

# Shrewsbury School Landslip

## Project Profile

**Client:** Shrewsbury School

**Designer:** Ramboll UK

**Value:** £250k



This contract was undertaken to remediate a landslip which had occurred to a steep river escarpment slope at Shrewsbury School, Shrewsbury. The steep, vegetated embankment within the ownership of the School failed following heavy rain in June 2018 when a section of retaining wall collapsed precipitating the landslip. The collapse caused damage to the adjacent Ridgemoor Lane, damaged existing services and felled a number of mature trees growing on the slope.

The top of the slope (Ridgemoor Lane) is elevated approximately 15 m above the River Severn flood plain land to the east on a slope graded at approximately 33 degrees (1 vertical to 1.5 horizontal). Prior to the failure, the upper part of the slope was supported by a brick retaining wall which substantially collapsed during the failure event, subsequent investigations suggested that the wall had no foundation. Because of the nature of the failure that occurred and the poor quality soils making up the slope the proposed solution comprised the construction of a free draining granular buttress made from imported stone/rockfill to stabilise the slope.

Work included;

- Establishing a Japanese Knotweed exclusion zone around existing stands of vegetation.
- Vegetation and tree clearance at the base of the embankment and entrance to the riverside track to accommodate construction vehicles, provide protection for trees to be retained and form new wildlife habitats with felled trees and soils.
- Modify existing fencing at the entrance to the riverside track and take down existing removable section of boundary fence to improve turning off Porthill Road.
- The existing public access track alongside River Severn which was used by the Rowing club and others was widened using Trakway to accommodate construction plant and material delivery lorries and a hardstanding was also established at the base of the failed slope to accommodating delivery vehicles.



# Shrewsbury School Landslip (Cont'd)

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- The slipped material from base of embankment was disposed off-site.
- Import and stockpile Class 6B Stone for the buttress construction remedial works.
- Using a long reach excavator located at the base of the embankment to trim the existing failed slope material to form 2m high benches, place geotextile separator and place imported Class B stone to new slope angle— 2,163tonnes of stone used.
- The stone buttress was constructed by working in 5m width sections across the embankment and placing/compacting the stone in 600mm deep layers.
- Construction of the 15m wide buttress was completed across the full width at each bench level to ensure stability of the existing slope.
- A 13 tonne excavator worked up the slope placing and compacting the 6B stone to each platform before constructing the next level. The excavator exited the finished works via the top of the embankment upon completion.
- Reconstruct Ridgemount Lane at the top of the buttress construction, replace the surface water drainage and provide new fencing.
- Reinstate the Rowing Club access track and boundary fencing.

