

Finow Priority Area for Action

Desk Study AFA0080



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Data attribution

The following data sources were consulted in the preparation of this report:

Catchment boundaries, waterbodies and areas for action: EPA (2018)
 Bedrock Unit: GSI (2008)
 Aquifer Category: GSI (2015)
 LandUse: Corine 2018
 Soils & Subsoils Maps: Teagasc-EPA (2015)
 IFS Soils: EPA (2006)
 Susceptibility Maps: EPA (2018)
 WFD waterbody status: EPA (2018)
 Pollution Impact Potential Maps: EPA (2021)

Date of Completion of this Desk Study

Document conclusions are based on data collated on or before 07/12/2021

Summary

The Finow Priority Area for Action (PAA) (WFD cycle 2), comprises two waterbodies; the Finow_010 and the Finow_020. Owgarriff (Finow)_010 has been proposed for inclusion in the Finow PAA for WFD cycle 3 and therefore was also assessed in this deskstudy.

Finow_010 is a High status objective river waterbody. It is currently at Good Status (2013-2018) and therefore is *At Risk* of not meeting its WFD objective. Biological status declined in this waterbody from consistently High up to and including 2013, to Poor in 2016. Biological recovery was evident in the EPA 2018 assessment with a Q value of 4. Good status was achieved and retained again in 2019. The chemistry data available at monitoring location, RS22F040100, Br 0.3km u/s L Guitane showed no breaches of the relevant EQS for ammonia, ortho-phosphate, total oxidised nitrogen or BOD, which may indicate a historic toxic event(s) on the macroinvertebrate community. The nature of the landuse in this area suggests there could be sheep dipping in the area and some product could have entered the waterbody causing a toxic impact on the invertebrates.

Finow_020 is a Good status objective river waterbody, currently at Moderate ecological status (2013-2018) and *At Risk* of not meeting its WFD objective. The Q value from the EPA biological assessment has been at Q3-4, moderate status since 2007. Prior to this the Finow_020 was High status. There are no chemistry data available for this river waterbody.

Owgarriff (Finow_10) is at High status objective river waterbody. It is currently at Good status (2013-2018) and therefore is *At Risk* of not meeting its WFD objective. Owgarriff (Finow_10) is achieving High biological status and has been consistently Q4-5 for macroinvertebrates since 2011, up to the latest sampling in 2019. There are no chemistry data available for this waterbody. Hydromorphological conditions are Good and are driving Good ecological status on this waterbody.

Agriculture in Finow_010, abstractions and other unknown anthropogenic pressures in Finow_020 and Hydromorphology in Owgarriff (Finow)_010, were all identified in the initial characterisation as the potential significant pressures on these river waterbodies.

The geology of Finow PAA is divided primarily into two sections. To the north there are Dinantian pure unbedded limestones which has a regionally important aquifer, karstified (diffuse) (Rkd) associated with it. The south of the PAA overlies Devonian old red sandstones, a locally important aquifer (Lm). To the north of the PAA and overlying the Rkd aquifer are well drained soils with an area of peat to the north east. The southern half of the PAA has a mixture of poorly drained soils with large interstitial pockets of peat. The soils, geology and susceptibility maps for the PAA indicate multiple pathways for nutrient loss including surface pathways for sediment, ammonia and phosphorous to the centre and southern reaches of the PAA and areas of shallow subsurface pathways for nitrate to the north of the PAA.

The potential pressures: agriculture, abstractions, hydromorphological pressures and other anthropogenic pressures will all need to be further explored during the local catchment assessment programme. A riverwalk of Finow_010 and Finow_020 will be needed to inform further, more targeted assessments, where required. Local catchment assessment will focus on the tributary streams to assess where significant issues might be occurring in Finow_010 and Finow_020. A combination of biological and chemistry sampling will be required to help identify the significant issues acting

negatively on both of these waterbodies. An assessment for hydromorphology will be carried out at the outlet of Owgarriff (Finow)_010, - "Owgarriff Br" to determine what is causing impact. The EPA biological assessment have shown this site to be consistently High status for macroinvertebrates, therefore SSIS may not be required at this site.

1 Background

Table 1.1: Background information on the Finow PAA

Priority Area for Action	Catchment Number	Catchment Name	Sub catchment	Region	Local Authority
Finow	22	Laune-Maine-Dingle Bay	22_6 Flesk [Kerry]_SC_020	Southwest	Kerry

Priority Area for Action	No. of At Risk WBs	No. of Review WBs	No. of dRBMP Prioritised WBs	No of WBs for Status Improvement:		
				2021	2027	Beyond 2027
Finow	3	0	1	1	2	0
Reasons for selection	<ul style="list-style-type: none"> • Project to examine impact from abstraction. • One deteriorated High Ecological Status objective water body. • Two water bodies failing to meet protected area objectives for salmon. • Headwaters to Lough Leane. • High interest from Kerry County Council. 					

Table 1.2: Summary table of individual waterbodies within and flowing into the Finow PAA

Water body Code	Water body Name	Risk	Obj.	Ecological Status			Pressures		
				2012	2015	2018	Category	Sub-category	Sig? (Y/N)
IE_SW_22F040100	Finow_010	At Risk	High	High	High	Good	Agriculture	Agriculture	Y
IE_SW_22F040300	Finow_020	At Risk	Good	Moderate	Moderate	Moderate	Abstractions	Water supply	Y
							Anthropogenic Pressures	Unknown	Y
IE_SW_22O060100	Owgarriff (Finow)_010 (discharges to Finow_020). Proposed for inclusion in cycle 3	At Risk	High	High	High	Good	Hydro-morphology	Dams, barriers, locks, weirs	Y

Source: Summary information from WFD App

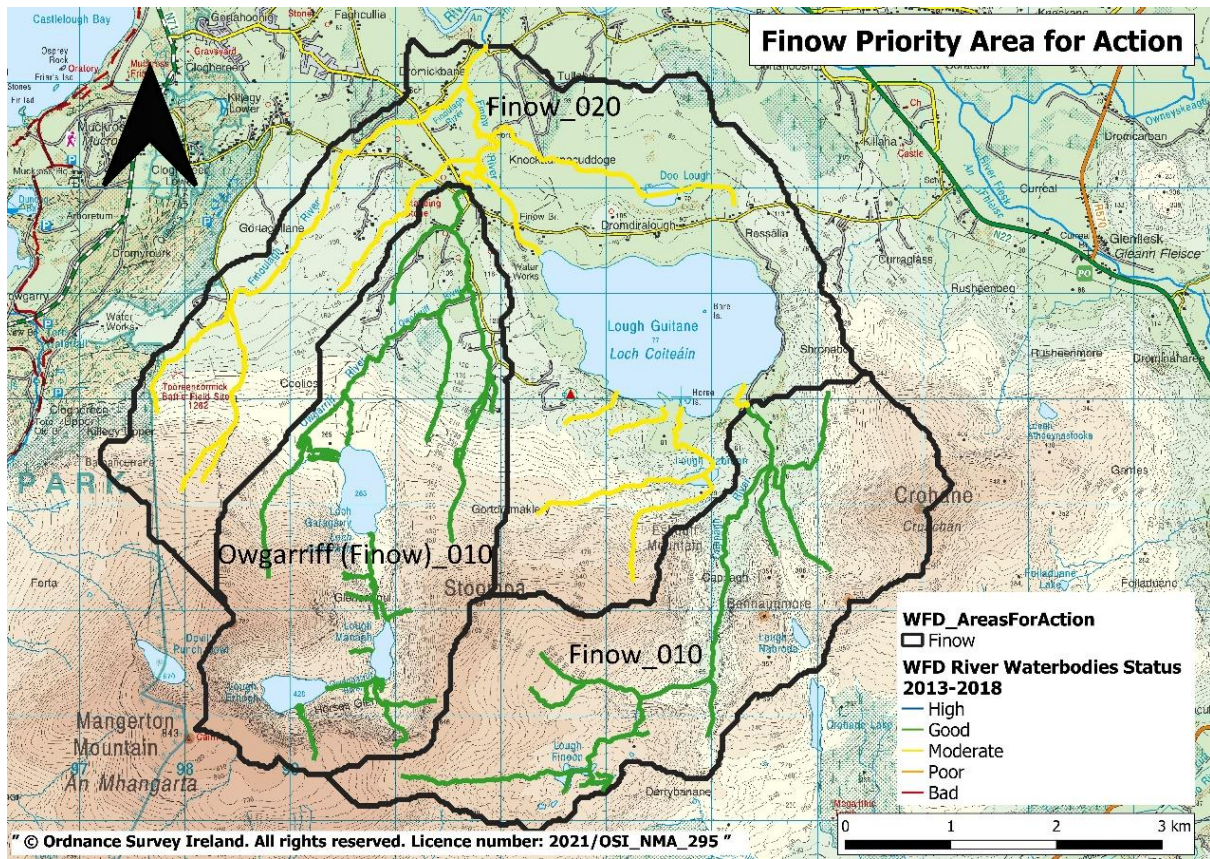


Figure 1.1: Finow Priority Area for Action incl. inputting waterbody Owgarriff (Finow)_010 Ecological Status (2013-2018).

