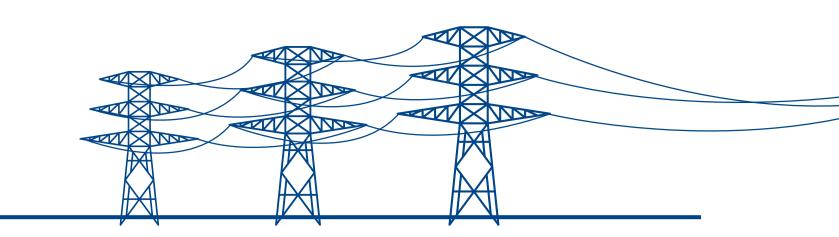
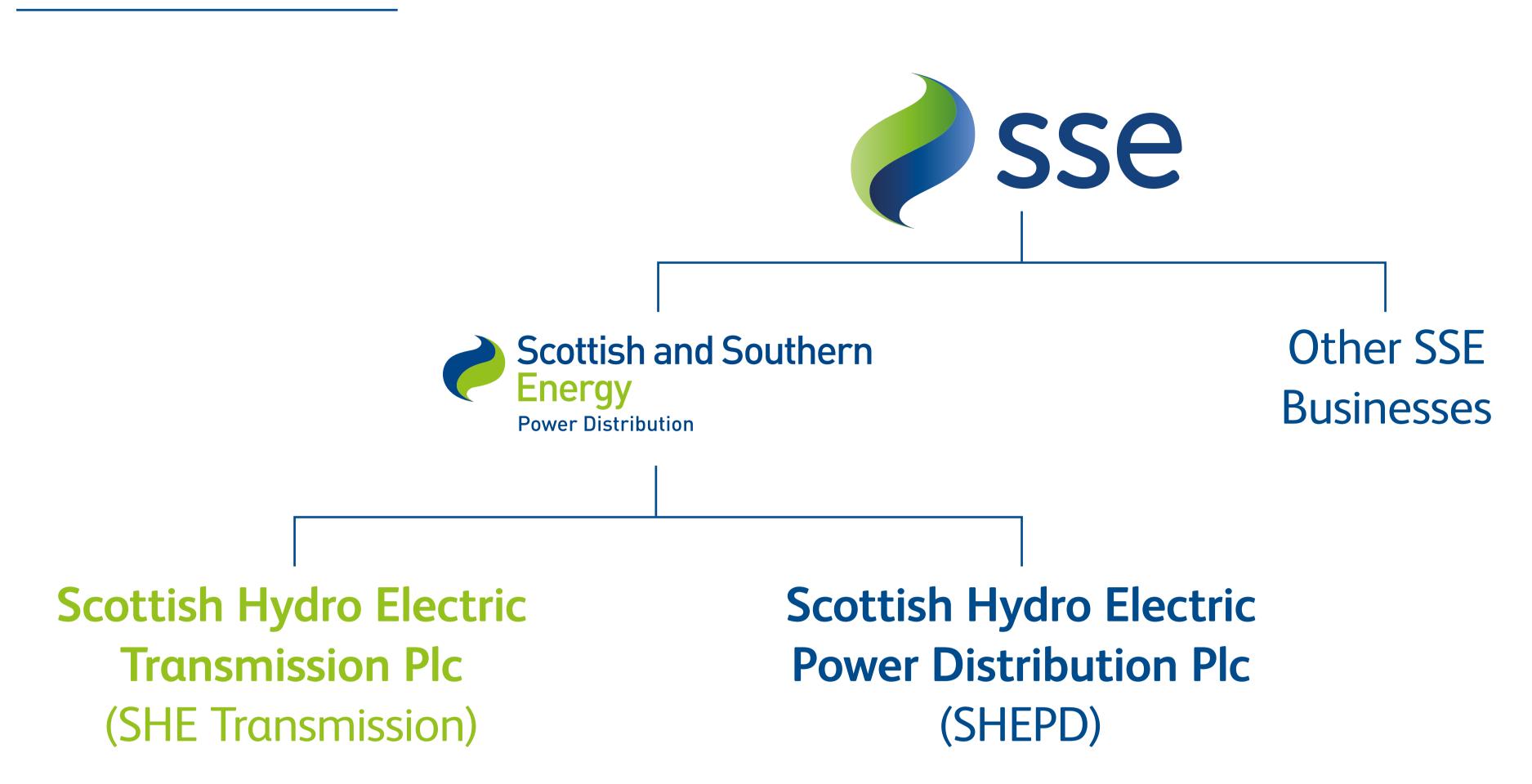
Scottish Hydro Electric Transmission Plc

