

Fish in Rivers Factsheet

SWRBD

Blackwater (Munster) River Catchment

Factsheet: 2025/14

The River Blackwater Catchment is located within the South-Western River Basin District and covers an area of approximately 3,310 km² extending over Counties Cork, Kerry, Limerick and Waterford.

The River Blackwater rises in the Mullaghareirk Mountains, bordering County Cork and County Kerry. The river flows in a southerly direction, being joined by the Cullavaw and Owentaraglin Rivers around Rathmore, before flowing east to Banteer. In Banteer the River Blackwater is joined by the Allow and Glen rivers flowing from the north and south. The Awbeg and Clydagh rivers join the Blackwater before passing through Mallow and Fermoy. Downstream of Fermoy, the Funshion, Araglin and Owennashad join the Blackwater as the river continues towards Lismore Co. Waterford.

At Cappoquin in Co. Waterford, the River Blackwater turns sharply southwards, widening and becoming tidal. Several tributaries join the river downstream of Cappoquin, including the Finisk, Geosh, Bride, Licky,

Glendine, and Tourig rivers. After flowing for approximately 170 km, the River Blackwater enters the Celtic Sea at Youghal Harbour.

This report presents the results of an electro-fishing (CEN 2003) survey, carried out across the River Allow sub-catchment (n=7) and at four WFD surveillance monitoring sites (n=4) on the Blackwater River Catchment in 2025. The River Allow was surveyed as part of an IFI investigation into the impacts of a fish kill which occurred on the River Allow following a discharge from the Freemount water treatment plant on June 9th 2024. Two sites (Sites 2 and 3) were surveyed immediately upstream and downstream of the site of the fish kill.

The survey methods included 10-minute timed Electro-Fishing (TEF₁₀), and Area Delineated Electro-Fishing (ADEF handset). TEF₁₀ fish count results were converted to minimum population estimates according to Matson *et al.* (2018). Due to adverse weather conditions, complete surveys were not possible at all sites. In their place, spot surveys were carried out.

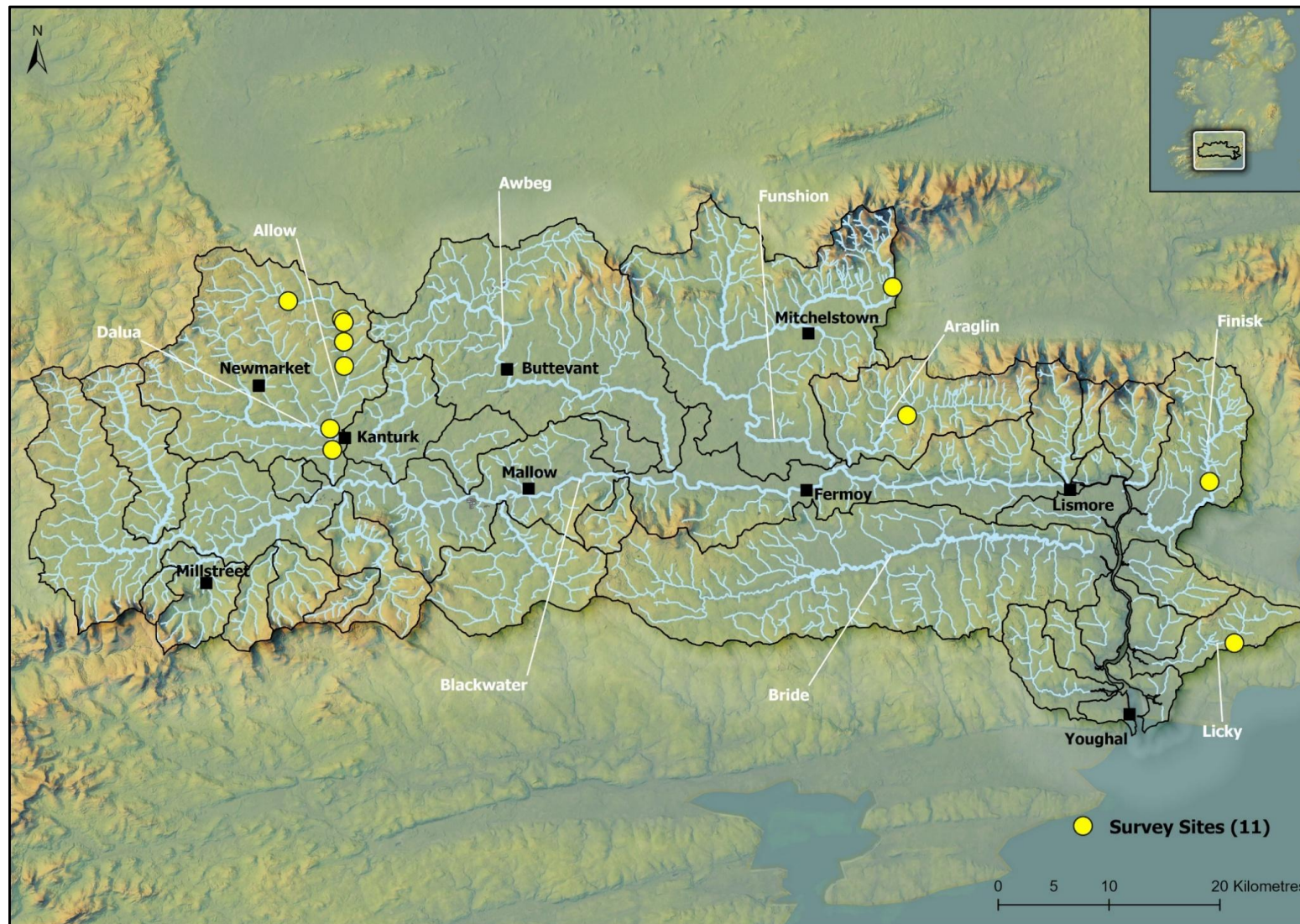


Figure 1. Location of electrofishing survey sites on the Blackwater (Munster) River Catchment, September 2025.

