Curraghinalt Gold Project, County Tyrone, Northern Ireland

Biological Water Quality Assessment Report

November 2025

Dalradian Gold Limited

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REVISION HISTORY

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November 2025	DGL-21.001 v1.1	Dalradian Gold Limited	Draft Report issued to client for review and comment.
November 2025	DGL-21.001 v1.1	Dalradian Gold Limited	Final Report issued to client.

CONTRACT

This document has been prepared by Green & Blue Ecology for Dalradian Gold Limited to provide information for the ecological monitoring programme of biological water quality assessment carried out for 2024/25 as part of the gold mine development at Curraghinalt, County Tyrone.

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1. INTRODUCTION

1.1. Background

A planning application for the development and operation of an underground gold mine, as part of the Curraghinalt Project at Greencastle in County Tyrone, was submitted to the Department for Infrastructure (DfI) by Dalradian Gold Limited (DGL) in November 2017. Further revisions to the planning application were made in 2019.

To inform an Ecological Impact Assessment (EcIA), that formed part of the wider Environmental Impact Assessment (EIA) for the proposed gold mine development and submitted as part of the planning application, an assessment of biological water quality in the Owenkillew and Owenreagh rivers was carried out in 2015/16.

Since 2018, an annual programme of monitoring of biological water quality of the Owenkillew River, Owenreagh River and some of their tributaries has been carried out to collate baseline information and along with chemical sampling to provide information on water quality on relevant waterbodies in the vicinity of the gold mine development.

This report presents the results of the biological water quality assessment undertaken in 2024/25.

1.2. Legislation and Planning Policy Context

The European Water Framework Directive (200/60/EC) was transposed in Northern Ireland through The Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017 and is continues to be retained by The Water (Amendment) (Northern Ireland) (EU Exit) Regulations 2019 and for the purpose of this report is still referred to as WFD.

The WFD regulations place a responsibility on Northern Ireland to ensure all inland and coastal water reach at least good ecological status, or good ecological potential for artificial or heavily modified water bodies implemented through a River Basin Management Plan (RBMP) approach. The RBMP sets out a programme of measures to be implemented over a six-year cycle, currently in the third cycle.

Ecological status of surface waters assesses the overall ecosystem health expressed by the biological quality elements that includes: phytoplankton; macrophytes; phytobenthos; benthic macroinvertebrates; and fish. It is a composite assessment on the quality of a surface water ecosystem and shows the combined impact of pressures for example pollution, habitat degradation and climate change.

The Owenkillew River is designated as a Special Area of Conservation (SAC) and an Area of Special Scientific Interest (ASSI), primarily for its population of freshwater pearl mussel (*Margaritifera margaritifera*). However, the Owenreagh River also supports good populations of freshwater pearl mussel and the section of river upstream of Cashel Bridge, Greencastle is also designated as an ASSI for this species.

Both the Owenkillew and Owenreagh Rivers are important nursery and spawning areas for salmon (*Salmo salar*) and trout (*Salmo trutta*).

The Strategic Planning Policy Statement (SPPS) for Northern Ireland, published in September 2015, states that planning permission will only be granted for a development proposal that is not likely to harm a statutorily protected species, that includes the aquatic species associated with the Owenkilliew and Owenreagh rivers, and which can be adequately mitigated or compensated against.

1.3. Study Aims and Objectives

The aim of the study was to provide an indication of the ecological status, in respect to the macroinvertebrate element, of the Owenkillew and Owenreagh rivers, and some of their associated tributaries, in the vicinity of the Curraghinalt gold deposit.

2. METHODOLOGY

Baseline ecological data were collated through the sampling and identification of macroinvertebrates families and assessment was undertaken using biotic indices in accordance with current standard methodologies and published good practice guidelines.

2.1. Study Area

The Curraghinalt gold deposit is located in the South Sperrin Mountains approximately 7.5km east of the village of Gortin, and between the settlements of Rouskey and Greencastle, County Tyrone.

The application area has five component project sites (Figure 1) that include:

i. **Infrastructure Site (Area A)**. The site where the process plant and dry stack facility (DSF) will be located and includes the access road of from the Crockanboy Road near Greencastle.
ii. **Mineral Extraction Area (Area B)**. The area where the mineral deposit is known to occur and the maximum extent of the underground mine workings.
iii. **Existing Surface Infrastructure Site (Area C)**. The existing surface infrastructure that was developed for the underground exploration programme that will be retained for use as an early works base and for underground development and future training.
iv. **Passing Bays on Camcosy Road and a Proposed Turning Point for Heavy Goods Vehicles off Lenagh Road (Area D)**. The existing passing bays developed for the Curraghinalt Underground Exploration Programme and proposed turning point for heavy goods vehicles during the construction phase of the development.
v. **Mineral Exploration Area (Area E)**. The target area for future exploration of the Curraghinalt deposit by means of underground drifts (essentially exploration tunnels).

The area of study for the biological water quality comprised of a total of 15 sampling sites in the Owenkillew (nine sites) and Owenreagh (six sites) catchments. Table 1 provides a summary of the sites used for the sampling of macroinvertebrates, and their locations are shown in Figure 1.

Table 1: Summary of Water Quality Monitoring Sites

Sampling Site Reference	NGR	Catchment	Description
Owenkillew Catchment			
OK-01	H 61348 84779	Owenkillew	Downstream of Monanameal Bridge
OK-02	H 60551 86107	Owenkillew	Downstream of Glenhull Bridge
OK-03	H 60192 87047	Owenkillew	Coneyglen Burn downstream of Coneyglen Bridge
OK-04	H 58816 86764	Owenkillew	Downstream of Greenan Bridge
OK-05	H 57578 87327	Owenkillew	Glenlark Burn downstream of Glenlark Bridge
OK-06	H 57119 87115	Owenkillew	Downstream of confluence of the Curraghinalt Burn
OK-07	H 52313 87172	Owenkillew	Upstream of Drumlea Road Bridge
OK-09	H 57124 86646	Owenkillew	Curraghinalt Burn upstream of Attys Bridge
OK-10	H 56711 86877	Owenkillew	Attagh Burn
Owenreagh Catchment			
OR-01	H 61835 80722	Owenreagh	Downstream of Formil Bridge
OR-02	H 58147 82115	Owenreagh	Downstream of Cashel Bridge
OR-04	H 58336 83399	Owenreagh	Pollanroe Burn upstream of Pollanroe Bridge
OR-04a	H 57787 84510	Owenreagh	Unnamed tributary

Sampling Site Reference	NGR	Catchment	Description
OR-05	H 56162 83631	Owenreagh	Downstream of Aghnamirigan Bridge
OR-06	H 53553 85897	Owenreagh	Upstream of Drumlea Bridge

2.2. Macroinvertebrate Sampling

Macroinvertebrates were collected and analysed based on Environment Agency's manual for collecting and analysing river invertebrate samples[1], British Standard BS EN ISO 10870:2012 – Guidelines for the Selection of Sampling Methods and Devices for Benthic Macroinvertebrates in Fresh Waters and on the sampling method based on the standard River Invertebrate Prediction and Classification System (RIVPACS)[2] to ensure wherever possible that the results are comparable with and monitoring carried out by Northern Ireland Environment Agency (NIEA) as part of any WFD assessment of compliance against statutory environmental objectives.

Samples were collected in Spring (March – May), Summer (June – August) and Autumn (September – November) during 2024/25 from each sampling site. A standard 3 minutes kick-sampling using a standard hand-net (20-25cm lower edge and 19-22cm vertical sides) with a 1mm mesh net plus an additional minute searching for and collecting individual specimens living on the surface and which may be attached to stones and other submerged objects, and sweeping of any marginal vegetation where present was used to collect each sample.