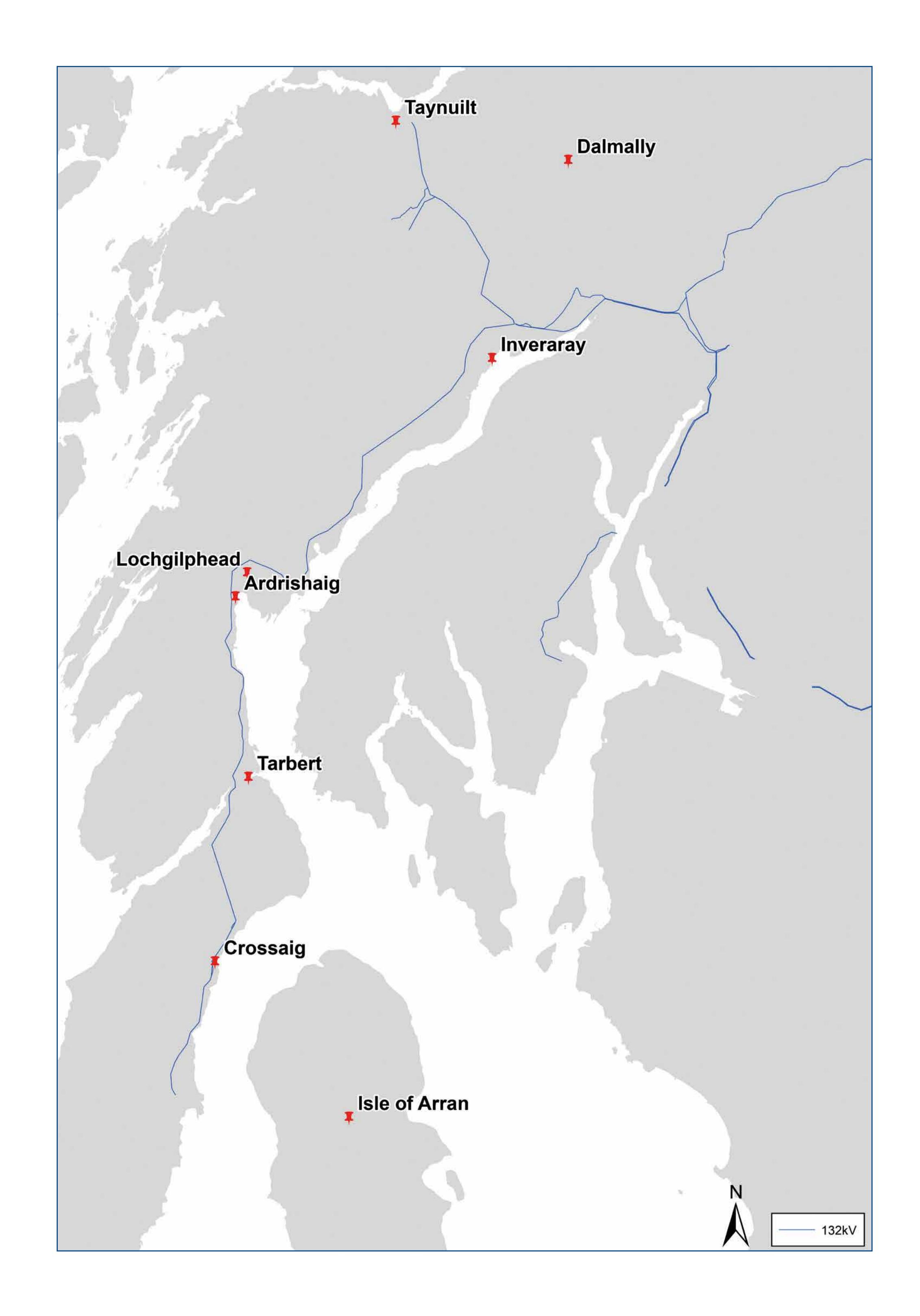


Who we are



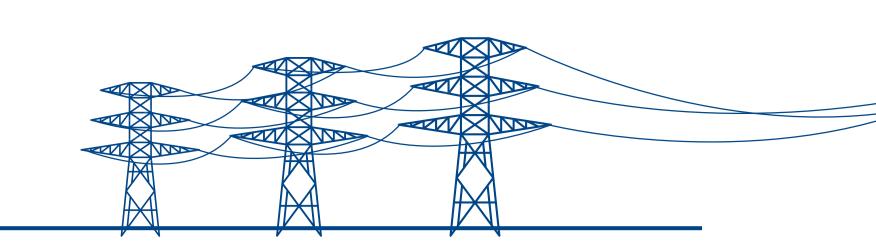
SHE Transmission is the owner of the electricity transmission network in the north of Scotland. It holds a licence under the Electricity Act 1989 and in terms of that licence has obligations to maintain the existing network to ensure that the lights stay on and invest in the network to provide the infrastructure needed to allow generation developments to connect to it.

The transmission network gathers energy from power stations, hydroelectric generation schemes and wind farms and carries it to areas where it is to be used. We work with the Transmission System Operator, National Grid, who is responsible for operating the transmission network across the whole of Great Britain, to make sure that power flows smoothly and reliably across our network.





Project Overview: Inveraray to Crossaig Overhead Line Replacement



The aim of the project is to reinforce the existing transmission network in the region to enable renewable energy projects to connect to the electricity network, and to ensure security of supply. The main elements of the project are as follows:

- Construction of a new 275/132kV substation at Craig Murrail, located between Lochgilphead and Lochgair;
- Reduce in scale or remove Port Ann Substation;
- Construction of a new 275kV overhead line, initially operated at 132kV between Inveraray and Crossaig (connecting to the new Craig Murrail Substation); and
- Decommissioning / removal of the existing 132kV transmission line between Inveraray and Crossaig.

Project Timeline

The project is currently at the early stages in the development process and timescales are indicative at this stage.

March 2014

Route selection study area presented to statutory consultees

October 2014

Public exhibition on the Inveraray to Crossaig OHL options and expression of preferred route

September 2015

Preferred route and Craig Murrail substation study area discussed with the statutory consultees

