

# GEOPHYSICAL SCREENING AS PRE-GEOTECHNICAL INVESTIGATIONS FOR LIGHT RAIL CONNECTION TO AALBORG AIRPORT

A new light rail connection between the city of Aalborg and the nearby airport is being constructed in order to improve mobility in the region. As a pre-geotechnical investigation, a geophysical screening was conducted using the DualEM method. DualEM is a geophysical method optimized for detailed mapping of the subsurface electrical conductivity to a depth of 5 to 10 m.

Through the DualEM screening, it was possible to map the varying conditions along the three proposed routes. Some parts of the routes are characterized by low resistivity, equating to clayey sediments, while other parts are characterized by higher

resistivity, showing more sandy sub-surface sediments. Potential areas with unstable sediments were identified, and the extension of a known former landfill site was mapped.

The results from the DualEM survey were used to optimize the location of subsequent geotechnical boreholes. The boreholes are located strategically in relation to the variation along each of the three proposed routes.

**CUSTOMER**  
The Municipality of Aalborg  
**LOCATION**  
Aalborg  
**PROJECT COUNTRY**  
Denmark  
**PERIOD**  
2014  
**SERVICES PROVIDED**  
Detailed geophysical investigation  
Geotechnical boreholes

