

OWENKILLEW AND OWENREAGH RIVERS – SUMMARY OF RIVER MONITORING AND CLASSIFICATION

Executive Summary

1. This report describes the ongoing monitoring and Water Framework Directive (WFD) classifications for the four river waterbodies on the Owenkillew River and two river waterbodies on the Owenreagh (East) River.
2. Ecological and Chemical status have been reported separately for each waterbody in 2021 and 2024.
3. The Ecological status of the six waterbodies in 2015, 2018, 2021 and 2024 and the drivers for less than Good status are summarised in the table below

River Water Body Name	2015 Ecological Status	Driver for less than Good Ecological Status	2018 Ecological Status	Driver for less than Good Ecological Status	2021 Ecological Status	Driver for less than Good Ecological Status	2024 Ecological Status	Driver for less than Good Ecological Status
Owenkillew River (Drumlea)	GOOD	N/A	GOOD	N/A	GOOD	N/A	GOOD	N/A
Glenlark River	GOOD	N/A	GOOD	N/A	MODERATE	Iron	MODERATE	Iron
Coneyglen River	MODERATE	Fish	MODERATE	Iron, Diazinon	MODERATE	Iron, Diazinon	MODERATE	Iron
Owenkillew River (Glenhull)	MODERATE	Iron, Diazinon	MODERATE	Iron	MODERATE	Iron	MODERATE	SRP, Iron
Owenreagh (East) River (Drumlea)	GOOD	N/A	GOOD	N/A	GOOD	N/A	GOOD	N/A
Owenreagh (East) River (Greencastle)	GOOD	N/A	MODERATE	SRP, Iron	MODERATE	SRP, Iron	MODERATE	SRP, Iron

4. Of the six waterbodies discussed in this report two are at Good Ecological status and four at Moderate Ecological status.
5. All four Moderate status waterbodies are failing for Iron and two are also Moderate status for SRP
6. While there are no standards set for Suspended Solids in the Water Framework Directive the results show that all six water bodies passed the annual average guideline standard of 25mg/l in each year suspended solids were monitored.
7. The extrapolation of uBPTS to all waterbodies mean all six river water bodies have been assessed as Moderate Chemical status in 2021 and 2024.
8. WFD 2024 Chemical status assessments show that when failures due to Cypermethrin or uPBT substances are not included all six river water bodies would be assessed High Chemical status.

OWENKILLEW AND OWENREAGH RIVERS – SUMMARY OF RIVER MONITORING AND CLASSIFICATION

1. Background

The Northern Ireland Environment Agency monitor all rivers in NI under the requirements of the EU Water Framework Directive (WFD) to assess overall water quality status. The statutory standards are set out in the Water Framework Directive (Classification, Priority Substances and Shellfish waters) Regulations (Northern Ireland) 2015.

For the first and second cycle River Basin Management Plans (RBMPs) Northern Ireland reported the Overall Surface Water status of river water bodies. Based on the 'One-out, All-out' principle, Overall Surface Water status is assessed as the worst of Ecological status and Chemical Status. Therefore, to achieve the overall aim of 'Good status', a river water body will have to be at least Good for both Ecological and Chemical status.

Ecological status comprises biological, general physicochemical and hydromorphological quality elements. Ecological status is assessed on a five-band system ranging from High to Bad status.

Chemical status assesses those chemicals that have been identified as Priority Substances and are assessed as High where any Priority Substance monitored has passed the relevant standard and Moderate where any Priority Substance monitored has failed the relevant standard.

For the third cycle NI reported Ecological and Chemical status separately. This will allow us to contextualise any chemical breaches and allow mitigation measures to focus on those pressures impacting the river ecology. For the first time the presence of ubiquitous, persistent, bioaccumulative, toxic (uPBT) substances were assessed as part of chemical status.

The uPBT substances are monitored by analysing concentrations in both the water column and in biota. Biota samples are only collected at selected surface water monitoring stations and not across the entire network. Due to their bioaccumulative and persistent nature, uPBT substances in biota have been detected at all monitored stations and resulted in failures of all those stations. Hence it is reasonable to presume that uPBT substances would cause more failures if additional stations were monitored. For this reason, the uPBT failures have been extrapolated to all water bodies across Northern Ireland.

To allow a comparison between the chemical status in 2015 and 2018 (uPBT substances were not monitored) and 2021 and 2024, the chemical status has been broken into three sub-groups:

- a. chemical classification excluding both uPBT substances and cypermethrin – this subgroup can be compared with the chemical classification results from 2015 and 2018
- b. chemical classification excluding uPBT substances
- c. chemical classification including uPBT substances (extrapolated to all waterbodies)

2. Owenkillew and Owenreagh water bodies

This report describes the ongoing monitoring and Water Framework Directive (WFD) classifications for the Owenkillew and Owenreagh (East) Rivers for monitoring stations above and below lands proposed for development by Dalradian Gold.

The area of interest for this report covers four river waterbodies on the Owenkillew River and two river waterbodies on the Owenreagh (East) River. Four of the waterbodies contain a single monitoring site and two of the waterbodies (Owenkillew Glenhull and Owenreagh Greencastle) contain two monitoring sites. The river waterbodies and associated monitoring stations are presented in Table 1 and their locations are shown in the map in Appendix I. The WFD status for 2015, 2018, 2021 and 2024 for each element monitored in these six river water bodies can be found in Appendix II.

River Water Body Number	River Water Body Name	Monitoring Station	Monitoring Station Name
GBNI1NW010104043	Owenkillew River (Drumlea)	F10074 Operational site	OWENKILLEW RIVER AT DRUMLEA
GBNI1NW010102025	Glenlark River	F10075 Operational site	GLENLARK RIVER AT GLENLARK BRIDGE
GBNI1NW010102085	Coneyglen River	F10076 Surveillance site	CONEYGLEN BURN AT CONEYGLEN BRIDGE
GBNI1NW010102086	Owenkillew River (Glenhull)	F10077 Surveillance site	OWENKILLEW RIVER AT MONANAMEAL BRIDGE
		F10058 Operational site	BROUGHDERG WATER AT BROUGHDERG BRIDGE
GBNI1NW010104041	Owenreagh (East) River (Drumlea) Operational site	F10081 Operational site	OWENREAGH (EAST) RIVER AT DRUMLEA BRIDGE
GBNI1NW010102091	Owenreagh (East) River (Greencastle)	F11315 Operational site	OWENREAGH RIVER AT FORMIL BRIDGE
		F10069 Operational site	GLASHAGH BURN AT CASHEL WOOD

Table 1. River water bodies and Monitoring Stations.

WFD Surveillance stations are monitored monthly for all chemical parameters and on a rolling programme for all biological elements. WFD Operational sites are monitored monthly for nutrients and quarterly for other chemical parameters and on a rolling programme for all biological elements.

The Freshwater Fish Directive included an annual average guideline standard of 25mg/l Suspended Solids but was repealed in December 2013 by the Water Framework Directive. Under the Habitats Directive, a favourable condition annual average target of 10mg/l is set for pearl mussel recruitment. WFD does not specify an environmental standard for this parameter, so these are non-statutory guidelines. Suspended Solids are monitored monthly at surveillance sites and selected others and quarterly at operational sites.

Due to the global pandemic monitoring programmes were temporarily suspended in line with public health guidelines resulting in no sample collection during April and May 2020. Sampling resumed at a reduced number of monitoring stations in June 2020 until December 2020. As of January 2021, all monitoring stations are being sampled at their planned frequency of either monthly or quarterly.

The Ecological and Chemical status of the Owenkillev and Owenreagh waterbodies are discussed in the sections below.

3.0 Ecological Status

3.1 River water body GBNI1NW010104043 Owenkillev River (Drumlea)

The Owenkillev River (Drumlea) river water body is located downstream of the proposed area for development. The main channel is a Special Area for Conservation (SAC) for Freshwater Pearl Mussel. The river water body is classified using the monitoring station F10074 Owenkillev River at Drumlea. The station is an operational WFD site.

In the 2015, 2018, 2021 and 2024 classifications the water body has been consistently classified as Good Ecological status with all physico-chemical, specific pollutant and biological elements consistently High or Good status based on data collected up to the end of 2023. At an element level macro-invertebrates improved from Good in 2015 and 2018 to High status in the 2021 and 2024 classifications. Macrophytes also improved from Good in 2015 and 2018 to High status in the 2021 classification. For the 2024 classification macrophytes have been recorded as "no data" due to the implementation of the alkalinity rule, ie, a diatom-based assessment alone will give a reliable classification if alkalinity is <75mg/L CaCO₃. Implementation of the rule means that for 2024 macrophytes have not been included in classification. Diatoms improved from Good in 2015 to High in 2018 but have returned to Good status for the 2021 and 2024 classifications. Water Framework Directive standards for soluble reactive phosphorus (SRP) are site specific and are based on annual averages calculated over a three-year rolling period. SRP declined from High status in 2015 to Good status in 2018 and 2021 and has remained at Good status in the 2024 classification.

The Owenkillev River at Drumlea station is monitored for suspended solids on a monthly basis. Using the Freshwater Fish Directive standards which are based on annual averages, as a guideline, the Drumlea station passed both the 25mg/l standard and the more precautionary standard of 10mg/l between the years 2017 to 2023, inclusive. The Suspended Solids annual averages for Owenkillev River at Drumlea are presented in Table 2.