Allow River Sub-catchment

Seven sites were surveyed in the Allow River sub-catchment in 2025. This included two sites upstream of Freemount water treatment plant (Sites 1 & 2) and five sites downstream of Freemount water treatment plant (Sites 3, 4, 5, 6 and 7) (Figure 2 and Table 1).

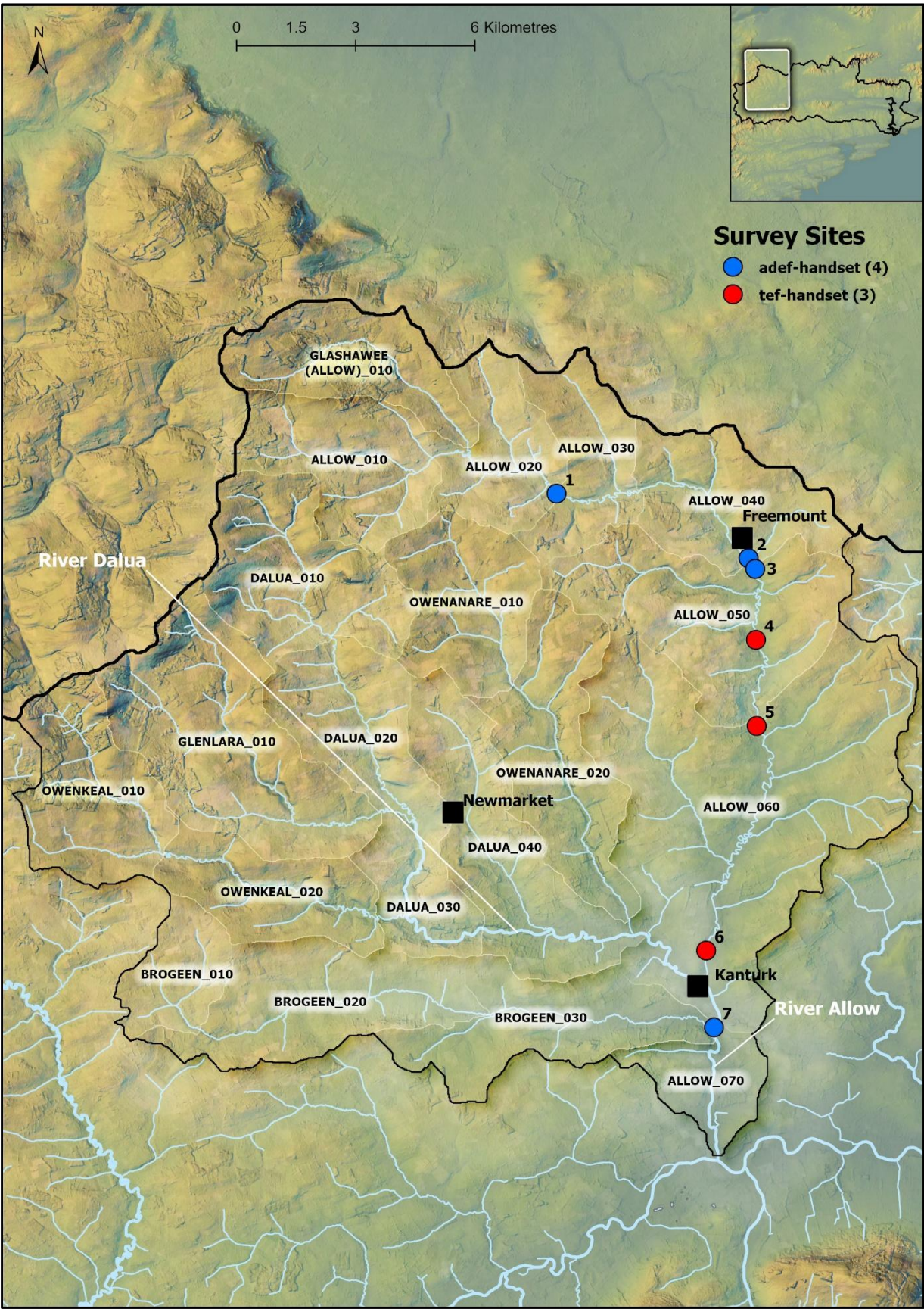


Figure 2. Location of electrofishing survey sites on the Allow River sub-catchment, September 2025.

Table 1. Site survey details, Allow River sub-catchment, September 2025.

No.	WFD Sub-basin	River	Site	Method	SPOT	Date
Allow River sub-catchment						
1	Allow_020	Allow River	u/s Ballynaguilla Bridge	ADEF (Handset)	Yes	24/09/2025
2	Allow_040	Allow River	u/s Freemount WTP	ADEF (Handset)	NO	24/09/2025
3	Allow_050	Allow River	d/s Freemount WTP	ADEF (Handset)	NO	24/09/2025
4	Allow_050	Allow River	Bridge 2km u/s Johnsbridge	TEF (Handset)	Yes	24/09/2025
5	Allow_060	Allow River	100m d/s Johnsbridge	TEF (Handset)	Yes	24/09/2025
6	Allow_060	Allow River	1km u/s Bridge at Kanturk	TEF (Handset)	Yes	25/09/2025
7	Allow_060	Allow River	1.2km d/s Bridge at Kanturk	ADEF (Handset)	Yes	25/09/2025

Table 2. Minimum density estimates of fish (no. fish/m²), Allow River sub-catchment, September 2025 (previous results are shown where applicable).

