

Fish in Rivers Factsheet

NBIRBD

River Dee Catchment

Factsheet: 2024/02

The River Dee is located within the Eastern River Basin District. The River Dee rises a few kilometres west of Kingscourt in County Cavan and flows in an easterly direction for approximately 60 km through County's Meath and Louth before meeting the White River and the River Glyde and entering the sea at the village of Annagassan. The Dee has three main tributaries, the Killary River that joins south of Drumconrath, Co. Meath, the Garra River which joins west of Ardee, Co. Louth and the White River which joins north of Dunleer, Co Louth.

Geology comprises mostly of limestone and calcareous shale in the upper catchment and greywacke and mudstone in the lower catchment (downstream of Ardee). The estuary at Annagassan falls within a Special

Area of Conservation (SAC) and a Special Protection Area (SPA) in Dundalk Bay (EPA, 2016).

Inland Fisheries Ireland conducts annual nation-wide fish sampling surveys to assess and report the status of stocks in Ireland's rivers, lakes and transitional waters. This report presents the results of an electro-fishing (CEN 2003) survey carried out in the Dee Catchment. Four sites were surveyed on the 8th of July and one site on the 26th of August 2024.

The survey methods included 10-minute timed Electro-Fishing (TEF₁₀), and Area Delineated Electro-Fishing (ADEF handset). All TEF₁₀ fish count results were converted to minimum population estimates according to Matson *et al.* 2018.



White River at Coneyburrow Bridge, Co. Louth (Site 5).



Iascach Iníre Éireann
Inland Fisheries Ireland



Figure 1. Location of electrofishing survey sites on the River Dee Catchment, 2024. Sub-catchments and WFD River Sub-basins are also highlighted.

Table 1. Site survey details, River Dee Catchment, 2024.

No.	WFD Sub-basin	River	Site	Method	WFD	Date
Dee sub-catchment						
1	Dee_040	Dee	Nobber	TEF (Handset)	No	08/07/2024
2	Dee_050	Dee	Burley Bridge	ADEF (Handset)	Yes	08/07/2024
3	Dee_090	Dee	Drumcar Bridge	ADEF (Handset)	No	08/07/2024
White sub-catchment						
4	White (Louth)_010	White	Martinstown Wood	TEF (Handset)	No	08/07/2024
5	White (Louth)_030	White	Coneyburrow Bridge	ADEF (Handset)	Yes	26/08/2024

Table 2. Minimum density estimates of fish (no. fish/m²), River Dee Catchment, July 2024 (previous results are shown where applicable).

Site no.	Dee									
	1	2			3					
Species	2024	2009	2014	2024	2013	2014	2015	2021	2024	
Brown trout	0.012	0.011	0.015	0.039	0.006	0.002	0.012	0.022	0.003	
0+ brown trout	0.012	-	-	0.003	0.002	-	0.012	0.006	-	
1+ & older brown trout	-	0.011	0.015	0.036	0.004	0.002	-	0.016	0.003	
Salmon	-	0.004	0.001	0.003	0.080	0.056	0.058	0.008	0.060	
0+ salmon	-	0.001	0.001	0.003	0.050	0.050	0.050	-	0.060	
1+ & older salmon	-	0.003	-	-	0.030	0.006	0.008	0.008	-	
European eel	-	0.001	-	-	0.038	0.012	0.038	0.018	0.081	
Flounder	-	-	-	-	0.002	-	0.002	0.006	-	
Gudgeon	-	0.002	-	0.003	-	-	-	-	-	
Lamprey sp.	-	-	-	0.003	0.002	-	0.002	-	0.005	
Minnow	-	0.002	0.018	0.080	1.062	0.088	0.050	0.071	0.157	
Nine-spined stickleback	-	-	-	-	-	0.002	-	-	-	
Perch	-	-	-	0.003	-	-	-	-	-	
Roach	0.014	0.010	0.009	-	-	-	-	-	-	
Sea trout	-	-	-	0.003	-	-	-	-	-	
Stone loach	-	0.003	-	0.023	0.088	0.032	0.022	0.051	0.108	
Three-spined stickleback	0.021	0.016	-	0.033	0.108	-	0.002	0.004	0.005	
All fish	0.046	0.050	0.043	0.188	1.386	0.192	0.187	0.180	0.420	
White										
Site no.	4				5					
Species	2016	2024	2012	2013	2014	2015	2016	2017	2021	2024
Brown trout	-	0.018	0.123	0.010	0.011	0.155	0.057	0.047	0.019	0.036
0+ brown trout	-	0.018	0.087	0.003	0.006	0.142	0.006	0.024	0.010	-
1+ & older brown trout	-	-	0.036	0.007	0.006	0.013	0.051	0.024	0.010	0.036
Salmon	-	-	0.025	0.014	0.003	0.019	0.006	0.024	0.003	0.018
0+ salmon	-	-	0.022	0.010	0.003	0.016	0.006	0.017	0.003	0.014
1+ & older salmon	-	-	0.003	0.003	-	0.003	-	0.007	-	0.004
European eel	-	-	0.003	0.007	-	-	-	-	-	0.004
Lamprey sp.	-	-	0.008	-	0.011	0.006	0.003	0.007	-	0.004
Minnow	0.032	0.234	0.081	0.215	0.386	0.488	0.113	0.304	0.618	0.952
Stone loach	0.021	-	0.006	0.160	0.059	0.065	0.026	0.017	0.129	0.111
Three-spined stickleback	0.032	-	0.008	1.760	0.112	0.245	0.045	0.162	0.142	0.180
All fish	0.084	0.252	0.254	2.166	0.581	0.979	0.249	0.560	0.912	1.305