Monitoring Station Number	Monitoring Station Location	Suspended Solids Annual Average (mg/l)						
		2017	2018	2019	2020	2021	2022	2023
F10074	OWENKILLEW R AT DRUMLEA	3.1	4.0	5.5	5.8	3.4	2.6	5.7

Table 2. Suspended solids annual averages for 2017 to 2023, inclusive, at Owenkillev River at Drumlea

Figure 1 shows that with the exception of the four peaks of suspended solids occurring in January 2018, May 2019, September 2020 and October 2023, which may be attributable to a natural event such as heavy rainfall, levels of suspended solids have remained consistently low during the seven years 2017 and 2023.

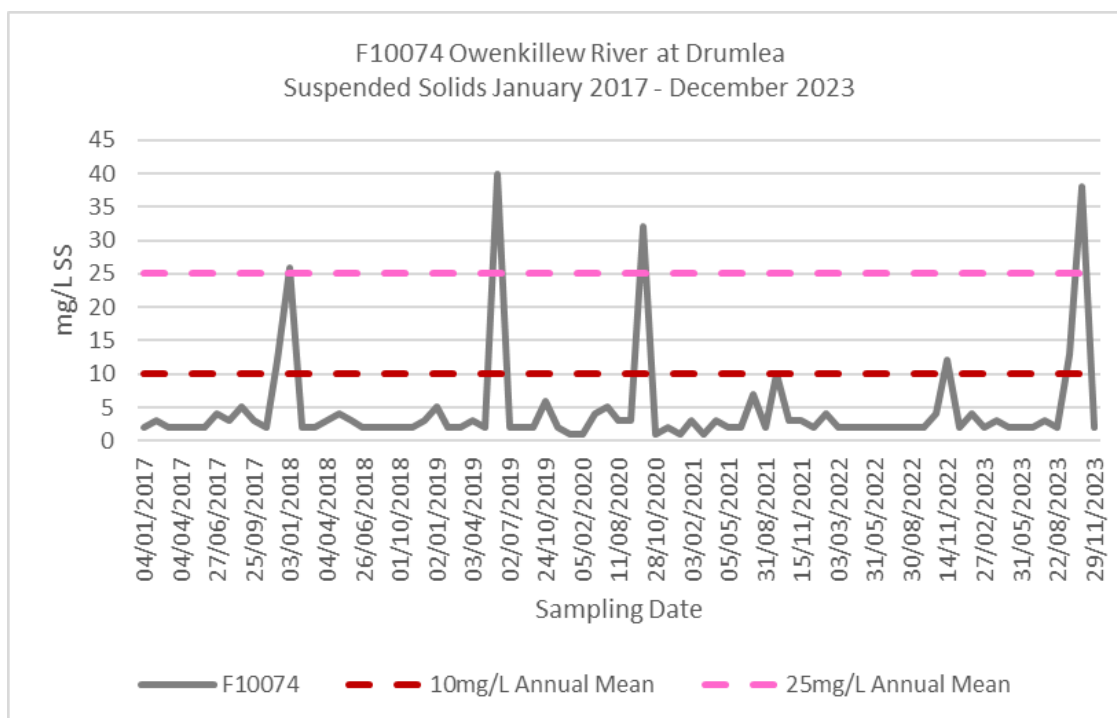


Figure 1. Suspended solids results measured between January 2017 and December 2023 at Owenkillev River at Drumlea.

3.2 River water body GBNI1NW010102086 Owenkillev River (Glenhull)

The Owenkillev River (Glenhull) river water body is located upstream of the proposed area for development. The river water body is classified using the average of the results from the two river monitoring stations as identified in Table 3.

River Waterbody Number	Monitoring Station Number	Monitoring Station Location	WFD station type
GBNI1NW010102086	F10077	OWENKILLEW RIVER AT MONANAMEAL BRIDGE	Surveillance
GBNI1NW010102086	F10058	BROUGHDERG WATER AT BROUGHDERG BRIDGE	Operational

Table 3. Monitoring stations located within the Owenkillev River (Glenhull) river water body.

Both monitoring stations are on the main channel which has been designated an SAC for Freshwater Pearl Mussel.

The Owenkillev River (Glenhull) water body has been classified as Moderate Ecological status in 2015, 2018, 2021 and 2024. The drivers for less than Good status are presented in Table 4.

Classification Year	Ecological Status	Driver for less than Good Ecological Status
2015	MODERATE	Dissolved Iron, Diazinon
2018	MODERATE	Dissolved Iron

Classification Year	Ecological Status	Driver for less than Good Ecological Status
2021	MODERATE	Dissolved Iron
2024	MODERATE	SRP, Dissolved Iron

Table 4. Ecological status of Owenkillev River (Glenhull) water body in 2015, 2018, 2021 and 2024.

Monitoring for metals, has been carried out on a monthly basis since January 2009 and January 2015 at Owenkillev River at Monanameal Bridge and Broughderg Water at Broughderg Bridge, respectively. The 1000µg/L dissolved iron annual average environmental quality standard (AA-EQS) has consistently been exceeded throughout each classification period resulting in the river waterbody being classified as Moderate for dissolved iron in the 2015, 2018, 2021 and 2024 classifications. NIEA will investigate these failures to determine if there are anthropogenic sources of dissolved iron in the Owenkillev River (Glenhull) river water body.

The specific pollutant diazinon was detected in monitoring that took place during the first river basin cycle at Owenkillev River at Monanameal Bridge between September 2010 and August 2011. The second and third cycle monitoring, which took place between July 2015 and June 2016 and between May 2022 and April 2023 at Owenkillev River at Monanameal Bridge, did not detect an exceedance of diazinon in this river water body.

SRP at F10077 Owenkillev River at Monanameal Bridge has consistently been assessed as Good status throughout the classification periods. However, SRP at F10058 Broughderg Water at Broughderg Bridge has declined from High status in the 2015, 2018 and 2021 classifications to Moderate status in 2024. The deterioration from Good to Moderate status at Broughderg Water has been due to a number of results exceeding the Good/Moderate boundary set for this station (see Figure 2).

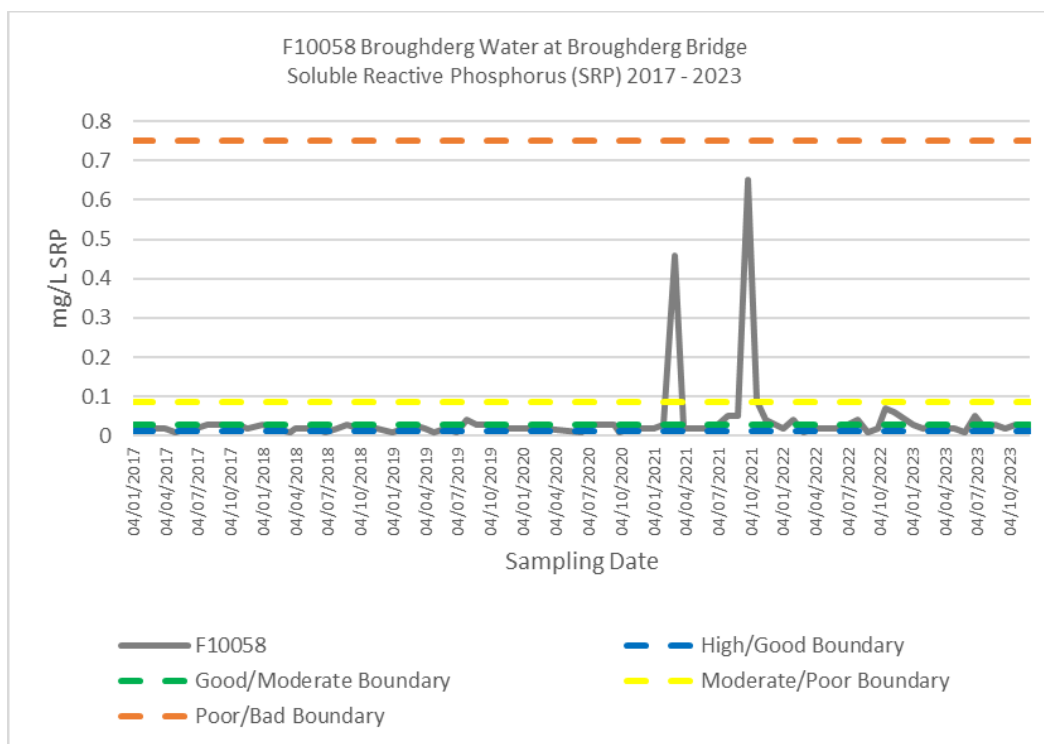


Figure 2. Soluble Reactive Phosphorus results measured between January 2017 and December 2023 at Broughderg Water at Broughderg Bridge

All other physicochemical, specific pollutant and biological elements have remained High or Good status. At an element level, macrophytes were assessed as High in 2015 declining to Good in 2018 and for the 2021 and 2024 classifications have returned to High. Conversely diatoms improved from Good in 2015 to High in 2018 and for the 2021 and 2024 classifications have returned to Good. Fish have improved to High status in 2021 and 2024 from Good in the 2015 and 2018 classifications.

The Owenkillev River at Monanameal Bridge and Broughderg Water at Broughderg Bridge are both monitored for suspended solids on a monthly basis. Using the Freshwater Fish Directive standards which are based on annual averages as a guideline, both stations passed both the 25mg/l standard and the more precautionary standard of 10mg/l between the seven years 2017 to 2023, inclusive.

