

PUBLIC INFORMATION

PUBLISHED 7 JANUARY 2022

Green Recovery Scheme Investment – Darlington North (Scotch Corner Junction)

Project overview			
Project name	Darlington North (Scotch Corner Junction)	Total investment (£)	£6.5m
Voltage	33kV	Location or relevant substation	Darlington North
Capacity released (MW)	TBC	Targeted completion	2023
Project description	Replacement of 33kV switchboard at Darlington North substation. This project is a key enabler for future development at the Scotch Corner Junction and will provide additional fault level headroom for distributed generation in the North Yorkshire region.		

Northern Powergrid is investing £53m in vital local electricity networks as part of a national Green Recovery Scheme that aims to accelerate green-growth projects and stimulate the economy. A total of 14 projects in 17 locations across our region are set to benefit.

We have now completed the detailed design work required for each of the 14 projects and following final approval, work on the Darlington North project is underway. From this point onwards, any relevant new connections offers that are issued will factor in the capacity made available through the Green Recovery Scheme, meaning that applicants could benefit from significantly cheaper connections costs.

This document provides potential applicants with an overview of the project and the information required to apply for a new connection.

For more information on the Green Recovery Scheme visit our website northernpowergrid.com/green-recovery or email greenrecovery@northernpowergrid.com

Project specification

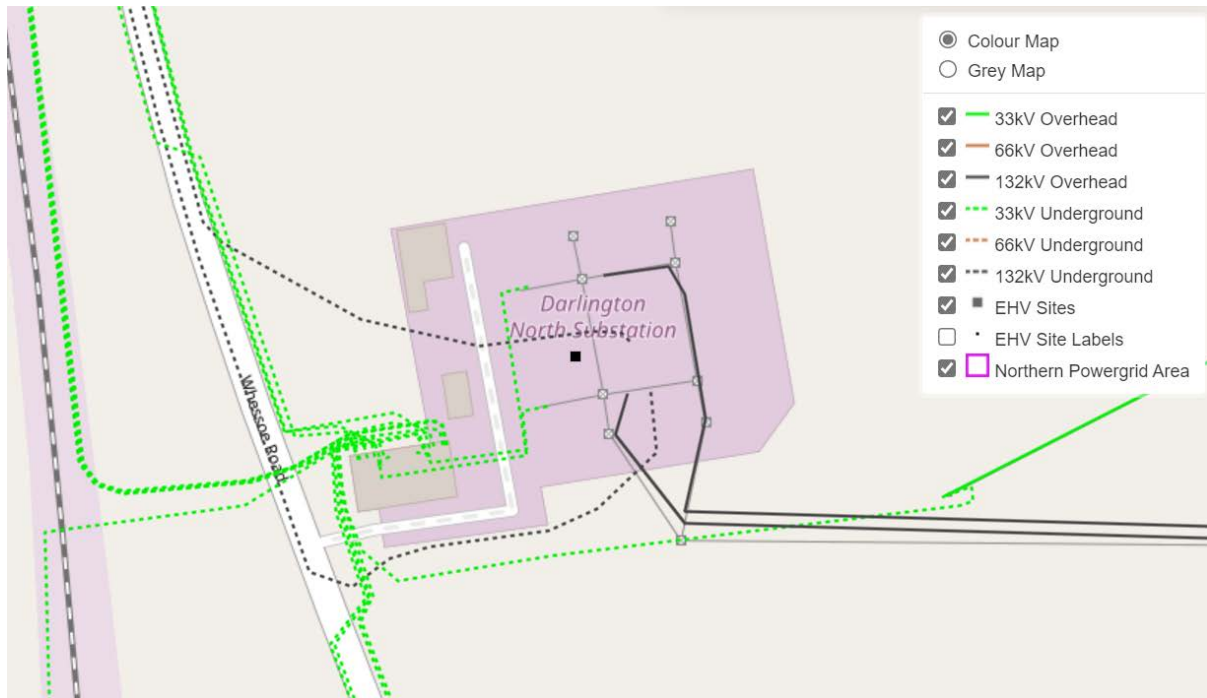
Darlington North 132/33kV substation is supplied at 132kV from Norton 400/132kV grid supply point (GSP) via two 132kV circuits connecting two 45/90MVA 132/33kV transformers (GT1 and GT2). The two 132kV circuits are also teed off to feed Aycliffe Rail and Skeeby.

According to distribution load estimates (DLE), the maximum load forecast at Darlington North 33kV for 2021-22 is 64.4MVA, against a firm capacity of 109MVA. This is expected to increase to 68.6MVA in 2024-25 remaining within the firm capacity of the substation.

An aerial view of the Darlington North 132/33kV substation is shown below.



The 132kV underground cables supplying Darlington North 132/33kV substation and the 33kV underground cables going out from the substation are shown below.



Due to the make of units and lack of remaining space, the 33kV switchgear at Darlington North substation is now non-extendable. Therefore, any further growth in demand or generation that could be accommodated by the substation will be limited.

The Green Recovery Scheme identified a potential requirement for a new primary substation at the Scotch Corner motorway service area (MSA) based on stakeholder feedback and market intelligence. This project will undertake the first part of the enabling works to ultimately add a new primary substation at the motorway services.

To allow a cost effective connection of a new primary substation at Scotch Corner in the future and also in the Darlington area in anticipation of rising demand due to full scale vehicle electrification, it is proposed to replace the non-extendable 33kV switchgear to create additional 33kV feeder ways. This will release the remaining firm capacity potential for any new large connections and also provide additional fault level headroom (rising from 17.5kA to a potential of 31.5kA).