Allow River sub-catchment							
Site no.	1	2	3	4	5	6	7
Species	2025	2025	2025	2025	2025	2025	2025
Brown trout	P	0.042	0.043	P	P	P	-
0+ brown trout	P	0.015	0.009	P	P	P	-
1+ & older brown trout	P	0.027	0.034	-	P	P	-
Salmon	P	0.062	0.034	P	P	P	P
0+ salmon	P	0.054	0.021	P	P	P	P
1+ & older salmon	P	0.009	0.013	P	P	P	P
Dace	-	-	-	-	-	-	P
European eel	-	0.003	0.004	-	-	-	P
Lamprey sp.	-	-	-	-	-	-	-
Minnow	-	0.015	0.013	-	-	P	P
Stone loach	P	0.012	0.030	P	P	P	P
Three-spined stickleback	-	-	0.004	-	-	-	-
All fish	SPOT*	0.134	0.128	SPOT*	SPOT*	SPOT*	SPOT*

*SPOT surveys were carried out where due to adverse weather and instream conditions, a full electrofishing survey was not possible. Results are not comparable to full survey and are included as a guide to indicate species presence or absence.
P=present.



Allow River, upstream of Freemount Water Treatment Plant (Site 2), Co Cork.



Electrofishing on the Allow River, downstream of Freemount Water Treatment Plant (Site 3), Co Cork.

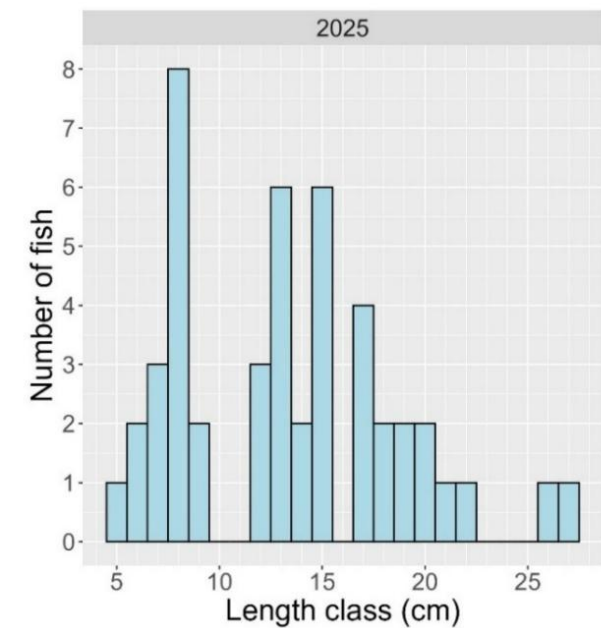


Figure 3. Length frequency distribution for brown trout (n = 47), Allow River sub-catchment, 2025 (No. sites =6).

Table 3. Salmonid % age class structure (where recorded), River Allow sub-catchment, September 2025.

Species	Site No.	% of catch				
		0+	1+	2+	3+	4+
Allow sub-catchment						
Brown trout	1	25	25	50	-	-
	2	36	28	36	-	-
	3	10	30	60	-	-
	4	100	-	-	-	-
	5	34	-	33	-	33
	6	33	20	40	-	7
	7	-	-	-	-	-
Salmon	1	90	10	-	-	-
	2	86	14	-	-	-
	3	63	37	-	-	-
	4	67	33	-	-	-
	5	72	28	-	-	-
	6	69	28	3	-	-
	7	67	27	6	-	-

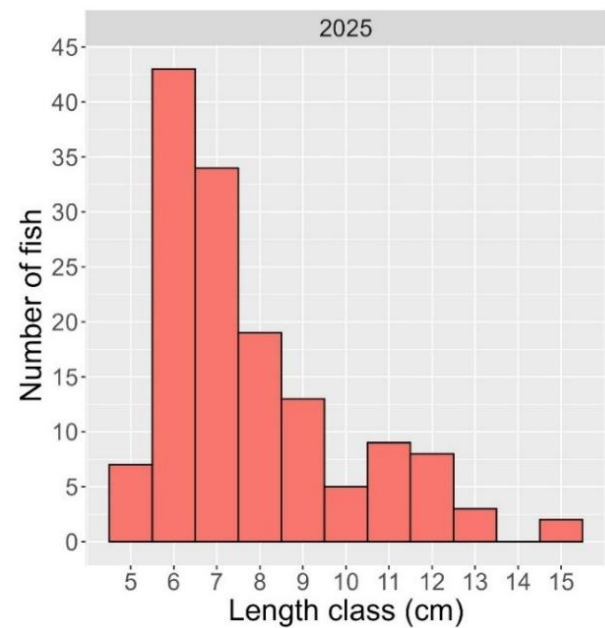


Figure 4. Length frequency distribution for salmon (n = 143), Allow River sub-catchment, 2025 (No. sites =7).

Table 4. Fish ecological status, Allow River sub-catchment, September 2025.

Site No.	2025
Allow River sub-catchment	
1	NA*
2	M
3	M
4	NA*
5	NA*
6	NA*
7	NA*

NA* Sites where a SPOT survey was carried out, were not assigned an ecological status.



Figure 5. Location of electrofishing survey sites on the Funshion (Site 8), and Araglin (Site 9), river sub-catchments, Blackwater River Catchment, September 2025.