The suspended solids annual average for Owenkillev River at Monanameal Bridge and Broughderg Water at Broughderg Bridge are presented in Table 5.

Monitoring Station Number	Monitoring Station Location	Suspended Solids Annual Average (mg/L)						
		2017	2018	2019	2020	2021	2022	2023
F10077	OWENKILLEW R AT MONANAMEAL BR	4.1	2.1	3.1	3.3	2.6	2.3	2.8
F10058	BROUGHDERG WATER AT BROUGHDERG BR	3.8	1.9	4.3	6.3	3.3	2.5	2.5

Table 5. Suspended solids annual averages for 2017 to 2023, inclusive at Owenkillev River at Monanameal Bridge and Broughderg Water at Broughderg Bridge.

Generally, levels of suspended solids have remained consistently low throughout the years 2017 to 2023, inclusive, but as shown in Figure 3 there have been a number of peaks at both stations. These may be attributable to a natural event such as heavy rainfall. As the two monitoring stations are not sampled on the same day a direct comparison of the data cannot be made.

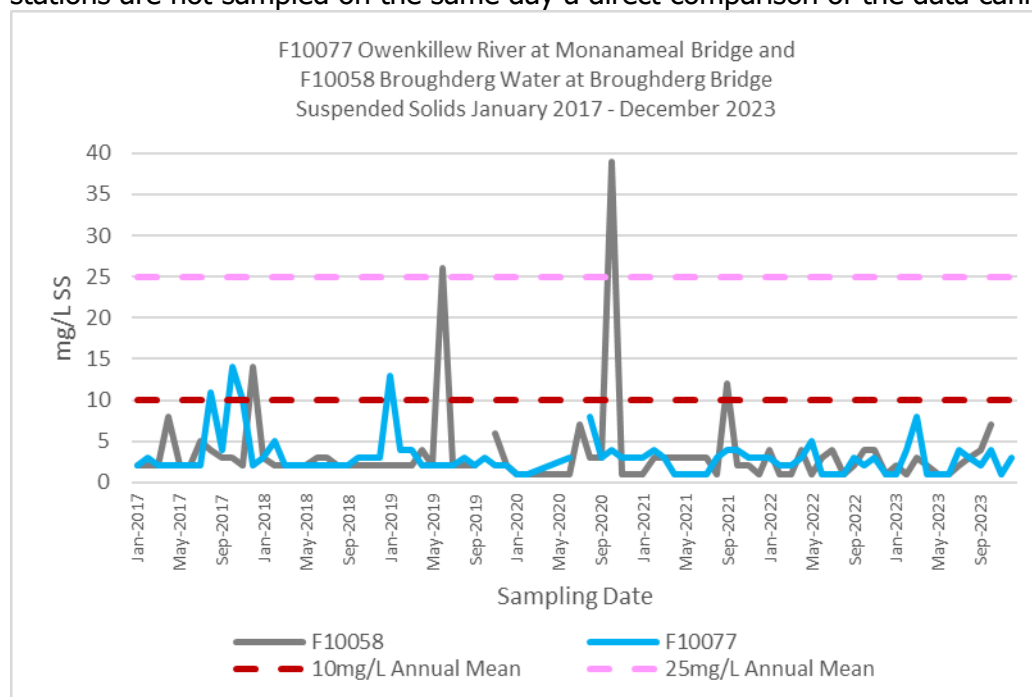


Figure 3. Suspended solids results measured between January 2017 and December 2023 at Owenkillev River at Monanameal Bridge and Broughderg Water at Broughderg Bridge

3.3 River water body GBNI1NW010102086 Glenlark River

The Glenlark River water body is located upstream of the proposed area for development. The river water body is classified using the monitoring station F10075 Glenlark River at Glenlark Bridge. The station is an operational WFD site.

The Glenlark River water body was classified as Good Ecological status in 2015 and 2018 but declined to Moderate Ecological status in the 2021 and 2024 classifications due to the specific pollutant dissolved iron as presented in Table 6.

Classification Year	Ecological Status	Driver for less than Good Ecological Status
2015	GOOD	n/a
2018	GOOD	n/a
2021	MODERATE	Dissolved Iron
2024	MODERATE	Dissolved Iron

Table 6. Ecological status of Glenlark River water body in 2015, 2018, 2021 and 2024.

Monitoring for metals, including dissolved iron, was carried out on a quarterly basis between 2015 and 2019, inclusive, before moving to a monthly monitoring frequency in January 2020. Dissolved iron status was not available for the 2015 classification. In 2018 dissolved iron was assessed as High status but deteriorated to Moderate for the 2021 and 2024 classifications as result of the 1000µg/l dissolved iron annual average environmental quality standard (AA-EQS) being consistently exceeded. NIEA will investigate these failures to determine if there are anthropogenic sources of dissolved iron in the Glenlark River water body.

All other physicochemical, specific pollutant and biological elements have remained High or Good status. At an element level, SRP deteriorated from High status in 2015 to Good in the 2018, 2021 and 2024 classifications. Macrophytes deteriorated from High status in 2015 to Good in the 2018 and 2021 classifications. For 2024 macrophytes have been recorded as "no data" due to the implementation of the alkalinity rule, ie, a diatom-based assessment alone will give a reliable classification if alkalinity is <75mg/L CaCO₃. Implementation of the rule means that for 2024 macrophytes have not been included in classification. Diatoms were assessed as Good status in 2015 improving to High in 2018 and for the 2021 and 2024 classifications have returned to Good status.

Since January 2020 monitoring station F10075 Glenlark River at Glenlark Bridge has been monitored for suspended solids on a monthly basis. Using the Freshwater Fish Directive standards which are based on annual averages as a guideline, the station passed the 25mg/l standard. The more precautionary standard of 10mg/l was exceeded in 2020 but has passed the standard in 2021, 2022 and 2023.

The Suspended Solids annual average is presented in Table 7 and the data collected during the four years 2020 to 2023 is shown in Figure 3.

Monitoring Station Number	Monitoring Station Location	Suspended Solids Annual Average (mg/l)			
		2020	2021	2022	2023
F10075	GLENLARK R AT GLENLARK BR	11.7	1.7	1.3	3.1

Table 7. Suspended solids annual average 2020 to 2023, inclusive, at Glenlark River at Glenlark Bridge.

Generally, levels of Suspended Solids remained consistently low throughout the four years 2020 to 2023 but as shown in Figure 4 there were two peaks detected in September 2020 and October 2023 which may be attributable to a natural event such as heavy rainfall.

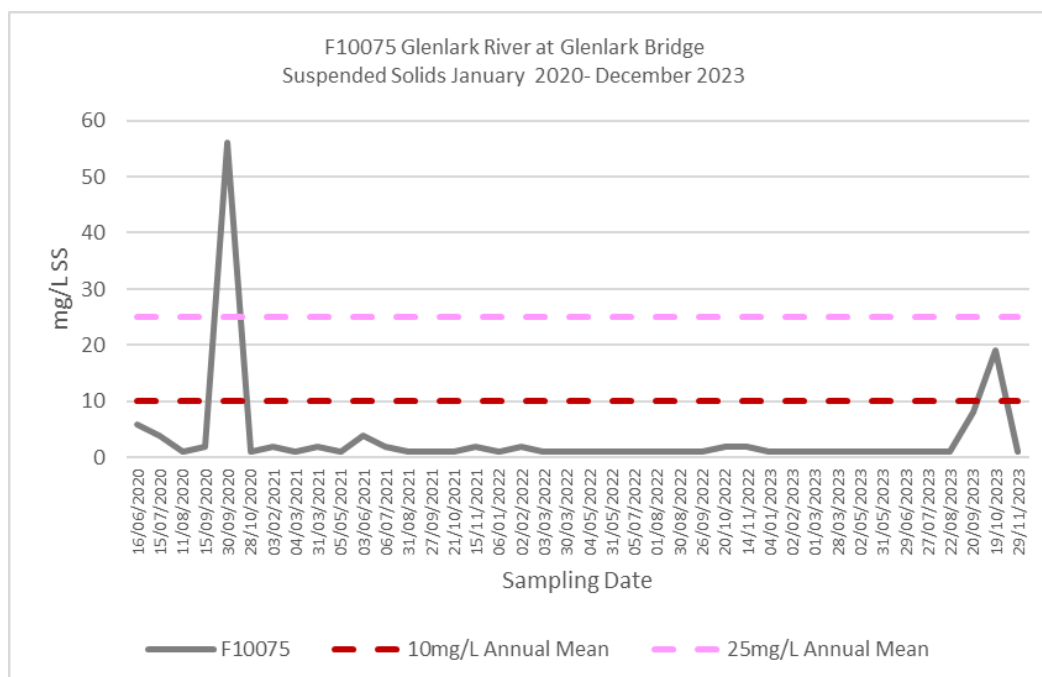


Figure 4. Suspended solids results measured between 2020 and 2023, inclusive, at Glenlark River at Glenlark Bridge

3.4 River water body GBNI1NW010102085 Coneyglen Burn

The Coneyglen Burn river water body is located upstream of the proposed area for development. The river water body is classified using the monitoring station F10076 Coneyglen Burn at Coneyglen Bridge.

The Coneyglen Burn water body has been classified as Moderate Ecological status in the 2015, 2018, 2021 and 2024 classifications. The drivers for less than Good status are presented in Table 8.

