Friends of the Dart – September 2025 Data Review

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Executive Summary

This report presents a summary and analysis of *E. coli* monitoring conducted by Friends of the Dart between March and September 2025 across the River Dart catchment. The monitoring programme forms part of Phase 3 of Friends of the Dart's ongoing citizen science initiative, designed to identify pollution sources, track changes over time, and provide a robust evidence base for action on water quality. Data from the Environment Agency and South West Water has also been analysed to provide a comprehensive overview of bacterial loading within the catchment.

Findings indicate that several monitored tributaries consistently contribute high *E. coli* concentrations to the main River, particularly the Stoke Gabriel Stream, River Hems, Malt Mill Lake, and the Bidwell Brook. Median *E. coli* concentrations at sites on these tributaries frequently exceeded the Environment Agency threshold for "poor" bathing water quality. In contrast, other tributaries such as Old Mill Leat, Rattery Stream, Old Road 1 and 2, and the Harbourne exhibited lower median concentrations, but higher variability associated with rainfall events. Dartington Beach, Dartington Pontoon and Steamer Quay had consistently elevated *E. coli* concentrations, as did sites around Staverton STW and Still Pool. Considering the popularity of these sites amongst River users, this highlights the importance of continued monitoring and identification of pollution sources.

The findings from March–September monitoring provide a strong evidence base for refining Friends of the Dart's approach through the winter months. The next phase of work will focus on identifying pollution sources within high-risk tributaries—particularly the River Hems and Malt Mill Lake—through targeted sampling and walkover surveys in collaboration with the Environment Agency and local landowners. Friends of the Dart will continue to sample Community-Designated Bathing Sites and Steamer Quay twice monthly under both dry and wet conditions, whilst the sampling frequency of Holne Weir, Stoke Gabriel, Dittisham and Warfleet Creek will be reduced to once per month, reflecting their consistently low bacterial loads. Additional sites with lower average *E. coli* concentrations but high variability will be included in wet weather sample rounds to better understand the effects of rainfall and runoff on bacterial loading at these sites.

This refined winter sampling strategy will prioritise the most affected sub-catchments while maintaining essential long-term monitoring. Together, these actions will strengthen the dataset ahead of the 2026 bathing season, support engagement with regulatory partners, and help protect the health of the River Dart and its tributaries year-round.

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1. Introduction

1.1 Introduction to Friends of the Dart

Friends of the Dart is a Community Interest Company (CIC) working to protect the River Dart through science, advocacy, and collaboration. One of our key activities is monitoring the River's water quality to understand pollution levels and guide our campaigning efforts. Since launching, Friends of the Dart has helped drive significant change. Our campaigning contributed to the designation of four Bathing Water Sites along the River Dart, and our data and advocacy placed pressure on South West Water to commit to 16 infrastructure upgrades within the Dart catchment. We are also proud to have supported other community groups in establishing bacterial monitoring on their own rivers, and we work closely with a range of partners, including the Environment Agency, South Hams District Council, DEFRA, the University of Plymouth, the University of Exeter, the Bidwell Brook Partnership, the River Dart Catchment Partnership, and local communities and businesses.

1.2 Phase 3 Monitoring

In 2025, we entered Phase 3 of our water quality monitoring programme. This phase builds on work initiated in 2024 and continues our commitment to sharing open-source, accessible, high-quality water data with the local community, partner organisations, and stakeholders. Phase 3 aims to investigate faecal pollution sources, with a particular focus on the Dart's tributaries, to better understand where bacterial levels are elevated and why. This work is carried out in collaboration with partners including the Environment Agency, the University of Plymouth, and the Bidwell Brook Partnership.

By conducting weekly monitoring of 30 sites across the Dart catchment, this phase seeks to answer the following questions:

- Where in the Dart catchment are pollution levels highest?
- Do certain tributaries contribute more to bacterial loads in the main River?
- How do rainfall events affect pollution levels across the sites?
- Is there evidence of continuous pollution sources, such as sewage treatment works or agricultural runoff, contributing to water quality issues?

1.3 Friends of the Dart Monitoring Methods

We test for *Escherichia coli (E. coli),* a common faecal indicator organism that lives in the intestines of warm-blooded animals, including humans, and is shed in faeces. Its presence in river water indicates recent contamination by faecal matter, which may carry harmful pathogens posing risks to both human and ecological health. Water samples are collected twice per month at each monitoring site — once under dry weather conditions and once under

wet weather conditions. These data help us address the questions outlined in Section 2.2. We use Neogen Petrifilm™ E. coli Count Plates to test for *E. coli*, a reliable indicator of faecal contamination from sewage or livestock. If present, *E. coli* produces blue colonies on the plate, which are counted to estimate *E. coli* concentration in colony-forming units per 100 ml (cfu/100 ml).

Petrifilm plates are ideal for wide-scale environmental monitoring: they do not require a full laboratory setup, produce results within 24 hours (compared to 48 hours or more for traditional laboratory tests), and are cost-effective, allowing frequent and repeated testing. To ensure the continued reliability of our *E. coli* data, we carry out quarterly validation using results from an accredited laboratory. A subset of samples is processed in-house using Petrifilm plates, while duplicate samples are analysed by the laboratory using traditional culture-based methods.

1.4 Environment Agency Monitoring Methods

This report considers data from the Environment Agency's water quality monitoring on the Dart, which uses traditional culture methods to calculate the *E. coli* concentration in water samples.

1.5 Purpose of this Report

This report provides a review of *E. coli* monitoring data collected by Friends of the Dart between March and September 2025, alongside Environment Agency data gathered between May and September 2025.

The purpose of this report is threefold:

1. To summarise and interpret data gathered across the Dart catchment during this period, identifying patterns, trends, and pollution hotspots.
2. To inform decision-making by Friends of the Dart directors regarding priority areas for further investigation and the design of the upcoming winter sampling strategy.
3. To communicate findings to the wider community, offering an accessible overview of water quality conditions in the River Dart and its tributaries, and highlighting where collective action may be most needed.

The report draws on data collected from monthly sampling under both wet and dry conditions at sites distributed throughout the Dart catchment. It presents summary statistics and rankings for each site, compares tributary contributions, and visualises spatial and temporal patterns in *E. coli* concentrations. Together, these analyses provide insight into the water quality of the River system and establish an evidence base for focused monitoring and remediation efforts through the winter and beyond.

2. Sampling Site Overview

Friends of the Dart has been monitoring 30 sites across the Dart catchment since March 2025 (Figure 1). These include community-designated sites — areas that, while not officially designated Bathing Waters, are popular for swimming and other recreational activities. Regular monitoring of these sites helps to build a clearer picture of water quality and supports other organisations, such as the Environment Agency, in guiding their own monitoring efforts. These sites are Holne Weir, Dartington Beach, and Dartington Pontoon.

Friends of the Dart also monitor officially designated Bathing Water Sites outside of the bathing season (May–September, during which the Environment Agency undertakes weekly sampling). Monitoring these sites year-round helps to understand seasonal variation, as the River is used recreationally throughout the year and access to up-to-date water quality information remains vital. These designated Bathing Water Sites are Steamer Quay (Totnes), Stoke Gabriel, Dittisham, and Warfleet Creek (Dartmouth).

In addition, Friends of the Dart regularly monitor a network of tributary sites to better understand the sources and drivers of pollution across the catchment. Data gathered from these sites support investigations into the key questions outlined in Section 1.2.

The Environment Agency monitors 14 sites during the bathing season, including the designated Bathing Water Sites and several tributaries feeding into the River Dart thought to influence water quality at those bathing locations (Figure 1).

