

# EROSION CONTROL AT RUSSELL HOMES, SALTERSFORD GARDENS

## HOLMES CHAPEL, CHESHIRE, UNITED KINGDOM

### Slope Protection

#### Problem

In 2018 Maccaferri provided Russell Homes with a design and supply package for a ParaGrid reinforced soil slope to retain a boundary of their new residential development along Macclesfield Road in Holmes Chapel, Cheshire. This structure was successfully installed in the summer of 2018. As part of the design, erosion control measures were incorporated on the face of the reinforced slope. This consisted of a 150mm deep MacWeb cellular soil containment system which was filled with topsoil. The soil placed within the MacWeb was seeded with a wildflower mix and a layer of Enkamat 7010 erosion protection matting was pinned over the top to prevent washout of the topsoil.

Maccaferri was contacted by Russell Homes in February 2021 because part of the topsoil surface of the slope had slipped towards the road below following a period of heavy rainfall. Following a site visit, it was determined that the ParaGrid reinforced embankment was stable and had not been adversely affected by the topsoil slip which had occurred as a result of an excessive amount of soil being placed on the slope during construction which measured approximately 400mm deep—an increase of 250mm on the designed depth of 150mm topsoil. Part of this overburden had become saturated following heavy rainfall and the erosion control measures installed in 2018 were not sufficient to prevent the additional weight of excess topsoil from eroding and slipping down the slope, which resulted

#### Solution

Maccaferri was tasked with proposing remedial measures to reinstate the slipped topsoil layer and provide a long-term enhanced erosion control solution to prevent any further topsoil slips from occurring under similar circumstances in the future. Following a review of the original design, as-built site conditions and a range of potential solutions it was agreed that the best course of action was to scrape off the excess 250mm topsoil overburden from the slope face so that it would adhere to the planned design depth of 150mm, and where the MacWeb system had been damaged in the slip this would be reinstated with a new panel filled with the correct depth of topsoil which was imperative to mitigate the risk of future slips.

**Client:** Russell Homes

**Designer / Consultant:** E3P

**Contractor:** Chartrange

**Products used (Qty.)**

**Date of construction:** 06/2021 - 10/2021

[Google Maps](#)

[Google Earth](#)



ParaGrid reinforced slope with MacWeb erosion control in 2018



Fully established wild flower vegetation in June 2019



Fully established wild flower vegetation in June 2019



Slope face stripped of excess topsoil ahead of remedial works



MacWeb cellular containment system ahead of topsoil filling



MacMat R Green and Gripple soil anchors