Classification Year	Ecological Status	Driver for less than Good Ecological Status
2015	MODERATE	Fish
2018	MODERATE	Dissolved Iron, Diazinon
2021	MODERATE	Dissolved Iron, Diazinon
2024	MODERATE	Dissolved Iron

Table 8. Ecological status of Coneyglen Burn water body in 2015, 2018, 2021 and 2024.

Fish was assessed as Moderate in the 2015 classification but since 2018 has been assessed as Good status.

The specific pollutant diazinon was not detected in monitoring that took place between September 2010 and August 2011 during the first river basin cycle. However, the second cycle monitoring which took place between July 2015 and June 2016, detected an exceedance of diazinon in this river water body resulting in the Moderate Ecological status for 2018 and 2021. The third cycle monitoring which took place between May 2022 and April 2023 at Coneyglen Burn at Coneyglen Bridge did not detect an exceedance of diazinon in this river water body.

Monitoring for metals, including dissolved iron, has been carried out on a monthly basis since January 2015. Dissolved iron status was not available for the 2015 classification. The Coneyglen Burn water body has been assessed as Moderate for dissolved iron for the 2018, 2021 and 2024 classifications as result of the 1000µg/l dissolved iron annual average environmental quality standard (AA-EQS) being consistently exceeded. NIEA are investigating these failures to determine if there are anthropogenic sources of dissolved iron in the Coneyglen Burn water body.

All other physico-chemical, specific pollutants and biological elements have remained High or Good status. At an element level macrophytes were assessed as High in 2015 declining to Good in 2018 and for the 2021 and 2024 classifications has returned to High status. Conversely diatoms improved from Good in 2015 to High in 2018 and for the 2021 and 2024 classifications have returned to Good. SRP deteriorated from High status in 2015 and 2018 to Good in the 2021 and 2024 classifications.

Suspended solids were monitored on a quarterly basis between 2017 and 2019, inclusive, before moving to a monthly monitoring frequency in January 2020. Using the Freshwater Fish Directive standards which are based on annual averages, as a guideline, the station passed the 25mg/l standard each of the years between 2017 and 2023, inclusive. The more precautionary standard of 10mg/l was also passed in all seven years. The Suspended Solids annual averages are presented in Table 9 and the measured data over the seven-year period between 2017 and 2023 are shown in Figure 5.

Monitoring Station Number	Monitoring Station Location	Suspended Solids Annual Average (mg/l)						
		2017	2018	2019	2020	2021	2022	2023
F10076	CONEYGLEN BURN AT CONEYGLEN BR	<2	5.0	3.8	5.5	2.5	2.0	3.5

Table 9. Suspended solids annual averages between 2017 and 2023, inclusive, at Coneyglen Burn at Coneyglen Bridge

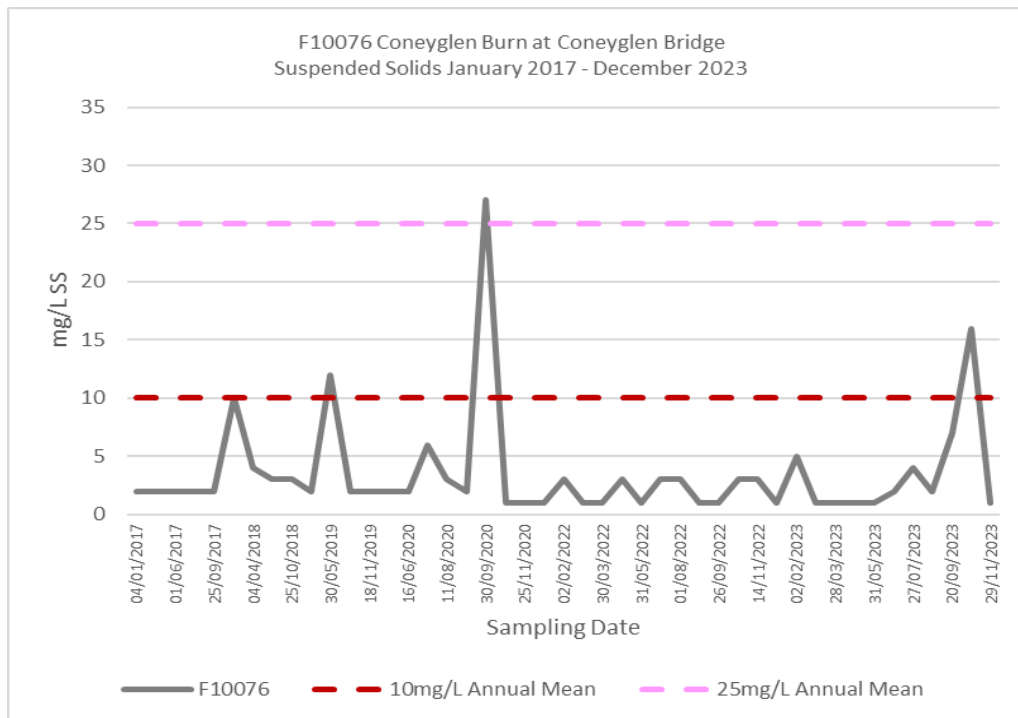


Figure 5. Suspended solids results measured between January 2017 and December 2023 at Coneyglen Burn at Coneyglen Bridge

Generally, levels of Suspended Solids remained consistently low throughout the seven-year period 2017 to 2023 but as shown in Figure 4 there were two peaks detected in September 2020 and October 2023 which may be attributable to a natural event such as heavy rainfall.

3.5 River Water Body GBNI1NW010104041 Owenreagh (East) River (Drumlea)

The Owenreagh (East) River (Drumlea) river water body is located downstream of the proposed area for development.

The river water body is classified using the monitoring station F10081 Owenreagh (East) River at Drumlea Bridge. The station is an operational WFD site. Throughout the 2015, 2018, 2021 and 2024 classifications the water body has been consistently classified as Good Ecological status with all physico-chemical, specific pollutant and biological elements consistently at High or Good status based on data collected up to the end of 2023.

At an element level, diatoms deteriorated from High status in 2015 and 2018 to Good in the 2021 and 2024 classifications and SRP deteriorated from High status in 2015 to Good in the 2018, 2021 and 2024 classifications. Macrophytes deteriorated from High status in 2015 to Good in the 2018 and 2021 classifications. For 2024 macrophytes have been recorded as “no data” due to the implementation of the alkalinity rule, ie, a diatom-based assessment alone will give a reliable classification if alkalinity is <75mg/L CaCO₃. Implementation of the rule means that for 2024 macrophytes have not been included classification.

Since January 2020 monitoring station F10081 Owenreagh (East) River at Drumlea Bridge has been monitored for suspended solids on a monthly basis. Using the Freshwater Fish Directive standards which are based on annual averages, as a guideline, the station passed the 25mg/l

standard each of the four years 2020 to 2023. The more precautionary standard of 10mg/l was exceeded in 2020.

The Suspended Solids annual average is presented in Table 10 and the data collected between January 2020 and December 2023 is shown in Figure 5.

Monitoring Station Number	Monitoring Station Location	Suspended Solids Annual Average (mg/l)			
		2020	2021	2022	2023
F10081	OWENREAGH (EAST) RIVER AT DRUMLEA BRIDGE	12.2	1.9	1.6	3.8

Table 10. Suspended solids annual average 2020 to 2023, inclusive, at Owenreagh (East) River at Drumlea Bridge.

Generally, levels of Suspended Solids remained consistently low throughout the four years 2020 to 2023 but as shown in Figure 6 two peaks have been detected in September 2020 and October 2023 which may be attributable to a natural event such as heavy rainfall.

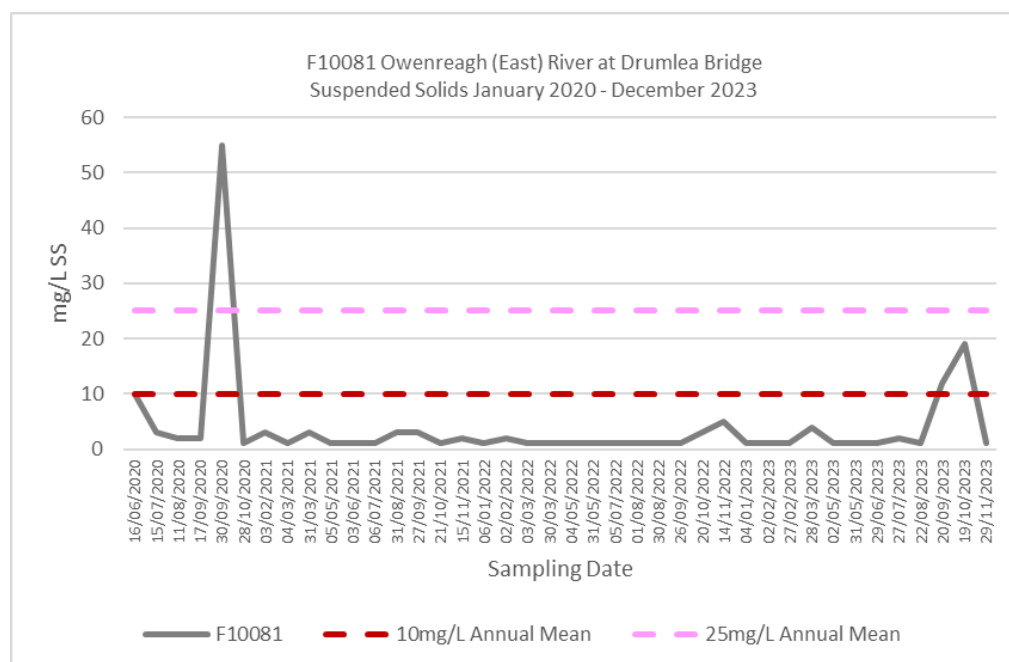


Figure 6. Suspended solids results measured between January 2020 and December 2023 at Owenreagh (East) River at Drumlea Bridge

3.6 GBNI1NW010102091 Owenreagh (East) River (Greencastle)

The Owenreagh (East) River (Greencastle) river water body is located upstream of the proposed area for development. The river water body is classified using the average of the results from the two river monitoring stations as identified in Table 11.

