6-14 presents a summary of the  current status of the WWTPs and the corresponding receiving waterbodies.

**Table 6-14 WWTP current capacity and compliance, and receiving water quality status in the Gweebarra-Sheephaven catchment in County Donegal**

| WWTP Information | | | | | AER 2021 | | | | Receiving water body | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Settlement** | **Census pop. (2016)** | **Wastewater Treatment Plant (WWTP)** | **Reg #** | **Indication of Available Capacity (June 2022)** | **Organic capacity – As constructed** | **Organic capacity – collected load (peak week)** | **Organic capacity – Remaining** | **Compliance Status** | **Receiving water body** | **Ecological status (2016-2021)** | **WFD Risk (2016-2021)** |
| Letterkenny | 19,274 (21,086 in 2022) | Letterkenny WWTP | D0009 | • Green | 40000 | 23434 | 16566 | Compliant | Lough Swilly (Coastal) | Good | At risk |
| An Clochán Liath | 1,164 (1,918 in 2022) | Dungloe WWTP | D0208 | • Green | 2,400 | 1,517 | 883 | Compliant | Dungloe_020 | Poor | At risk |
| Glenties | 805 | Glenties WWTP | D0210 | • Green | 1600 | 459 | 1141 | Compliant | Stracashel_020 | Moderate | Not at risk |
| Falcarragh (An Fál Carrach) | 764 | No treatment | D0343 | • Red | - | - | - | Non-compliant | Ballyness Bay | High | Not at risk |
| Ardara | 732 | Ardara WWTP | D0512 | • Green | 2350 | 987 | 1363 | Compliant | Owenea Estuary | High | Not at risk |
| Downings (Cnoc na Muirleog) | 396 | Downings WWTP | D0350 | • Red | 1000 | 2071 | 0 | Compliant | Sheephaven Bay | High | Review |
| Creeslough | 393 | Creeslough WWWP | D0534 | • Red | 300 | 557 | 0 | Non-compliant | Faymore_010 | Good | Review |
| Dunfanaghy | 298 | Dunfanaghy/ Portnablagh WWTP | D0211 | • Red | 900 | 2310 | 0 | Non-compliant | Sheephaven Bay | High | Review |
| Carrigart village WWTP | 222 | Carrigart Village WWTP | D0523 | • Amber | 450 | 316 | 134 | Non-compliant | Carrickart_010 | Good | Review |

| WWTP Information | | | | | AER 2021 | | | | Receiving water body | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Settlement** | **Census pop. (2016)** | **Wastewater Treatment Plant (WWTP)** | **Reg #** | **Indication of Available Capacity (June 2022)** | **Organic capacity – As constructed** | **Organic capacity – collected load (peak week)** | **Organic capacity – Remaining** | **Compliance Status** | **Receiving water body** | **Ecological status (2016-2021)** | **WFD Risk (2016-2021)** |
| Carrigart (Umlagh WWTP) | | Umlagh WWTP | | | 225 | 74 | 151 | Non-compliant | Murloy Bay broadwater | Good | Not at Risk |
| Annagary | 236 | Annagary WWTP | A0306 | • Green | - | - | - | N/A | Gweedore Estuary | High | Not at Risk |
| Burtonport | Unavailable | - | A0446 | • Green | - | - | - | N/A | Glais Bheagãin_010 | Moderate | Review |
| Doochary | Unavailable | Doochary WWTP | A0366 | • Green | - | - | - | N/A | Meenagowan_010 | Good | Review |
| Glencolmcille (Glencolmcille No.2 Housing Scheme) | Unavailable | Glencolmcille WWTP | A0483 | • Green | - | - | - | N/A | Murlin_020 | Poor | At Risk |
| Glencolmcille (Glencolmcille No.3 Housing Scheme) | - | - | A0482-01 | - | - | - | - | N/A | Murlin_020 | Poor | At Risk |
| Glencolmcille (Glencolmcille Housing Scheme) | - | - | A0448-01 | - | - | - | - | N/A | Murlin_020 | Poor | At Risk |
| Gortahork | 185 | Gortahork WWTP | A0295 | • Green | - | - | - | N/A | Ballyness Bay | High | Not at risk |
| Kerrykeel | - | Kerrykeel HS WWTP | A0445 | • Green | - | - | - | N/A | Burnside_010 | Poor | At Risk |

| WWTP Information | | | | | AER 2021 | | | | Receiving water body | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Settlement** | **Census pop. (2016)** | **Wastewater Treatment Plant (WWTP)** | **Reg #** | **Indication of Available Capacity (June 2022)** | **Organic capacity – As constructed** | **Organic capacity – collected load (peak week)** | **Organic capacity – Remaining** | **Compliance Status** | **Receiving water body** | **Ecological status (2016-2021)** | **WFD Risk (2016-2021)** |
| Meenaneary Housing Scheme | - | - | A0474-01 | - | - | - | - | N/A | Cnoc_Fola_010 | Good | Review |
| Loughanure Housing Scheme | - | - | A0475-01 | - | - | - | - | N/A | Lake Anure | Good | At risk |
| Meenanillar Housing Scheme | - | - | A0459-01 | - | - | - | - | N/A | Catheen_010 | Poor | At risk |
| Tory Island | 119 | Tory Island WWTP | A0480 | Green | | | | N/A | Tory Island Waters (Coastal) | Unassigned | Review |

### 6.1.8 HA 39 Lough Swilly catchment WFD assessment

The Lough Swilly catchment includes the area drained by all streams entering tidal water in Lough Swilly between Fanad Head and Dunaff Head, draining a total area of 965km². The largest urban centre in the catchment is Letterkenny followed by Buncrana. The total population of the catchment is approximately 55,455 with a population density of 57 people per km².

The catchment is largely mountainous and is underlain by metamorphic rocks with the exception of the Glendowan Mountains in the west which are composed of granite. These rocks generally provide relatively poor groundwater resources[35].

The water quality assessment, risk, key issues and significant pressures for the Lough Swilly catchment is summarize in the 3rd Cycle Draft Lough Swilly Catchment report (2021)[36]. The catchment report was used as the main source of information for this section, however since the report is based on 2013-2018 data, the information was updated with the EPA catchments interactive Dashboard[37] as well as the WFD Status and WFD Risk 2016-2021assessment[38].

Lough Swilly catchment comprises seven subcatchments (Table 6-15), with 51 rivers, nine lakes, five transitional, three coastal waterbodies and eight groundwater bodies.

**Table 6-15 Subcatchments comprised in the Lough Swilly catchment.**

| Subcatchment ID | Subcatchment Name |
|---|---|
| 39_1 | Crana_SC_010 |
| 39_2 | Burnfoot_SC_010 |
| 39_3 | Cashelpreaghan_SC_010 |
| 39_4 | LeslieHill[Stream]_SC_010 |
| 39_5 | Leannan_SC_020 |
| 39_6 | Swilly_SC_010 |
| 39_7 | Leannan_SC_010 |

#### *6.1.8.1 Risk*

In total, there are 76 waterbodies in the Lough Swilly Catchment and 31 (41%) are currently At Risk, 18 (24%) in Review and 27 (36%) are Not At Risk.

***Surface waters***

For the 51 rivers waterbodies, 25 (49%) are At Risk, 13 (25%) are in Review and 13 (25%) are Not At Risk.

For the nine lake waterbodies, two (22%) are At Risk, three (33%) are in Review and four (44%) are Not At Risk. Gartan and Fern are the lake waterbodies At Risk.

For the five transitional waterbodies, three (60%) are At Risk and two (40%) are in Review. The transitional waterbodies At Risk are the Swilly Estuary, Inch Lough and Outer Swilly Estuary.

Two coastal waterbodies are Not At Risk (Northwestern Atlantic Seaboard (Has 37;38) and Northern Atlantic Seaboard (Has 40;02)) and one (Lough Swilly) is At Risk.

[35] EPA, 2021. 3rd Cycle Draft Lough Swilly Catchment report. 35 P. Available online: < Lough Swilly (catchments.ie) >

[36] EPA, 2021. 3rd Cycle Draft Lough Swilly Catchment report. 35 P. Available online: < Lough Swilly (catchments.ie) >

[37] EPA Catchments.ie. < Catchments.ie - Water, from source to sea.>

[38] Water Framework Directive-Data. Available online: < (6) WFD Application - Data Download (edenireland.ie)>

***Groundwater***

All the groundwater bodies in the catchment are Not At Risk.

***Heavily modified waterbodies***

There are no designated heavily modified water bodies (HMWBs) in the catchment.

### *6.1.8.2 Significant issues and pressures*

Excess nutrients remain the most prevalent issues in the Lough Swilly catchment (Figure 6-16) impacting 21 waterbodies in Cycle 3. Chemical issues are impacting 13 waterbodies, while organic 11 pollution and morphological issues are each impacting 10 waterbodies. Hydrological issues are impacting eight waterbodies and Sediment is impacting six waterbodies.

For river waterbodies, the main significant issues are nutrient impacts (17), chemical pollution (13), morphological impacts (8), hydrological issues (8), organic pollution (6) and other impacts (6).

For lake waterbodies, the main significant issues are nutrient pollution (1), organic (1) and morphological impacts (1).

For the At Risk transitional waterbodies, the significant issues are nutrient pollution (3), organic (3) and morphological (1).

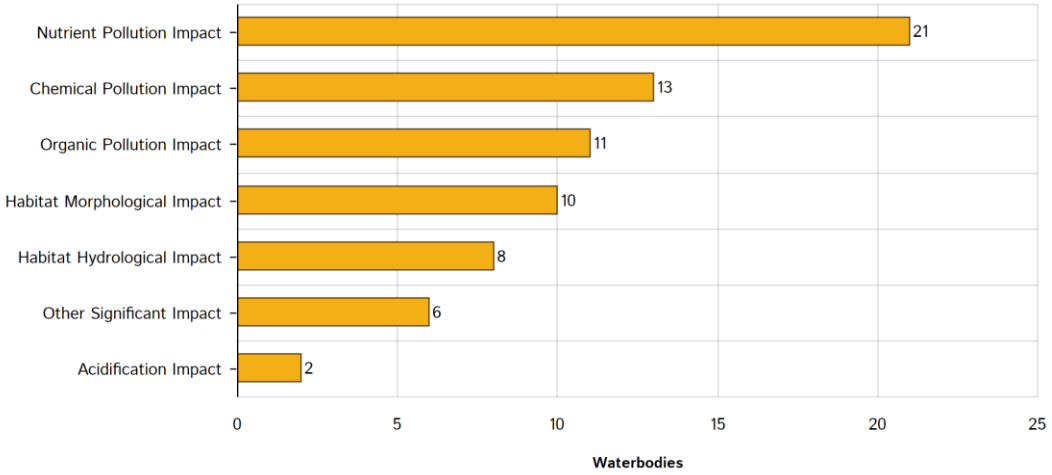



**Figure 6-16 Significant issues across all At Risk surface WBs in the Lough Swilly catchment**

From the High Status Objectives Waterbodies, Gartan Lake is impacted by morphological issues, Carn Low_010 river waterbody is impacted by nutrient and organic pollution and Glaskeelan_010 river is impacted by hydrological and morphological issues as well as nutrient pollution.

Figure 6-17 shows a breakdown of the number of Risk waterbodies in each significant pressure category. The significant pressure affecting the greatest number of waterbodies is agriculture, followed by, urban waste water, domestic waste water, hydromorphological pressures, forestry, peat, mines and quarries, urban run-off and industry.

The impacts related to farming in this catchment are overland 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. Sediment can also be a problem from land drainage works, bank erosion from animal access or stream crossings. There may also be issues with agricultural pesticides such as sheep dip entering water bodies.

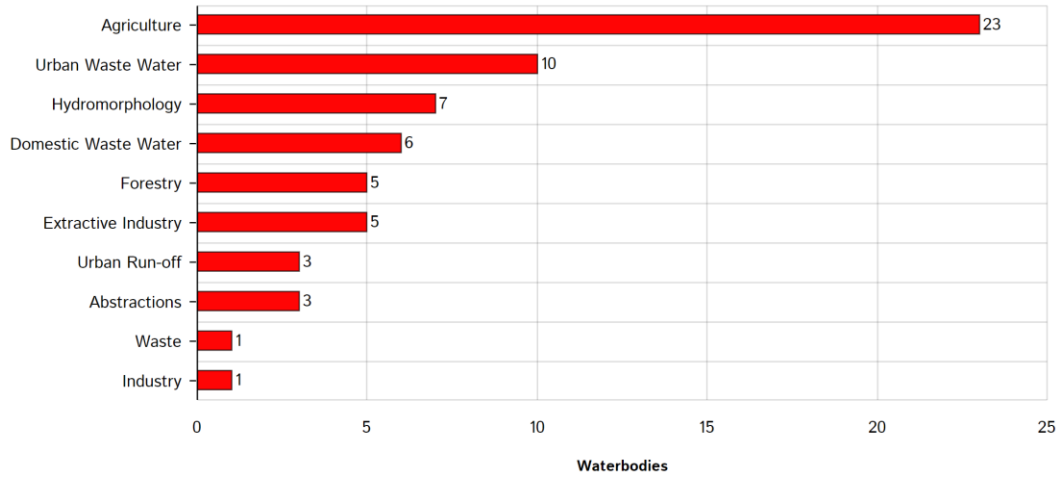



**Figure 6-17 Significant pressures across all At Risk surface WBs in the Lough Swilly catchment**

### *6.1.8.3 Load reduction assessment*

In the catchment pasture, discharges from urban waste water and arable land are responsible for 48%, 14% and 12% of the nitrogen load respectively while land in pasture, discharges from urban waste water, peat and forestry contribute 32%, 29%, 13% and 13% of the phosphorus loadings for the catchment respectively.

The national load reduction assessment indicated that 10 of the 46 catchments require N reductions to restore some transitional and coastal (TRAC) waterbodies. Nitrogen load reduction to meet TRAC WFD objectives are not required in the Lough Swilly Catchment. For phosphorous, some areas (Figure 19 of the catchment report) where agricultural measures should be targeted have been identified. Further modelling work is required to determine precisely what load reduction is required.

### *6.1.8.4 Protected Areas*

***Drinking water***

There are four 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.

All waterbodies in the catchment met the DWPA objective in 2019.

***Bathing Waters***

There are four bathing waters in or directly adjacent to the catchment identified under the Bathing Water Regulations 2008.

Portsalon bathing water had an Excellent classification in 2020, Lisfannon and Rathmullen had a Good classification and Lady's Bay (Buncrana) was classified as Poor.

***Shellfish Areas***

There is one designated shellfish area in the catchment: Lough Swilly (IEPA2_0042). The average dissolved concentration of metals and microbial quality indicated that this areas did not meet the WFD protected area objective.

***Natura 2000 sites***

There are seven SACs in this catchment, six of which have water dependent habitats or species. The SACs were assessed for associated water dependent habitats and species using their 2013-2018 status. The results are presented in Table 6-12.

**Table 6-16 Natura 2000 Network Assessment Summary – Lough Swilly catchment**

| Water Body Type | Total No. | Meeting the Requirements | Didi not meet the Requirements | Unknown* |
|---|---|---|---|---|
| Rivers | 30 | 9 | 10 | 11 |
| Lakes | 3 | 3 | 0 | 0 |
| Transitional & Coastal | 3 | 1 | 2 | 0 |

* Water body status unassigned

***Nutrient Sensitive Areas***

There are no designated Nutrient Sensitive Areas in the catchment.

### *6.1.8.5 Heavily modified Waterbodies (HMWB) and Artificial Waterbodies (AWBs)*

There are currently no designated heavily modified water bodies (HMWBs) or artificial waterbodies (AWBs) in the catchment.

### *6.1.8.6 Further characterisation actions assigned at Cycle 2*

There was one Area for Action (Leannan), comprising of 11 waterbodies, selected for further characterisation and action in the catchment for the 2nd Cycle River Basin Management Plan. Table 6-17 shows the subcatchment, number of water bodies and the reasons for selection.

**Table 6-17 2nd Cycle Areas for Action in the Lough Swilly catchment[39].**

| 2nd Cycle Area for Action | Number of waterbodies | Sub-catchment | Local Authority | Reason for selection |
|---|---|---|---|---|
| Leannan | 11 | 39_5, 39_7 | Donegal | • Two Deteriorated water bodies, one of which is a High Ecological status objective water body.<br>• Four At Risk water bodies are not meeting their Protected Area objective.<br>• Freshwater Pearl Mussel and salmonid catchment.<br>• Build on Ramelton and Milford WWTP planned upgrades as well as forestry and agricultural improvements.<br>• Opportunity for community engagement. • Starting at the Headwaters<br>• Incorporating three unassigned lakes and one unassigned river water bodies.<br>• Multiple pressures that can be investigated at the same time.<br>• Build on status improvements of two of the tributaries. • Supports improvement of the Swilly estuary. |

### *6.1.8.7 WWTP status in the catchment*

Urban Waste Water Agglomerations have been identified as a significant pressure in six At Risk river waterbodies, two transitional waterbodies (Swilly Estuary & Outer Swilly Estuary) and one lake waterbody (Fern). None of the seven agglomerations identified as significant pressures are scheduled for upgrades under Irish Water's Capital Investment Programme (2020-2024).

Domestic waste water has been identified as a significant pressure in three river waterbodies and two transitional waterbodies (Swilly Estuary & Outer Swilly Estuary).

[39] EPA, 2021. 3rd Cycle Draft Lough Swilly Catchment report. 35 P. Available online: <Lough Swilly (catchments.ie) >

The impacts relate to inadequate and poorly sited domestic waste water treatment systems This situation arises typically in areas with poorly draining soils and subsoils, and shallow bedrock areas, and results in elevated nutrient concentrations in nearby streams.

Table 6-18 presents a summary of the  current status of the WWTPs and the corresponding receiving waterbodies.

**Table 6-18 WWTP current capacity and compliance, and receiving water quality status in the Lough Swilly catchment in County Donegal**

| WWTP Information | | | | | AER 2021 | | | | Receiving water body | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Settlement** | **Census pop. (2016)** | **Wastewater Treatment Plant (WWTP)** | **Reg #** | **Indication of Available Capacity (June 2022)** | **Organic capacity – As constructed** | **Organic capacity – collected load (peak week)** | **Organic capacity – Remaining** | **Compliance Status** | **Receiving water body** | **Ecological status (2016-2021)** | **WFD Risk (2016-2021)** |
| Letterkenny | 19,274 (21,086 in 2022) | Letterkenny WWTP | D0009 | • Green | 40,000 | 23,434 | 16,566 | Compliant | Swilly (Donegal)_010 | Good | Review |
| Buncrana | 6,785 (7,296 in 2022 and 7,678 in 2030*) | Buncrana WWTP | D0125 | • Green | 10,000 (upgrading to 17,700) | 8,853 | 1,147 | Compliant | Lough Swilly | Good | At Risk |
| Ramelton | 1,266 | No treatment | D0341 | • Red | - | - | - | Non-compliant | Swilly Estuary | Poor | At risk |
| Ramelton | | No treatment | D0341-01 | | - | - | - | Non-compliant | Newmill_010 | Moderate | Review |
| Newtowncunningham | 1,080 | Newtowncunningham WWTP | D0349 | • Red | 600 | 1,289 | 0 | Non-Compliant | Glar_010 | Poor | Review |
| Milford | 1,037 | Milford (Donegal) WWTP | D0342 | • Red | 920 | 1,708 | 0 | Non-compliant | Fern | Bad | At risk |
| Kilmacrennan | 753 | Kilmacrennan WWTP | D0513 | • Red | 500 | 840 | 0 | Non-Compliant | Leannan_050 | Good | At Risk |
| Manorcunningham | 675 | Manorcunningham WWTP | D0519 | • Amber | 1,000 | 786 | 214 | Non-Compliant | Leslie Hill Stream_020 | Moderate | At Risk |
| Fahan | 588 | Fahan WWTP | D0535 | • Red | 800 | 834 | 0 | Non-Compliant | Lisfannan_010 | Moderate | Review |

| WWTP Information | | | | | AER 2021 | | | | Receiving water body | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Settlement** | **Census pop. (2016)** | **Wastewater Treatment Plant (WWTP)** | **Reg #** | **Indication of Available Capacity (June 2022)** | **Organic capacity – As constructed** | **Organic capacity – collected load (peak week)** | **Organic capacity – Remaining** | **Compliance Status** | **Receiving water body** | **Ecological status (2016-2021)** | **WFD Risk (2016-2021)** |
| Rathmullen | 493 | No Treatment | D0345 | • Red | | | | Non-compliant | Outer Swilly Estuary | High | Not at Risk |
| Bridge End | 454 | Bridgend WWTP | D0532 | • Red | 260 | 403 | 0 | Non-Compliant | Skeoge_010 | Poor | At risk |
| Burnfoot | 450 | Burnfoot WWTP | D0531 | • Red | 180 | 324 | 0 | Non-Compliant | Burnfoot_020 | Poor | At risk |
| Moness Housing Scheme | - | - | A0450-01 | - | - | - | - | N/A | Carrowen_010 | Moderate | Review |
| Termon Housing Scheme | - | - | A0489 | - | - | - | - | N/A | Leannan_050 | Moderate | At risk |

*Buncrana AP 2024-2030 – Draft

### 6.1.9 HA 40 Donagh-Moville catchment WFD assessment

The Donagh-Moville catchment includes the area drained by the River Donagh and all streams entering tidal water between Dunaff Head and Culmore Point, draining a total area of 507km². The largest urban centre in the catchment is Carndonagh followed by Moville. The total population of the catchment is approximately 18,338 with a population density of 36 people per km².

