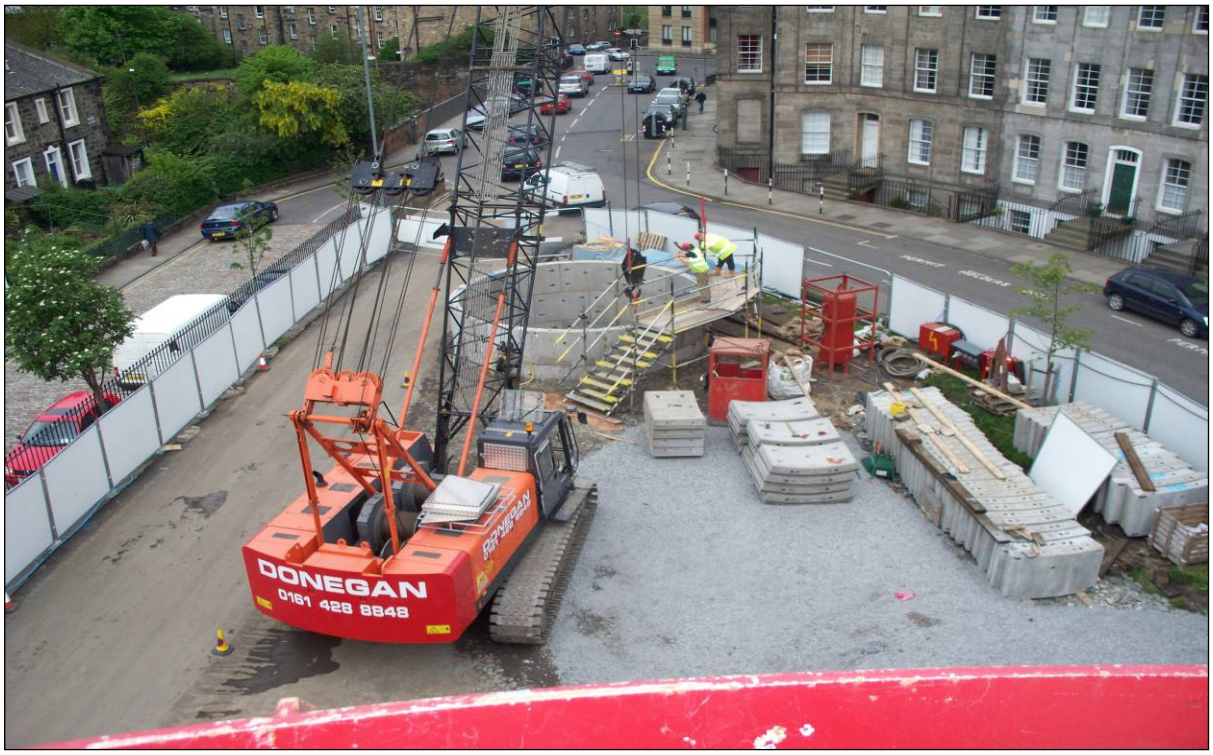
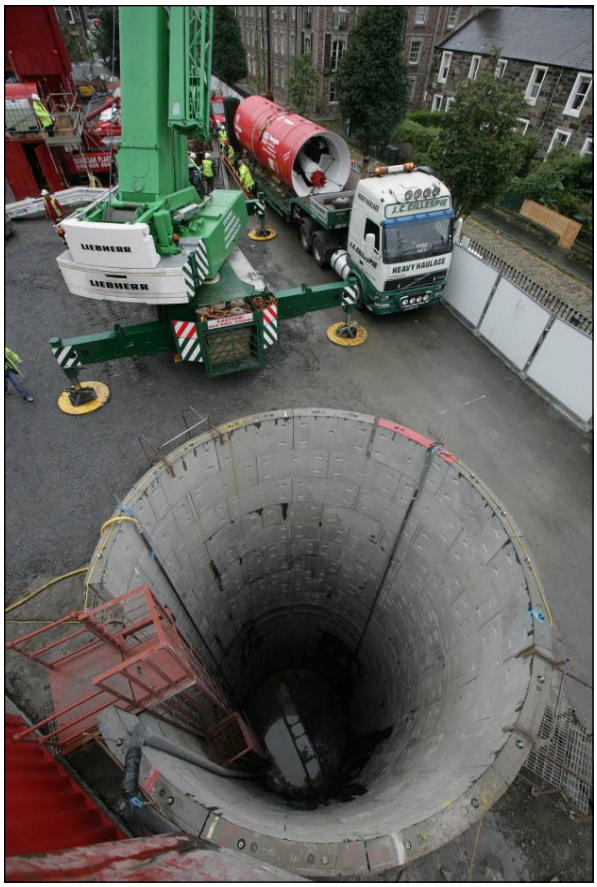
The Complete Construction Service



Donegan
Civil Engineering



Title:	**Dewar Place Cable Tunnel**
Location:	Haymarket, Edinburgh
Client:	Scottish Power
Project Manager:	Gordon Vickers
Main Contractor:	Donegan
Commenced:	April 2008
Completed:	February 2010
Value:	£3.80m

Background Of The Works:

Having constructed approximately 13km's of new cabling to a refurbished Sub Station in the Haymarket area, of Edinburgh, the last Two Hundred metres of cabling were proving problematic, for Scottish Power.

The Company constructing the new Sub Station having used Donegan in the past, suggested, the client get in touch.

The largest problem, was to design and build a tunnelling machine from scratch, that could both contend with the rock strength, and negotiate the curve in the tunnel.

