



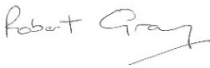
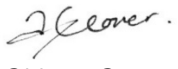
Citizen Crane: Year 11 Report

October 2025

Working in partnership



Report title	
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This document has been created for the purposes of Thames Water's Smarter Water Catchments initiative. Although Thames Water remain the primary client, this document will be made available to all partners associated with the project, in line with the true partnership ethos of the project. The work detailed in this report is based on the information available at the time. Any findings and/or recommendations will inform future phases of the project. We welcome all feedback to azra.glover@zsl.org

Executive Summary

Introduction

1. This report sets out the findings of Year 11 of the Citizen Crane programme. In the first few years of this programme we focused on collecting and analysing monthly water quality and ecological data sets collected by citizen scientists and using these to better understand the river ecosystem and target interventions that might improve it.
2. This work has continued over the last eleven years and has also expanded to encompass a much wider array of citizen science-based data collection and engagement - particularly as part of the Smarter Water Catchments programme that started in April 2020.
3. The Citizen Crane volunteers have continued to provide high quality data for the programme and have extended their range of activities to include geomorphology, wetland monitoring, water vole and mink monitoring, as well as a third Outfall Safari.

Findings

4. For many years, our annual Citizen Crane reports recorded variations in river conditions but without seeing any significant or sustained improvements. This was despite the removal of hundreds of misconnections as part of the TW Surface Water Outfall Programme (SWOP). This changed in Year 9 (2022-23) with a significant improvement in RMI and water quality scores, combined with a positive shift in the river's Water Framework Directive classifications. These improvements appear to have been largely sustained and developed over the last two years.
5. The data from Year 11 are less definitive than Year 10, although there are still a few sites where RMI scores have improved. Water quality data from the EA and sondes indicate that the river condition is at least remaining stable, although there remains evidence for occasional releases of sewage throughout the system.
6. The Surface Water Outfall Programme (SWOP) data indicate that large numbers of misconnected properties remain across the catchment - with over 500 identified over the last five years, compared to 470 in the previous five years. In addition, the team has identified and rectified at least 89 network problems over the last five years.
7. Whilst these are impressive numbers, and indicate the amount of pollution being removed from the system by the SWOP, there remain concerns that a comparable number of new problems may be added to the system every five years. This is based on the continuing issues being identified both by the SWOP teams and the outfall safaris.
8. The Citizen Crane team recommends that a more systematic approach to the review and analysis of these data is undertaken to gain a better understanding of the scale of the problem and whether this is being reduced or not. Recent data from the GLA, indicating the Crane and Brent may be hot spots for misconnections across London, serves to illustrate the benefits of more data assessment.
9. The lack of progress with road run-off treatment is a consistent frustration. The project team remains hopeful that, as improvements are delivered elsewhere, this will lead to progress with some of the more chronic road pollution sources. There have been recent indications that a long-proposed wetland interception scheme for the M4 in Cranford Park may be moving forwards.

10. This is particularly important given recent work by the Centre for Ecology and Hydrology (CEH) that indicates heavy metals such as copper and zinc (prevalent in road run-off) may be the most critical to the health of river systems. We are hoping to continue investigating the issue of heavy metals through the Citizen Crane programme.
11. The most encouraging data this year are from small scale river restoration works around the catchment. These have shown that improving river geomorphology (alongside coppicing of shading riverside vegetation) can transform the value of the local ecosystem. Evidence includes the development of marginal and submerged vegetation, the creation of new nurseries for fish development and much improved invertebrate counts (RMI scores).
12. We are hopeful that these small-scale schemes can be expanded over the next few years and improvements will be delivered at a catchment scale as a result. This will require continued long-term funding as well as engagement and development of community-based volunteer programmes and the delivery of further training and employment schemes linked to river restoration and management. This is likely to be the focus of the team and the wider partnership over the next five years.
13. One of the major positive developments over the last eleven years has been the increase in partnership-based working across the catchment to identify issues and deliver projects to resolve them. Representatives of the various groups - EA, TW, Local Authorities, community-based partners and others - are becoming more familiar with each other, leading to a good level of trust and understanding being developed, and this has been incredibly helpful when putting together project proposals and then delivering upon these opportunities.
14. Public engagement has continued to expand. This has helped to grow and sustain the volunteering efforts of the Citizen Crane teams as well as engaging a wide audience through our social media. A major communications initiative launched through Citizen Crane has helped to raise the profile of misconnections across the capital with articles on the front page of regional press and the TV news.
15. We remain hopeful that these and other initiatives will enable the Crane Valley to reach “Good Ecological Status” over the next five years. This would be a major achievement for an urban river system with a full range of associated challenges.

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1 INTRODUCTION

This report sets out the findings of Year 11 of the Citizen Crane programme, including a review of citizen science data for the period from April 2024 to March 2025. Citizen Crane started in the Crane catchment in west London in 2014, following major pollution incidents in 2011 and 2013. A core project team of three organisations: Friends of the River Crane Environment (FORCE), Frog Environmental and Zoological Society of London (ZSL) came together to set up the programme, and they have continued since. The team is supported by a steering group including Thames Water (TW), The Environment Agency (EA) and Crane Valley Partnership (CVP).

Core Citizen Crane monitoring includes monthly River Monitoring Initiative (RMI) sampling at up to 16 sites, water quality sampling (from 2014 to 2020) and the outfall safari (delivered every three years since 2016). The scope of Citizen Crane has grown and evolved over the last five years in response to the Smarter Water Catchment (SWC) programme. The work now includes a wide range of other citizen science activities and is co-ordinated by a Citizen Crane Officer, appointed by ZSL in 2021.

Annual Citizen Crane reports have been produced since 2015, and all the Citizen Crane reports can be found in the CVP Library: <https://www.cranevalley.org.uk/project-archive-library/>.

This Year 11 Citizen Crane report presents:

- Core Citizen Crane data collected between April 2024 and March 2025
- An outline of other work related to water quality undertaken by the Citizen Crane team and our Crane Valley partners
- Conclusions from a review of these data sets

This is a summary report and further information can be found in the other SWC reports referenced, many of which are also held in the CVP Project Library.

2 CITIZEN CRANE CORE INVESTIGATIONS

2.1 River Monitoring Initiative

The River Monitoring Initiative (RMI) is a national methodology used for detecting and reporting pollution events and assessing the ecological condition of a river system through up to eight groups of invertebrates, measured and scored using a logarithmic scale, and collected by standard three-minute kick sampling. Trends in RMI scores can be used as a proxy for changes in water quality, although they are also indicators of changes to habitat quality/suitability for different species and other variables such as seasonality, light levels, silt and flow rates.

The Citizen Crane volunteer teams have been carrying out RMI assessments at up to 16 sites every month over the eleven year period from April 2014. The main catchment map, including the key monitoring locations, is shown in Figure 2.1. This section of the report reviews the RMI findings from last year (April 2024 to March 2025) and presents these, alongside a summary of the long-term data set, to identify any emerging trends. The data for 2024-25 for 10 long-term monitoring points, and three sites (1b to 1d) set up in 2023, are set out in Table 2.1 below. Note: trigger levels for pollution incident reporting were set with the agreement of the Environment Agency at the start of the monitoring.

Table 2.1: Summary of core RMI data April 2024 – March 2025

Site	Site number	No. of samples	No: of Trigger breaches	Mean	Trigger level
Headstone Manor Park	1	12	2	2.9	3
Yeading Walk	1b	9	0	3.2	2
Streamside Open Space	1c	12	N/A	3.4	N/A
Roxbourne Park	1d	12	3	3.5	3
Spider Park	2	8		2.9	3
Ickenham Marsh	3	11	0	3.6	3
Newton Park West	4	12	11	2.5	4
Yeading Brook Meadows	6	9	1	4.8	4
Minet Country Park	7	8	4	2.6	3

Cranford Country Park*	8				
Donkey Wood - Crane	9	12	0	7.6	3
Donkey Wood – DNR	10	12	0	9.1	7
Crane Park Island	11	10	3	9.0	8
Mill Road Weir	12	10	6	6.6	7

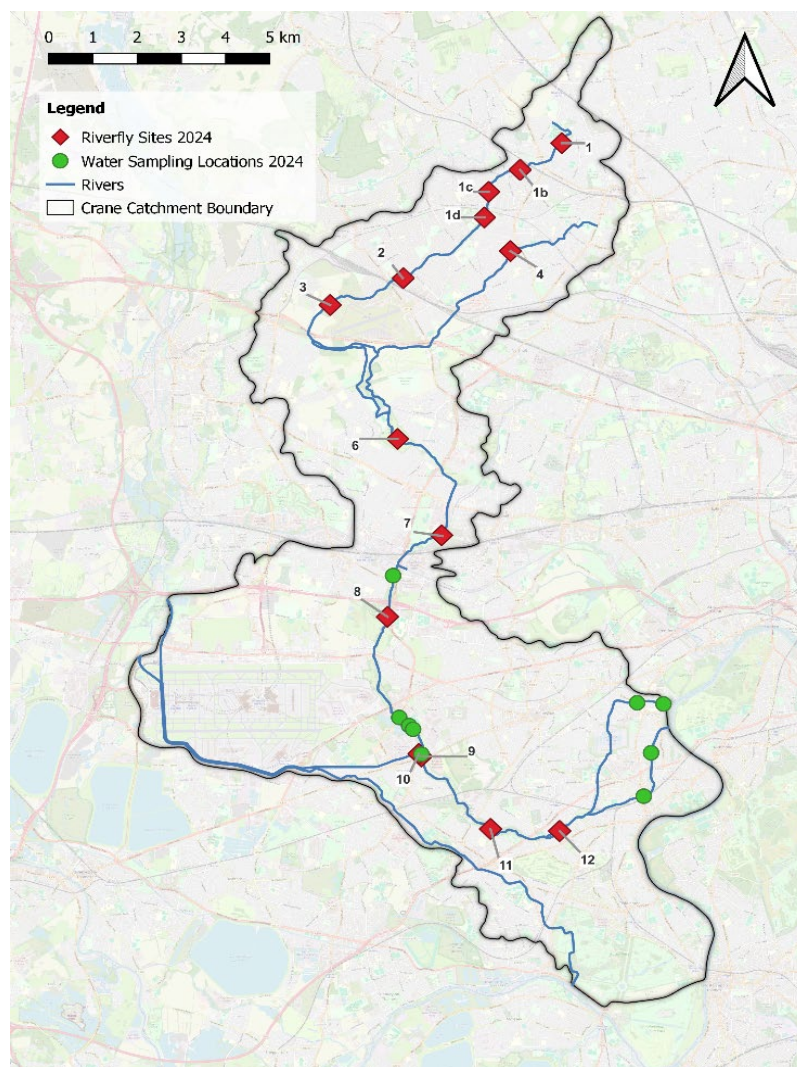


Figure 2.1: Catchment map with Riverfly Monitoring Initiative (RMI) monitoring locations and Environment Agency water sampling locations from year: April 2024 to March 2025.

The main findings from these data are as follows:

- The general trend follows that of previous years, with the lowest RMI scores at the top of both upstream sub-catchments, quite poor scores in the middle, and the river condition improving towards the base of the catchment. Note that The Riverfly Partnership state that an RMI score of 5 and below is indicative of a river system that is heavily adversely impacted.
- Trigger levels were breached regularly at both Newton Park West and Minet Country Park. This is in line with findings from previous years. These breaches are so regular that they are no longer reported to the EA. The causes are considered further in Section 2.3 below.
- Trigger levels were also breached regularly at Headstone Manor Park this year as per the previous year.
- Regular trigger level breaches were recorded this year at Spider Park. This may be due to an overgrowth of plants smothering gravels at the site as well as several blockages and pollution events upstream (ZSL Pers. Comm). Note that these data pre-date the development of the new river restoration site here (completed in April 2025).
- Regular winter breaches were also recorded this year at Mill Road Weir. More detailed analysis of the data here shows that the RMI scores in the winter reduced to around 4 for several months. Previously this type of response has been due to the impact of glycol from Heathrow - but last year the seasonal dips at the two upstream sites closer to the airport were much less significant than at Mill Road. The local team reported that the site has become increasingly over-shaded, and this may explain the reduced scores.

Figure 2.2 below shows the average annual RMI data at each site for each of the eleven years from 2014.

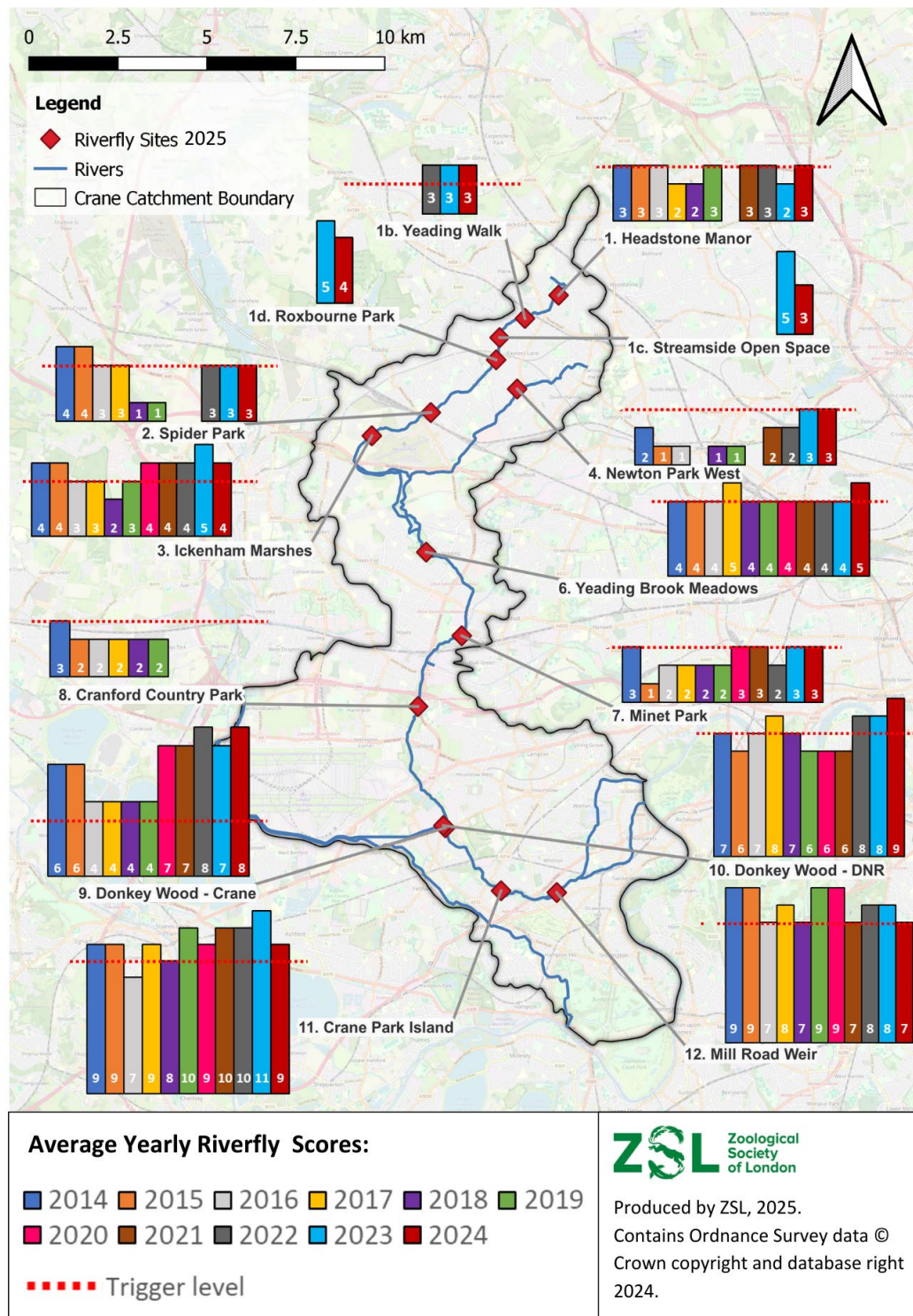


Figure 2.2: Catchment map with Riverfly Monitoring Initiative (RMI) monitoring locations, showing corresponding Riverfly scores and RMI trigger levels where available. 'Average Yearly Scores' are based on mean RMI data for each reporting year (April - March; e.g. 2024 represents April 2024 to March 2025).