At each sampling location all collected material was placed into a white plastic tray and sorted by hand on site for any large and conspicuous organisms that were removed and placed into a labelled container with 70% ethanol. Any captured fish were returned to the watercourse. All large pieces of vegetation and debris were visually searched, washed clean of any invertebrates and discarded. The remaining contents of the tray were then returned to the net, draining off excess water, before being placed into the aforementioned labelled container.

Each sample collected in the field was returned to the laboratory for sorting and identification and all major

2.3. Analysis of Macroinvertebrates

Each sample was sorted and analysed based on the Walley Hawkes Paisley Trigg (WHPT) Index[3] (Taxonomic Level 2 as recognised by RIVPACS) identifying invertebrates at the family level. However, for groups difficult to identify, i.e. Ogliochaeta and Chironomidae, mixed taxon analysis was used for the identification at Taxonomic Level 5.

2.4. Classification of WFD Ecological Status for Macroinvertebrates

The River Invertebrate Classification Tool version 3 (RICT3), developed by the four UK environmental agencies to classify the ecological quality of rivers, was used to assess the biological assessment of water quality based on the benthic macroinvertebrate community at each sampling site compared with RIVPACS model reference sites.

Environmental data for each sampling site was collated from a combination of Ordnance Survey mapping (National Grid Reference, Altitude, Slope and Distance from Source), historical baseline measurements (Discharge and Alkalinity) and in-field observations (Mean Width, Mean Depth and Substrate Composition). Environmental variables for each sampling site, used in the RICT predications for 2024/25, are presented at Appendix A

[1] Environment Agency (2009). *Freshwater Macro-invertebrate Sampling in Rivers*. Operational Instruction 018_08. Issued 09/12/2017.

[2] Water Framework Directive – United Kingdom Technical Advisory Group (2014). *River Assessment Method Benthic Invertebrate Fana Invertebrates (General Degradation): Whalley, Hawkes, Paisley & Trigg (WHPT) Metric in River Invertebrate Classification Tool (RICT)*.

[3] Paisley, M.F., Trigg, D.J. and Walley, W.J. (2014). *Revision of the Biological Monitoring Working Party (BMWP) Score System: Derivation of Present-only and Abundance-related Scores from Field Data*. River Research and Applications, Vol. 30 pp. 887-904.

The environmental variables were entered into RICT3 to predicted WHPT Average Score Per Taxon (WHPT ASPT) and number of scoring taxa (WHPT NTaxa) for each sampling site. This was then used to compare the observed (O) scores to the predicted expected (E) to establish an WHPT and NTaxa Ecological Quality Ratio (EQR) for each of the Spring, Summer and Autumn sampling results at each sampling site.

RICT3 was then used to provide a classification output report based on the sampling results to provide a WFD class for each season (Spring, Summer and Autumn) sampling results and for a combination of the Spring and Autumn results based on the average of the WHPT ASPT and WHPT NTaxa EQRs for these seasons. The WFD classification boundaries for EQRs are detailed in Table 2.

The overall WFD status classification is determined by taking an average of the ASPT EQRs and NTAXA EQRs from both the spring and autumn seasons and using the worst class indicated by the two indices. This output generated by RICT is called the Minimum of NTaxa and ASPT or MINTA (WFD-UKTAG, 2021).

Table 2: Macroinvertebrate EQR Class Boundaries

Class Boundary (WHPT Classification)		WHPT ASPT EQR	WHPT NTAXA EQR
H	High	>0.97	>0.80
G	Good	0.86 – 0.97	0.68 – 0.80
M	Moderate	0.72 – 0.86	0.56 – 0.68
P	Poor	0.59 – 0.72	0.47 – 0.56
B	Bad	<0.59	<0.47

2.5. Survey Personal

The surveys were led by [redacted] of Green & Blue Ecology. [redacted] has over 25 years of experience in ecological and environmental consultancy and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and is experienced in carrying out biological water quality assessments in Northern Ireland and throughout the UK and Republic of Ireland.

2.6. Uncertainty of Data and Limitations

It was not possible to survey Sampling Site OR-04a in Summer 2025 due to a high risk of confrontation with protesters. However, it is considered that the absence of this data set does not materialistically affect the overall assessment of ecological status at this site. However, sampling was undertaken during spring and autumn and therefore the absence of data for summer 2025 has not affected the overall classification at this site.

It is considered that all due care and attention to the sampling, sorting and the identification of organisms has been made to ensure that all taxa collected are representative of the macroinvertebrate communities present at all the sites sampled at the time of the survey.

River conditions at the time of the sampling can vary considerably in the study area depending upon flow conditions which can limit due to health and safety the width of the channel of the main rivers which can be kick-sampled.

3. RESULTS

3.1. General Habitat Description

The Curraghinalt gold deposit is located in the South Sperrin Mountains approximately 7.5 km east of the village of Gortin, and between the settlements of Rouskey and Greencastle, County Tyrone (Figure 1). It lies in the catchment of the Owenkillew River covering some 454 km^2 with a combined river length (including tributaries) of approximately 81 km and which forms part of the large River Foyle system.

The Owenkillew River rises in Davagh Forest and flows in a westerly direction through the South Sperrin Mountains and to the north of the Curraghinalt gold deposit. It is a large river that is oligotrophic in its upper reaches becoming oligo-mesotrophic through its middle and lower reaches.

The Owenkillew River is joined by the Owenreagh River east of Gortin. This river and its tributaries drain a catchment area of 85 km^2. The river flows to the south of the Curraghinalt gold deposit separated by a topographic ridge that forms the drainage divide between the Owenkillew River and the Owenreagh River.

3.2. Macroinvertebrate Sampling

A full macroinvertebrate taxa list for each sampling site identified during the 2024/2025 monitoring programme are presented at Appendix B.

3.2.1. Sampling Results 2024

Table 3 presents for each sampling site a summary of the biometric scores, EQR values and mean EQR (average of spring (S) and autumn (A) values) obtained through the sampling of macroinvertebrates in 2024. It also provides WFD classification based on analysis using RICT to determine the most probable classification for the combined WHPT NTaxa and WHPT ASPT and overall classification of status. Please note that these are indicative classifications based on the data presented. Ony NIEA can make formal WFD classifications.

Table 3: RICT WHPT Results for the Macroinvertebrate Sampling 2024

Site	Index	Score	EQR	Mean EQR	RICT Most Probable Classification	Confidence of Class	Overall Classification
Owenkillew River and Tributaries							
OK01	WHPT NTaxa (S)	15	0.58	0.51	Moderate	45.79	Moderate
	WHPT NTaxa (A)	11	0.44				
	WHPT ASPT (S)	6.64	1.09	1.12	High	99.16	
	WHPT ASPT (A)	6.63	1.16				
OK02	WHPT NTaxa (S)	14	0.55	0.45	Poor	46.60	Poor
	WHPT NTaxa (A)	9	0.35				
	WHPT ASPT (S)	6.00	1.06	1.04	High	78.29	
	WHPT ASPT (A)	5.41	1.01				
OK03	WHPT NTaxa (S)	7	0.29	0.26	Bad	98.70	Bad
	WHPT NTaxa (A)	5	0.22				
	WHPT ASPT (S)	5.36	0.79	0.75	Moderate	69.72	
	WHPT ASPT (A)	4.42	0.70				
OK04	WHPT NTaxa (S)	13	0.54	0.48	Moderate	41.99	Moderate
	WHPT NTaxa (A)	9	0.43				
	WHPT ASPT (S)	6.65	0.94				