Civil Engineering & Tunnelling Contractors

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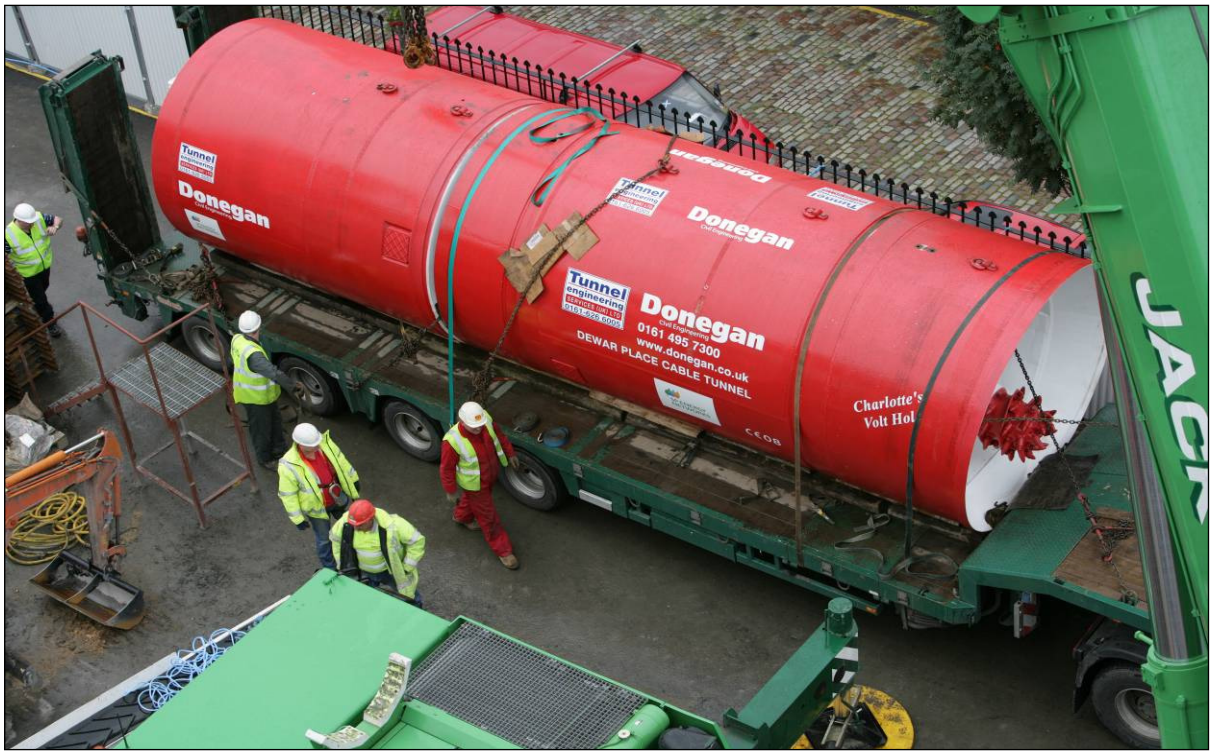

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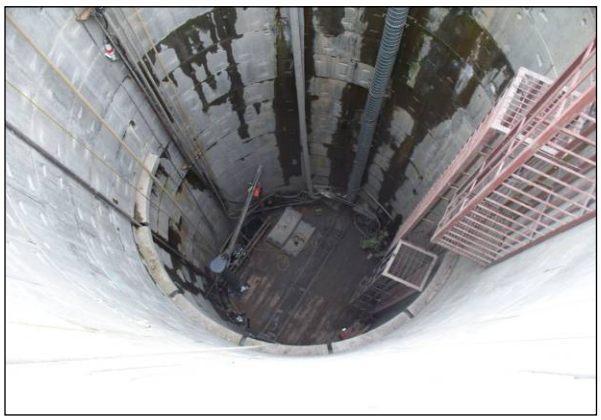
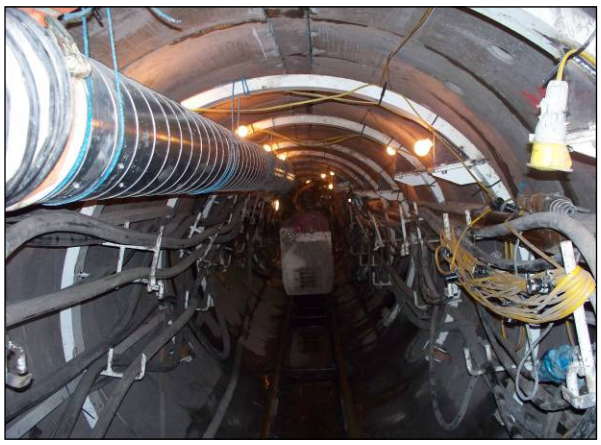
Scope of the works:

The works involved sinking a 6.00m diameter drive shaft approx 24m deep, as can be seen in this picture, a 6.00m diameter reception shaft approx 13m deep, and then constructing a 2.10m diameter segmental tunnel approx 200m in length with a 90m radius curve along the line.

The drive shaft was constructed within a communal garden in a residential area, with the reception shaft located within what will be a new electrical sub-station. The purpose of the project was to bring a new high voltage cable in through the tunnel to feed the new electrical sub-station.

Donegan procured a specially designed 'Roadheader Tunnel Boring Machine' for the project which involved tunnelling through dolerite subvolcanic rock with strengths recorded of up to 190mpa.





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