

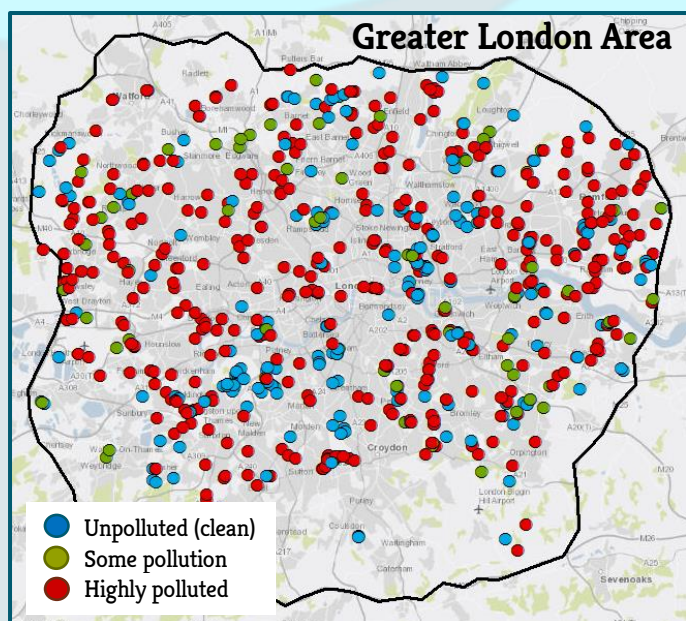
# Greater London Area

## What is Clean Water for Wildlife?

Clean Water for Wildlife is part of a Heritage Lottery Funded nationwide project to raise awareness of the critical importance of clean water for freshwater wildlife. In the first national survey of its kind, we're using the power of citizen science to gather results from all kinds of freshwaters including ponds, lakes, rivers, streams and ditches, all of which are important for freshwater wildlife. The survey uses 'quick kits' to assess the level of nitrate and phosphate pollution; two nutrients which can pose a major risk to wildlife if they are above natural levels.

### Our aims

- To engage many thousands of people to help them learn about, participate in, and enjoy their freshwater heritage
- To create a map of water quality from over 10,000 freshwaters, and uncover the best, most unpolluted habitats
- To make a significant difference to the protection of freshwater biodiversity in the UK.



### Clean Water Case Studies

All the results from the Clean Water for Wildlife survey are available to view and download from WaterNet, the data hub for the People, Ponds and Water project. But, we are also producing a series of case studies which illustrate some of the most interesting results. This case study concentrates on the Greater London Area.

### Description of the survey area

The Greater London Area consists of the City of London and 32 administrative boroughs, roughly within the M25 orbital. The largest proportion of the Greater London Area is heavily urbanised, but even here there are pockets of green space and numerous nature reserves. Towards the outskirts, land use becomes more rural, although this is still predominantly an intensively farmed landscape.

### The results

So far, 730 samples have been collected by Earthwatch and Thames Water for Wildlife volunteers and staff. In total, 226 pond, 150 river, 124 lake, 116 stream, 100 ditch and 14 other (such as canal) samples have been tested using the Clean Water for Wildlife test kits.

60% of sites were highly polluted, and a further 10% of sites showed at least some evidence of nutrient pollution. Of the unpolluted sites, 86% were ponds or lakes. There were no unpolluted rivers and only 12% of clean water sites were streams or ditches.

Clean water sites, although they were few and far between, were found throughout the Greater London Area even within the urban landscape.

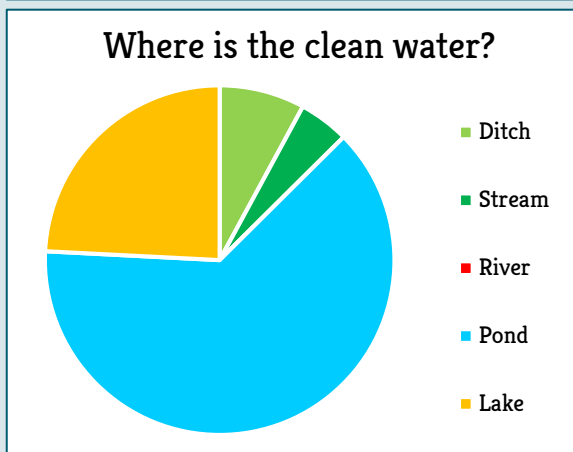
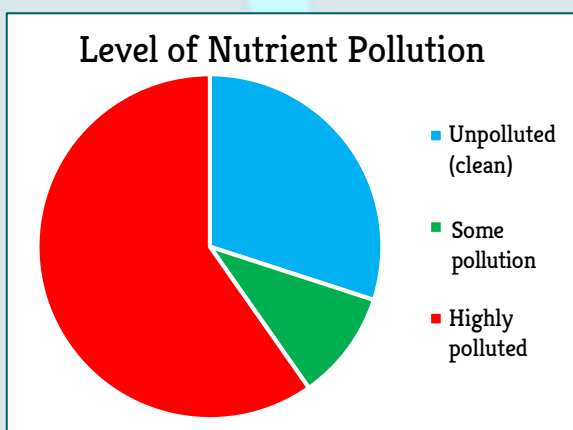


