

Secutex® Green

Construction Road for the
Rehabilitation of a Water
Retaining Wall

Project name

Rehabilitation of Krainerwand & relocation of Mühlkanal,
Dettingen unter Teck, Germany

Owner

Municipality Dettingen unter Teck, Germany

Construction works

Schäfer Road Construction and Landscaping,
Leinfelden-Echterdingen, Germany

Designer

welsner + welsner, Independent Garden and
Landscape Architects, Nürtingen, Germany

Products

Secutex® Green 60G1 GRK 4





Fig. 1: Footpath, that is widened to form the construction road



Fig. 2: Construction road on the island between mill canal and Lauter

During the development of the „Goldmorgen Süd“ construction area near Stuttgart, Germany, a water retaining wall is erected facing the mill canal. Since the stability of this wall is massively impaired, a thorough rehabilitation is necessary.

Challenge

The work is carried out from an „island“ between the Lauter river and the mill canal. Access to the construction site is via a public road. As the construction site is only accessible for all machines via a private footpath between the river and the canal, it is necessary to widen the access road by felling and mulching after consultation with the authorities.

After widening the road, the path must be made passable for trucks and excavators. As an alternative to the classic construction method using several decimetres thick mineral soil layers, a geotextile separation nonwoven is installed on the existing ground. The actual base course layer, consisting of e. g. gravel is then installed on top of this nonwoven. In this way, mixing of the ballast with the often fine-grained subsoil can be avoided. This saves material and thus costs. To prevent the entry of plastics into this ecologically sensitive area, Secutex® Green is used, a nonwoven made of biodegradable fibres.

Solution

To preserve the soil structure, a 3 - 4 m wide route is installed with Secutex® Green 60G1 GRK 4 to absorb the load from construction site traffic with heavy equipment. GRK 4 stands for Geotextile Robustness Class 4. Depending on the GRK (3 - 5), a minimum mass and a minimum puncture resistance must be achieved in order to meet the respective requirements of classes 3 to 5. The conditions resulting from the expected construction site traffic in this project amounted to GRK 4. The placed gravel acts as a base course for the construction vehicles. The nonwoven fabric prevents the base course from mixing with the subsoil and thus a possible reduction in the stability of the construction road that might otherwise occur.

At the end of the construction road, a parking area for site vehicles is created, also with Secutex® Green.

On top of the installed separation layer, a 20cm thick ballast layer of gravel 0/56 is placed. The entire construction road will be removed after completion of the construction work. For ecological reasons, the engineering office invited tenders for a biodegradable nonwoven which can be composted after use as a site road.



Fig. 3: Parking area for construction vehicles

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