Site	Index	Score	EQR	Mean EQR	RICT Most Probable Classification	Confidence of Class	Overall Classification
	WHPT ASPT (A)	6.21	0.95	0.95	Good	74.65	
OK05	WHPT NTaxa (S)	9	0.38	0.35	Bad	71.37	Bad
	WHPT NTaxa (A)	7	0.33				
	WHPT ASPT (S)	5.91	0.84	0.88	Good	58.35	
	WHPT ASPT (A)	6.07	0.93				
OK-06	WHPT NTaxa (S)	13	0.52	0.48	Poor	48.04	Poor
	WHPT NTaxa (A)	12	0.45				
	WHPT ASPT (S)	6.69	1.29	1.29	High	100	
	WHPT ASPT (A)	6.28	1.28				
OK07	WHPT NTaxa (S)	13	0.51	0.51	Poor	43.24	Poor
	WHPT NTaxa (A)	14	0.51				
	WHPT ASPT (S)	6.13	1.18	1.23	High	100	
	WHPT ASPT (A)	6.31	1.28				
OK09	WHPT NTaxa (S)	2	0.09	0.11	Bad	100	Bad
	WHPT NTaxa (A)	3	0.14				
	WHPT ASPT (S)	4.55	0.65	0.68	Poor	56.47	
	WHPT ASPT (A)	4.53	0.71				
OK10	WHPT NTaxa (S)	5	0.22	0.26	Bad	97.11	Bad
	WHPT NTaxa (A)	6	0.29				
	WHPT ASPT (S)	5.56	0.78	0.79	Moderate	80.92	
	WHPT ASPT (A)	5.33	0.80				
Owenreagh River and Tributaries							
OR01	WHPT NTaxa (S)	14	0.58	0.57	Moderate	52.94	Moderate
	WHPT NTaxa (A)	12	0.56				
	WHPT ASPT (S)	6.26	0.90	0.88	Good	58.95	
	WHPT ASPT (A)	5.55	0.86				
OR02	WHPT NTaxa (S)	14	0.55	0.44	Poor	45.40	Poor
	WHPT NTaxa (A)	8	0.33				
	WHPT ASPT (S)	6.34	0.99	1.05	High	83.90	
	WHPT ASPT (A)	6.63	1.10				
OR04	WHPT NTaxa (S)	8	0.36	0.34	Bad	81.86	Bad
	WHPT NTaxa (A)	7	0.32				
	WHPT ASPT (S)	6.45	0.92	0.91	Good	64.47	
	WHPT ASPT (A)	5.76	0.90				
OR04a	WHPT NTaxa (S)	4	0.18	0.18	Bad	99.95	Bad
	WHPT NTaxa (A)	4	0.18				
	WHPT ASPT (S)	5.05	0.72	0.67	Poor	60.49	
	WHPT ASPT (A)	4.03	0.63				
OR05	WHPT NTaxa (S)	10	0.40	0.42	Bad	52.87	Bad
	WHPT NTaxa (A)	12	0.45				
	WHPT ASPT (S)	6.45	1.24				

Site	Index	Score	EQR	Mean EQR	RICT Most Probable Classification	Confidence of Class	Overall Classification
	WHPT ASPT (A)	5.96	1.21	1.22	High	99.99	
OR06	WHPT NTaxa (S)	13	0.52	0.46	Poor	47.91	Poor
	WHPT NTaxa (A)	11	0.40				
	WHPT ASPT (S)	6.39	1.28	1.27	High	99.9	
	WHPT ASPT (A)	5.91	1.25				

3.2.1. Sampling Results 2025

Table 4 presents for each sampling site a summary of the biometric scores, EQR values and mean EQR (average of spring (S) and autumn (A) values) obtained through the sampling of macroinvertebrates in 2025. It also provides WFD classification based on analysis using RICT to determine the most probable classification for the combined WHPT NTaxa and WHPT ASPT and overall classification of status.

Table 4: RICT WHPT Results for the Macroinvertebrate Sampling 2025

Site	Index	Score	EQR	Mean EQR	RICT Most Probable Classification	Confidence of Class	Overall Classification
Owenkillew River and Tributaries							
OK01	WHPT NTaxa (S)	17	0.66	0.61	Moderate	50.13	Moderate
	WHPT NTaxa (A)	14	0.56				
	WHPT ASPT (S)	6.34	1.04	1.09	High	97.38	
	WHPT ASPT (A)	6.57	1.15				
OK02	WHPT NTaxa (S)	16	0.62	0.62	Moderate	50.17	Moderate
	WHPT NTaxa (A)	16	0.62				
	WHPT ASPT (S)	6.02	5.65	1.15	High	99.72	
	WHPT ASPT (A)	6.58	5.35				
OK03	WHPT NTaxa (S)	9	0.37	0.84	Bad	59.73	Bad
	WHPT NTaxa (A)	9	0.40				
	WHPT ASPT (S)	5.50	0.81	0.80	Moderate	84.65	
	WHPT ASPT (A)	4.98	0.79				
OK04	WHPT NTaxa (S)	15	0.62	0.74	Good	56.57	Good
	WHPT NTaxa (A)	18	0.86				
	WHPT ASPT (S)	6.33	0.89	0.95	Good	75.41	
	WHPT ASPT (A)	6.56	1.00				
OK05	WHPT NTaxa (S)	9	0.38	0.43	Poor	43.06	Poor
	WHPT NTaxa (A)	10	0.47				
	WHPT ASPT (S)	5.98	0.85	0.90	Good	68.44	
	WHPT ASPT (A)	6.19	0.95				
OK06	WHPT NTaxa (S)	17	0.68	0.64	Moderate	47.65	Moderate
	WHPT NTaxa (A)	16	0.60				
	WHPT ASPT (S)	6.46	1.25	1.33	High	100	
	WHPT ASPT (A)	6.94	1.42				

Site	Index	Score	EQR	Mean EQR	RICT Most Probable Classification	Confidence of Class	Overall Classification
OK07	WHPT NTaxa (S)	16	0.63	0.57	Moderate	57.13	Moderate
	WHPT NTaxa (A)	14	0.51				
	WHPT ASPT (S)	6.50	1.25	1.24	High	100	
	WHPT ASPT (A)	6.01	1.22				
OK09	WHPT NTaxa (S)	5	0.22	0.23	Bad	99.53	Bad
	WHPT NTaxa (A)	5	0.23				
	WHPT ASPT (S)	4.48	0.64	0.67	Poor	67.75	
	WHPT ASPT (A)	4.48	0.70				
OK10	WHPT NTaxa (S)	10	0.44	0.46	Poor	41.95	Poor
	WHPT NTaxa (A)	10	0.49				
	WHPT ASPT (S)	5.44	0.76	0.77	Moderate	85.93	
	WHPT ASPT (A)	5.21	0.78				
Owenreagh River							
OR01	WHPT NTaxa (S)	16	0.66	0.70	Good	47.40	Good
	WHPT NTaxa (A)	16	0.74				
	WHPT ASPT (S)	6.40	0.92	0.94	Good	80.21	
	WHPT ASPT (A)	6.14	0.95				
OR02	WHPT NTAXA (S)	14	0.55	0.54	Moderate	53.62	Moderate
	WHPT NTAXA (A)	13	0.54				
	WHPT ASPT (S)	6.36	0.99	1.03	High	77.09	
	WHPT ASPT (A)	6.26	1.07				
OR04	WHPT NTAXA (S)	12	0.53	0.50	Poor	42.74	Moderate
	WHPT NTAXA (A)	10	0.46				
	WHPT ASPT (S)	6.15	0.88	0.88	Moderate	50.88	
	WHPT ASPT (A)	5.63	0.88				
OR04a	WHPT NTaxa (S)	5	0.22	0.25	Bad	98.67	Bad
	WHPT NTaxa (A)	6	0.28				
	WHPT ASPT (S)	5.40	0.77	0.80	Moderate	80.11	
	WHPT ASPT (A)	5.38	0.84				
OR05	WHPT NTaxa (S)	17	0.68	0.66	Moderate	45.46	Good
	WHPT NTaxa (A)	17	0.63				
	WHPT ASPT (S)	6.50	1.25	1.27	High	100	
	WHPT ASPT (A)	6.38	1.29				
OR06	WHPT NTaxa (S)	16	0.64	0.61	Moderate	56.47	Moderate
	WHPT NTaxa (A)	16	0.58				
	WHPT ASPT (S)	6.47	1.30	1.33	High	100	
	WHPT ASPT (A)	6.41	1.36				