The catchment is largely mountainous and is entirely underlain by metamorphic rocks that provide limited groundwater resources[40].

The water quality assessment, risk, key issues and significant pressures for the Donagh-Moville catchment is summarize in the 3rd Cycle Draft Donagh-Moville Catchment report (2021)[41]. The catchment report was used as the main source of information for this section, however since the report is based on 2013-2018 data, the information was updated with the EPA catchments interactive Dashboard[42] as well as the WFD Status and WFD Risk 2016-2021assessment[43].

Donagh-Moville catchment comprises six subcatchments (Table 6-19), with 36 rivers, one lakes, one transitional, five coastal waterbodies and four groundwater bodies.

**Table 6-19 Subcatchments comprised in the Donagh-Moville catchment.**

| Subcatchment ID | Subcatchment Name |
|---|---|
| 40_1 | Clonmany_SC_010 |
| 40_2 | Glennagannon_SC_010 |
| 40_3 | Malin[Stream]_SC_010 |
| 40_4 | Culduff_SC_010 |
| 40_5 | Greencastle_SC_010 |
| 40_6 | BogstownRiver_SC_010 |

#### *6.1.9.1 Risk*

In total, there are 47 waterbodies in the Donagh-Moville Catchment and 22 (47%) are currently At Risk, 18 (38%) in Review and 7 (15%) are Not At Risk.

***Surface waters***

For the 36 rivers waterbodies, 21 (58%) are At Risk, 13 (36%) are in Review and 2 (6%) are Not At Risk.

The only lake waterbody (Fad Meendoran) in the catchment is At Risk.

The only transitional waterbody (Foyle and Faughan Estuaries) in the catchment is in Review.

For the five coastal waterbodies, three (60%) are in Review and two (40%) are Not At Risk. There are no coastal waterbodies At Risk in the catchment.

***Groundwater***

For the four groundwater bodies, one (25%) is in Review and three (75%) are Not At Risk. There are no At Risk groundwater bodies in the catchment.

[40] EPA, 2021. 3rd Cycle Draft Donagh-Moville Catchment report. 35 P. Available online: < Donagh-Moville (catchments.ie) >

[41] EPA, 2021. 3rd Cycle Draft Donagh-Moville Catchment report. 35 P. Available online: < Donagh-Moville (catchments.ie) >

[42] EPA Catchments.ie. < Catchments.ie - Water, from source to sea.>

[43] Water Framework Directive-Data. Available online: < (6) WFD Application - Data Download (edenireland.ie)>

***Heavily modified waterbodies***

There are no designated heavily modified water bodies (HMWBs) or artificial waterbodies (AWBs) in the catchment.

### *6.1.9.2 Significant issues and pressures*

Out of the 22 At Risk waterbodies, 21 are river waterbodies and one is a lake (Fad Meendoran lake). In the lake waterbody hydrological and sediment issues are impacting. In the river waterbodies excess nutrients and organic impacts remain the most prevalent issues in the Donagh-Moville catchment (Figure 6-18) impacting 14 waterbodies and 11 waterbodies respectively in Cycle 3 (2016-2021). Chemical pollution is currently also impacting 10 waterbodies, hydrological issues are impacting three river waterbodies and morphological issues are impacting one waterbody.

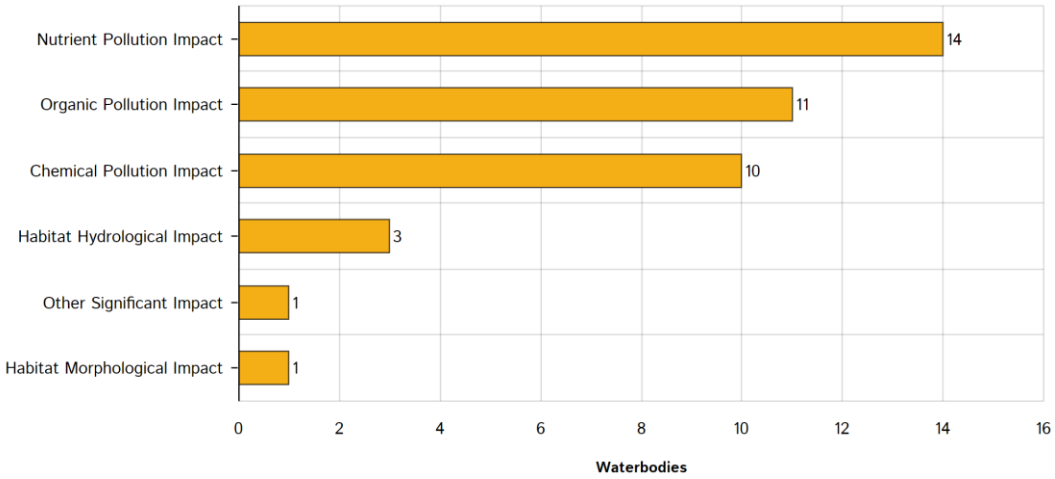



**Figure 6-18 Significant issues across all At Risk surface WBs in the Donagh-Moville catchment**

Figure 6-19 shows a breakdown of the number of Risk waterbodies in each significant pressure category. The significant pressure affecting the greatest number of waterbodies is agriculture, followed by domestic waste water, other[6] , diffuse urban, urban waste water, peat and hydromorphology.

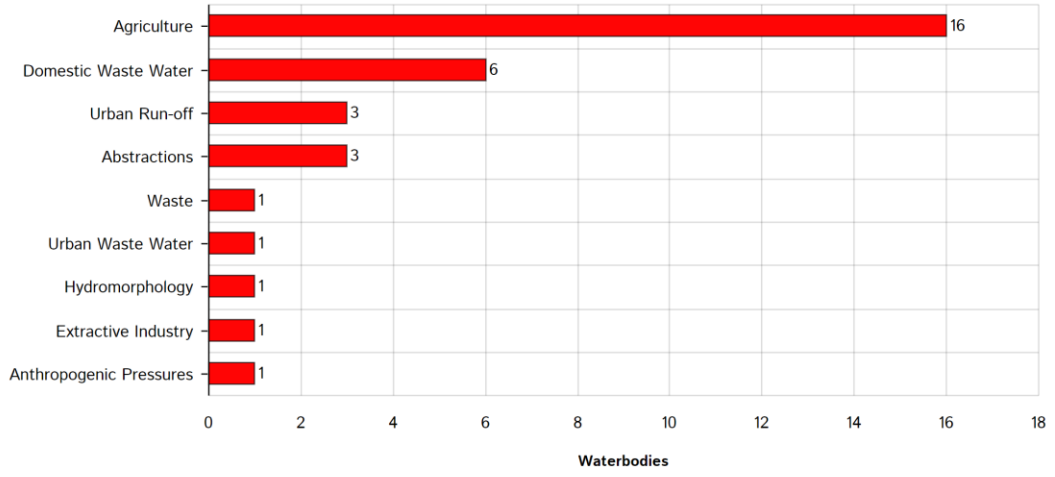



**Figure 6-19 Significant pressures across all At Risk surface WBs in the Donagh-Moville catchment**

### *6.1.9.3 Load reduction assessment*

In the catchment pasture and peat land are responsible for 57% and 15% of the nitrogen load respectively while land in pasture, peat and discharges from urban waste water contribute 46%, 24% and 13% of the phosphorus loadings for the catchment respectively.

The national load reduction assessment indicated that 10 of the 46 catchments require N reductions to restore some TRAC waterbodies. Nitrogen load reduction to meet TRAC WFD objectives are not required in the Donagh-Moville Catchment.

For phosphorous, some areas (Figure 18 of the catchment report) where agricultural measures should be targeted have been identified. Further modelling work is required to determine precisely what load reduction is required.

#### *6.1.9.4 Protected Areas*

***Drinking water***

There are three 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.

All waterbodies in the catchment met the DWPA objective in 2019.

***Bathing Waters***

There are two marine bathing waters in or directly adjacent to the catchment identified under the Bathing Water Regulations 2008. Both Strove and Culdaff bathing waters had an Excellent classification for 2021.

***Shellfish Areas***

There is one designated shellfish area in the Donagh-Moville catchment (Trawbreaga Bay (IEPA_0043)). The shellfish area is compliant with the relevant standards and there are no water quality issues of concern.

***Natura 2000 sites***

There are nine SACs in this catchment, six of which have water dependent habitats or species. There are no designated Nutrient Sensitive Areas in the catchment. The SACs were assessed for associated water dependent habitats and species using their 2013-2018 status. The results are presented in Table 6-20.

**Table 6-20 Natura 2000 Network Assessment Summary – Donagh-Moville catchment**

| Water Body Type | Total No. | Meeting the Requirements | Didi not meet the Requirements | Unknown* |
|---|---|---|---|---|
| Rivers | 17 | 3 | 7 | 7 |
| Transitional & Coastal | 1 | 1 | 0 | 0 |

* Water body status unassigned

***Nutrient Sensitive Areas***

There are no designated Nutrient Sensitive Areas in the catchment.

#### *6.1.9.5 Heavily modified Waterbodies (HMWB) and Artificial Waterbodies (AWBs)*

There are no designated heavily modified water bodies (HMWBs) or designated artificial water bodies (AWBs) in the catchment.

#### *6.1.9.6 Further characterisation actions assigned at Cycle 2*

There were five Areas for Action (Roosky, Donagh, Clonmany, Malin and Lough Nastackan), comprising of 14 waterbodies, selected for further characterisation and action in the catchment for the 2nd Cycle River Basin Management Plan. Table 6-20 shows the subcatchment, number of water bodies and the reasons for selection.

**Table 6-21 2nd Cycle Areas for Action in the Donagh-Moville catchment[44].**

| 2nd Cycle Area for Action | Number of waterbodies | Sub-catchment | Local Authority | Reason for selection |
|---|---|---|---|---|
| Roosky | 2 | 40_6 | Donegal | • One deteriorated water body.<br>• Possibility to build on the improvement in Status of one water body.<br>• Small geographical area.<br>• Multiple pressures that can be investigated at the same time. |
| Donagh | 2 | 40_2 | Donegal | • One Deteriorated High Ecological status objective water body.<br>• Starting in the Headwaters.<br>• Multiple pressures incorporating both rural and urban areas. |
| Clonmany | 5 | 40_1 | Donegal | • Similar pressures and issues in all water bodies in the subcatchment.<br>• Whole subcatchment action area starting from the headwaters.<br>• Build on improvements in the Clonmany WWTP. |
| Malin | 3 | 40_3 | Donegal | • Two deteriorated water bodies both of which have previously been Good status.<br>• Same multiple significant pressures in the deteriorated water bodies selected in this action area. |
| Lough Nastackan | 2 | 40_4 | Donegal | • Two deteriorated water bodies.<br>• One of the deteriorated water bodies has a High Ecological Status objective.<br>• Both deteriorated water bodies were previously at High status.<br>• Individual water bodies with no inflowing water bodies.<br>• Same single significant pressure in both water bodies. |

#### *6.1.9.7 WWTP status in the catchment*

Urban Waste Water Treatment Agglomerations have been identified as a significant pressure in six At Risk river waterbody (Table 6-22).

Domestic waste water has been identified as a significant pressure in six river waterbodies. The significant issues arise from inadequate domestic waste water systems, many of which are sited on areas of high pollution impact potential/poorly draining soils, that result in enrichment and potential for microbial/organic contamination. All five waterbodies impacted by domestic waste water are also impacted by agricultural pressures.

Table 6-22 presents a summary of the current status of the WWTPs and the corresponding receiving waterbodies.

[44] EPA, 2021. 3rd Cycle Draft Donagh-Moville Catchment report. 35 P. Available online: <Donagh-Moville (catchments.ie) >

**Table 6-22 WWTP current capacity and compliance, and receiving water quality status in the Donagh-Moville catchment in County Donegal**

| WWTP Information | | | | | AER 2021 | | | | Receiving water body | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Settlement** | **Census pop. (2016)** | **Wastewater Treatment Plant (WWTP)** | **Reg #** | **Indication of Available Capacity (June 2022)** | **Organic capacity – As constructed** | **Organic capacity – collected load (peak week)** | **Organic capacity – Remaining** | **Compliance Status** | **Receiving water body** | **Ecological status (2016-2021)** | **WFD Risk (2016-2021)** |
| Carndonagh | 2,471 (2,502 in 2022) | Carndonagh/Malin WWTP | D0113 | • Amber | 5833 | 5248 | 585 | Non-Compliant | Donagh_030 | Poor | At risk |
| Moville | 1,480 | No treatment | D0212 | • Red | - | - | - | No AER | Bredagh_010 | Poor | At Risk |
| Clonmany | 428 | Clonmany WWTP | D0533 | • Amber | 450 | 338 | 112 | Non-Compliant | Clonmany_020 | Moderate | At risk |
| Ballyliffin | 426 | Ballyliffin WWTP | D0351 | • Red | - | - | - | Non-compliant | Ardagh_010 | Poor | Review |
| Culdaff | 237 | Culdaff WWTP | A0308 | • Green | - | - | - | N/A | Culdaff_020 | Moderate | At Risk |
| Gleneely | 236 | Gleneely WWTP | A0368 | • Green | - | - | - | N/A | Culdaff_010 | Poor | At Risk |
| Glengad Housing Scheme | - | - | A0452-01 | - | - | - | - | N/A | Portaleen_010 | Poor | At risk |
| Redcastle Housing Scheme | - | - | A0494-01 | - | - | - | - | N/A | Fad (Redcastle)_010 | Poor | Review |

## 6.2 Buncrana Scoping

### 6.2.1 Surface waterbodies

There are five rivers (Table 6-23) in the Buncrana region AP 2024-2030, three of them with poor WFD ecological status which are *At Risk* and two of them with moderate WFD ecological status which are under *Review* (Figure 6-20).

The Lough Swilly water coastal waterbody has a good ecological status and is At Risk due to urban runoff and domestic wastewater discharges(Figure 6-21).

The Crana estuary has a moderate WFD ecological status and its risk category is under *Review*.

**Table 6-23 WFD ecological status and risk of the surface waterbodies in the Buncrana region.**

| Waterbody | WFD EcoStatus 2016-2021 | WFD Risk 2016-2021 |
|---|---|---|
| **Rivers** | | |
| Crana_020 | Poor | At Risk |
| Crana_030 | Poor | At Risk |
| Gortyarrigan_010 | Moderate | Review |
| Lisfannan_010 | Moderate | Review |
| Mill (Donegal)_020 | Poor | At Risk |
| **Coastal** | | |
| Lough Swilly | Good | At Risk |
| **Transitional** | | |
| Crana Estuary | Moderate | Review |