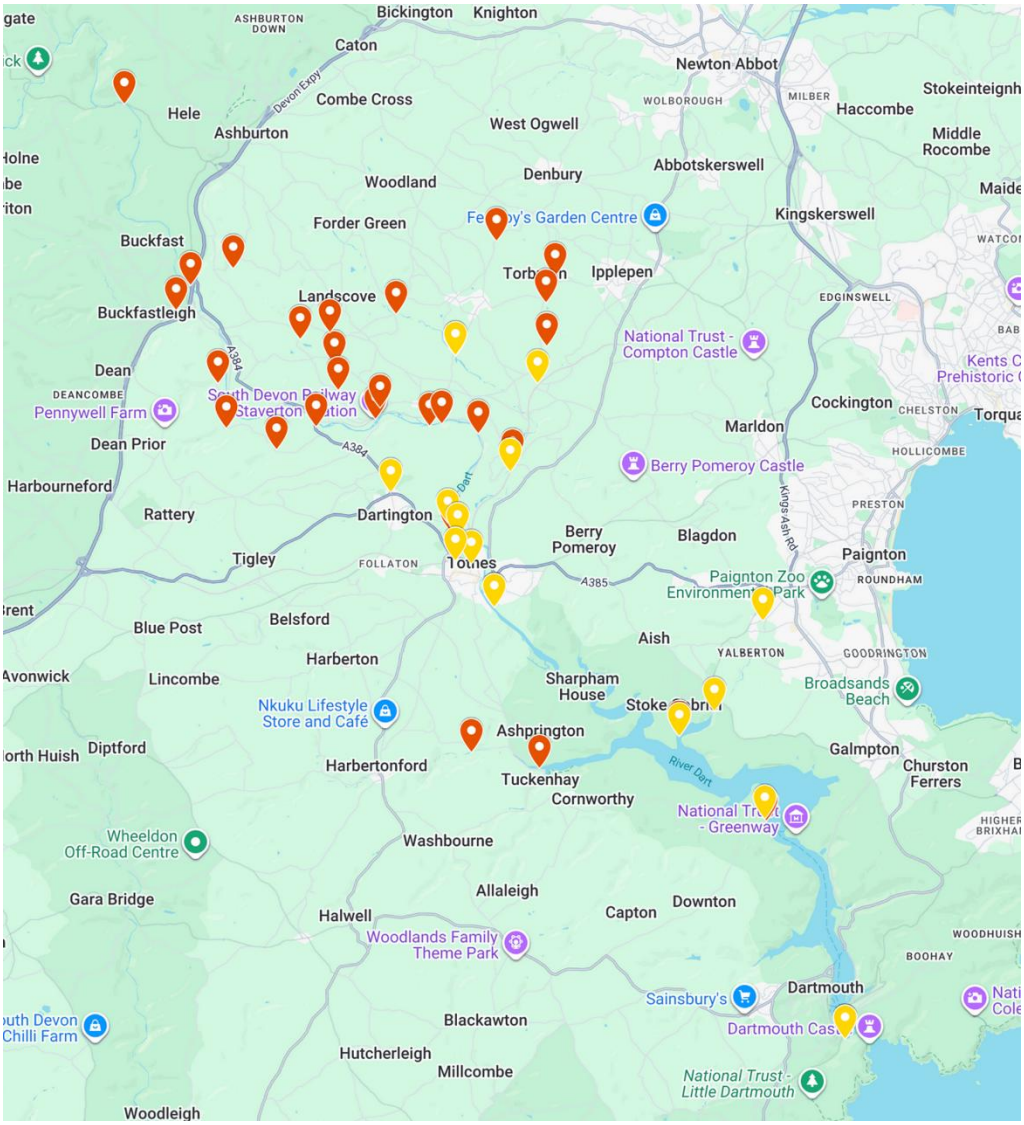

Figure 1. Map of all sampling sites in the River Dart catchment, with Friends of the Dart sampling sites marked by red pins, and Environment Agency sampling sites marked by yellow pins.

Table 1. Site names and coordinates (latitudinal, longitudinal) of all Friends of the Dart sampling sites.

Site Name	Coordinates (Lat/Long)
Holne Weir	50.521344, -3.789977
Ashburn	50.486513, -3.769998
Mardle	50.481749, -3.774442
Wash US	50.489879, -3.757445
Old Road 1	50.467692, -3.761685
Old Road 2	50.459233, -3.759498
Rattery Stream	50.454997, -3.744429
Torbryan Stream	50.488370, -3.660366
Tripe's Copse Stream	50.495058, -3.678121
Ambrook US	50.483286, -3.663258
Ambrook DS	50.474901, -3.662953
Broadhempston STW US	50.481088, -3.708400
Broadhempston STW DS	50.473100, -3.690524
Old Mill Leat 1 (OML 1)	50.471436, -3.726828
Old Mill Leat 2 (OML 2)	50.476228, -3.737121
Old Mill Leat 3 (OML 3)	50.477525, -3.728057
Old Mill Leat DS (OML DS)	50.466519, -3.725599
Littlehempston	50.452592, -3.673075
Staverton Bridge	50.461023, -3.714446
Staverton Village	50.46317, -3.713058
Still Pool	50.460226, -3.701097
Staverton STW US	50.459770, -3.698323
Staverton STW DS	50.460040, -3.694635
Dartington Beach	50.458098, -3.683675
Dartington Pontoon	50.439386, -3.691698
Steamer Quay	50.424991, -3.678654
Harbourne	50.397430, -3.685237
Bow Creek	50.394213, -3.665050
Stoke Gabriel	50.400825, -3.622987
Dittisham	50.384137, -3.596892
Warfleet Creek	50.342673, -3.573276

Table 2. Site names and coordinates (latitudinal, longitudinal) of all Environment Agency sampling sites in the Dart catchment. Note that from here, Bow Bridge is referred to as Broadhempston STW DS, as sampling was performed at the same site.

Site Name	Coordinates (Lat/Long)
Bow Bridge	50.473164, -3.6903031
Ambrook	50.467872, -3.6655954
Littlehempston	50.450908, -3.6739162
Shinners Bridge	50.447067, -3.7097964
Dartington Lodge	50.441022, -3.6926784
Totnes Weir	50.438546, -3.6897736
Whiteley Bridge	50.433951, -3.6903140
Priory Drive	50.433289, -3.6857282
Steamer Quay	50.424973, -3.6786751
Tor Park	50.422339, -3.5981696
Byter Mill	50.405285, -3.6125972
Stoke Gabriel	50.400375, -3.6229277
Dittisham	50.384578, -3.5971951
Warfleet Creek	50.342532, -3.5734240