Table 3. Salmonid % age class structure (where recorded), River Dee Catchment, July 2024.

Species	Site No.	% of catch			
		0+	1+	2+	3+
Brown trout	1	100	-	-	-
	2	4	63	33	-
	3	-	-	100	-
	4	100	-	-	-
	5	-	42	41	17
Salmon	2	100	-	-	-
	3	100	-	-	-
	5	80	20	-	-

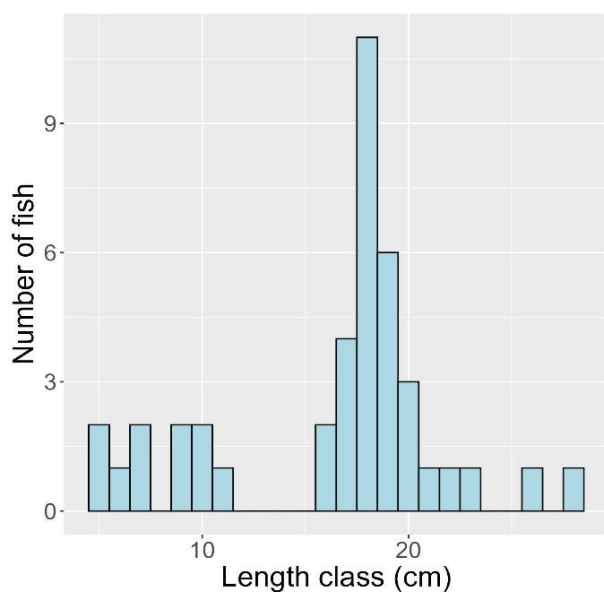


Figure 2. Length frequency distribution for brown trout (n = 41), River Dee Catchment, 2024 (No. sites = 5).

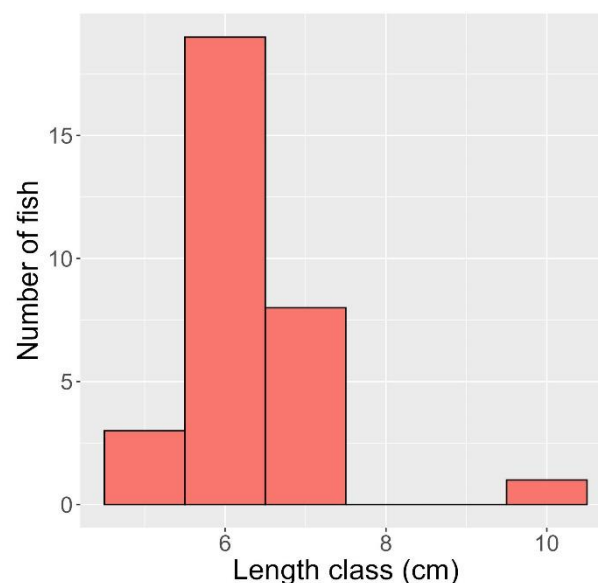


Figure 3. Length frequency distribution for salmon (n = 31), River Dee Catchment, 2024 (No. sites = 3).

