

WRPS WILBRAHAM RIVER QUALITY SURVEY 1st March 2026



Summary

The Wilbraham River Protection Society (WRPS) undertook a third river quality survey in March 2026 when the river and its tributaries had fully recovered after sections dried out during the last 6 months of 2025. The timing is close to the first survey on 23rd Feb 2025 for comparison purposes.

On this occasion, as the previous studies had shown essentially “clean” water from the springs down to the Fulbourn New Cut/LW River Confluence, the sampling sites were reduced in number (see map). Two new locations were added further downstream – the EA Gauging Weir at Lode and the Duck Pond Outflow at Station Road Stow-cum-Quy. This was to establish if contamination increased further downstream.

Water levels were not as high as Feb 2025 but overall results showed if anything an improvement in pollution parameters. None of the results are reportable and as previously found the main sites of concern were the Parish Ditch (draining Wilbraham Fen & the A14 road runoff), downstream of Teversham Sewage Works and downstream of Quy Mill Hotel. The results further downstream towards Bottisham Lode demonstrated that contaminants were substantially reduced likely as a result of dilution with “clean” spring water from the augmented LW River and rainfall runoff.

The following results again largely rely on a formal analysis by Dr Steve Boreham using more sophisticated methods detailed below. The WRPS team phosphate results using the Hanna Checker again correlated very closely with Steve’s more sophisticated IRIS system.

Introduction

Much of the unique local biodiversity in Fulbourn and the Wilbrahams relies on a healthy water table and chalk stream. It should be noted that the river passes through or adjacent to 3 SSSIs and a County Wildlife Site and is surrounded in many locations by farmland. Over the last 3 decades the river system has intermittently dried out but at the time of sampling the whole river had only been in water and fully flowing since the end of January 2026 – following 6 months in 2025 when half of the LW River bed was dry.

Methods

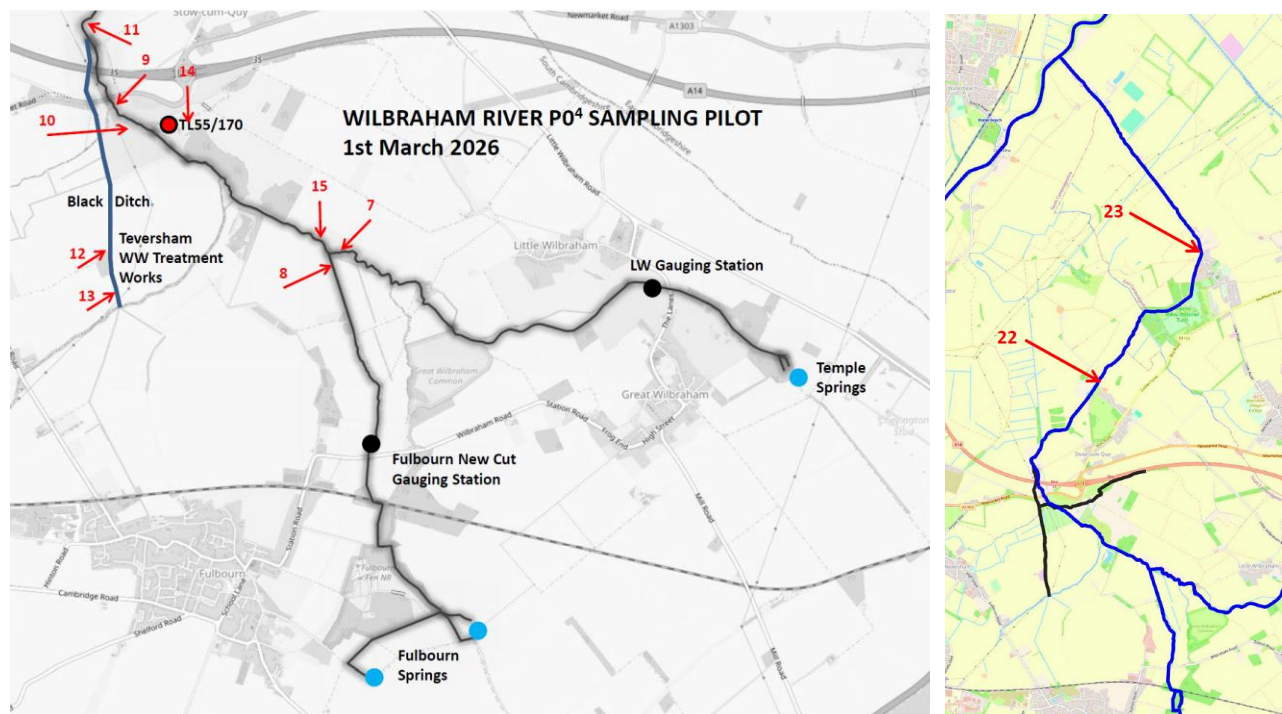
The sampling locations are illustrated in Figure 1&2 and the numbering scheme matches earlier studies. Samples were taken by volunteers trying to avoid any disturbance of the sediment and placed into A & B 50 ml sample pots.