4. CONCLUSIONS

4.1. Conclusions

Four sites on the Owenkillew River (OK01, OK02, OK06 and OK07) and three sites on the Owenreagh River (OR02, OR05 and OR06) had WHPT ASPT EQR scores indicative of High ecological status in 2024 and 2025. OK04 had a WHPT APST EQR score indicative of Good in 2024, but which increased to High status in 2025.

Five of the other sites had not change in status between 2024 and 2025 with OK05 and OR01 having indicative Good ecological status for WHPT ASPT, OK03 and OK10 with Moderate status and OK09 Poor status.

Two sites show a change in status with OR04a increasing from Poor in 2024 to Moderate in 2025 and OR04 reducing from Good to Moderate over this same period. The change in indicative status at OR-04 is probably due to the influence of livestock where it was noticeable during the summer sampling sediments on the bed due bed disturbance and poaching of banks by cattle accessing the channel at the sampling site.

The number of scoring taxa were below the RICT3 predicted scores at all sampling sites, but 11 of the sites showed an increase in WHPT NTaxa EQRs scores from 2024 to 2025.

For the Owenkillew River the sites that showed an increase include: OK04 Moderate to Good; OK02, OK06, OK07 and OK10 Poor to Moderate; and OK05 Bad to Poor. OK01 had score indicative of Moderate status and OK03 and OK09 Bad in both 2024 and 2025.

Five sites for the Owenreagh River also showed an increase in WHPT NTaxa EQR scores between 2024 and 2025 that included: OR01 Moderate to Good; OR05 Bad to Moderate; OR02 and OR06 Poor to Moderate; and OR04 Bad to Poor. Only OR04a shown no change between 2024 and 2025 remaining at Bad.

Table 5 presents a summary of minimum, maximum and average WHPT NTaxa and WHPT ASPT for the monitoring programme carried out from 2021 to 2025 inclusive.

In terms of the WHPT ASPT EQR Class these typically correspond to the WFD status assigned for macroinvertebrates by the NIEA for 2024 for the the Owenkillew and Owenreagh Rivers (Table 6). However, with the exception of OK03 for its WHPT ASPT EQR Class and all sites in respect to ASPT NTaxa EQR Class the results obtained for 2024 and 2025 do not correspond to the current WFD macroinvertebrate status..

Table 5: Summary of Full Macroinvertebrate Sampling from 2021/2025 Sampling

Site	Survey Range	Survey Count	WHPT NTaxa Score Min – Max (Average)	WHPT NTaxa EQR Score Min – Max (Averagee B/P/M/G/H	WHPT NTaxa EQR Class Min – Max (Average)	WHPT ASPT Score Min – Max (Average)	WHPT ASPT EQR Score Min – Max (Average) B/P/M/G/H	WHPT ASPT EQR Class Min – Max (Average)
Owenkillew River								
OK01	2021 to 2025	14	5 – 27 (13)	0.27 – 0.99 (0.49)	B – H (P)	3.96 – 6.64 (5.96)	0.68 – 1.20 (1.02)	M– H (H)
OK02	2021 to 2025	14	4 – 17 (11)	0.15 - 0.64 (0.42)	B – M (B)	3.48– 6.85 (5.67)	0.60 – 1.23 (1.00)	P – H (H)
OK03	2021 to 2025	14	3 – 11 (7)	0.13 – 0.53 (0.32)	B – B (B)	2.80 – 5.50 (4.57)	0.44 – 0.81 (0.70)	B – M (P)

Site	Survey Range	Survey Count	WHPT NTaxa Score Min – Max (Average)	WHPT NTaxa EQR Score Min – Max (Averagee B/P/M/G/H	WHPT NTaxa EQR Class Min – Max (Average)	WHPT ASPT Score Min – Max (Average)	WHPT ASPT EQR Score Min – Max (Average) B/P/M/G/H	WHPT ASPT EQR Class Min – Max (Average)
OK04	2021 to 2025	14	9 – 24 (13)	0.37 – 0.86 (0.55)	B – M (P)	5.63 – 6.76 (6.34)	0.88 – 1.21 (0.96)	G – H (G)
OK05	2021 to 2025	14	4 – 15 (8)	0.17 – 0.84 (0.36)	B – M (B)	3.84 – 6.90 (5.81)	0.57 – 1.06 (0.86)	B – H (G)
OK06	2021 to 2025	14	7 – 17 (12)	0.25 – 0.71 (0.45)	B – G (B)	6.11 – 6.69 (6.41)	1.11 – 1.42 (1.27)	H – H (H)
OK07	2021 to 2025	14	11 – 18 (12)	0.29 – 1.03 (0.50)	B – H (P)	5.54 – 7.02 (6.33)	1.00 – 1.41 (1.19)	H – H (H)
OK09	2022 to 2025	11	1 – 5 (3)	0.04 – 0.23 (0.13)	B – B (B)	3.60 – 6.30 (4.51)	0.51 – 0.90 (0.69)	P – G (P)
OK10	2022 to 2025	11	2 – 11 (6)	0.10 – 0.49 (0.28)	B – P (B)	1.60 – 6.90 (5.36)	0.24 – 1.03 (0.78)	B – H (M)
Owenreagh River								
OR01	2021 to 2025	14	5 – 16 (13)	0.21 – 0.81 (0.52)	B – H (P)	5.14 – 6.92 (5.93)	0.75 – 1.13 (0.91)	M – H (G)
OR02	2021 to 2025	14	5 – 14 (9)	0.19 – 0.55 (0.38)	B – P (B)	4.73 – 6.69 (6.02)~	0.78 – 1.11 (0.97)	M – H (H)
OR04	2021 to 2025	14	6 – 16 (9)	0.25 – 0.91 (0.42)	B – P (B)	5.39 – 7.07 (6.02)	0.83 – 1.01 (0.91)	G – G (G)
OR04a	2022 to 2025	11	3 - 6 (4)	0.14 – 0.28 (0.17)	B – B (B)	4.03 – 5.40 (4.41)	0.63 – 0.84 (0.66)	P – M (P)
OR05	2021 to 2025	14	9 – 17 (12)	0.32 – 0.68 (0.48)	B – M (P)	5.42 – 7.22 (6.38)	0.97 – 1.47 (1.22)	H – H (H)
OR06	2021 to 2025	14	7 – 16 (11)	0.18 – 0.69 (0.48)	B – G (P)	4.94 – 6.47 (5.87)	0.98 – 1.36 (1.16)	H – H (H)

Table 6: WFD Macroinvertebrate Status 2024 (NIEA)