River Waterbody Number	Monitoring Station Number	Monitoring Station Location	WFD station type
GBNI1NW010102091	F11315	OWENREAGH RIVER AT FORMIL BRIDGE	Operational
GBNI1NW010102091	F10069	GLASHAGH BURN AT CASHEL WOOD	Operational

Table 11. Monitoring stations located within the Owenreagh (East) River (Greencastle) river water body.

Both Owenreagh River at Formil Bridge and Glashagh Burn at Cashel are WFD Operational stations. The Owenreagh (East) River (Greencastle) water body was classified as Good Ecological status in 2015 and Moderate Ecological status in 2018, 2021 and 2024. The drivers for less than Good status are provided in Table 12.

Classification Year	Ecological Status	Driver for less than Good Ecological Status
2015	GOOD	n/a
2018	MODERATE	SRP, Dissolved Iron
2021	MODERATE	SRP, Dissolved Iron
2024	MODERATE	SRP, Dissolved Iron

Table 12. Ecological status of Owenreagh (East) River (Greencastle) water body in 2015, 2018, 2021 and 2024.

Monitoring for metals, including dissolved iron, was carried out on a quarterly basis during 2015 before moving to a monthly monitoring frequency in January 2016 at both Owenreagh River at Formil Bridge and Glashagh Burn at Cashel Wood. Dissolved iron status was not available for the 2015 classification. For the 2018, 2021 and 2024 classifications, the 1000µg/l dissolved iron annual average environmental quality standard (AA-EQS) has consistently been exceeded resulting in the water body's Moderate status for dissolved iron. NIEA are investigating these failures to determine if there are anthropogenic sources of dissolved iron in the Owenreagh (East) River (Greencastle) river water body.

At an element level macroinvertebrates have improved to High in the 2021 and 2024 classifications from Good in 2015 and 2018. Macrophytes and diatoms were assessed as High status in 2015 and 2018 declining to Good in 2021 and have returned to High status in the 2024 classification. For 2024 macrophytes at F11315 have been recorded as "no data" due to the implementation of the alkalinity rule, ie, a diatom-based assessment alone will give a reliable classification if alkalinity is <75mg/L CaCO₃. Implementation of the rule means that for 2024 macrophytes have not been included the classification.

A review of the monitoring programme resulted in the monitoring of biology quality elements at F10069 Glashagh Burn being suspended. The station has been consistently at Good or better for biology elements across the classification periods. Chemistry elements continue to be monitored at the usual frequency.

SRP declined from High in 2015 to Good in the 2018, 2021 and 2024 classifications at the main channel station F11315 Owenreagh River at Formil Bridge and from Good in 2015 to Moderate in the 2018, 2021 and 2024 classifications at the tributary station F10069 Glashagh Burn at Cashel Wood. The deterioration from High to Good status at station F11315 and from Good to Moderate status at station F10069 has been due to a large number of results exceeding the High/Good and Good/Moderate boundaries respectively, set for these stations (see Figure 7).

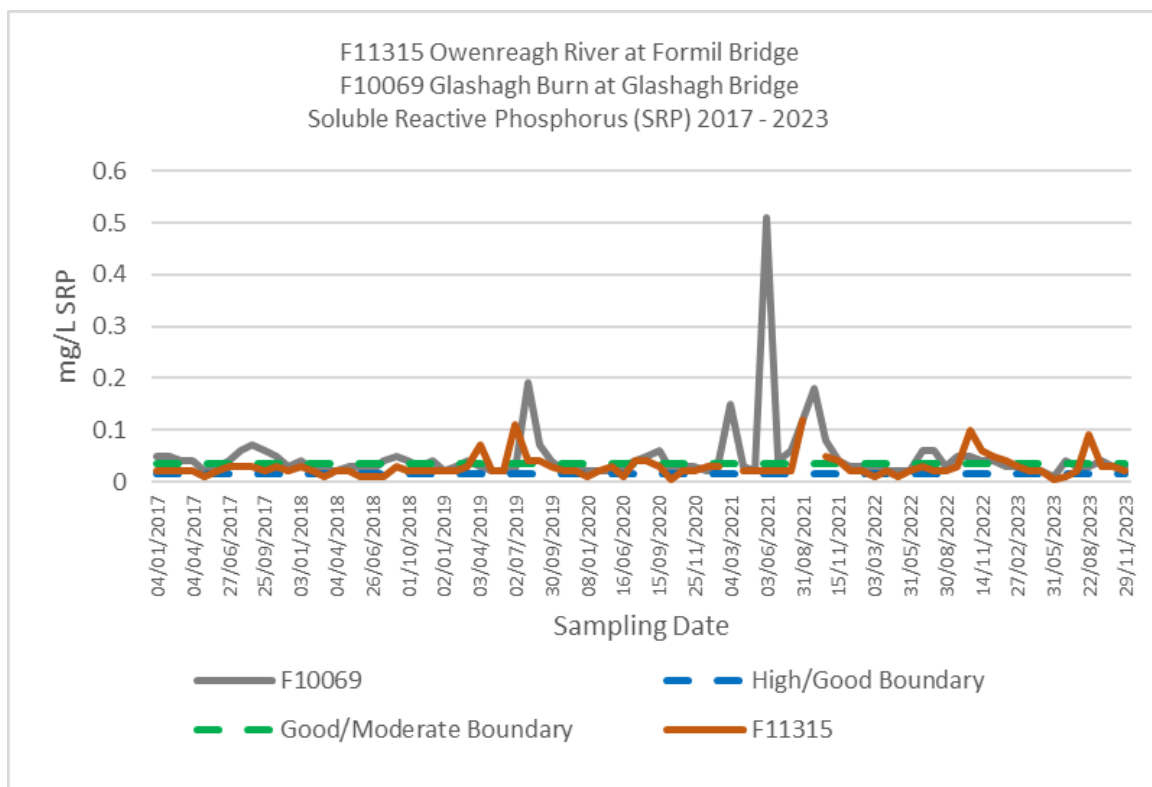


Figure 7. Soluble Reactive Phosphorus results measured between January 2017 and December 2023 at Owenreagh River at Formil Bridge and Glashagh Burn at Cashel Wood.

Owenreagh River at Formil Bridge and Glashagh Burn at Cashel are both monitored for suspended solids on a monthly basis. Using the Freshwater Fish Directive standards which are based on annual averages, as a guideline, both stations passed the 25mg/l standard in the seven years 2017 to 2023, inclusive. The more precautionary standard of 10mg/l was also passed in all seven years at both stations. The suspended solids annual average for Owenreagh River at Formil Bridge and Glashagh Burn at Cashel are presented in Table 13.

Monitoring Station Number	Monitoring Station Location	Suspended Solids Annual Average (mg/l)						
		2017	2018	2019	2020	2021	2022	2023
F11315	OWENREAGH RIVER AT FORMIL BRIDGE	8.0	2.0	2.2	2.1	4.5	3.0	2.8
F10069	GLASHAGH BURN AT CASHEL WOOD	<2	<2	4.9	6.9	2.0	1.7	2.3

Table 13. Suspended solids annual averages for the years 2017 to 2023, inclusive, at Owenreagh River at Formil Bridge and Glashagh Burn at Cashel.

Figure 8 presents the suspended solids measured at Owenreagh River at Formil Bridge and Glashagh Burn at Cashel Wood between the years 2017 and 2023, inclusive. With the exception of the two peaks measured at Glashagh Burn and one at Owenreagh River, which may be attributable to a natural event such as heavy rainfall, all other levels of suspended solids have remained consistently low throughout the seven-year period.