The A samples were analysed using a Hanna Checker “low range” phosphate meter. In addition using a loaned multi-parameter meter we analysed samples in the field for pH, temp, conductivity, turbidity and dissolved oxygen. The B samples were analysed by Dr Steve Boreham using a Hanna “Iris” spectrophotometer and Petrifilms. The parameters he measured were pH, Electrical Conductivity (EC), Turbidity, Phosphate, Ammonia-N, Nitrate, and Escherichia coli counts.

River and Climate Status

The sampling took place on Sunday 1st March 2026 from 08:30 to 13:00. At Lode the river flow was 0.255m³/sec (compared with 0.338m³/sec in Feb 2025), The level (stage) at the Lanes gauging weir was 6.3cm (compared with 10.8cm in Feb 2025). Overall the river levels were relatively low. During February 50mm of rainfall was recorded close to Wilbraham Fen and there was 3mm of rain during the 48 hours prior to the survey. We understand that augmentation was running fully at The Temple and Fulbourn and the springs at the Temple and Fulbourn were not running (since June 2025). The groundwater level at Cherry Tree/Cedar Tree Stud was 13.35mAoD (compared with 14.8mAoD in Feb 2025).

Figure 1 Sampling Locations



Results

A comparison of the A&B sample phosphate results is shown in Table 1. Excellent correlation was obtained between the WRPS LR Hanna Meter and the Lab Iris system.

Table 1

	Phosphate mg/l Checker LR	calc'd Phosphate-P mg/l	Phosphate-P IRIS mg/l
	0.00	0.00	0.00
	0.02	0.01	0.01
	0.00	0.00	0.00
	0.20	0.07	0.08
	0.61	0.20	0.21
	1.54	0.50	0.53
	0.07	0.02	0.03
	0.02	0.01	0.01
	0.00	0.00	0.00
	0.79	0.26	0.27
	0.15	0.05	0.08

The results of the Lab analysis are shown in Table 2 below

The key findings were the presence of coliforms at several locations. Increased phosphate levels were found downstream of Teversham Sewage Treatment Works in the Black Ditch (12,10) and downstream of Quy Mill Hotel (11). Increased ammonia levels were again found in the Parish Ditch (14) and downstream of Quy Mill Hotel (11) Increased turbidity was found in several locations. Overall levels were lower than in the previous Feb 2025 study.