1.1 Protected Areas

Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC occupies almost the entire catchment area (Fig. 1-1-1). The site is a Special Area of Conservation (SAC) selected under the E.U. Habitats Directive for its' Oligotrophic to Mesotrophic waters as well as many listed flora and fauna species. The PAA is also a Margaritifera sensitive area as a catchment of other extant populations and there is a small area of the Killarney National Park Special Protected Area located to the south west of the catchment. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Merlin (*Falco columbarius*) and the Greenland White-fronted Goose (*Anser albifrons flavirostris*). The PAA lies in a Margaritifera sensitive area as a catchment for other extant populations.

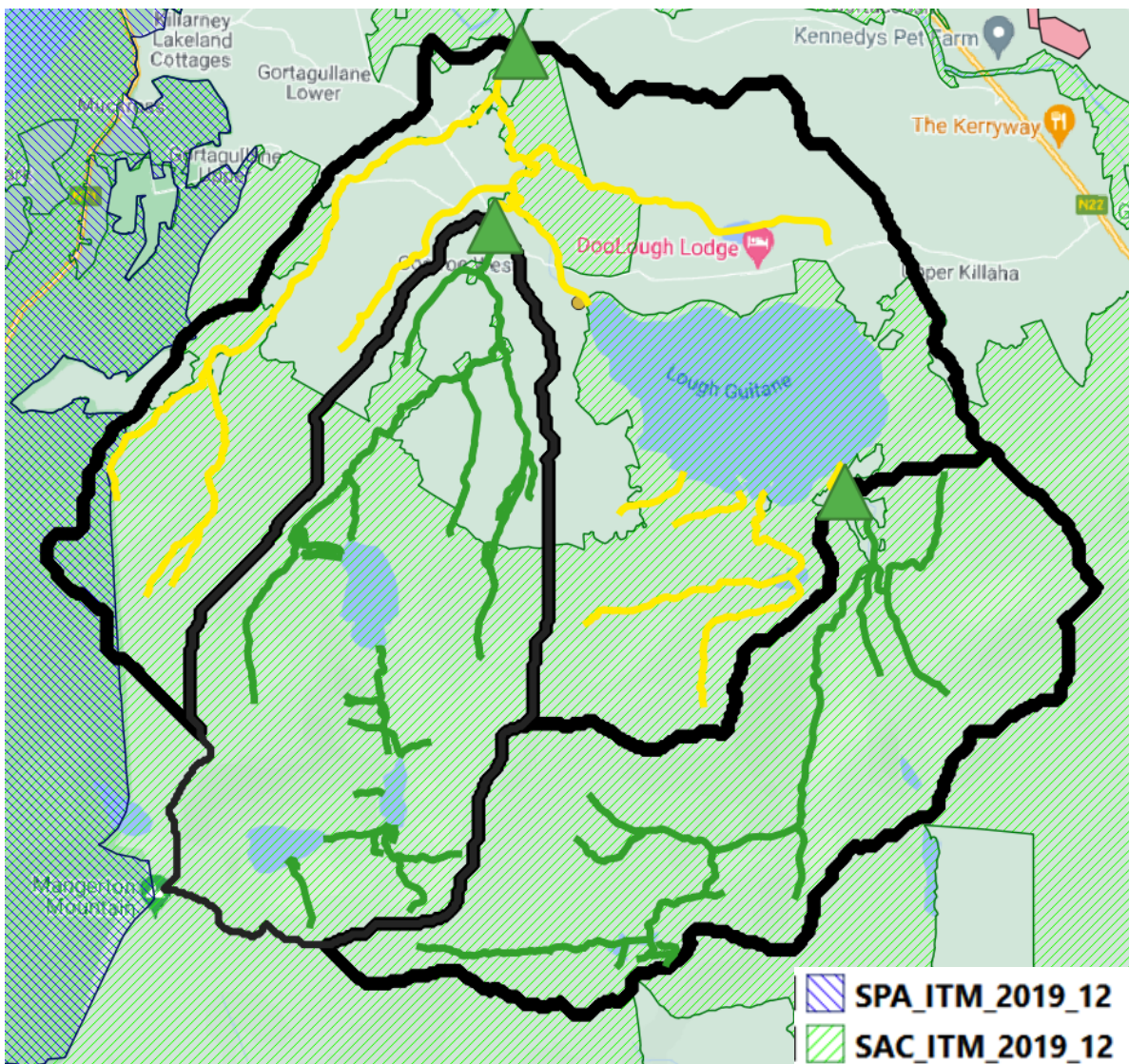


Figure 1.2: Map of Protected areas in the Finow PAA incl. inputting waterbody Owgarriff (Finow)_010

2 Receptor information

2.1 Context and Setting

The Finow Priority Area for Action (PAA) (WFD cycle 2) comprises two waterbodies, the Finow_010 and the Finow_020. Owgarriff (Finow)_010 has been proposed for inclusion in the Finow PAA for cycle 3 and is therefore included for assessment in this deskstudy.

From the southern uplands, Finow_010 flows north into Lough Guitane SW_22_172. It has one monitoring location RS22F040100, Br 0.3km u/s L Guitane.

Finow_020 has both an inputting and an outputting river waterbody into and out of Lough Guitane. The Finow_020 flows north into Flesk_050. It has one operational monitoring location RS22F040300, Br (Ford) u/s Flesk R confl.

The headwaters of the Owgarriff (Finow)_010 are located in the southwestern uplands of the PAA where there are three small upland loughs, hydraulically connected upstream; Erhogh SW_22_160, Managh SW_22_154 and Garragarry SW_22_169. The Owgarriff (Finow)_010 flows northward into Finow_020. It has one monitoring location, RS22O060100, Owgarriff Br.

Biology is monitored at all three monitoring locations, while supporting chemistry monitoring is carried out on the Finow_010 at monitoring location RS22F040100, Br 0.3km u/s L Guitane since 2019.

2.2 Receptor Overview

Table 2.1: Receptor information for Finow PAA

	Owgarriff (Finow)_010	Finow_010	Finow_020	
Risk Category	<i>At Risk</i>	<i>At Risk</i>	<i>At Risk</i>	
Waterbody Monitoring Point	RS22O060100	RS22F040100	RS22F040300	
Biological Status 2010-2015 2013-2018 trends in Q values 2016-2018 Q value data Fish status (where rel)	High	High	Moderate	
	Good	Good	Moderate	
	Q4-5	Q3 (2016) Q4 (2018 & 2019)	Q3-4	
Hydrochemistry Data				
Ortho-P (mg/l P) Baseline indicative quality Trends - significant? Dist to threshold	No Chemistry Data	Sampling commenced in 2019 No Breach of EQS	No Chemistry Data	
	NH4-N (mg/l N) Baseline indicative quality Trends - significant? Dist to threshold	No Chemistry Data	Sampling commenced in 2019 No Breach of EQS	No Chemistry Data
		TON (mg/l N) Baseline indicative quality Trends - significant? Dist to threshold	No Chemistry Data	Sampling commenced in 2019 No Breach of EQS
Supporting Conditions Chemical conditions Oxygenation Conditions Acidification Conditions				
Hydromorphology				
RHAT score	2016 WFD Class Good	N/A	N/A	
Evidence of Arterial drainage				
Ecological Status (2013–2018)	High	Moderate	Good	
Elements driving status	Hydromorphology	Invertebrates	Invertebrates	
Protected Areas	Yes	No	No	
WFD Objective	High	High	Good	
EPA biologist notes (if any)	Maintaining High ecological quality	Serious decline to poor in 2016 monitoring, indicative of a toxic event, suspected sheep dip. Recovery to Good in 2018 but not yet returned to High status		
Significant issue/impact for receptor (e.g. PO₄)	Hydromorphology	Toxic event, suspected sheep dip contamination		

2.2.1 Biological Monitoring Results

There are three operational monitoring stations on the Finow PAA (cycle 2) and the Owgarriff (Finow)_010. Table 2-2 below show the historic ecological status (based on macroinvertebrate Q-values) for each station.