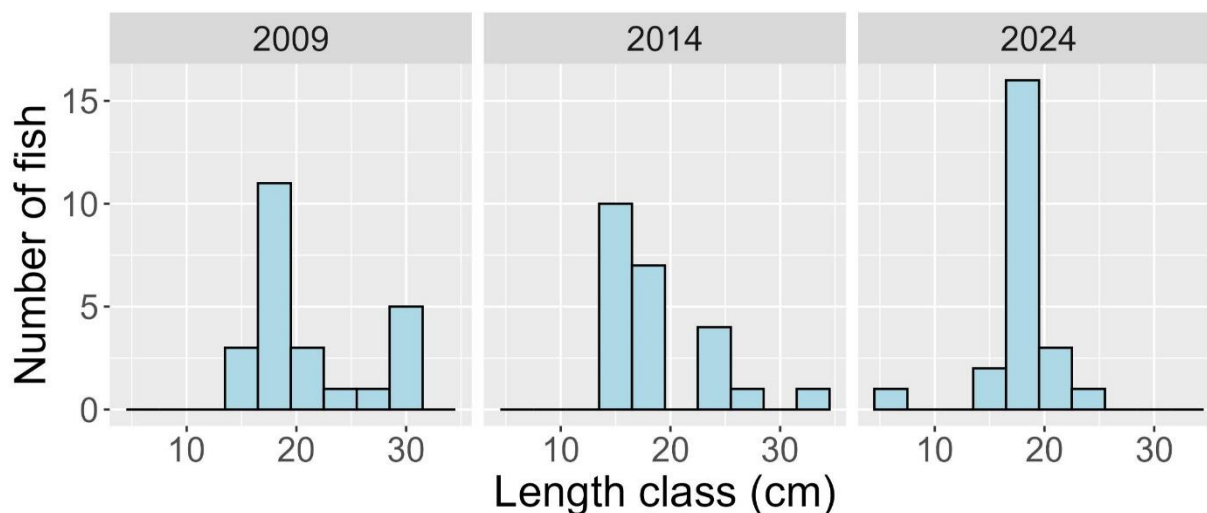


Figure 4. Length frequency distribution of brown trout (2009 n= 24, 2014 n=23, 2024 n=24) at Burley Bridge (Site 2), a WFD surveillance monitoring site, on the River Dee.