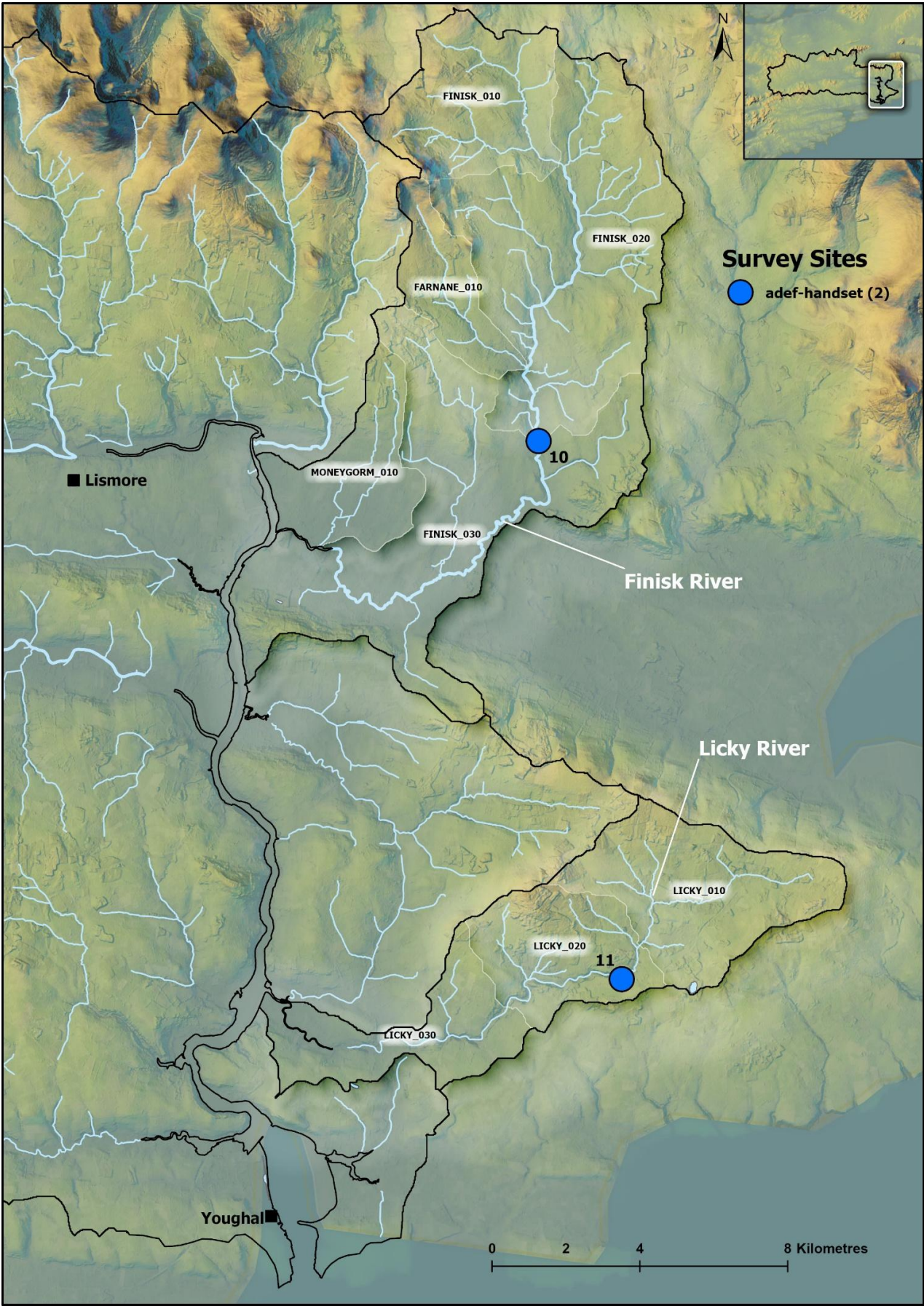


Figure 6. Location of electrofishing survey sites on the Finisk (Site 10) and Licky (Site 11) river sub-catchments, Blackwater River Catchment, September 2025

Table 5. Site survey details, River Blackwater Catchment, September 2025.

No.	WFD Sub-basin	River	Site	Method	WFD	Date
Funshion River sub-catchment						
8	FUNSHION_010	Funshion River	Brackbaun Bridge	ADEF (Handset)	YES	25/09/2025
Araglin River sub-catchment						
9	ARAGLIN (BLACKWATER)_020	Araglin River	Elizabeth's Bridge	ADEF (Handset)	YES	24/09/2025
Finisk River sub-catchment						
10	FINISK_030	Finisk River	Modelligo Bridge	ADEF (Handset)	YES	23/09/2025
Licky River sub-catchment						
11	LICKY_020	Licky River	Bridge Northeast of Glenlicky	ADEF (Handset)	YES	23/09/2025

Table 6. Minimum density estimates of fish (no. fish/m²), River Blackwater Catchment, Water Framework Directive (WFD) surveillance monitoring (SM) sites, (previous results are shown where applicable).

