

Dan Bank Road and Slope Stabilisation

The overall project is designed to stabilise the movement of the A626 Stockport to Marple Road, which had suffered from settlement and lateral movement, as the road foundations were slowly sliding down the embankment towards the watercourse known as Marple Brook.

The immediate Dan Bank area is designated a site of Special of Biological Interest, due to the diverse Flora & Fauna and Ancient Woodland found there.

Phase 1

Duration 10 weeks

Bridge Improvement & Scour Protection Works

Refurbishment improvements were required to the bridge masonry arch located at the bottom of “Dan Bank” that carries the A626 over Torkington Brook. The work consisted of the repair and re-pointing of the bridge structure, plus the reinforcement and extension of the old masonry wing walls. Ant-scour protection measures were incorporated up stream of the bridge structure and included the installation of structural gabions and the underpinning of the existing bridge foundations.

Client

Stockport Metropolitan County Council

Location

A626 Stockport Road, Marple, Cheshire

Value

£2.5m on 4 phased projects

Duration

Overall duration 36 weeks



Phase 2

Duration 7 weeks

Slope Stabilisation Drainage and Marple Brook Improvement Works

These works were designed to improve the natural subsoil drainage of the slope and promote less silting and better water flow in Marple Brook at its base. New land drainage wrapped in geotextile and covered in lime free gravel was installed from the Brook, up to the slope to the main road. Separate drains, catch pits and silt traps were also installed to catch the surface water runoff from the road gullies. Marple Brook was cleaned of debris and scour protection measures were installed, using environmentally sympathetic timber and pre planted coir materials. The majority of this work was completed manually by Bethells skilled labour force, this being the best way to reduce the environmental impact that any construction activity had on the site.



Phase 3

Duration 8 weeks

Road and Ground Stabilisation Works

Before this phase could be started all stakeholders, local residents and the EA were consulted at length by the Client. Agreements were reached regarding the scheduling, timing and the methodology to be employed when installing the significant number of piles in this region. To avoid road disruption, the vast majority of work was undertaken during night time closures of the A626.

The scheme required the installation of nearly 300 600mm dia x 8/12 metre long contiguous reinforced concrete piles to form a 300m long r structure to reatin the A626 and the slop above. The contiguous piles were linked at road level by a reinforced concrete pile cap. New road drainage, storm water interceptors and steel rope vehicle restraint system were installed and fitted.



Phase 4

Duration 11 weeks

Road Surfacing and Reconstruction & Dooley Lane Junction improvements

The final phase required further slope stabilisation work, this time to the uphill slope above the A626. This part of the scheme involved the installation of geo-textile materials and 350 soil nails up to 15 metres in length. This allowed the excavation of the existing embankment to enable the extra width necessary to construct a new stone retaining wall

Concurrent with the wall construction, the existing asphalt road and kerb line was replaced in its entirety. Once again all the works were carried out at night throughout the evenings between the hours of 7pm and 6am to eliminate any traffic chaos.

Throughout each construction phase, noise monitoring was carried out, and a nature conservation officer made daily visits to the site. In addition, the EA were regular visitors and fully supported the scheme.

The scheme received full backing and support from all stakeholders, local residents and environmental bodies. Now completed, Stockport Metropolitan County Council has entered the scheme for a number of construction and environmental awards.