January 2016

Preferred site for the Craig Murrail substation study presented to the statutory consultees

March 2016

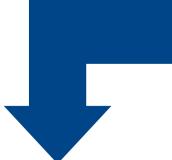
Public exhibitions

August 2016

Consultations

2016

- Section 37 application submitted for Inveraray to Crossaig OHL
- Planning application submitted for the Craig Murrail substation



2017

Consents approved for the Inveraray to Crossaig OHL and the Craig Murrail substation

2018

Construction Start

2020/2021

Phased completion and commissioning

Consultation on Preferred Route Corridor

Scottish Hydro Electric (SHE) Transmission is presenting proposals for a replacement of the existing 84 kilometre 132kV steel tower line between Inveraray and Crossaig Substation with a new 275kV overhead line. The proposals were consulted upon in October 2014 and different routing options were illustrated. The project is required to enable new generation to connect to the transmission network and to reinforce the network serving the Kintyre peninsula. We are currently carrying out studies of the preferred route corridor to ensure that the final route alignment takes into account environmental factors whilst also being technically and economically efficient.

Consultation on Proposed Substation Site

The replacement line will need to link into the local electricity network and will require the construction of a new substation. The new substation would potentially replace an existing substation, located near to the village of Port Ann. The project team are developing both projects together to achieve an efficient and economic proposal.

Consent Requirements

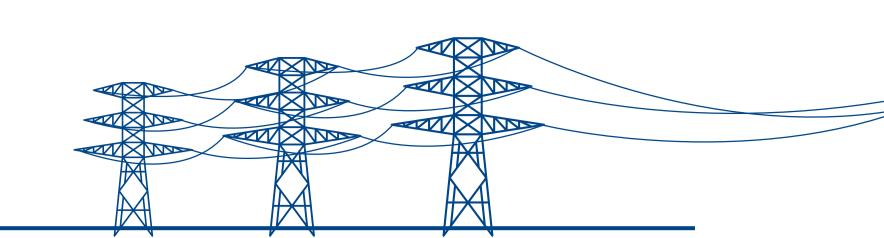
As part of the consultation process the proposed substation will be subject to the Town and Country Planning process and we are consulting with Argyll & Bute Council and other key statutory bodies. Similarly an application for consent for the proposed Overhead Line will be made to the Scottish Government and we are consulting with key statutory bodies.