Funshion sub-catchment				Araglin sub-catchment		
Site no.	8			9		
Species	2017	2022	2025	2013	2022	2025
Brown trout	0.095	0.134	0.051	0.036	0.037	0.009
0+ brown trout	0.089	0.096	0.041	0.013	0.008	0.004
1+ & older brown trout	0.005	0.038	0.010	0.023	0.029	0.005
Salmon	0.036	0.151	0.044	0.107	0.086	0.033
0+ salmon	0.010	0.089	0.008	0.013	0.026	0.015
1+ & older salmon	0.026	0.062	0.036	0.095	0.059	0.018
Dace	-	-	-	-	-	-
European eel	-	-	0.003	0.016	0.012	0.004
Lamprey sp.	-	-	-	0.002	0.002	-
Minnow	-	-	-	-	-	-
Stone loach	-	-	-	-	0.004	0.002
Three-spined stickleback	-	-	-	-	-	-
All fish	0.130	0.285	0.098	0.161	0.140	0.047
Finisk sub-catchment				Licky sub-catchment		
Site no.	10			11		
Species	2017	2022	2025	2013	2018	2025
Brown trout	0.108	0.148	0.025	0.079	0.297	0.063
0+ brown trout	0.071	0.051	0.016	0.015	0.106	0.041
1+ & older brown trout	0.037	0.097	0.009	0.064	0.190	0.023
Salmon	0.040	0.190	0.095	0.090	0.022	0.023
0+ salmon	0.040	0.148	0.089	0.004	0.011	-
1+ & older salmon	-	0.042	0.006	0.086	0.011	0.023
Dace	-	-	-	-	-	-
European eel	0.020	0.004	-	0.011	0.017	0.023
Lamprey sp.	-	-	-	-	-	-
Minnow	-	-	-	-	-	-
Stone loach	-	-	-	-	-	-
Three-spined stickleback	-	0.004	0.009	-	-	-
All fish	0.168	0.346	0.130	0.180	0.336	0.108

Table 7. Brown trout % age class structure (where recorded), River Blackwater Catchment, Water Framework Directive (WFD) sites, September 2025.

Site No.	% of catch				
	0+	1+	2+	3+	4+
Funshion sub-catchment					
8	81	19	-	-	-
Araglin sub-catchment					
9	50	50	-	-	-
Finisk sub-catchment					
10	40	27	27	-	6
Licky sub-catchment					
11	72	24	4	-	-

Table 8. Salmon % age class structure (where recorded), River Blackwater Catchment, Water Framework Directive (WFD) sites, September 2025.

Site No.	% of catch		
	0+	1+	2+
Funshion sub-catchment			
8	27	73	-
Araglin sub-catchment			
9	51	47	2
Finisk sub-catchment			
10	93	7	-
Licky sub-catchment			
11	-	100	-

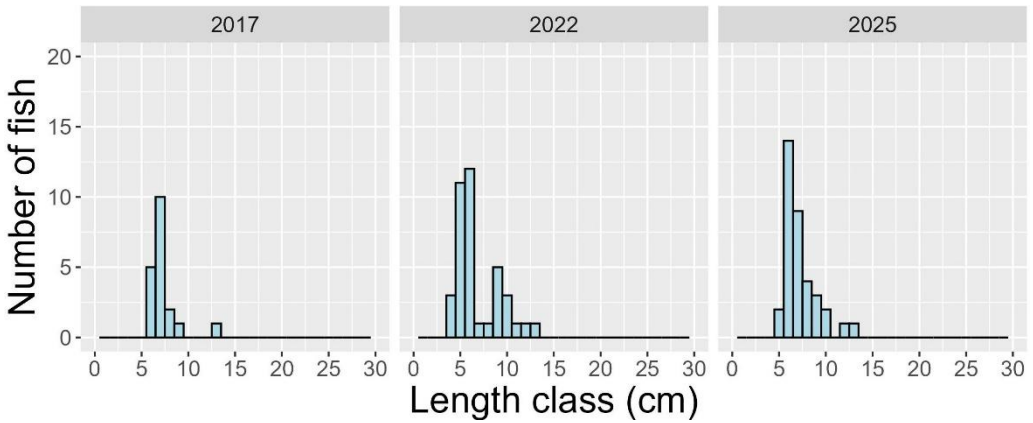


Figure 7. Length frequency distribution of brown trout (2017 n=19, 2022 n= 39, 2025 n= 36) at Site 8 (Brackbaun Br.), a WFD Surveillance Monitoring site, Funshion River sub-catchment.

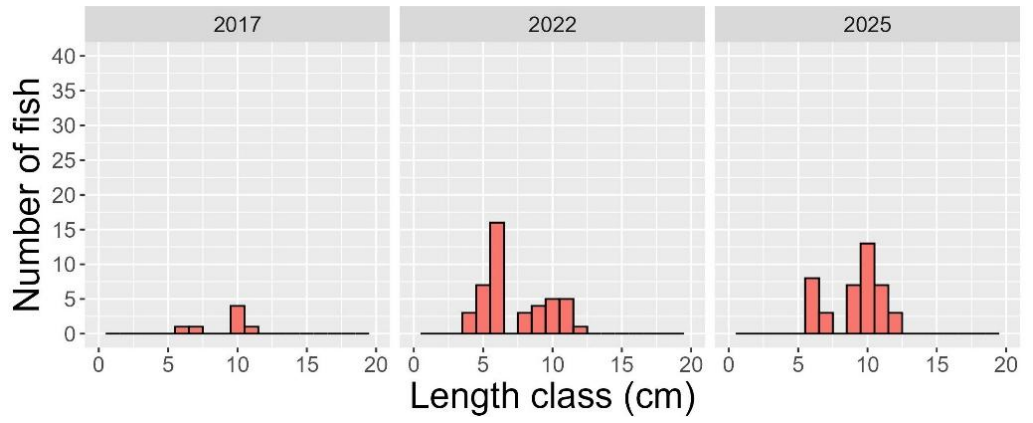


Figure 8. Length frequency distribution of salmon (2017 n=7, 2022 n= 44, 2025 n= 41) at Site 8 (Brackbaun Br.), a WFD Surveillance Monitoring site, Funshion River sub-catchment.