3. Site-Level Analysis

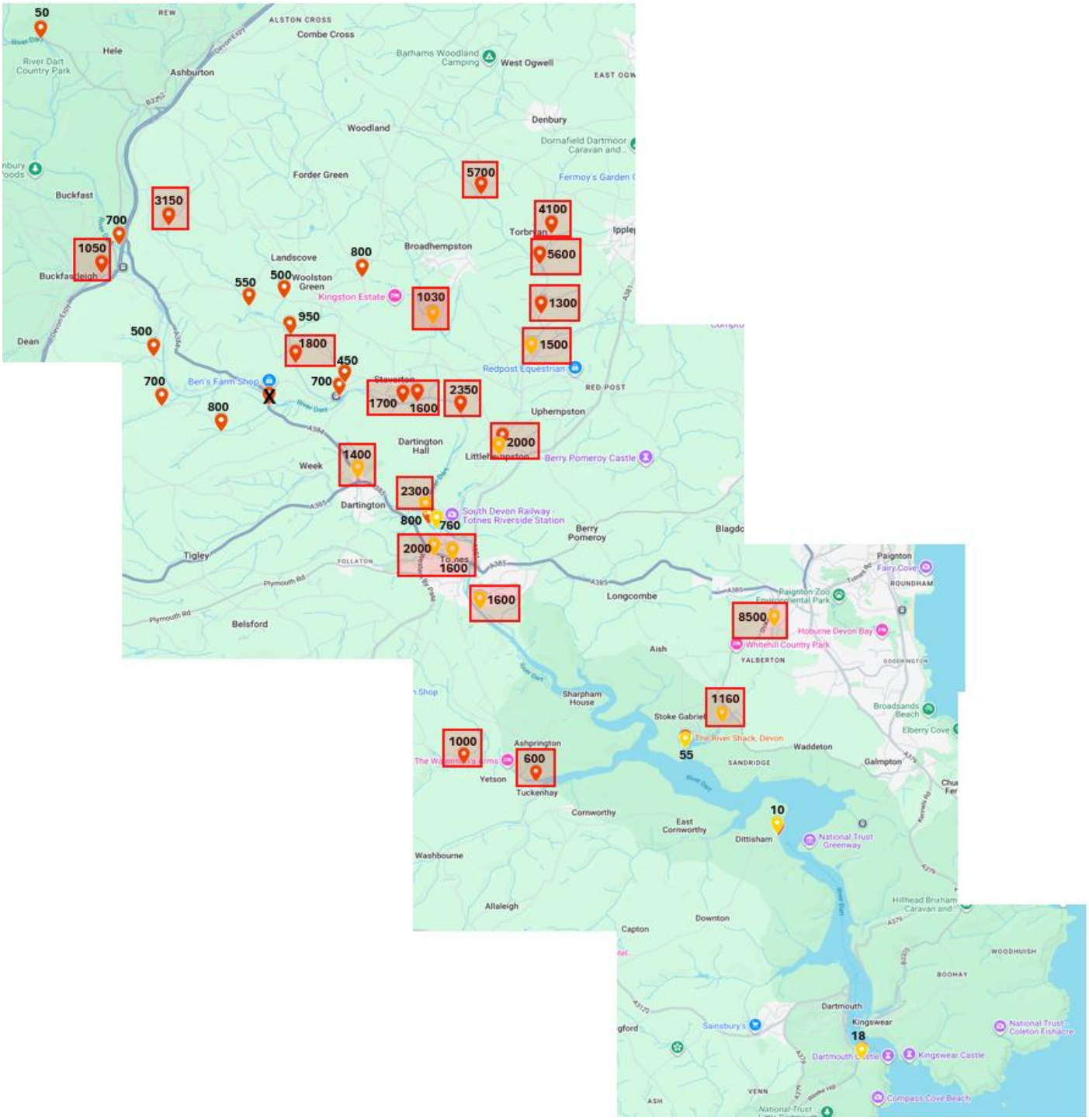

Figure 2. Map of the Dart catchment monitored by Friends of the Dart (red pins) and the Environment Agency (yellow pins). Numbers associated with the pins are the median *E. coli* concentration in cfu/100ml for that sampling site. The following sites consider data from Friends of the Dart and the Environment Agency: Broadhempston STW DS; Littlehempston; Steamer Quay; Stoke Gabriel; Dittisham; Warfleet Creek. Red boxes indicate where the sample site median *E. coli* value exceeds the threshold for "poor" bathing water quality as defined by the Environment Agency (500 cfu/100ml for tidal sites; 1000 cfu/100ml for non-tidal sites).

3.1 Main Dart Sites

Analysis of all monitoring sites across the Dart catchment highlights pollution hotspots that should be prioritised for continuous monitoring this winter, as well as areas along the main River where *E. coli* levels are consistently high. Sites along the main Dart showing persistently elevated *E. coli* concentrations include those upstream and downstream of Staverton Sewage Treatment Works (STW), Dartington Beach, and Steamer Quay (Figure 2).

The summary statistics for Staverton STW upstream (US) and downstream (DS) sites are very similar (Table 4), and the median *E. coli* concentration is higher upstream of the treatment works. This suggests that Staverton STW is unlikely to be the primary pollution source, or that the outfall may be located at a different point than that shown on South West Water's (SWW) WaterFit Live map. Monitored tributaries feeding into the Dart upstream of these sites and Dartington Beach do not appear to carry bacterial loads sufficient to explain the elevated concentrations observed at these main River sites. This points to possible contributions from Kilbury STW in Buckfastleigh, or one of the unmonitored tributaries upstream.

Steamer Quay has shown consistently high *E. coli* concentrations throughout the monitoring period and will likely retain its Environment Agency classification of "poor" water quality for this bathing season. Median *E. coli* concentrations at Dartington Pontoon and Totnes Weir are lower than at Dartington Beach and Steamer Quay (Figure 2; Table 4), suggesting that elevated bacterial levels at Dartington Beach dilute before reaching Dartington Pontoon. The elevated bacterial input from the Bidwell Brook also appears to dilute before entering the main River, but there are pollution inputs between Totnes Weir and Steamer Quay that drive the consistently high levels observed at Steamer Quay. Potential inputs include the River Hems and Malt Mill Lake, both of which contribute elevated bacterial loads to the main River (see Section 4, Tributary-Level Analysis).

There are nine SWW sewage assets with outfalls between Totnes Weir and Steamer Quay, including Totnes STW, which recorded 917 spills totalling 301.5 hours between January and June 2025, and Totnes Town Pumping Station, which recorded 2,143 spills totalling 126 hours (Table 3; Figure 7).

3.2 Mardle, Ambrook and the Hems

Key tributaries of interest include the River Mardle, all sites on the Ambrook, and the Hems, particularly at Broadhempston STW downstream and Littlehempston. The River Mardle receives a SWW discharge upstream (St Luke's Church CSO), which spilled five times between January and June 2025 for a total of 4.5 hours (Table 3; Figure 7). This limited spill duration suggests that elevated *E. coli* levels here may result from agricultural runoff or other non-sewage sources.

Broadhempston STW ranks ninth among all Dart-related assets, with 14 spills totalling 363.2 hours in 2025 (Table 3; Figure 7). Combined with the lower median *E. coli* concentration upstream of the works (Figure 2), this suggests that the STW could be driving the elevated levels downstream.

The Ambrook contains outfalls for three SWW assets with high spill frequencies and durations: Torbryan Pumping Station (4 spills totalling 491.3 hours), Denbury STW (110 spills totalling 147.7 hours), and Ipplepen STW (177 spills totalling 129.7 hours) (Table 3; Figure 7). Elevated *E. coli* levels in the Ambrook could therefore be linked to these assets.

Littlehempston, the most downstream site on the River Hems, has a median *E. coli* concentration of 2,000 cfu/100 ml (Figure 2), suggesting that the Hems contributes to poor water quality downstream at Steamer Quay. The following Ambrook sites rank among the highest *E. coli* concentrations across all Friends of the Dart and Environment Agency monitoring locations: Tripe's Copse Stream, Ambrook US, Torbryan Stream, and Littlehempston (Figure 3).

3.3 Old Mill Leat

Median *E. coli* levels at sites along the Old Mill Leat are generally below the threshold for poor water quality, except at Wash US and OML DS. Elevated levels at Wash US appear to dilute downstream, with OML 2 showing a median concentration of 550 cfu/100 ml. However, concentrations then rise again at OML DS to a median of 1,800 cfu/100 ml (Figure 2).