Consultation on the Project

All comments and feedback received during the consultation will be reviewed and used by the project team to help refine proposals ahead of presenting a preferred route alignment and substation site later in 2016. The closing date for comments on information presented at this exhibition is 30th April 2016.



Project Considerations: Inveraray to Crossaig Overhead Line Replacement



Requests have been made to National Grid by a number of wind farm developers for transmission grid connections in the Argyll and Kintyre area. SHE Transmission is responsible for providing the infrastructure required to connect the wind farms to the electricity network.

We have undertaken a route options appraisal and substation site selection exercise to identify the preferred route and site location for the new transmission infrastructure, taking into account, amongst other criteria, environmental factors to minimise any potential adverse impacts on natural and cultural heritage resources. We are now seeking views from local residents about our proposals.



Overhead Line Tower Design

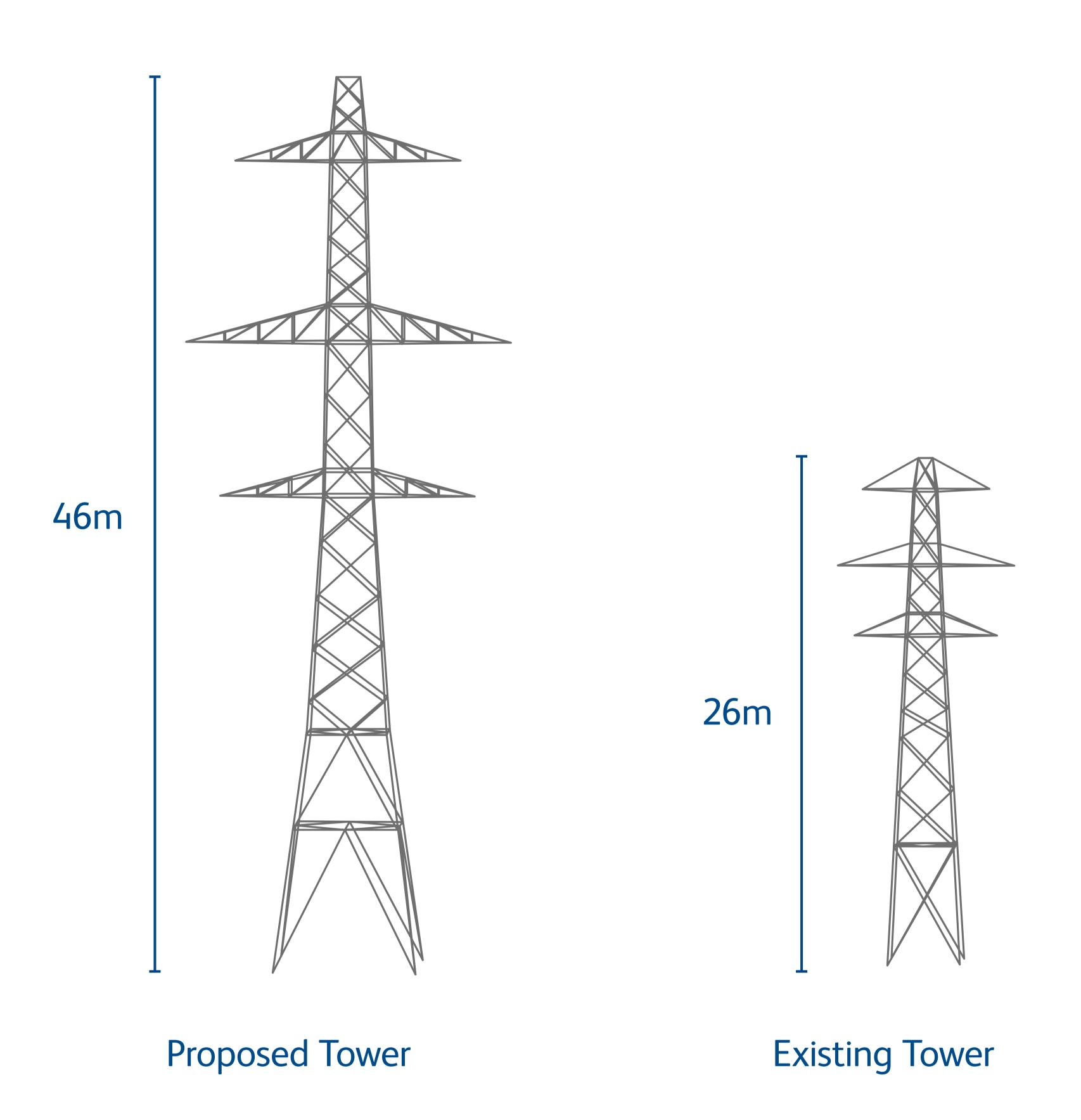
To accommodate the demand for generation connections in the area the overhead line has to operate at 275kV. As a result the towers will require to be higher than those currently existing.

