

PUBLIC INFORMATION

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Green Recovery Scheme Investment – Woodall Junction

Project overview			
Project name	Woodall Junction	Total investment (£)	£7.3m
Voltage	66kV	Location or relevant substation	Area around M1 Junction 30-31, S26
Capacity released (MW)	TBC	Targeted completion	2023
Project description	New 66kV feeders energised at HV to create additional capacity for demand and generation. Delivers a scalable connection for the motorway service area which has the highest projected demand requirements from Project Rapid in the Northern Powergrid region. Investment will enable the full future demand to be realised and development of the surrounding areas.		

Northern Powergrid is investing £53m in vital local electricity networks as part of a national Green Recovery Scheme which 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 Woodall Junction 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

As part of the Green Recovery Scheme, future requirements at various motorway service areas (MSAs) have been considered. According to Arup's Project Rapid report for the Department of Transport which looks at the utilisation of rapid electric vehicles chargers, the load growth at Woodall Services and the surrounding areas will be substantial enough to justify new infrastructure investment. The forecast load growth is mainly due to Project Rapid but there is also an anticipated demand growth within the area. The initial forecast suggests an approximate 7MVA growth in demand, with the possibility of reaching up to 52MW in the future.

It is proposed to lay two cable circuits rated at 66kV but connected from the 11kV of Kiveton Park Primary to a new 11kV board at Woodall Services. This work will provide an initial 7MVA firm demand capacity (stage 1). If the demand grows beyond 7MVA, these circuits can be connected to the 66kV ring near Kiveton Park and a primary substation with a new 66/11 kV substation built closer to Woodall Services (stage 2).

For the purpose of this specification, only stage 1 is being considered with stage 2 works being undertaken as and when required.

The distribution load estimates (DLE) show the firm capacity of Kiveton Park 11kV substation as 15.3MVA, with maximum demand being around 8.1MVA, it leaves around 7.2MVA of spare capacity (approximately 47%). There is therefore sufficient headroom to supply the initial demand of 7MVA at Woodall Services.

Woodall Services is located near the M1 Motorway, Junction 30/31 within the Sheffield area, postcode S26 7XR. Its infrastructure is on both the northbound and southbound highways.

Figure 1 shows the proposed route for the dual cable circuits, as well as the location of Kiveton Park primary substation and Woodall Services. Kiveton Park substation is just off Hard Lane and is mostly surrounded by green fields, while there are some residential areas to the north of Woodall Services.

The route proposed is approximately 3.5km (i.e. 7km of dual cables length). The cables are proposed to be laid within public roads for most of the distance which includes Hard Lane, Union Street, Woodall Lane and Dowcarr Lane.



Figure 1 – Proposed cable route