

Evidence text (800wds) for FCA awards

The Lye Valley Nature Reserve is an important 4.5 hectare site that has been credited with SSSI status due to its rare fenland and plants, including the grass of Parnassus. The Lye Valley runs from The Slade in Headington Oxford (OX3), south east towards Southfield Golf course. The valley is a 14,000 year old internationally rare habitat, a “tufa forming” alkaline spring fen. It represents 1.5ha of only 19ha of this habitat left in England, and supports over 20 species of plants rare in Oxfordshire, of which 14 are on England’s Red List. It also hosts 10 species of rare and 27 species of nationally scarce invertebrates, notably soldier flies, and glow worms, as well as thriving populations of reptiles and amphibians.

The northern SSSI section is in the centre of the Lye Valley, and it is also a local wildlife site. The Lye Brook and footpath (boardwalk), run through the middle of the reserve.



Map showing the Lye Valley Nature Reserve

Local to the Lye Valley are Rock Edge and Old Quarry Nature Reserves both of which are part of the crucial rainwater catchment and infiltration area for the springs which keep the valley spring-fen wet, and ensure the formation of limy tufa, essential to the valley's unique wildlife. The Lye Valley depends on at least a square mile catchment of rainwater gently permeating through the ground to the springs to keep the fen wet, which is important not just for the health of the fen, but if areas become too dry they will suffer peat oxidation with CO2 emission affecting the city's net zero commitment.

With an increase in intense storm events due to climate change, the Boundary and Lye Brook have been severely impacted by storm flash flood erosion. The storm water from the surrounding surface roads pours out of the Thames Valley drain, and gouges out the channel of the Lye Brook, before pouring onto the Golf course and causing havoc there. In September 2023 the force of the water lifted up a plank bridge on the Golf course and deposited it about 100 metres further downstream. It is the ferocious strength, and quantity of the water flow that is causing so much damage to the Lye Brook.

In order to combat the damage, the volunteers, Friends of the Lye Valley have taken on the backbreaking work of shoring up the sides of the Lye Brook, and have been acting as "human beavers" creating log dams in what was once a tiny gentle brook to try and stem the inevitable flooding further downstream which happens every time there is a storm. This work provides and continues to provide an active benefit to those living downstream of the flooding.

Factual evidence of water flow gathered by Natural England in 2011 was carried out by MWH Global. Data exists on the outpouring of the Thames Valley drain at the valley head, peak flow compared to low flow.

The natural flow rate of the Lye Brook from its catchment area was 4.2litres per second. Peak flow from the drain outfall at the valley head after a storm was recorded at 1750 litres per second. This data is over 12 years old.

Since 2011, many more buildings have been erected and hard surfaces created (paved driveways) within the rainwater catchment area of the Lye Valley. The valley is in real danger of slowly drying out as the water feeding the springs is unable to permeate through the ground, but instead becomes "ground run off", and is diverted to the main Thames Valley drain system.

So what to do? The FoLV volunteers have spent hundreds of “man hours” working in the stream, and in the valley to build up the sides of the Lye Brook, to prevent it from collapsing in on itself, and created numerous log dams across the brook to slow the water flow.

Their efforts have not gone unrecorded, but to date they have not been officially recognised by Oxford City Council (who own the land), or any other official organisation. The benefits of their tireless work are of course recognised by the few who live in the roads south of Florence park, where there has been significantly less flooding in recent months even though there have been two severe flash floods.

Another unsung benefit is of course the bringing together of a wonderful dedicated team of selfless volunteers, and building a community of like minded people.