The advantage of larger towers is that the distance between towers is greater resulting in less towers being required (anticipated to be approximately 250).

The existing line comprises of 384 towers between Inveraray and Crossaig. They are approximately 26 metres in height with spans between towers of approximately 220 metres.

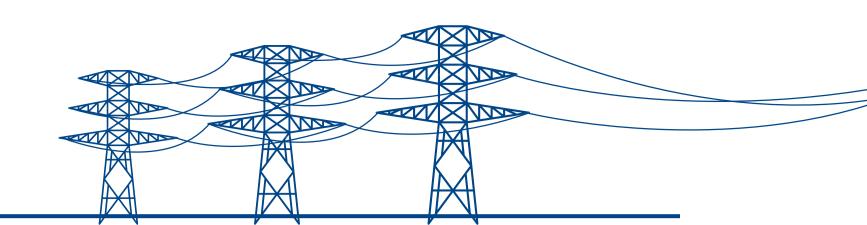
The towers on the proposed line would be approximately 46 metres in height. This increase in height would allow increased spans of approximately 300 to 350 metres.

The drawings below give an indication of how the proposed towers will look in comparison to the existing towers.





Craig Murrail Substation Site Options



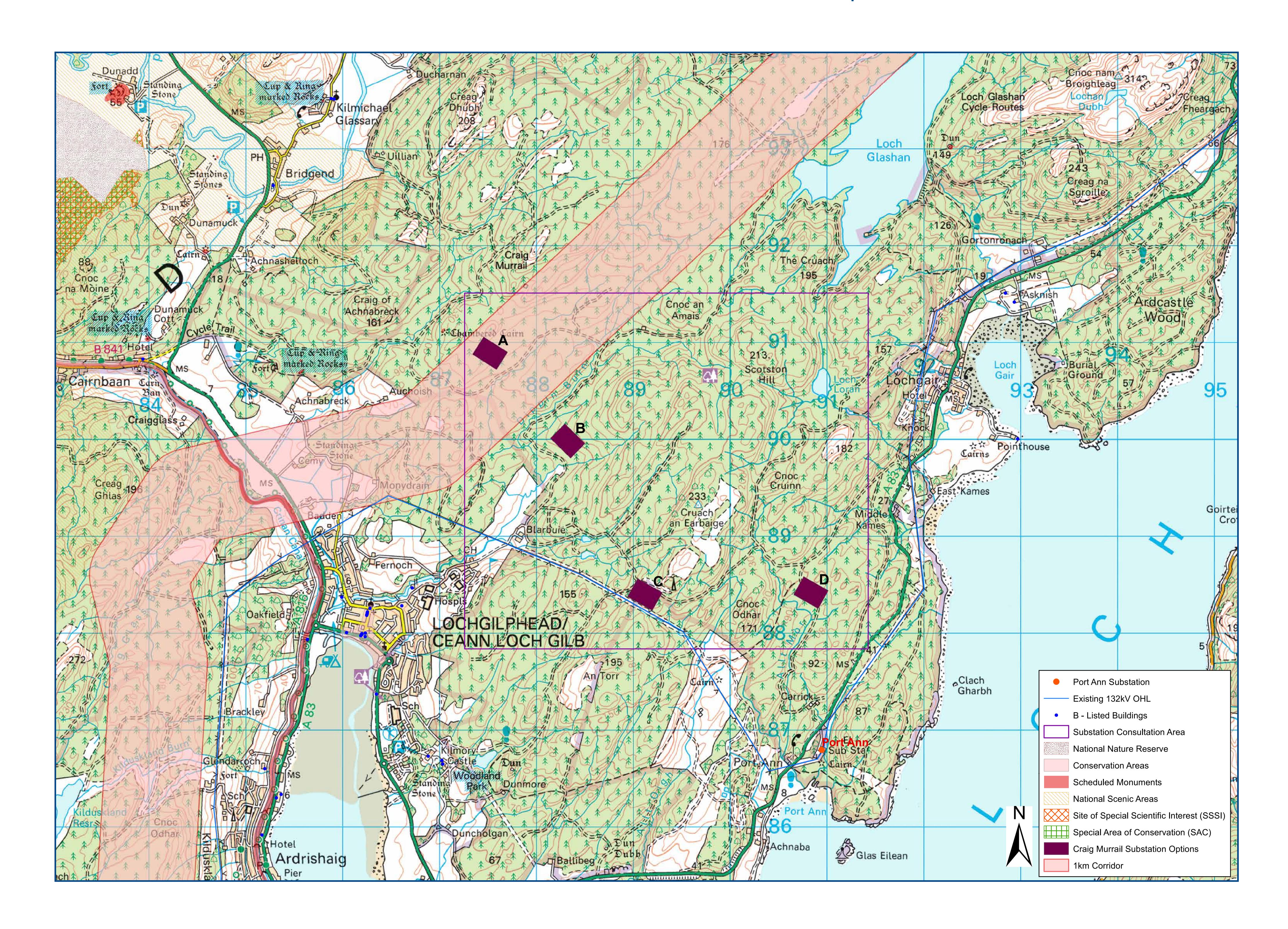
Consultation on Proposed Substation Location