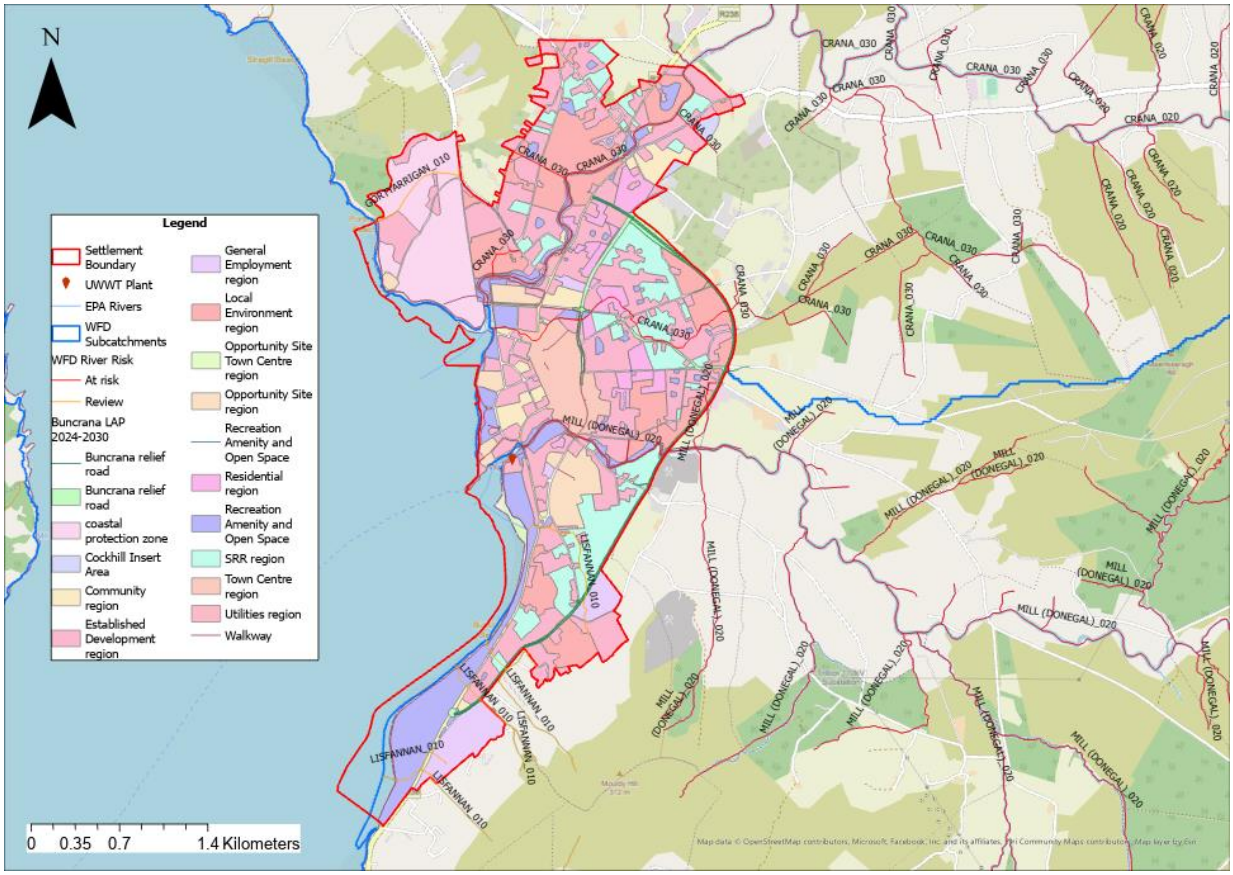



**Figure 6-20 WFD Risk for Rivers vs land-use zoning map (AP 2024-2030) in the Buncrana region.**

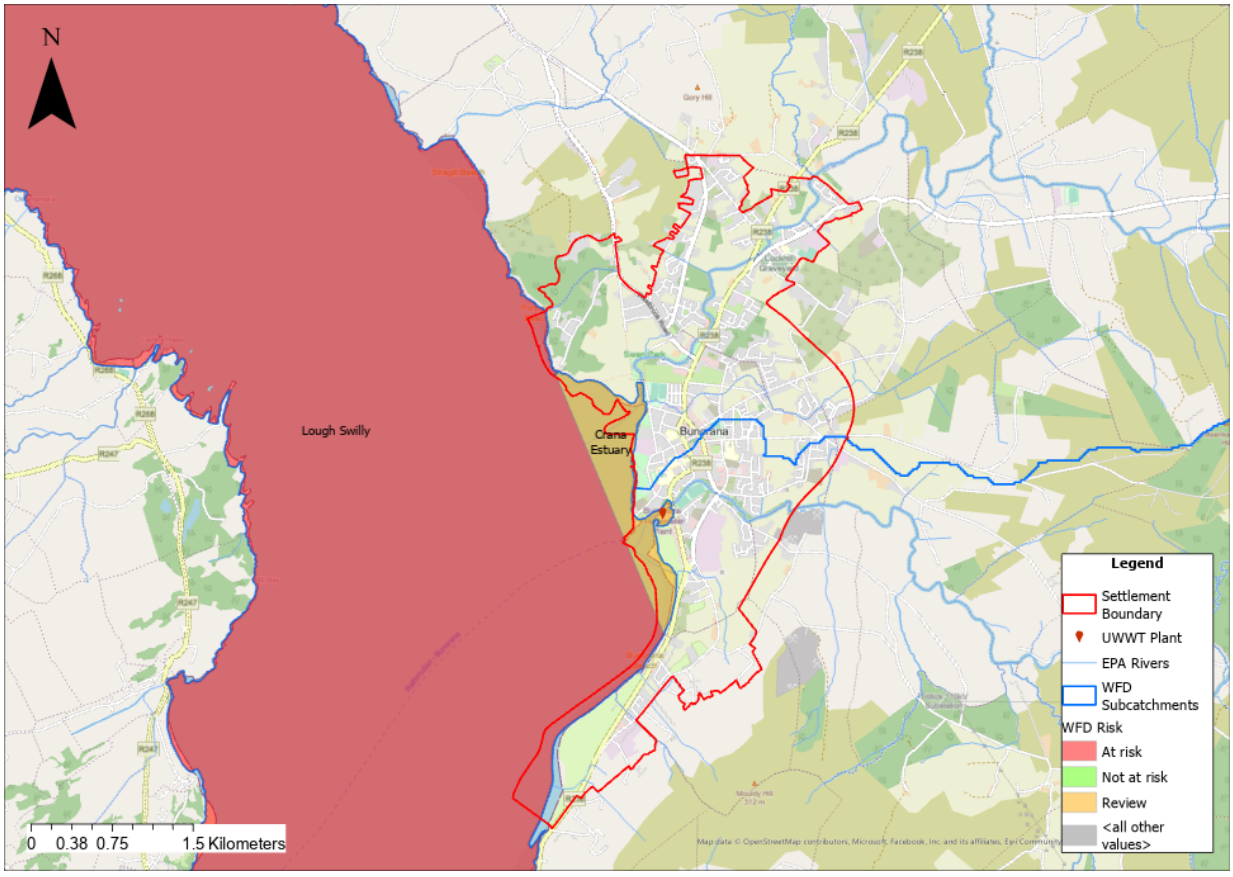


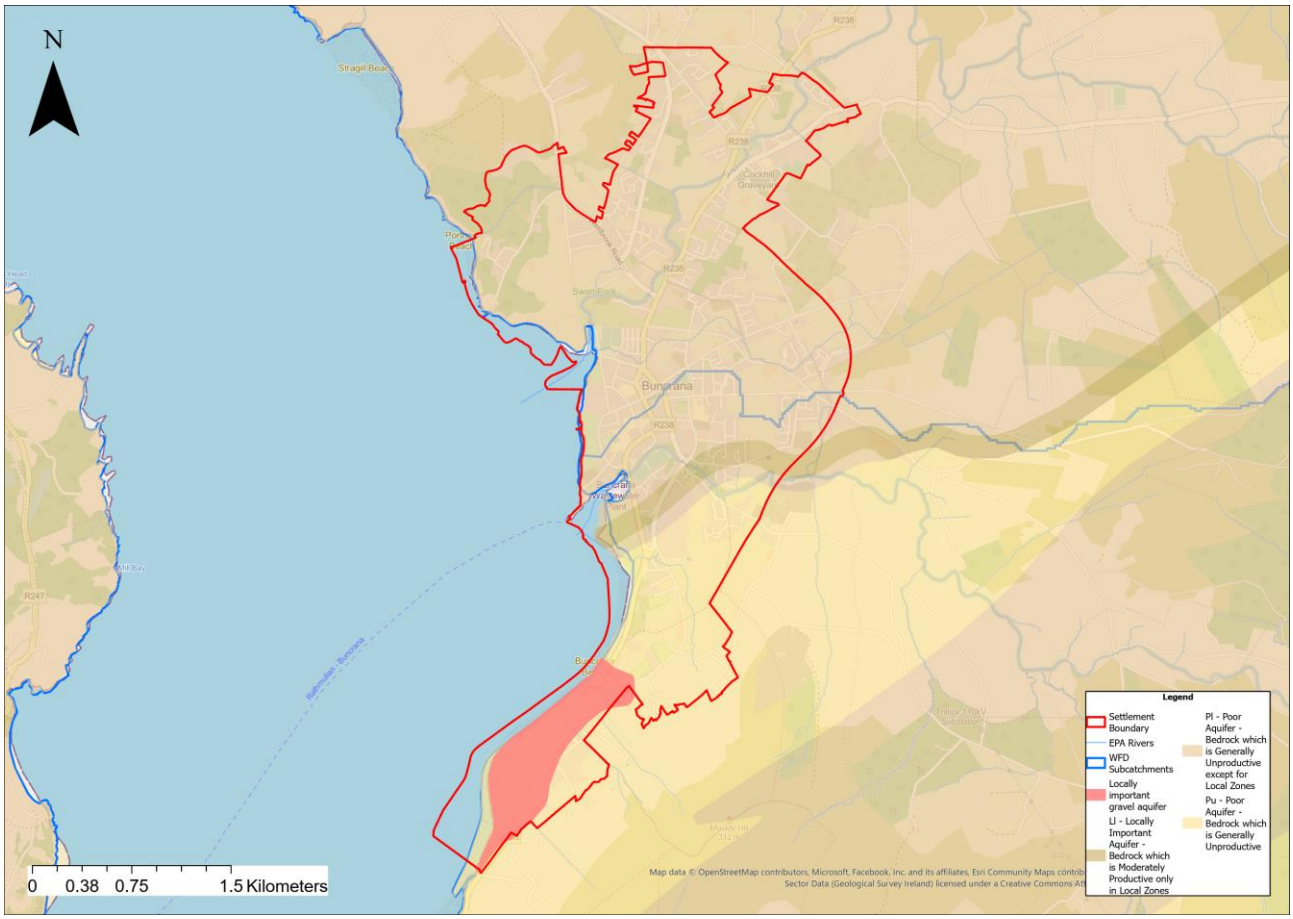
**Figure 6-21 WFD Risk for coastal and transitional waterbodies in the Buncrana region.**

## 6.2.2 Groundwater

### *6.2.2.1 Aquifer classification*

According to the GSI[45], Buncrana is located in the Lough Swilly Groundwater Body (GWB). The bedrock geology is dominated by the Upper Crana Quartzite Formation (UC) and the Lower Crana Quartzite Formation (LC), characterised by the presence of psammitic schist with pebbly grit beds and some marble beds, respectively. This bedrock is generally unproductive except for local zones – poor aquifer (PI). The south border of the UP formation is surrounded by the Culdaff Limestone Formation (CU) described as grey graphitic marble and pelitic schist and is a locally important aquifer with bedrock moderately productive only in local zones (LI).

Further south the Fahan Slate Formation (FS) composed by pelitic and psammitic schist is found. This bedrock is generally unproductive – poor aquifer (Pu). Within the FS formation, in the southern side of the Buncrana settlement, there is a locally important gravel aquifer (Lg) of approximately 0.557km$^2$.

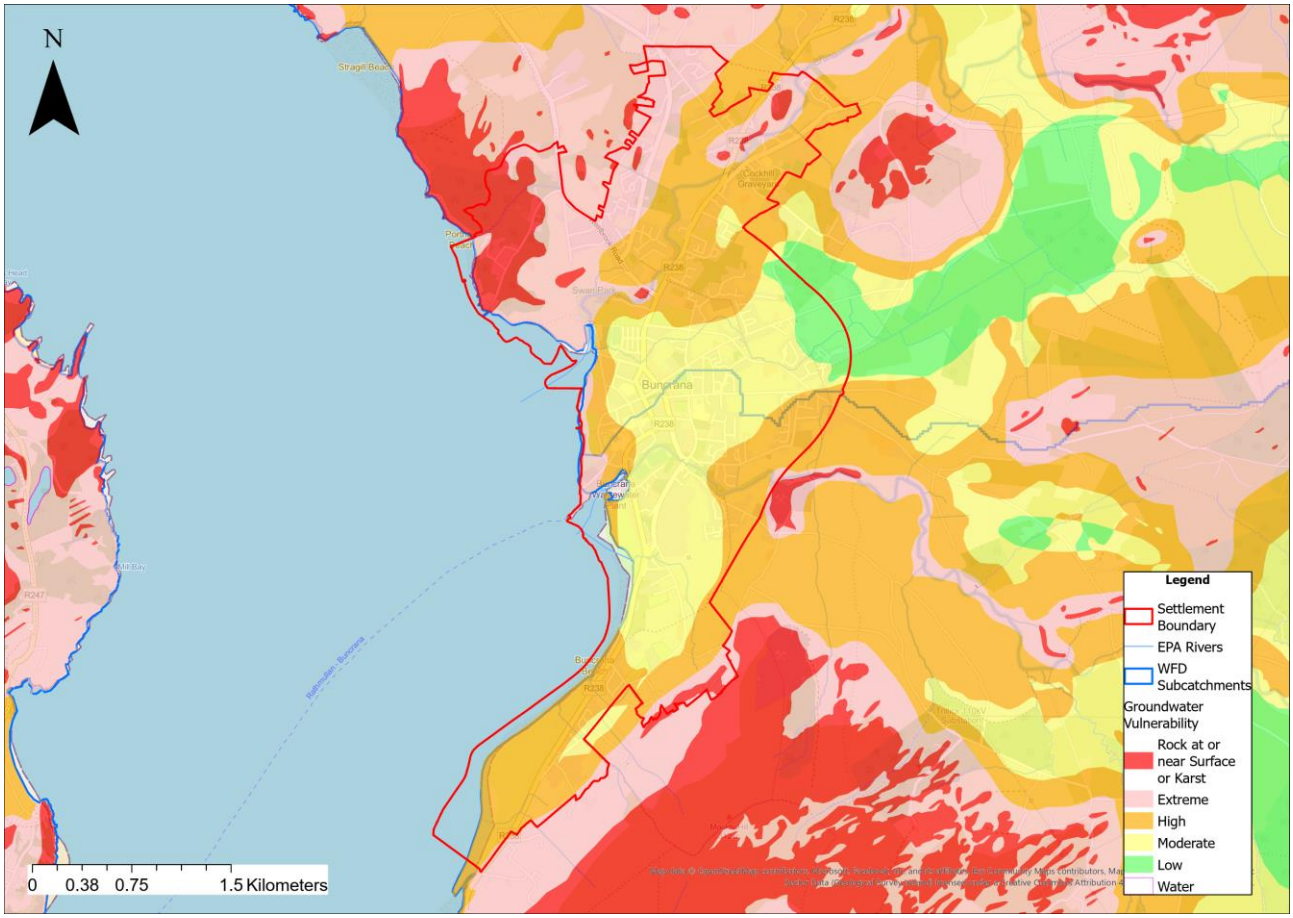



### *6.2.2.2 Groundwater vulnerability*

The GSI[46] indicates that the groundwater vulnerability varies from moderate where the subsoil permeability is low, to high and extreme with some patch of extreme to rock at or near the surface in the north of the settlement boundary. The Subsoil permeability is generally moderate, however within the gravel aquifer the permeability is high.

[45] GSI, 2004. Ballybofey GWB: Summary of Initial Characterization. 3 p. Available online: < Microsoft Word - Ballybofey.doc (geodata.gov.ie)>

[46] GSI – Vulnerability map. Available online : < https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef>




#### *6.2.2.3 Groundwater risk*

The Lough Swilly GWB (IEGBNI_NW_G_059) is *Not at Risk* and the ecological status is *Good* for the period 2016-2021.

### 6.2.3 Significant issues and pressures in At Risk Waterbodies

The EPA[47] provides a description of pressures at a waterbody level. The catchment report for the area summarizes significant pressures and issues in waterbodies in the Buncrana region.

The Excess nutrients remain the most prevalent issue in the Lough Swilly and Crana Estuary due to combined sewer overflows from Letterkenny (D0009-1), urban runoff and domestic single house discharges. Crana Estuary is also impacted by the discharge of the Buncrana WWTP (D0125-01).

The Crana_020 river is impacted by farmyards (sheep dipping), water abstraction from the Crana River Pollan Dam PWS and siltation due to peat extraction, while the main pressure of the Crana_030 river is agriculture. The Mill (Donegal)_020 river is mainly impacted by the Cassidy Quarry that caused slightly exceedance of suspended solids and pH and the dam on the Mill river.

### 6.2.4 Protected areas

The Lough Swilly SAC(002287), SPA (004075) and pNHA (000166) is the largest protected area in the Buncrana region. Lough Swilly is a long sea lake, with shallow water and intertidal sand and mudflats being dominant habitats. The main rivers flowing into the site are the Swilly, Lennan and Crana.

This site is a SAC due to the presence of the following habitats and species listed in the Annex I/II of the E.U. Habitat Directive: [1130] Estuaries, [1150] Coastal Lagoons, [1330] Atlantic Salt Meadows, [6410] Molinia Meadows, [91A0] Old Oak Woodlands and [1355] Otter.

[47] EPA

To the north-east of Buncrana there is NHA are of the Umrycam Bog (002406).

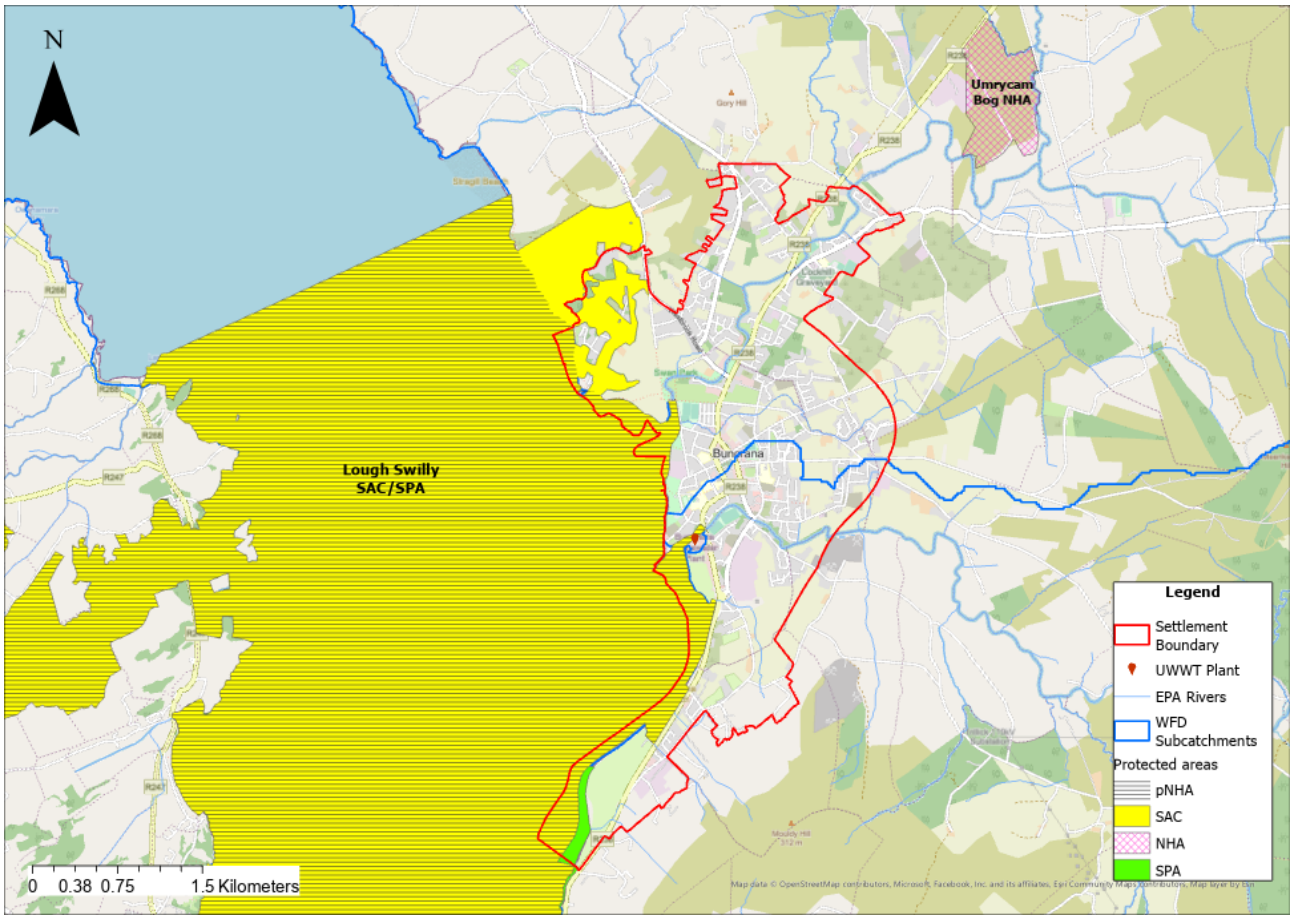



**Figure 6-22 Protected areas in the Buncrana region.**

### 6.2.5 Flooding

The Strategic Environmental Assessment identified a number of potential negative impacts associated with the proposed measures, but these are predominantly short term in nature. They include the potential for disturbance of the local community during construction of the hard defences, and short term sedimentation and water quality impacts. There is also potential for disturbance or loss of habitats and/or species in the direct footprint of the hard defences, and minor visual impacts in the medium to long term. As the proposed works will be located immediately adjacent to and upstream of Lough Swilly SAC and SPA, with the potential for direct and indirect impacts on the qualifying habitats and/or species, Appropriate Assessment was required.

## 6.3 Ballybofey/Stranorlar Scoping

Figure 6-23 shows the different areas included in the Ballybofey/Stranorlar AP. This settlement locates in the Foyle catchment (HA 01) (Figure 4-1) and sub-catchments Finn [Donegal]_SC_030 on the northern side and Finn [Donegal]_SC_040 on the southern side (Figure 4-3).

### 6.3.1 Surface waterbodies

There are five rivers (Table 6-24) in the Ballybofey/Stranorlar region AP 2024-2030 and all are *At Risk* according to the WFD (Figure 6-23). All the rivers have moderate status, except Finn (Donegal)_060 which has a poor status. The latter together with Finn (Donegal)_070 have a high content of nitrates.

**Table 6-24 WFD ecological status and risk of the rivers in the Ballybofey/Stranorlar area.**

| River | WFD EcoStatus 2016-2021 | WFD Risk 2016-2021 |
|---|---|---|
| Burn Daurnett_010 | Moderate | At Risk |
| Finn (Donegal) | Moderate | At Risk |
| Finn (Donegal)_050 | Moderate | At Risk |
| Finn (Donegal)_060 | Poor (high nitrate) | At Risk |
| Finn (Donegal)_070 | Moderate (high nitrate) | At Risk |

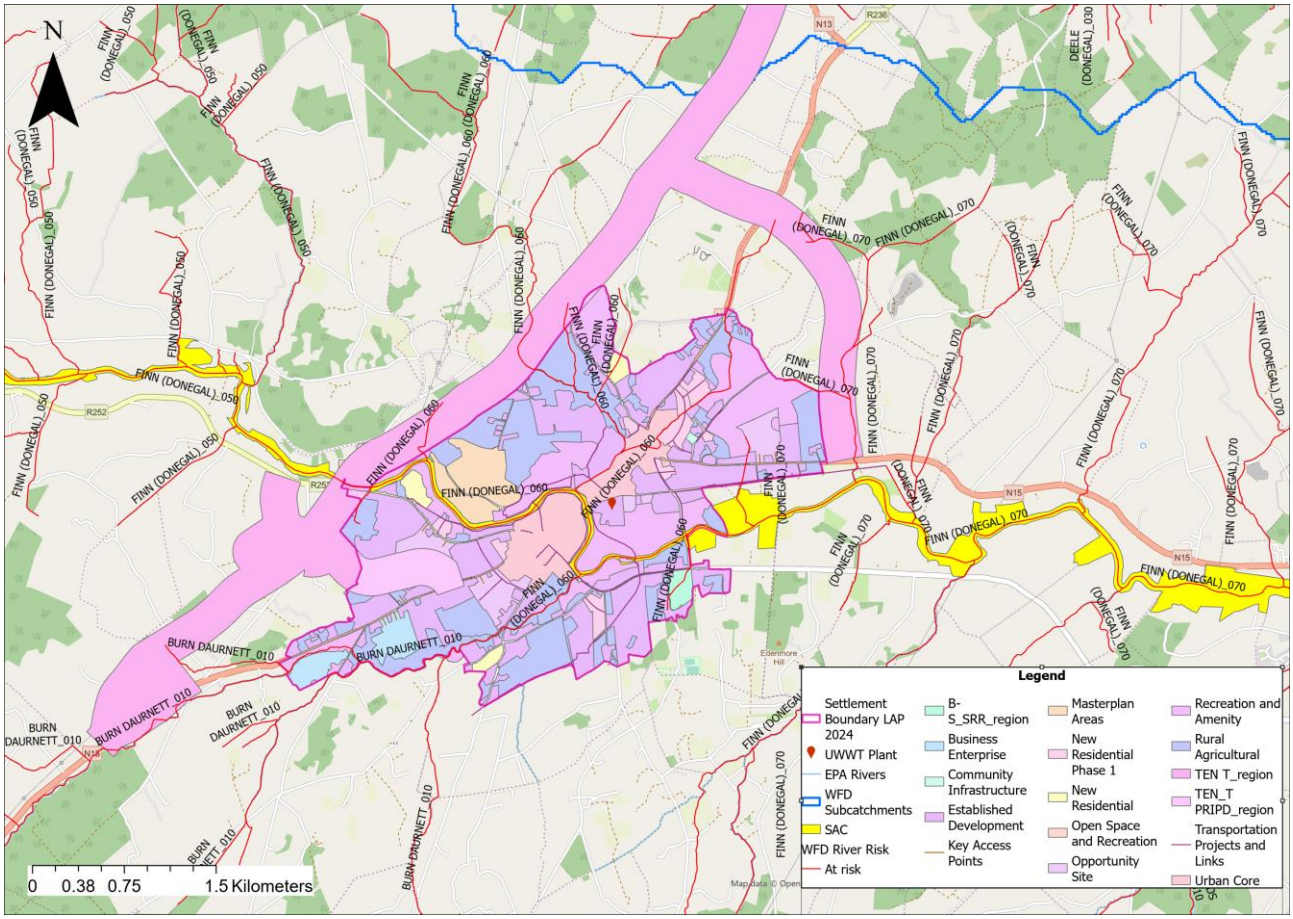



**Figure 6-23 WFD Risk for Rivers vs land-use zoning map (AP 2024-2030) in the Ballybofey/Stranorlar region.**

## 6.3.2 Groundwater

### *6.3.2.1 Aquifer classification*

According to the GSI[48], Ballybofey/Stranorlar is located within the Ballybofey Groundwater Body (GWB). The bedrock geology of the settlement is dominated by the Lough Eske Psammite Formation (ESKE), which is typified by pale green, massively bedded, feldespatic psammites with pelitic beds generally <10m thick. The Ballybofey GWB is dominated by a poor aquifer (PI) which is generally unproductive except for local zones (85%).