Waterbody Name	Waterbody Code	NIEA Site Reference (Operational / Surveillance)	Sampling Site	Macroinvertebrate Status
Owenkillew River (Glenhull)	UKGBNI1NW010102086	UKGBNIF10077	OK-01	High
Owenkillew River (Drumlea)	UKGBNI1NW010104043	UKGBNIF10074	OK-07	High
Coneyglen Burn	UKGBNI1NW010102085	UKGBNIF10076	OK-03	Good

Waterbody Name	Waterbody Code	NIEA Site Reference (Operational / Surveillance)	Sampling Site	Macroinvertebrate Status
Glenlark River	UKGBNI1NW010102025	UKGBNIF10075	OK-05	Good
Owenreagh (East) River (Greencastle	UKGBNI1NW010102091	UKGBNIF11315	OR-01	High
Owenreagh (East) River (Drumlea)	UKGBNI1NW010104041	UKGBNIF10081	OR-06	High

FIGURES

NOTES

LEGEND

- APPLICATION SITE
- SURFACE WATER MONITORING STATIONS

CURRAGHINALT GOLD PROJECT
COUNTY TYRONE

BIOLOGICAL WATER QUALITY ASSESSMENT

LOCATION OF SAMPLING SITES

FIGURE 1

Scale 1:28,460 @ A3

Date NOVEMBER 2025

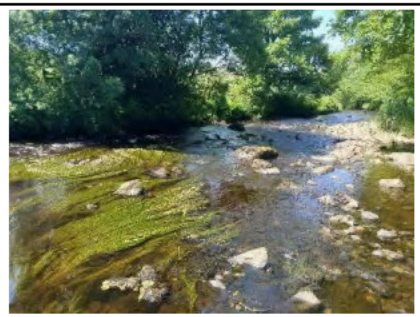
DGL-25.001

APPENDIX A
ENVIRONMENTAL VARIABLES FOR THE SAMPLING SITES

SITE	Waterbody	Year	NGR	Easting	Northing	Altitude (mAOD)	Slope	Discharge Category	Velocity	Dist_from_Source	Mean_Width (m)	Mean_Depth (cm)	Alkalinity	Boulder / Cobbles	Pebbles/ Gravel	Sand	Silt / Clay	Hardness	Calcium	Conductivity
OK1	Owenkillew	2024	H	61348	84779	139	0.39	5	-	19	6.7	50	-	60	35	5	0	-	-	65
OK2	Owenkillew	2024	H	60551	86107	135	0.39	5	-	20	7.4	60	-	30	65	5	0	-	-	62
OK3	Coneyglen	2024	H	60192	87047	138	1.16	3	-	11	5.3	50	-	80	15	5	0	-	-	94
OK4	Owenkillew	2024	H	58816	86764	118	0.42	6	-	23	12.9	70	-	80	15	5	0	-	-	31
OK5	Glenlark	2024	H	57578	87327	118	0.87	4	-	8.8	5.9	50	-	80	15	5	0	-	-	60
OK6	Owenkillew	2024	H	57119	87115	113	0.42	6	-	25	12.6	80	-	90	10	0	0	-	-	55
OK7	Owenkillew	2024	H	53213	87172	106	0.33	8	-	30	18.5	80	-	50	40	10	0	-	-	53
OK9	Curraghinlt	2024	H	57124	86646	170	9.01	1	-	0.1	1.25	15	-	30	55	15	0	-	-	29
OK10	Attagh	2024	H	56711	86877	118	7.3	1	-	1	0.8	15	-	50	25	15	10	-	-	30
OR1	Owenreagh	2024	H	61835	80722	148	0.77	2	-	8.6	5.2	50	-	65	30	5	0	-	-	75
OR2	Owenreagh	2024	H	58147	82115	119	0.44	4	-	14	7.4	40	-	5	75	20	0	-	-	75
OR4	Pollanroe	2024	H	58336	83399	170	11	1	-	1.7	1.25	20	-	10	80	10	0	-	-	94
OR4a	Un-named	2024	H	57787	84510	174	3.88	1	-	1.5	0.6	15	-	30	55	15	0	-	-	94
OR5	Owenreagh	2024	H	56162	83631	108	0.39	5	-	17	8.4	75	-	0	95	5	0	-	-	55
OR6	Owenreagh	2024	H	53553	85897	92	0.48	6	-	20	9.8	80	-	70	15	15	0	-	-	73

APPENDIX B
MACROINVERTEBRATE TAXA LIST

Site Reference:	OK01	**Site Name:**	Downstream of Monanameal Bridge
Waterbody Reference:	UKGBNI1NW010102086	**Waterbody Name:**	Owenkillew River (Glenhull)
Waterbody WFD Status Cycle 3 (2024):	Moderate	**NIEA Site Reference:**	UKGBNIF10077



Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Mollusca (snails, limpets and mussels)	Sphaeriidae (Pea mussels)	*Euglesa personata*				2	1	
		Euglesa sp.	1					
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*	2	1		2	2	2
Crustacea (crayfish, slaters and shrimps)	Gammaridae	*Gammarus duebeni*	3		2	3		
Ephemeroptera (mayflies)	Baetidae	*Baetis muticus*	1					
		Baetis rhodani/atlanticus agg.	72	31	17	65	17	49
		Baetis sp.						2
	Heptageniidae (incl. Arthropleidae)	*Ecdyonurus dispar*	18	6	10	39	13	17
		Rhithrogena semicolorata	7					
	Ephemerellidae	*Serratella ignita*	8			6		2
	Caenidae	*Caenis rivulorum*	1			1		
Plecoptera (stoneflies)	Leuctridae	*Leuctra fusca*					1	
		Leuctra hippopus	3			4	1	6
		Leutra sp.		1	1			
	Chloroperlidae	*Siphonoplerla torrentium*	2	1	1	1		3
Coleoptera (beetles)	Dytiscidae	*Oreodytes davisii*				1	1	1
	Elmidae	*Elmis arena*	2	1	2			

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
		Esolus parallelepipeus	1					
		Limnius volckmari	15	4	5	4	2	2
		Oulimnius sp.	2					
Trichoptera (caddisflies)	Rhyacophilidae	*Rhyacophila dorsalis*	2	1	1	1	1	1
	Glossosomatidae	*Glossosoma boltoni*	1			2	1	2
	Hydropsychidae	*Hydropsyche siltalia*				1		3
Diptera (true flies)	Tipulidae (incl. Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*	2	1	1	2	1	1
	Simuliidae	*Simulium argyreatum/variegatum*	11	5		19		3
		Simulium sp.	3					
	Chironomidae	Chironomidae	12	2	9	8	2	2
		Tanypodinae			2			
Trombidiformes (water mites)	Hydrachinidae	Hydrachinidae		18	3	5	21	

Site Reference:	OK02	**Site Name:**	Downstream of Glenhull Bridge
Waterbody Reference:	UKGBNI1NW010102086	**Waterbody Name:**	Owenkillew River (Glenhull)
Waterbody WFD Status Cycle 3 (2024):	Moderate	**NIEA Site Reference:**	

