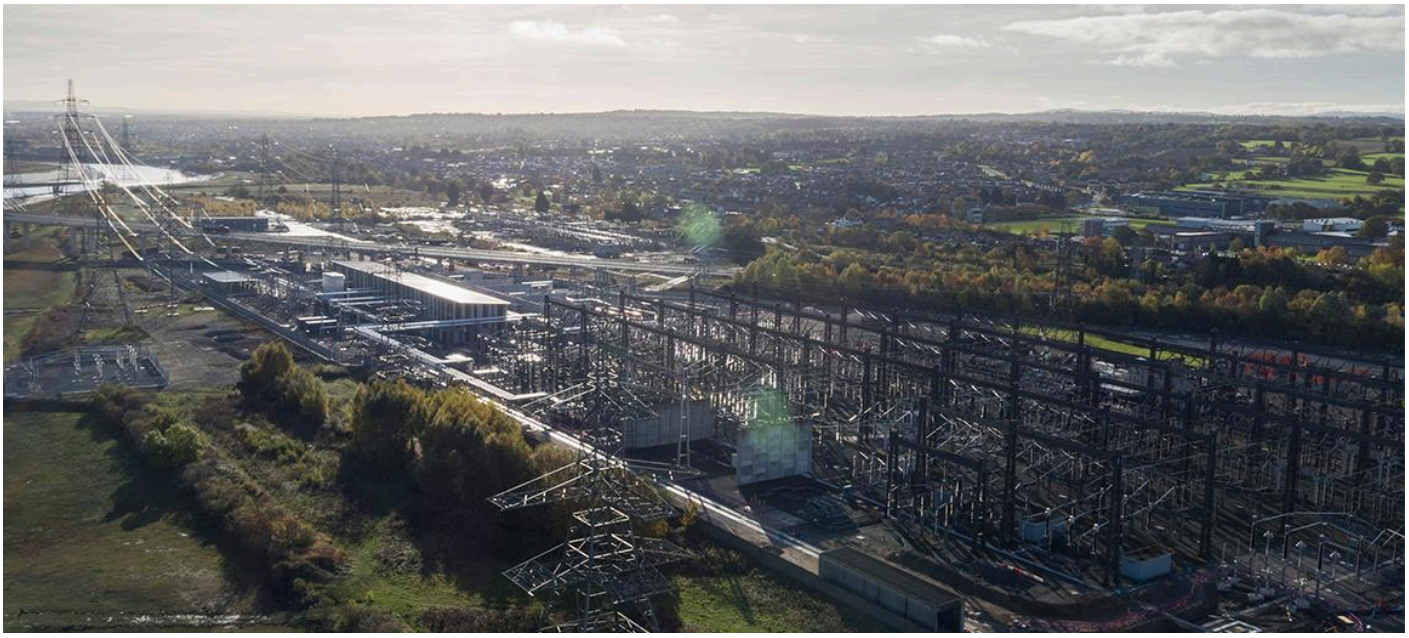
Connah's Quay 400kV substation



TOTAL COST	TARGET END DATE	DURATION
£36.5M	2020	9Y

RESPONSIBLE BUSINESS

Sectors

- Energy, Transmission, Electricity

Project profile

- A new build 400Kv gas insulated substation to replace the National Grid Deeside 400kV Substation that has reached the end of the life expectancy.

Client

- National Grid

Stage

- In progress

Location

- Wales

Project key facts

- Part of the Electricity Alliance Central (EAC) framework, a consortium between Morgan Sindall Infrastructure, ABB and Atkins to deliver major enhancements to the UK's electricity transmission infrastructure
- Features one of the largest Gas Insulated Switchgear solutions on the national transmission network, internally larger than a football pitch

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Project Description

Morgan Sindall Infrastructure in partnership with ABB is constructing a new 400kV Substation at Connah's Quay, adjacent to the existing Deeside Substation site.

The substation will play a vital role in the reinforcement of the high-voltage transmission infrastructure in northwest England, and facilitate the connection of new high-voltage direct current (HVDC) power links, such as EirGrid's East West Interconnector between the UK and Ireland that came online in 2012.

In addition to the main works we also undertook the construction of a new 800 metre fence line adjacent to the Dee Estuary. As a Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Special Area of Conservation (SAC) with RAMSAR designation, there has been a high level of environmental input to ensure that we had the controls in place to minimise the impact the work had on the local birds and wildlife.

The new building contains one of the largest Gas Insulated Switchgear (GIS) solutions on the national transmission network and is greater internally than the size of a football pitch. Our leaner and safer design brought new ways of undertaking work in a complex environment whilst providing National Grid with an enhanced power supply.

The overall scope of the works for the partnership included the design, supply, install and testing of 24 fully equipped 400kV GIS bays and four partially equipped skeleton bays for 400kV GIS and associated equipment.

Responsible business

Improving the environment

As the work is within 16 metres of flood defence a bespoke Environmental Permit application was submitted to Natural Resources Wales (NRW).

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over £2,000 for Mind West Cumbria

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