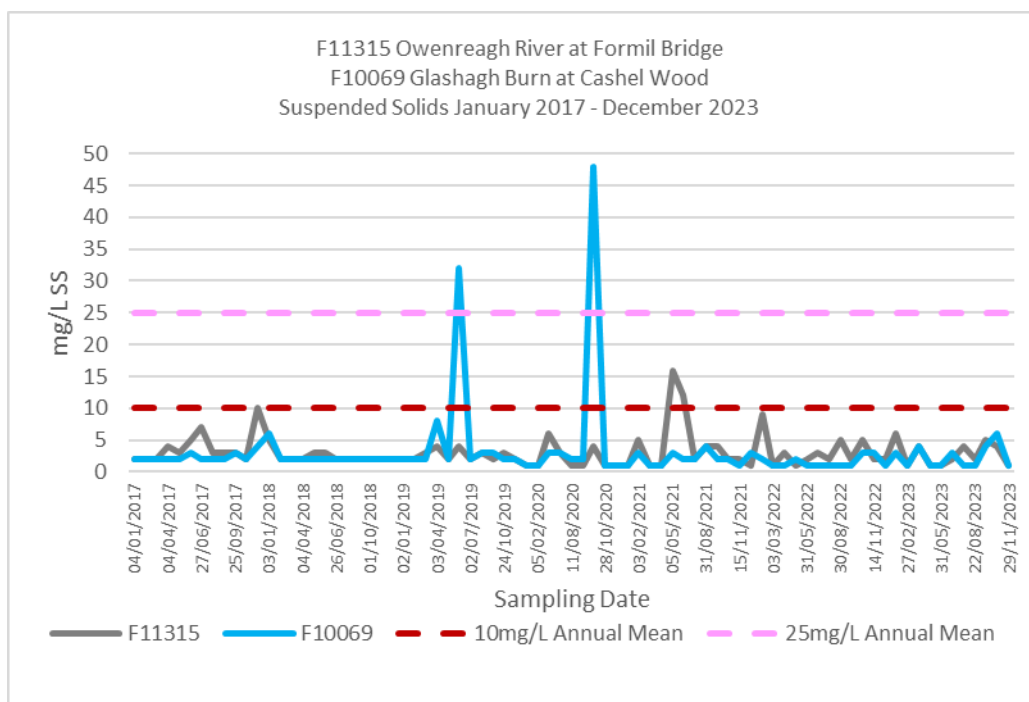


Figure 8. Suspended solids results measured between January 2017 and December 2023 at Owenreagh River at Formil Bridge and Glashagh Burn at Cashel Wood.

4. Chemical status of Owenkillev and Owenreagh water bodies

As explained in Section 1, to allow a comparison between the chemical status in 2015 and 2018 (uPBT substances were not monitored) and 2021 and 2024, the chemical status has been broken into three sub-groups:

- (a) chemical classification excluding both uPBT substances and cypermethrin – this subgroup can be compared with the chemical classification results from 2015 and 2018
- (b) chemical classification excluding uPBT substances
- (c) chemical classification including uPBT substances (extrapolated to all waterbodies)

Table 14 presents Chemical status in 2015, 2018, 2021 and 2024 for the Owenkillev and Owenreagh water bodies for sub-group (a) chemical classification excluding both excluding both uPBT substances and cypermethrin – this subgroup allows comparison of the 2021 and 2024 chemical classification with the chemical classification results from 2015 and 2018.

River Water Body Number	River Water Body Name	2015 Chemical status	2018 Chemical status	2021 Chemical status	2024 Chemical status
GBNI1NW010104043	Owenkillev River (Drumlea)	HIGH	HIGH	HIGH	HIGH
GBNI1NW010102025	Glenlark River	HIGH	HIGH	HIGH	HIGH
GBNI1NW010102085	Coneyglen River	HIGH	HIGH	HIGH	HIGH
GBNI1NW010102086	Owenkillev River (Glenhull)	HIGH	HIGH	HIGH	HIGH

River Water Body Number	River Water Body Name	2015 Chemical status	2018 Chemical status	2021 Chemical status	2024 Chemical status
GBNI1NW010104041	Owenreagh (East) River (Drumlea)	HIGH	HIGH	HIGH	HIGH
GBNI1NW010102091	Owenreagh (East) River (Greencastle)	HIGH	MODERATE (Dissolved Lead)	HIGH	HIGH

Table 14. Chemical status excluding both uPBT substances and cypermethrin in 2015, 2018, 2021 and 2024.

If uPBT substances and cypermethrin are excluded, all waterbodies were assessed as High Chemical status in the 2015, 2018, 2021 and 2024 classifications with the exception of the Owenreagh Greencastle River waterbody in the 2018 classification which was classified as Moderate Chemical status due to Dissolved Lead. Monitoring for metals, has been carried out on a monthly basis since January 2015. The exceedance of the dissolved lead Maximum Allowable Concentration environmental quality standard (MAC-EQS) was due to a single result and was likely caused by sample contamination. There have been no further exceedances of the MAC-EQS for dissolved lead.

Table 15 presents Chemical status in the 2024 classification for the Owenkillev and Owenreagh water bodies for sub-groups (b) chemical classification excluding uPBT substances and (c) chemical classification including uPBT substances (monitored data extrapolated to all waterbodies).

River Water Body Number	River Water Body Name	Chemical status 2024 excluding uPBT substances	Chemical status 2024 all failing substances including uPBT substances
GBNI1NW010104043	Owenkillev River (Drumlea)	HIGH	MODERATE (extrapolated uPBTs)
GBNI1NW010102025	Glenlark River	HIGH	MODERATE (extrapolated uPBTs)
GBNI1NW010102085	Coneyglen River	MODERATE (Cypermethrin)	MODERATE (Cypermethrin, extrapolated uPBTs)
GBNI1NW010102086	Owenkillev River (Glenhull)	MODERATE (Cypermethrin)	MODERATE (Cypermethrin, uPBTs)
GBNI1NW010104041	Owenreagh (East) River (Drumlea)	HIGH	MODERATE (extrapolated uPBTs)
GBNI1NW010102091	Owenreagh (East) River (Greencastle)	HIGH	MODERATE (extrapolated uPBTs)

Table 15. Chemical status in 2024 excluding uPBT substances and Chemical status including cypermethrin and uPBT substances

Monitoring of uPBTs was carried out at monitoring station F10077 Owenkillev River at Monanameal Bridge only located within river water body GBNI1NW010102086 Owenkillev River

(Glenhull). The uPBT substance benzo(a)pyrene was monitored in the water column and assessed as High status. The uPBT substances mercury and brominated diphenyl ethers were detected in biota collected during 2018 resulting in a Moderate assessment for Chemical status in the 2021 classification. The Moderate Chemical status due to uPBTs for the 2024 classification has been extrapolated to the remaining river water bodies presented in Table 15.

Since December 2018 Cypermethrin has been identified as a WFD Annex X Priority Substance with a more stringent standard. Cypermethrin was monitored between June 2017 and June 2018 and exceedances of this standard resulted in a Moderate Chemical status for the river water bodies GBNI1NW010102085 Coneyglen River and GBNI1NW010102086 Owenkillev River (Glenhull). The source of the cypermethrin in this water body will be investigated by NIEA.

4. Conclusion

There are two river water bodies downstream of the proposed mine development: Owenkillev River (Drumlea) and Owenreagh (East) River (Drumlea). Both river water bodies have been consistently assessed as Good Ecological status since 2015.

The remaining four river water bodies Coneyglen, Glenlark, Owenkillev (Glenhull) and Owenreagh (Greencastle) are upstream of the lands proposed for development.

Owenkillev (Glenhull) River and Coneyglen Burn have consistently been assessed as Moderate Ecological status due to the specific pollutant Dissolved Iron.

The Owenreagh (East) River (Greencastle) has declined from Good Ecological status in 2015 to Moderate in 2018, 2021 and 2024 due to SRP and Dissolved Iron.

Glenlark River has declined from Good Ecological status in 2015 and 2018 to Moderate in 2021 and 2024 due to Dissolved Iron.

While there are no standards set for Suspended Solids in the Water Framework Directive they are monitored monthly or quarterly at selected monitoring stations. Examination of the results for the stations show that all six water bodies passed the annual average guideline standard of 25mg/l in each year suspended solids were monitored.

WFD 2024 Chemical status assessments show that when failures due to Cypermethrin or uPBT substances are not included all six river water bodies are of High Chemical status.

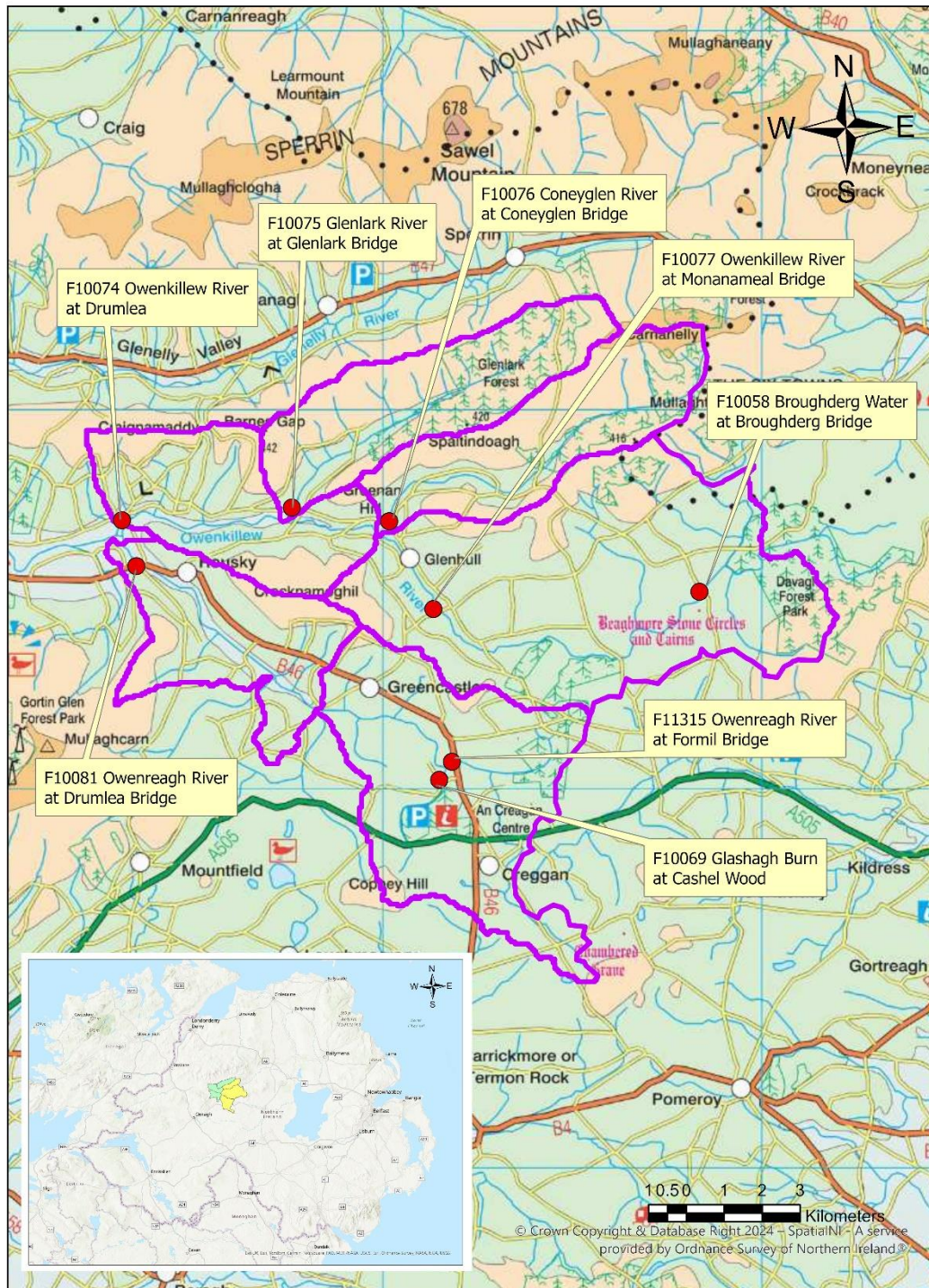
Cypermethrin was newly identified in December 2018 as an Annex X Priority Substance. Two river water bodies, Owenkillev River (Glenhull) and Coneyglen Burn, have been assessed as exceeding the cypermethrin standard.