As the Old Mill Leat lies outside the catchment of any SWW assets, these elevated levels likely reflect agricultural runoff, with a faecal pollution source located upstream of OML DS. The Staverton Bridge site, just upstream of the confluence of the Old Mill Leat with the main Dart, shows a median *E. coli* concentration of 700 cfu/100 ml, suggesting that while certain parts of the Leat have elevated bacterial loads, they do not appear to significantly impact downstream water quality on the main River.

3.4 Bidwell Brook

Environment Agency monitoring on the Bidwell Brook shows elevated *E. coli* concentrations, with medians of 1,400 cfu/100 ml at Shinners Bridge and 2,300 cfu/100 ml at Dartington Lodge (Figure 2). Five SWW assets discharge into the Bidwell Brook: Rattery STW (28 spills totalling 840.3 hours), Dartington School No. 2 CSO (33 spills totalling 425.8 hours), Dartington C CSO (16 spills totalling 132 hours), and Textile Mill CSO (65 spills totalling 118.4 hours) (Table 3; Figure 7).

Although *E. coli* concentrations at Dartington Lodge — the site nearest the confluence of the Bidwell Brook and main Dart — are high (2,300 cfu/100 ml), concentrations at Dartington Pontoon immediately downstream are lower (755 cfu/100 ml) (Figure 2), suggesting that the Bidwell Brook's overall contribution to bacterial loading in the main River may be limited.

3.5 Malt Mill Lake

Malt Mill Lake was monitored by the Environment Agency throughout the bathing season, with consistently elevated *E. coli* concentrations. Whiteley Bridge had a median concentration of 2,000 cfu/100 ml, and Priory Drive 1,600 cfu/100 ml (Figure 2).

Two SWW CSOs discharge into Malt Mill Lake: Quarry Close CSO (14 spills totalling 9.5 hours) and St John's Terrace CSO (10 spills totalling 2 hours) (Table 3; Figure 7). A third CSO, Lower Collapark, also discharges into Malt Mill Lake, but WaterFit Live reports its last spill as occurring on 24/10/2024, and it is not listed in SWW's 2025 EDM dataset.

Given the low spill frequency and duration of these assets, they are unlikely to be solely responsible for the high *E. coli* levels observed. Environment Agency discharge permit data indicate two additional outflows to the stream — one agricultural and one trade-related. A targeted winter walkover survey is recommended to investigate these discharge locations and determine whether they are contributing to the consistently elevated *E. coli* levels observed throughout the bathing season.

3.6 River Harbourne

Monitoring by Friends of the Dart on the River Harbourne shows a median *E. coli* concentration of 1,000 cfu/100 ml, which dilutes to around 600 cfu/100 ml at Bow Bridge on the tidal Bow Creek (Figure 2). Several sewage treatment works discharge into the Harbourne and Bow Creek system, including Harbertonford STW, which ranked as the worst-performing Dart asset in terms of spill duration for 2025 (14 spills totalling 1,465.7 hours). Other relevant assets include Harberton STW (60 spills totalling 41.8 hours), Ashprington STW (29 spills totalling 11.7 hours), and Cornworthy STW (69 spills totalling 491.8 hours) (Table 3; Figure 7).

Given the high frequency and duration of spills in this catchment, it is likely that regular dilution from tidal flows in Bow Creek reduces their impact on bacterial load in the River. Continued monitoring is recommended to confirm this.

3.7 Stoke Gabriel Stream

The unnamed stream rising in Collaton St Mary and flowing through Yalberton before entering Mill Pool at Stoke Gabriel was monitored by the Environment Agency throughout the bathing season. The upstream Tor Park site showed extremely high median *E. coli* concentrations of 8,500 cfu/100 ml (Figure 2), ranking as the most polluted of all sites monitored by Friends of the Dart and the Environment Agency (Figure 3).

Downstream, Byter Mill recorded a median concentration of 1,160 cfu/100 ml, while the sampling site on the main Dart averaged 55 cfu/100 ml (Figure 2). The Tor Park site is located immediately downstream of the Tor Park Pumping Station, which recorded 13 spills totalling 28.8 hours between January and June 2025. Other relevant SWW assets include the Scout Hut CSO (21 spills totalling 303.3 hours) (Table 3; Figure 7), located downstream of Tor Park and Byter Mill but upstream of the Stoke Gabriel sampling point.

Finally, the Stoke Gabriel Pumping Station, situated just above the Stoke Gabriel sampling site, was reported on WaterFit Live as last spilling on 29/08/2025, confirming activity this year. However, it does not appear in the SWW 2025 EDM dataset. It is possible that it did not spill during the January–June reporting period, but an Environmental Information Request (EIR) was submitted by Friends of the Dart on 15/09/2025 to confirm this.

