

Restoration of the River Ems Valley by Sarah Hughes, Chalk Stream Resilience Officer (Ems & Hambrook)*



Situated in the South Downs National Park, the River Ems catchment area starts in the north at Uppark House (Tower Hill) and Harting Down, and includes villages such as Compton, North Marden, Up Marden, West Marden, Stoughton, Walderton, Racton, Stansted Park, Aldsworth and Westbourne. Its southernmost point is the Slipper Mill Pond in Emsworth, where the river flows into Chichester harbour (Area of Outstanding Natural Beauty).

Everything that is used/deposited within the Ems catchment impacts the chalk watercourse, i.e. agriculture, septic tanks, road runoff, private outfalls, industrial waste, livestock, dogs (flea & tick treatments) etc.

Chalk rivers are vitally important and rare ecosystems. There are approximately 283 chalk streams in the world, with the majority (85%) in the UK.

- They are fed from groundwater chalk aquifers so have clean, clear water at relatively stable temperatures.
- They support an unusual diversity of wildlife including important fish populations and specialist insect species.
- They are home to threatened plants and animals such as water vole, European eel and brown trout.
- Due to their very clean, clear waters they have supported many industries historically.
- They offer a unique environment for aquatic plants such as water crowfoot, starwort, fool's watercress and water parsnip.

** for Arun & Rother Rivers Trust trading as the Western Sussex Rivers Trust*

Photo above right: Richard and Will Crombie

The River Ems has two main arms.

One starts northwest of Wildham Woods, flowing south through Wildham Barn towards Stoughton, passing the major springs, Rudkin's Source, near the bottom of Lambdown Hill, before entering Stoughton and flowing out to Mitchmere Pond and Farm.

The watercourse then flows past Portsmouth Water's potable water abstraction site at Walderton. Evidence shows that the river had a much stronger flow before abstraction, which started in the 1960s, with *Where to fish guides: 1928-1966* stating the Ems above Racton as 'good for trouting'. After 1973 there is no mention of the Ems as a place to fish.

The river then enters Lordington where mills and fisheries once were, suggesting there was once stronger than average flow.

It then passes on the westside of Racton Park Farm and continues under Common Road. There was a sheepwash here below Broadwash Bridge, on Common Road, just north of Foxbury Lane, suggesting a good water flow.

Records suggest that the river was never dry below Aldemoor/Lord's Fishpond, north of Westbourne, before abstraction began in the 1960s. It was rarely dry below Broadwash Bridge and for parts of the year trout and eel could be found as far north as Mitchmere Pond.

The river then flows into Deepsprings, a wildlife haven with a wet meadow and woodland.

It continues to the old canal and Watersmeet, where the second arm of the River Ems joins from Stubbermere, Brickkiln Ponds and the Aldsworth Pond.

*Aerial view from
Common Road,
looking north to
Racton/Lordington
and the top part of
River Ems catchment*

Photo: Malcolm Lamb



From Watersmeet to Westbourne Mill the river is one for approximately 150 metres – the only place this happens in the whole River Ems catchment.

At Westbourne Mill the river divides: one arm flows down the millstream, the other flows parallel until they join west of King Street.

The river splits again at Old Rectory Close, one flows along the west side of Mill Lane, the other meanders through Mill Meadows Farm, both flowing under the A27.

The river joins and splits again at Lumley Mill, with the Lumley watercourse on the eastern side and the River Ems flowing through Constant Spring and on to Brook Meadow Local Nature Reserve.

Finally, the River Ems flows into Chichester harbour, possibly in five divisions.

The River Ems is a vitally important ‘blue’ 8.80 km wildlife corridor enabling wildlife to commute from the coastal plain to the South Downs National Park and wider landscape. The river supports a wealth of creatures, from microscopic organisms to mammals like bats, water voles and otters.

The journey upstream for some of our most endangered species is fraught with

difficulties. We have over-engineered our watercourses, straightening them, with no natural banks/flood areas, only hard engineering, huge sluices and weirs.

The southeast of England is a water stressed area and we need to be mindful of our water use as it is either water out of our tap or in our river. Water is abstracted for customers to use and sadly we’re using too much.

Portsmouth Water needs to achieve sustainable abstraction from the aquifer – without water the River Ems is dead. Unsustainable abstraction reduces the resilience of the river, which has a flashy nature, drying in the summer and flooding in the winter.

With further development planned we must work as a community to protect this important chalk river and wildlife corridor.

Working in partnership with local landowners and residents, we can make a change. We would like to reverse decades of over-engineering to make the River Ems as fish friendly as possible and provide a habitat for wildlife to shelter, as well as to improve biodiversity within and adjacent to the river and the catchment that it supports.

Continued overleaf

Restoration of the River Ems Valley contd

We have developed a community led, 10-year restoration plan for the River Ems, with aspirations of recharging the aquifer, making it resilient to climate change, holding back water wherever possible, being diligent with the impacts of flooding and drought, and using nature-based solutions to increase biodiversity and connectivity.

The restoration work will include:

- Working in partnership with farmers, reducing abstraction and providing buffer zones for point and diffused pollution sources, especially from livestock.
- Creating and restoring ponds, water meadows, meanders, scrapes etc. to hold back water and recharge the aquifer.

- Hedgerow/woodland planting, hedgelaying and dead hedging to improve biodiversity and connectivity.
- Removal of obstructions to ease migration routes, such as weirs, concrete walls and man-made obstructions to flow.
- Recording, eradication and management of Invasive Non-Native Species.
- Providing 'the Dos and Don'ts' of septic tank care highlighting habitat protection.
- Enthusing the community to take action and save water.

Working together we can ensure the River Ems is a beautiful river for future generations and wildlife to enjoy. Visit wsrt.org.uk to find out more and sign up as a volunteer.