

# Case Study: Dorset's Natural Influence at its best

## Biodiversity Net Gains from the Weymouth Relief Road construction



**Lead Partner:** Natural England and Dorset County Council (project completed prior to local government reorganisations)

**Other Partners:** DWT, RSPB, Dorset AONB

### Project Summary

The Weymouth Relief Road is a single carriageway route improving the A354 and bypassing the communities of Broadway, Littlemoor and Upwey, completed in 2011. A relief road had been included in Local Plans since 1949.

Over the course of the planning process, the original route which would have crossed the Lorton Valley, dividing the Lodmoor Site of Special Scientific Interest (SSSI), was changed to a less ecologically damaging one, alongside a railway line. The revised route left the valley with an intact, and over time enhanced, network of high quality habitats including nationally important grasslands, woodlands and wetlands.



Flower rich chalk cuttings © John Stobart (NE)

### Ecological Losses

Although less damaging, the new road alignment resulted in significant loss to Dorset Wildlife Trust's (DWT) Lorton Meadows Nature Reserve, as well as the Woodland Trust's Two Mile Coppice, which forms part of the Lorton SSSI. The scheme also impacted on the Dorset AONB landscape.

#### Summary of ecological losses associated with the new road

- 0.6 hectares (ha) of the western edge of Two Mile Coppice, part of the Lorton SSSI. Of this 0.25ha was considered to be ancient woodland though later found not to be and 0.35ha was secondary woodland.
- 0.5ha of other woodland.
- 20.8ha of semi-improved neutral grassland, including 5.5ha approaching Local Wildlife Site (SNCI) quality, 3.1ha of which was in DWT's Lorton Meadows Nature Reserve.
- 1.5ha of semi-improved calcareous grassland.
- 2.9km of mature hedgerow.
- 2.7ha of scrub.



One of the four green bridges © John Stobart (NE)



View of the road with the Southdown Ridge road cutting on skyline © John Stobart (NE)



Former road narrowed with flower rich lime-stone spoil verges © John Stobart (NE)

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### Summary of Ecological Gains Secured

- An Ecological Mitigation Area (EMA) (32.23ha) linking the DWT's Lorton Meadows Nature Reserve and the RSPB's Lodmoor Nature Reserve. The EMA includes Horselyynch Plantation a site of regional importance for bats.
- Management of the EMA includes:
  - \* Recreation of 12ha of unimproved neutral grassland from recent arable conversion;
  - \* Restoration management of 2.4ha of existing woodland (Horselyynch Plantation);
  - \* Restoration management of 4.6ha of semi-improved pasture;
  - \* Planting of 8.9ha of new scrub and woodland.
- The EMA was managed directly by the road scheme for a 5 year establishment period before being passed to DWT as an extension of their Lorton Meadows Reserve. £150,000 secured for subsequent management for a further 20 years.
- Embanked noise screening has successfully prevented significant noise pollution within the Lorton Valley.
- Lodmoor North landfill remediation – prevention of on-going landfill leachate seepage into Lodmoor SSSI.
- Restoration of 2.5ha of scrub and semi-improved grassland on remaining tip areas.
- Widening of the land fill 'pinch-point' to provide more ecological connectivity between northern and southern parts of the Lodmoor SSSI & control unauthorised access.
- 4.4ha of new chalk cuttings designed to provide a diverse range of different chalk grassland plant communities.
- 6.1km of new native hedgerow planting.
- Creation of 4 large balancing ponds designed for wildlife.
- Four 'green bridges' along route and wildlife crossing points beneath the new road.
- The construction of an outdoor classroom with bat roost at the DWT Lorton Meadows Nature Reserve.
- Establishment of a wider Lorton Valley Nature Park with the aim of securing the long term future of the Lorton / Lodmoor valley for wildlife and people.
- The provision of bat and barn owl boxes.
- £300,000 for additional landscape mitigation measures.



**Wildflower chalk verges © John Stobart (NE)**



**Balancing pond designed for wildlife  
© John Stobart (NE)**



**Embanked sound barrier against the Lorton NR. Road aligned to minimise losses to Two Mile Coppice  
© John Stobart (NE)**



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**Restored pasture on the former LWS within EMA, with Horselyynch Plantation in background**  
© John Stobart (NE)

### Creation of wildflower chalk verges

To support wildflower growth the road verges used a thin (15-20mm) covering of top soil on to chalk sub soil and in places no topsoil (saving an estimated £270,000 in top soil costs). The verges and larger areas of cuttings were then seeded locally collected wildflower seed. The resulting flower rich swards now support bee orchid and 23 species of butterfly have been recorded, including the nationally rare Adonis Blue and local Small Blue. The chalk cuttings and verges have helped integrate the scheme into the Dorset AONB landscape and created a diverse ecological corridor. The scheme has also resulted in very low verge maintenance costs.

### Lodmoor landfill

The construction of the Park and Ride on the Lodmoor landfill raised concerns relating to leachate contamination, but work included the capping of the tip to prevent ongoing leachate contamination of the Lodmoor SSSI wetlands. The unused tip areas have been restored to ephemeral ponds, scrub and grassland habitats.