Table 2.2: EPA Biological Monitoring data for the Finow PAA

Monitoring site	1990	1994	1996	1998	2001	2004	2007	2010	2011	2013	2016	2018	2019
Finow_010 Br 0.3km u/s L Guitane	NS	High Q5	High Q5	High Q5	High Q4-5	High Q5	High Q4-5	High Q5	Not sampled	High Q5	Poor Q3.25	Good Q4	Good Q4
Finow_020 Br (Ford) u/s Flesk R confl	High Q4-5	High Q4-5	High Q5	High Q5	High Q5	High Q5	Mod Q3-4	Mod Q3-4	NS	Mod Q3-4	Mod Q3-4	NS	Mod Q3-4
Owgarriff (Finow_010) Owgarriff Br	High Q5	High Q5	High Q4-5	Good Q4	High Q4-5	High Q4-5	Good Q4	NS	High Q4-5	High Q4-5	High Q4-5	NS	High Q4-5

NS: not sampled

2.2.2 Hydrochemistry

WFD monitoring for supporting chemistry commenced in the Finow_010 in February 2019 at monitoring location “Br 0.3km u/s L Guitane” RS22F040100. A review of the most recent data (05/10/2021) showed no breaches in the relevant EQS for ammonia, ortho-phosphate, total oxidised nitrogen or BOD.

There are no chemistry data available on the Owgarriff (Finow)_010 or the Finow_020.

2.2.3 Other Data

Owgarriff(Finow)_010 is failing to achieve its High status objective due to hydromorphological condition. The most recent RHAT assessment was carried out in 2016. A score of Good was awarded. The biologist’s notes stated that there was too much filamentous algae present in the channel with a bit more fine silt present than what was expected. A minor area of cattle access was observed as well as poor quality bank vegetation and riparian land cover on both the left and right banks. The floodplain connectivity on both the left and right bank was average. All these factors contributed to the score of “Good”.

2.2.4 Water Abstractions

There are two water abstractions within the Finow PAA collectively known as the Kerry Central Regional Water Supply. By far the largest contributor of the two is Lough Guitane, APR001175. The drinking water treatment plant is located close to its western shoreline. Detail of the plant taken from a 2018 EPA drinking water audit report stated “The supply serves a population of 58,488 dispersed north of the treatment plant across the large towns of Killarney, Tralee and Castleisland, smaller villages and rural hinterland. The farthest network extremity is almost 50 km from the treatment plant. The design capacity of the plant is 51,000 m³ /day and the plant is currently producing 36,000 m³ /day. Treatment comprises pH adjustment, chemical coagulation and flocculation, dissolved air

flotation (DAF) clarification, rapid gravity sand filtration, UV disinfection, pH correction, chlorination and fluoridation.”.

The water abstraction facility, APR001174 on Owgarriff(Finow)_010 is considered a supplementary supply for the Central Regional supply which is the largest public supply in county Kerry. This supplementary supply rarely used, possibly only for a few hours each month. (info from KCC environment section).

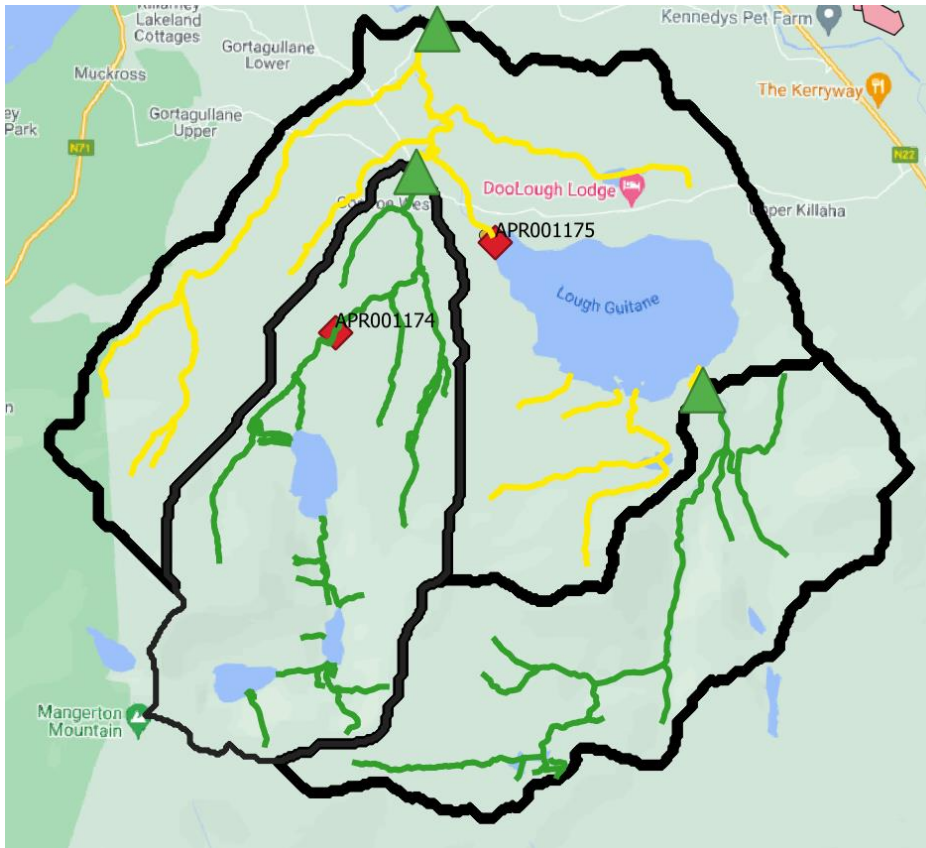


Figure 2.1: Location of water abstraction facilities for the Central Regional Water Supply

2.3 Significant Issue

The Finow_010 deteriorated from consistently High status, Q5 in 2013 to Poor status in 2016. EPA biological assessments carried out in 2018 and 2019 have shown some recovery back to Good status but the waterbody is still not reaching its High ecological status objective. WFD monitoring for supporting chemistry commenced in the Finow_010 in February 2019. A review of the most recent data (05/10/2021) showed no breaches in the relevant EQS for ammonia, ortho-phosphate, total oxidised nitrogen or BOD. Notes from the EPA biologists state “a serious decline from High to Poor Ecological quality was noted at this site, manifested by almost the total absence of any invertebrate fauna in this stretch of river. This wipe out is thought to be related to a toxic event earlier in the year, possibly related to sheep dip”. It is suspected that the significant issue in this waterbody was

contamination with a chemical product (possibly associated with sheep dipping practices) that entered the river and caused this dramatic deterioration.

The Finow_020 declined from consistently High status, Q4-5 in 2004 to Moderate status, Q3-4 in 2007 and has remained at Moderate status up to and including the most recent EPA biological assessment in 2019. There are no routine chemistry monitoring at this EPA monitoring point and no sedimentation issues have been recorded for impacted WFD site (“Br (Ford) u/s Flesk R confl”), The significant issues at the monitoring site “Br (Ford) u/s Flesk R confl”, could include sediment, hydromorphology, and periodic nutrient (P and NH₃-N) and/or organic pollution. Further characterisation of the issues will be required and will focus on, and upstream of, the monitoring point “Br (Ford) u/s Flesk R confl”.

The Owgarriff (Finow)_010 is not meeting its WFD High ecological status objective due to Hydromorphology. Biological status at “Owgarriff Br.” is High, Q4-5 consistently since 2011 up to the most recent 2019 assessment. The WFD app identifies an impassable weir as the significant pressure preventing this waterbody achieving its High ecological status objective. However the most recent RHAT score from 2016 cited a number of factors impacting on the overall RHAT score for this waterbody, including instream filamentous algae and poor quality riparian areas and bank vegetation. There is a surface water abstraction facility on this waterbody also but only acts as a supplementary supply and is rarely needed.

