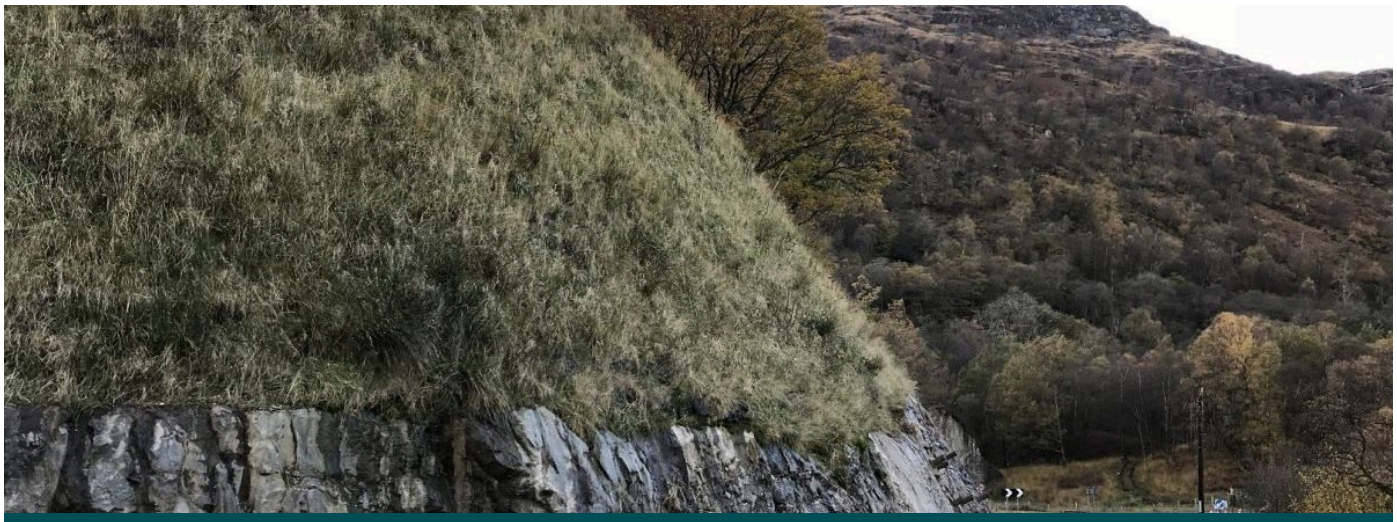
# A82 Pulpit Rock Improvement, Loch Lomond Rock Slope Stabilisation and Viaduct Construction

## Loch Lomond, Scotland



| TYPE OF PROJECT | YEAR OF CONSTRUCTION | CLIENT | CONTRACTOR | DESIGNER |
|---|---|---|---|---|
| **Slope Protection** | **2015** | **Transport Scotland** | **McLaughlin & Harvey** | **Tony Gee & Partners** |

PROD. RELATED
**MacArmour & SteelGrid ()**

# Challenge

The A82 trunk road along Loch Lomond in Scotland is one of the country's most important transport routes, connecting key regions and supporting both local traffic and tourism. However, at Pulpit Rock, traffic flow had been severely restricted for many years due to a single-lane section controlled by traffic lights. This long-standing bottleneck caused significant congestion, delays, and safety concerns on this critical route.

The geographical constraints of the site presented a major engineering challenge. With steep rock faces on one side and Loch Lomond on the other, conventional road widening was not feasible. To address this, a solution was required that would increase road capacity without compromising the surrounding environment or stability of the rock slopes.

The chosen approach involved constructing a new road lane out over Loch Lomond, eliminating the need for traffic light controls. The scheme included the development of a new viaduct running parallel to the loch, widening of the existing carriageway to the north, and the creation of a continuous two-lane road. This required complex civil engineering works in a highly constrained and environmentally sensitive location.

MACCAFERRI LTD. 9 Blenheim Office Park Fenlock Road, Long Hanborough, Oxfordshire OX29 8LN, UK
PH:+44 1865 770555 E-mail: info.uk@maccaferri.com



Vegetative soil wrapped on MacMat® R.



View of the rock cutting slope at initial stages.

# Solution

McLaughlin & Harvey were awarded the design and build contract for the A82 Pulpit Rock improvement works. The project scope included earthworks, formation of new rock cuttings, rock slope stabilisation, construction of a raised viaduct over water, and full carriageway construction across a 400-metre stretch of Loch Lomond's shoreline.

One of the most challenging elements of the project was the stabilisation of the newly exposed rock slopes. The engineering design required the installation of rock anchor systems across the slope face to improve overall rock mass stability. In addition, a surface stabilisation solution was needed to control potential rockfall and prevent localised instability.

To meet these requirements, a high-strength, high-stiffness steel mesh system was specified. The Steelgrid HR system was selected due to its superior mechanical performance, compatibility with the rock anchoring layout, and ease of installation as part of an integrated slope stabilisation solution. This ensured effective reinforcement of the rock face while maintaining constructability in a difficult environment.

Given the exposed lochside conditions and the heavy use of de-icing salts on the A82, long-term durability and corrosion resistance were critical factors. To achieve the required design life, a polymer-coated Steelgrid HR30 mesh was used. This provided enhanced protection against corrosion compared to traditional PVC-coated systems, making it particularly suitable for aggressive roadside and marine environments.

The completed project successfully removed the traffic bottleneck at Pulpit Rock, delivering a safe, efficient two-lane carriageway along Loch Lomond. The combination of innovative viaduct construction and advanced rock slope stabilisation techniques has significantly improved traffic flow and journey reliability on the A82, while ensuring long-term structural performance in a challenging natural setting.

MACCAFERRI LTD. 9 Blenheim Office Park Fenlock Road, Long Hanborough, Oxfordshire OX29 8LN, UK
PH:+44 1865 770555 E-mail: info.uk@maccaferri.com



Works completed in 2015



View of the vegetated rock in 2016



Vegetated slope—Autumn 2018



Vegetated slope—Autumn 2018

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