

## A82 PULPIT ROCK IMPROVEMENTS LOCH LOMOND, SCOTLAND, UNITED KINGDOM

### Suspended Drapery

#### Problem

The A82 road winds along one side of Loch Lomond in Scotland.

Major reconstruction work was needed to improve traffic flow that has been hindered for many years due to a single-lane stretch of the carriageway on this critical arterial route. The solution to this problem was the construction of a new road lane, however, due to the geography of the site the only option was to construct the new lane out over the loch replacing the long-standing traffic light controls which caused lengthy delays.

The improvements to the A82 at Pulpit Rock include a new viaduct running parallel with Loch Lomond, the widening of the existing carriageway to the north of the viaduct and the introduction of a two-lane carriageway.

#### Solution

McLaughlin & Harvey won the design & build contract which included earthworks, the formation of new rock cuttings, rock mass stabilisation, construction of the new raised viaduct structure over water and carriageway construction and commissioning over a 400m length of the shores of Loch Lomond.

The formation of the new rock cut and stabilisation of the parent rock mass was considered one of the most challenging aspects of the project. The original engineering design included the augmentation of the rock mass stability by the installation of rock anchorages across the face of the slope. The design also required the installation of a stabilisation netting system to support any surface instabilities in the finished slope profile - a high strength and high stiffness mesh was required. Steelgrid HR system was chosen due to its high strength and high stiffness plus its compatibility with the anchor pattern and ease of connectivity to the slope surfacing solution.

Due to the client's requirement for a long design life combined with the exposed lochside location of the site and the extensive use of de-icing salts on the A82 trunk road, the polymer-coated version of Steelgrid HR30 mesh was chosen as the facing system for the slopes.

**Client:** Transport Scotland

**Designer / Consultant:** Tony Gee & Partners

**Contractor:** McLaughlin & Harvey

**Products used (Qty.)**

**Date of construction:** 03/2015 - 05/2015

[Google Maps](#)

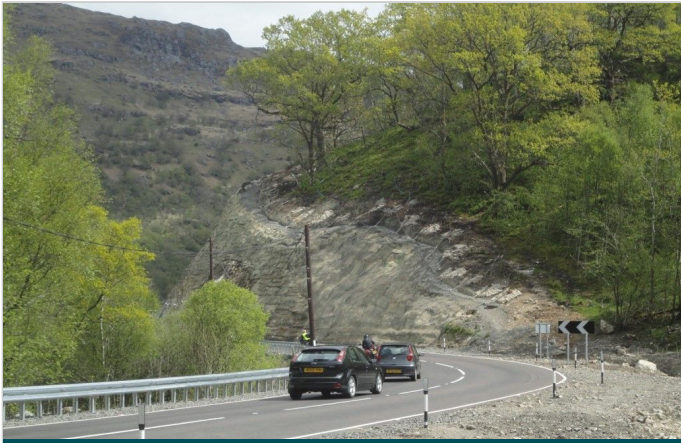
[Google Earth](#)



Vegetative soil wrapped on MacMat® R.



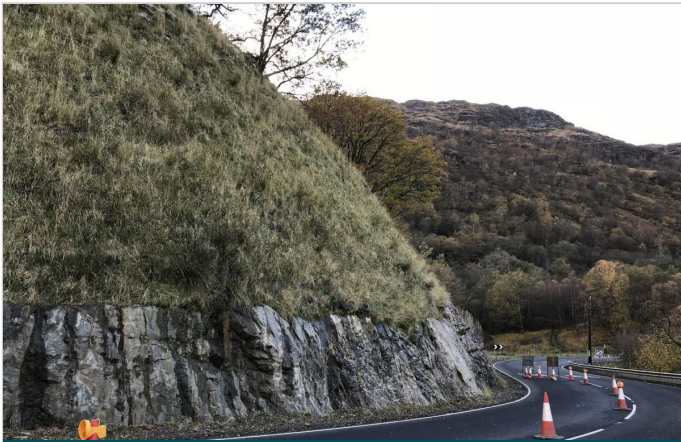
View of the rock cutting slope at initial stages.



Works completed in 2015



View of the vegetated rock in 2016



Vegetated slope—Autumn 2018



Vegetated slope—Autumn 2018