3 Significant Pressures

3.1 Initial EPA characterisation

Table 3.1: Initial EPA characterisation

Water body Name	Id	Category	Subcategory	Name	Significant?	Pressure & Impact details
OWGARRIFF (FINOW)_010	WBP0008308	Hydromorphology	Dams, barriers, locks, weirs	n/a	Yes	Altered habitat due to Morphological changes Highly impassable weir
FINOW_010	WBP0005487	Agriculture	Agriculture	n/a	Yes	Chemical Pollution Thought to be related to a toxic event, (possibly Sheep Dip products)
FINOW_020	WBP0004330	Abstractions	Water supply	n/a	Yes	Altered habitat due to Hydrological changes River abstraction for Central Regional Lough Guitane: Scheme No1300PUB1016. And an associated drinking water treatment plant with up to 40,000m ³ /day abstraction.
	WBP0006409	Anthropogenic Pressures	Unknown	n/a	Yes	Unknown significant pressure that requires further investigation

4 Pathways Information and Analysis

4.1 Conceptual Model

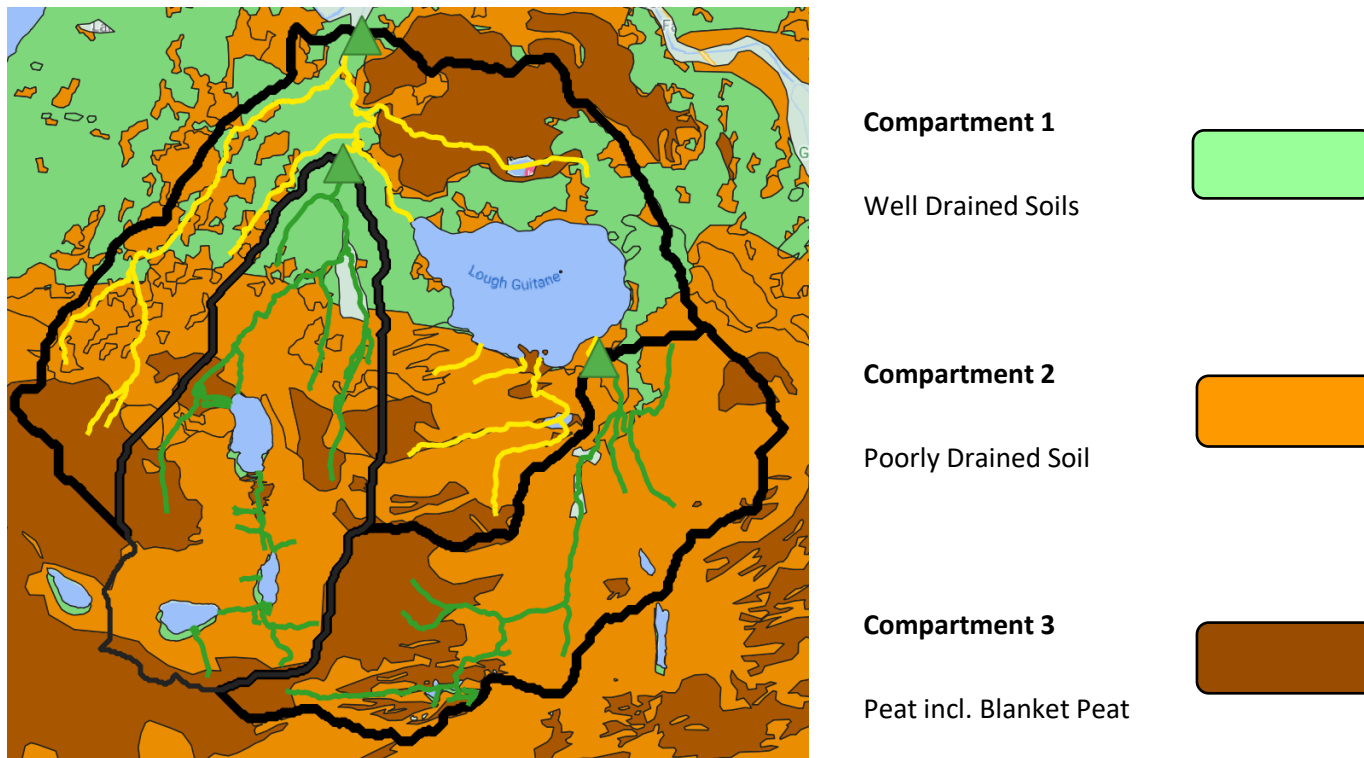


Figure 4.1: Conceptual Model for Finow PAA

Table 4.1: Pathways information check list

Factor	Map	Compartment 1	Compartment 2	Compartment 3
Topography <ul style="list-style-type: none"> Map Aerial imagery 				
Soil type		Course Loamy, Loamy	Loam, Peat, Rock	Peat Soils
Subsoil type		TDSs, RCK	TDSs, RCK,	Blanket Peat
Recharge permeability		Moderate	Moderate area to the NW of Compartment 2 Not applicable DTB <3m	Low to moderate toward the north of the PAA. Not applicable DTB ,3m - the area of peat in the south of the PAA
Bedrock unit		Dinantian Pure Unbedded Limestones Devonian Old Red Sandstone	Devonian Old Red Sandstone Basalt and other volcanic rocks	Dinantian Pure Unbedded Limestones in the North of PAA Devonian Old Red Sandstone to the south of the PAA
Aquifer type		Rkd	LI	Rkd & LI
Groundwater vulnerability		Predominately Moderate with areas of Extreme and Rock at near surface to the eastern side of L. Guitane	A mix of moderate to extreme. The majority and to the south of the compartment in the upland Rock at or near surface	A mix of Low to moderate toward the north. Extreme vulnerability in the peat compartment in the south of the PAA
Hydrology <ul style="list-style-type: none"> Drainage density 		Wet/ Dry soils map shows this area to be well drained.	Wet/Dry soils map shows this area to be poorly drained. Rock outcrops	Wet/Dry soils map shows this area to be peat area, poorly draining.

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Susceptibility				
<ul style="list-style-type: none"> PO4 to SW 		Low (Rank 4 and 5)	Moderate predominately with an area of high to the North of the compartment (Rank 3 and 2)	Moderate (Rank 3)
<ul style="list-style-type: none"> NO3 to GW 		Moderate/ Low (Rank 3 and 4) across entire area	Low (Rank 4)	Low to very low (Rank 4 and 5)
<ul style="list-style-type: none"> NO3 to SW 		Moderate (Rank 3) on well drained soils	Very Low (Rank 5)	Very Low (Rank 5)
Likely main pathway(s)		Sub surface pathways for Nitrate	Surface/overland flow of ammonia, phosphate and sediment fines to surface waters	Surface/overland flow of ammonia, phosphate and sediment fines to surface waters

Compartment1

Compartment 1 consists of well drained soils where agriculture is the dominant land use. Susceptibility maps show areas of moderate risk for shallow subsurface pathways for nitrate (Rank 3). The majority of this compartment ranks very low in terms of pollution impact potential for Nitrate (Appendix II), however there is an area of High PIP- N (Rank 1 and 2) to the north eastern area of Lough Guitane, with direct connections to Finow_020.

Compartment2

Compartment 2 consists of poorly draining soils and rock outcrops. More than two-thirds of the catchment fall into this compartment, with potential for overland flow pathways and surface runoff of ammonia and P from the lowland as well as sediment from the uplands also. Land drains are also conduits for diffuse and potential point sources of P ultimately delivering to the waterbodies in this compartment. However the PIP – P map (Appendix I) shows low risk (rank 4 to 7) due to the land use in this area, which is mostly moors, heathland and peat bogs. Therefore sediment should also be considered in these areas.

Compartment3

Compartment 3 comprises of peat soils. Degraded peat carries a risk of sediment and ammonia losses to the river. Local catchment assessment will investigate if losses from these peat bogs are sources of contamination to the waterbodies.

5 Interim Story

5.1 Introduction

The Finow Priority Area for Action (WFD cycle 2), comprises two waterbodies, the Finow_010 and the Finow_020. Owgarriff (Finow)_010 has been proposed for inclusion in the Finow PAA for cycle 3 and is included for assessment in this deskstudy.

The Finow PAA and Owgarriff(Finow)_010 is located almost entirely in the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC. L. Guitane is located within the three waterbodies but does not form part of the Finow PAA selected for LAWPRO further characterisation in the WFD 3rd cycle.