The main findings observed from the long term RMI data are:

- The RMI data for the previous year (2023/24) showed a general improvement on the record over previous years at four sites, suggesting that water quality and other factors impacting RMI scores were improving.

- The data for 2024/25 are more mixed - with some sites (e.g. both Donkey Wood sites and Yeading Brook Meadows) showing continued improvement, whereas other sites (such as Crane Park Island and Mill Road) showing reduced average scores.
- The weather between April 2024 and March 2025 in London was generally warmer than average, with Spring 2025 being the warmest and driest in the UK for 50 years. The winter by contrast was very wet.
- ZSL have produced long term 10-year regression analysis for the RMI data (ZSL pers. comm), and seven of the ten long term sites show a significant positive trend, indicating an increase in average scores over time. Mill Road, Headstone Manor Park and Spider Park show weak negative trends indicating declines in average scores over time.

In broad terms, these data are slightly disappointing when compared with the encouraging signs from 2023/24 (as reported in the Year 10 report). Nevertheless, the long-term regression information indicates that there remains an overall trend of improvement across the ten long term sites. Further consideration of the data from individual sites is given below.

2.2 RMI Data from Individual Sites

The following findings are drawn from a review of the data alongside subjective reports and observations from individual sites:

- **Site 1: Headstone Manor Park.** In 2023 - 2024 there had been a significant pollution incident at this site leading to a reduced average score of 2. The score recovered to 3 last year. Nevertheless, given the major investment in the new Headstone Manor wetland, and the amount of misconnection work in the upstream drainage catchments, these continued low scores are rather disappointing. Note that the upstream wetland is also being sampled for invertebrates, albeit using a different wetland-based methodology (see ZSL report on Headstone Manor wetland) and has identified a rich assemblage. One explanation for the low scores at Site 1 (on the stream directly below the wetland), and supported by findings at other sites, is that these are caused by poor geomorphological conditions in the stream channel, exacerbated by over-shading of the site, as much or more than any ongoing water quality issues.
- **Sites 1b to 1d: Yeading Walk to Roxbourne Park.** These three sites have been added to the roster as part of the Yeading Brook Unbound project, with the enthusiastic engagement of local volunteer groups. This project is in the early delivery stage and aims to enhance the habitat quality of several kilometres of the Yeading Brook West. The low scores at present are recording the baseline condition before any improvement works.
- **Site 2: Spider Park.** The average score at this site remained at 3 for another year. The geomorphology of this site was well below optimal during 2024/25, with the main channel being deep, silty and over-shaded by trees. A river restoration scheme has recently been completed (in Spring 2025) to enhance the form and function of the stream through this site and these RMI scores are a valuable baseline with which to help assess the changes delivered by this work. Note that recent RMI sampling at the newly restored site (in summer 2025) reported a score of 6 (significantly higher than ever reported here previously) with the first caseless caddis found for example. This indicates the potential for local geomorphological improvements and reduced shading to enhance the ecological conditions and RMI scores here and elsewhere.
- **Site 4: Newton Park West.** A second successive score of 3, whilst still being low, is the joint highest annual mean score recorded over the eight years of data gathering at this site - which has only seen scores of 1 and 2 previously. This result may be indicative of cumulative improvements being

delivered by large scale investigations and improvement works in the upstream system (as set out in section 3.5 below), combined with the benefits derived from the local wetlands systems which have been in place over the last 7 years. Note however that there are still major unresolved pollution issues upstream of the site.

- **Site 5: Ickenham Marsh.** The score of 4 returns the site to its long-term average following the improvement to 5 for the first time last year.
- **Site 6: Yeading Brook Meadows.** This site has achieved a score of 5 for only the second time in the 11 year monitoring period.
- **Site 7: Minet Country Park.** The RMI score at this site has been low throughout the eleven years of monitoring and last year was its joint highest at 3. The low scores may be caused in part by the poor geomorphology within and local to the site, although there is also thought to be ground contamination locally which may be an additional local ecological issue.
- **Site 8: Cranford Park.** This site has not been monitored for several years. We remain hopeful that a monitoring team will be set up here and/or the adjacent Avenue Park in the near future. Note that there is a longer-term objective to enhance the river through Avenue Park - where it is very over-shaded - and an RMI site is proposed for the site as and when these plans move forwards.
- **Site 9: Donkey Wood: River Crane.** The scores at this site increased to between 7 and 8 over the last four years - with another 7 scored last year. This increase is believed to be at least partly a result of the new glycol treatment plant at the Heathrow Eastern Balancing Reservoir immediately upstream and a consequent increase in winter RMI scores. The full data set is plotted in Figure 2.3 and shows that (a) there has been an improvement in winter minimum scores and (b) an overall improvement in scores over the last four years. This may be due to the invertebrate diversity and abundance throughout the year benefitting from no longer being subject to the winter impacts from Heathrow.

It is interesting to note that the Donkey Wood Crane site is upstream of the confluence with the Upper Duke's River. Our working assumption over recent years had been that the input from the Upper Duke's River (a water transfer from the Chalk fed River Colne to the west) is a major benefit to the lower parts of the river and significant improvements may not be possible upstream of the confluence. These recent data from Site 9 are very encouraging and indicate that the better ecological conditions seen downstream of the confluence may also be possible in the upstream parts of the catchment. Note that sampling Site 9 is wide and shallow, with a high flow velocity, a gravel bed and dappled sunlight. This is different from the form of much of the rest of the upstream corridor - which is often deep, slower moving, silty and/or over-shaded. The pilot investigations of river restoration works in the upstream catchment are therefore of particular interest – and may reveal that there is greater scope for ecological improvement than previously envisaged.

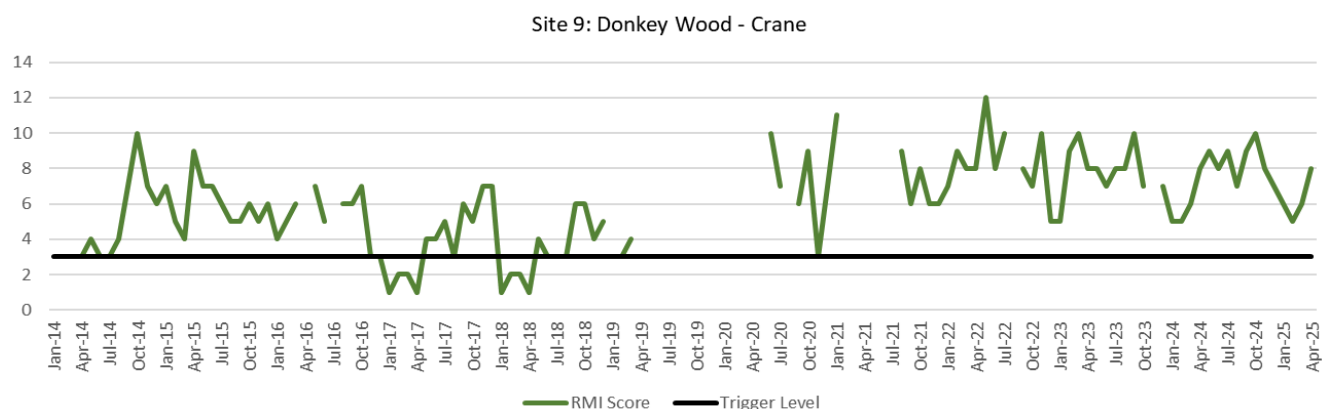


Figure 2. 3: 2014 - 2025 Monthly RMI data for Site 9

- **Site 10: Donkey Wood: Upper Duke of Northumberland's River.** Last year's RMI score of 9 was the highest over the last eleven years. The Upper Duke of Northumberland's had suffered from summer low flows at various times over the period up to 2023. Over the last two years the summer flows appear to have returned to normal, following work around the upstream offtake from the River Colne. These high scores support this assumption and reflect the continued high value contribution of this inflow to the river downstream.
- **Site 11: Crane Park Island.** Last year's score of 9 was a reduction compared to the high score of 11 in the previous year - but this site remains the best performing along the Crane Valley. Comparisons with other rivers across London (see the data from the Citizen Crane Year 9 report) indicate it may be at least equivalent to the highest anywhere else in Greater London.

The detailed data in Figure 2.4 below show a clear step change in the scores around 2021 - though not as marked as at the Donkey Wood site upstream. This may also be explained by the beneficial impact of the new glycol treatment works at Heathrow. There have also been, over the last two years, improvements to the ecological condition of around 500 metres of river channel through Little Park and Pevensey Nature Reserve several hundred metres upstream of this site (as discussed in Section 3.8 below).

There is a reduction in the scores over the winter period 2024/25 below the trigger level. No specific pollution issues were recorded during this time.

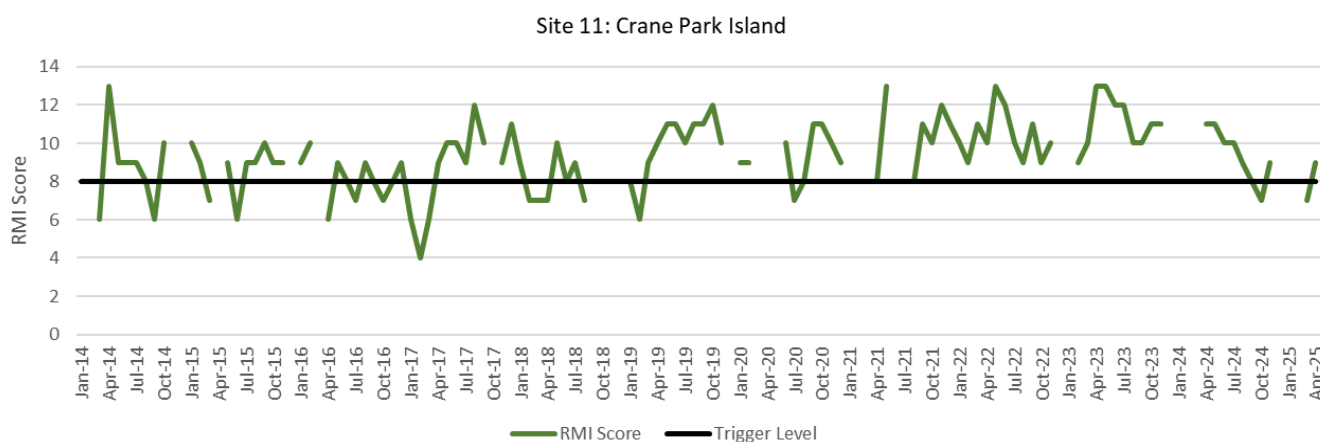


Figure 2.4: 2014 – 2025 Monthly RMI data for Site 11

- **Site 12: Mill Road.** Last year's RMI score of 7 was at the low end of scores for this site. The team at this site suspect that the score may be compromised by an increased level of shading from ivy clad trees and associated vegetation on the riverbank. As a result, there is no in-stream vegetation at this site, whereas there is plenty in the unshaded reach immediately upstream. There are plans to remove some of this shading in the coming winter and it will be interesting to see if this benefits the RMI scores at the site.

The detailed plot in Figure 2.5 reveals there was a significant dip in scores over the winter period and below the trigger level. There were no obvious signs of pollution identified by the team and the dip is consistent with the data for Site 11 upstream, indicating it may be due to the high flows experienced during this period.

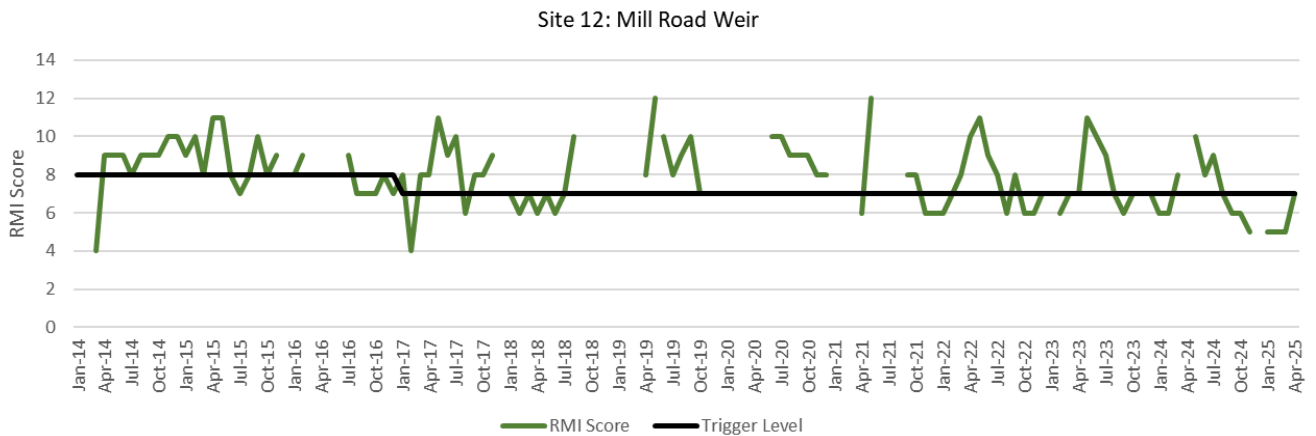


Figure 2.5: 2014 – 2025 Monthly RMI data for Site 12

The RMI methodology has also been applied at river restoration pilot sites across the catchment, providing an ecological baseline in advance of improvement works. Ongoing monitoring will be used to assess any impacts from the works.