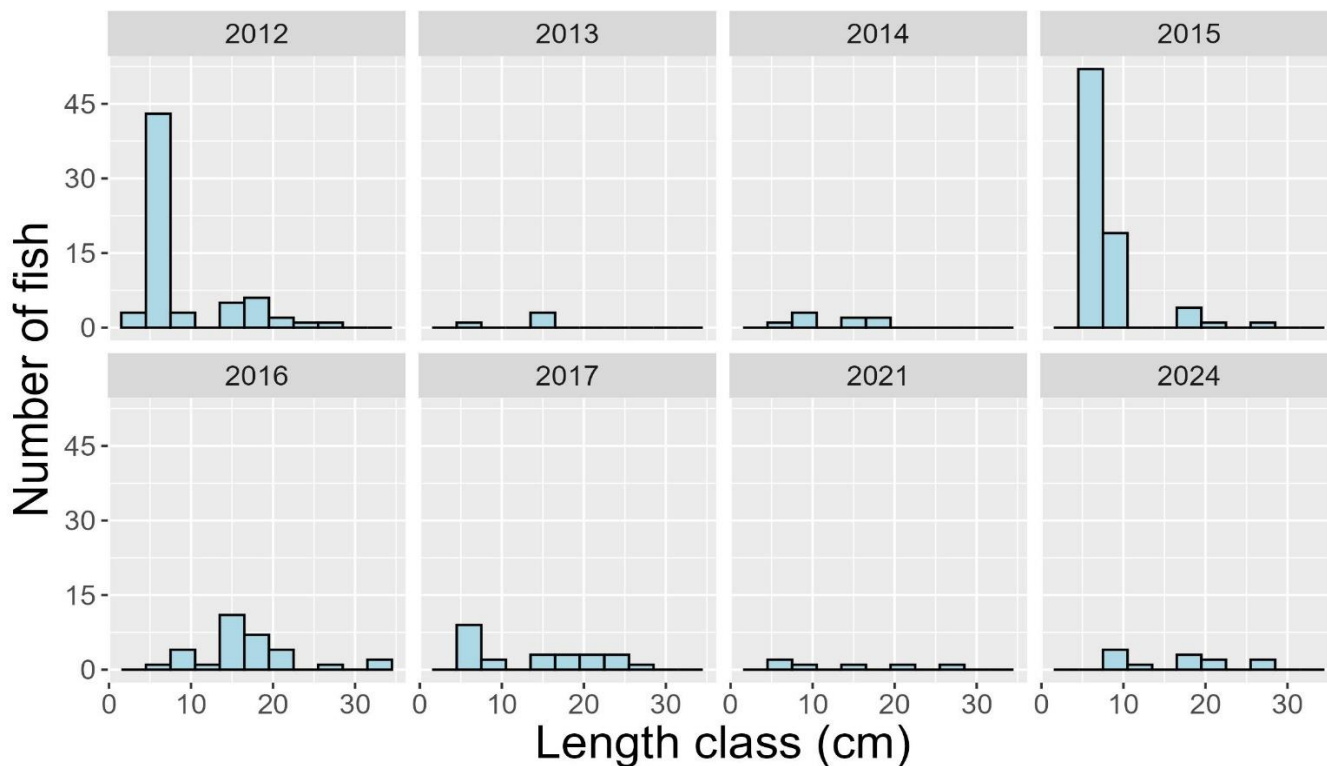


Figure 5. Length frequency distribution of brown trout, (2012 n= 64, 2013 n= 4, 2014 n= 8, 2015 n= 77, 2016 n= 31, 2017 n= 24, 2021 n=6, 2024 n=12) at Coneyburrow Bridge (Site 5), a WFD surveillance monitoring site, on the White River, in the River Dee Catchment.

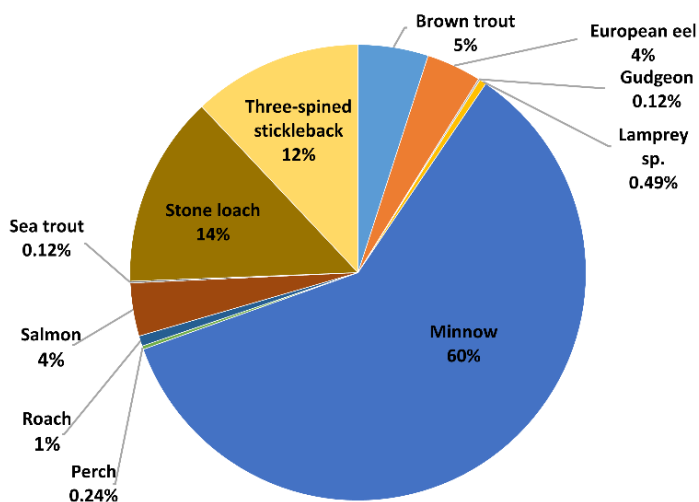
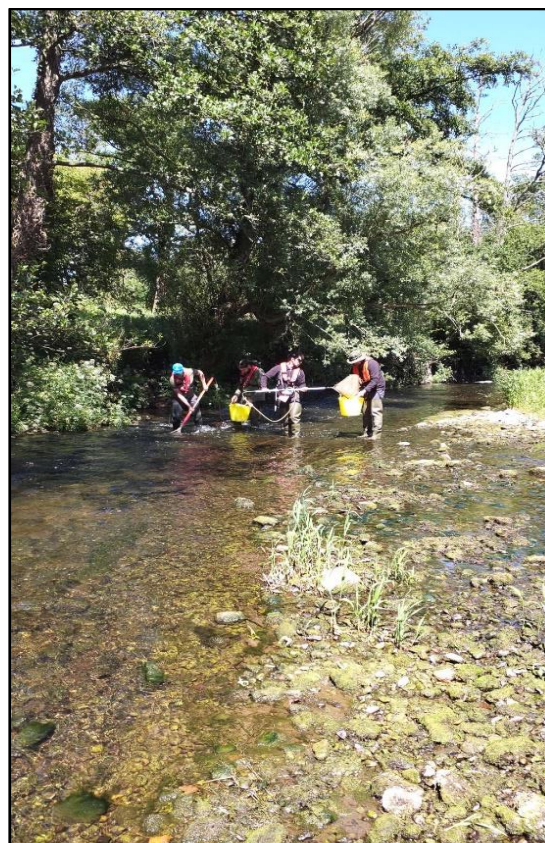


Figure 6. Fish species composition (%), River Dee Catchment, 2024.