5.2 Finow_010

- WFD High Ecological Status Objective waterbody
- WFD cycle 3 –**At Risk**, Good WFD status (driven by macro-invertebrates).
- WFD cycle 2 – **At Risk**, Good WFD status (driven by macro-invertebrates).
- A review of the most recent supporting chemistry data data (05/10/2021) showed no breaches in the relevant EQS for each parameter analysed.
- Significant issue is suspected to link to historic toxic event(s) possibly sheep dipping products.
- The main significant pressure is most likely agriculture but local catchment assessment is needed to confirm
- As this waterbody is still *At Risk*, additional fieldwork is needed. The fieldwork should focus on the tributaries and along the main channel of Finow_010. Local catchment assessments should include a stream walk as well as biological, nutrient and sediment assessments as required.

5.3 Finow_020

- WFD Good Ecological Status Objective waterbody
- WFD cycle 3 –**At Risk**, Moderate WFD status (driven by macro-invertebrates).
- WFD cycle 2 – **At Risk**, Moderate WFD status (driven by macro-invertebrates).
- No supporting chemistry data available.
- Significant issue cannot be determined from water-quality data and no sediment issues have been recorded at this site. However, sediment, hydromorphology and nutrient pollution will all need to be considered in the local catchment assessment.
- The main significant pressures could include agriculture, abstractions and/or anthropogenic pressures.
- As this waterbody is still *At Risk*, further local catchment assessment is required. A combination of biological and chemistry sampling as well as sediment and hydromorphological assessments will be required to help identify the significant issues acting negatively on this waterbody.

5.4 Owgarriff (Finow)_010

- WFD High Ecological Status Objective waterbody
- WFD cycle 3 –**At Risk**, Good WFD status (driven by Hydromorphology, Dams, barriers, locks, weirs).
- WFD cycle 2 – Not **At Risk**, High WFD status (Hydromorphology wasn't surveyed in previous iteration)
- No supporting chemistry data available.
- Significant pressure acting on the waterbody is hydromorphology, with the LA noting a highly impassable weir here.
- Initially, local catchment assessment will include a site visit and a hydromorphology assessment of the location. Other biological, chemistry or sediment assessments can be carried out if deemed warranted subsequently.

6 Workplan

6.1 EPA further characterisation actions

Table 6.1: EPA Characterisation Actions

WB Name	Id	Action	Responsible Organisation	Further Characterisation Action details
OWGARRIFF (FINOW)_010		No Proposed Further Action data available	Proposed WFD Cycle 3	
FINOW_010	FC002608	IA1 Provision of Information	Local Authority Waters Programme (LAWPRO)	EPA need to discuss sampling it again next year to confirm a single toxicity event. HES. KY Co need to check sheep dip.
	FC002609	IA1 Provision of Information	Local Authority Waters Programme (LAWPRO)	Need to check if there is a sheep dip that could have been the source.
FINOW_020	FC002610	IA5 Multiple Sources in defined rural area (1km) or waterbody or rural town	Local Authority Waters Programme (LAWPRO)	IA5. Need to look at WTP in first instance and see is it generating an impact.
	FC003402	IA1 Provision of Information	Local Authority Waters Programme (LAWPRO)	Check with the biologists to see if there are any clues in the inverts data to assist with determining the pressure.

Source: WFD App

6.2 Local Catchment Assessment

Finow_010

Undertake biological assessments (SSIS) and field parameters, taking account of sediment levels also at sites 1 to 3 initially (see Figure 6.1 below). These sites appear accessible by road. If at this point it is identified that impact is occurring further upstream in the catchment, a stream walk should be undertaken. A risk assessment will need to be carried out on site in advance to assess how safe access to sites Finow_010, 4 and 5 is as this section of the catchment is quite remote with a varied topography and steep mountains.

Finow_020

Undertake SSIS at sites 1 - 6 (see Figure 6.1 below) to identify tributaries that are impacted and causing a significant pressure at the waterbody outlet – Br (Ford) u/s Flesk R confl. Assess the level of sedimentation and test for conductivity, pH, temperature and DO. Nutrient sampling for ortho-phosphate, ammonia and nitrate may also be necessary depending on the outcome of the initial SSIS assessment results.

Owgarriff(Finow) 010

This waterbody does not form part of the cycle 2 Finow PAA. If included, as proposed, in an expanded Area for Action in cycle 3, the following field assessments will be undertaken:

An assessment for Hydromorphology will be carried out at the outlet of Owgarriff(Finow)_010, - “Owgarriff Br” to determine what is causing impact. The EPA biological assessments have shown this site to be consistently High status for macroinvertebrates, therefore SSIS will not be required at this site.

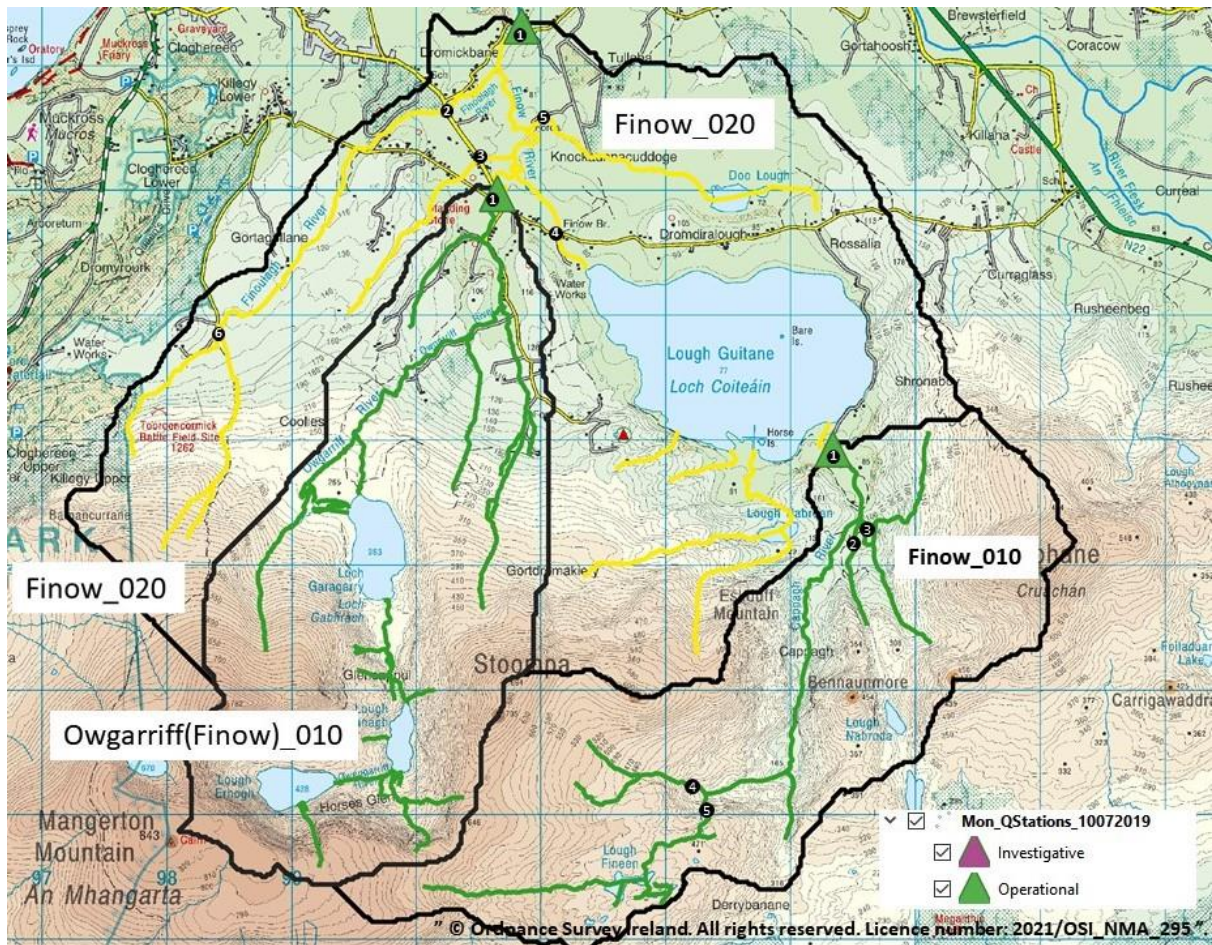


Figure 6.1: Local catchment assessment sites on Finow_010, Finow_020 and Owgarriff(Finow)_010