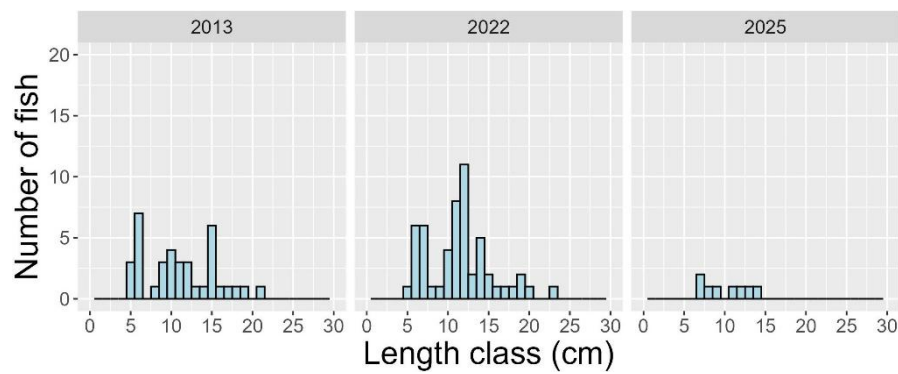


Figure 9. Length frequency distribution of brown trout (2013 n=37, 2022 n= 54, 2025 n= 8) at Site 9 (Elizabeth's Br.), a WFD Surveillance Monitoring site, Araglin River sub-catchment.

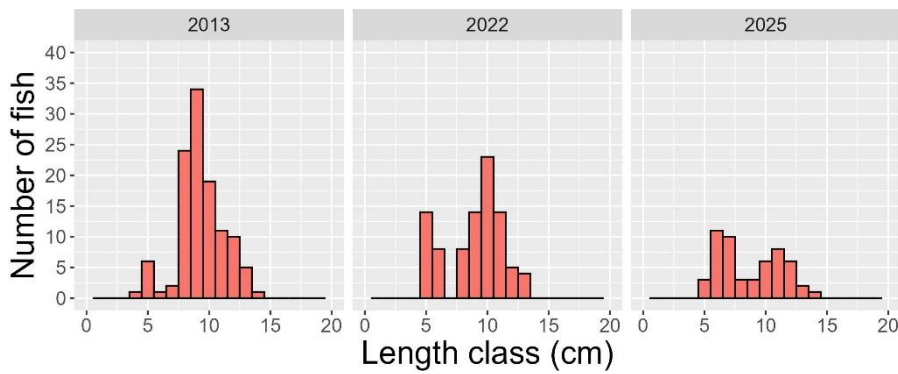


Figure 10. Length frequency distribution of salmon (2013 n=114, 2022 n= 90, 2025 n= 53) at Site 9 (Elizabeth's Br.), a WFD Surveillance Monitoring site, Araglin River sub-catchment.

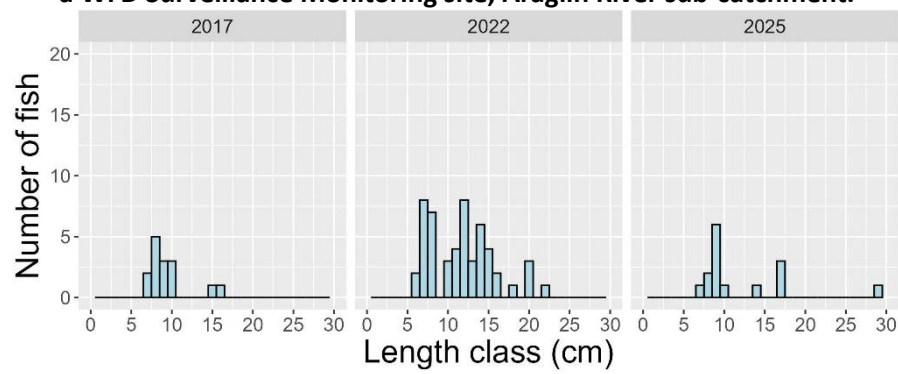


Figure 11 Length frequency distribution of brown trout (2017 n=15, 2022 n= 52, 2025 n= 15) at Site 10 (Modelligo Br.), a WFD Surveillance Monitoring site, Finisk River sub-catchment.

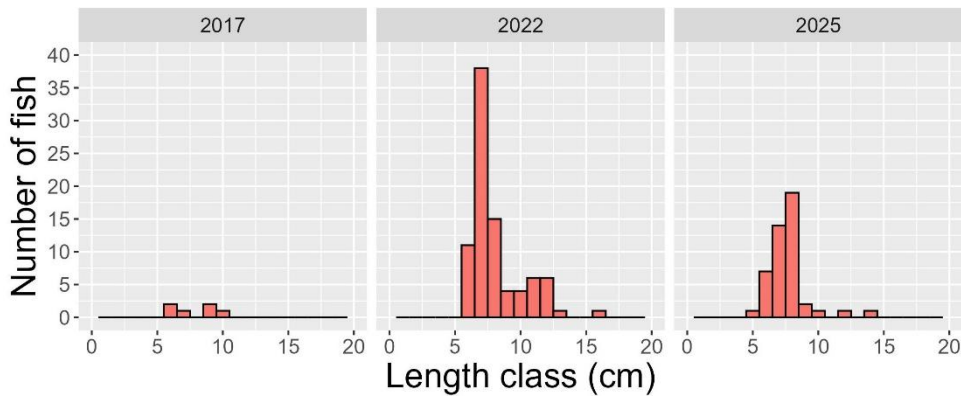


Figure 12. Length frequency distribution of salmon (2017 n=6, 2022 n= 86, 2025 n= 46) at Site 10 (Modelligo Br.), a WFD Surveillance Monitoring site, Finisk River sub-catchment.