### Wider benefits of the scheme to the Lorton Valley

Over the years prior to the scheme, the extent of wildlife habitats and open space within the Lorton Valley had been significantly reduced through landfilling of the southern wetland and infill housing. The notification of key sites within the valley as the Lodmoor and Lorton SSSIs prevented further losses of nationally important habitats. However, much of the remainder of the valley in the north was retained by developers and left unmanaged. The resulting seemingly abandoned land attracted antisocial activities such as vandalism, fly tipping and numerous burnt-out cars.

Central to the road scheme's biodiversity mitigation package was the acquisition through compulsory purchase of the 31ha "Ecological Mitigation Area" (EMA). The EMA includes Horselyynch Plantation, a mature beech woodland with regionally important bat populations, along with several fields which were formerly recognised as a grassland Local Wildlife Site (LWS, termed a Site of Nature Conservation Interest or SNCI in Dorset) until their old pastures were destroyed by conversion to maize. The acquisition of the EMA has allowed the recreation of new wildflower-rich neutral grassland. The initial 5 years of restoration has now been completed and the EMA land is in suitable condition to allow its transfer to the ownership of the Dorset Wildlife Trust. The ongoing management of the EMA for 20 years is supported by £150,000 funding.



**Ephemeral pond on restored and capped landfill**  
© John Stobart

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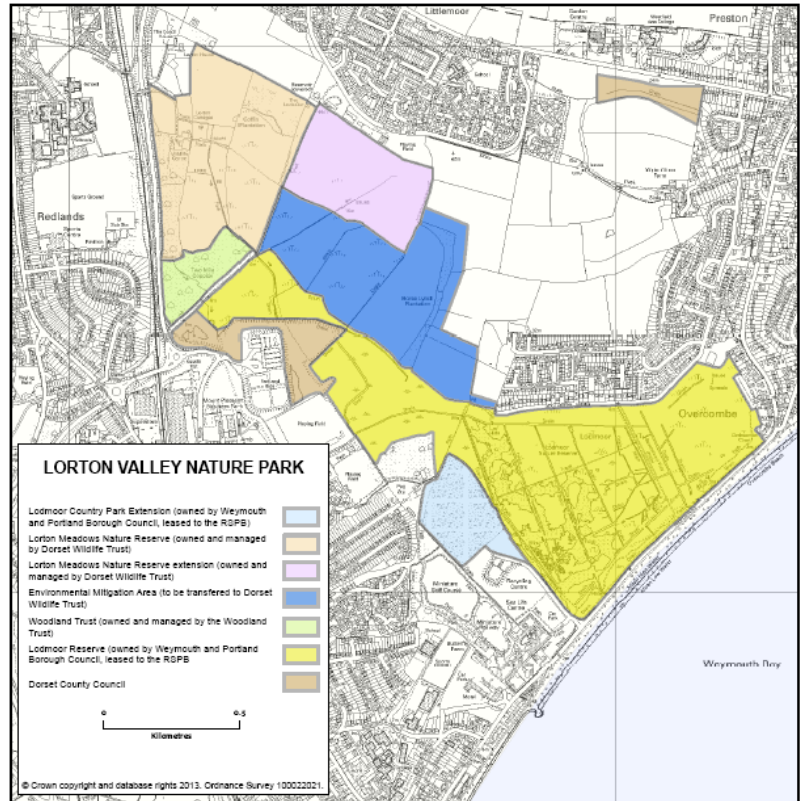
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### Lorton Valley Nature Park

Natural England helped negotiate a £300,000 landscape mitigation fund, £70,000 of which was used to purchase an additional 15ha block of land as an extension to the DWT Lorton Meadows Nature Reserve. A further support for the land purchase was received through a voluntary contribution from a local developer. The EMA and the new DWT land links up and buffers the valley's designated wildlife sites and has enabled the formation of the Lorton Valley Nature Park, which is supported by policy within the adopted Weymouth and Portland Local Plan.

The Lorton Valley Nature Park covers over 194ha of biodiverse habitats that includes the 34ha DWT Lorton Meadows Nature Reserve, the 79ha RSPB Lodmoor reserve and the 6ha Woodland Trust's Two Mile Coppice. It is hoped as future developments come forward more land will be added to the Nature Park.



Interpretation Board © DWT

### More information

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### Landscape mitigation measures

The northern section of the new road runs through the protected landscape of the Dorset AONB. The road has been designed to limit landscape impacts by cutting through the prominent Southdown ridge obliquely so as to avoid a visible notch in the ridgeline.

The scheme provided a £300,000 landscape mitigation fund, calculated using Higher Level Stewardship rates for proposed hedgerow and dry stone wall works. One third of the fund was used for landscape enhancements in the Lorton Valley and the remaining £200,000 used as match for the £2.5 million Heritage Lottery funded South Dorset Ridgeway Landscape Partnership. The project has secured the restoration of 12ha of priority habitat, 300m of drystone wall, laid 1.5km of hedgerow, enhanced 6km of road verge for wildlife and the clearance of scrub from 25 ancient monuments.