Electrofishing on the River Dee at Drumcar Bridge, Co. Louth (Site 3).

Table 4. Fish ecological status, River Dee Catchment, July to August 2024.

Site no.	2009	2012	2013	2014	2015	2016	2017	2021	2024
Dee sub-catchment									
1	-	-	-	-	-	-	-	-	P
2	M	-	-	M	-	-	-	M	M
3	-	-	M	M	M	-	-	M	M
White sub-catchment									
4	-	-	-	-	-	P	-	-	P
5	-	M	P	P	M	M	M	P	M

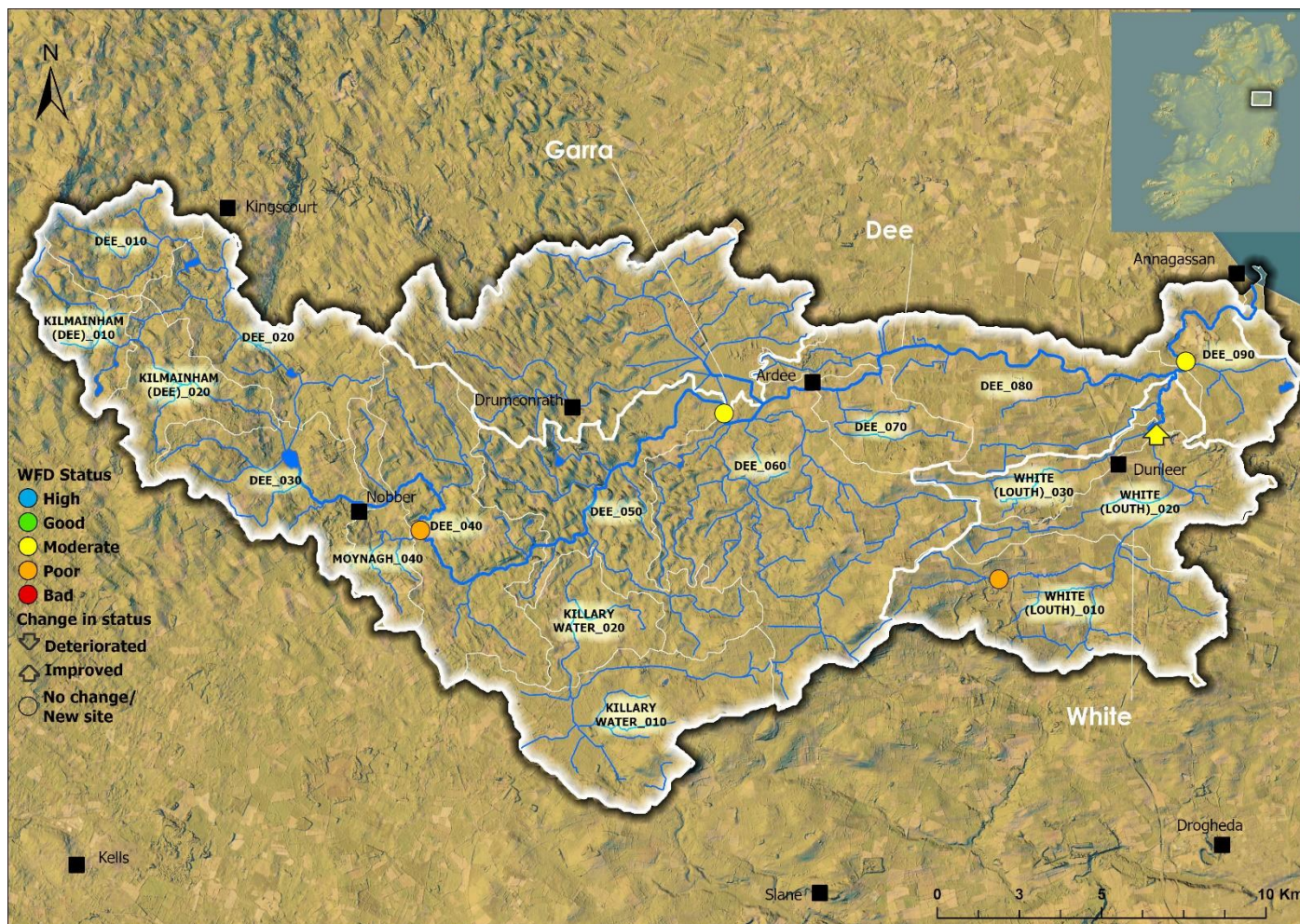


Figure 7. Fish ecological status in the River Dee Catchment, July to August 2024. Arrows indicate a change in status since previous surveys (where applicable).

