The Lower Windrush Valley Year II (2017)

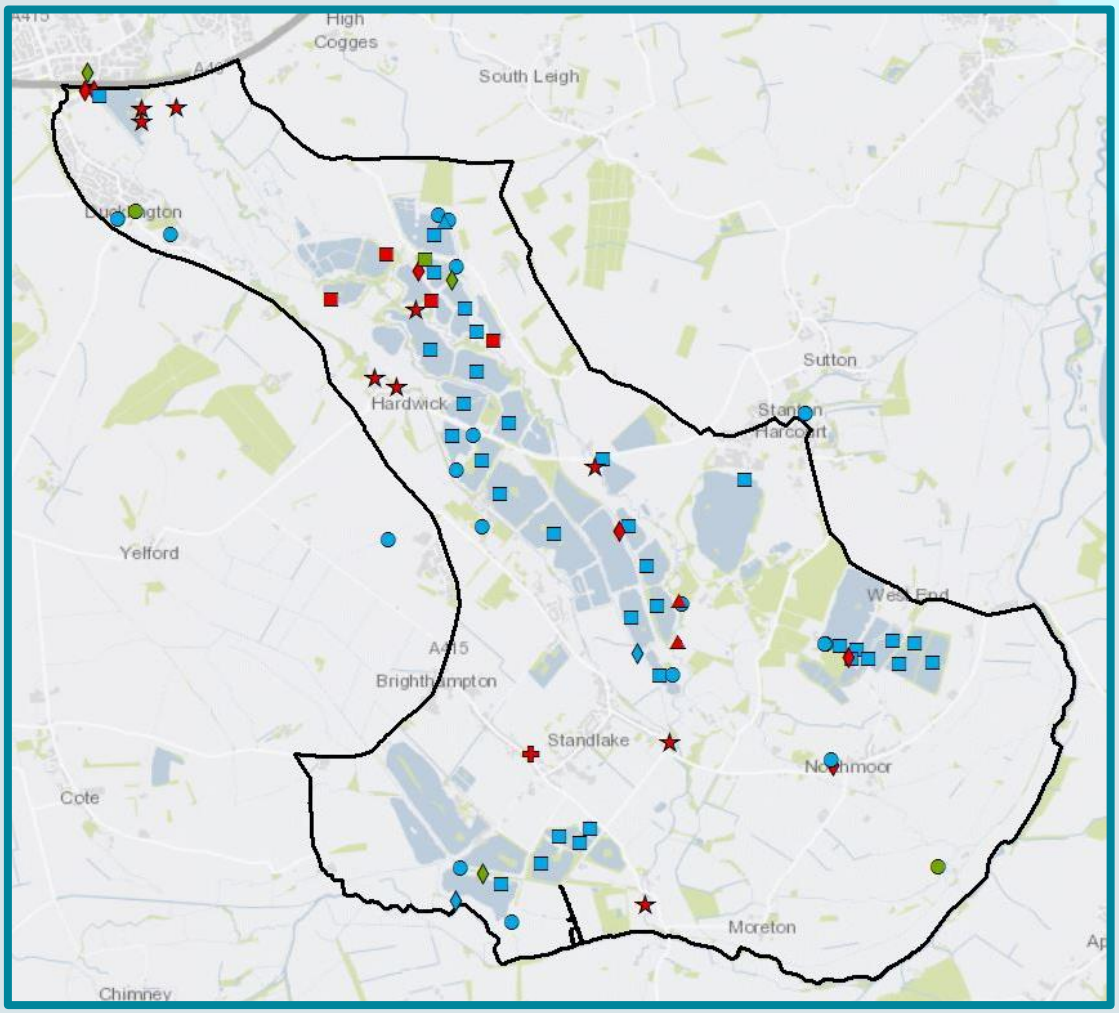
Overview

For a second year, the Lower Windrush Valley water bodies have been surveyed for nutrients – nitrate and phosphate - as part of the Clean Water for Wildlife Survey. Volunteers visited gravel pit lakes, various sites along the River Windrush, and small waters, like ponds, ditches and streams, which are abundant in the area. Once again the results show how important the Lower Windrush Valley gravel pit lakes and ponds are for freshwater wildlife – providing a clean water refuge in a landscape where nutrient pollution is widespread. The data also shows that the River Windrush has high levels of nutrients, despite the effort of the many organisations dedicated to improving our water habitats, and so we must continue to work at the catchment scale to clean up the River Windrush and its tributary streams.

LWV 2017 survey results

82 water samples were collected by LWV volunteers including the River Windrush (9 sites), gravel pit lakes (39 sites), ponds (19 sites including garden ponds, village ponds and ponds on restored mineral sites), ditches (3 sites), streams (11 sites) and a well (1 site) in May 2017. A further 9 sites (7 ponds, 1 ditch and 1 stream) were visited but were dry and therefore could not be tested.