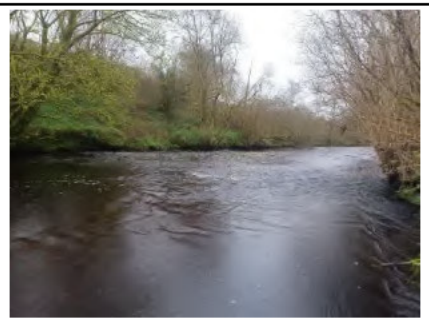
Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Mollusca (snails, limpets and mussels)	Sphaeriidae (Pea mussels)	*Euglesa personata*	1			1		
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*	3	1	1	3	1	2
Crustacea (crayfish, slaters and shrimps)	Gammaridae	*Gammarus duebeni*	4	1	3	3	1	5
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	64	27	24	52	13	28
	Heptageniidae (incl. Arthropleidae)	*Ecdyonurus dispar*	19	2	2	32	10	29
		Rhithrogena semicolorata	10			9	2	2
	Ephemeridae	*Ephemera danica*			2			
	Ephemerellidae	*Serratella ignita*	4					
	Caenidae	*Caenis rivulorum*	1					
Plecoptera (stoneflies)	Leuctridae	*Leuctra hippopus*	2	2	1	2	2	2
	Chloroperlidae	*Siphonoplerla torrentium*						1
Coleoptera (beetles)	Dytiscidae	*Oreodytes sanmarkii*				1	1	2
	Elmidae	*Elmis arena*	5		4	3	1	1
Trichoptera (caddisflies)	Rhyacophilidae	*Rhyacophila dorsalis*	1			1	1	2
	Glossosomatidae	*Agapetus fuscipes*				2	1	
	Polycentropodidae	*Polycentropus kingi*						2
	Hydropsychidae	*Hydropsyche siltalia*	1	1		2	1	4

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*	2		2	2	2	1
	Simuliidae	*Simulium sp.*	13		5	28	12	4
	Chironomidae	Chironomidae	5	2	3	4	2	6

Site Reference:	OK03	**Site Name:**	Coneyglen Burn downstream of Coneyglen Bridge
Waterbody Reference:	UKGBNI1NW010102085	**Waterbody Name:**	Coneyglen Burn
Waterbody WFD Status Cycle 3 (2024):	Moderate	**NIEA Site Reference:**	UKGBNIF10076

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*	2	2	2	3	4	2
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	8	6	6	16	4	6
	Heptageniidae (incl. Arthropleidae)	*Ecdyonurus dispar*	1					
	Ephemeridae	*Ephemera danica*			1	1		
Plecoptera (stoneflies)	Leuctridae	*Leuctra hippopus*	1			1	1	2
Coleoptera (beetles)	Dytiscidae	*Dytiscus sp.*				2	2	1
Trichoptera (caddisflies)	Hydropsychidae	*Hydropsyche siltalia*	2			3	2	2
	Limnephilidae (including Apataniidae)	*Potamophylax cingulatus*						1
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*			1	1		1
	Simuliidae	*Simulium sp.*	3			8	1	1
	Chironomidae	Chironomidae	3	1	4	3	5	2

Site Reference:	OK04	**Site Name:**	Downstream of Greenan Bridge
Waterbody Reference:	UKGBNI1NW010104043	**Waterbody Name:**	Owenkillew River (Drumlea)
Waterbody WFD Status Cycle 3 (2024):	Good	**NIEA Site Reference:**	



Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*		1		3	6	2
Crustacea (crayfish, slaters and shrimps)	Gammaridae	*Gammarus duebeni*	2	2	1	2	2	9
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	21	17	21	51	19	13
	Heptageniidae (incl. Arthropleidae)	*Ecdyonurus dispar*	20	10	13	16	22	20
		Rhithrogena semicolorata	5	1		16	2	8
	Ephemeridae	*Ephemera danica*		1	1			1
	Ephemerellidae	*Serratella ignita*	3			2	4	2
	Caenidae	*Caenis rivulorum*	2					
Plecoptera (stoneflies)	Leuctridae	*Leuctra hippopus*	3	3	3	5	2	5
	Chloroperlidae	*Siphonoplerla torrentium*	3	1		1		1
Coleoptera (beetles)	Dytiscidae	*Oreodytes sanmarkii*	2	1		3	1	1
	Elmidae	*Limnius volckmari*	6	4	4	5	4	2
Trichoptera (caddisflies)	Rhyacophilidae	*Rhyacophila dorsalis*	4			1		1
	Polycentropodidae	*Plectrocnemia conspersa*						1
	Hydropsychidae	*Hydropsyche siltalia*	4	1	1	6	8	
		Hydropsyche angustipennis				3	3	
	Limnephilidae (including Apataniidae)	*Potamophylax cingulatus*				3	2	4

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*				1	8	4
	Simuliidae	*Simulium sp.*		2	1	3	7	1
		Simulium argyreatum/variegatum	18	5		15		
	Chironomidae	Chironomidae	9	4	11	9	4	11
Trombidiformes (water mites)	Hydrachinidae	Hydrachinidae	7	6		5	5	

Site Reference:	OK05	**Site Name:**	Glenlark Burn downstream of Glenlark Bridge
Waterbody Reference:	UKGBNI1NW010102025	**Waterbody Name:**	Glenlark River
Waterbody WFD Status Cycle 3 (2024):	Moderate	**NIEA Site Reference:**	UKGBNIF10075

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*	1	1	1	1	2	2
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	39	33	21	66	19	11
	Heptageniidae (incl. Arthropleidae)	*Ecdyonurus dispar*	6	4	4	7		6
Plecoptera (stoneflies)	Nemouridae	*Protonemura praecox*						1
	Leuctridae	*Leuctra hippopus*	1	1	1	1		3
	Elmidae	*Limnius volckmari*	1			2		1
Trichoptera (caddisflies)	Rhyacophilidae	*Rhyacophila dorsalis*	3	1	1	2	1	1
	Hydropsychidae	*Hydropsyche siltalia*	2	2	2	3	3	2
Diptera (true flies)	Simuliidae	*Simulium sp.*	1			15	2	2
	Chironomidae	Chironomidae	5	3	10	4	2	2

Site Reference:	OK06	**Site Name:**	Downstream of confluence of the Curraghinalt Burn
Waterbody Reference:	UKGBNI1NW010104043	**Waterbody Name:**	Owenkillew River (Drumlea)
Waterbody WFD Status Cycle 3 (2024):	Good	**NIEA Site Reference:**	

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Mollusca (snails, limpets and mussels)	Lymnaeidae	*Ampullaceana balthica*					1	
	Ancylus group (= Ancylidae)	*Ancylus fluviatillis*				1		2
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*				1		2
Crustacea (crayfish, slaters and shrimps)	Gammaridae	*Gammarus duebeni*	1	4	2	2		7
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	49	9	11	102	23	29
	Heptageniidae (incl. Arthropleidae)	*Ecdyonurus dispar*	6	3	2	13	18	12
		Rhithrogena semicolorata	2	2	3	24	6	22
	Ephemerellidae	*Serratella ignita*	2	3	3	7	8	5
Plecoptera (stoneflies)	Leuctridae	*Leuctra hippopus*	4	2	6	6	2	3
		Leutra sp.				2		
	Chloroperlidae	*Siphonoplerla torrentium*	5			4	1	2
Coleoptera (beetles)	Dytiscidae	*Oreodytes sanmarkii*				2		
		Dyticus sp.					1	1
	Elmidae	*Limnius volckmari*	3	1	2	4	1	1
Trichoptera (caddisflies)	Rhyacophilidae	*Rhyacophila dorsalis*	2	2	1	2	1	1
	Glossosomatidae	*Agapetus fuscipes*	1	1	1	1	1	1
	Hydropsychidae	*Hydropsyche siltalia*	3	1	1	7	1	6

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
	Lepidostomatidae	*Lepidostoma hirtum*						2
	Limnephilidae (including Apataniidae)	*Potamophylax cingulatus*	1		1	4	2	2
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*				1	3	1
	Simuliidae	*Simulium sp.*	6	2	2	59	2	
	Chironomidae	Chironomidae	11	5	6	4	2	
Trombidiformes (water mites)	Hydrachinidae	Hydrachinidae	9	14	1	6	9	