One of the most exciting findings this year has been flat bodied mayflies. The first find was at the Rifle Club river restoration site (as discussed below). Further individuals have subsequently been recorded at Site 9 and Site 12 in August and September 2025 (see the photo in Figure 2.6 below). This species is indicative of high-quality conditions and will be a useful indicator of any further changes in the years to come.



Figure 2.6 Flat bodied mayfly - as found in Summer 2025 at the Rifle Club site

One consideration for the lower Crane sites is the amount of dog activity in the river. Several hundred dog owners use Crane Park every day and many of them encourage their dogs to go into the river. The Mill Road site is a particularly popular spot for dog use, and many dogs also use the Crane Park Island location. By contrast the Donkey Woods site has less dog use and the Rifle Club site (due to fencing) has no dog use.

Dogs disturb the riverbed and can also carry insecticides as a flea treatment. The first dedicated dog dip was installed in Kneller Gardens last year and two further dog dips are proposed in Crane Park. These are intended to influence where dogs can access the river and thereby reduce sedimentation and associated disturbance from more sensitive areas. Controls on dog access to the river elsewhere (by the use of dead hedging and associated planting for example) are being implemented in association with these new features and it will be interesting to see how this affects dog activity locally.

2.3 Water Quality Data

Data for the First Six Years of Citizen Crane

Over the first six years of the Citizen Crane programme, volunteers collected monthly water samples and measured the flow rate at each of the RMI sites. The samples were analysed in Thames Water laboratories for ammonia and phosphate concentrations, and these data were used to build up a picture of the organic pollution concentrations and loadings across the main catchment.

A plot was produced that showed concentrations and loadings with distance down the catchment for each of the first six years of the project. The main findings were:

- The highest concentrations of ammonia and phosphate were in the two upper tributaries of the catchment and concentrations reduced significantly with distance downstream.
- The loadings of both ammonia and phosphate varied with distance downstream and there were significant reaches towards the base of the catchment where loading reduced with distance. This indicated the ability of these parts of the ecosystem to remove organic pollutants.
- There was a significant input of phosphate from the Upper Duke of Northumberland's River - due to the loading from sewage works in the River Colne upstream of the Duke of Northumberland's River offtake.

These findings were fairly consistent over the six year period from 2014 to 2019 inclusive.

Change in Approach

No samples were taken in Year 7 due to COVID-19 restrictions. A decision was then made to discontinue the water quality sampling and rely on the Environment Agency water quality datasets, which had been significantly enhanced over the intervening period. This approach has continued over the last few years - and in the last three years we have also undertaken some comparative analysis of the EA data sets.

Phosphate and Ammonia Concentration Data

Figures 2.7 and 2.8 below show the entire Environment Agency datasets for phosphate and ammonia respectively for the last year (April 2024 to March 2025). Note that the monitoring locations are identified on Figure 2.1:

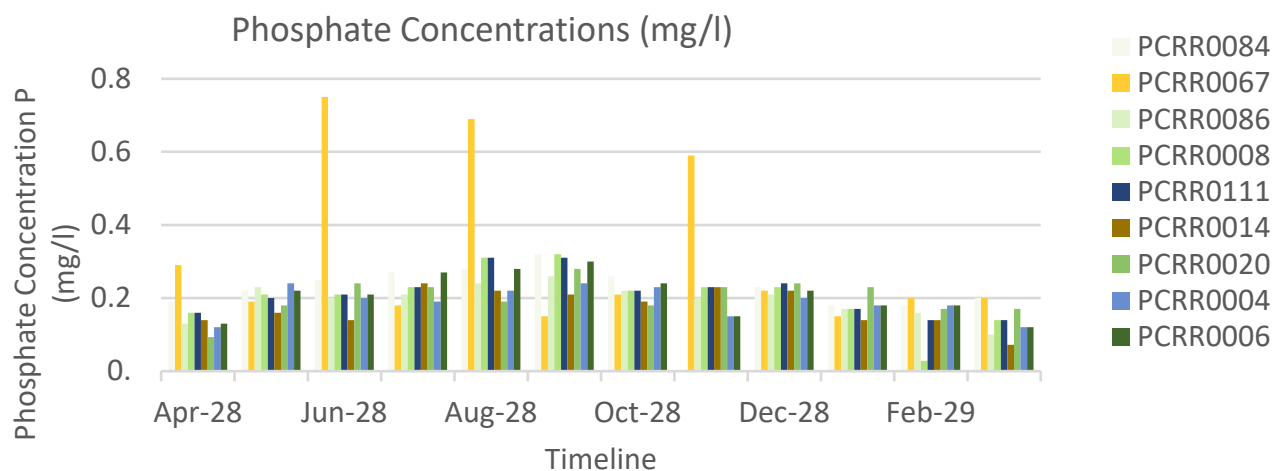


Figure 2.7: full dataset of phosphate concentrations for 2024 - 2025

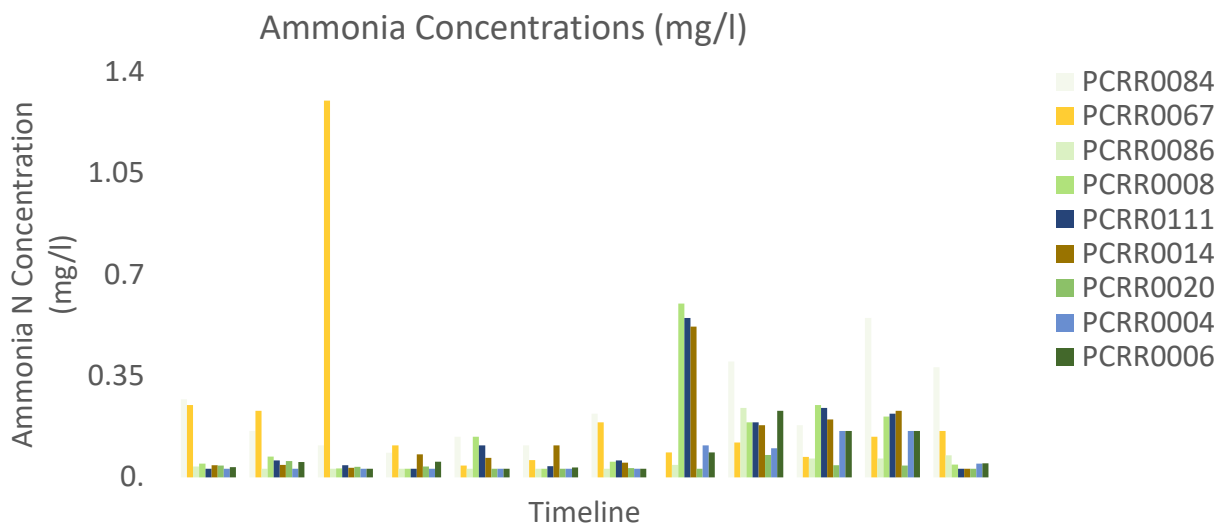


Figure 2.8: full dataset of ammonia concentrations for 2024 - 2025

The main points from these data are as follows:

- All the EA monitoring points are from the middle and lower parts of the catchment and therefore do not pick up the higher concentration issues in the upper reaches.
- The phosphate concentration data are very consistent between sites, and across the 12 month period, with a mean concentration of around 0.2 mg/litre. There are several spikes recorded (particularly in site 067) up to around 0.7 mg/litre.
- This suggests that the phosphate inputs are reasonably well distributed across the middle and lower parts of the catchment - although data from site 067 indicates there may be some significant intermittent sources upstream of this site.
- The ammonia concentration data show more variations. There is also a clear shift from November 2024 onwards at most sites with concentrations at or below 0.1mg/litre before this for the six months beforehand and shifting to an average of around 0.2mg/litre afterwards.

- Concentrations are significantly higher at the two sites above Donkey Wood and there are several notable peaks above 0.5mg/litre - with one sample at 1.2mg/litre.
- This suggests that there are generally higher ammonia concentrations upstream and, although most of the ammonia inputs are reasonably distributed across the catchment, there remain sporadic much higher inputs.

Figures 2.9 and 2.10 show the plot of median annual concentrations of phosphate and ammonia respectively for 2023 - 2024 (Year 10 in green) and 2024-2025 (Year 11 in blue) compared with the median data for Year 1 to 6 (in grey) from the Citizen Crane dataset:

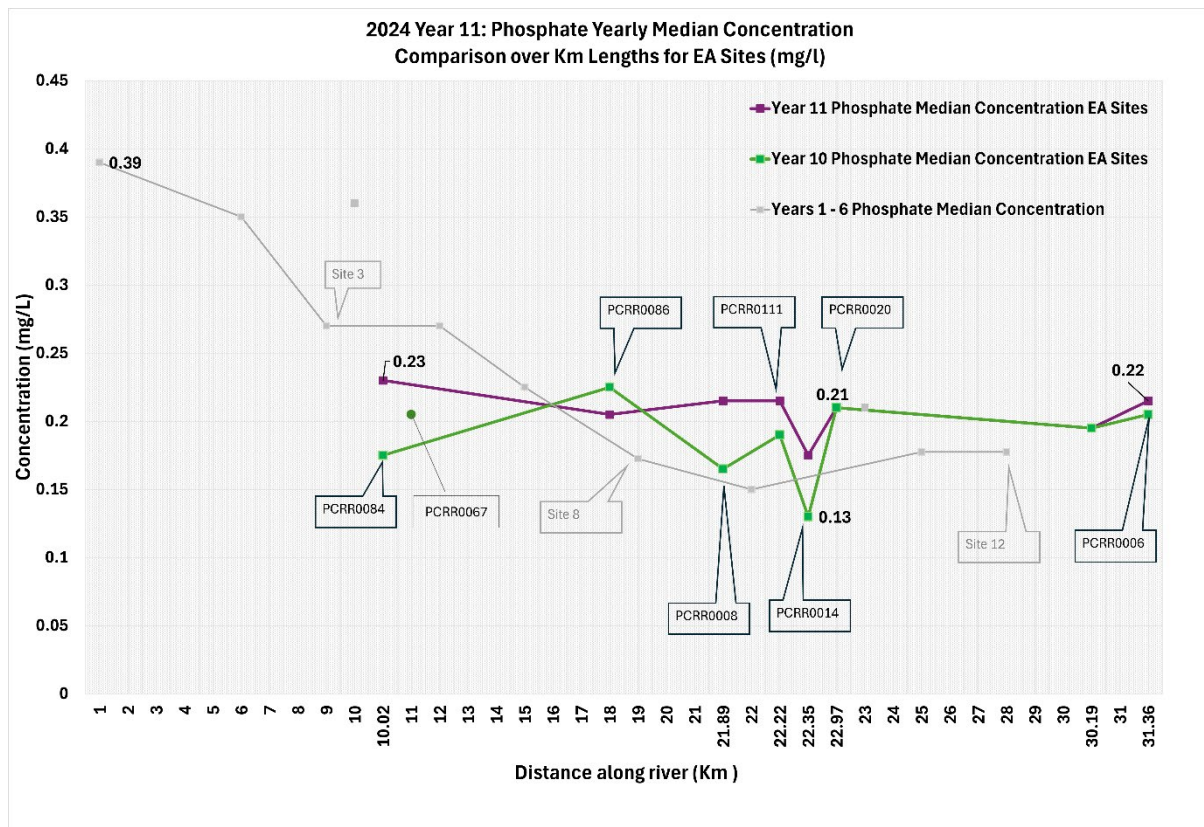


Figure 2.9: Comparison of Environment Agency phosphate data for Years 10 and 11 with Citizen Crane data for Years 1 to 6

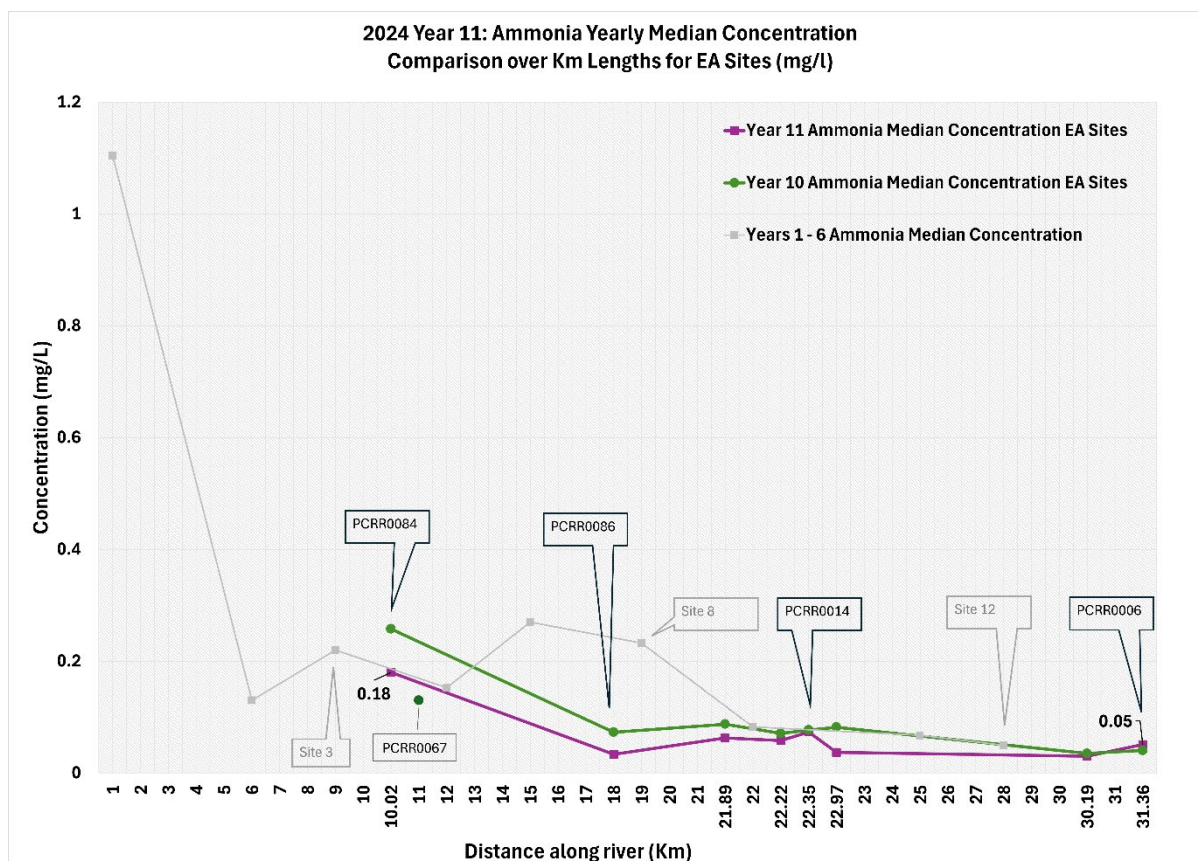


Figure 2.10: Comparison of Environment Agency ammonia data for Year 10 (2023 – 2024 in green) and Year 11 (2024 - 2025 in pink) with Citizen Crane data for Years 1 to 6 (in grey)

The key points from these two plots are as follows:

- Both datasets show broadly similar curves for the Citizen Crane data for Years 1 to 6 and the EA data for Year 10 and Year 11.
- The phosphate data are generally indicative of slightly higher concentrations in the lower reaches of the catchment over the last two years - at around 0.2 mg/l.
- The ammonia data are generally indicative of lower concentrations in the middle catchment and comparable levels in the lower catchment - at or below 0.1 mg/l.