66% of the waterbodies sampled in the LWV showed no evidence of nutrient pollution (see 2017 pie chart, below). A high proportion of ponds and lakes were unpolluted. In contrast, the river sites all had high nutrient pollution, as were most of the stream sites. One well was sampled, which also had high levels of nutrients.



Result comparison between 2016 and 2017

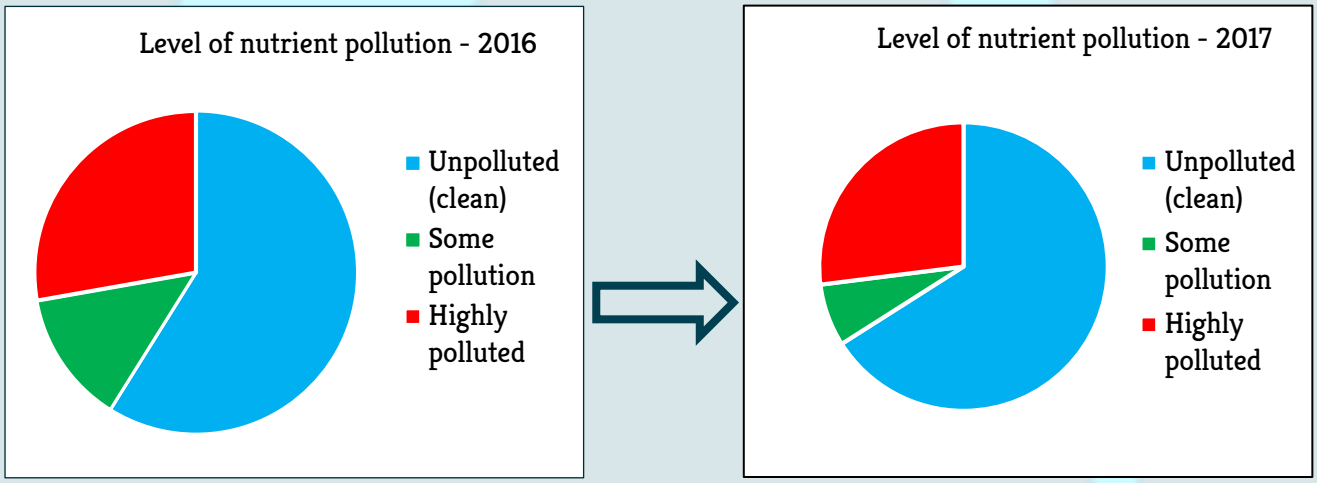
The results of the survey were remarkably consistent between 2016 and 2017, with a high proportion of sites containing unpolluted 'clean' water - 66% in 2017 and 59% in 2016.

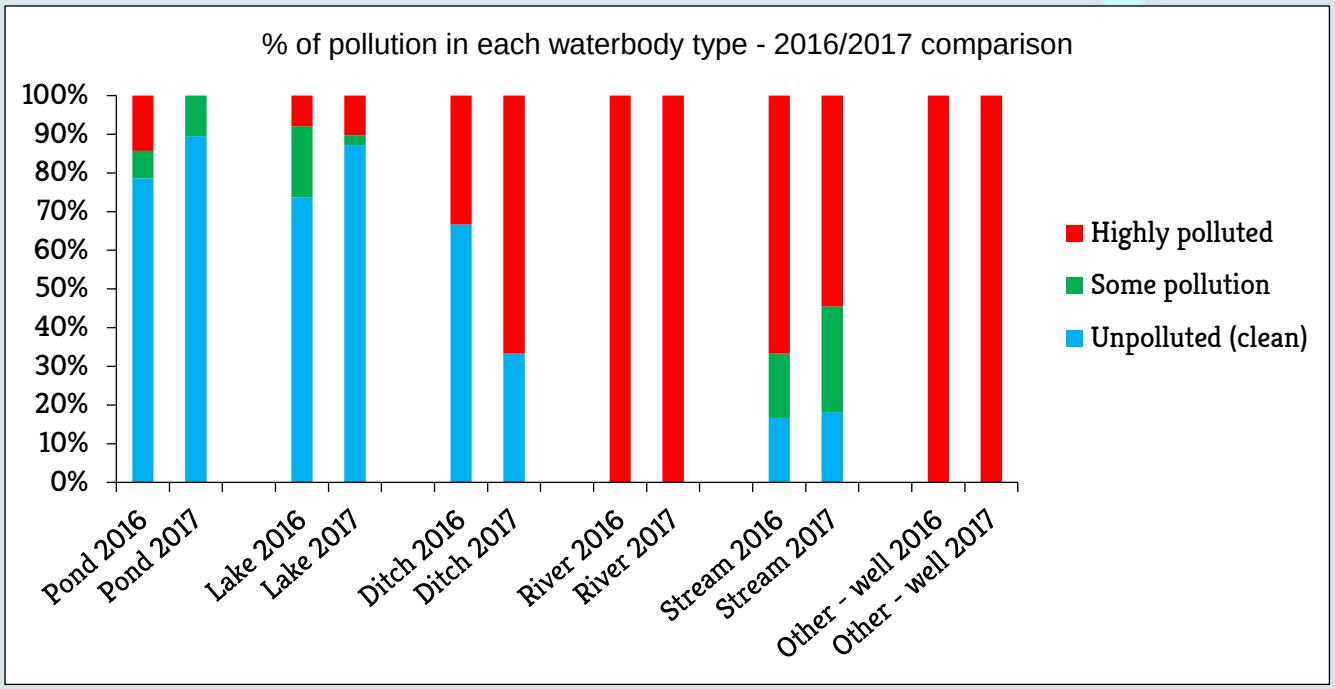
The clean water was found in the same types of waterbodies in both years, with the majority being in lakes and ponds and very little, or none, found in the River Windrush and stream sites.