The Inveraray to Crossaig 275kV overhead line will require to connect to the existing electricity network and will necessitate the construction of a new substation. We have identified four potential locations for the new substation and are seeking views of Statutory Authorities, landowners and members of the public.

The proposed locations for the new substation are located near to the preferred overhead line corridor with an initial search area identified North of Lochgilphead. The design of the substation will be further refined following identification of a preferred location.

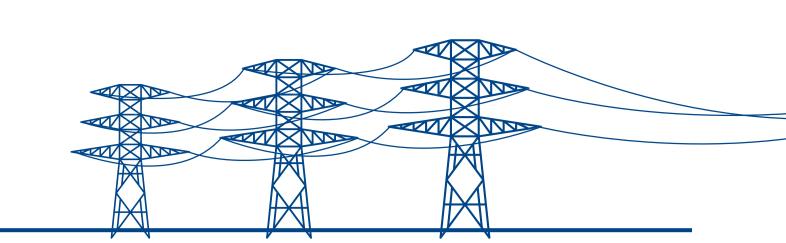
The substation is required to convert voltages from 33kV to 132kV, to maintain supplies to local communities. The substation will be designed for future operation at 275kV. The new substation may lead to a rationalisation of infrastructure in and around the Port Ann area. Four potential locations (Site A,B,C and D) for the substation have been identified as shown on the map below.

All comments and feedback received during the consultation will be reviewed and used by the project team to help refined proposals ahead of future engagement. The closing date for comments on information presented at this exhibition is **30th April 2016**.





Craig Murrail Substation Site Selection Process



Craig Murrail Substation

ASH Design + Assessment has been commissioned by SHE Transmission to carry out a detailed site selection analysis of the identified substation study areas. ASH consultants accompanied SHE Transmission on various site visits and carried out a detailed assessment of the substation study area.

Four specific sites for the location of the proposed substation have been selected for further assessment: Site A, B, C and D.