In broad terms these data indicate that the water quality with respect to these two key indicators of organic pollution is largely unchanged over the eleven year period - at least in the middle and lower catchment.

The most encouraging data are for ammonia in the middle catchment, which appears to have reduced overall, although there is still evidence of occasional ammonia spikes, indicative of pollution pulses.

Note that the EA data do not have any data points for the upstream tributaries of the catchment where potentially the most water quality improvement work has been achieved.

Phosphate and Ammonia Loading

Figures 2.11 and 2.12 below show a plot of (a) the median loading data for phosphate and ammonia over the first six years of Citizen Crane (the blue line) and (b) spot loading median annual data for years 10 and 11. These latter data have been produced using the Environment Agency water quality data from two sites in combination with flow data from the EA gauging stations in the middle and lower catchment.

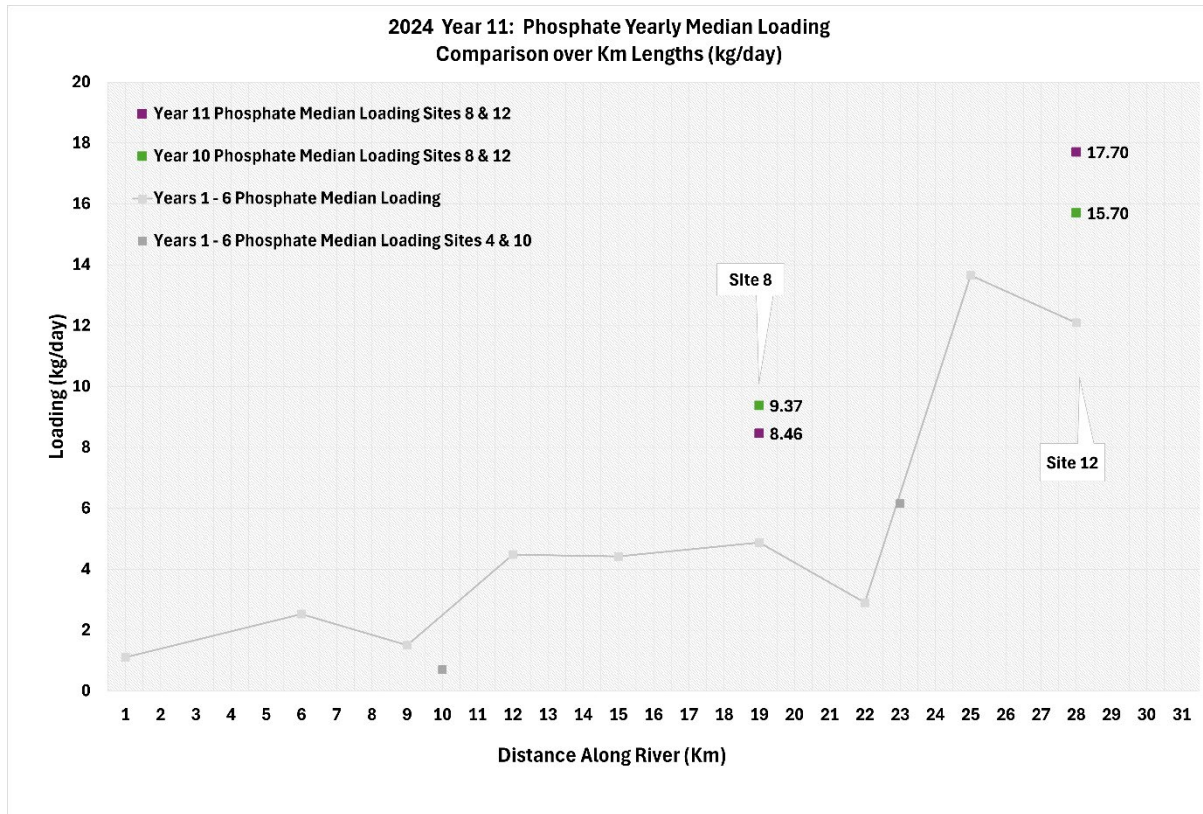


Figure 2.11: Phosphate loading data for the eleven year Citizen Crane period

The following points are made from the phosphate data:

- The phosphate loadings over the last two years are of the same order as each other and around 20 percent higher than the median curve for the previous six years. This may either be a real change or a function of the different dataset and methodology.
- The impact of the inputs from the Upper Duke of Northumberland's River continues to be evident - with the phosphate load being doubled over this reach of the river. Note that there are plans to introduce phosphate stripping at one or more of the sewage works in the Colne catchment upstream of the Upper Duke's River offtake and this could have a significant beneficial impact in reducing the nutrient loading in the Lower Crane valley.

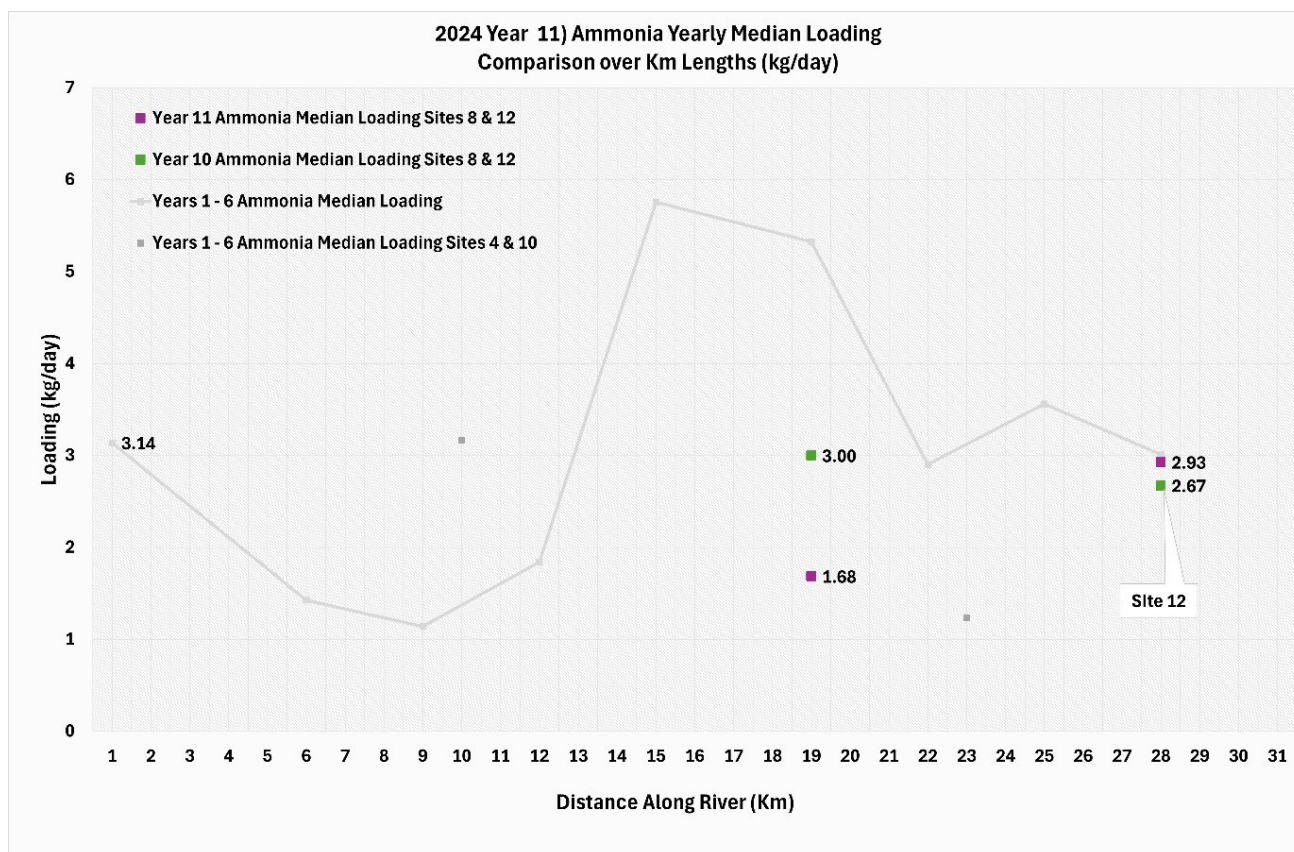


Figure 2.12: Ammonia loading data for the eleven year Citizen Crane period

The following points are made from the ammonia data:

- The ammonia loadings over the last two years are comparable to (to somewhat lower than) the median curve for the previous 6 years
- The data continue to reveal the ability of the lower reaches of the river to remove ammonia from the ecosystem

Heavy Metal Data

Recent investigations by the Centre for Ecology and Hydrology (as presented to the Thames Rivers Trust meetings in 2025) reviewed much of the UK's water quality data set to assess the relative importance of key parameters for controlling ecological value in rivers. The reviews identified that:

- River conditions across the UK have generally improved over the last 20 to 30 years
- The largest control on river condition is copper and zinc, followed by BOD and nickel
- The main change in river conditions has been due to the large-scale reduction in coal burning, leading to reduced inputs of heavy metals into the water cycle from polluted air
- Phosphate has relatively little influence on river condition

These findings appear to be well founded and are currently filtering through the UK water industry. We have therefore started a review of the available data on key metals in the Crane to see what these might reveal.

To date we have only been able to collate Environment Agency monitoring data for (a) Yeading Brook at Headstone Manor, (b) Crane at Northcote Road and (c) DNR at Kidds Mill. These data are plotted below.

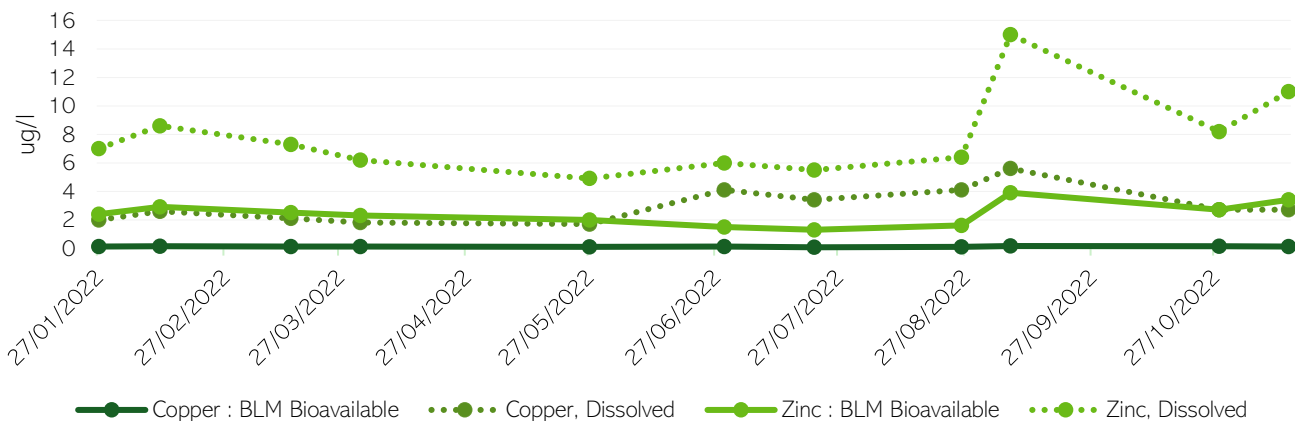


Figure 2.13: Dissolved and bioavailable (BLM) copper (Cu) and zinc (Zn) concentrations at Yeading Brook, Headstone Manor (2022).

Figure 2.13 above presents a short term data set from the upper reaches of the Yeading Brook at Headstone Manor. These data show dissolved zinc concentrations typically ranged between 5-10 µg/l, with a notable short-lived increase to around 15 µg/l in late summer. Dissolved copper remained consistently lower, between 2-4 µg/l, with bioavailable fractions, representing only a small proportion of the total. While this short dataset provides a useful early indication of conditions, it is too limited to confirm seasonal trends or long-term patterns. Continued monitoring through future years will be essential to determine whether the late-summer peaks are part of a recurring cycle or the result of one-off factors such as rainfall or surface runoff.

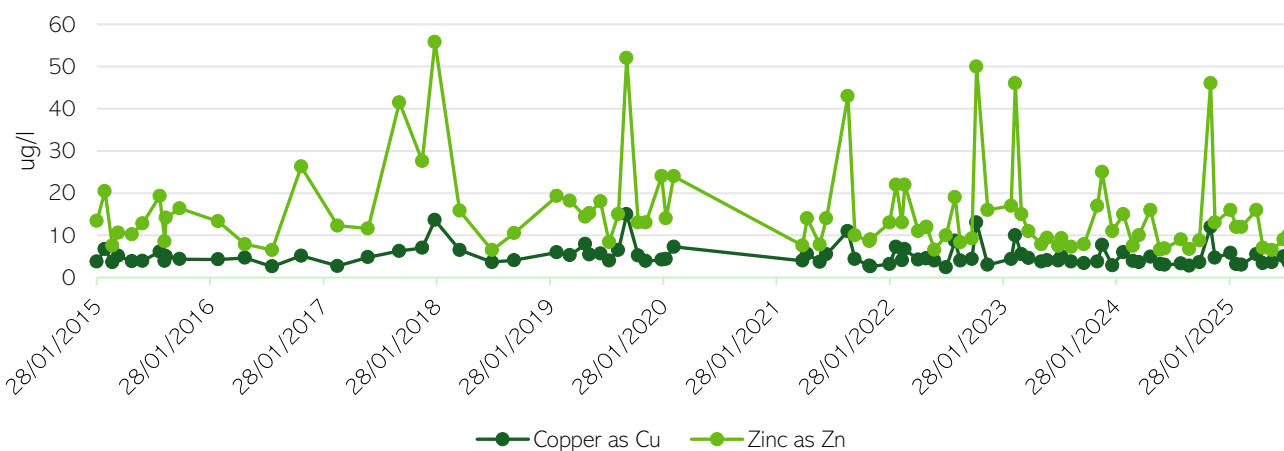


Figure 2.14: Total copper (Cu) and total zinc (Zn) concentrations at the Crane at Northcote Road, Isleworth, 2015-2025.