Summary

Ten fish species and sea trout, a separate 'variety' of trout, were captured at five sites surveyed in the Dee Catchment in 2024.

Brown trout was the most common species present (five sites, 100%), followed by minnow and three-spined stickleback (four sites each, 80%), salmon, lamprey sp. and stone loach (three sites each, 60%), European eel (two sites, 40%), gudgeon, perch, roach and sea trout (one site each, 20%).

Minnow was the most abundant species recorded, followed by stone loach, three-spined stickleback, brown trout, European eel, salmon, roach, lamprey sp., perch, gudgeon and sea trout.

Brown trout ranged in length from 5.2 to 28.5cm. Four age classes were present (0+, 1+, 2+ and 3+), with 1+ being the most abundant cohort. The highest density of brown trout (all ages combined) (0.039 fish/m²) was recorded at Site 2 (Burley Bridge) on the River Dee. The highest density of 0+ brown trout (0.018 fish/m²) was recorded at Site 4 (Martinstown Wood) in the White River. The highest densities of 1+ and older brown trout (0.036 fish/m²) were recorded at Site 2 (Burley Bridge) and at Site 4 (Martinstown Wood).

Salmon ranged in length from 5.3 to 10.5cm. Two age classes were present (0+ and 1+), with 0+ being the most abundant cohort. The highest density of salmon (all ages combined) (0.060 fish/m²) was recorded at Site 3 (Bridge at Drumcar) in the River Dee. The highest density of 0+ salmon (0.060 fish/m²) was also recorded at Site 3. The highest density of 1+ and older salmon (0.004 fish/m²) was recorded at Site 5 (Coneyburrow Bridge) in the White River.

A Water Framework Directive fish classification tool (FCS2) was developed for Irish rivers in 2011 (SNIFFER 2011). The tool works by comparing various fish community metric values within a site to those predicted for a site under un-impacted conditions. In general, a site will achieve High status if all indicator species (e.g. both salmonid cohorts 0+ and 1+ and older) are present and in expected numbers. Status will decline if such cohorts are missing, are in poor abundance, or if more tolerant species proliferate.

Fish ecological status was assigned to five sites surveyed in the River Dee Catchment during 2024 (Table 4 and Figure 7). Three sites were assigned Moderate status and two sites assigned Poor. Four sites were surveyed previously on this catchment and assigned fish ecological status. When compared with their most recent previous surveys, one site improved (Site 5) and three sites were unchanged (Table 4).

The reasons for the failures (i.e. moderate status) in fish ecological status were due to lower-than-expected abundance of type specific indicator species (e.g., salmon and trout), absence of certain age cohorts indicating recruitment failures. Failures and deteriorations in fish ecological status can be caused by pressures such as nutrient enrichment, habitat modification and fish passage issues.

References

- CEN (2003) Water Quality Sampling of Fish with Electricity. CEN EN 14011:2000. Brussels. European Committee for Standardization.
- Matson, R., Delanty, K., Shephard, S., Coghlan, B. and Kelly, F. (2018). *Moving from multiple pass depletion to single pass timed electrofishing for fish community assessment in wadeable streams*. Fisheries Research, 198, 99-108.

SNIFFER (2011) River Fish Classification Tool: Science Work. WFD68c, Phase 2. Final Report. Version 6. Edinburgh. Scotland and Northern Ireland Forum for Environmental Research.

EPA (2016) <https://gis.epa.ie/EPAMaps/WaterCatchments.ie> – Catchments.ie Accessed in March/April 2025.

Inland Fisheries Ireland: 3044 Lake Drive, Citywest Business Campus, Dublin, D24 Y265, Ireland

CITATION: Corcoran, W., Gordon, P., McCarthy, E., Flynn, E., O Brian, M., Szocs, A., Robson, S., Piaskowy, J., and Kelly, F.L., (2025) Sampling Fish in Rivers 2024 – Dee River Catchment, Factsheet No. 2. National Research Survey Programme. Inland Fisheries Ireland.

The report includes Tailte Éireann data reproduced under Tailte Éireann Copyright Permit: CYAL50441756 © Tailte Éireann.



Iascach Iníre Éireann
Inland Fisheries Ireland