Table 2

WRPS Nos	Grid Reference (approx)	Km upstream of Quay Mill	Location	Lab & Field Measurements												
				Phosphate-P IRIS mg/l	Ammonia-N LR IRIS mg/l	Nitrate as N mg/l IRIS	Nitrate calc'd mg/l	Total Coliform count per ml	E. coli count per ml	pH	EC	Turbidity NTU	Dissolved Oxygen %	Dissolved Oxygen mg/l		
7	TL 52635 58428	2.75	LWR U/S of Fulbourn New Cut confl	0.00	0.14	13.9	61.6	1	0	8.36	764	5.8	120.0	13.67		
8	TL 52580 58345	2.75	Fulbourn New Cut U/S LWR confl	0.01	0.11	10.0	44.3	0	0	8.09	872	1.2	108.0	12.01		
9	TL 51036 59451	0.73	A1303 bridge channel	0.00	0.10	7.1	31.5	1	0	7.86	828	3.8	94.0	10.87		
10	TL 50874 59375	0.75	Black Ditch by A1303 layby	0.08	0.14	12.2	54.0	7	1	7.84	891	7.6	99.1	11.12		
11	TL 50767 59990	0.00	D/S Quay Mill Hotel	0.21	0.17	12.3	54.5	16	5	7.65	896	13.8	86.5	10.05		
12	TL 51021 58446	1.60	D/S bridge by Teversham STW	0.53	0.09	16.0	70.9	24	12	7.76	832	5.1	99.6	11.25		
13	TL 51066 58144	1.90	U/S of Teversham STW	0.03	0.01	10.8	47.8	9	5	7.78	795	7.7	100.0	11.31		
14	TL 51277 59303	0.95	Parish Ditch U/S Black Ditch	0.01	0.22	4.8	21.3	2	0	7.34	1179	5.7	69.2	7.99		
15	TL 52495 58499	2.60	D/S LWR / Fulbourn New Cut confl	0.00	0.01	11.7	51.8	3	1	8.34	787	1.1	117.0	13.23		
22	TL 51709 61118	-1.60	Stonebridge Pond Quay	0.27	0.06	8.8	39.0	12	6	7.61	909	8.5	88.20	10.33		
23	TL 53079 62816	-4.20	Lode Gauging Weir	0.08	0.01	8.9	39.4	8	5	7.36	912	6.4	90.70	10.60		

Discussion

The results are less dramatic than the previous study in Feb 2025 despite the water levels being slightly lower. Contaminants are again focused at three main locations. Firstly the Parish Ditch which drains the A14 and the Wilbraham Fen had low dissolved oxygen, high conductivity along with raised ammonia levels. It also has the lowest pH value. All these features are suggestive of road runoff contamination. Secondly comparing upstream and downstream of Teversham Sewage Works phosphate, nitrate and coliforms were found to be elevated consistent with effluent. Thirdly downstream of Quay Mill Hotel we again found elevated ammonia and turbidity levels and some reduction in dissolved oxygen. The reasons for this are unclear although additional road runoff is likely where the A14 passes over both the Black Ditch and Quay Water upstream of Quay Mill Hotel.

Encouragingly the new downstream samples taken from Stonebridge Duck Pond showed only elevated phosphate levels, and the values at the Lode Gauging Weir were essentially normal. The pH here was relatively low at 7.36 probably reflecting rainwater effects and this may account for the dilution of the contaminants found upstream.

Comparison of the 1st and 3rd Surveys

This is best appreciated by studying the maps below provided by Dr Boreham which allow comparison of the various positive findings by location.

Conclusion

This third WRPS quality survey has provided further information on the state of the river and provides a comparison with official WFD measurements. Overall this survey undertaken with fairly low river levels (and springs not flowing) revealed relatively good water quality on the parameters measured. The three main sites of pollution probably merit further monitoring, particularly the effects of road runoff contamination.

Acknowledgements

We would like to thank all the volunteers for their time and effort carrying out the survey. In particular the WRPS is again indebted to Dr Steve Boreham for his time, advice, effort and detailed analysis, mapping and interpretation of our B samples.

Prepared by Prof David Lomas 23rd March 2026

References: click for links

- [Hydrology Data Explorer Lode Flow](#)
- [Hydrology Data Explorer Cherry Tree Stud Borehole](#)
- [UK Bathing Water Quality - Coliforms](#)
- [UK Drinking Water Standards](#)
- [UK Environmental Standards 1](#)
- [UK Environmental Standards 2](#)
- [UK River Phosphorus Standards](#)

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Appendix 1 Site Pictures (note numbers are not the sample numbers)