[48] GSI, 2004. Ballybofey GWB: Summary of Initial Characterization. 3 p. Available online: < Microsoft Word - Ballybofey.doc (geodata.gov.ie)>

### 6.3.2.2 *Groundwater vulnerability*

The GSI[49] (Figure 6-24) indicates that the groundwater vulnerability is generally high in the Ballybofey/Stranorlar area, with some extreme and rock near the surface/or karst zones to the north of the settlement. The high vulnerability related to the permeability (moderate) and to the thickness of the subsoil (3-10m), which is described as till and alluvium along the Finn river.

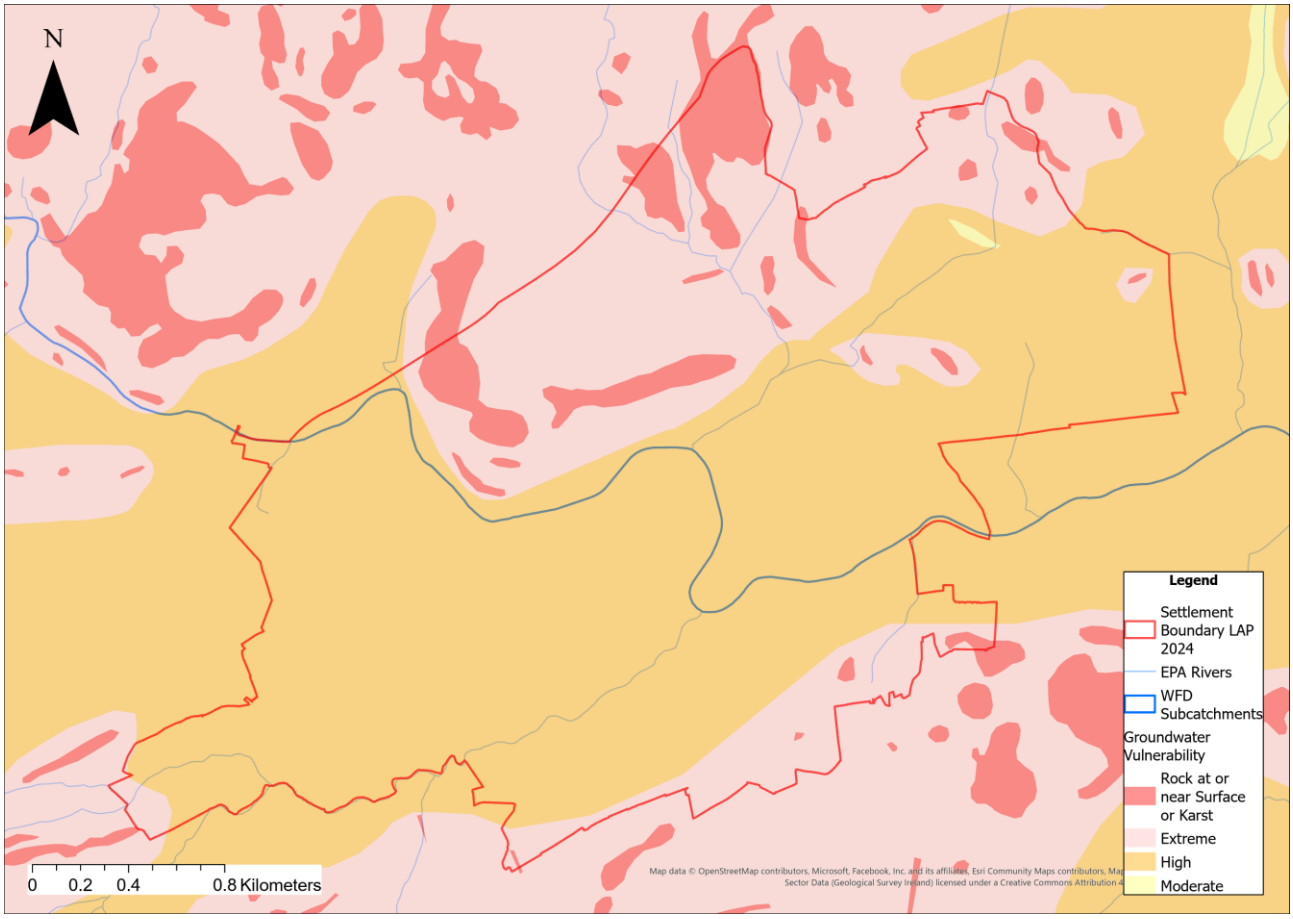



**Figure 6-24 Groundwater vulnerability in the Ballybofey/Stranorlar region.**

### 6.3.2.3 *Groundwater risk*

The GWB Ballybofey (IEGBNI_NW_G_048) is *Not at Risk* and the ecological status is *Good* for the period 2016-2021.

## 6.3.3 Significant issues and pressures in At Risk Waterbodies

The EPA[50] provides a description of pressures at a waterbody level. The catchment report summarizes significant pressures and issues in *At Risk* waterbodies in the Ballybofey/Stranorlar region.

Excess nutrients remain the most prevalent issue in the streams in the Ballybofey/Stranorlar area, due to agriculture and urban wastewater, which are the main pressures in these streams. The issues related to farming in these streams are predominantly due to chemical impacts and phosphorous loss from pastures to surface waters. In the case of urban wastewater, in Cycle 2 2010-2015 there has been issues regarding discharges in Fin [Donegal]_060, through storm water overflows and pump station emergency overflow identified as non-compliant with DHPLG criteria in the Ballybofey/Stranorlar WWTP. Urban Run-off, including misconnections, has been identified as a significant pressure.

[49] GSI – Vulnerability map. Available online : < https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef>

[50] EPA

Forestry has been identified as a pressure in Finn (Donegal)_050 where forestry in poorly drained soils could potentially promote phosphate and silt runoff. The is also extensive forestry in the Burn Daurnett_010 river.

Pesticides have also been found in the Finn River.

#### *6.3.3.1 WWTP status*

Recent upgrades to the Ballybofey/Stranorlar wastewater treatment plant has increased its overall treatment capacity of 9,200 population equivalent (Table 6-4).

### 6.3.4 Protected areas

Ballybofey/Stranorlar benefits from rich natural heritage assets including: the River Finn Special Area of Conservation/the River Finn Corridor, the Drumboe Woods, and Environs Area, Lough Alaan, Dunwiley Woods, treelined historic Railway Corridors and a biodiversity rich rural hinterland including pockets of deciduous woodland, mature field boundaries/hedgerows, water courses and associated aquatic habitats.

The River Finn Special Area of Conservation (SAC) (IE0002301) is host to several Annex 1 habitats and Annex II species including the Atlantic Salmon (IEPA5D0014) and the Otter which are likely to be found within the plan area. The SAC site synopsis specifically notes that The River Finn is one's of Ireland's premier salmon waters and is important in an international context in having a stable spring salmon population. It also notes that Otter is widespread thought the system and its habitat includes wet grassland and marsh dominated by rushes (Figure 6-23).

### 6.3.5 Flooding

According to the Ballybofey/Stranorlar AP 2024-2030, there is a history of fluvial and pluvial flooding in the region, with the most recent event recorded in December 2015. The Office of Public Works (OPW) national Catchment Flood Risk Assessment and Management (CFRAM) Programme mapped, and identified measures to manage, flood risk in certain areas of Ballybofey/Stranorlar. The associated mapping available on floodinfo.ie indicates that:

- Flood Zone A (i.e. 1:100 year/1% Annual Exceedance Probability flood risk area) covers a significant portion of the plan area including areas to the south of Railway Road and along the Burn Daurnett.
- Flood Zone B (i.e. 1:1000 year/1% Annual Exceedance Probability flood risk area) covers a significant part of Ballybofey Town Centre.

The 2009 Flood Risk Management Guidelines adopts a precautionary approach to flooding and sets out a sequential approach including: avoiding development at risk from flooding, substituting a land use development where avoidance is not possible, justifying a proposed land use in strategic circumstances where avoidance/substitution is not possible and mitigating any residual flood risk. The guidelines identify a hierarchy of flood risk areas and the types of development acceptable in same namely:

- Flood Zone A: Water Compatible Development (e.g. open space, outdoor sports and recreation)
- Flood Zone B: Less Vulnerable Development (e.g. Retail, leisure, warehousing, commercial)
- Flood Zone C: High Vulnerable Development (e.g. Dwellings, Essential infrastructure, Schools)

The Ballybofey/Stranorlar Flood Relief Scheme aims to identify, design, and deliver a scheme to alleviate flood risk in the twin towns. The scheme must be technically, socially, environmentally and economically acceptable to the community and also meet the standards of the EU Floods Directive. A Strategic Environmental Assessment identified several potential negative impacts associated with the proposed measures, but these are predominantly short term in nature. They include the potential short-term sedimentation and water quality impacts. There is potential for minor medium to long term impacts on water quality and fisheries from recurrent dredging. There is also potential for disturbance or loss of habitats and/or species in the direct footprint.

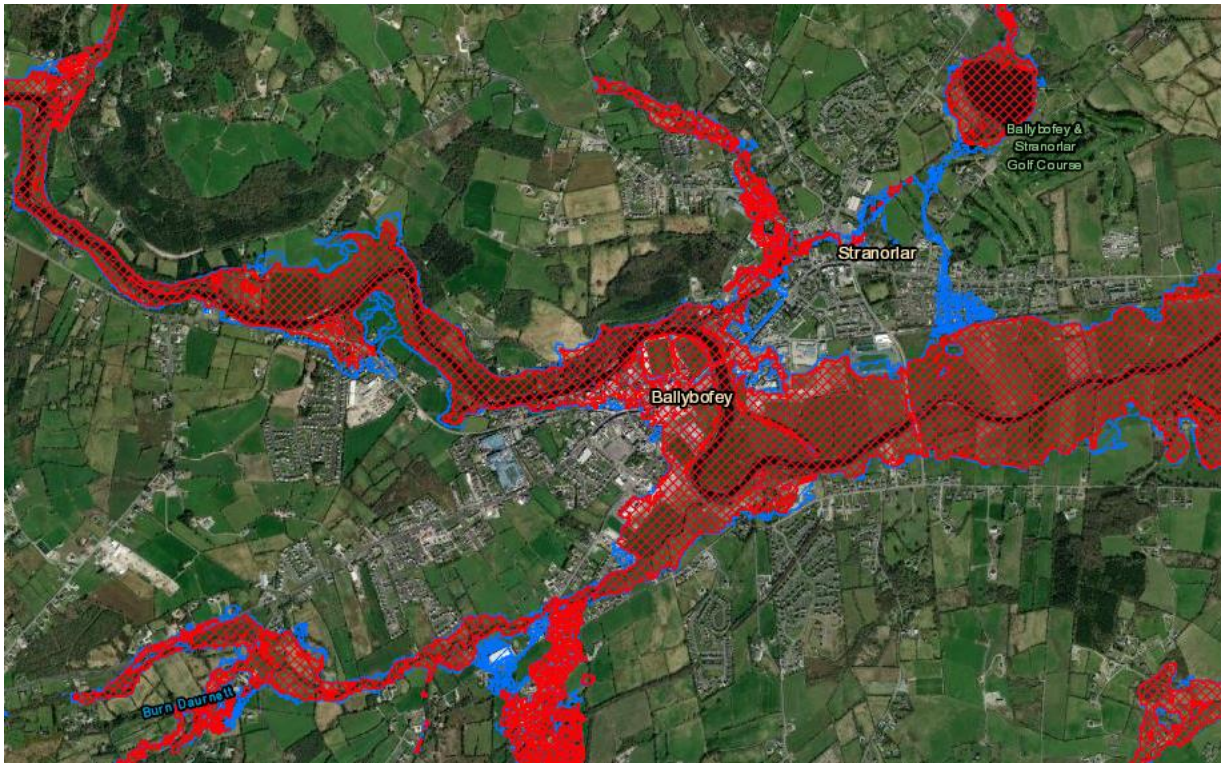



**Figure 6-25 High End Future Scenarios Flood Zone A and Flood Zone B ion Ballybofey/Stranorlar area[51].**

## 6.4 Bundoran Scoping

Figure 6-26 shows the different areas included in the Bundoran AP. This settlement locates in the Erne catchment (HA 36) (Figure 4-1) and sub-catchments Erne_SC_050 on the northern side and Drowes_SC_010 on the southern side (Figure 4-3).

### 6.4.1 Surface waterbodies

There are two rivers (Figure 6-26) in the Bundoran region AP 2024-2030, both with Good WFD ecological status. The Bradoge_020 river is *At Risk*, while Drowes_010 is under *Review* (Table 6-25).

The two coastal and the transitional waterbodies are classified as *High* ecological status (2016-2021). Donegal Bay and Drowes Estuary are *Not at Risk* and the Bundoran Bay is under *Review*.

The Lough Melvin locates in Co. Leitrim, however the Drowes_010 river connects the lake to Donegal Bay. This lake is *At Risk* and the ecological status is Moderate (Table 6-25).

**Table 6-25 WFD ecological status and risk of the surface waterbodies in the Bundoran region.**

| Waterbody | WFD EcoStatus 2016-2021 | WFD Risk 2016-2021 |
|---|---|---|
| **Rivers** | | |
| Bradoge_020 | Good | At Risk |
| Drowes_010 | Good | Review |
| **Lakes** | | |
| Lough Melvin | Moderate | At Risk |
| **Coastal** | | |

[51] Donegal County Council. Ballybofey/Stranorlar LAP 2024-2030 – draft.

| Waterbody | WFD EcoStatus 2016-2021 | WFD Risk 2016-2021 |
|---|---|---|
| Donegal Bay (Erne) | High | Not at Risk |
| Bundoran Bay | High | Review |
| **Transitional** | | |
| Drowes Estuary | High | Not at Risk |
| Erne Estuary | Good | Not at Risk |

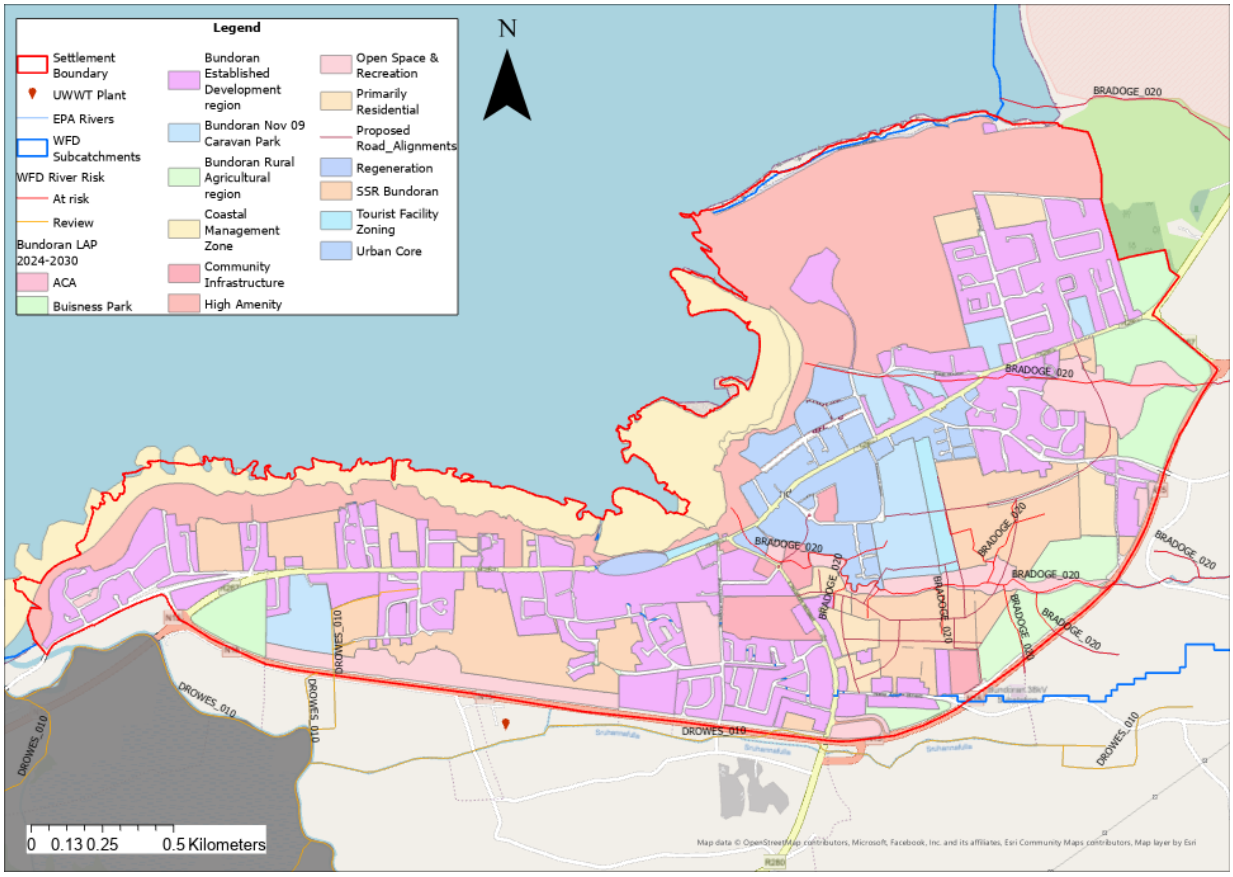



**Figure 6-26 WFD Risk for Rivers with land-use zoning map (AP 2024-2030) in the Bundoran region.**

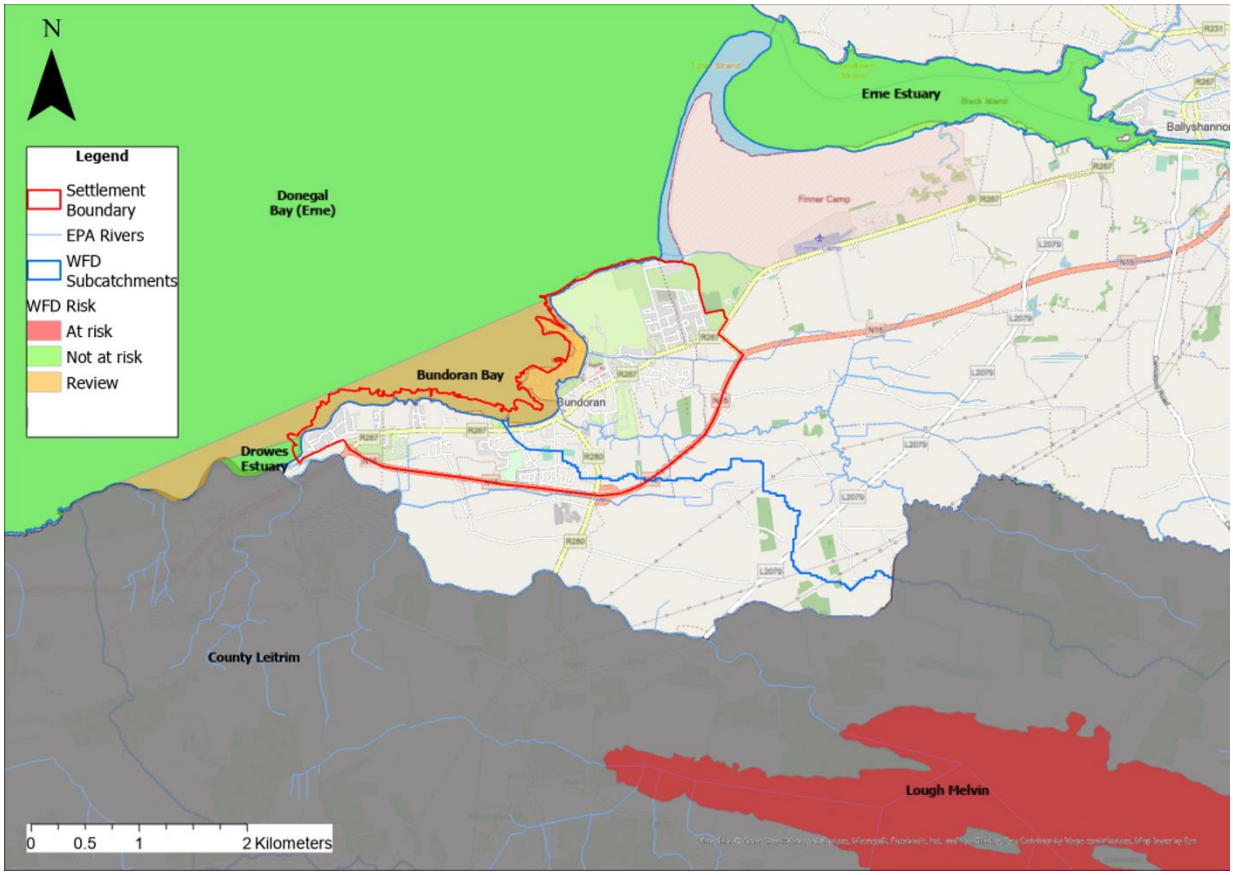



**Figure 6-27 WFD risk of lake, coastal and transitional waterbodies in the Bundoran region.**

## 6.4.2 Groundwater

### *6.4.2.1 Aquifer classification*

According to the GSI[52] GWB summary report Bundoran is located in the Bundoran Groundwater Body (GWB). The bedrock geology is dominated by the Bundoran Shale Formation (BN), which is characterised by the presence of dark shale and minor fine-grained limestone. The BN is a locally Important Aquifer, with bedrock which is moderately productive only in local zones (Ll). To the north of BN, the geology is dominated by the Ballyshannon Limestone Formation (BS), a pale grey calcarenite limestone which is a Regionally Important Aquifer – Karstified (Rk). To the south of BN, dominates the Mullaghmore Sandstone Formation (MU) composed by sandstone, siltstone and shale, which is a Locally Important Aquifer with a bedrock generally moderately productive (Lm).