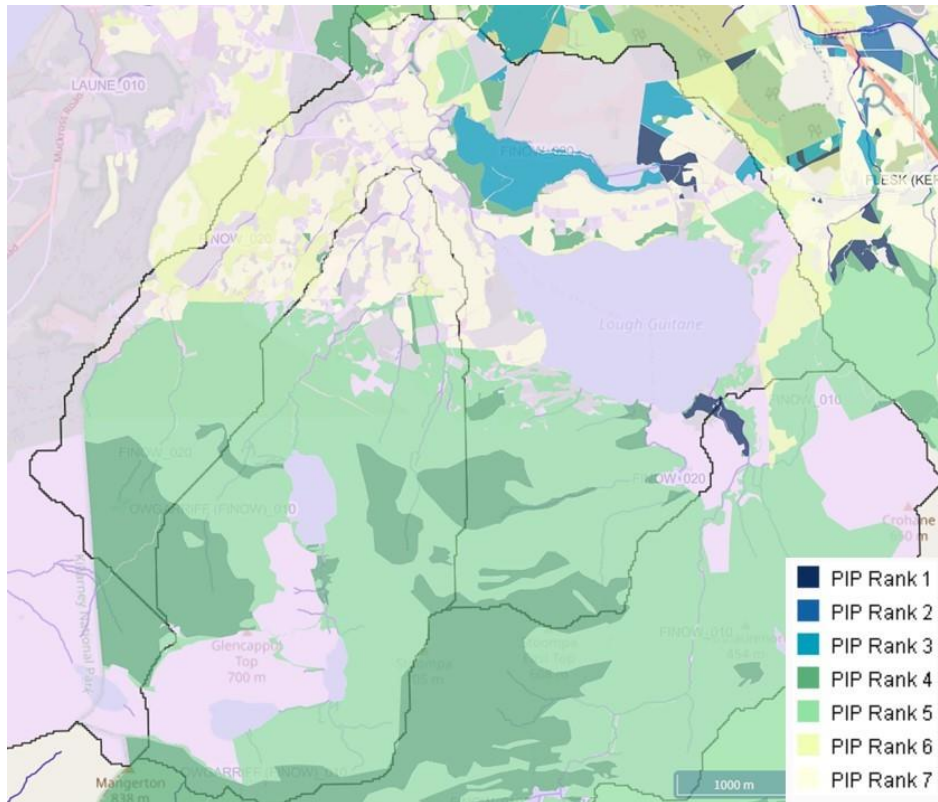
7 Communications

The public meeting for this PAA was held on Wednesday 7th July 2021. This event was held virtually due to ongoing COVID 19 restrictions. There was a good attendance at the meeting, ca. 8-10 people in addition to LAWPRO staff. There was a high level of engagement at the meeting. The main questions and conversations included:

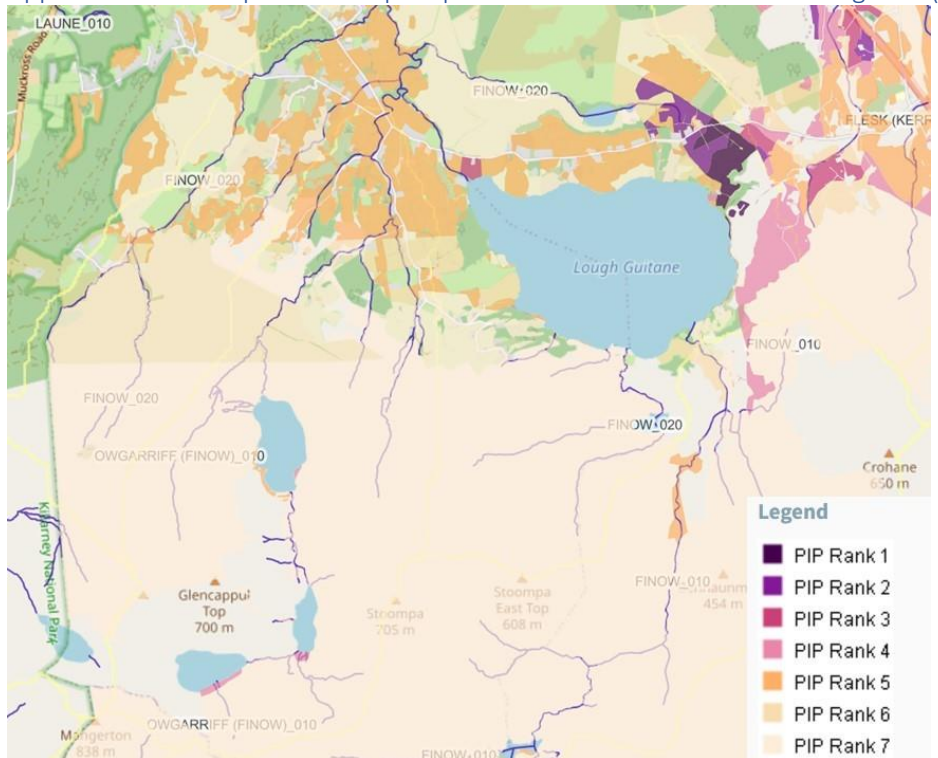
- When LAWPRO start undertaking a public consultation for the 3rd cycle of the RBMP, please send the information onto the Kerry PPN
- New CAP agreements-will it benefit the PAA's and general Environment or has it gone far enough ?
- Will the numbers of PAA's increase from 190 or will they decrease in the 3rd phase of the RBMP ?
- Finow means clean water
- Awareness of the Environmental Linkage Group - Likeminded people coming together to share information about what is going on with different groups

Appendices

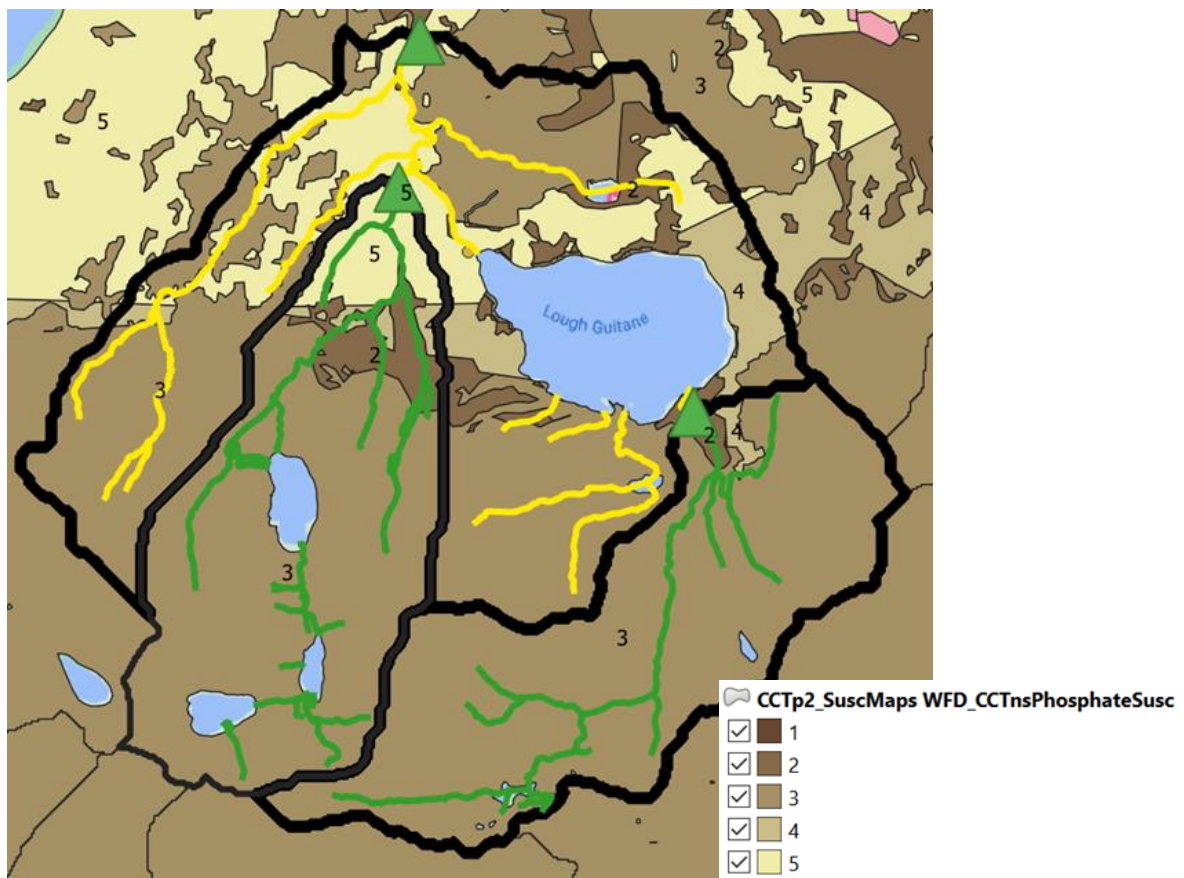
Appendix I: Phosphorus pollution impact potential in the Finow PAA and Owgariff (Finow)_020.