Table 1: Level of nutrient pollution

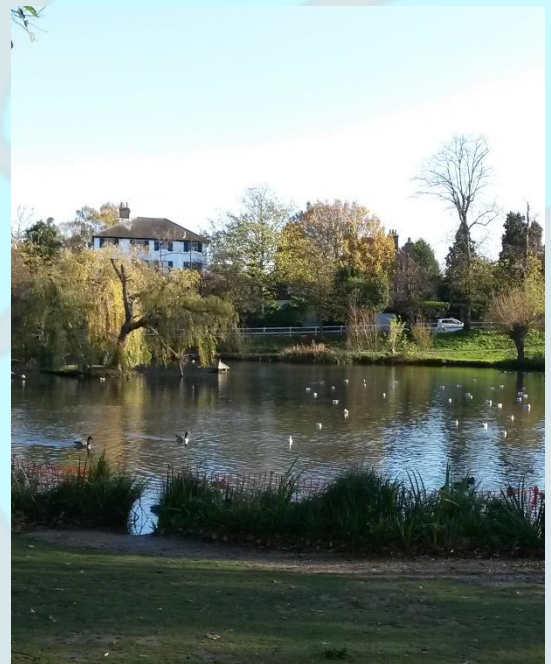
	Unpolluted (clean)	Some pollution	Highly polluted
Pond	136	28	62
Lake	52	15	57
Ditch	17	11	72
Stream	10	14	92
Other	4	2	8
River	0	5	145
<b>TOTAL</b>	<b>219</b>	<b>75</b>	<b>436</b>

### Understanding the results

Ponds and lakes are the cleanest freshwater habitats in the Greater London Area. Like most of lowland Britain all the rivers and most ditches and streams are polluted by nutrients. Rivers and streams drain large areas of land and are exposed to multiple sources of pollution from urban and agricultural areas. Ponds and lakes are also affected by the surrounding land use, but they naturally drain smaller areas of land. If the surrounding habitat is free from nutrient pollution, the ponds and lakes are likely to have clean water. Clean water is vital for freshwater biodiversity and these unpolluted sites can support rich and valuable wildlife communities.

In the Greater London Area, unpolluted ponds and lakes were found in nature reserves, woodlands, green spaces and the London parks. These places and the freshwater habitats they support offer important refuges for freshwater wildlife in the heart of the city.

Less than 6% of London's green space is currently freshwater habitat, and we know that ponds and lakes are most beneficial to wildlife when they are part of pond networks. Clean water maps could be used to identify areas we should be protecting and to plan locations for new pond creation which will maximise the benefits for freshwater biodiversity.



*A clean water pond, Chislehurst, Bromley,*

The London Clean Water for Wildlife data was collected as part of Freshwater Habitats Trust's Heritage Lottery Funded project 'People, Ponds and Water' [freshwaterhabitats.org.uk/projects/people-ponds-water](https://freshwaterhabitats.org.uk/projects/people-ponds-water). Additional funding, support and data were provided by Thames Water through the Thames Water for Wildlife project [freshwaterhabitats.org.uk/projects/thameswaterforwildlife](https://freshwaterhabitats.org.uk/projects/thameswaterforwildlife) and the Earthwatch FreshWater Watch programme [freshwaterwatch.thewaterhub.org](https://freshwaterwatch.thewaterhub.org). Data gathered by project staff, FreshWater Watch volunteers and Thames Water for Wildlife volunteers across urban ponds, streams, rivers, lakes and ditches, is providing us with a better understanding of how water chemistry varies across a large urban landscape, such as London.

#### Earthwatch

Earthwatch is an international environmental charity, bringing individuals from all walks of life together with world-class scientists to work for the good of the planet. All bring their knowledge, passion, and experience to support our work, improve scientific understanding, and inspire change.

Their FreshWater Watch programme aims to create a global water quality database to assess the health of freshwater ecosystems. They have recruited a global network of trained citizen science scientists who support freshwater research and agency monitoring. You can see and analyse the results of their nutrient and particulate measurements using the WaterHub [freshwaterwatch.thewaterhub.org](https://freshwaterwatch.thewaterhub.org). Freshwater Habitats Trust has been working on the UK Earthwatch project to investigate the use of quick chemistry kits by professionals and citizen scientists.

#### Thames Water for Wildlife

Clean water is crucial to the wonderful wildlife that makes its home in the Thames Water region. But whilst we know something about the River Thames and its major tributaries, thousands of ponds, lakes, ditches and streams remain largely unmonitored and at risk. The Thames Water for Wildlife project aims to discover the best and most unpolluted freshwater habitats, and help to monitor some of the rarest wildlife that depends on clean water in this region. As a responsible steward for the natural environment, Thames Water are keen to ensure that everyone has a chance to better understand, appreciate and enjoy our wonderful freshwater habitats and the unique species they contain.