Site Reference:	OK07	**Site Name:**	Upstream of Drumlea Road Bridge
Waterbody Reference:	UKGBNI1NW010104043	**Waterbody Name:**	Owenkillew River (Drumlea)
Waterbody WFD Status Cycle 3 (2024):	Good	**NIEA Site Reference:**	

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Mollusca (snails, limpets and mussels)	*Ancylus* group (= Ancylidae)	*Ancylus fluviatillis*	1	1	1	1	1	1
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*	4	4	2	2	2	3
Crustacea (crayfish, slaters and shrimps)	Gammaridae	*Gammarus duebeni*	1			2	1	4
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	109	16	12	131	12	36
	Heptageniidae (incl. Arthropleidae)	*Ecdyonurus dispar*	6	3	1	12	6	
		Rhithrogena semicolorata	26	18	16	46	21	32
	Ephemeridae	*Ephemera danica*				2		
	Ephemerellidae	*Serratella ignita*	1	3	2	3	1	2
Plecoptera (stoneflies)	Leuctridae	*Leuctra hippopus*	2	2	2	11	2	8
Coleoptera (beetles)	Elmidae	*Elmis arena*	1			1	1	1
		Limnius volckmari			2			1
Trichoptera (caddisflies)	Rhyacophilidae	*Rhyacophila dorsalis*	4	2	2	4	1	1
	Polycentropodidae	*Polycentropus flavomaculatus*			1	2		
	Hydropsychidae	*Hydropsyche siltalia*	1	1	2	1	2	3
	Limnephilidae (including Apataniidae)	*Potamophylax cingulatus*			1	2	2	2

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*	4	1	4	2	1	1
	Simuliidae	*Simulium sp.*		2	1	37	5	3
		Simulium argyreatum/variegatum	4			12		
	Chironomidae	*Chironomidae*	12	7	15	14	2	3
Trombidiformes (water mites)	Hydrachinidae	Hydrachinidae	2	5			11	

Site Reference:	OK09	**Site Name:**	Curraghinalt Burn upstream of Attys Bridge	
Waterbody Reference:	UKGBNI1NW010104043	**Waterbody Name:**	Owenkillew River (Drumlea)	
Waterbody WFD Status Cycle 3 (2024):	Good	**NIEA Site Reference:**		

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*				1	2	1
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	7	6	6	8	2	4
	Heptageniidae (incl. Arthropleidae)	*Rhithrogena semicolorata*				1	2	2
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*			3			
	Simuliidae	*Simulium sp.*	3	1	1	7	1	2
	Chironomidae	Chironomidae				2	1	2

Site Reference:	OK10	**Site Name:**	Attagh Burn
Waterbody Reference:	UKGBNI1NW010104043	**Waterbody Name:**	Owenkillew River (Drumlea)
Waterbody WFD Status Cycle 3 (2024):	Good	**NIEA Site Reference:**	

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Crustacea (crayfish, slaters and shrimps)	Asellidae	*Asellus aquaticus*	1	1	2	1	1	2
	Gammaridae	*Gammarus duebeni*		1	1	2	1	3
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	5	2	2	12	9	8
	Heptageniidae (incl. Arthropleidae)	*Rhithrogena semicolorata*				4	2	2
Plecoptera (stoneflies)	Leuctridae	*Leuctra hippopus*	1	1	1	1	1	2
Hemiptera (bugs)	Veliidae	*Velia caprai*					2	
Coleoptera (beetles)	Dytiscidae	*Dyticus sp.*				1	2	1
	Elmidae	*Elmis arena*					2	
Trichoptera (caddisflies)	Limnephilidae (including Apataniidae)	*Potamophylax cingulatus*				2	1	2
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*	2	1	3	2	1	1
	Simuliidae	*Simulium sp.*	5	1	4	8		2
	Chironomidae	Chironomidae					2	1
		Tanypodinae				2		

Site Reference:	OR01	**Site Name:**	Downstream of Formil Bridge
Waterbody Reference:	UKGBNI1NW010102091	**Waterbody Name:**	Owenreagh (East) River (Greencastle)
Waterbody WFD Status Cycle 3 (2024):	Moderate	**NIEA Site Reference:**	UKGBNIF11315

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Mollusca (snails, limpets and mussels)	Lymnaeidae	*Ampullaceana balthica*					4	
	Ancylus group (= Ancylidae)	*Ancylus fluviatillis*					2	1
	Sphaeriidae (Pea mussels)	*Euglesa sp.*			1			
	Tateidae	*Potamopyrgus antipodarum*	5	10	2	3	5	2
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*	2		2	2	2	3
Crustacea (crayfish, slaters and shrimps)	Gammaridae	*Gammarus duebeni*	12	7	18	11	6	8
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	23	10	16	22	9	11
		Baetis muticus				4		
		Baetis sp.				2		
	Heptageniidae (incl. Arthropleidae)	*Ecdyonurus dispar*				4		
		Rhithrogena semicolorata	5	2	1	14	7	6
	Ephemeridae	*Ephemera danica*			1			
	Ephemerellidae	*Serratella ignita*	2			3		
	Caenidae	*Caenis rivulorum*	1					
Plecoptera (stoneflies)	Leuctridae	*Leuctra hippopus*	3	1		3	2	3
	Chloroperlidae	*Siphonoplerla torrentium*	2			2	1	4
Coleoptera (beetles)	Dytiscidae	*Oreodytes sanmarkii*	2			2	1	1

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
		Dyticus sp.				1		
	Elmidae	*Elmis arena*	1			2	2	1
		Limnius volckmari	3		3	1		
Trichoptera (caddisflies)	Rhyacophilidae	*Rhyacophila dorsalis*	1	1	1	1	1	1
	Glossosomatidae	*Agapetus fuscipes*				2	1	2
	Hydropsychidae	*Hydropsyche siltalia*			1	1		3
	Limnephilidae (including Apataniidae)	*Potamophylax cingulatus*				3		1
		Anabolia nervosa					1	
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*	3		2	3	1	1
	Simuliidae	*Simulium sp.*	3	1	1	7	1	4
	Chironomidae	Chironomidae	4		13	4	2	1
Trombidiformes (water mites)	Hydrachinidae	Hydrachinidae	6	5		17	8	

Site Reference:	OR-02	**Site Name:**	Downstream of Cashel Bridge
Waterbody Reference:	UKGBNI1NW010104041	**Waterbody Name:**	Owenreagh (East) River (Drumlea)
Waterbody WFD Status Cycle 3 (2024):	Good	**NIEA Site Reference:**	

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*	1			1		3
Crustacea (crayfish, slaters and shrimps)	Gammaridae	*Gammarus duebeni*	6	2	4	3	1	4
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	73	24	22	80	29	21
		Baetis muticus						
		Baetis sp.						
	Heptageniidae (incl. Arthropleidae)	*Ecdyonurus dispar*	7	2	1	6	7	
		Rhithrogena semicolorata	28	13	15	42	25	28
	Ephemeridae	*Ephemera danica*	1					
	Ephemerellidae	*Serratella ignita*				1		
Plecoptera (stoneflies)	Leuctridae	*Leuctra hippopus*	6	5	2	7	3	3
	Chloroperlidae	*Siphonoplerla torrentium*	2	1	1	2	2	3
Coleoptera (beetles)	Dytiscidae	*Oreodytes sanmarkii*	1			1	2	1
	Elmidae	*Elmis arena*		2				
		Limnius volckmari			1	2	6	2
Trichoptera (caddisflies)	Rhyacophilidae	*Rhyacophila dorsalis*	1			1	2	1
	Polycentropodidae	*Polycentropus sp.*						1
	Hydropsychidae	*Hydropsyche siltalia*	1	1		1	3	3