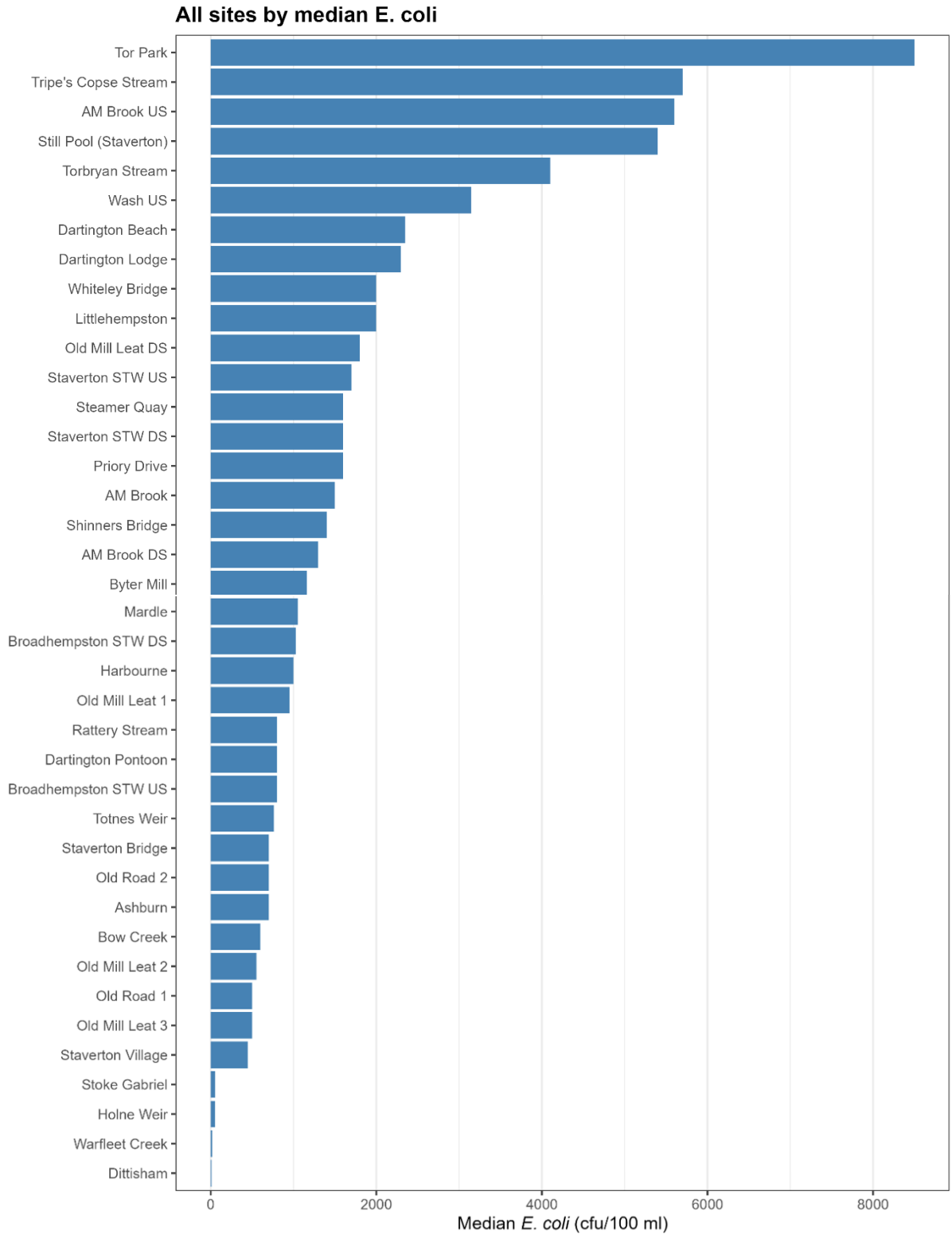

Figure 3. Median *E. coli* concentrations in cfu/100ml of all sampling sites monitored by Friends of the Dart and the Environment Agency. Medians have been calculated from all available monitoring data under both wet and dry weather conditions.

4. Tributary-Level Analysis

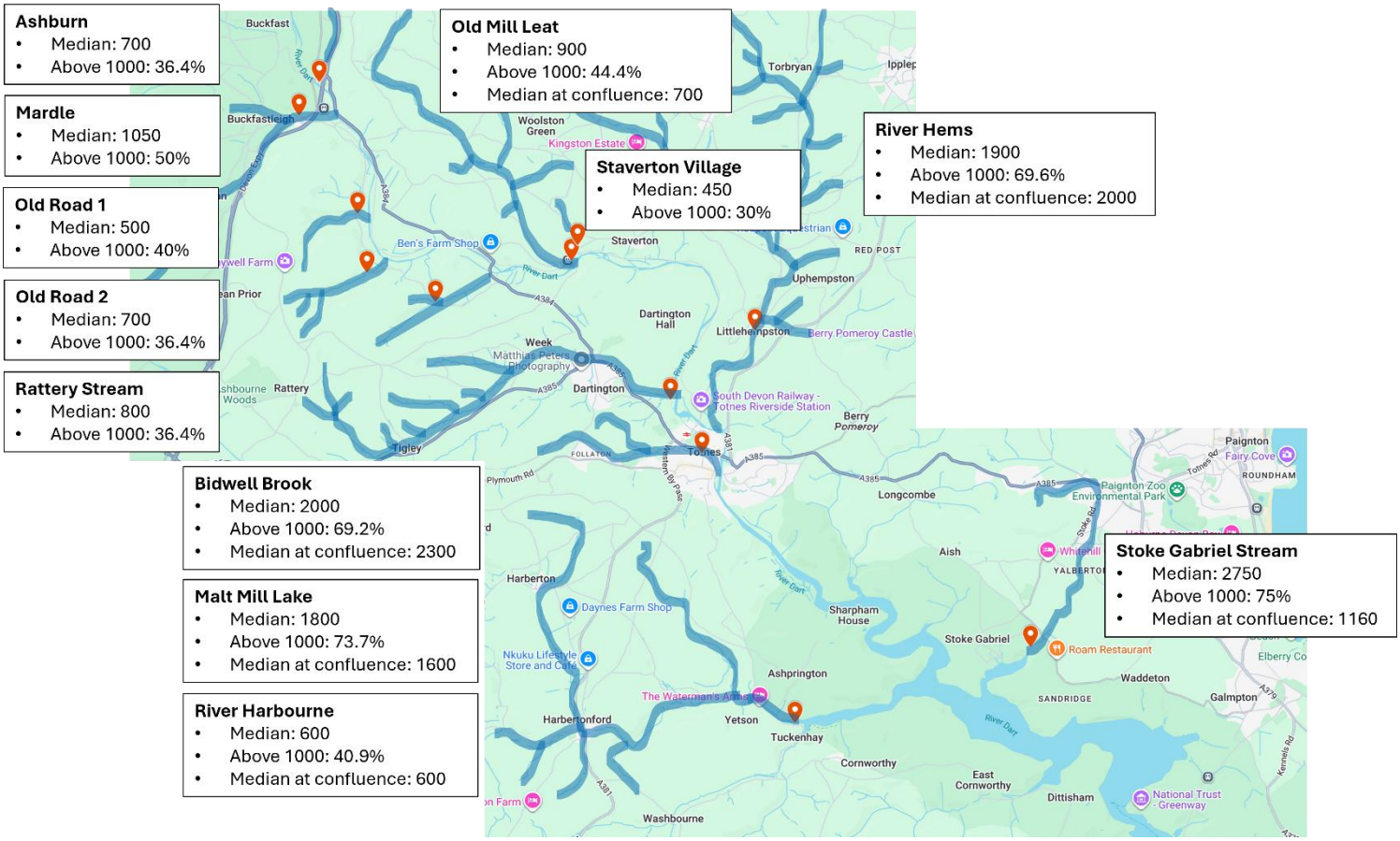

Figure 4. Summary of the bacterial loads of each of the Dart tributaries monitored by Friends of the Dart and the Environment Agency. Tributaries are highlighted in blue. The sampling site closest to the tributary confluence with the Dart are pinned in red. "Median" refers to the median *E. coli* concentration in cfu/100ml of all samples within the tributary. "Above 1000" refers to the percent of samples within the tributary that exceed the threshold for "poor" bathing quality (defined here as 1000 cfu/100ml for all tributary sites). "Median at confluence" refers to the median *E. coli* concentration in cfu/100ml at the sampling site closest to the confluence. Where "Median at confluence" does not appear, only one sampling site exists on that tributary, so the "Median" value represents our best understanding of the bacterial load of the tributary.

Tributary-level analysis was carried out using all available data from sites monitored by Friends of the Dart and the Environment Agency. Median *E. coli* concentrations were calculated for each tributary based on all sampling sites within its catchment.

The Stoke Gabriel Stream contributed the highest bacterial load to the main River, with a median *E. coli* concentration of 2750 cfu/100 ml and 75% of samples exceeding the threshold for "poor" bathing water quality (Figure 4). The River Hems also showed consistently high bacterial levels, with a median of 1900 cfu/100 ml and 69.9% of samples above the "poor" threshold. Similarly, Malt Mill Lake had a median concentration of 1800 cfu/100 ml, with 73.7% of samples exceeding the "poor" threshold.

The Bidwell Brook exhibited a median concentration of 2000 cfu/100 ml, with 69.2% of samples exceeding the threshold for "poor" water quality, while the River Mardle recorded a median of 1050 cfu/100 ml and 50% of samples above this level. The remaining tributaries—Old Mill Leat, Rattery Stream, Ashburn, Old Road 2, River Harbourne, Old Road 1, and Staverton Village—had median concentrations below the "poor" threshold (Figure 4).

Examining the median *E. coli* concentrations at the sampling sites closest to each tributary's confluence with the main Dart identifies the following as key tributaries of concern: the Bidwell Brook (2300 cfu/100 ml), River Hems (2000 cfu/100 ml), Malt Mill Lake (1600 cfu/100 ml), Stoke Gabriel Stream (1160 cfu/100 ml), and River Mardle (1050 cfu/100 ml) (Figure 4). These tributaries are therefore likely to contribute to elevated bacterial levels along the main River.