GBNI1NW010102086 Owenkillev River (Glenhull) was the only one of the Owenreagh and Owenkillev waterbodies where biota monitoring was carried out and exceedances of the uPBTs mercury and brominated diphenyl ethers were found.

With the extrapolation of uPBTs all six river water bodies are assessed as Moderate Chemical status.

Appendix I

The locations of the monitoring stations are illustrated on Map 1. The location and Ecological Status in 2024 of the river water bodies are also presented.



Map 1: Locations of monitoring stations on the Owenkillew River and Owenreagh (East) River

Appendix II

WFD classification for each element at each station is presented in Tables 16 to 19.

Monitoring Station Number	F10074	F10077	F10058	F10075	F10076	F10081	F11315	F10069
Monitoring Station Name	OWENKILLEW RIVER AT DRUMLEA	OWENKILLEW RIVER AT MONANAMEAL BRIDGE	BROUGHDERG WATER AT BROUGHDERG BRIDGE	GLENLARK RIVER AT GLENLARK BRIDGE	CONYGLLEN BURN AT CONYGLLEN BRIDGE	OWENREAGH (EAST) RIVER AT DRUMLEA BRIDGE	OWENREAGH (EAST) RIVER AT FORMIL BRIDGE	GLASHAGH BURN AT CASHEL WOOD
River Water Body Number	GBNI1NW010104043	GBNI1NW010102086		GBNI1NW010102025	GBNI1NW010102085	GBNI1NW010104041	GBNI1NW010102091	
River Water Body Name	Owenkillew River (Drumlea)	Owenkillew River (Glenhull)		Glenlark River	Coneyglen Burn	Owenreagh (East) River (Drumlea)	Owenreagh (East) River (Greencastle)	
Irish Grid Reference	H532871	H614848	H684853	H576875	H603871	H535859	H619807	H615803
Macro-invertebrates	GOOD	HIGH	HIGH	GOOD	GOOD	HIGH	GOOD	HIGH
Macrophytes	GOOD	HIGH	HIGH	HIGH	HIGH	HIGH	GOOD	HIGH
Fish (river water body)	NO DATA	GOOD	GOOD	NO DATA	MODERATE	NO DATA	NO DATA	NO DATA
Diatoms	GOOD	GOOD	GOOD	GOOD	GOOD	HIGH	HIGH	HIGH
Final Biology	GOOD	GOOD	GOOD	GOOD	MODERATE	HIGH	GOOD	HIGH
Dissolved Oxygen Percent Saturation	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	GOOD	HIGH
Phosphorus (SRP)	HIGH	GOOD	GOOD	HIGH	HIGH	HIGH	HIGH	GOOD
pH	HIGH/GOOD	HIGH/GOOD	HIGH/GOOD	HIGH/GOOD	HIGH/GOOD	HIGH/GOOD	HIGH/GOOD	HIGH/GOOD
Final Physico-chemistry	HIGH	GOOD	GOOD	HIGH	HIGH	HIGH	GOOD	GOOD
Total Ammonia	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Other Specific Pollutants	HIGH	MODERATE	NO DATA	NO DATA	HIGH	HIGH	NO DATA	NO DATA
Final Specific Pollutants	HIGH	MODERATE	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Hydromorphology (river water body)	HIGH	GOOD	GOOD	HIGH	HIGH	GOOD	HIGH	HIGH
Final Ecology	GOOD	MODERATE	GOOD	GOOD	MODERATE	HIGH	GOOD	GOOD
Chemical Status	HIGH	HIGH	NO DATA	NO DATA	HIGH	HIGH	NO DATA	NO DATA
Overall Monitoring Station Status	GOOD	MODERATE	GOOD	GOOD	MODERATE	GOOD	GOOD	GOOD
For Regulatory Purposes - not used in Classification								
Biochemical Oxygen Demand	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Temperature	HIGH	GOOD	HIGH	HIGH	HIGH	HIGH	HIGH	NO DATA

Table 16. WFD classification 2015 (data collected up to year ending 2014). New WFD standards for 2015 applied.

Monitoring Station Number	F10074	F10077	F10058	F10075	F10076	F10081	F11315	F10069
Monitoring Station Name	OWENKILLEW RIVER AT DRUMLEA	OWENKILLEW RIVER AT MONANAMEAL BRIDGE	BROUGHDERG WATER AT BROUGHDERG BRIDGE	GLENLARK RIVER AT GLENLARK BRIDGE	CONYGLLEN BURN AT CONYGLLEN BRIDGE	OWENREAGH (EAST) RIVER AT DRUMLEA BRIDGE	OWENREAGH (EAST) RIVER AT FORMIL BRIDGE	GLASHAGH BURN AT CASHEL WOOD
River Water Body Number	GBNI1NW010104043	GBNI1NW010102086		GBNI1NW010102025	GBNI1NW010102085	GBNI1NW010104041	GBNI1NW010102091	
River Water Body Name	Owenkillev River (Drumlea)	Owenkillev River (Glenhull)		Glenlark River	Coneyglen Burn	Owenreagh (East) River (Drumlea)	Owenreagh (East) River (Greencastle)	
Irish Grid Reference	H532871	H614848	H684853	H576875	H603871	H535859	H619807	H615803
Macro-invertebrates	GOOD	HIGH	HIGH	GOOD OR BETTER	GOOD	GOOD OR BETTER	GOOD	HIGH
Macrophytes	GOOD	GOOD	GOOD	GOOD	GOOD	HIGH	HIGH	HIGH
Fish (river water body)	NO DATA	GOOD	NO DATA	NO DATA	GOOD	NO DATA	NO DATA	NO DATA
Diatoms	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	GOOD	HIGH
Final Biology	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	HIGH
Dissolved Oxygen Percent Saturation	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Phosphorus (SRP)	GOOD	GOOD	GOOD	GOOD	HIGH	GOOD	GOOD	MODERATE
pH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Final Physico-chemistry	GOOD	GOOD	GOOD	GOOD	HIGH	GOOD	GOOD	MODERATE
Total Ammonia	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Other Specific Pollutants	HIGH	MODERATE	MODERATE	HIGH	MODERATE	HIGH	HIGH	MODERATE
Final Specific Pollutants	HIGH	MODERATE	MODERATE	HIGH	MODERATE	HIGH	HIGH	MODERATE
Hydromorphology (river water body)	HIGH	MODERATE	MODERATE	HIGH	GOOD	GOOD	HIGH	HIGH
Final Ecology	GOOD	MODERATE	MODERATE	GOOD	MODERATE	GOOD	GOOD	MODERATE
Chemical Status	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	MODERATE	HIGH
Overall WFD Monitoring Station Status	GOOD	MODERATE	MODERATE	GOOD	MODERATE	GOOD	MODERATE	MODERATE
For Regulatory Purposes - not used in Classification								
Biochemical Oxygen Demand	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Temperature	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	NO DATA

Table 17. WFD classification 2018 (data collected up to year ending 2017).