Site Options – Advantages and Disadvantages

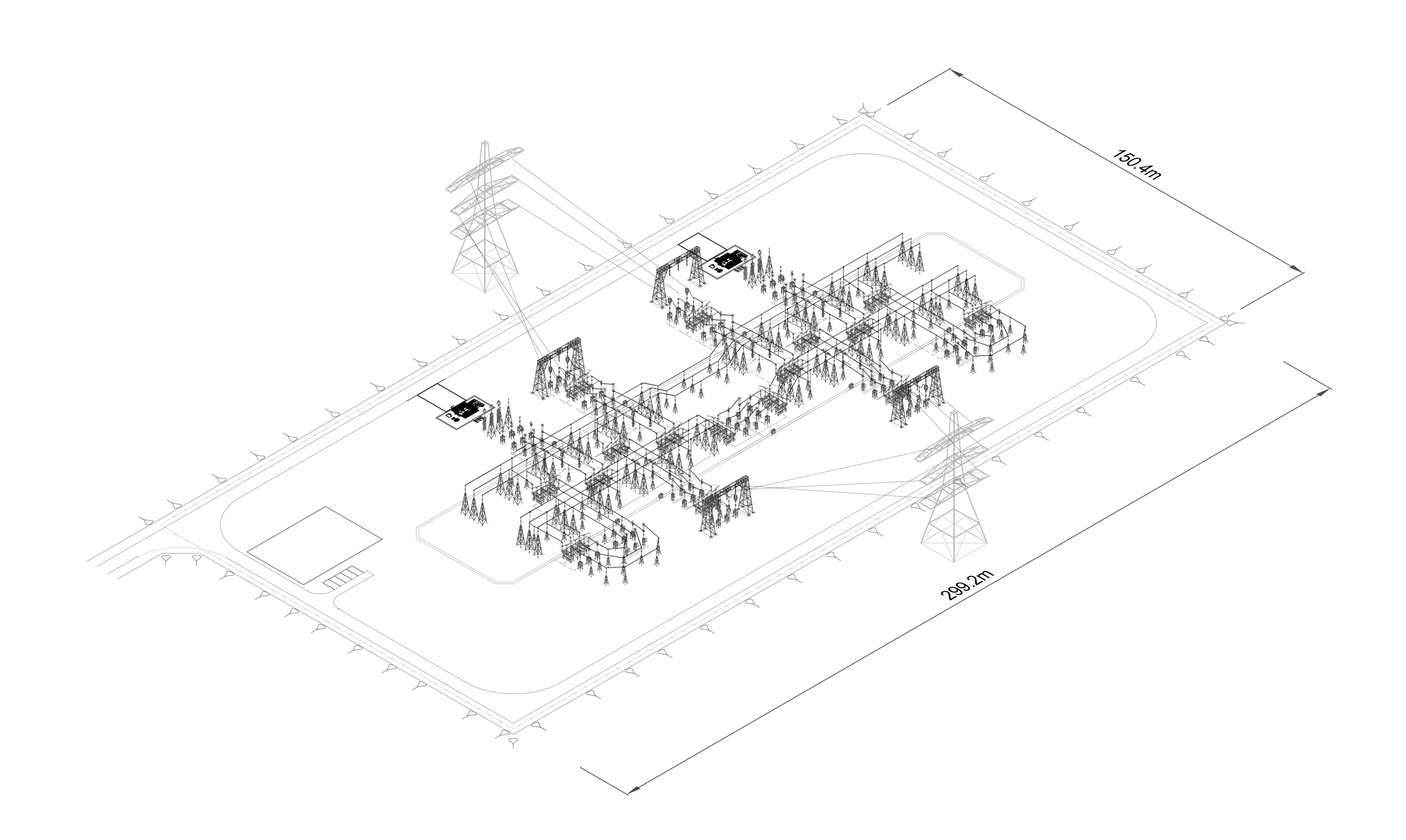
A high level comparison of the four sites has been undertaken. This has considered environmental, technical, operational and economic considerations. A summary of the results of this comparison is shown here. Those options considered less preferential are shown in amber and those considered to have more potential are shown in green.

On the basis of the analysis (right), site A has emerged as the preferred option for the proposed substation.

Consultation with the Community

We are now consulting with the wider community, landowners and key stakeholders on our preferred site with a view to preparing a formal planning application. The result of this consultation will inform the final development to be taken forward.

Aspect	A	В	C	D	Comments
Environmental (land use, water environment, cultural heritage, visual, noise and habitats)					The sites with the lowest likely environmental effects are Sites A, B and D; which having the same assessment score, were all recommended in preference to Site C. Site C is likely to have moderate effects on habitats, geology and soils
Technical Safety during construction, meeting the programme, availability of equipment)					Site C and D longest OHL construction to substation site. Minimal OHL construction to site A. All sites tried to minimise construction of access tracks
Operational (ease of maintenance, safety, spares)					No major differences between operational sites
Economic (capital cost and operational cost)					The capital cost of site A is lower than that of the other three sites





Inveraray to Crossaig Overhead Line Replacement