Analysis of overall summary statistics shows that several tributaries have high mean *E. coli* values and large coefficients of variation (CV), indicating substantial temporal variability and occasional high-concentration events that raise the mean above the median. Tributaries showing this pattern include the Old Mill Leat, Rattery Stream, Ashburn, Old Road 1 and 2, Staverton Village, and the River Harbourne (Table 5). This variability suggests that *E. coli* concentrations in these systems are strongly influenced by rainfall, with spikes occurring under wet weather conditions. Continued monitoring after rainfall events is therefore recommended to better understand the bacterial loads contributed to the main River by these tributaries after wet weather events.

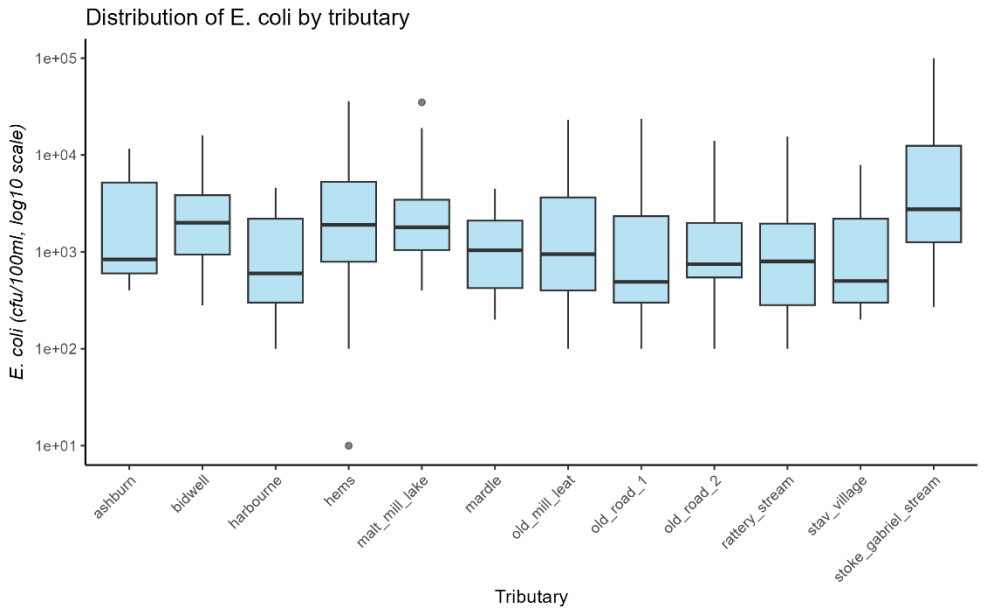

Figure 5. Distribution of *E. coli* concentrations in cfu/100ml of samples taken from each monitored tributary in the Dart catchment, represented in a boxplot using a log10 scale. Available data from Friends of the Dart and the Environment Agency are considered here.

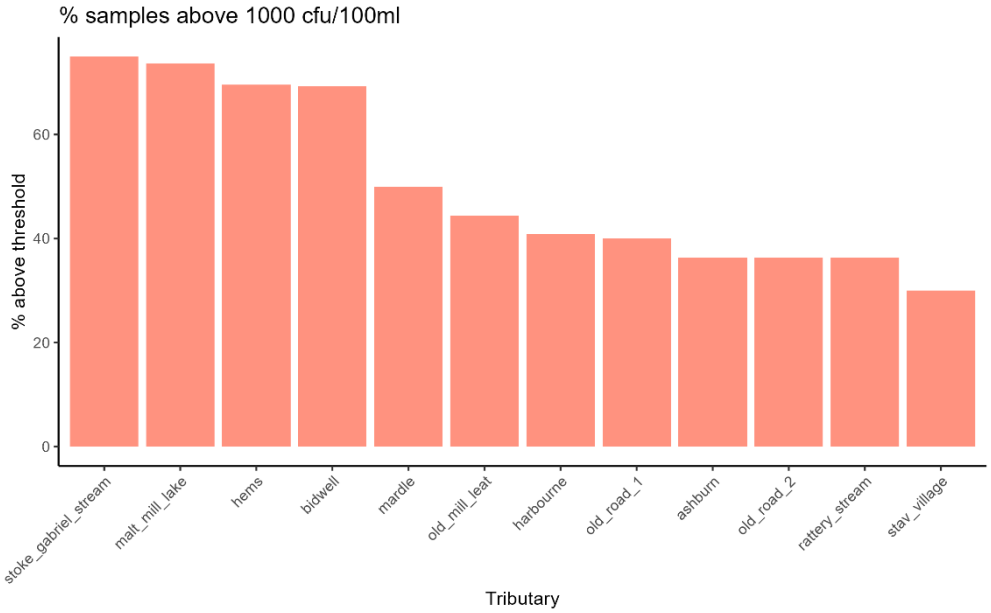

Figure 6. The percentage of samples taken from each monitored tributary in the Dart catchment that exceeded the threshold for "Poor" bathing water quality for non-tidal sites as defined by the Environment Agency (1000 cfu/100ml). Available data from Friends of the Dart and the Environment Agency are considered here.

5. South West Water EDM 2025 Analysis

This section presents analysis of Event Duration Monitoring (EDM) data for 2025 across the River Dart catchment. EDM records start and stop time of storm overflow discharges from Sewage Treatment Works, Pumping Stations, and CSOs. Data source was the SWW 2025 EDM Start Stop Storm Overflows XLS, available to download at: https://www.southwestwater.co.uk/environment/rivers-and-bathing-waters/waterfitlive/storm-overflow-map. The analysis aims to identify the highest impact assets by both frequency and duration of spills. Number of spills refers to the total number of spill events recorded in the monitoring period (January to June 2025 at the time of analysis), and spill duration refers to the cumulative hours of discharge over the monitoring period. All analysis was performed in RStudio. Spills with a duration ≤ 1 minute were presumed to be sensor errors and thus removed from the dataset prior to analysis.

The key findings are that Harbertonford STW was by far the poorest performing asset when considering spill duration (1465.7 hours), followed by Scorriton STW, Rattery STW, and Kilbury STW (Table 3; Figure 7A). In terms of number of spills, Totnes Town Pumping Station far exceeded other assets, recording 2143 spills between January and September 2025. Totnes STW and Mayors Avenue Pumping Station in Dartmouth also appear to be performing poorly, with 917 and 764 spill events recorded respectively (Table 3; Figure 7B). Further analysis of spill events per month revealed that peak spill activity occurred in January and February 2025 for the majority of assets. This may reflect increased rainfall events, however additional analysis comparing spill events to rainfall records is required to confirm this.

Table 3. The total spill duration (hours) and number of spills of all South West Water assets in the Dart catchment for which data is available. The monitoring period runs from January to June 2025. All spills with duration ≤ 1 minute were assumed to be sensor errors and removed from the dataset before analysis. Assets are ranked from highest to lowest considering spill duration.

