

Dublin LUAS – OLE Parafil Replacement



OVERHEAD LINE




“Thanks for all your efforts over the past number of months and in more recent weeks, the overall result has been a great result despite some challenges along the way. I attended the site walk Saturday 28/11/20, the quality of the installation is very good and I am very pleased with the overall work.”



Parafil Replacement, Steevens Lane. Works completed during short nightly possession / isolation of the LUAS system

**DESIGN,
SUPPLY,
BUILD,
COMMISSION**


**SEPTEMBER 2020 -
NOVEMBER 2020**

**VALUE
€450,000**



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OVERHEAD LINE

The project was for the Design, Supply, Build & Commission into service of replacement overhead line support equipment, required due to reliability issues of the existing equipment, specifically the existing Parafil rope.

This turn-key project was conceived and delivered over an extended period of time, with initial concept discussions, assistance to TII in the development of business case, risk assessments, and ultimately the core works in the autumn of 2020.

Concept & Risk Assessments. The Dublin LUAS system was suffering Parafil failures on the red and green lines. There was significant evidence of historic failures, and Pod-Trak were contracted to undertake an analysis of failures, and risk assessments based upon failure data, equipment type, and the environment where the equipment was operating. The risk assessment concluded that there was an unacceptably high risk of failures resulting in significant risk of public electrocution and disruption to the LUAS service. This risk assessment was used as a key piece of information to develop the business case to renew the Parafil rope assemblies.

Design. Pod-Trak have extensive knowledge of Tramway overhead line systems, and used this knowledge to develop a design that was both reliable and aesthetically pleasing. Surveys were undertaken to assure a high quality design, with the results of the surveys used to inform the design process. With the good quality design information, we were able to identify a significant non conformance within the existing arrangement for which we were able to design out as part of the Parafil replacement project.

A key feature of Tramway equipment is for it to be visually nonobtrusive. To achieve this Pod-Trak commissioned a new insulator design which was developed, tested and installed within the timeframe of the project.

Supply. All equipment supplied for the project was specified to minimise visual impact, whilst providing a robust mechanical and electrical support for the contact system. Materials were specified and secured through our supply chain which included the development and production of the new 1.5KV insulator. The insulator development was undertaken in accelerated timescales to provide Dublin with

best possible solution using available proven technology and is a key achievement in the delivery of the project.

Construction and Entry into Service. Construction was completed over short nightly possession and isolation, using 4 MEWP teams and all completed under the constraints of Covid-19 where our teams were confined to their accommodation and were not permitted to interact with the LUAS maintenance / isolation teams. Risk assessments were completed and working practices agreed between all parties that allowed the works to proceed in an efficient manner. The geographical scope of the project was between Fatima Stop and the Ashling Hotel and included pedestrian management and traffic management.

All works were completed in a safe, assured manner and handed back into service on a day by day basis. Client walkouts were completed weekly, with great feedback as to the quantity and quality of work undertaken. Following construction a full set of as-built drawings were produced for inclusion into the client H&S file.