A longer term data set (2015 to 2025) was available for sites at the base of the Crane at Northcote Road and DNR at Kidds Mill (plotted as Figure 2.14), both sampling points lie within the tidal reach of the river where it joins the Thames. As such, results may be influenced by mixing with water from the tidal Thames, particularly during high tides or periods of saline intrusion. This influence likely contributes to some of the variability observed in both datasets.

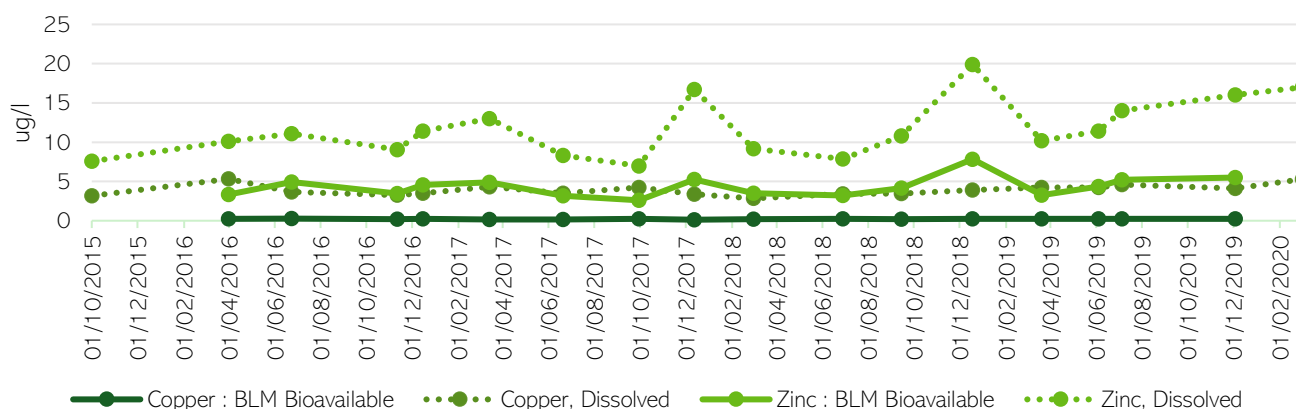


Figure 2.15: Dissolved and bioavailable copper (Cu) and zinc (Zn) concentrations at DNR, Kidds Mill (2015-2020).

At Kidds Mill, the longer dataset (2015-2020) shows dissolved zinc concentrations typically ranging between 8-15 µg/l, with periodic peaks exceeding 20 µg/l, particularly in 2018 and late 2019. Dissolved copper values are lower overall (2-5 µg/l), with bioavailable copper (Cu BLM) mostly measure at or below 0.3 µg/l, and bioavailable zinc generally around 3-5 µg/l. There is no strong long-term upward or downward trend, though some of the short-term peaks suggest localised influences such as runoff or storm events.

At the Crane at Northcote Road, metals have been measured as total zinc and total copper, rather than in their dissolved or bioavailable forms as used for WFD compliance assessment. This makes direct comparison with Environmental Quality Standards (EQS) difficult at this stage. Nevertheless, the 20-year dataset suggests no clear long-term trend, but instead a high degree of variability, with occasional sharp increases that could plausibly be linked to tidal effects, variations in flow, or episodic pollution inputs.

Going forward and given the potential value and importance of heavy metals as a control on biodiversity, we will investigate expanding both the collection and analysis of zinc and copper data across the catchment. This will help determine whether observed variations are consistent over time, reduce uncertainty around tidal influence, and strengthen the evidence base for assessing ecological implications under the WFD framework.

Other Water Quality Data

Concerns have been raised in recent years about other pollutants including:

- Chemicals of Emerging Concern (CEC): an investigation was carried out into CECs in the Crane Valley in 2023 and a report produced in 2024 <https://www.cranevalley.org.uk/wp-content/uploads/2025/06/Final-Project-Report-Chess-and-Crane-29.02.2024v2.pdf>
- PFA's: an initial review of the EA data indicates that there are low levels of PFA's in the river both upstream and downstream of the Heathrow site

Given the number and complexity of issues that are already within our remit, these issues have not been addressed further by the Citizen Crane team to date.

2.4 Outfall Safaris

'Outfall Safaris' are a volunteer supported means of evaluating the polluting potential of surface water outfalls across a river catchment. The first outfall safari in the UK was carried out in the Crane catchment in 2016 by the Citizen Crane team and reported in the Citizen Crane Year 3 report. A total of 230 surface water outfalls were surveyed, and the data was used to investigate specific pollution problems as well as prioritising investigations as part of Thames Water's Surface Water Outfall Programme (SWOP).

A second outfall safari was undertaken in the Crane in 2021, and the findings were summarised in the Year 8 report. A third full catchment outfall safari for the Crane was held in the summer of 2024, and this was summarised in the Year 10 report. A comparison of the data from the three main safaris from the Crane Valley is provided in Table 2.2 below:

Table 2.2: Outfall Safari comparison of data from 2016, 2021 and 2024

	2016	2021	2024 **
River length surveyed (km)	34	45	25
No: volunteers	15	46	22
Outfalls evaluated	221	223	146
	Impact Score* (Number/%)		
0	162 (73)	172 (77)	115 (79)
1 to 4	26 (12)	24 (11)	1 (1)
5 to 9	24 (11)	19 (9)	27 (18)
10+	9 (5)	8 (4)	3 (2)

Notes:

*Impact score is based on visual pollution indicators using the methodology developed by Thames Water for all outfalls

**The safari in 2024 was reduced due to poor weather conditions

The findings from this comparison are:

- The percentage of unpolluted outfalls has increased slightly over the course of the eight year period - from 73 per cent to 79 per cent.
- However, there remain around 20 per cent moderately to highly polluted outfalls across the catchment despite the benefits of at least 10 years of the Surface Water Outfall Programme (SWOP - see also below).

- The percentage of the most highly polluted outfalls (with a score of 10+) have also reduced significantly and were only 2 per cent of the total in 2024.

These findings indicate some slow progress in dealing with the most highly polluting sources - though they also appear to support the contention that the scale of the SWOP is currently not sufficient to create a major beneficial impact in a reasonable timescale.

The next outfall safari on the Crane Valley is due in Summer 2027. In the meantime, the approach has proved popular and effective as a means of identifying pollution problems and engaging local people with the problems and has been rolled out across the Thames Region.

2.4.1 Pollution Reporting

This section sets out information on various pollution events we have been informed about over the last year. We have encouraged our volunteers and the wider public to report all pollution incidents that they see using the Environment Agency and Thames Water contact numbers. Both organisations have recently also launched web based reporting systems, and these are also being promoted to volunteers.

Five significant incidents are listed below:

- Yeading Brook at Northumberland Road - September 2023 and June 2024. A sewage pollution issue was reported by the local Citizen Crane team in September 2023 and again in June 2024. Thames Water investigated and it is understood to have been resolved.
- Huckerby's Meadow - June 2024. Sewage flooding of this nature reserve site was reported by London Wildlife Trust (LWT) in June 2024. It subsequently emerged this was the fifth time the nature reserve had been subject to sewage flooding in the memory of LWT staff. The Citizen Crane team asked TW to investigate the causes of the flooding and how this might be resolved on a long-term basis. TW reported that they have (a) implemented a repair to the problem in August 2024 and (b) included a proposal in their AMP8 plan for a longer-term solution from 2025.
- Lyndhurst Avenue - May 2024. Two sewer failures were reported in Lyndhurst Avenue, Twickenham several weeks apart in the summer of 2024. Both failures resulted in sewage outflowing to the River Crane in Crane Park and this was reported by local people.
- Talbot Road - July 2025. A sewer blockage resulted in an outflow of sewage into the tidal Crane. This was reported by a member of the Citizen Crane team and attended by TW and EA staff. It was noted by them to have been resolved within a few hours. Note that this site has also had several previous reports of blockages and sewage outflows over the last 35 years.
- Northumberland Road bridge on the Yeading Walk - summer 2025. A sewage issue was reported by local members of the public and followed up by TW and EA staff. We currently have no further information on this incident.

Note that most of these sites have been the source of previous incidents and this suggests that some sites are particularly susceptible to sewer blockages or other failures and would benefit from additional pre-emptive actions by Thames Water (and/or others).

The Environment Agency National Incident Recording System (NIRS) recorded 41 incidents in the Crane catchment over the 12 month period to the end of March 2025, compared to 24 in the 12 months to the end of March 2024. Most of these (38) were minor Category Three incidents, along with 3 significant Category 2 incidents. These are discussed further in section 3.4 below. It is interesting to note that neither the Huckerby's Meadow nor the Lyndhurst Avenue incident above were classified as significant, despite both

having a clear and significant impact on the local environment. Note that the Talbot Road and Northumberland Road incidents were outside of the EA reporting period.

2.4.2 Citizen Crane Misconnection Investigations

The Citizen Crane team started to investigate and publicise the issue of large-scale misconnections in April 2024, working alongside Crane Valley CIC as hosts of the Crane Valley Partnership. In September 2024 FORCE received the results of an Environmental Information Request that revealed seven blocks of flats in the Crane and Brent catchments had been misconnected for several years at least without any resolution. This issue was publicised more broadly and resulted in considerable regional and national media coverage. Ongoing work with several partners - including Clean Up River Brent (CURB), Thames 21, Thames Water and the Regional Connect Right team, has resulted in progress towards resolving all these large-scale misconnections and an improved understanding of the scale of the problem by key organisations and the wider public.

The team consider this type of investigation and awareness raising is a major benefit to the objective of radically reducing the number and impact of misconnections across the catchment - particularly as this appears unlikely to be achieved by the SWOP programme in isolation. The misconnections communications initiative is ongoing, and an internal report has been produced identifying 50 potential actions for ten key partners and the broader water sector. Discussions are continuing with these partners to implement at least some of these actions. Further details are available from FORCE on request.

2.4.3 Other Citizen Science Investigations

The Citizen Crane team has continued to expand the range and nature of activities being delivered by citizen science volunteers. These are summarised below:

- **Wetlands monitoring**

Following a pilot study at Headstone Manor Park wetlands in 2022, ZSL have developed a community science methodology for monitoring the performance of constructed wetlands built as nature-based solutions. In 2024, ZSL trialled these methods at three constructed wetlands across London - two of these wetlands were in the Crane catchment at Headstone Manor Park and Newton Park West (both at the top of the catchment in LB Harrow). ZSL worked with Citizen Crane to train local volunteers to carry out monthly wetland sampling at these sites. Over seven months, volunteers assessed wetland invertebrates using newly selected target taxa, alongside ammonia and phosphate levels and fixed-point photography to track ecological health and function.

The results showed that mature wetlands (including Newton Park West and Headstone Manor Park) typically recorded higher invertebrate scores at outlets than inlets, indicating effective water quality improvement. The trial also demonstrated that citizen scientists can reliably collect meaningful data, providing early warnings of wetland stress and supporting ongoing maintenance.

The ZSL report and methods are available here: <https://www.zsl.org/what-we-do/projects/londons-rivers/>. The report concluded that this approach is a safe, engaging, and scalable method for community-based monitoring, though it should ideally be complemented with broader water chemistry and biodiversity surveys to capture the full ecological value and performance of urban wetlands.

- **Geomorphology**

The Modular River Physical (MoRPh) system is being used with volunteers to evaluate the geomorphological improvements being delivered at various sites across the catchment. ZSL (through Citizen Crane) and MoRPh developers Cartographer have been working together to facilitate 'MoRPh Blitz' events where volunteers are supported to work as groups of 10-15 to survey proposed, planned and completed river restoration projects across the Crane using the MoRPh CSci methods combined with RMI sampling. In 2024, baseline surveys were carried out at Little Park (following restoration works in 2023) and at Spider Park (just prior to restoration works in 2025). Volunteers returned to Spider Park to complete a follow up, post-restoration survey at Spider Park in June 2025 and there are plans to return to survey Little Park in Spring 2026.

- **Lower Crane Restoration Scheme monitoring**

This work programme is developing options and opportunities for enhancing the environmental value of the concrete lined lower three km section of the River Crane through Twickenham. The first pilot river restoration scheme was installed in 2023 along a 30m section of the river at Twickenham Rifle Club and included removal of the concrete along one bank, the creation of a new backwater area and the installation of narrow marginal berms and a gravel substrate.

Monitoring of the biodiversity value of this section, through the use of RMI and MORPH techniques alongside visual observations of fish movements, is ongoing. A survey in summer 2025 identified the localised restored gravel bed in this section as being of very high invertebrate value - with an RMI score of 12 and the first confirmed presence of a flat bodied mayfly in the lower Crane. We found it remarkable that a short gravel section in an otherwise heavily modified concrete channel could provide such a rich invertebrate habitat and consider this may be due to a combination of some or all the following:

- Good overall water quality
- Good gravel and marginal habitat - if only for a very small section - such that any invertebrates passing through would choose to stay there
- Good light levels with no shading - this appears to be important for habitat development elsewhere
- Lack of dog or human activity. This part of the river has no public access so there is no disturbance by dogs or people

These findings indicate the value of gravel introductions, marginal habitat and light (as well as considering the access for people and dogs) and are helping to guide the design and implementation of other river restoration sites throughout the catchment.

The next pilot river restoration site is at Mereway Nature Park, around 500m upstream of the Rifle Club site, where installation works started in October 2025, and the scheme is planned for completion by spring 2026.

- **Invasive Non-Native Species (INNS)**

The SWC programme has funded a pilot study to map the distribution of four key INNS across the catchment (Japanese knotweed; Giant Hogweed; Himalayan Balsam; and Floating Pennywort) and is currently targeting the catchment wide removal of these using various approaches over the next three years. The 2024 Outfall Safari, largely undertaken by citizen scientist volunteers, included a section for recording INNS along the riverbank. These data were used to help map INNS distribution as part of the pilot study. Further mapping and engagement work may be possible as the programme moves forwards.

The RMI monthly monitoring teams have also recorded the presence of red swamp crayfish and Asiatic clams at one or more sites. Records of further sightings have been requested and will be held in a central

database. This approach can be used for other invasive (or merely rare and unusual) species as these are identified by the team and others.