Overflow Name	Spill Duration (hours)	Number of Spills
Harbertonford STW	1465.7	14
Scorriton STW	890.2	98
Rattery STW	840.3	28
Kilbury STW	693	95
Holne STW	627	53
Cornworthy STW	491.8	69
Torbryan Pumping Station	491.3	4
Dartington School No2 CSO	425.8	33

Broadhempston STW	363.2	14
Scout Hut CSO	303.3	21
Totnes STW	301.5	917
Princetown STW	239.2	64
Blackbrook North CSO	207.1	84
Denbury STW	147.7	110
Dartington C CSO	132	16
Ipplepen STW	129.7	177
Totnes Town Pumping Station	126	2143
Textile Mill CSO	118.4	65
Pear Tree Cross CSO	117.6	267
Stonepark Crescent CSO	95.8	46
Dittisham Main STW	90.6	61
Smith Street CSO	79.3	128
Townstal Tank CSO	71.7	8
Ferry Boat Pumping Station	51.1	350
Harberton STW	41.8	60
Bridgetown Steamer Quay CSO	40.9	36
Mayors Avenue Pumping Station	40.2	764
Staverton STW	40	6
Lower Ferry Pumping Station	33.5	33
Tor Park Pumping Station	28.8	13
Swallowfields CSO	28.6	29
31 Fore Street CSO	16.8	42
Ashprington STW	11.7	29
Quarry Close CSO	9.5	14
Mill Creek Pumping Station	8.4	6
Widecombe STW	7	12
Old Woollen Mill CSO	6.7	12
Darthaven Marina Pumping Station	4.9	84
Shinners Bridge CSO	4.9	9
St Lukes Church CSO	4.5	22
Kiln Road Pumping Station	3.6	5
St Katherines Way CSO	3.4	15
St Johns Terrace CSO	2	10

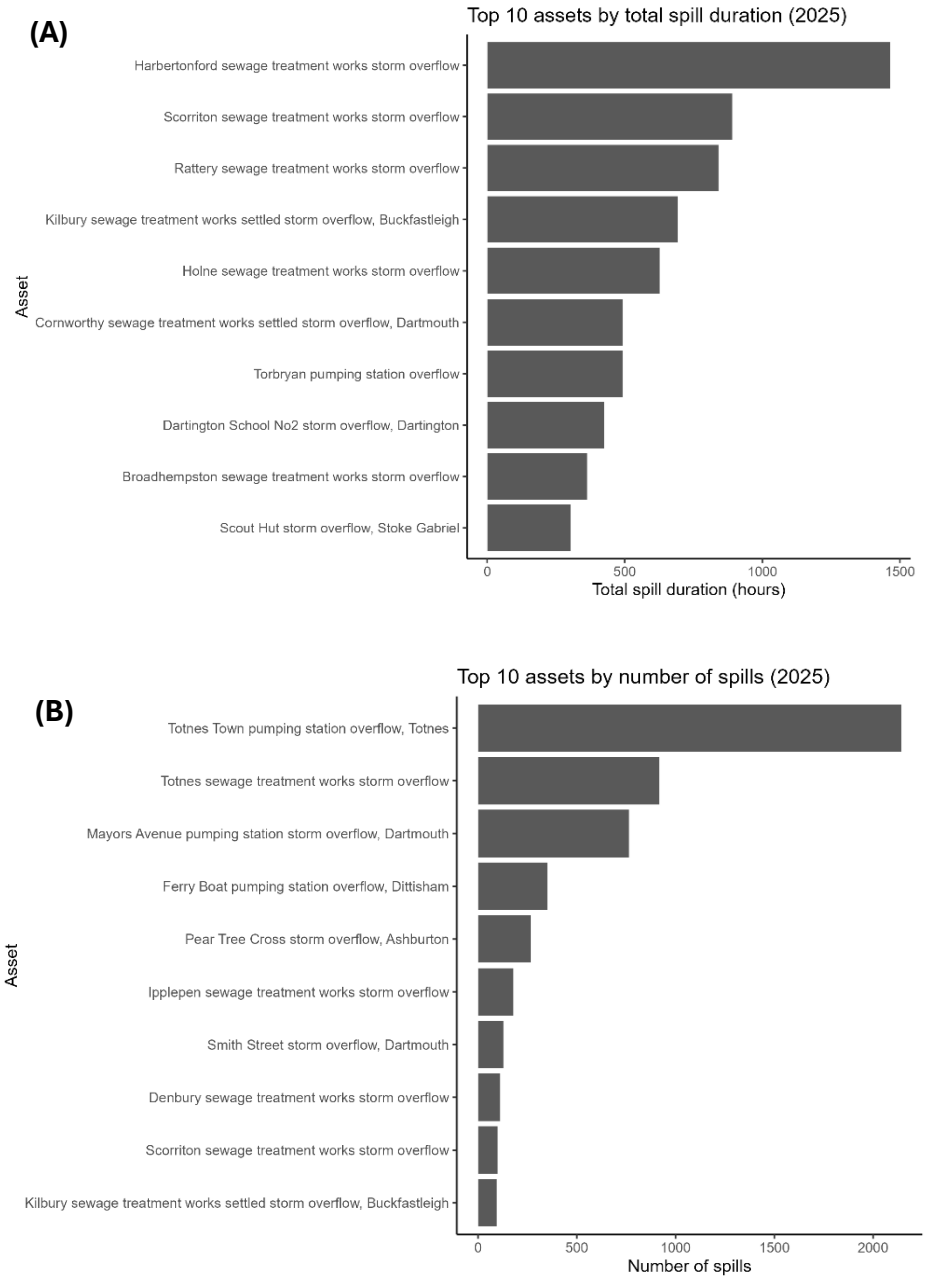

Figure 7. South West Water assets in the Dart catchment for which 2025 EDM data is available ranked by (A) Total Spill Duration; and (B) Total Number of Spills. The monitoring period runs from January to June 2025. All spills with duration ≤ 1 minute were assumed to be sensor errors and removed from the dataset before analysis. Assets are ranked from highest to lowest considering spill duration.

6. Recommendations and Next Steps

The findings from Friends of the Dart and the Environment Agency monitoring highlight key areas of concern and provide a strong evidence base for designing the winter sampling programme. The next phase of work should build on these results to refine understanding of pollution sources and strengthen the dataset ahead of the 2026 bathing season.

6.1 Targeted Investigations of High-Risk Tributaries

Monitored tributaries with consistently high or highly variable *E. coli* concentrations—particularly the Stoke Gabriel Stream, River Hems, Malt Mill Lake—should be prioritised for focused winter sampling. Investigations should aim to identify specific pollution inputs within these catchments, such as failing infrastructure, misconnections, or diffuse sources linked to land use. Targeted investigations should take place in the form of walkover surveys. Coordination with local landowners, the Environment Agency, and South West Water will be important to ensure findings can inform remedial action. Continued monitoring of the Bidwell Brook is recommended once the University of Plymouth finishes their data collection in Spring 2026.

6.2 Core Monitoring on the Main Dart

The following Community-Designated Bathing Sites on the main River should continue to be monitored twice per month under wet and dry conditions: Still Pool, Dartington Beach and Dartington Pontoon. The same sampling frequency is also recommended for Steamer Quay. This reflects the high usage of these sites by people interacting with the River, and the high bacterial concentrations evidenced in this data review.

Holne Weir and the following Designated Bathing Sites: Stoke Gabriel; Dittisham; Warfleet Creek, should be monitored at a lower frequency of one sample per month, reflecting the consistently lower bacterial concentrations evidenced. This will ensure continuity in the long-term dataset and help assess whether interventions or seasonal changes are influencing bacterial levels.

6.3 Wet Weather Sampling

Given the evidence that some tributaries show sharp increases in *E. coli* concentrations following rainfall, targeted wet weather sampling should be expanded to cover non-priority sites. This will support better understanding of how storm overflows, surface runoff, and agricultural activity impact water quality. Recommended wet weather sample sites are: Rattery Stream, Old Road 1, Old Road 2, and Staverton Village.