There is a locally important gravel aquifer (Lg) located to the north-east of Bundoran.

[52] GSI, 2004. Ballybofey GWB: Summary of Initial Characterization. 3 p. Available online: < Microsoft Word - Ballybofey.doc (geodata.gov.ie)>

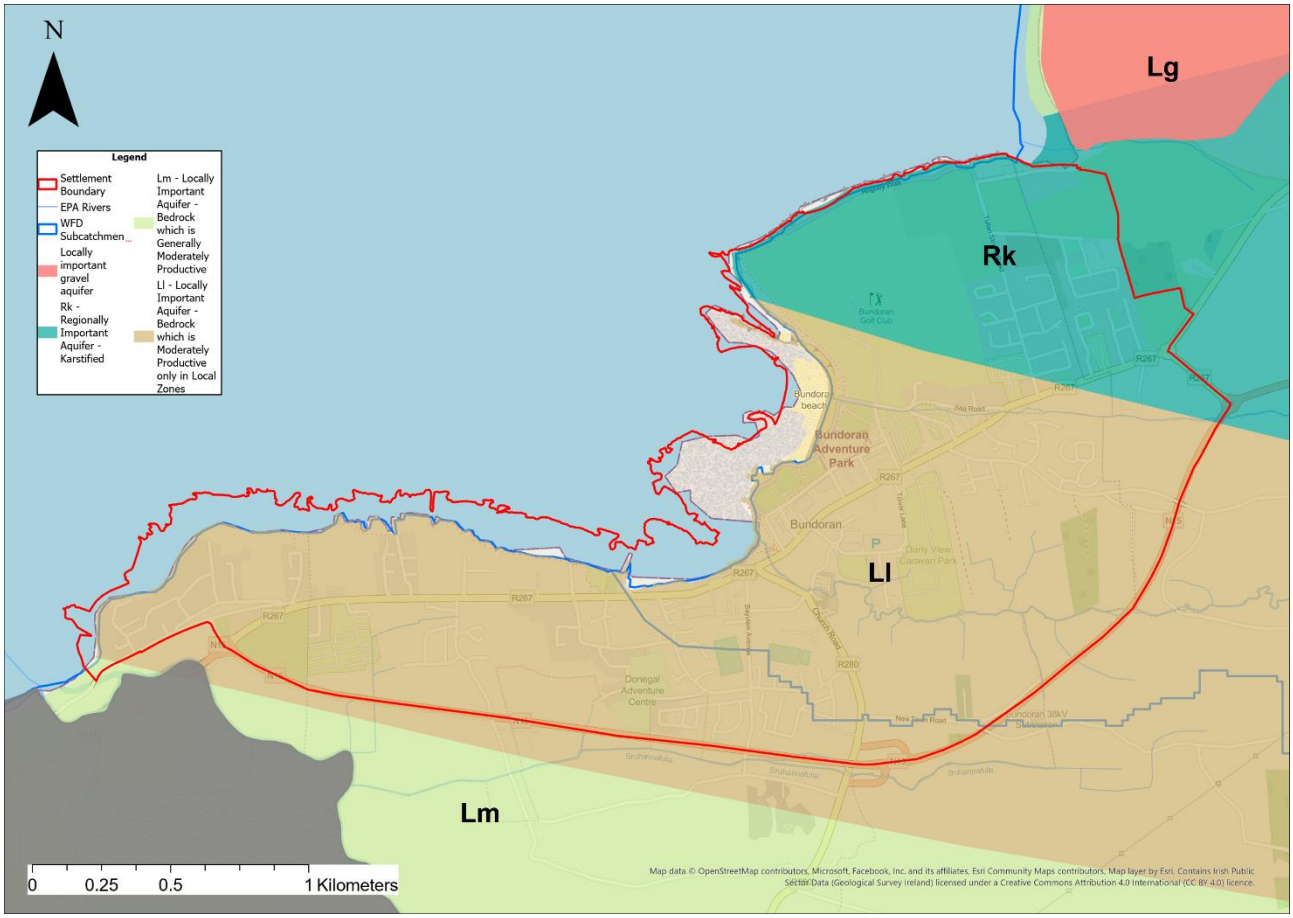



**Figure 6-28 Groundwater resources in the Bundoran region.**

### *6.4.2.2 Groundwater vulnerability*

The GSI[53] groundwater body mapping indicates that the groundwater vulnerability varies from moderate where the subsoil permeability is low, to high and extreme along the Bradoge river and along the Donegal Bay shore (subsoil permeability has not been evaluated).

[53] GSI – Vulnerability map. Available online : < https://dcenr.maps.arcgis.com/apps/webappviewer/index.html?id=7e8a202301594687ab14629a10b748ef>

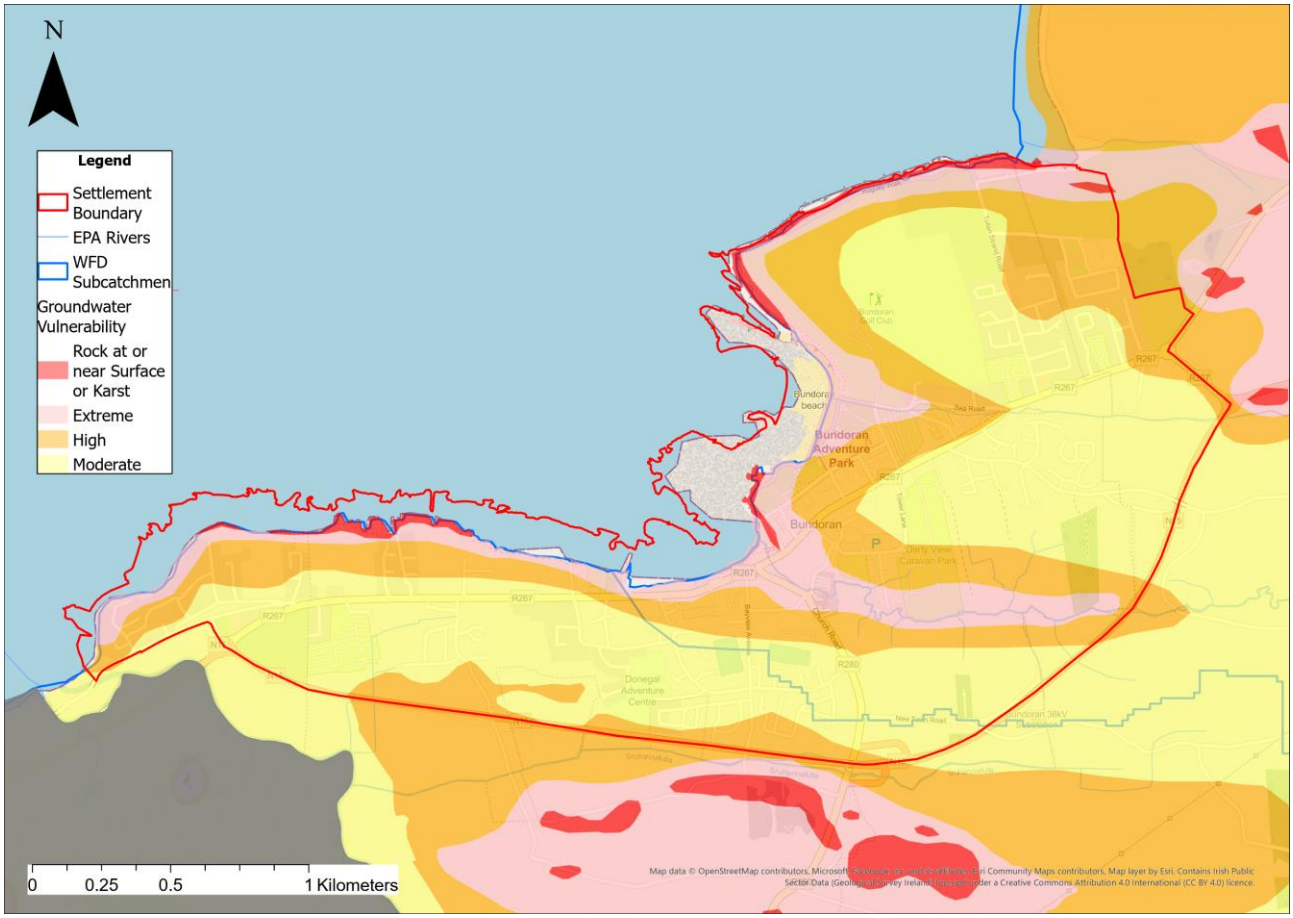



**Figure 6-29 Groundwater vulnerability in the Bundoran region.**

#### *6.4.2.3 Groundwater risk*

The Bundoran GWB (IEGBNI_NW_G_013) is *Not at Risk* and the ecological status is Good for the period 2016-2021.

### 6.4.3 Significant issues and pressures in At Risk Waterbodies

The EPA[54] provides a description of pressures at a waterbody level. The catchment report summarizes significant pressures and issues in waterbodies in the Bundoran region.

The Excess nutrients remain the most prevalent issue in the Bradoge_020 river due to combined sewer overflows from the Bundoran WWTP (D0130-01), single houses discharges and diffuse sources run-off

There are no significant pressures in transitional and coastal waterbodies in the region.

### 6.4.4 Protected areas

Figure 6-30 show the protected areas in the Bundoran region. The Donegal Bay SPA (004151), located to the north of Bundoran, is a large, sandy, mostly shallow area that extends along the Bundoran shoreline. For coastal SPA sites, conservation objectives are defined for attributes relating to waterbird species population and for attributes related to the maintenance and protection of habitats that support them. Wetlands habitats contained in Donegal Bay SPA are identified to be of conservation importance for non-breeding migratory waterbirds.

[54] EPA

The Lough Melvin SAC and pNHA (000428) is an oligo-mesotrophic lake that include a lot of inflowing and outflowing streams including Drowes_010 river, which connects the lake to Donegal Bay. This SAC was selected for the following habitats and species listed in the Annex I/II of the E.U. Habitat Directive: [3130] Oligotrophic to Mesotrophic Standing Waters, [6410] *Molinia* Meadows, [1106] Atlantic Salmon and [1355] Otter. The lake is used for boating, fishing and water abstraction, while much of the terrestrial part of the site is used for grazing. Consequently, the main threats to the site are from agricultural pollution and recreational pressure[55].There is an additional proposed NHA of the Erne Estuary/Finner Dunes (000139) to the north-east of Bundoran.

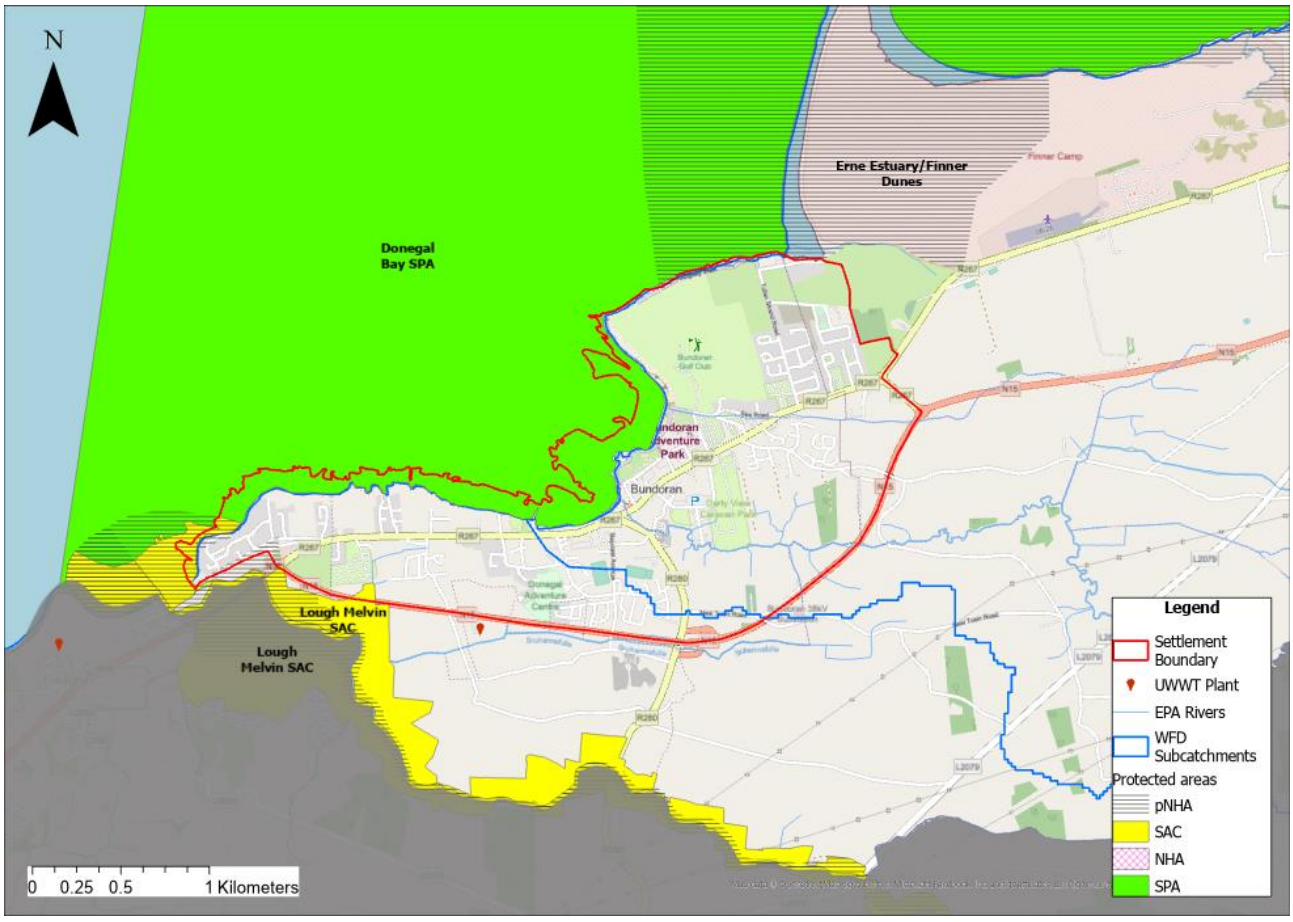



**Figure 6-30 Protected areas in the Bundoran region.**

[55] Lough Melvin SAC – Site synopsis. Available online: < https://www.npws.ie/sites/default/files/protected-sites/synopsis/SY000428.pdf >

# 7. SWSIA Assessment

## 7.1 Donegal County Development Plan

The SWSIA Screening highlighted some key objectives and policies that could potentially lead to negative impacts on the water environment. These are addressed in more detail here in the context of the scoping study outlined in the previous section of the report. The objectives and policies are dealt with under the following broad categories:

- Urban housing, population increase and waste water treatment capacity including the following:
  - Objectives: S-O-1, CS-O-1; CS-O-2; CS-O-6; CS-O-7
  - Policies: UB-P-1
- Rural Housing;
  - Objectives: S-O-1, CS-O-3;
  - Policies: RH-P-3; CDP-CCG-P-3;
- Tourism;
  - Objectives: TOU-O-1;
  - Policies: TOU-P-7; CDP-CCG-P-5
- Natural Resource Development
  - Objectives: EXO-1, MRCM-O-1
  - Policies: MRCM-P-3, CDP-CCG-P-5

### 7.1.1 Urban housing and WWTP capacity

The National Planning Framework (NPF) and associated 'Implementation Roadmap' (refer Table 3.2 below) provide projected population targets for County Donegal and in turn these figures inform the population projections in the Regional Spatial and Economic Strategy. The Housing chapter of the County Development Plan provides details of existing and projected populations in the regional growth centre of Letterkenny and the towns deemed to be growth drivers in the county and those towns classified as service towns, see Table 7-1.

**Table 7-1: Population Projections for Towns and County totals for 2023**

| Settlement | Population 2016 | Population Target 2030 | Population Increase | % Increase |
|---|---|---|---|---|
| Letterkenny | 19,274 | 25,434 | 6,160 | 32% |
| Buncrana | 6,785 | 8,342 | 1,557 | 23% |
| Ballybofey-Stranorlar | 4,852 | 6,409 | 1,557 | 32% |
| Donegal Town | 2,618 | 4,175 | 1,557 | 59% |
| Killybegs | 1,236 | 1,651 | 415 | 34% |
| An Clochán Liath (Dungloe) | 1,164 | 1,579 | 415 | 36% |
| Lifford | 1,626 | 1,959 | 333 | 20% |
| Carndonagh | 2,471 | 2,804 | 333 | 13% |
| Ballyshannon | 2,299 | 2,632 | 333 | 14% |
| Bundoran | 1,963 | 2,296 | 333 | 17% |
| Raphoe | 1,089 | 1,419 | 330 | 30% |
| Bunbeg-Derrybeg | 1,491 | 1,821 | 330 | 22% |
| Milford | 1,037 | 1,370 | 333 | 32% |
| Total (Towns) | 47,905 | 61,891 | 13,986 | 29% |
| County Total | 159,000 | 183,500 | 24,500 | 15% |
| Rural Population | 111,095 | 121,609 | 10,514 | 9% |

This shows the largest quantum increase is in Letterkenny with Buncrana, Ballybofey-Stranorlar and Donegal town having the next largest increase but only a quarter that of Letterkenny. Donegal town however has the greatest proportional increase with 59% increase in comparison to the 2016 census data. The

estimates for each town are subtracted from the county total to estimate the increase in rural population which is approximately 9%.

This information has been compared to the WWTP capacity for these towns to assess the potential impact of the population increases. Table 7-2 presents the results of this assessment. The second last column on the right highlights if the primary discharge or diffuse network discharge (SWO/CSO/leakage) are defined by the EPA as a Significant WFD Pressure. In some instance these may be highlight as a pressure but not rated as significant.

Where the WWTP is highlighted as non-compliant, exceeding its available capacity and/or currently a significant pressure the assessment defines this as a likely potential negative impact over the course of the CDP with the expected population growth.

As a result six receiving waterbodies are highlighted to have potentially negative impacts including:

- Letterkenny WWTP impact on Swilly estuary which is at Poor status. The plant upgrade has provided significant capacity however the key issue is SWO discharges to the upper reaches of the Swilly estuary. The projected population increase will likely exacerbate this issue without mitigation.
- Ballybofey/Stranorlar WWTP impact on Finn (Donegal)_060 which is at poor status and the significant pressures include the primary discharge from the WWTP, CSO discharges and diffuse discharges from the agglomeration network as result of misconnections.
- Lifford WWTP impact on Finn River which is at Moderate status and is listed as a pressure but not rated as significant. The WWTP discharge is currently non-compliant and currently exceeding plant capacity. Population increase with add further load to the plant which will likely have a negative impact on a water body already at Moderate status.
- Raphoe WWTP impact on Swilly Burn_010 which is at Poor status with the WWTP listed as a significant pressure with ammonia and orthophosphate concentrations doubling downstream of the plant. The population increase within the agglomeration will further compound the potential negative impact as the plant is already over capacity and non-complaint with the ELVs.
- Milford WWTP impact on the Fern river which is at Bad status. The plant is highlighted as being a significant pressure on the water body and is over capacity and non-compliant with ELVs. The population increase over the CDP will exacerbate this issue.
- Carndonagh/Malin WWTP impact on the Donagh_030 river water body, which is at Poor status. The plant is non-compliant and highlighted as Amber in terms of its available capacity, which is significantly higher than the population for Carndonagh but the existing organic load (peak week) is close to the design capacity for the plant, which may be a function of the seasonal increases in load due to tourism in the area. The CSO discharges are listed as a pressure for the water body but not categorised as significant. The current impacts from the plant and the network are undergoing further characterisation as an Area for Action with LAWPRO. Based on the poor status of the river, non-compliant nature of the plant, unresolved investigations it is considered likely that population increase over the CDP could results in a negative impact.