3 Stonebridge Pond Quay



2 Downstream Quy Mill



1 Upstream Teversham WWT



4 Parish Ditch



6 Black Ditch



5 Fulbourn New Cut



7 A1303 Bridge Channel

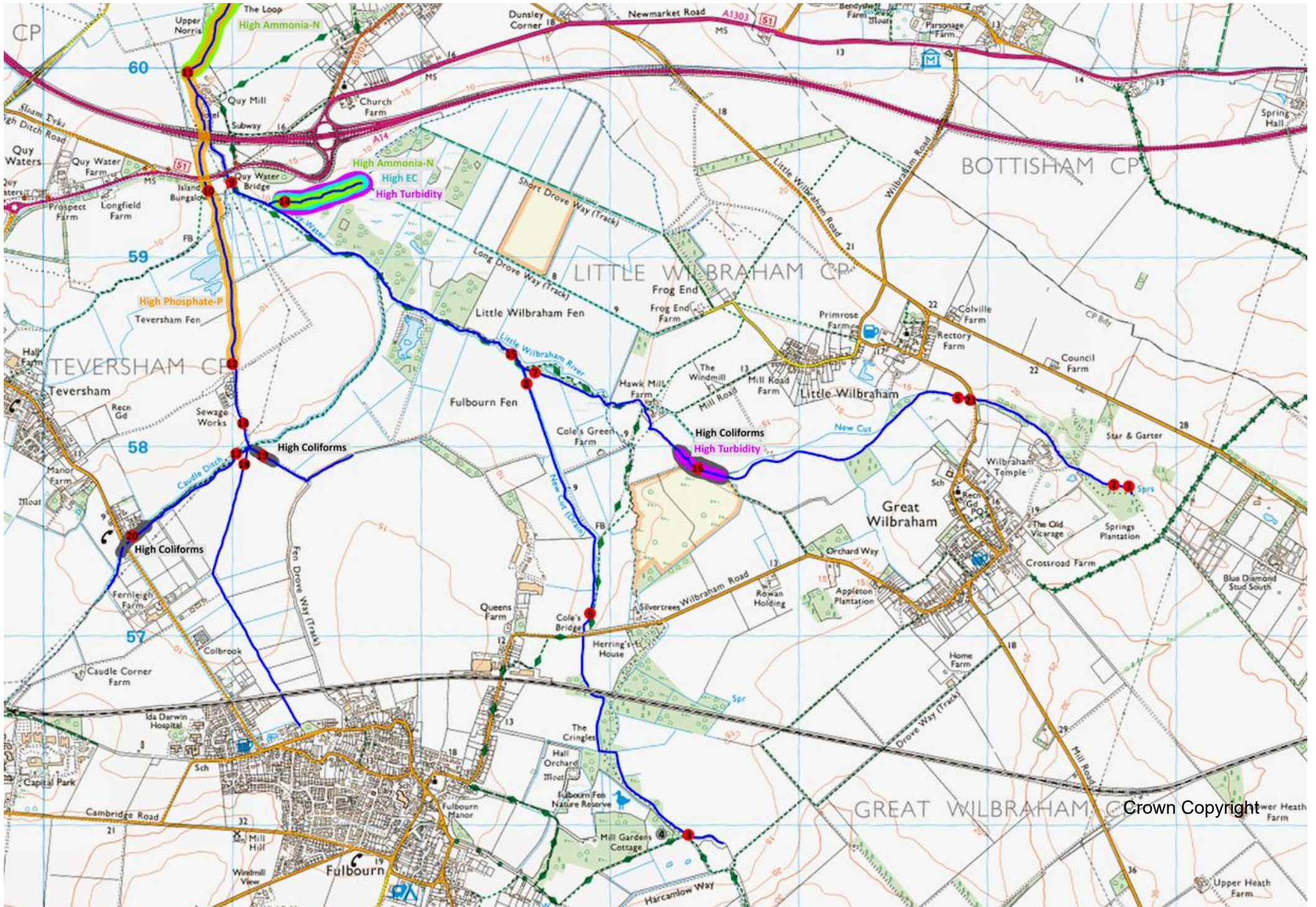


8 LW River Upstream of FBN Confluence

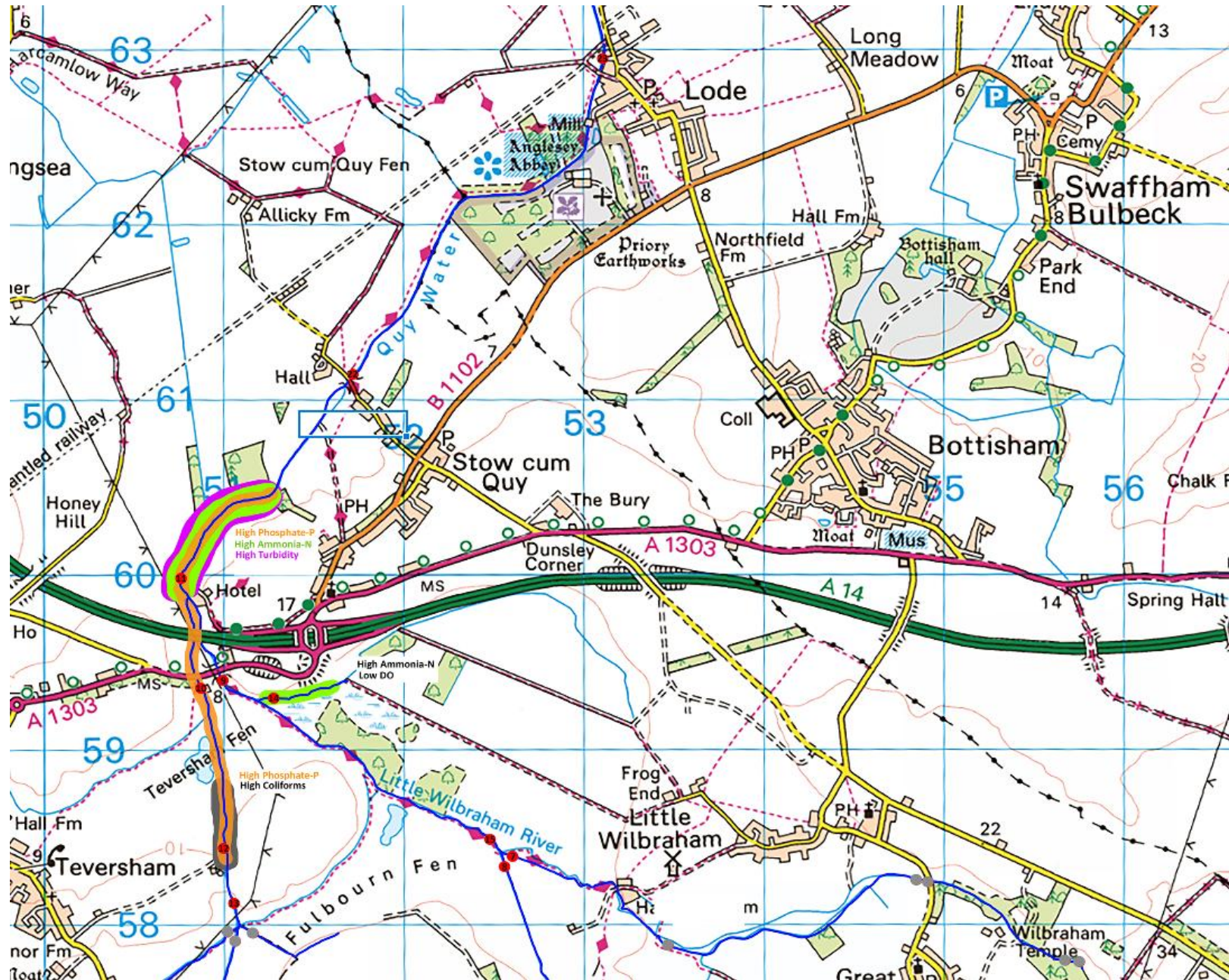


9 LWR Downstream of FBN confluence

Map 1 - Wilbraham River - 23 February 2025



Map 2 - Wilbraham River – Quay Water - 1st March



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WRPS Report on Wilbraham River Quality Survey 1st March 2026