6.4 Summary of Revised Winter Sampling Strategy

In conclusion, the recommendations are that the following sites continue to be monitored twice per month under both dry and wet weather conditions:

- Mardle
- Ashburn
- Wash US
- OML DS
- Broadhempston STW US and DS
- Tripes Copse
- Torbyran Stream
- Ambrook US and DS
- Littlehempston
- Staverton Bridge
- Still Pool
- Dartington Beach
- Dartington Pontoon
- Steamer Quay
- River Harbourne
- Bow Creek

The following sites should be monitored at a reduced frequency of once per month, aiming to capture *E. coli* concentrations under both dry and wet weather conditions:

- Holne Weir
- Stoke Gabriel
- Dittisham
- Warfleet Creek

The following sites should be monitored once per month under wet weather conditions only:

- Rattery Stream
- Old Road 1
- Old Road 2
- Staverton Village

Together, these next steps will ensure that Friends of the Dart continues to build a strong evidence base to guide action on water quality, inform engagement with regulatory partners, and help protect the health of the River Dart and its tributaries year-round.

7. Supplementary Material

Table 4. Summary statistics for all monitoring sites in the Dart catchment, considering data from Friends of the Dart and the Environment Agency. *E. coli* concentrations are in cfu/100ml. Analysis for Broadhempston STW DS, Littlehempston, Steamer Quay, Stoke Gabriel, Dittisham, and Warfleet Creek combines Friends of the Dart and Environment Agency data. Standard deviation is abbreviated to "SD"; coefficient of variation is abbreviated to "CV", and the percentage of samples exceeding the threshold for "poor" water quality is abbreviated to "% Exceeding Poor".

Site	Count	Mean	Median	SD	CV	First Sample	Last Sample	% Exceeding "Poor"
Tor Park	20	14710	8500	16278.4	1.11	06/05/2025	21/09/2025	100
Tripes Copse	9	8466.7	5700	9696.39	1.15	16/04/2025	24/09/2025	100
Ambrook US	11	6654.6	5600	5550.38	0.83	05/03/2025	24/09/2025	81.82
Still Pool	1	5400	5400			24/09/2025	24/09/2025	100
Torbryan	9	12033	4100	11136.88	0.93	16/04/2025	24/09/2025	100
Wash US	6	3700	3150	3854.35	1.04	14/06/2025	23/09/2025	66.67
Dartington Beach	12	2675	2350	2085.07	0.78	05/03/2025	24/09/2025	66.67
Dartington Lodge	31	3434	2100	4207.07	1.23	30/10/2024	24/09/2025	67.74
Littlehempston	25	3818.8	2000	5453.76	1.43	02/05/2025	24/09/2025	84
Whiteley Bridge	19	3326.3	2000	3455.93	1.04	02/05/2025	24/09/2025	68.42
OML DS	6	2916.7	1800	3838.45	1.32	14/06/2025	23/09/2025	66.67
Staverton STW US	9	2455.6	1700	1952.63	0.8	09/04/2025	11/09/2025	66.67
Priory Drive	19	4931.6	1600	8508.79	1.73	02/05/2025	24/09/2025	78.95
Staverton STW DS	9	2455.6	1600	1910.57	0.78	09/04/2025	11/09/2025	66.67
Steamer Quay	29	2844.1	1600	3454.64	1.21	05/03/2025	24/09/2025	89.66
Ambrook	19	2676.8	1500	4794.97	1.79	02/05/2025	24/09/2025	63.16
Shinners Bridge	19	3056.8	1400	3975.67	1.3	02/05/2025	24/09/2025	63.16
Ambrook DS	11	5127.3	1300	7349.43	1.43	05/03/2025	24/09/2025	63.64
Byter Mill	20	10253	1160	24809.85	2.42	06/05/2025	21/09/2025	50
Mardle	10	1480	1050	1411.7	0.95	05/03/2025	23/09/2025	50
Broadhempston STW DS	30	3921	1030	7825.97	2	05/03/2025	24/09/2025	50
Harbourne	11	1445.5	1000	1432.04	0.99	05/03/2025	23/09/2025	45.45
OML 1	6	2266.7	950	3736.13	1.65	14/06/2025	23/09/2025	50
Broadhempston STW US	11	3190.9	800	4110.34	1.29	05/03/2025	24/09/2025	45.45
Rattery Stream	11	2300	800	4458.92	1.94	05/03/2025	23/09/2025	36.36
Totnes Weir	17	1264.1	760	1166.99	0.92	02/05/2025	24/09/2025	41.18
Dartington Pontoon	23	1283.3	755	1509.8	1.18	30/10/2024	24/09/2025	26.09
Ashburn	11	2890.9	700	3837.3	1.33	05/03/2025	24/09/2025	36.36
Old Road 2	11	2118.2	700	4023.88	1.9	05/03/2025	23/09/2025	36.36
Staverton Bridge	11	4963.6	700	7560.06	1.52	05/03/2025	24/09/2025	36.36
Bow Creek	11	1127.3	600	1355.8	1.2	05/03/2025	23/09/2025	54.55
OML 2	6	1316.7	550	1819.25	1.38	14/06/2025	23/09/2025	33.33
Old Road 1	10	3270	500	7204.48	2.2	05/04/2025	23/09/2025	40
OML 3	6	2583.3	500	3764.79	1.46	14/06/2025	23/09/2025	33.33

Staverton Village	10	1550	450	2434.59	1.57	05/03/2025	03/09/2025	30
Stoke Gabriel	22	166.09	55	222.52	1.34	05/03/2025	24/09/2025	9.09
Holne Weir	10	250	50	618.69	2.47	05/03/2025	23/09/2025	10
Warfleet Creek	20	69.8	18	133.06	1.91	02/05/2025	24/09/2025	5
Dittisham	23	58.52	10	163.86	2.8	05/03/2025	24/09/2025	4.35

Table 5. Summary statistics for all monitored tributaries in the Dart catchment, considering data from Friends of the Dart and the Environment Agency. *E. coli* concentrations are in cfu/100ml. Standard deviation is abbreviated to "SD"; coefficient of variation is abbreviated to "CV", and the percentage of samples exceeding the threshold for "poor" water quality is abbreviated to "% Exceeding Poor".

Tributary	Count	Min	Mean	Median	Max	SD	CV	First Sample	Last Sample	% Exceeding "Poor"
Stoke Gabriel Stream	40	270	12481.25	2750	100000	20834.19	1.67	06/05/2025	21/09/2025	75
Bidwell Brook	39	280	3068.72	2000	16000	3285.34	1.07	02/05/2025	24/09/2025	69.23
Hems	125	10	4905.28	1900	36000	7215.73	1.47	05/03/2025	24/09/2025	69.6
Malt Mill Lake	38	400	4128.95	1800	35000	6457.04	1.56	02/05/2025	24/09/2025	73.68
Mardle	10	200	1480	1050	4500	1411.7	0.95	05/03/2025	23/09/2025	50
Old Mill Leat	45	0	3037.78	900	23000	4684.13	1.54	05/03/2025	24/09/2025	44.44
Rattery Stream	11	100	2300	800	15500	4458.92	1.94	05/03/2025	23/09/2025	36.36
Ashburn	11	0	2890.91	700	11600	3837.3	1.33	05/03/2025	24/09/2025	36.36
Old Road 2	11	0	2118.18	700	14000	4023.88	1.9	05/03/2025	23/09/2025	36.36
Harbourne	22	0	1286.36	600	4600	1370.54	1.07	05/03/2025	23/09/2025	40.91
Old Road 1	10	100	3270	500	23500	7204.48	2.2	05/04/2025	23/09/2025	40
Staverton Village	10	0	1550	450	7900	2434.59	1.57	05/03/2025	03/09/2025	30