Of the smaller population centres some plants face challenges in terms of capacity and compliance. The potential population increase in these areas is lower over the course of the CDP however some receiving water bodies are already being impacted by waste water. The EPA highlights the following agglomerations as being a “Key Pressure on Rivers or Lakes”: Ballintra, Kilmacrennan, Burnfoot and Bridgend. These are sites where waste water discharges were identified as the sole pollution pressure on water bodies at risk of not achieving good status. The assessment for these site sis also presented in Table 7-2, which highlights that Ballintra is not likely to pose a negative impact but that Kilmacrennan, Burnfoot and Bridgend are all discharging into the receiving water bodies at less than good status where the plan is non-compliant, the plant is over capacity and is noted as a significant pressure. It is noted that EPA classify Buncrana as a priority for potential impacts on Bathing Waters.

**Table 7-2 WWTP Capacity Assessment with future population projections**

| Settlement | Census pop. (2016) | Pop. Projection (2030) | Indication of Available Capacity (June 2022) | Organic capacity – As constructed | Collected load (peak week) | Organic capacity – Remaining | Compliance Status | Receiving water body | Ecological status (2016-2021) | WFD Risk (2016-2021) | WWTP WFD Pressure | Potential Negative Impact |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Letterkenny | 19,274 | 25,434 | Green | 40000 | 23434 | 16566 | Compliant | Swilly Estuary | Poor | At risk | Significant Pressure | Likely |
| Ballybofey/ Stranorlar | 4,852 | 6,409 | Green | 4000 (9200 recent upgrade) | 6167 | 0 | Non-Compliant | FINN (DONEGAL)_060 | Poor | At risk | Significant Pressure | Likely |
| Lifford | 1,626 | 1,959 | Green | 1550 | 1806 | 0 | Non-compliant | Finn River | Moderate | At risk | Not significant | Likely |
| Raphoe | 1,089 | 1,419 | Red | 800 | 1759 | 0 | Non-Compliant | SWILLY BURN_010 | Poor | At Risk | Significant | Likely |
| Milford (Donegal) | 1,037 | 1,370 | Red | 920 | 1708 | 0 | Non-compliant | Fern | Bad | At risk | Significant | Likely |
| Carndonagh/ Malin | 2,471 | 2,804 | Amber | 5833 | 5248 | 585 | Non-Compliant | DONAGH_030 | Poor | At risk | Not significant | Likely |
| Ballintra | 191 | 209* | Green | - | - | - | N/A | Ballintra_010 | Good | At Risk | Not Significant | Not Likely |
| Kilmacrennan | 753 | 824* | Red | 500 | 840 | 0 | Non-Compliant | Leannan_050 | Moderate | At Risk | Significant | Likely |
| Bridge End | 454 | 497* | Red | 260 | 403 | 0 | Non-Compliant | Skeoge_010 | Poor | At risk | Significant | Likely |
| Burnfoot | 450 | 493* | Red | 180 | 324 | 0 | Non-Compliant | Burnfoot_020 | Poor | At risk | Significant | Likely |
| Buncrana | 6,785 | 8,342 | Green | 10000 | 8853 | 1147 | Compliant | Lough Swilly | Good | At Risk | Not Significant | Not likely |

| Settlement | Census pop. (2016) | Pop. Projection (2030) | Indication of Available Capacity (June 2022) | Organic capacity – As constructed | Collected load (peak week) | Organic capacity – Remaining | Compliance Status | Receiving water body | Ecological status (2016-2021) | WFD Risk (2016-2021) | WWTP WFD Pressure | Potential Negative Impact |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ballyshannon | 2,299 | 2,632 | Green | 6100 | 28554 | 3245 | Compliant | Erne | Moderate | At risk | Not significant | Not Likely |
| Bundoran | 1,963 | 2,296 | Green | 12000 | 7030 | 4970 | Compliant | Bundoran Bay | High | Review | Not significant | Not likely |
| Donegal Town | 2,618 | 4,175 | Green | 12000 | 4972 | 7028 | Compliant | Inner Donegal Bay | Good | Not at Risk | No | Not likely |
| Killybegs | 1,236 | 1,651 | Green | 4200 | 2267 | 1933 | Compliant | Killybegs Harbour | Moderate | Review | Not significant | Not likely |
| Dungloe | 1,164 | 1,579 | Green | 2400 | 1517 | 883 | Compliant | DUNGLOE_020 | Poor | At risk | Not significant | Not likely |

*Arup estimate based on rural population increase estimate from Table 7-1.

There continues to be raw water effluent discharges at five locations in Donegal from large agglomerations (>500PE) as shown in Table 7-3. A review of the current status and risk of the receiving waterbodies indicates that the discharge presented a significant pressure in only one case, the discharge from Moville on the Bredagh_010, which is at Poor status. The other discharges are not classified by the EPA as a specific significant pressure on the water body. The Swilly Estuary is at Poor status but there are other more significant impacts (CSO discharges from Letterkenny and diffuse urban discharges) than the two raw effluent discharges (Ramelton and Rathmullen). The receiving water bodies for Falcarragh and Kilcar are both coastal water bodies with significant attenuation capacity which overall remain at High status and not at risk.

The discharge at Moville is expected to have a likely negative impact on WFD status with population growth over the CDP until appropriate treatment can be put in place.

**Table 7-3: Raw Sewage Primary Effluent Discharges from Agglomerations >500PE**

| Agglomeration | Population Equivalent (PE) | Receiving Water Body | WFD Status | WFD Risk | WWTP WFD Pressure | Potential Negative Impact |
|---|---|---|---|---|---|---|
| Moville | 1910 | Bredagh_010 | Poor | At Risk | Significant | Likely |
| Ramelton | 1363 | Swilly Estuary | Poor | At risk | No | Not Likely |
| Falcarragh | 1150 | Ballyness Bay | High | Not at risk | No | Not Likely |
| Rathmullen | 1140 | Swilly Estuary | Poor | At risk | No | Not Likely |
| Kilcar | 1107 | Donegal Bay Northern | High | Not at risk | No | Not Likely |

The cumulative impacts of multiple WWTPs discharging into individual water bodies has been assessed based on the classification of the discharges by the EPA in terms of significant pressures for the water bodies. While some effluent discharges may have limited or no treatment the organic load can be far less than that from larger agglomerations with tertiary treatment if there are issues with plant performance or overflows from SWO/CSOs.

The larger towns in the county are mainly positioned along the coast and insolation from one another. Therefore there is limited potential impact from cumulative effects as there are not multiple discharges downstream along a catchment.

The exception to this is where there are multiple towns located around Lough Swilly. The assessment has highlighted the Swilly Estuary as being significantly impacted by multiple direct discharges (Letterkenny, Ramelton, Rathmullen, Inch Island Housing Scheme and Fahan), in addition to which domestic waste water from single houses and diffuse sources of urban run-off are highlighted as significant pressures.

### 7.1.2 Rural Housing

The significant issues arise from inadequate domestic waste water systems, many of which are sited on areas of high pollution impact potential/poorly draining soils, that result in enrichment and potential for microbial/organic contamination. The source of the contamination can be from single house discharges or clusters of these within a catchment with limited assimilative capacity, or from small housing scheme treatment systems with a single direct point discharge to the receiving water body.

There are 16 water-bodies in County Donegal which currently have Domestic Waste Water listed as a Significant Pressure. The expected population increase in rural areas over the course of the CDP is expected to be 9%, which is significantly lower than in the county towns. The Core Strategy for the CDP 2023 includes approximately 1,920 residential units in Open Countryside, but it is not possible at this stage to determine how these will be distributed across the catchment nor how well the on-site treatment systems will be constructed or maintained.

The CDP includes multiple policies (RH-P-1, RH-P-2) which aim to limit the proliferation of one-off rural housing in all but exceptional circumstances. RH-P-9 seeks to ensure that the location, siting and design of

rural housing shall meet best practice and DCC guidelines and specifically (b, ii)) *avoid any negative impacts on protected areas defined by the River Basin District plan in place at the time.*

The EPA Report on Domestic Wastewater Treatment System Inspections 2021 found that 36% of the 121 systems inspected in Donegal failed said inspections. The cumulative extent of rural housing likely to be permitted during the lifetime of the plan the which will be permanently reliant on individual wastewater treatment system and the high failure rate of septic tanks systems in the county. It is assumed for the purposes of this assessment that DCC will enforce inspections and remedial measures to limit the impact of poorly designed and performing on-site systems over the course of the CDP.

### 7.1.3 Tourism

TOU-O-1 and TOU-P-7 were highlighted at screening stage for further assessment. These relate to the development from holiday resorts of a scale that would have a regional impact on tourism. Crucially the developments are required by the policy to comply with the criteria that they include high quality design, and TOU-P-8 further requires developments do not negatively affect sensitive natural environments, are significantly set back from riverbanks, coastlines and shorelines and that the area has adequate existing capacity in the public wastewater infrastructure for developments within urban areas, or suitable on-site effluent treatment for facilities in rural areas.

The residual issue is that for rural developments dependant on on-site systems is the evidence from the EPA 2021 report on the poor quality of private water treatment systems that if treatment systems are not properly maintained they can have a negative impact on the receiving environment. It is not possible at this stage to identify specific waterbodies that could, over the course of the CDP 2024, be subject to negative impacts from poorly constructed and maintained on-site waste water systems. The required mitigation for this potential impact is that such systems are designed and maintained in accordance with the EPA Guidance.

### 7.1.4 Natural Resource Development

MRCM-O-1 and EX-O-1 can be considered together in the context of the development of natural resources and the potential impact this could have on the receiving water environment.

MRCM-O-1 seeks to sustain and enhance the economic, social and cultural, and tourism vitality of Donegal's marine sector. This is considered together here in the context of MRCM-O-2 which requires the sustainable management the coastal environment. The CDP does not however provide any criteria or guidance in terms of how the sustainability of proposed marine sector development are to meet. There are currently no transitional or coastal waterbodies where Aquaculture is listed as a significant pressure.

EX-O-1 provides for the facilitation of extractive industries subject to the prevention of pollution and the safeguarding of aquifers and groundwater. There are currently five water bodies in the county where extractives industries (quarries and mines) are listed as significant pressures. The associated impacts include the following:

- Burnfoot_010 – poorly maintained sand quarry leading to sand, silt and sediment, illegal dumping and morphological changes;
- Catheen_010 - alteration in habitats due to hydrological and morphological changes;
- Corravaddy Burn_010 – sediment / silt issues from quarry;
- Corveen_010 – sediment, ammonia, pH and possibly elevated nitrates from explosives for blasting;
- Mill (Donegal)_010 – elevated suspended solids and pH.

In addition to the extraction from stone/aggregate from quarries, the extractive pressures would also include the extraction of peat which has been highlighted as a significant pressure on the following waterbodies. The impacts from peat extraction include impacts on suspended sediment, pH, colour, phosphate, ammonia and morphological changes:

- Corveen_010
- Crana_010
- Crana_020
- Cummirk_020

- Derg River (Millbrook)
- Finn (Donegal)_020
- Mill (Donegal)_020
- Mourne Beg River (Derrygoonan)
- Straid_010
- Stranagoppoge_010
- Tullynassidagh

However Peat Extraction <10ha is normally exempted development under the Planning and Development Regulations 2001(as amended) and therefore falls outside the scope of the planning system and in turn the CDP 2024-2030. Furthermore BIO-P-1 requires "all developments comply with the requirements of the EU Habitats Directive and EU Bird Directive." There is a residual risk in terms of the extraction of peat in peatland areas which are not designated at Natura 2000 sites or covered by the habitats directive but which can still yield potential impact on water quality and hydromorphology. The CDP recognises the National Peatlands Strategy 2015-2025, which sets out appropriate peatland management principles and states it "will seek to protect peatlands both within designated biodiversity sites and where appropriate in the wider environment". If these principles are put into practice and the impacts at the above water bodies are addressed as part of that management policy there should be no likely negative impacts resulting from the CDP.

## 7.2 Buncrana AP Phase 3 – Assessment

Table 7-4 presents the objectives and policies which were highlighted through the screening process as potentially presenting a risk to the WFD status. The table presents each of the water bodies potentially impacted, the current WFD stats and risk, the source activity associated with the impact and the results of the assessment. Where there is a potential for a likely negative impact on a specific water body this is highlighted in bold in the far right column.

**Table 7-4: Summary of assessment of impact of development in the Buncrana region on the WFD objectives.**

| Water body affected (WFD Code) | EcoStatus | WFD Risk | Existing Pressure | Impact Assessment |
|---|---|---|---|---|
| **BC-S-O-2/ BC-S-P-1 Re-powering Buncrana** | | | | |
| Mill (Donegal)_020 | Poor | At Risk | Forestry, extractive industry (quarries and peat), hydromorphology (dams, barriers, locks, weirs) and agriculture.<br>The Mill (Donegal)_020 river is mainly impacted by the Cassidy Quarry that caused slight exceedance of suspended solids and pH and the dam on the Mill river. | The construction of a pedestrian bridge over the Mill could represent a risk to water quality and river conveyance during construction and operation. However, with the implementation of best practices and mitigation measures including effective sediment control, the impacts are expected to be negligible and consequently there will be no change on the WFD status of the river. |
| Crana Estuary | Moderate | Review | Urban wastewater, anthropogenic pressures.<br>The Crana Estuary is a transitional waterbody that receives discharge from the Buncrana WWTP. The moderate EcoStatus is based on the Swilly Estuary where pressures are urban WWTP discharges, single house discharges and urban runoff. | The shorefront development are unlikely to significantly increase these particular pressures from urban waste water.<br>The development within the marine environment including jetties, facilities for outdoor water-based activities and harbour facilities could result in erosion/siltation, impact on marine ecosystems, aquaculture systems and water pollution. It is noted that the policy will only permit these where they will not impact the environmental quality of the area. It is assumed on this basis through the planning process that potential negative impacts can be mitigated. |
| Lough Swilly | Good | At Risk | Domestic (single houses discharge) and urban wastewater (Letterkenny), urban runoff (diffuse source).<br>The Lough Swilly is a coastal waterbody mainly impacted by the discharge of Letterkenny WWTP, single houses discharges as well as urban runoff. | The shorefront development is unlikely to increase these particular pressures. However, the development within the marine environment including jetties, facilities for outdoor water-based activities and harbour facilities could result in erosion/siltation, impact on marine ecosystems, aquaculture systems and water pollution.<br>As the construction is not within the waterbody and due to the potential for dilution within Lough Swilly, the impacts are expected to be negligible, and it is unlikely that will be a change on the WFD status. |
| **BC-TC-O-3 Urban Design Quality** | | | | |
| Mill (Donegal)_020 | Poor | At Risk | Forestry, extractive industry (quarries and peat), hydromorphology (dams, barriers, locks, weirs) and agriculture | The development of new opportunity sites (TC4 and TC5) within the town centre, while implementing best practice and mitigation measures during construction and operation, is unlikely to cause any deterioration in the WFD status of the river. |
| Crana_030 | Poor | At Risk | Agriculture (pasture).<br>The Crana_030 river is mainly impacted by agriculture upstream Buncrana settlement. | The development of a new opportunity site (TC1) within the town centre, while implementing best practice and mitigation measures during construction and operation, is unlikely to cause any deterioration in the WFD status of the river. |

| Water body affected (WFD Code) | EcoStatus | WFD Risk | Existing Pressure | Impact Assessment |
|---|---|---|---|---|
| | | | | |
| **BC-RG-O-1/ BC-SCS-P-1A/ BC-SCS-P-1B/ BC-SCS-P-2 Regeneration** | | | | |
| Mill (Donegal)_020 | Poor | At Risk | Forestry, extractive industry (quarries and peat), hydromorphology (dams, barriers, locks, weirs) and agriculture<br><br>The Mill (Donegal)_020 river is mainly impacted by the Cassidy Quarry that caused slightly exceedance of suspended solids and pH and the dam on the Mill river. | The development of new opportunity sites (SCS1A and SCS2), while implementing best practice and mitigation measures during construction and operation, is unlikely to cause any deterioration in the WFD status of the river. |
| Crana Estuary | Moderate | Review | Urban wastewater, anthropogenic pressures.<br><br>The Crana Estuary is a transitional waterbody that receives discharge from the Buncrana WWTP. The moderate EcoStatus is based on the Swilly Estuary where pressures are urban WWTP discharges, single house discharges and urban runoff. | The development of new opportunity sites (SCS1B and Opp Site 4), while implementing best practice and mitigation measures during construction and operation, is unlikely to cause any deterioration in the WFD status of the estuary. |
| Crana_030 | Poor | At Risk | Agriculture (pasture).<br><br>The Crana_030 river is mainly impacted by agriculture upstream Buncrana settlement. | The development of a new opportunity site (Opp Site 2), while implementing best practice and mitigation measures during construction and operation, is unlikely to cause any deterioration in the WFD status of the river. |
| Lough Swilly | Good | At Risk | Domestic (single houses discharge) and urban wastewater (Letterkenny), urban runoff (diffuse source).<br><br>The Lough Swilly is a coastal waterbody mainly impacted by the discharge of Letterkenny WWTP, single houses discharges as well as urban runoff. | The development of a new opportunity site (Opp Site 1), while implementing best practice and mitigation measures during construction and operation, is unlikely to cause any deterioration in the WFD status of the river. |
| **BC-F-O-1 Surface Water and Flooding** | | | | |
| Lisfannan_010 | Moderate | Review | Urban wastewater.<br><br>In the Lisfannan_010 river the main pressure identified is urban wastewater from the Fahan settlement, however it is not classified | The current Buncrana-Luddan FRS design does not consider measures in the Lisfanna_010 waterbody. Based on this consideration it is unlikely to cause any deterioration in the WFD status of the river. |

| Water body affected (WFD Code) | EcoStatus | WFD Risk | Existing Pressure | Impact Assessment |
|---|---|---|---|---|
| | | | as significant because Fahan WWTP discharges to the sea. | |
| Mill (Donegal)_020 | Poor | At Risk | Forestry, extractive industry (quarries and peat), hydromorphology (dams, barriers, locks, weirs) and agriculture.<br>The Mill (Donegal)_020 river is mainly impacted by the Cassidy Quarry that caused slightly exceedance of suspended solids and pH and the dam on the Mill river. | The portion of the Mill river associated to the scheme is being considered an AFAc under the 3rd cycle, with a potential blue dot label to be provided.<br>There is a proposed hard defence in the current Buncrana-Luddan FRS design which could result in increased suspended solids, a pressure that has already been identified as significant in this waterbody.<br>However, implementing best practices and mitigation measures such as the requirements from the WFD and LAWPRO, the hydro-morphological condition of the water body is unlikely to cause any deterioration in the WFD status. |
| Mill (Donegal)_010 | High | Not at risk | - No pressures have been identified in the Mill (Donegal)_010 river. | The current Buncrana-Luddan FRS design does not consider measures in the Mill (Donegal)_010 waterbody. Based on this consideration it is unlikely to cause any deterioration in the WFD status of the river. |
| Crana_020 | Poor | At Risk | Agriculture, forestry, abstractions (water supply) and extractive industry (peat)<br>The Crana_020 river is mainly impacted by agriculture, abstractions for water supply and peat extraction. | Local groups and third parties are undertaking projects to improve water quality of the River Crana. If measures are planned in this section of the Crana river, coordination with these groups to ensure the projects are not detrimentally impacted during works is vital.<br>The current Buncrana-Luddan FRS design does not consider measures in the Crana_020 waterbody. Based on this consideration it is unlikely to cause any deterioration in the WFD status of the river. |
| Crana_030 | Poor | At Risk | Agriculture (pasture).<br>The Crana_030 river is mainly impacted by agriculture upstream Buncrana settlement. | There are proposed hard defences along the river side park and Straboe, Cockhill road, in the current Buncrana-Luddan FRS design which could result in increased suspended solids.<br>However, implementing best practices and mitigation measures such as the requirements from the WFD and LAWPRO, the hydromorphological condition of the water body is unlikely to cause any deterioration in the WFD status. |
| Gortyarrigan_010 | Moderate | Review | - No pressures have been identified in the Mill (Donegal)_010 river. | The assessment technique for the determination of the ecological status is modelling (confidence). Further characterisation action includes the determination of water quality.<br>The current Buncrana-Luddan FRS design does not consider measures in the Gortyarrigan_010 waterbody. Based on this consideration it is unlikely to cause any deterioration in the WFD status of the river. |

| Water body affected (WFD Code) | EcoStatus | WFD Risk | Existing Pressure | Impact Assessment |
|---|---|---|---|---|
| Cashelnacor_010 | Moderate | At Risk | Domestic wastewater, agriculture<br>Two significant pressures have been identified in the Cashelnacor_010 river including domestic wastewater (single house discharges) and agriculture (pastures) with a consequent high nutrient concentration. | The current Buncrana-Luddan FRS design does not consider measures in the Cashelnacor_010 waterbody. Based on this consideration it is unlikely to cause any deterioration in the WFD status of the river. |
| Crana Estuary | Moderate | Review | Urban wastewater, anthropogenic pressures | The Crana Estuary is a transitional waterbody that receives discharge from the Buncrana WWTP. The moderate EcoStatus is based on the Swilly Estuary where pressures are urban WWTP discharges, single house discharges and urban runoff.<br>The current Buncrana-Luddan FRS design does not consider measures in the Crana Estuary. Based on this consideration it is unlikely to cause any deterioration in the WFD status of the river. |
| Lough Swilly | Good | At Risk | Domestic (single houses discharge) and urban wastewater (Letterkenny), urban runoff (diffuse source).<br>The Lough Swilly is a coastal waterbody mainly impacted by the discharge of Letterkenny WWTP, single houses discharges as well as urban runoff. Lough Swilly is the most significant ecological constrain in Buncrana, given its status as SAC and SPA, in addition to shellfish protected water status. | There is a proposed sea wall along the Swilly Road and embankment in the current Buncrana-Luddan FRS design adjacent to Lough Swilly SAC. These measures have a potential for short term, indirect, downstream impacts from sedimentation during works and potential for direct temporary local loss of habitat and displacement of species from works area (Byrnelooby, 2022).<br>Despite that, most works will set back from the waterbodies and the implementation of best practices and mitigation measures such as the requirements from the WFD and LAWPRO, these measured could **cause deterioration in the WFD status**. |
| Lough Swilly Groundwater body | Good | Not at Risk | - | Depending on the design of the scheme, works may occur adjacent or within areas where groundwater vulnerability is classified by the GSI as “extreme”.<br>Considering that a CEMP will be developed for construction activities and site investigation to prevent creating pathways for any contaminant present on site, it is unlikely to cause any deterioration in the WFD status of the groundwater body. |
| **BC-H-P-1 Housing** | | | | |
| Lisfannan_010 | Moderate | Review | Urban wastewater.<br>In the Lisfannan_010 river the main pressure identified is urban wastewater from the | The development of housing (SRR region), while implementing best practice and mitigation measures during construction and operation, is unlikely to cause any deterioration in the WFD status of the river. |

| Water body affected (WFD Code) | EcoStatus | WFD Risk | Existing Pressure | Impact Assessment |
|---|---|---|---|---|
| | | | Fahan settlement, however it is not classified as significant because Fahan WWTP discharges to the sea. | |
| Mill (Donegal)_020 | Poor | At Risk | Forestry, extractive industry (quarries and peat), hydromorphology (dams, barriers, locks, weirs) and agriculture.<br>The Mill (Donegal)_020 river is mainly impacted by the Cassidy Quarry that caused slightly exceedance of suspended solids and pH and the dam on the Mill river. | The portion of the Mill river associated to the scheme is being considered an AFAc under the 3rd cycle, with a potential blue dot label to be provided.<br>The development of housing (SRR region), while implementing best practice and mitigation measures during construction and operation, is unlikely to cause any deterioration in the WFD status of the river. |
| Crana_030 | Poor | At Risk | Agriculture (pasture).<br>The Crana_030 river is mainly impacted by agriculture upstream Buncrana settlement. | The development of housing (SRR and housing region), while implementing best practice and mitigation measures during construction and operation, is unlikely to cause any deterioration in the WFD status of the river. |

## 7.3 Ballybofey/Stranorlar AP Phase 3 – Assessment

Table 7-5 presents the objectives and policies which were highlighted through the screening process as potentially presenting a risk to the WFD status. The table presents each of the water bodies potentially impacted, the current WFD stats and risk, the source activity associated with the impact and the results of the assessment. Where there is a potential for a likely negative impact on a specific water body this is highlighted in bold in the far right column.

