



## Förstärkning Götatunneln (S) Sheet Waterproofing & Contact Grouting System

<b>Country</b>	Sweden
<b>Type</b>	Motorway Tunnel
<b>Client</b>	Trafikverket
<b>Main Contractor</b>	NCC Sverige AB, NCC Etablering (Operan)
<b>Execution of the work</b>	Renesco a.s.
<b>Designer</b>	COWI
<b>Construction Period</b>	2018

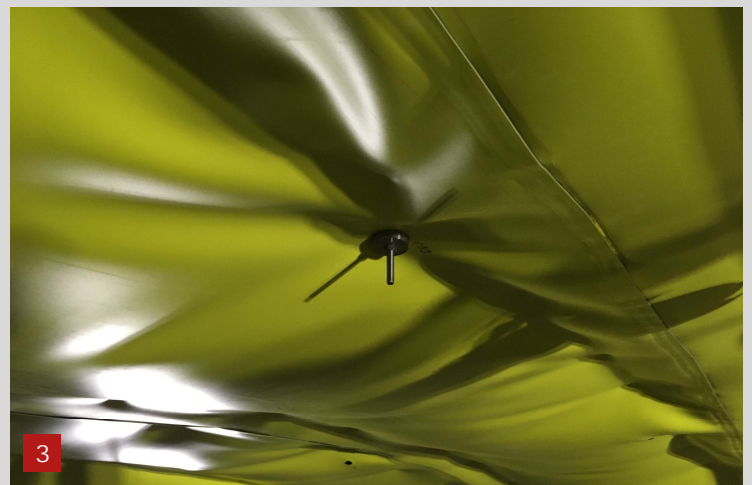
## Project Description

The Götatunneln (Göta Tunnel) is a road tunnel between Järntorget and Lilla Bommen in central Gothenburg, Sweden, 1,600m long. Due to the above crossing of the new West Link railway tunnel, Götatunneln needed additional waterproofing and reinforcement. After casting of the supporting concrete arch structure a 20mm void between the arch and the rock surface was required for later contact grouting, but not before the above crossing tunnel was mined.

## Scope of Service

Installation of waterproofing membrane system, special designed grouting layer and system, and anchor bolts for reinforcement of concrete supporting arch in the middle of the tunnel. Sheet Waterproofing 3,0mm PVC-P, grouting layer - three dimensional monofilament drainage core laminated with a woven fabric, special designed anchor bolts glued into the rock with polyester glue.

- Protection Geotextile, 500g/m<sup>2</sup>, Polypropylene
- Sheet Waterproofing, 3mm, PVC-P
- Protection membrane, 2mm with nobs
- Water barriers WP AF-24
- Start-End system Adhesive strip/tape
- Contact grouting tubes
- M16 anchor bolt 316L Stainless steel
- Rock anchor glue polyester cartridge SiS – 0.3 SF
- Grouting layer, geo-composite



1. Sheet waterproofing PVC-P
2. Grouting layer with injection hoses
3. Anchor bolts through membrane sealed with EPDM