- **Water vole and mink monitoring**

136 water voles were released to the lower Crane catchment in the summer of 2024. Between March and September of 2024 and 2025, citizen science volunteers have been monitoring the distribution of water voles around the release sites. Every two weeks over this six month period they check latrine rafts, along with surveys for other feeding and burrowing signs, to help build a better understanding of where the water voles are and if their range is expanding. Surveys have shown that the reintroduced water voles are still present within Crane Park and have extended upstream into Little Park. This information is being used to guide a further release of water voles at two satellite sites, upstream and downstream of the main release site, planned for 2026.

This work complements the work of another volunteer supported programme that has operated American mink traps within the catchment for the last five years, designed to protect our native water voles and other fauna. The scheme supports the operation of nine mink traps across the catchment and is part of a larger programme across Greater London, led by the Waterlife Recovery Trust and with many more traps in place. The overall programme is successfully removing mink from the region and there have been none found in the Crane catchment for several years.

- **Harrow Yellow Fish project**

Several volunteers in Harrow are in the early stages of developing a “yellow fish” scheme for the borough. This scheme has been implemented elsewhere in the UK and overseas and marks up road drains to indicate that they are connected to the river system.

The project team has been very encouraged by the enthusiasm of volunteers to engage and expand their involvement through the growing network of programmes and opportunities. Further consideration of this approach is set out in Section 3 below.

ZSL are developing a portal that will help all interested parties to better track the activities and the data of the Citizen Crane teams - and this is due to be launched later in 2025.

3 INFORMATION FROM OTHERS

3.1 Data from Sondes

In 2021 the SWC programme deployed sondes across the catchment, and these helped to build a more detailed understanding of the water quality issues in time and space. The findings are summarised in the Citizen Crane Year 8 report and more details can be found in the Water Quality report (available from ZSL on request). Two key findings were:

- Dissolved oxygen (DO) levels varied significantly, both from day to night and across the seasons, at many of the monitoring sites. Oxygen sags, with low DO levels at night and in response to low flows and high temperatures, were particularly common in the upper reaches where there are higher concentrations of organic contaminants. This is likely to be a limiting factor to the ecological value of parts of the river - through a combination of poor water quality, high organic sediment loads and reduced oxygen levels.
- There were regular pulses of high ammonia concentration throughout the catchment, 5 to 10 times the background level, lasting from a few hours to a couple of days and occurring every few weeks. These are believed to be due to inputs of sewage into the river system and were recorded at all monitoring locations. Sometimes these coincided with high rainfall events and at other times not. Likely causes include the triggering of Combined Sewer Overflows during storm events and the discharge of pollution through surface water outfalls following sewer blockages and collapses. Ammonia is poisonous to a wide variety of fauna at the levels (typically peaking at around 10 mg/l) recorded and these pulses are likely to be having a significant limiting effect on the ecological value of the river.

There is ongoing data collection by Heathrow Airport Ltd from sondes deployed in the middle reaches of the Crane (though our team has not seen these data for several years).

The Environment Agency has deployed sondes for measuring ammonium and unionised ammonia at two locations in the Crane catchment over the last year: at St Andrews Church and Rayners Lane Culvert. Both these are on Yeading Brook East in the upper part of the catchment (downstream of Site 4) and have been deployed upstream and downstream of a potential sewage source as part of a major investigation of pollution sources in this reach.

A definition of the different forms of ammonia measured is noted below.

- **Ammonia (NH_3)** – This is the toxic and un-ionised form of ammonia found in water. It can harm fish and other aquatic life even at very low concentrations
- **Ammonium (NH_4^+)** – This is the ionised form. It is less toxic than NH_3 and is the dominant form at lower pH and cooler temperatures
- **Total Ammonia** – Most routine tests measure **total ammonia**, which is $\text{NH}_3 + \text{NH}_4^+$ combined

The data plots for the two EA sonde sites are shown below in Figures 3.1 and 3.2. Note that as these are averaged data they do not show the full range of variation that would have been recorded at the sites.

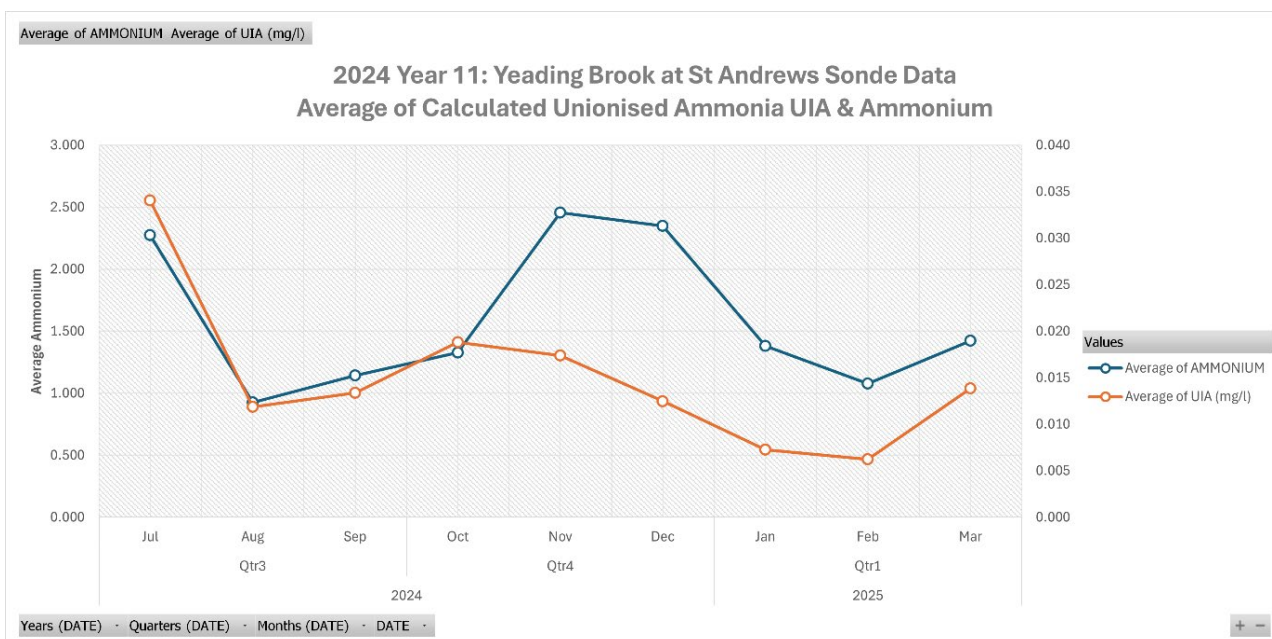


Figure 3.1: Averaged ammonia sonde data for St Andrew's Church on the Yeading Brook East

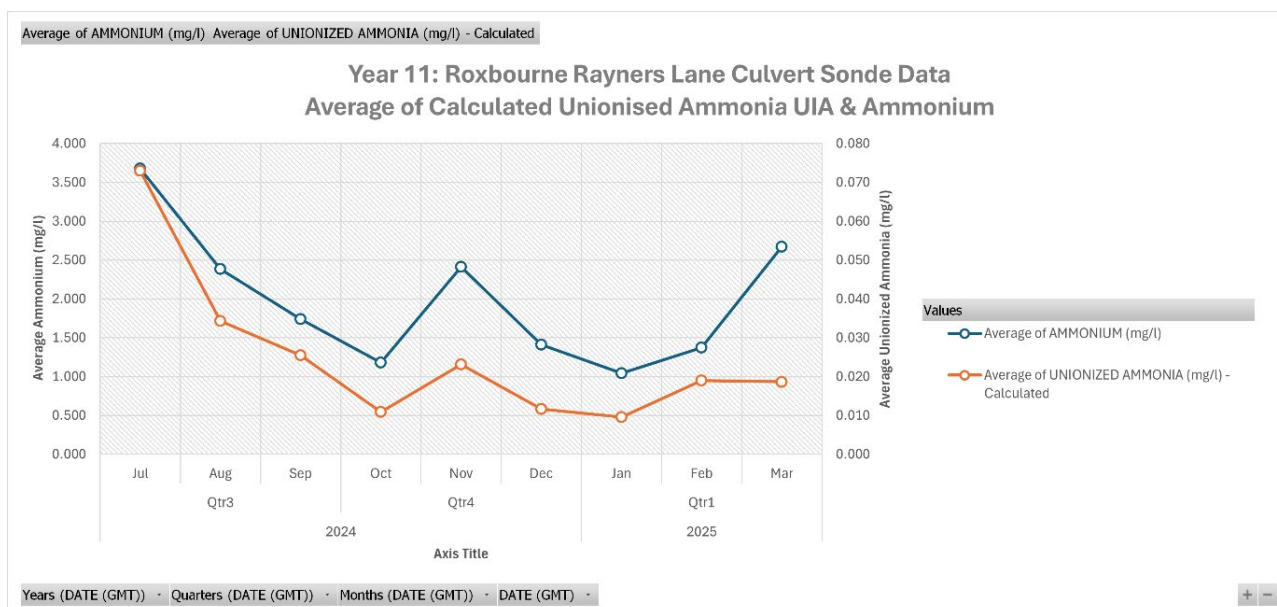


Figure 3.2: Averaged ammonia sonde data for Rayners Lane on Yeading Brook East

These data show continued high total ammonia concentrations (at between 1 and 4 mg/l) along the Yeading Brook East. There is also evidence from these plots that there is still a significant sewage source entering the river between the two sondes. The data are continuing to be used as part of the major investigation along this tributary of the Crane - as reported separately below.

New low cost sondes have been developed by the Clean Up River Brent group (CURB) and are currently being deployed in the Upper Crane catchment by the Harrow Rivers Group on an experimental basis linked to the Citizen Crane programme. If this is successful, it may provide a means for volunteers to collect cost-effective real-time data to complement the existing data sets.

3.2 Combined Sewer Overflows (CSO's)

The spill data for combined sewer overflows are recorded by Thames Water and the records for the 12 month period to April 2025 are set out in Table 3.1 below.

Table 3.1: Crane Catchment CSO data for 2024 (April 2024 to March 2025)

Site Name	Counted spills using 12-24h count method	Total Duration (hrs:min:sec) for all spills prior to processing through 12-24h count method
Field End Road (East)	0	0:00:00
Field End Rd Storm (Harrow)	3	9:15:00
Pavilion in Roxbourne Park	0	0:00:00
SSO, Junction Crane Valley/ Bath Road	0	0:00:00

It is outside the scope of this project to carry out a detailed assessment of these spills, but it would be interesting to investigate whether, for example, they coincided with high rainfall events.

We can though probably conclude that CSO's are unlikely to be the sole or major cause (and may not be a significant contributor) to the sewage peaks that have been recorded by sondes over the last few years - as these are much more frequent and distributed across the catchment.

It is encouraging to note that there have been no spills recorded at the major Bath Road CSO in the last year - in contrast to the previous year.

3.3 Surface Water Outfall Programme

The Surface Water Outfall Programme (or SWOP) is managed by Thames Water and targets misconnected properties that result in pollution going into the surface water drainage system (and thereby into the river) instead of the sewerage system. The SWOP first started in Asset Management Plan (AMP) Period 3 (2000 to 2005) and has been increased in each subsequent cycle, as the scale of the misconnections problem has been revealed.

TW data on the SWOP for the Crane catchment for AMP7 (April 2020 to March 2025) are provided in Table 3.2 below:

Table 3.2: Thames Water Surface Water Outfall Programme Data for Asset Management Plan 7 Crane Catchment

	Outfalls
AMP7 SWOP – Live projects	23
AMP7 SWOP – Signed off by EA	21
Waiting List	16
Total	60
AMP6 SWOP – Signed off by EA	39

Properties	Identified	Rectified	With Local Authority
Surveyed	3268	N/A	N/A
Properties with misconnections only	272	221	40
Properties with defects only	108	87	3
Properties with both misconnections and defects	122	94	10
Totals	502	402	53

The following points are made from these data:

- 39 outfalls were signed off in AMP6 (2015 to 2020)
- Initial progress in AMP7 (2020 to 2025) was slowed by the COVID-19 pandemic, however 21 outfalls were finally signed off within the Crane Catchment
- Some of the outfall catchments were very large in AMP7 - as the SWOP team started to tackle more of the complicated and culverted areas in the upstream parts of the catchment in LB Harrow – and this also helps to explain the reduced number of outfalls signed off
- In fact the total number of misconnected properties identified has actually increased slightly (from 470 in AMP6 to 502 in AMP7)

- The SWOP team has been more active in identifying sewer defects as well as misconnections within the curtilage of the property ownership. They identified that many properties had private sewer defects (230 in total) of which 122 had both misconnections and defects
- This extension of the range of sewer related problems identified and then rectified through the SWOP programme is a major step forward
- The number of appliances per misconnection has remained reasonably consistent at around three
- Over 1300 misconnected appliances were identified, with just under 1000 appliances rectified by the end of AMP7

The SWOP continues to be effective in stopping large numbers of misconnected properties from polluting the river system. Note that around nine percent of misconnections are not being rectified, and these are sent to the Local Authority Environmental Health Officers (EHOs) for resolution. The Citizen Crane team has several times raised the issue of EHO resources to resolve these outstanding misconnections and this remains a concern.

The TW SWOP team are also increasingly identifying and removing other sewer system issues (outside of the property and either within the TW system or associated network) that may cause pollution to enter the river. Records have been provided of 89 sewer defects identified in the Crane catchment, (as set out in Table 3.3 below) and this is believed to be only a partial record of the full extent of the work being done.

Table 3.3: sewer defects identified by the Surface Water Ourfall Programme team – partial dataset

Defect	Identified	Rectified
Blockage	22	18
Gully divider	37	31
Poor housekeeping	11	9
Private defect	17	15
Missing surface water cap	2	2
Total	89	75

This partial dataset indicates the type and distribution of the defects being identified. Note that “private defect” is a catch-all phrase for defects on a private drainage system that are not a blockage, surface water cap, gully divider or housekeeping issue. The scope of these issues is highly varied and could be a variety of potential pollution sources (e.g. cracks in a pipe, tree root infiltration, missing /broken brickwork, soil stack issues etc).

It is very encouraging to note that the SWOP scope is expanding to identify and resolve these broader issues, particularly given the large numbers of properties and sewer systems that are being revealed as having systems issues.

3.4 Environment Agency Pollution Data

The Environment Agency National Incidents Reporting System (NIRS) recorded 41 confirmed water pollution incident reports in the Crane and Yeading Brook catchments over the 12 month period to 31st March 2025. This compares to 24 over the previous 12 months and 37 over the period before. These are all the confirmed water pollution incident reports that were logged by the Environment Agency - either called in by the public or identified by the EA or other parties.