**Table 7-5 Summary of assessment of impact of development in the Ballybofey/Stranorlar region on the WFD objectives.**

| Water body affected (WFD Code) | EcoStatus | WFD Risk | Significant Pressures | Impact Assessment |
|---|---|---|---|---|
| **BS-T-O-1 and BS-T-P-1 Transportation and sustainable mobility** | | | | |
| Burn Daurnett_010 | Moderate | At Risk | Forestry;<br>Agriculture (Pasture) | An EIA is required for the TEN-T Priority Route Improvement Project, Donegal (TEN-T PRIPD). It is assumed the road design will be in accordance with best available drainage design and run off water treatment standard from TII. Some of the water bodies intersected by the route have significant pressures relating to urban runoff however given the extent of the route across a wide rural area and the relatively low traffic volumes the operational treated discharges are expected to have a minimal impact on river water quality. Temporary potential impacts during construction, primarily related to suspended sediment in run off from construction areas can typically be managed with normal best practice which would be adopted on such schemes. |
| Finn (Donegal)_060 | Poor | At Risk | Urban Waste Water (Ballybofey-Stranorlar SWO & WWTP);<br>Urban Runoff | |
| Finn (Donegal)_070 | Moderate | At Risk | Urban Waste Water (Killygordon WWTP);<br>Forestry (Clear-felling) | |
| Deele (Donegal)_030 | Moderate | At Risk | Agriculture (Farmyards);<br>Domestic Waste Water (Communal System Discharge) | |
| Deele (Donegal)_050 | Moderate | Review | Agriculture (Pasture) | |
| Swilly Burn_020 | Moderate | Review | Agriculture (Pasture & Arable);<br>Hydromorphology (Channelisation & Embankments) | |
| Leslie Hill stream_020 | Moderate | At Risk | Agriculture (Pasture);<br>Urban Waste Water (Manorcunningham WWTP);<br>Hydromorphology (Channelisation & Embankments) | |
| Swilly (Donegal)_010 | Good | Review | None | |
| Swilly Estuary | Poor | At Risk | Urban Waste Water (Letterkenny CSO);<br>Urban Runoff (Diffuse);<br>Domestic Waste Water (Single House Discharges) | |

| Water body affected (WFD Code) | EcoStatus | WFD Risk | Significant Pressures | Impact Assessment |
|---|---|---|---|---|
| **BS-T-O-2 Transportation and sustainable mobility** | | | | |
| Finn (Donegal)_060 | Poor | At Risk | Urban Waste Water (Ballybofey-Stranorlar SWO & WWTP);<br>Urban Runoff | River Finn Pedestrian Bridge to provide Direct connection between Ballybofey Main Street and Drumboe Woods. It is expected the bridge can be completed with only local temporary impacts on the river which can be mitigated with normal good construction practice and will not result in a deterioration of the WFD status. |
| **BS-H-P-1 Housing** | | | | |
| Finn (Donegal)_060 | Poor | At Risk | Urban Waste Water (Ballybofey-Stranorlar SWO & WWTP);<br>Urban Runoff | 12 sites in Phase 1 and 3 sites in Phase 2 have been zoned for primarily residential development with a view to delivering 537 additional units and may require an EIA.<br>The majority of the Phase 1 & 2 sites lie within the Finn (Donegal)_060 subbasin which is already at Poor Status and At Risk with the Urban Wastewater from Ballybofey-Stranorlar (both CSO and WWTP discharges) being listed as a significant pressure, in addition to diffuse urban runoff.<br>Best practice SuDS measures can limit the potential impact of urban runoff on the river but the Poor status indicates there is no assimilative capacity for further inputs. Whilst the Ballybofey/Stranorlar WWTP has recently been upgraded to provide a total treatment capacity of 9200PE the most recent monitoring data (March 2023) from the EDEN portal indicates that the plant upgrades have not had a material improvement on water quality of the receiving water body. Furthermore CSO discharges will have a negative effect on the river without network upgrades to address CSOs and storm water overflows and diffuse urban runoff (including from additional urbanisation) will add to these pressures<br>**The proposed policy is therefore expected to have a potential negative impact on the Finn (Donegal)_060.** |
| Finn (Donegal)_070 | Moderate | At Risk | Urban Waste Water (Killygordon WWTP);<br>Forestry (Clear-felling) | |
| Burn Daurnett_010 | Moderate | At Risk | Forestry;<br>Agriculture (Pasture) | |
| **BS-RCNH-P-2 Recreation, Community and Natural Heritage** | | | | |
| Ballybofey Groundwater Body | Good | Not at Risk | None | The development includes an extension to the existing graveyard which may present a risk to water quality. The graveyard is located near the River Finn SAC.<br>The groundwater vulnerability over much of the Drumboe Woods is classified as Extreme or Extreme with rock close to surface. This could limit the viability of a graveyard in this area or result in water quality impacts on |

| Water body affected (WFD Code) | EcoStatus | WFD Risk | Significant Pressures | Impact Assessment |
|---|---|---|---|---|
| | | | | the underlying groundwater and to a lesser extent on the River Finn, which groundwater will discharge into as baseflow.<br><br>Without further information on the location and size of the graveyard or number of burials it is not possible to complete a quantitative assessment. It is therefore concluded that the proposed policy |
| **Opportunity sites: BS-OPP-P-1 (OPP Site 1); BS-OPP-P-2 (OPP Site 2); BS-OPP-P-4 (OPP Site 4); BS-OPP-P-5 (OPP Site 5) Opportunity sites** | | | | |
| Finn (Donegal)_060 | Poor | At Risk | Urban Waste Water (Ballybofey-Stranorlar SWO & WWTP);<br><br>Urban Runoff | Opp Site 1, 2, 4 & 5 lie within Finn (Donegal)_060 which is already at Poor Status and At Risk from significant pressures related to Urban Waste Water and Urban Runoff. The Opp sites are identified to facilitate business/enterprise (including light engineering/manufacturing, logistics/warehousing, service-based enterprises) and multiple residential development proposals. This type of development will further increase the pressure from Urban Waste Water and Runoff in this catchment.<br><br>Best practice SuDS measures can limit the potential impact of urban runoff on the river but the Poor status indicates there is no assimilative capacity for further inputs. Whilst the Ballybofey/Stranorlar WWTP has recently been upgraded to provide a total treatment capacity of 9200PE the most recent monitoring data (March 2023) from the EDEN portal indicates that the plant upgrades have not had a material improvement on water quality of the receiving water body. Furthermore CSO discharges will have a negative effect on the river without network upgrades to address CSOs and storm water overflows and diffuse urban runoff (including from additional urbanisation) will add to these pressures<br><br>**The proposed policy is therefore expected to have a potential negative impact on the Finn (Donegal)_060.** |
| Finn (Donegal)_070 | Moderate | At Risk | Urban Waste Water (Killygordon WWTP);<br><br>Forestry (Clear-felling) | Opp Site 3 lies within Finn (Donegal)_070 which is identified to facilitate the expansion of the adjacent golf course or hospital facilities. The proposed development is more isolated in nature and expected to be less intense and discharging to water bodies without a significant urban runoff pressure. It is therefore expected that the proposed policy can be implemented without a potential negative impact on the status of the Finn (Donegal)_070. |
| **Surface water and flooding: BS-F-P-1** | | | | |
| Finn (Donegal)_060 | Poor | At Risk | Urban Waste Water (Ballybofey-Stranorlar SWO & WWTP); | Potential for direct disturbance impacts to River Finn SAC from construction of and rehabilitation of walls and embankments set back from the River Finn and tributaries. Potential for short term, indirect, downstream |

| Water body affected (WFD Code) | EcoStatus | WFD Risk | Significant Pressures | Impact Assessment |
|---|---|---|---|---|
| | | | Urban Runoff | impacts from sedimentation during construction and conveyance works adjacent to and upstream of the River Finn SAC<br><br>Potential for indirect downstream sedimentation impacts during construction. Potential for recurring impacts from future dredging.<br><br>Potential for indirect sedimentation impacts to the Finn Freshwater Pearl Mussel sensitive area, and FPM beds downstream of the AFA, during construction and conveyance works.<br><br>Mitigation of these impacts should be possible with good construction site practices, effective planning, appropriate timing of construction work to minimise disturbance of species, setting back of hard defences from the watercourse, and avoidance of in-stream works. |

## 7.4 Bundoran AP Phase 3 – Assessment

Table 7-6 presents the objectives and policies which were highlighted through the screening process as potentially presenting a risk to the WFD status. The table presents each of the water bodies potentially impacted, the current WFD stats and risk, the source activity associated with the impact and the results of the assessment. Where there is a potential for a likely negative impact on a specific water body this is highlighted in bold in the far right column.

**Table 7-6 Summary of assessment of impact of development in the Bundoran region on the WFD objectives.**

| Water body affected (WFD Code) | EcoStatus | WFD Risk | Significant Pressure | Potential Impact |
|---|---|---|---|---|
| **BN-CZ-P-1 Coastal Zone** | | | | |
| Bundoran Bay (IE_NW_020_0000) Coastal | High | Review | Anthropogenic pressures | The redevelopment of brownfield sites (e.g. the former Astoria site). The development of marinas, jetties, facilities for outdoor water-based activities and harbour facilities for maritime leisure developments.<br>Development of a brownfield site has the potential to mobilise contaminants through the groundwater pathway and potentially impact on down-gradient surface water bodies. Development in accordance with best available guidance (CIRIA C773 and (Irish EPA 2013) with sufficiently detailed ground investigation and remedial strategy can ensure the potential impact during construction is mitigated.<br>The development of marinas and jetties can lead to hydro-morphological impacts due to sediment mobilisation and impact on local sea currents. However it is noted the proposal will not be allowed to impact on the "environmental quality of the High Amenity Area." |
| Drowes Estuary (IE_NW_020_0100) Transitional | High | Not at Risk | Anthropogenic pressures | |
| **BD-H-P-1 Housing (Key considerations for new residential sites)** | | | | |
| Bradoge_020 | Good | Not at Risk | None | The proposed policy includes for the development of up to 121 units over the 6-year plan and identifies four potential sites for this development (Phase 1) with optional Phase 2 sites also identified. Two of the four Phase 1 sites (NR1.1 and NR1.2) are located directly adjacent the Bradoge River, with NR1.3 located further upstream but directly adjacent NR1.2. NR1.4 is located directly adjacent the seafront.<br>Combined sewer overflows from the Bundoran agglomeration and Urban run-off are highlighted as pressures for the Bradoge_020 river water body but these are not rated as Significant pressures. Therefore it is expected that with standard design measures the potential impact can be mitigated. It is noted that the policy requires that developments include analysis of the local surface water drainage network. Sustainable Urban Drainage Systems (SuDS) and nature-based solutions shall be employed for the management of surface water. Includes consideration of potential flood risk – detailed flood risk assessment may be required. |
| Drowes_010 | Good | Review | Agriculture (Pasture) | |
| Bundoran Bay (IE_NW_020_0000) Coastal | High | Review | Anthropogenic pressures | |
| **BN-OPP-P-1 Opportunity sites: Opportunity Site 1 (Western Gateway)** | | | | |
| Drowes_010 | Good | Review | Agriculture (Pasture) | The nature of the type of proposed development for this opportunity site is office development, light industrial, medical related facilities and community & recreational use. The nature of this type of development will have a limited potential impact on the receiving environment, furthermore the significant pressures for the water body are agricultural and the development site is set back from the river corridor. |

| Water body affected (WFD Code) | EcoStatus | WFD Risk | Significant Pressure | Potential Impact |
|---|---|---|---|---|
| | | | | As such with suitable SuDS and good practice construction mitigation measures it is expected the proposed development will not results in a negative impact on the receiving water body. |
| **BN-OPP-P-2 Opportunity sites: Opportunity Site 2 & 3** | | | | |
| Bradoge_020 | Good | Not at Risk | None | The nature of the type of proposed development for this opportunity site is office development, light industrial, medical related facilities and community & recreational use. The nature of this type of development will have a limited potential impact on the receiving environment, furthermore there are currently no significant pressures on the water body.<br>As such with suitable SuDS and good practice construction mitigation measures it is expected the proposed development will not results in a negative impact on the receiving water body. |

# 8. Mitigation

## 8.1 Proposed Mitigation Strategy

Mitigation measures for potential impacts on the WFD status of a water body may involve physical amendments to the project such as the provision of revised drainage arrangements, on-site treatment facilities, water efficiency measures, or relocation of structures.

Mitigation during the construction phase could involve the use of best practices or standard measures as detailed in the project Construction and Environmental Management Plan (CEMP), to prevent hazards such as spillages reaching nearby watercourses, use of sediment traps.

For mitigation measures to be effective they must be specific in nature for the proposed development. It is not possible at this stage to define specific mitigation measures for developments that may arise over the course of the CDP planning cycle.

The impact assessment completed above has taken into account the interaction between certain objectives and policies which would have a positive, mitigating effect on other aspects of the CDP which, without this would potentially have a more negative impact. These positive impact objectives and policies are intrinsic to sustainable development and the potential and enhancement of the environment of County Donegal. In addition the land use zonings/spatial frameworks have sought to avoid or reduce environmental effects by avoiding potentially impactful development types/zones within environmentally sensitive areas such as Natura 2000 sites, Natural Heritage Areas, Nature Reserves and flood plains.

The further urbanisation is recognised as a significant potential impact due to increased urban runoff. The CDP requires the use of Sustainable Urban Drainage Systems (SUDS) including flood attenuation areas, wetlands, the controlled release of surface waters and use of open spaces and semi-permeable hard surfaces for urban development proposals. It is assumed for the purposes of the impact assessment that these SUDS measures will be implemented at a project level and therefore additional specific SUDS measures are not specified here.

The impact assessment has assumed that good construction practices will be implemented for any further developments. This includes, inter alia:

- Control of water pollution from construction sites. Guidance for consultants and contractors (C532)
- Control of water pollution from linear construction projects. Site guide (C649)

Through the planning process it will be possible for DCC to enforce planning conditions which uphold the criteria set out in the CDP and stipulate that these must be met and implemented through project specific mitigation measures both during construction and operation of proposed developments.

Where there are potential residual impacts outlined in Section 7, taking into account other mitigating objectives and policies, it is possible to consider additional mitigation measures for impacts, however these are more site specific in nature and without confirmed designs the measures are indicative. The key areas highlighted for additional measures include:

- Upgrade of Waste Water Treatment Plants to ensure they are compliant with their emission limit values.
- Upgrade of waste water agglomeration secondary discharge locations (SWOs and CSOs) to prevent or limit the impact of such discharges on the environment.
- Upgrade of waste water agglomeration collection network to detect and limit diffuse leakage of untreated waste water to the environment.
- Improve performance of private on-site waste water systems with survey and enforcement of improvement actions.

- Protection of hydromorphology when sea-front and in-stream works are proposed such as jetties, marinas and bridges. This will require detailed surveys and analysis to determine the appropriate design for such developments with project specific measures for construction and monitoring during operation being required.

Improvements in the wastewater infrastructure is completed by Uisce Éireann in partnership with Donegal Co. Co. Table 8-1 lists the current planned and "in progress" Uisce Éireann wastewater projects in County Donegal.

The impact assessment has been based on the available information from the EPA in terms of WFD status and risk from the most recent WFD reporting cycle. In some cases improvement works will have been completed following that and some of the improvements in Table 8-1 will be completed during the CDP period. The impact assessment has used the information from the most recently published AER for each WWTP for the basis of its current compliance and capacity. It is not possible to predict how effective future or recently completed improvements will be as this will depend on plant operation as well as design. Therefore the potential effect of these future mitigating factors have not been included in the assessment as a conservative measure.

**Table 8-1: Current Planned and In Progress Waste Water Projects by Uisce Éireann**

| Project | Current Status[56] |
|---|---|
| National – Eliminating Raw Sewage | In progress |
| Gweedore Sewerage Scheme | In progress |
| Donegal Countywide Sewer Upgrade Project | In progress |
| Ballybofey-Stranorlar Sewerage | In progress |
| Killea & Carrigans Shared Waters Enhancement and Loughs Legacy (SWELL) | In progress |
| Coolatee Sewerage Scheme | In progress |
| Lifford Shared Waters Enhancement and Loughs Legacy (SWELL) project | In progress |
| Donegal Wastewater Treatment Plants Upgrades | Planned |
| Moville Sewerage Scheme | Planned |
| Buncrana Sewerage Scheme | Planned |

[56] Based on information on 6th July 2023 from Projects | Uisce Éireann (formerly Irish Water)

# 9. Conclusions

The Donegal County Development Plan and Area Plans for Bundoran, Buncrana and Ballybofey/Stranorlar has been assessed following Strategic Water Status Impact Assessment guidance. This included an initial screening of the objectives and policies to determine the potential impact on Water Framework Directive status of the receiving water bodies. The key objectives and policies identified at the screening stage were those related to urban and rural population growth, continued urbanisation, infrastructure, tourism and sea-front/on-shore developments.

The screening was followed by scoping to review the baseline status and characterisation of which was completed at the sub-catchment level, as recommended by the SWSIA guidance document. This highlighted the status of the receiving environment and the significant pressures.

The impact assessment considered the objectives and policies identified at screening stage in the context of the scoping study on the receiving environment to determine if there would be a likely potential negative impact on the WFD status of the receiving water body as a result of the objective, policies and zoning contained within the plans. The level of quantification of the impact assessment is limited by the detail on the nature of proposed developments and the confidence in future predictions on certain drivers such as population growth and economic development.

It is not possible to predict how other significant pressures on the water environment which are not directly influenced by the CDP with develop over the period of the CDP, crucially agriculture, which is the most significant pressure on the waterbody status in County Donegal by a significant margin. The impact assessment has taken account of the cumulative impacts from other pressures (such as agriculture and forestry) by considering the more recent available information on status, water quality and the current significant pressures in assessing whether there will be a likely impact as a result of the CDP.

Many of the CDP objectives and policies which have been identified as positive impacts inherently act as mitigating factors for the objectives and policies which could have a negative impact. These interactions have been taken into account in the impact assessment to ensure the assessment is not overly conservative and assumes that the governance by Donegal County Council will ensure these objectives and policies are enforced through the correct means as part of proper planning process.