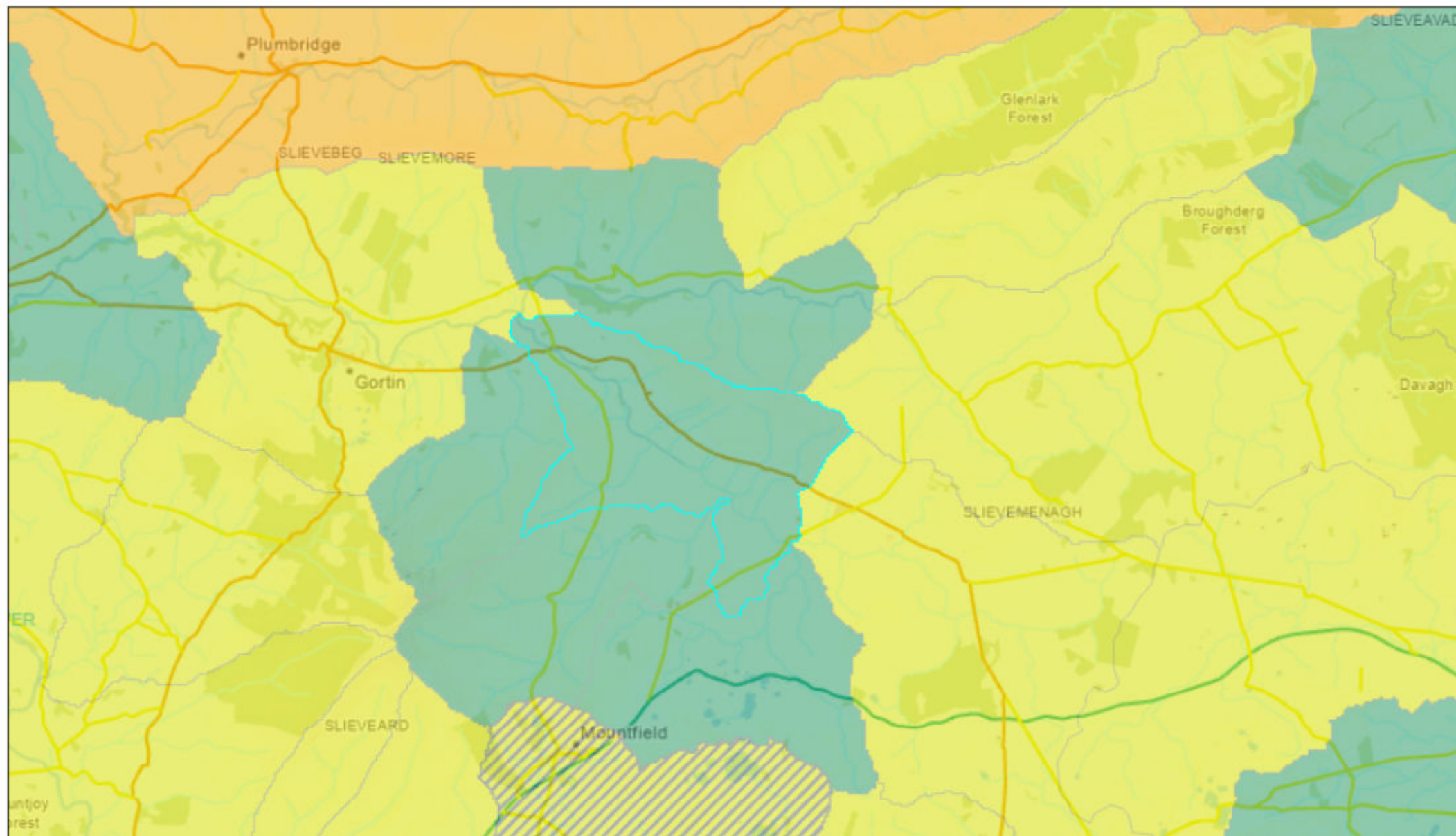
Monitoring Station Number	F10074	F10077	F10058	F10075	F10076	F10081	F11315	F10069
Monitoring Station Name	OWENKILLEW RIVER AT DRUMLEA	OWENKILLEW RIVER AT MONANAMEAL BRIDGE	BROUGHDERG WATER AT BROUGHDERG BRIDGE	GLENLARK RIVER AT GLENLARK BRIDGE	CONYGLLEN BURN AT CONYGLLEN BRIDGE	OWENREAGH (EAST) RIVER AT DRUMLEA BRIDGE	OWENREAGH (EAST) RIVER AT FORMIL BRIDGE	GLASHAGH BURN AT CASHEL WOOD
River Water Body Number	GBNI1NW010104043	GBNI1NW010102086		GBNI1NW010102025	GBNI1NW010102085	GBNI1NW010104041	GBNI1NW010102091	
River Water Body Name	Owenkillew River (Drumlea)	Owenkillew River (Glenhull)		Glenlark River	Coneyglen Burn	Owenreagh (East) River (Drumlea)	Owenreagh (East) River (Greencastle)	
Irish Grid Reference	H532871	H614848	H684853	H576875	H603871	H535859	H619807	H615803
Macro-invertebrates	HIGH	HIGH	HIGH	GOOD OR BETTER	GOOD	GOOD OR BETTER	HIGH	HIGH
Macrophytes	HIGH	HIGH	HIGH	GOOD	HIGH	HIGH	GOOD	GOOD
Fish	NO DATA	HIGH	HIGH	NO DATA	GOOD	NO DATA	NO DATA	NO DATA
Diatoms	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	HIGH	GOOD
Final Biology	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD
Dissolved Oxygen Percent Saturation	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Phosphorus (SRP)	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	MODERATE
pH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Final Physico-chemistry	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	MODERATE
Total Ammonia	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Other Specific Pollutants	HIGH	MODERATE	MODERATE	MODERATE	MODERATE	HIGH	HIGH	MODERATE
Final Specific Pollutants	HIGH	MODERATE	MODERATE	MODERATE	MODERATE	HIGH	HIGH	MODERATE
Hydromorphology (river waterbody)	HIGH	MODERATE	MODERATE	HIGH	HIGH	GOOD	HIGH	HIGH
Final Ecology	GOOD	MODERATE	MODERATE	MODERATE	MODERATE	GOOD	GOOD	MODERATE
Chemical Status (Not including uPBTs or Cypermethrin)	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Chemical Status (Not including uPBTs)	HIGH	MODERATE	HIGH	HIGH	MODERATE	HIGH	HIGH	HIGH
Chemical Status (Including uPBTs)	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE
Overall WFD Monitoring Station Status	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE
For Regulatory Purposes - not used in Classification								
Biochemical Oxygen Demand	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Temperature	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	NO DATA

Table 18. WFD classification 2021 (data collected up to year ending 2020).

Monitoring Station Number	F10074	F10077	F10058	F10075	F10076	F10081	F11315	F10069
Monitoring Station Name	OWENKILLEW RIVER AT DRUMLEA	OWENKILLEW RIVER AT MONANAMEAL BRIDGE	BROUGHDERG WATER AT BROUGHDERG BRIDGE	GLENLARK RIVER AT GLENLARK BRIDGE	CONYEGLLEN BURN AT CONYEGLLEN BRIDGE	OWENREAGH (EAST) RIVER AT DRUMLEA BRIDGE	OWENREAGH (EAST) RIVER AT FORMIL BRIDGE	GLASHAGH BURN AT CASHEL WOOD
River Waterbody Number	GBNI1NW010104043	GBNI1NW010102086		GBNI1NW010102025	GBNI1NW010102085	GBNI1NW010104041	GBNI1NW010102091	
Irish Grid Reference	H532871	H614848	H684853	H576875	H603871	H535859	H619807	H615803
Macro-invertebrates	HIGH	HIGH	NO DATA	GOOD OR BETTER	GOOD	GOOD OR BETTER	HIGH	NO DATA
Macrophytes	NO DATA	HIGH	NO DATA	NO DATA	HIGH	NO DATA	NO DATA	NO DATA
Fish	NO DATA	HIGH	NO DATA	NO DATA	GOOD	NO DATA	NO DATA	NO DATA
Diatoms	GOOD	GOOD	NO DATA	GOOD	GOOD	GOOD	HIGH	NO DATA
Final Biology	GOOD	GOOD	NO DATA	GOOD	GOOD	GOOD	GOOD	NO DATA
Dissolved Oxygen Percent Saturation	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Phosphorus (SRP)	GOOD	GOOD	MODERATE	GOOD	HIGH	HIGH	GOOD	MODERATE
pH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Final Physico-chemistry	GOOD	GOOD	MODERATE	GOOD	HIGH	HIGH	GOOD	MODERATE
Total Ammonia	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Other Specific Pollutants	HIGH	MODERATE	MODERATE	MODERATE	MODERATE	HIGH	HIGH	MODERATE
Final Specific Pollutants	HIGH	MODERATE	MODERATE	MODERATE	MODERATE	HIGH	HIGH	MODERATE
Hydromorphology (river waterbody)	HIGH	MODERATE	MODERATE	HIGH	HIGH	GOOD	HIGH	HIGH
Final Ecology	GOOD	MODERATE	MODERATE	MODERATE	MODERATE	GOOD	GOOD	MODERATE
Chemical Status (Not including uPBTs or Cypermethrin)	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Chemical Status (Not including uPBTs)	HIGH	MODERATE	HIGH	HIGH	MODERATE	HIGH	HIGH	HIGH
Chemical Status (Including uPBTs)	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE
Overall WFD Monitoring Station Status	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE
For Regulatory Purposes - not used in Classification								
Biochemical Oxygen Demand	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Temperature	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	NO DATA

Table 19. WFD classification 2024 (data collected up to year ending 2023)

NIEA Catchment Data Map Viewer



01/10/2025, 10:32:11

River Waterbodies Ecological Status 2021

GOOD
MODERATE

POOR
MEP

1:102,753
0 0.75 1.5 3 mi
0 1.25 2.5 5 km
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Ordnance Survey of Northern Ireland