TARMAC

ACT
SUSTAINABILITY STRATEGY

**From quarry to wetland, Langford Lowfields demonstrates how restoration can deliver lasting benefits for nature, communities and future generations.**

# PEOPLE

## COMMUNITIES

### Langford Lowfields: Transforming a Quarry into a National Wetland Treasure

Langford Lowfields Nature Reserve shows how long-term planning, careful land management and strong partnership working can transform a working quarry into a thriving natural space. Located northeast of Newark, the 120 hectare site is now the largest reedbed in the East Midlands, supporting an impressive diversity of wildlife while offering accessible green space for health, wellbeing and environmental education.

#### A Vision Shaped by Partnership

The reserve was originally designed to support rare and declining wetland species such as the Bittern. Its creation is the result of more than three decades of collaboration between Tarmac, landowner Trinity College Cambridge and the Royal Society for the Protection Birds (RSPB). Planning permission for sand and gravel extraction was granted in 1988, and from the outset the project included progressive restoration using on-site materials to create reedbed, wetland, hay meadow, scrub, wet woodland and rough grassland.

Over 30 years, extraction and restoration were closely integrated to form a mosaic of Section 41 priority habitats. Around 70 hectares of reedbed now dominate the site, half of which is fully established. A major long-term milestone was recently achieved with the full transfer of the restored land to the RSPB, securing the reserve's future as a conservation site and public amenity.

#### Working Together to Restore Nature

The partnership was built on shared vision and professional expertise across environmental science, surveying, minerals planning and land management. Tarmac carried out the physical landforming, while the RSPB led ecological surveys, planting and aftercare. Under-digging techniques were used where needed to generate additional silts and clays, enabling a more effective habitat design.

Support from Nottinghamshire County Council, Collingham Parish Council and the local community was important throughout the project. Quarterly stakeholder meetings kept communication open, and co-located offices for Tarmac and the RSPB helped maintain close collaboration.

#### Community Connection

Community involvement remains central to Langford Lowfields. A team of around 30 volunteers assists with habitat management, visitor engagement and wildlife monitoring. Their efforts build a strong sense of ownership and pride in the

reserve. Volunteers also contributed to a 2010 archaeological dig, which uncovered evidence of Roman settlement and historic river features.

As the reserve continues to mature, 2025 reflects a period where long term planning and community involvement come together. Public access remains carefully managed to reduce disturbance while enabling people to experience the landscape. Visitor numbers have continued to rise since opening in 2014, demonstrating growing local connection to the site. Annual aftercare reporting and ongoing engagement ensure the reserve evolves in line with ecological needs and community expectations, while plans for a dedicated dog walking area are being developed to balance recreation with wildlife protection.

### Environmental Outcomes and Innovation

Langford Lowfields has supplied one third of Nottinghamshire's sand and gravel requirements while delivering a fourfold Biodiversity Net Gain compared with the agricultural land previously occupying the site. Its design includes finger shaped reed edges, open water and island features that attract key species. A large outfall sluice and six smaller sluices manage water levels and allow critically endangered eels to access the reserve.

The site is managed through a detailed monitoring programme, including breeding bird counts, monthly waterbird surveys, electro-fishing, drone photography, reed health assessments and water quality tracking. To date, 220 bird species have been recorded, with 51 breeding. Otters, harvest mice, badgers and water shrews also inhabit the site. The wetland's carbon capture rate exceeds that of rainforest by 70 percent.

Langford's approach to embedding habitat creation through the full lifecycle of a quarry has become best practice across Tarmac's operations. The site also contributes to the "Bigger and Better in the Trent and Tame" vision, which aims to create connected wetlands throughout the River Trent catchment.

### A Lasting Legacy

Beyond its ecological value, Langford Lowfields delivers social benefit. The reserve attracts around 800 visitors each month and serves as a training site for university students and conservation professionals. RSPB staff remain active in the Trent Gateway partnership, helping to create a thriving river corridor for wildlife and people.

From a working quarry to a nationally important wetland, Langford Lowfields stands as a model of more sustainable restoration that brings communities closer to the natural world and supports biodiversity for generations to come.