Table 1: Level of nutrient pollution - 2017

	Unpolluted (clean)	Some pollution	Highly polluted	Total
Pond	17	2	0	19
Lake	34	1	4	39
Ditch	1	0	2	3
River	0	0	9	9
Stream	2	3	6	11
Other - well	0	0	1	1
TOTAL	54	6	22	82

Pupils from Stanton Harcourt Primary School taking part in the survey





A clean water pond at Tar Lakes

The River Windrush near Ducklington

Understanding the LWV results

Clean water in the LWV is concentrated in ponds and lakes. These results are very similar to those from other parts of lowland England, where the majority of streams and all the rivers suffer serious nutrient pollution. However, the proportion of clean water habitats in the LWV is *much greater* than in other parts of lowland England, and this is because of all the gravel ponds and lakes created as part of mineral extraction.

For contrast, a Water Blitz conducted across the River Ock catchment just south of the LWV reported that only 28% of sites were unpolluted 'clean' water – about half the amount recorded in the LWV – and very similar to the proportion of clean water seen in Greater London. This really shows the importance of the LWV as a clean water haven for freshwater wildlife.

What's next?

Now that we have gathered information about water quality in the Lower Windrush Valley water bodies for a couple of years, here's what we're planning to do next:

- We need to tell everyone about these positive water quality survey results, and make sure everyone is aware of the wealth of fantastic freshwater wildlife and unpolluted 'clean' water that exists in the Lower Windrush Valley. So we will disseminate this message to landowners, local communities and the general public, but also local authorities, planners, businesses and partners working across the River Windrush catchment to improve land and water management.
- We'll continue to provide advice and support to the minerals industry to promote the creation of clean water ponds and good practice in lake restoration on sand and gravel quarries – and so protect and extend the clean water resource in the valley.
- We are planning further water quality surveys in future years, so that we can continue to monitor and learn about the waters of the Lower Windrush Valley – we would not be able to do this without the support of local volunteers!

Clean Water for Wildlife Case Study

1st Standlake Brownies testing the waterbodies at Tar Lakes as part of a trip to Rushy Common

The Lower Windrush Valley Project and Freshwater Habitats Trust thank all the volunteers who have participated in the Clean Water for Wildlife Survey in 2016 and 2017 – this would not have been possible without them:

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Sue Taylor

We would also like to thank all of the landowners who granted access to their land for volunteers to survey.

The Clean Water for Wildlife survey in the LWV was coordinated by the Lower Windrush Valley Project, in collaboration with Freshwater Habitats Trust's Heritage Lottery Funded project 'People, Ponds and Water'. Information about the testing method, the 2016 Lower Windrush Valley case study, and others from other parts of the country can be found here: freshwaterhabitats.org.uk/projects/people-ponds-water

The Lower Windrush Valley (LWV)

The Lower Windrush Valley (LWV), in West Oxfordshire, is an area that incorporates the floodplain of the River Windrush from the town of Witney to its confluence with the River Thames at Newbridge. Over the last 60 years, the valley has been extensively modified by mineral extraction and there are now over 60 gravel pit lakes in the valley and many ponds that had been created through the restoration of gravel pits.

The Lower Windrush Valley Project was established by Oxfordshire County Council to create and implement an environmental strategy for Lower Windrush Valley area. Officially launched in 2001, the project works closely with mineral operators, landowners and the local community to coordinate, implement and help manage a range of initiatives that aim to strengthen the landscape, protect and enhance the biodiversity and improve public access in the valley. For further information about the project and to see its Strategic Plan, visit the project website: www.oxfordshire.gov.uk/lowerwindrushvalleyproject