

Wren
KITCHENS

KITCHENS

BATHROOMS

BEDROOMS

CLIENT

**Imtech Engineering Services
Central**

PROJECT

**New Wren Kitchens Manufacturing
Factory 15MVA Connection and
11kV Infrastructure**

LOCATION

Barton-upon-Humber

SERVICES PROVIDED

- Project management and site supervision
- Health and safety documentation
- Senior authorised person provision
- Earthing study and design
- Protection and grading study
- Supply and installation of 11kV switchgear
- Supply, installation, and commissioning of transformers with close coupled 11kV ring main units
- Supply and Installation of all 11kV cable
- Supply and installation of all 11kV earthing
- Provision of operation and maintenance manual on completion of the project

OVERVIEW

The scope of works was to design, supply, and install a 15MVA, 11kV network including substations and interconnecting cables to provide the power for a new Wren Kitchens Factory constructed adjacent to the existing Wren Kitchens site in Barton-upon-Humber.

DESCRIPTION

IUS completed the design of the 11kV system earth installation, including ground surveys and testing to ascertain the ground resistivity around the site to be used in the earthing model. All earthing apparatus was installed to the design resulting in compliant earth nest readings.

A protection and grading study was undertaken of the 11kV network from the Northern Powergrid (NPg) metering breakers, through the customer's intake 11kV switchboard and transformer, including the largest LV ACBs, to ensure correct protection and grading for the new 11kV system.

Following design, a new client owned an 11kV intake substation, comprising a 7 No. panel extensible switchboard was supplied and installed at the perimeter of the site. Also installed were 2 No. 11kV 300mm Copper Triplex cable loops between the clients' switchboard and the NPg switchgear in the adjacent rooms. This also included liaison with NPg on the final connections and operational requirements to ensure a seamless "power on".

The scope of services also included the supply, installation, and commissioning of 12 No. 1500kVA, 11000/433V transformers, and 2 No. 1000kVA transformers, all with close coupled 11kV ring main units, installed within 4 No. substations around the site.

To create 2 x 11kV rings, IUS supplied and installed 4.5 km of 300mm Aluminium 11kV Triplex cable to provide connection between the clients' new intake substation and the 4 No. aforementioned substations.