It is recognised that some required mitigation measures required for some impacts are outside the direct control of DCC to implement. This is the case in terms of the impacts associated with housing and population growth in towns where the waste water treatment infrastructure requires improvement. Uisce Éireann has a programme of wastewater infrastructure projects in progress and planned for the county which will mitigate these impacts in the future. The most recently published information on plant performance (AER) and WFD status has been used in the impact assessment but as a conservative measure future potential improvements have not been taken assumed.

## 9.1 Donegal County Development Plan Results

The likely negative potential impacts identified at the county level result for the policies in support of housing where wastewater discharges are a significant pressure on the water environment. The following water bodies were highlighted as being at risk of a likely negative potential impact:

- Rivers
    - Bredagh_010
    - Burnfoot_020
    - Donagh_030
    - Fern River
    - Finn (Donegal)_060

- Finn River
- Leannan_050
- Skeoge_010
- Swilly Burn_010

- Transitional Water Bodies
  - Swilly Estuary

The other drivers for potential impacts identified included rural housing, tourism and natural resource development. The CDP includes mitigating policies in relation to these pressures which if implemented should limit future potential impact.

In particular domestic wastewater is listed as significant pressure for 16 water bodies in the county. The CDP contains multiple policies aimed at limiting one-off developments, ensuring high design standard for new build and preventing negative impacts on the water environment. These measures in addition to enforcement of on-site system inspections and remediation is expected to limit the potential impact from rural housing.

## 9.2 Buncrana Area Plan Results

The Area Plan for Buncrana has been reviewed under the screening, scoping and impact assessment SWIA methodology. The following potential negative impacts were identified:

- Lough Swilly – Proposed sea wall along the Swilly Road and embankment as part of the flood relief scheme directly adjacent the Lough Swilly SAC which could have short term construction impacts directly downstream with local loss of habitat where in-stream works are required.

The policy for the development of the coastal zone (BC-S-P-1) which includes marinas and jetties limits these potential impact on areas of high environmental quality and it is assumed that through the planning process for any such developments appropriate design and mitigation measures can be stipulated to prevent impacts on hydromorphology.

## 9.3 Ballybofey/Stranorlar Area Plan Results

The Area Plan for Ballybofey/Stranorlar has been reviewed under the screening, scoping and impact assessment SWIA methodology. The following potential negative impacts were identified:

- Finn (Donegal)_060 – Housing developments under BS-H-P-1 and at the opportunity sites (Opp1, 2, 4 and 5) within this sub-basin are likely to further compound the significant pressure the wastewater discharge and other discharges (e.g. Combined Sewer Overflows, Storm Water Overflows and Diffuse Runoff) are having on the river notwithstanding the recent upgrade to the WWTP.

## 9.4 Bundoran Area Plan Results

The Area Plan for Bundoran has been reviewed under the screening, scoping and impact assessment SWIA methodology. There were no likely potential negative impacts that would results in a deterioration of the WFD status for the receiving water bodies in this area. The Bundoran WWTP has undergone an improvement which has significantly increased the capacity at the plant which should accommodate any future population increase within the scope of the CDP.

The AP includes for the development of brownfield sites within the town, however it is assumed that these will be completed in accordance with best practice through planning conditions to limit the potential impact on the water environment.

The policy for the development of the coastal zone (BN-CZ-P-1) which includes marinas and jetties limits these prevent impact on areas of high environmental quality and it is assumed that through the planning process for any such developments appropriate design and mitigation measures can be stipulated to prevent impacts on hydromorphology.

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## Appendix A – Screening Risk Assessments

# A.1 County Development Plan

| Theme | Objective | Potential Negative Risk | Neutral | Potential Positive Impact |
|---|---|---|---|---|
| Key Strategic Objectives of the County Development Plan | S-O-1 | | | |
| | S-O-2 | | | |
| | S-O-3 | | | |
| | S-O-4 | | | |
| | S-O-5 | | | |
| | S-O-6 | | | |
| | S-O-7 | | | |
| Core Strategy Objectives | CS-O-1 | | | |
| | CS-O-2 | | | |
| | CS-O-3 | | | |
| | CS-O-4 | | | |
| | CS-O-5 | | | |
| | CS-O-6 | | | |
| | CS-O-7 | | | |
| Climate change | CA-O-1 | | | |
| | CA-O-2 | | | |
| Towns and villages | TV-O-1 | | | |
| | TV-O-2 | | | |
| | TV-O-3 | | | |
| | TV-O-4 | | | |
| | TV-O-5 | | | |
| | TV-O-6 | | | |
| Urban Housing | UB-O-1 | | | |
| | UB-O-2 | | | |
| | UB-O-3 | | | |
| Rural Housing | RH-O-1 | | | |
| | RH-O-2 | | | |
| | RH-O-3 | | | |
| | RH-O-4 | | | |
| | RH-O-5 | | | |
| Economic development | Strategic objective | | | |
| | ED-O-1 | | | |
| | ED-O-2 | | | |
| | ED-O-3 | | | |
| | ED-O-4 | | | |
| | ED-O-5 | | | |
| | ED-O- 6 | | | |
| | ED-O- 7 | | | |
| | ED-O- 8 | | | |
| | ED-O- 9 | | | |
| | ED-O- 10 | | | |
| | ED-O- 11 | | | |
| | ED-O- 12 | | | |
| | ED-O- 13 | | | |
| | ED-O- 14 | | | |
| | ED-O- 15 | | | |
| | ED-O- 16 | | | |
| | ED-O- 17 | | | |
| | ED-O- 18 | | | |
| | ED-O- 19 | | | |
| | ED-O- 20 | | | |
| | ED-O- 21 | | | |
| Economic development - Retail | RS-O-1 | | | |
| | RS-O-2 | | | |
| | T-O-1 | | | |
| | T-O-2 | | | |
| | T-O-3 | | | |

| Theme | Objective | Potential Negative Risk | Neutral | Potential Positive Impact |
|---|---|---|---|---|
| Infrastructure/ Transport | T-O-4 | | | |
| | T-O-5 | | | |
| | T-O-6 | | | |
| | T-O-7 | | | |
| | T-O-8 | | | |
| | T-O-9 | | | |
| | T-O-10 | | | |
| | T-O-11 | | | |
| | | | | |
| | T-O-12 | | | |
| | T-O-13 | | | |
| | T-O-14 | | | |
| | T-O-15 | | | |
| Infrastructure/ Water and wastetater infrastrcuture | WW-O-1 | | | |
| | WW-O-2 | | | |
| | WW-O-3 | | | |
| Infrastrcuture/ Telecoms | TC-O-1 | | | |
| Infrastructure/ Flooding | F-O-1 | | | |
| Electric transmission and gas networks | ETN-O-1 | | | |
| | G-O-1 | | | |
| Natural Resource Development/ Renewable Energy | E-O-1 | | | |
| | E-O-2 | | | |
| | E-O-3 | | | |
| | E-O-4 | | | |
| | E-O-5 | | | |
| Natural Resource Development/ Extractive Industry and geology | EX-O-1 | | | |
| Natural and Built Heritage/ Biodiversity | BIO-O-1 | | | |
| Natural and Built Heritage/ Landscape | L-O-1 | | | |
| Natural and Built Heritage/ Architectural Conservation | AH-O-1 | | | |
| | AH-O-2 | | | |
| | AH-O-3 | | | |
| | AH-O-4 | | | |
| Natural and Built Heritage/ Archaeology | AYH-O-1 | | | |
| Tourism | TOU-O-1 | | | |
| Community Development | CCG-O-1 | | | |
| | CC-O-2 | | | |
| | CC-O-3 | | | |
| Gaeltacht | GAE-O-1 | | | |
| Marine resource, coastal management and the islands | MRCM-O-1 | | | |
| | MRCM-O-2 | | | |
| Public Rights of Way | PROW-O-1 | | | |
| General introduction LAP Housing | GEN-H-O-1 | | | |
| General introduction LAP Transporte | GEN-T-O-1 | | | |
| | GEN-T-O-2 | | | |
| General introduction LAP Town centre | GEN-TC-O-1 | | | |
| General introduction LAP Recreation, community and natural heritage | GEN-RCNH-O-1 | | | |

| Theme | Objective | Potential Negative Risk | Neutral | Potential Positive Impact |
|---|---|---|---|---|
| Core Policies | CS-P-1 | | | |
| | CS-P-2 | | | |
| | CS-P-3 | | | |
| Climate change | Climate Ready Donegal | | | |
| Towns and villages | TV-P-1 | | | |
| | TV-P-2 | | | |
| | TV-P-3 | | | |
| | TV-P-4 | | | |
| | TV-P-5 | | | |
| | TV-P-6 | | | |
| | TV-P-7 | | | |
| | TV-P-8 | | | |
| Urban Housing Standards | UB-P-1 | | | |
| | UB-P-2 | | | |
| | UB-P-3 | | | |
| | UB-P-4 | | | |
| | UB-P-5 | | | |
| | UB-P-6 | | | |
| | UB-P-7 | | | |
| | UB-P-8 | | | |
| | UB-P-9 | | | |
| | UB-P-10 | | | |
| | UB-P-11 | | | |
| | UB-P-12 | | | |
| Rural Housing | RH-P-1 | | | |
| | RH-P-2 | | | |
| | RH-P-3 | | | |
| | RH-P-4 | | | |
| | RH-P-5 | | | |
| | RH-P-6 | | | |
| | RH-P-7 | | | |
| | RH-P-8 | | | |
| | RH-P-9 | | | |
| | RH-P-10 | | | |
| | RH-P-11 | | | |
| Economic Development | ED-P-1 | | | |
| | ED-P-2 | | | |
| | ED-P-3 | | | |
| | ED-P-4 | | | |
| | ED-P-5 | | | |
| | ED-P-6 | | | |
| | ED-P-7 | | | |
| | ED-P-8 | | | |
| | ED-P-9 | | | |
| | ED-P-10 | | | |
| | ED-P-11 | | | |
| Economic Development - retail | RS-P-1 | | | |
| | RS-P-2 | | | |
| | RS-P-3 | | | |
| | RS-P-4 | | | |
| | RS-P-5 | | | |
| | RS-P-6 | | | |
| | RS-P-7 | | | |
| | T-P-1 | | | |
| | T-P-2 | | | |
| | T-P-3 | | | |
| | T-P-4 | | | |
| | T-P-5 | | | |
| | T-P-6 | | | |

| Theme | Objective | Potential Negative Risk | Neutral | Potential Positive Impact |
|---|---|---|---|---|
| Infrastructure/ Transport | T-P-7 | | | |
| | T-P-8 | | | |
| | T-P-9 | | | |
| | T-P-10 | | | |
| | T-P-11 | | | |
| | T-P-12 | | | |
| | T-P-13 | | | |
| | T-P-14 | | | |
| | T-P-15 | | | |
| | T-P-16 | | | |
| | T-P-17 | | | |
| Infrastructure/ Water and wastewater | WW-P-1 | | | |
| | WW-P-2 | | | |
| | WW-P-3 | | | |
| | WW-P-4 | | | |
| | WW-P-5 | | | |
| | WW-P-6 | | | |
| | WW-P-7 | | | |
| | WW-P-8 | | | |
| | WW-P-9 | | | |
| | WW-P-10 | | | |
| | WW-P-11 | | | |
| | WW-P-12 | | | |
| | WW-P-13 | | | |
| Infrastructure/ Telecoms | TC-P-1 | | | |
| | TC-P-2 | | | |
| | TC-P-3 | | | |
| | TC-P-4 | | | |
| Infrastructure/ Flooding | F-P-1 | | | |
| | F-P-2 | | | |
| | F-P-3 | | | |
| | F-P-4 | | | |
| Natural Resource Development/ Renewable energy | E-P-1 | | | |
| | E-P-2 | | | |
| | E-P-3 | | | |
| | E-P-4 | | | |
| | E-P-5 | | | |
| | E-P-6 | | | |
| Natural Resource Development/ Wind Energy | WE-P-1 | | | |
| | WE-P-2 | | | |
| | WE-P-3 | | | |
| | WE-P-4 | | | |
| | WE-P-5: | | | |
| | WE-P-6: | | | |
| | WE-P-7: | | | |
| | WE-P-8 | | | |
| | WE-P-9 | | | |
| Natural Resource Development/ Extractive industry and geology | EX-P-1 | | | |
| | EX-P-2 | | | |
| | G-P-1 | | | |
| Natural and Built Heritage/ Biodiversity | BIO-P-1 | | | |
| | BIO-P-2 | | | |
| | BIO-P-3 | | | |
| | BIO-P-4 | | | |
| | BIO-P-5 | | | |
| Natural and Built Heritage/ Landscape | L-P-1 | | | |
| | L-P-2 | | | |
| | L-P-3 | | | |
| | L-P-4 | | | |
| | L-P-5 | | | |

| Theme | Objective | Potential Negative Risk | Neutral | Potential Positive Impact |
|---|---|---|---|---|
| | L-P-6 | | | |
| | L-P-7 | | | |
| | L-P-8 | | | |
| Natural and Built Heritage/ Archaelogy | AH-P-1 | | | |
| | AH-P-2 | | | |
| | AH-P-3 | | | |
| | AH-P-4 | | | |
| | AH-P-5 | | | |
| | AH-P-6 | | | |
| | AH-P-7 | | | |
| | AH-P-8 | | | |
| | AH-P-9 | | | |
| | AH-P-10 | | | |
| Archaeological Heritage | AYH-P-1 | | | |
| | AYH-P-2 | | | |
| | AYH-P-3 | | | |
| | AYH-P-4 | | | |
| Technical Standards | TS-P-1 | | | |
| Tourism | TOU-P-1 | | | |
| | TOU-P-2 | | | |
| | TOU-P-3 | | | |
| | TOU-P-4 | | | |
| | TOU-P-5 | | | |
| | TOU-P-6 | | | |
| | TOU-P-7 | | | |
| | TOU-P-8 | | | |
| Community development | CC-P-1 | | | |
| | CC-P-2 | | | |
| | CC-P-3 | | | |
| | CC-P-4 | | | |
| | CC-P-5 | | | |
| | CC-P-6 | | | |
| | CC-P-7 | | | |
| | CC-P-8 | | | |
| | CC-P-9 | | | |
| | CC-P-10 | | | |
| | CC-P-11 | | | |
| | CC-P-12 | | | |
| | CC-P-13 | | | |
| An Gaeltacht | GAE-P-1 | | | |
| | GAE-P-2 | | | |
| | GAE-P-3 | | | |
| | GAE-P-4 | | | |
| | GAE-P-5 | | | |
| | GAE-P-6 | | | |
| Marine Coastal and Island | MRCM-P-1 | | | |
| | MRCM-P-2 | | | |
| | MRCM-P-3 | | | |
| | MRCM-P-4 | | | |
| | MRCM-P-5 | | | |
| | MRCM-P-6 | | | |
| | MRCM-P-7 | | | |
| | MRCM-P-8 | | | |
| | MRCM-P-9 | | | |
| | MRCM-P-10 | | | |
| Public Rights of Way | PROW-P-1 | | | |
| General Introduction LAP | GEN-DM-1 | | | |
| General Introduction LAP Housing | GEN-H-P-1 | | | |
| | GEN-H-P-2 | | | |
| | GEN-H-P-3 | | | |

| Theme | Objective | Potential Negative Risk | Neutral | Potential Positive Impact |
|---|---|---|---|---|
| General Introduction LAP<br>Economic Development | GEN-ED-P-1 | | | |
| | GEN-T-P-1 | | | |
| | GEN-T-P-2 | | | |
| | GEN-T-P-3 | | | |
| | GEN-T-P-4 | | | |
| | GEN-T-P-5 | | | |
| | GEN-T-P-6 | | | |
| | GEN-T-P-7 | | | |
| General Introduction LAP<br>Town Centre | GEN-TC-P-1 | | | |
| | GEN-TC-P-2 | | | |
| | GEN-TC-P-3 | | | |
| | GEN-TC-P-4 | | | |

# A.2 Buncrana AP – Screening

| Theme | Objective | Potential Negative Impact | Not at Risk | Potential Positive Impact |
|---|---|---|---|---|
| Re-powering Buncrana | BC-S-O-1 | | | |
| | BC-S-O-2 | | | |
| Urban Design Quality | BC-TC-O-1 | | | |
| | BC-TC-O-2 | | | |
| | BC-TC-O-3 | | | |
| | BC-TC-O-4 | | | |
| Regeneration | BC-RG-O-1 | | | |
| Zoned Employment Lands | BC-ZEL-O-1 | | | |
| Active Travel, Permeability and Connectivity | BC-AT-O-1 | | | |
| | BC-AT-O-2 | | | |
| Roads | BC-R-O-1 | | | |
| Surface Water and Flooding | BC-F-O-1 | | | |

| Theme | Policy | Potential Negative Risk | Neutral | Potential Positive Impact |
|---|---|---|---|---|
| Re-powering Buncrana | BC-S-P-1 | | | |
| | BC-S-P-2 | | | |
| | BC-S-P-3 | | | |
| | BC-S-P-4 | | | |
| Urban Design Quality | BC-TC-P-1 | | | |
| Regeneration | BC-SCS-P-1A/ BC-SCS-P-1B/ BC-SCS-P-2 | | | |
| | BC-SCS-P-4 | | | |
| Active Travel, Permeability and Connectivity | BC-AT-P-1 | | | |
| Housing | BC-H-P-1 | | | |
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| Opportunity Sites | BC–OPP–P-1 | | | |
| | BC–OPP–P-2 | | | |
| | BC–OPP–P-3 | | | |
| Roads | BC-R-P-1 | | | |
| Natural Heritage Policies Specific to Buncrana | BC-NH-P-1 | | | |
| | BC-NH-P-2 | | | |
| | BC-NH-P-3 | | | |
| Long Established Residential Areas | BC-LRA-P-1 | | | |
| Social, Community & Culture | BC-SCC-O-1 | | | |

# A.3 Ballybofey/Stranorlar AP Screening

| Theme | Objective | Potential Negative Impact | Neutral | Potential Positive Impact |
|---|---|---|---|---|
| Economic Development and Employment | BS-ED-O-1 | | | |
| Transportation and sustainable mobility | BS-T-0-1 | | | |
| | BS-T-O-2 | | | |
| | BS-T-O-3 | | | |
| Urban Regeneration and Town Centre Development | BS-TC-0-1 | | | |
| | BS-TC-O-2 | | | |
| | BS-TC-0-3 | | | |
| Recreation, Community and Natural Heritage | BS-RCNH-O-1 | | | |
| | BS-RCNH-O-3 | | | |
| | BS-RCNH-O-4 | | | |

| Theme | Policy | Potential Negative Impact | Neutral | Potential Positive Impact |
|---|---|---|---|---|
| Housing | BS-H-P-1 | | | |
| | BS-H-P-2 | | | |
| Economic Development and Employment | BS-ED-P-1 | | | |
| | BS-ED-P-2 | | | |
| Transportation and sustainable mobility | BS-T-P-1 | | | |
| Flooding | BS-F-P-1 | | | |
| Urban Regeneration and Town Centre Development | BS-TC-P-1 | | | |
| Recreation, Community and Natural Heritage | BS-RCNH-P-1 | | | |
| | BS-RCNH-P-2 | | | |
| | BS-RCNH-P-3 | | | |
| | BS-RCNH-P-4 | | | |
| | BS-RCNH-P-5 | | | |
| | BS-RCNH-P-6 | | | |
| | BS-RCNH-P-7 | | | |
| | BS-RCNH-P-8 | | | |
| Opportunity sites | BS-OPP-P-1 (OPP Site 1) | | | |
| | BS-OPP-P-2 (OPP Site 2) | | | |
| | BS-OPP-P-3 (OPP Site 3) | | | |
| | BS-OPP-P-4 (OPP Site 4) | | | |
| | BS-OPP-P-5 (OPP Site 5) | | | |

# A.4 Bundoran AP Screening

| Theme | Objective | Potential Negative Impact | Neutral | Potential Positive Impact |
|---|---|---|---|---|
| Coastal zone | BN-CZ-O-1 | | | |
| Town Centre/ Urban Core | BN-TC-O-1 | | | |
| Regeneration | BN-REGEN-O-1 | | | |
| Employment and Economy | BD-EE-O-1 | | | |
| Active Travel, Permeability and Connectivity | BN-AT-O-1 | | | |

| Theme | Policy | Potential Negative Impact | Neutral | Potential Positive Impact |
|---|---|---|---|---|
| Coastal zone | BN-CZ-P-1 | | | |
| | BN-CZ-P-2 | | | |
| | BN-CZ-P-3 | | | |
| | BN-CZ-P-4 | | | |
| Active Travel, Permeability and Connectivity | BN-AT-P-1 | | | |
| | BN-AT-P-2 | | | |
| Housing (Key considerations for new residentail sites) | BD-H-P-1 | | | |
| Housing (Key considerations for new residentail, phase 2 development lands ) | BD-H-P-1 | | | |
| Opportunity sites | BN-OPP-P-1 | | | |
| | BN-OPP-P-2 | | | |
| | BN-OPP-P-3 | | | |
| Caravan Park Development | BN-CP-P-1 | | | |