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*	1	1	1	1		1
	Simuliidae	*Simulium sp.*	4			4		
		Simulium argyreatum/variegatum				17	2	
		Simulium aureum				1		
	Chironomidae	Chironomidae	4	1	7	3	2	1
Trombidiformes (water mites)	Hydrachinidae	Hydrachinidae		9	3	4	5	

Site Reference:	OR-04	**Site Name:**	Pollanroe Burn upstream of Pollanroe Bridge
Waterbody Reference:	UKGBNI1NW010104041	**Waterbody Name:**	Owenreagh (East) River (Drumlea)
Waterbody WFD Status Cycle 3 (2024):	Good	**NIEA Site Reference:**	

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*				1	1	1
Crustacea (crayfish, slaters and shrimps)	Gammaridae	*Gammarus duebeni*	21	18	31	17	3	11
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	31	16	16	73	27	19
	Heptageniidae (incl. Arthropleidae)	*Rhithrogena semicolorata*	3	2	1	8	4	11
		Electrogena lateralis	1			4		
Plecoptera (stoneflies)	Leuctridae	*Leuctra hippopus*	3	2	3	4	2	2
	Chloroperlidae	*Siphonoplerla torrentium*	1			1		
Coleoptera (beetles)	Dytiscidae	*Dytiscus sp.*				1	1	1
	Elmidae	*Elmis arena*	2			3	1	1
Trichoptera (caddisflies)	Hydropsychidae	*Hydropsyche siltalia*				2		2
	Limnephilidae (including Apataniidae)	*Potamophylax cingulatus*				1	1	2
		Drusus annulatus				1		
Diptera (true flies)	Simuliidae	*Simulium sp.*	2	2	2	16	2	
	Chironomidae	Chironomidae	2	2	6	2	2	1
Trombidiformes (water mites)	Hydrachinidae	Hydrachinidae	7	2	1	11	7	

Site Reference:	OR-04a	**Site Name:**	Unnamed tributary	
Waterbody Reference:	UKGBNI1NW010104041	**Waterbody Name:**	Owenreagh (East) River (Drumlea)	
Waterbody WFD Status Cycle 3 (2024):	Good	**NIEA Site Reference:**		

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*		1				1
Hirudinea (leeches)	Erpobdellidae	*Erpobdellidae*						
Crustacea (crayfish, slaters and shrimps)	Asellidae	*Asellus aquaticus*						
	Gammaridae	*Gammarus duebeni*						
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	8	2	3	12		5
Plecoptera (stoneflies)	Leuctridae	*Leutra sp.*						1
Coleoptera (beetles)	Dytiscidae	*Dytiscus sp.*				1		1
	Elmidae	*Elmis arena*	1			2		
Trichoptera (caddisflies)	Limnephilidae (including Apataniidae)	*Potamophylax cingulatus*	5	3	1	4		3
		Chaetopteryx villosa		1		2		
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*	2	1	4	2		1
	Chironomidae	Chironomidae			2			

Site Reference:	OR-05	**Site Name:**	Downstream of Aghnamirigan Bridge
Waterbody Reference:	UKGBNI1NW010104041	**Waterbody Name:**	Owenreagh (East) River (Drumlea)
Waterbody WFD Status Cycle 3 (2024):	Good	**NIEA Site Reference:**	

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Mollusca (snails, limpets and mussels)	Lymnaeidae	*Ampullaceana balthica*					1	
	Sphaeriidae (Pea mussels)	*Euglesa personata*	2					
		Eugles asp.			1	1		
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*	6	3	3	1	1	2
Crustacea (crayfish, slaters and shrimps)	Asellidae	*Asellus aquaticus*					1	1
	Gammaridae	*Gammarus duebeni*	2		2	6	7	15
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	82	26	21	112	33	42
	Heptageniidae (incl. Arthropleidae)	*Ecdyonurus dispar*	12	1		6	2	1
		Rhithrogena semicolorata	42	13	13	64	22	30
	Ephemerellidae	*Serratella ignita*		2	1	5	2	2
Plecoptera (stoneflies)	Leuctridae	*Leuctra hippopus*	7	3	3	8	5	8
	Chloroperlidae	*Siphonoplerla torrentium*	4			6	2	4
Coleoptera (beetles)	Dytiscidae	*Oreodytes sanmarkii*				2	2	1
	Elmidae	*Elmis arena*		2	1			
		Limnius volckmari			1	2	2	1
Trichoptera (caddisflies)	Rhyacophilidae	*Rhyacophila dorsalis*	1	3	3	5	4	2
	Hydropsychidae	*Hydropsyche siltalia*		3	1	3	2	5
	Lepidostomatidae	*Lepidostoma hirtum*				1		1

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
	Limnephilidae (including Apataniidae)	*Potamophylax cingulatus*						3
		Anabolia nervosa				1		
		Chaetopteryx villosa					1	
		Drusus annulatus				1		
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*			2	2	2	1
	Simuliidae	*Simulium sp.*	27	3		46	8	1
	Chironomidae	Chironomidae	6	4	11	2	3	2
		Tanytarsini	2					
Trombidiformes (water mites)	Hydrachinidae	Hydrachinidae	3	14	2	11	13	

Site Reference:	OR-06	**Site Name:**	Upstream of Drumlea Bridge
Waterbody Reference:	UKGBNI1NW010104041	**Waterbody Name:**	Owenreagh (East) River (Drumlea)
Waterbody WFD Status Cycle 3 (2024):	Good	**NIEA Site Reference:**	UKGBNIF10081

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
Oligochaeta (worms)	Oligochaeta	*Oligochaeta*	2	1	2	3	6	4
Crustacea (crayfish, slaters and shrimps)	Gammaridae	*Gammarus duebeni*	1		3	4		8
Ephemeroptera (mayflies)	Baetidae	*Baetis rhodani/atlanticus agg.*	17	9	12	21	8	14
	Heptageniidae (incl. Arthropleidae)	*Ecdyonurus dispar*		1				2
		Rhithrogena semicolorata	12	1	4	33	2	10
	Ephemerellidae	*Serratella ignita*	1	1	2	2	1	1
Plecoptera (stoneflies)	Leuctridae	*Leuctra hippopus*	2	2	2	3	1	3
	Chloroperlidae	*Siphonoplerla torrentium*	1			2		1
Coleoptera (beetles)	Dytiscidae	*Nebrioporus depressus*	1			2		
	Elmidae	*Limnius volckmari*	1	1	1	2	1	1
Trichoptera (caddisflies)	Rhyacophilidae	*Rhyacophila dorsalis*	2	2	2	1	1	1
	Glossosomatidae	Glossosoma boltoni				2	1	2
	Hydropsychidae	*Hydropsyche siltalia*				3	2	3
		Hydropsyche angustipennis						
	Lepidostomatidae	*Lepidostoma hirtum*						
	Limnephilidae (including Apataniidae)	*Potamophylax cingulatus*	3			4	1	11
		Limnephilus lunatus				1		

Order	Taxonomic Family	Species	15/04/2024	23/07/2024	25/10/2024	08/05/2025	28/08/2025	10/11/2025
		Chaetopteryx villosa						1
Diptera (true flies)	Tipulidae (including Cylindrotomidae, Limoniidae & Pedicidae)	*Dicranota sp*			2		1	1
		Tipula sp.				2	1	
	Simuliidae	*Simulium sp.*	2	1	1	54	12	4
	Chironomidae	Chironomidae	6	1	10	2	1	2
		Tanypodinae			1			
		Tanytarsini			3			
Trombidiformes (water mites)	Hydrachinidae	Hydrachinidae	5	31	4	24	19	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