The 41 reports were classified as follows:

- Category 1 (major) Incidents - 0
- Category 2 (significant) Incidents - 3
- Category 3 (minor) Incidents - 38

The reports occurred in the following waterbodies:

- Crane - 11
- Yeading Brook West - 13
- Yeading Brook East - 2
- Yeading Brook (after the two arms combine) - 3
- Roxbourne - 12

The pollutants were described as follows:

- Fats, oils, and greases - 3
- Hydrocarbons (oils) - 8
- Sewage - 27
- Chlorinated water - 1
- Fire fighting runoff - 1
- Uncertain - 1

The cause of the pollution reports were described as follows:

- Blockages within the sewer network - 12
- Flytipping - 4
- Misconnections - 10
- Defects/sewer failures - 3
- Uncertain (oil) - 8
- Uncertain (sewage) - 2
- Burst water main - 1
- Fire fighting - 1

There has been an increase in the number of pollution reports to the Environment Agency compared with previous years. One likely cause of this increase is due to the continual monitoring work on the Roxbourne (Yeading Brook East). The sonde that was temporarily installed in the stream at Rayner's Lane has triggered a number of misconnection-related incident reports, and requests were made to residents to more actively report hydrocarbon related incidents. This has highlighted the extent of the issue at the site and makes up approximately 30% of this year's pollution reports. If we exclude the Roxbourne, pollution reports across the wider Crane waterbodies are comparable to previous years.

The upper part of the catchment (Yeading Brook West and Roxbourne/Yeading Brook East) receives the majority of pollution incident reports (73%). This parallels the findings from our water quality and RMI

monitoring, which indicates the upper catchment is in poorer condition than the downstream Crane waterbody.

The majority of incident reports in 2024/25 (66%) were related to sewage pollution, and the majority of these (81% total) were as a result of blockages in the network (44%) or misconnections (37%). Sewer defects were reported as the cause of sewage related pollution in three cases (11%), and all of these were categorised as Category 3 incidents (i.e. minor incidents without significant impact on the river).

Two sewage pollution reports were categorised as Category 2 incidents (one at Ten Acre Wood, and one at Ickenham, both on the Yeading Brook West). Both of these more significant incidents were confirmed to result from blockages in the sewer network.

Oil pollution makes up approximately 20% of incident reports across the catchment (8 in total), and all of these came from an unknown source (i.e. the location of the problem could not be confirmed). Four of the oil reports were from the Yeading Brook East in Harrow, where investigations are ongoing into industrial activities upstream and potential historic contaminated land influence (see also section 3.6 below). The other four were from the Crane, where a confirmed source could not be determined.

One of the oil pollution incidents (on the Crane, at Donkey Wood), was determined as a Category 2 incident. Environment Agency and Thames Water resources were deployed in this case, with mitigation measures in place (i.e. booms and absorbents) to reduce downstream spread of the pollutant and remove it from the river. The oil impact was not observed to be continuous, indicating this was a one-off incident (e.g. a flytip, or accidental release), but this could not be confirmed.

Moving forwards, the Environment Agency has released an online reporting system where new pollution incidents can be raised: Report water pollution in England - GOV.UK. This system has been designed to reduce barriers to people reporting pollution problems. If this system is well received and utilised, it is likely that pollution reports will grow in the Crane catchment in future years as more issues are captured by members of the public. The Environment Agency encourages people to report any problem they observe with a watercourse using the above link, or via the 24/7 incident hotline: 0800 80 70 60. Citizen Crane volunteers are also encouraged to report on the Thames Water hotline number of 0800 3169800.

3.5 Water Framework Directive (WFD) Classifications

The Water Framework Directive (WFD) regulations introduced a rigorous method of evaluating the ecosystem value of catchments across the UK. The Crane Valley is divided into three catchments:

- Main Crane
- Yeading Brook - upstream parts of the river
- Portlane Brook - minor catchment to the west of the Crane Valley.

The Year 9 report (April 2022 to March 2023) included encouraging news about improvements to WFD Classifications in the Crane Valley. There were improvements across many Classes on the main Crane with most parameters moving to Good or High status, two parameters (fish and phyto-benthos - algae and diatoms) remaining as Moderate status, and one parameter (phosphate) remaining as Poor. There were only partial reports for the other two WFD catchments, but these also revealed some improvements in WFD Class.

There have been no new WFD datasets released over the last two years and the next major review is due at the end of 2025. The WFD results from 2022 have helped to focus efforts on the remaining Moderate and Poor Classes, in line with a longer-term goal of achieving Good Ecological Status for the Crane Valley.

This would be a remarkable achievement for an urban river catchment if delivered; only 14 percent of rivers nationally are currently classed as Good Ecological Status.

3.6 Yeading Brook East Investigations

One of the initial shocking findings of the Citizen Crane investigations was the poor quality of the water inflowing to the top of the catchment in Yeading Brook West (Headstone Manor Park) and Yeading Brook East (Newton Park West). The data from Yeading Brook East have continued to reveal major problems including:

- Significant inputs of sewage - as revealed by the outfall safaris and sonde investigations
- Hydrocarbon inputs via the Roxbourne tributary - as revealed by a build-up of oil in Newton Park West wetlands as well as complaints by local people about noxious levels of hydrocarbon fumes in their homes

These findings have led to detailed joint investigations by the EA, TW, London Borough of Harrow and local community volunteers Harrow Nature Conservation Forum (HNCF) which have included:

- Detailed SWOP investigations of many of the upstream surface water drainage catchments by TW. Note that one of the challenges in this area is the extensive networks of underground covered culverts containing the upstream drainage system
- Investigations of the nature of the hydrocarbon pollution in the downstream wetlands in Newton Park West - led by HNCF with support from LB Harrow, EA and British Geological Survey
- Investigation of ongoing operations at upstream industrial sites - led by the EA with support from LB Harrow
- Investigation of a major disused gasworks site - led by LB Harrow with support from the EA

An interim report was produced in 2024 as part of the Smarter Water Catchments programme. This identified:

- Many misconnections - which have been identified for rectification
- A number of sewer failures - also put forward for rectification
- Some poor practice at local industrial sites - largely resolved following EA site visits
- Likely hydrocarbon contamination from the re-developed gas works site - this is being investigated further with ground penetrating radar to try and ascertain the precise location(s) of the leakage

These findings illustrate the potential for multiple pollution sources, and the associated complexity of resolving pollution problems, in urban areas. This type of remediation work could not be delivered without a high level of co-operation between many interested parties and support from the Crane Valley Partnership. The investigation work is ongoing with regular meetings between key stakeholders for updates.

The RMI data for Newton Park West provide some reason for hope that things may be improving (see section 2 above) whilst the addition of the Newton Park West wetland to the urban wetland monitoring pilot will hopefully provide insight into the issues and how they are being resolved.

3.7 London Regional Investigations

We are very pleased to note the great interest being shown in London's rivers and their water quality from the Greater London Authority (GLA) with the launch of their "Healthy Rivers" programme. The Citizen Crane

team are in contact with the GLA team about this initiative and are contributing to the development of a London-wide approach.

One of the early outputs from this work has been a map which shows the distribution of misconnections across Greater London, and this is shown in Figure 3.3 below.

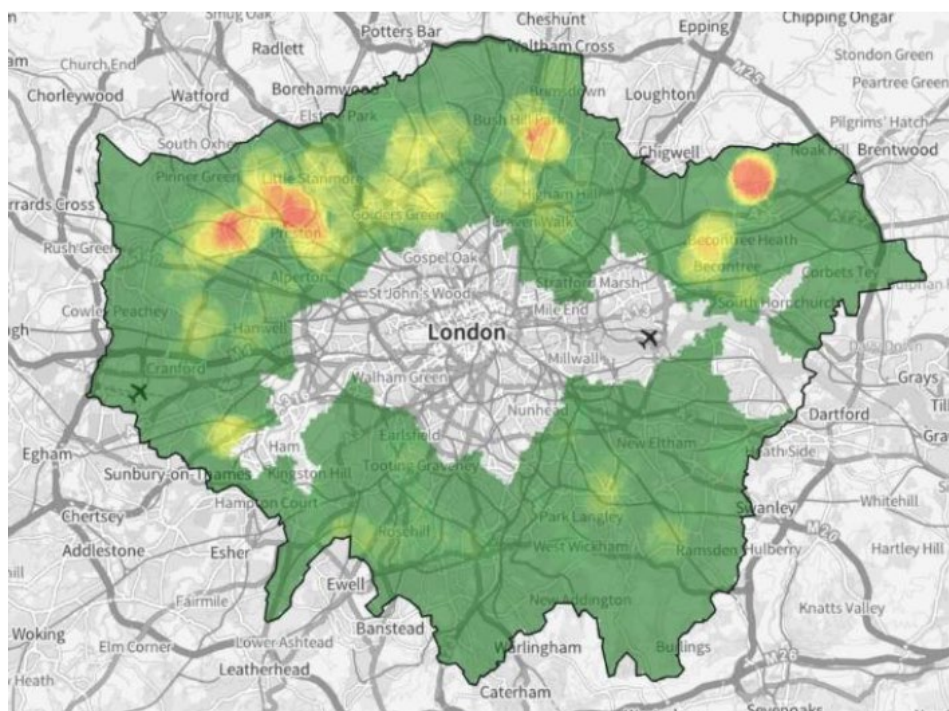


Figure 3.3: The distribution of misconnections across the Capital

The project team is currently engaging with the GLA and TW to better understand the source(s) and potential importance of this map - though we note at this stage:

- The central area of London is not included as this is served by dual drains which capture both surface water and sewage outfalls
- The issues appear to be larger in North London than South London
- There is a major double hot spot in and around Harrow in the upper parts of the Crane and Brent catchments - which would appear at face value to be the largest misconnection issue across Greater London

It could be very interesting to find out more about these data and what they may be telling us about the distribution of misconnections across Greater London - which could also help with targeting responses to the issue. Note that a separate part of the GLA report stated that misconnections are not generally found in properties built before 1920. Given that a significant part of the housing stock in London pre-dates 1920, this is also worth investigating further.

3.8 Road Run-Off

Previous Citizen Crane reports have recognised road run-off as a chronic source of heavy metals, polluted sediment and hydrocarbons as well as presenting an ongoing risk from both small and larger pollution events. In previous years hydrocarbon pollution events lasting several hours to several days have been

reported at various locations in the river system. These are likely caused by leaks, or the deliberate disposal, of oils to the surface water drainage system.

There were eight oil related incidents in the Crane catchment reported by the EA over the last year. Four of these were linked to the ongoing pollution problems at Yeading Brook East reported above. This leaves three category three incidents and one category two incident - the latter in Donkey Wood was attended by the EA and TW and resulted in booms being deployed to manage the pollution. None of these incidents were tracked back to a source and this is typical of this type of problem - which remains notoriously difficult to track down.

One of the implications of identifying copper and zinc as potentially major pollution issues for rivers like the Crane (see the CEH report above) is that it increases our focus on road run-off as a major source of these pollutants.

The Citizen Crane team have been looking to engage with Highways England since 2018 to remediate major road pollution inputs to the river system - including notably those from the M4 into the river at Cranford Park - with renewed attempts over the last year. In August 2025 ZSL, LB Hillingdon and EA had a constructed wetland feasibility study approved in principle, to be delivered in spring 2026, for a wetland adjacent to the Frog's Ditch in Cranford Park and helping to intercept a major part of the run-off from the M4.

3.9 Other Relevant Schemes

The Citizen Crane team is engaged, alongside partners, with many other schemes and opportunities that are in development or delivery across the Crane catchment including:

- **Little Park/Pevensey Road Nature Reserve:** Restoration of a 500 metre length of the river and two hectares of associated wet woodland. Phase One of the scheme was completed in 2024 and has enhanced the river condition and extended the wet woodland area. River deflectors have led to the development of more varied river habitats and flushed a deep layer of sediment from the river, revealing the gravel river bed. Volunteers have played a key part in the delivery of this project, helping with the planting as well as completing MoRPh surveys and litter removal counts. Little Park was also part of the water vole release in summer 2024, when 136 water voles were released over a kilometre of river corridor. Further local works have continued through 2025 and there are plans to extend these further upstream and downstream over the next few years.
- **Lower Crane restoration:** This project is seeking to enhance the ecological value of a 2500 metre length of concrete lined channel immediately below the Mereway Road weir in the London Borough of Richmond. A pilot restoration site was delivered in 2022 at Twickenham Rifle Club, creating a new backwater and around 30 metres of enhanced river corridor. The project team continues to monitor the ecological value of this site using RMI and other survey techniques. A new major fish pass was opened in June 2024, providing fish passage between the Lower Crane and the main part of the river for the first time in hundreds of years. Further restoration schemes are in development for implementation in 2025 and 2026.
- **Northcote Nature Reserve:** This project, near the confluence of the Crane with the tidal Thames, was formally opened in June 2024. It includes a new tidal creek alongside around 30 metres of improved river corridor in a much enhanced one hectare site. Initial monitoring was carried out by volunteers prior to the site development and further monitoring (including fish surveys) is being delivered during 2025.
- **Spider Park:** River restoration works were installed over 200 metres of the river in Spider Park in LB Hillingdon. Baseline RMI and MoRPh surveys were carried out prior to installation and further

monitoring is ongoing. Recent RMI data (from June 2025) showed a score of 6 compared to scores of 3 prior to the restoration. This is a powerful indicator of the effectiveness of restoring the river as a means of enhancing its ecological value. The project team are currently developing a plan to extend these improvement works further upstream.