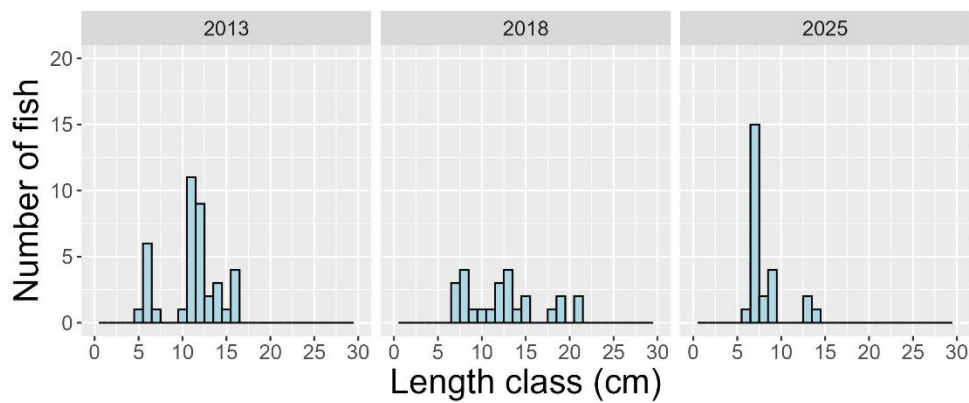


Figure 13. Length frequency distribution of brown trout (2013 n=39, 2018 n= 25, 2025 n= 25) at Site 11 (Br. NE of Glenlicky), a WFD Surveillance Monitoring site, Licky River sub-catchment.

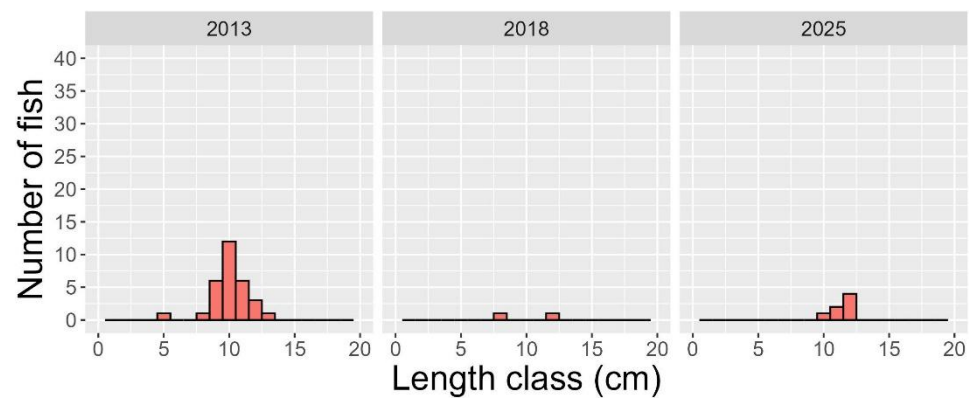


Figure 14. Length frequency distribution of salmon (2013 n=30, 2018 n= 2, 2025 n= 7) at Site 11 (Br. NE of Glenlicky), a WFD Surveillance Monitoring site, Licky River sub-catchment.

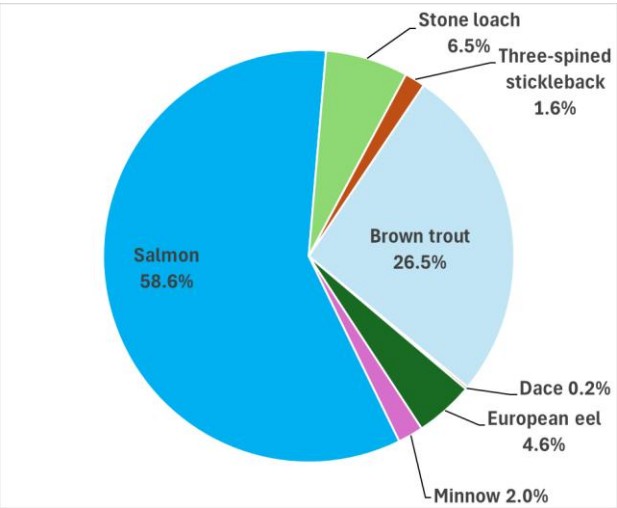


Figure 15. Fish species composition (%), River Blackwater Catchment, 2025.

Table 9. Fish ecological status, River Blackwater Catchment, September 2025.

Site No.	2013	2017	2018	2022	2025
Funshion sub-catchment					
8	-	N/A	-	G	M
Araglin sub-catchment					
9	G	-	-	G	M
Finisk sub-catchment					
10	-	M	-	G	M
Licky sub-catchment					
11	M	-	M	-	M