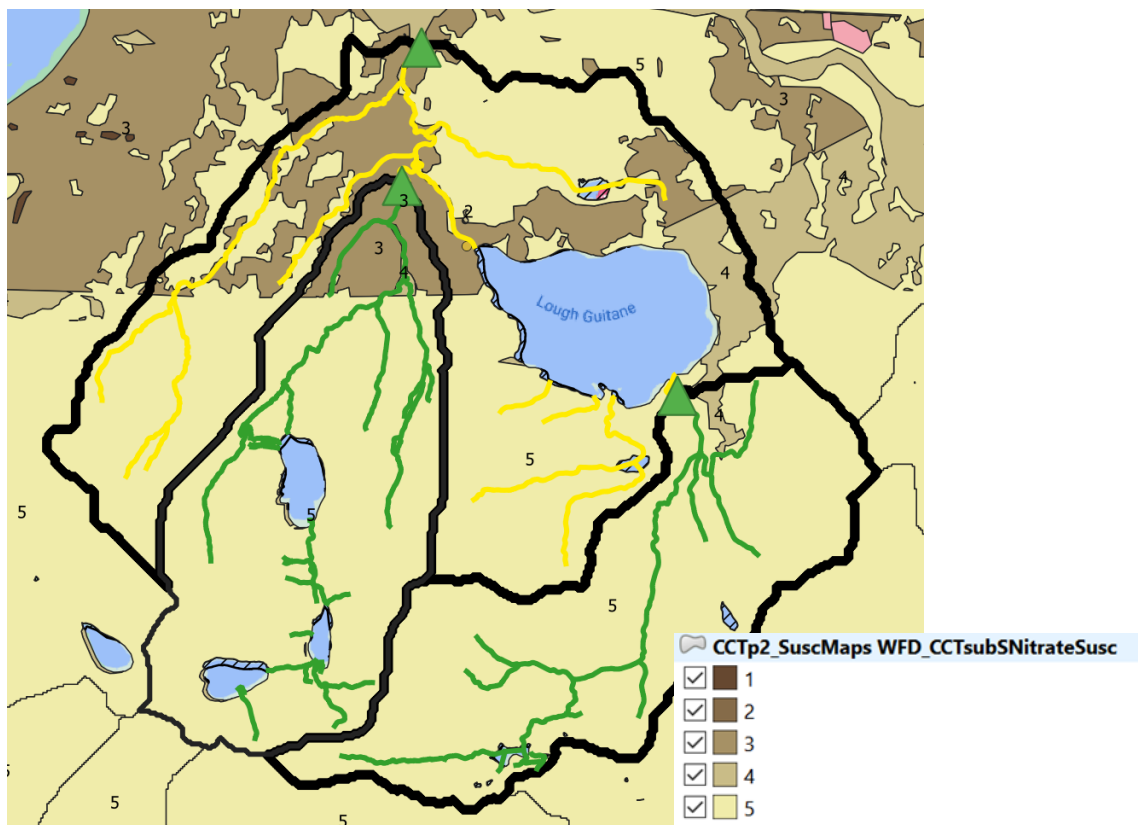
Appendix II: Nitrate pollution impact potential in the Finow PAA and Owgariff (Finow)_020.



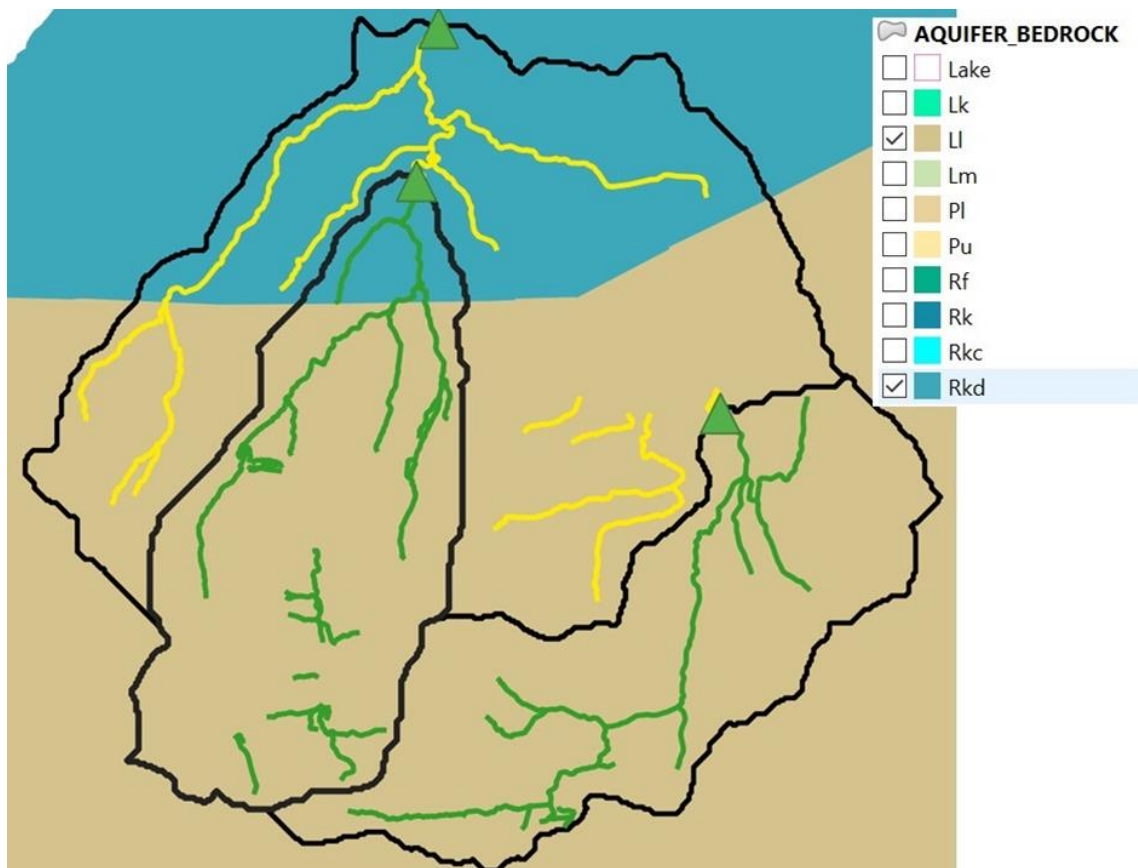
Appendix III: Susceptibility map near surface Phosphate in the Finow PAA and Owgarriff (Finow)_020.