- **Brazil Mill and Donkey Woods (known as the “Take Me to the River” project):** This major project is seeking to deliver environmental and community enhancements to this 2000 metre reach of the river in the London Borough of Hounslow. Plans are currently in development, including a scheme to link this work to the Little Park scheme as noted above.
- **Gutteridge Woods and surrounding area:** London Wildlife Trust (LWT) have produced a feasibility study for a major wetland and river restoration project at the confluence between the eastern and western tributaries of the Crane Valley in the London Boroughs of Ealing and Hillingdon. This is one of around a dozen major re-wilding schemes identified across Greater London by LWT and the GLA. This scheme has the potential to create large areas of new high value habitat as well as improve the water quality for the river system downstream of the confluence.
- **Yeading Brook Unbound:** This major scheme aims to enhance the habitat along 3500 metres of river corridor on the western arm of the Yeading Brook in the London Borough of Harrow. Baseline monitoring has included the setting up of several new RMI sites and MoRPh surveys. Initial works have started in Yeading Walk with further work planned in Roxbourne Park through 2026. This scheme has also enhanced the ecological value of the major flood relief scheme in Headstone Manor Park, creating new planting in a wet channel through the flood basin.
- **Yeading Brook Meadows:** This project has been developed by one of our Citizen Crane volunteer teams. The scheme is to create new and enhanced backwater habitat adjacent to the RMI site.
- **Sustainable Drainage Schemes (SuDS):** These have a significant overlap with nature based solutions and are a set of catchment based responses to flood risk problems - and can be engineering and/or nature based in their form. These are of interest to the Citizen Crane team as they are part of the suite of approaches which can also enhance the water quality and ecological value of the river corridor. Nine SuDS schemes were installed in LB Hounslow through a separate TW funded project that completed in March 2025. These schemes help to slow the flow of water into the surface drainage system and thereby reduce peak flows to the sewers and/or the river system. They can also create new and enhanced habitat and community benefits. The Citizen Crane team are currently in discussion about developing a volunteer supported monitoring system to assess the effectiveness of these and other SuDS schemes.
- **The London Surface Water Strategy:** This was published in July 2024 by the Greater London Authority (GLA). This identified ambitious targets for SuDS development across Greater London. We are hopeful that the Crane Valley may be able to provide pilot sites to assess the value of these systems and how they might be optimised for the provision of environmental and social as well as flood management benefits. This opportunity will be investigated further over the next few years of the Citizen Crane programme.
- **Other Nature Based Solutions:** This is a term for improving conditions (say flood risk; water quality or water company asset performance) though creating or enhancing natural features in the landscape. There is considerable interest in developing nature based solutions as (a) they can provide additional benefits and at an attractive cost whilst (b) engineered solutions may become increasingly difficult and expensive to deliver effective outcomes. Some of the schemes above could be considered as nature based solutions, although they are generally not designed specifically for this purpose. The team is working with TW and other partners to investigate how nature-based solutions may be developed further in the Crane catchment. This includes discussions with the wider team in TW and engagement with the London Surface Water Strategy. This work also accords with the objectives of the GLA Heathy Rivers programme.

- **Other research:** The Citizen Crane team has contributed to a research projects list that has been developed by the Crane Valley Partnership for sharing with research partners and others.

The works are all designed to help protect and enhance the ecological value of the Crane Valley's river corridors. At present, we are seeing ecological improvements local to the schemes that have been delivered. Plans are currently being developed to deliver enhancements at a much larger scale, and it is hoped that these will also see broader benefits and cumulatively lead to catchment level improvements.

One of the major challenges will be how to implement and then monitor, maintain and continue to enhance these schemes at scale. The team is currently engaged with the wider Partnership to discuss mechanisms for doing this - including the continued growth of the voluntary sector and the development of training and employment schemes linked to river restoration and management.

4 COMMUNICATIONS AND ENGAGEMENT

4.1 Communication with Citizen Crane Volunteers

The volunteers are the backbone of the Citizen Crane programme and it is remarkable how many of them have continued monitoring the river on a monthly basis over the last eleven years. The project team engages with volunteers via a monthly newsletter, which currently has over 80 subscribers (to subscribe contact azra.glover@zsl.org). The newsletter encourages feedback and discussions around findings of interest, project opportunities, safety concerns and other matters. Many of the volunteers also attend our annual Citizen Crane Forum which provides an opportunity to share findings and discuss future plans.

There are regular training sessions for both new and established volunteers. Sessions are added as and when new areas of interest are developed, such as the MoRPh surveys, urban wetland survey work and water vole monitoring. The team has also been working with Let's Go Outside and Learn (LGOAL) to reach out across diverse communities, particularly in the central parts of the Crane Valley. Tailored training sessions have been delivered and linked to the development of an AQA Qualification for environmental work.

A new portal is being developed for use with the Citizen Crane volunteers. This will be based on the portal developed by the River Chess volunteer support team and is intended to be in place by the end of 2025.

4.2 Wider Engagement

The project team has been working with Crane Valley Partnership (CVP), Friends of the River Crane Environment (FORCE), Zoological Society of London (ZSL), Let's Go Outside and Learn (LGOAL) and Habitats and Heritage (H&H) to engage the wider public on key messages around the Citizen Crane programme. These include:

- The existence of the Crane Valley
- The value of the river as an ecological asset
- The opportunities for volunteering and engagement
- The misconnections problem
- Issues with the disposal of wet wipes and cooking fats to the sewerage system
- Issues with the disposal of liquid pollutants to road drains
- Publicity around pollution events and information on how to report a pollution problem (using EA and TW reporting tools)
- River restoration projects - plans and progress

The platforms used include Facebook, X (formerly Twitter), Instagram, Youtube, Threads, LinkedIn and TikTok. The engagement includes photos, short stories and video clips.

The engagement from and with local people includes:

- Around 7000 followers on FORCE platforms and over 1000 with the Crane Valley Partnership. Other Crane Valley groups (such as Cranford Action Group, Headstone Manor friends and Pevensey Rangers) each have around a thousand followers, posting regularly on related issues
- High numbers of views - typically several thousand across all platforms with some stories reaching 50 to 100,000+ people
- Positive comments and responses from the majority of people

- Information and support in the form of pollution information and reports, sharing key messages across other forums and new volunteers for activities. Note that several pollution issues have been identified and then tracked through these forums
- An updated State of the Crane Environment Report was launched in February 2025 - including an outline of the Partnership's work to date and the expectations over the next five years for the water quality theme alongside four others (communities and access; geomorphology; flooding and biodiversity). Around 200 copies of this report have been handed out to key partners and interested parties with many more downloaded online <https://www.cranevalley.org.uk/wp-content/uploads/2025/02/State-of-the-Crane-Environment-Report-February-2025.pdf>
- A new Catchment Plan was launched in July 2025 with "Achieving Good Ecological Status" as one of six strategic objectives for the catchment <https://www.cranevalley.org.uk/wp-content/uploads/2025/08/River-Crane-Catchment-Plan-2025-2030-First-Edition.pdf>
- The wider Crane Valley Partnership has also developed a "Story for the Crane Valley" named "A River Runs Through Us". This story-based approach is already helping to raise the profile of the Crane Valley as a whole <https://www.cranevalley.org.uk/wp-content/uploads/2025/08/Crane-Valley-Story-Guide.pdf>

The misconceptions campaign has had a wider level of engagement, with articles in the regional and national press as well as a story on regional TV and radio news regarding seven misconnected blocks of flats in the Crane and Brent catchments. The Citizen Crane team has been working closely with volunteers at the Clean Up River Brent group (CURB) to develop and present this issue. The story has also been picked up by local politicians and has helped to raise the profile of the issue with the GLA and local authorities. As a result, the original seven misconnected blocks are all being further investigated with at least one resolved and other resolutions in progress. This story is ongoing and there is scope for further national and regional media engagement as a result.

4.3 Environment Agency and Thames Water Interest Groups

The Environment Agency and Thames Water have been part of the steering group for Citizen Crane since its inception in 2014 and their role is essential in linking Citizen Crane with their regulatory and operational frameworks. Initiatives such as the Outfall Safari, data sharing with the TW SWOP programme and the development of the Yeading Brook East investigations have all been partly derived from these links.

In 2022, the two organisations set up the Crane Valley Interest Group (TW) and Crane Valley Working Group (EA) to better align their internal departments with interests in the Crane Valley. These groups have been meeting regularly over the last three years and sharing ideas and information. The two groups also held a joint meeting for the first time in 2023, with a further annual meeting in 2024 and another planned for later in 2025. These meetings are helping to provide wider engagement and co-ordination on key issues of interest to the Citizen Crane team.

4.4 Wider Engagement

The project team has engaged at a regional and national level about the Citizen Crane programme including:

- Presentations and site visits with decision makers and interest groups

- Representation on the board of the national DEFRA funded CastCo project, investigating the opportunities for citizen science to engage more directly with decision making and programme development etc
- Representation on the regional Connect Right group - investigating misconnections and cross-connections
- Linkage to the “DEFRA Policy Challenge” being delivered as part of the Silk Stream project in the adjacent Brent catchment by the London Borough of Harrow and others
- Representation on the GLA’s Heathier Rivers programme and to the GLA Environment Committee

These linkages have helped to raise an awareness of the Crane Valley and the Citizen Crane programme as well as seeding the wider adoption of citizen science activities that have been trialled through this programme. Outfall Safari, for example, is now being delivered across most of the Thames catchment as well as being trialled nationally.

5 SUMMARY AND CONCLUSIONS

5.1 General

1. This report sets out the findings of Year 11 of the Citizen Crane programme. In the first few years of this programme we focused on collecting and analysing monthly water quality and ecological data sets collected by citizen scientists and using these to better understand the river ecosystem and target interventions that might improve it.
2. This work has continued over the last eleven years and has also expanded to encompass a wider array of citizen science-based data collection and engagement - particularly as part of the Smarter Water Catchments programme that started in April 2020.
3. The Citizen Crane volunteers have continued to provide high quality data for the programme and have extended their range of activities to include geomorphology, wetland monitoring, water vole and mink monitoring, as well as a third Outfall Safari.

5.2 Findings

1. For many years the Citizen Crane reports recorded variations in river condition but without seeing any significant or sustained improvements. This was despite the removal of hundreds of misconnections as part of the TW Surface Water Outfall Programme (SWOP). This changed in Year 9 (2022-23) with significant improvement in RMI and water quality scores, combined with a positive shift in the river's Water Framework Directive classifications. These improvements appear to have been largely sustained and developed over the last two years.
2. The data from Year 11 are less definitive than Year 10, although there are still a few sites where RMI scores have improved. Water quality data from the EA and sondes indicate that the river condition is at least remaining stable, although there is still evidence for occasional releases of sewage through the system.
3. The Surface Water Outfall Programme (SWOP) data indicate that large numbers of misconnected properties remain across the catchment - with over 500 identified over the last five years, compared to 470 in the previous five years. In addition, the team has identified and rectified at least 89 sewer network problems over the last five years.
4. Whilst these are impressive numbers and indicate the amount of pollution being removed from the system by the SWOP, there remain concerns that a comparable number of new problems may be added to the system every five years. This is based on the continuing issues being identified both by the SWOP teams and the outfall safaris.
5. The Citizen Crane team continues to recommend that a more systematic approach to the review and analysis of these data is undertaken to gain a better understanding of the scale of the problem and whether this is being reduced or not. Recent data from the GLA, which indicate that the Crane and the Brent may be hot spots for misconnections across London, only serve to increase the need for this type of assessment.
6. There is further evidence that the treatment system at Heathrow is effective in removing glycol from the river ecosystem.
7. The lack of progress with road run-off is a consistent frustration. The project team remains hopeful that, as improvements are delivered elsewhere, this may lead to progress with some of the more chronic road pollution sources, and there have been recent indications that a long proposed scheme for the M4 in Cranford Park may be moving forwards.
8. This is particularly important given recent work by the Centre for Ecology and Hydrology that indicates heavy metals such as copper and zinc (prevalent in road run-off) may be the most critical

to the health of river systems. We are hoping to continue investigating the issue of heavy metals through the Citizen Crane programme.

9. The most encouraging data are from small scale river restoration works around the catchment. These have shown the potential for improved river geomorphology and the coppicing of shading riverside vegetation to transform the value of the local ecosystem - including the development of marginal and submerged vegetation, enhanced fish nurseries and much improved RMI scores.
10. We are hopeful that these small-scale schemes can be expanded upon over the next few years and that improvements will be delivered at a catchment scale as a result. This will require continued long term funding as well as engagement and development of community based volunteer programmes and the delivery of further training and employment schemes linked to river restoration and management. This is likely to be a focus of the team and wider partnership over the next five years.
11. One of the major positive developments over the last eleven years has been the increase in partnership-based working across the catchment to identify issues and deliver projects to resolve them. Representatives of the various groups - EA, TW, Local Authorities, community-based partners and others - are familiar with each other, leading to a good level of trust and understanding being developed, and this has been incredibly helpful when resolving issues or putting together project proposals and opportunities.
12. Public engagement has continued to expand. This has helped to grow and sustain the volunteering efforts of the Citizen Crane teams as well as engaging a wide audience in the Crane Valley on how they can help improve the catchment. For example, we have noted several pollution incidents that have been reported by Citizen Crane volunteers and/or members of the public and have resulted in the pollution problems being attended to in hours and days rather than weeks and months.
13. A major misconnections campaign in the Crane and the Brent has been led by local community groups and supported by the Citizen Crane team and Crane Valley CIC. This has received considerable public attention, with articles in the national press and regional TV and radio. The campaign has led directly to increased engagement from local authorities and the GLA and activities leading to the identification and rectification of several major misconnections in the Crane and Brent catchments.
14. It is becoming clear that the SWOP programme is not enough on its own and this type of community led campaign is essential to try and better inform and engage the public and other key interested parties about the importance of misconnections and their role in both resolving them and stopping them happening in the first place.
15. Overall, there are further encouraging signs that the river ecosystem is improving and moving towards Good Ecological Status. The system is very complex, and we believe the recent improvements are due to a combination of actions by all our partners to identify and remove pollution sources as well as improve the ecological functioning of the river.

5.3 The Future

1. The Citizen Crane project currently sits within the TW Smarter Water Catchment (SWC) programme. The first five years of this programme ended in March 2025. TW and the project team are working to see how Citizen Crane, as well as the wider SWC programme, can be supported for a further five years through TW and other funding streams.
2. The intention from all partners is for the core Citizen Crane monitoring to continue, subject to securing funding and continued volunteer engagement. The team has been delighted to see how volunteers have also engaged with a wider range of citizen science activities and we are keen to continue and expand this. The opportunity for formal training and qualifications delivered through these programmes has already helped to broaden the volunteer base and we would like to embed and expand this approach.

3. The SWOP is planned to continue for a further five years. This provides an opportunity to further focus efforts on the key pollution problem areas at the top of the catchment, as well as expanding the work to identify and deal with associated network issues.
4. We are also keen to see the wider SWC and associated programmes for river restoration continue and expand over the next five years. Our findings to date indicate that improving the geomorphology and environmental management of the corridor helps to transform its ecological value. We are therefore hoping to support the delivery of river improvements at scale across the catchment over the next five years - using the Citizen Crane volunteers to monitor (and help optimise) effectiveness.
5. Public engagement work also needs to expand, subject to funding, both to grow our volunteer network and engage the wider population on the key issues and where they can make a difference.
6. We have seen very encouraging progress over the last eleven years. If these proposed activities can be delivered and learned from over the next five years, then our long-term target of “Good Ecological Status” or, as we have previously defined it:

“An urban river corridor teeming with wildlife and unconstrained by pollution, serving as a vital community resource where people can connect with nature and improve their wellbeing.”

can be achieved by 2030.

Working in partnership