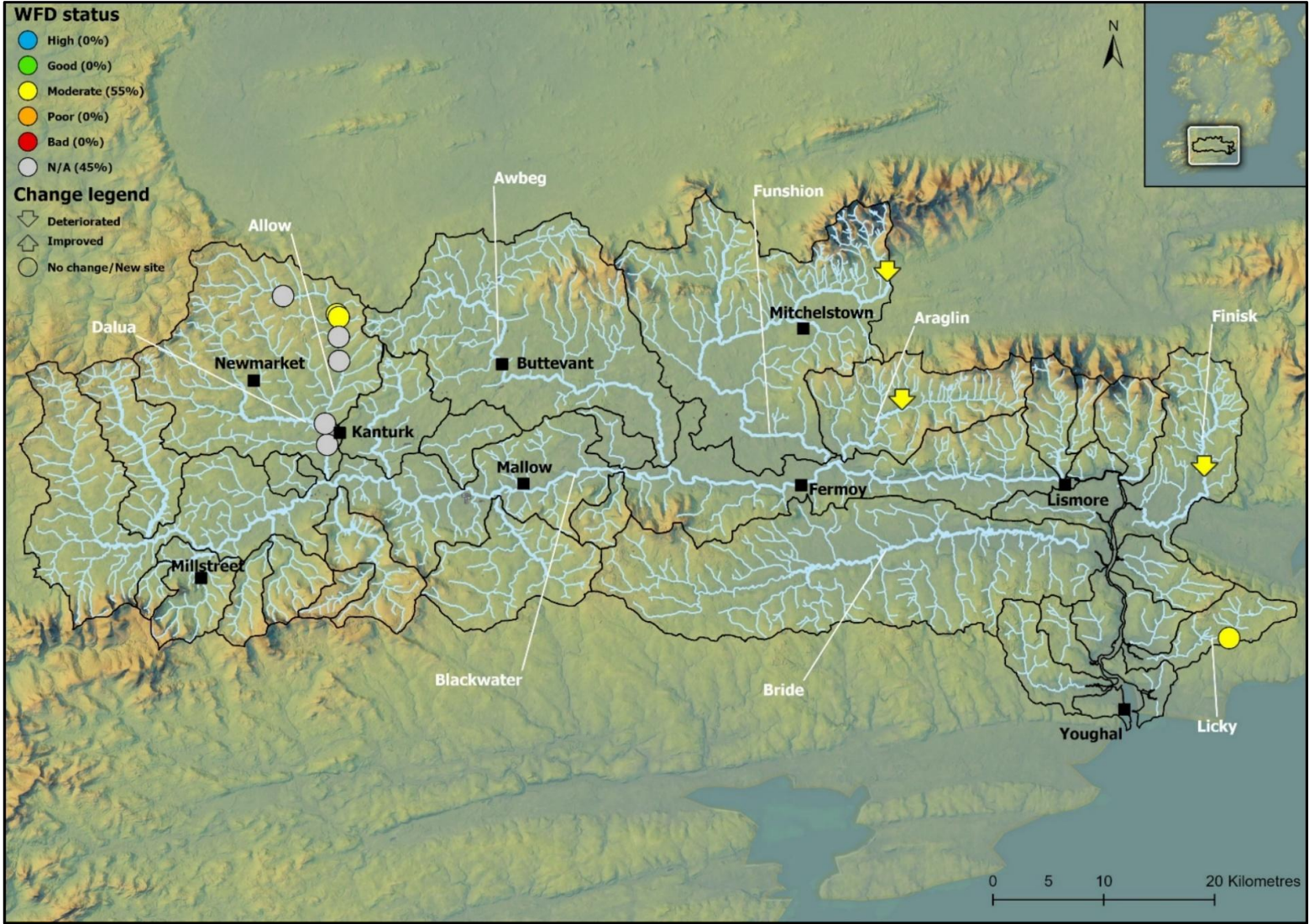


Figure 16. Fish ecological status in the Blackwater River Catchment, 2025. Arrows indicate a change in status since previous surveys (where applicable).

Summary

Seven fish species were recorded at eleven sites electro-fished on the River Blackwater Catchment in 2025.

Salmon was the most common species present (11 sites, 100%), followed by brown trout (10 sites, 91%), stone loach (8 sites, 73%), European eel (6 sites, 55%), minnow (4 sites, 36%), three-spined stickleback (2 sites, 18%), and dace (1 site, 9%).

Salmon was the most abundant species present, followed by brown trout, stone loach, European eel, minnow, three-spined stickleback and dace (Figure 15).

Salmon ranged in length from 5.0 to 15.3cm (Figure 4). Three age classes of salmon (0+, 1+, and 2+) were present, with 0+ being the most abundant cohort. The highest density of salmon (all ages combined) (0.095 fish/m²) was recorded at Site 10 (Modelligo Bridge) on the Finisk River. The highest density of 0+ salmon (0.089 fish/m²) was also recorded at Site 10. The highest density of 1+ and older salmon (0.036 fish/m²) was recorded at Site 8 (Brackbaun Bridge) on the Funshion River.

Brown trout ranged in length from 5.5 to 29.5cm (Figure 3). Four age classes of brown trout (0+, 1+, 2+ and 4+) were present with 0+ being the most abundant cohort. The highest density of brown trout (all ages combined) (0.063 fish/m²) was recorded at Site 11 (Br. NE of Glenlicky) on the Licky River. The highest density of 0+ brown trout (0.041 fish/m²) was recorded at Site 11 (Br. NE of Glenlicky) on the Licky River and Site 8 (Brackbaun Br.) on the Funshion River. The highest density of 1+ and older brown trout (0.034 fish/m²) was recorded at Site 3 (d/s Freemount WTP) on the Allow 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.

Two sites (Sites 2 and 3) on the Allow sub-catchment, were assigned Moderate status in 2025. Fish ecological status was not assigned at five sites. At these sites, weather and in-stream conditions made it difficult to carry out a full survey, so a spot survey used to identify species presence or absence, was carried out in lieu of a full survey (Table 4 and Figure 16).

All Four WFD sites were assigned status in 2025. All four were assigned Moderate status. When compared with their most recent previous surveys, three sites (Sites 8, 9 and 10) declined in status from Good to Moderate and one site (Site 11) remained unchanged at Moderate status.

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), and the absence of certain age cohorts indicating recruitment failures.

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.

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