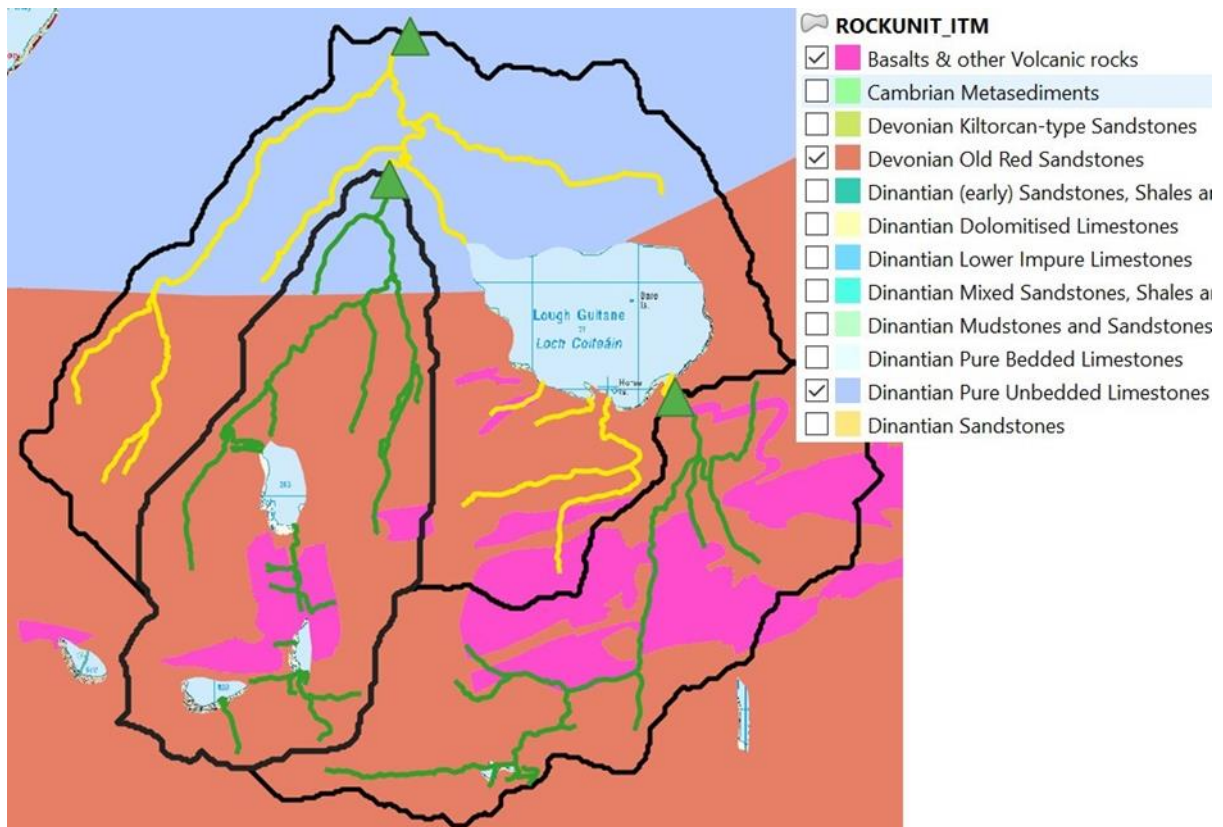
Appendix IV: Susceptibility map sub surface Nitrate in the Finow PAA and Owgarriff (Finow)_020.



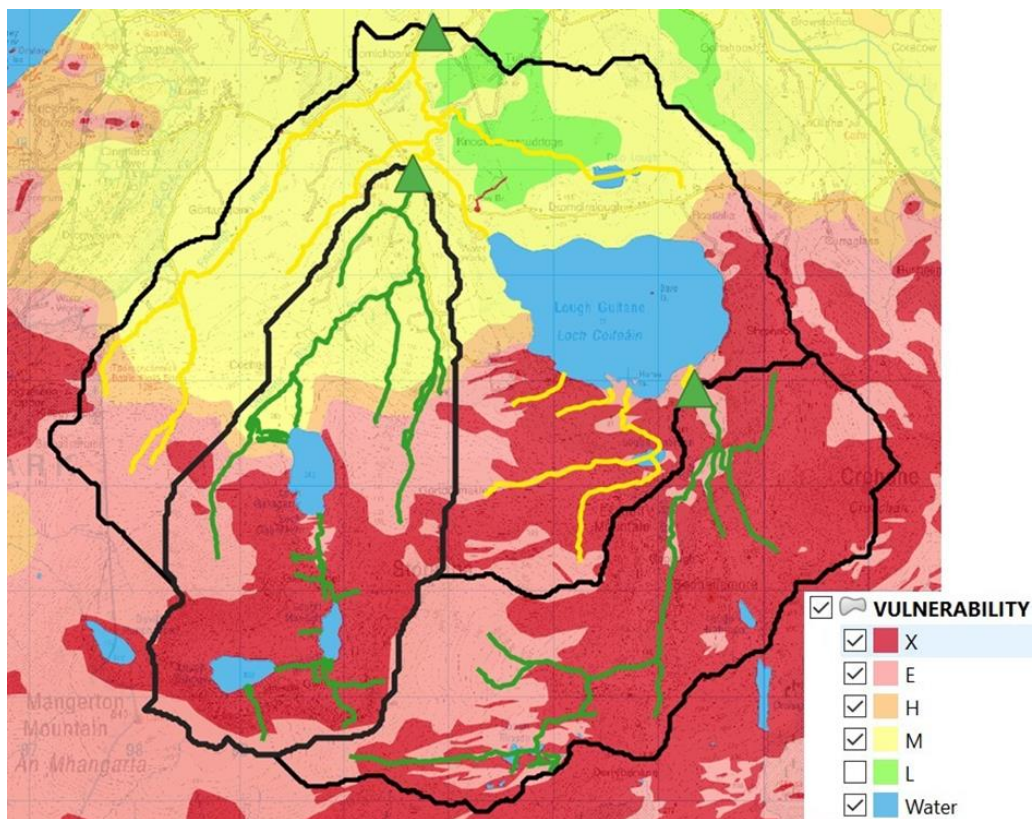
Appendix V: Aquifer Map for Finow PAA and Owgarrieff (Finow)_020.



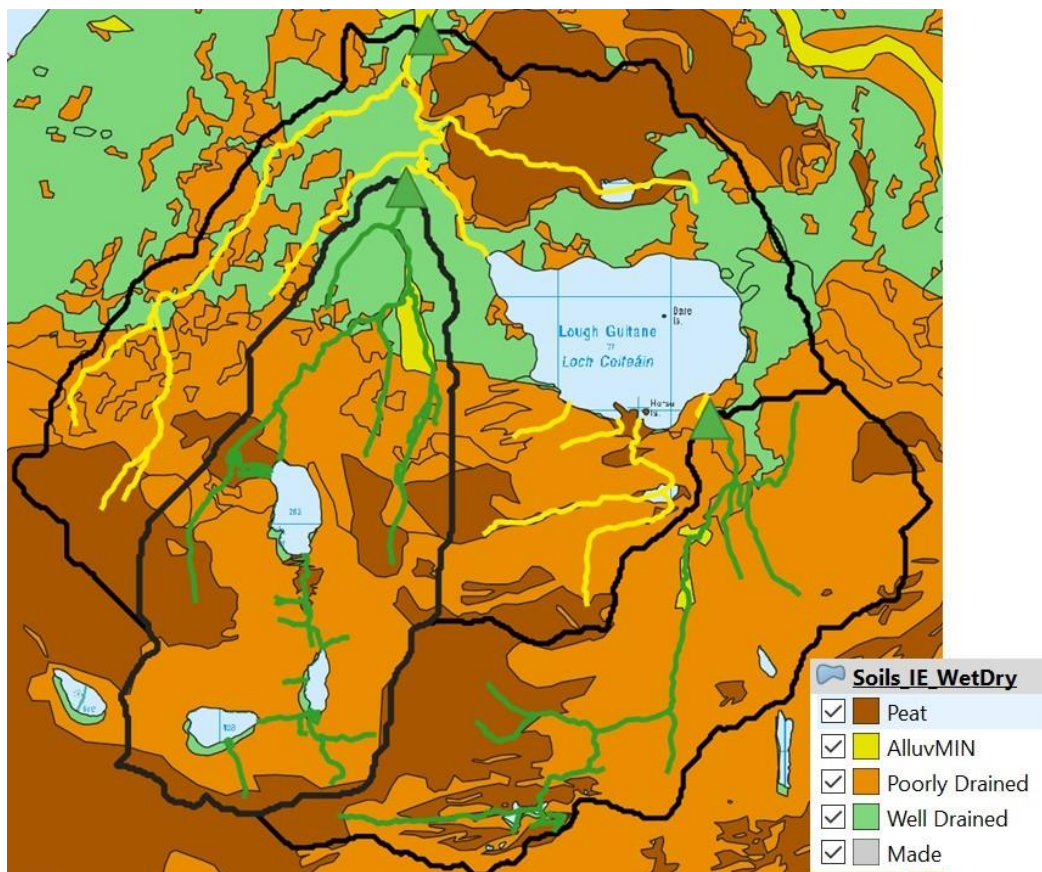
Appendix VI: Rock unit Map for Finow PAA and Owgarrieff (Finow)_020.



Appendix VII: Vulnerability Map for Finow PAA and Owgarriff (Finow)_020.



Appendix VIII: Soils Wet Dry Map for Finow PAA and Owgarriff (Finow)_020.



Appendix IX: Landuse Map for Finow PAA and Owgarriff (Finow)_020.

