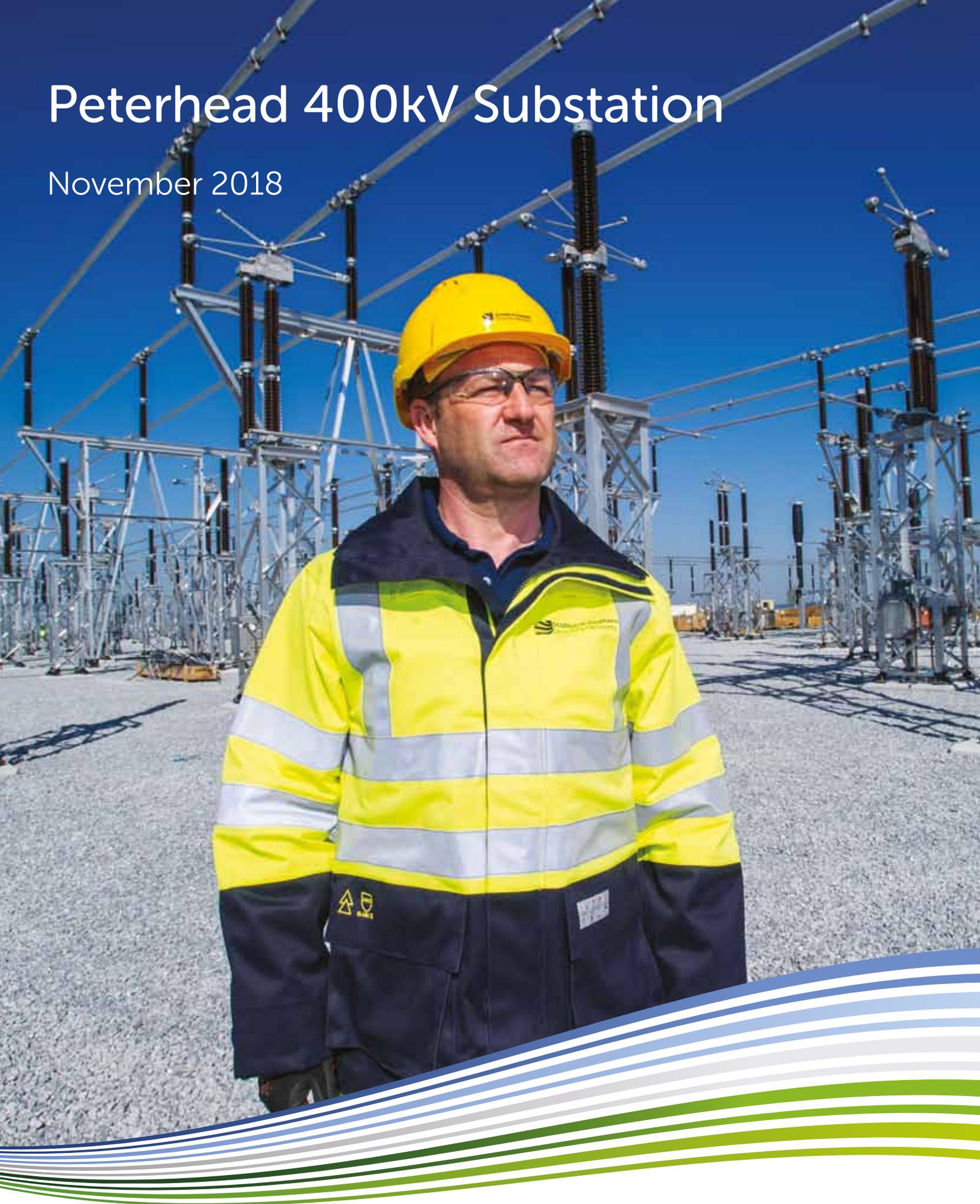


Peterhead 400kV Substation

November 2018



Scottish & Southern
Electricity Networks

Who we are

We are Scottish and Southern Electricity Networks, operating under licence as Scottish Hydro Electric Transmission Plc (SHE Transmission) for the transmission of electricity in the north of Scotland.



What is the difference between Transmission and Distribution?

Electricity Transmission is the transportation of electricity from generating plants to where it is required at centres of demand. The Electricity Transmission network, or grid, transports electricity at very high voltages through overhead lines, underground cables and subsea cables. Our transmission network connects large scale generation, primarily renewables, to central and southern Scotland and the rest of Great Britain. It also helps secure supply by providing reliable connection to the wider network of generation plans.

The Electricity Distribution network is connected into the Transmission network but the voltage is lowered by transformers at electricity substations, and the power is then distributed to homes and businesses through overhead lines or underground cables.

Overview of Transmission Projects



In total we maintain about 5,000km of overhead lines and underground cables – easily enough to stretch across the Atlantic from John O’Groats all the way to Boston in the USA.

Our network crosses some of the UK’s most challenging terrain – including circuits that are buried under the seabed, are located over 750m above sea level and up to 250km long.

The landscape and environment that contribute to the challenges we face also give the area a rich resource for renewable energy generation. There is a high demand to connect from new wind, hydro and marine generators which rely on Scottish and Southern Electricity Networks to provide a physical link between the new sources of power and electricity users. Scottish and Southern Electricity Networks is delivering a major programme of investment to ensure that the network is ready to meet the needs of our customers in the future.

Our responsibilities

We have a licence for the transmission of electricity in the north of Scotland and we are closely regulated by the energy regulator Ofgem.

Our licence stipulates that we must develop and maintain an efficient, co-ordinated and economical system of electricity transmission.

Project Overview

Significant generation connecting to the North East transmission network has triggered the need for a new 400kV substation in Peterhead.

We previously consulted on proposals for a new substation at Peterhead in 2013, however due to the changing requirements in the transmission network, we have undertaken further system and technical analysis to ensure that our proposals meet the future requirements of the network.

Our proposals will consider plans to reinforce the existing 275kV overhead line, which connects the substations at Blackhillock, Keith, New Deer, Rothienorman, Kintore and Peterhead, to enable operation at an increased voltage of 400kV.

On this basis, we propose to develop a new substation adjacent to the existing 275kV substation at Peterhead. The new substation will comprise of four super grid transformers, plant enclosures, a 400kV gas-insulated busbar, substation control building and associated infrastructure.

October/November 2018

Proposal of Application Notice and Public Consultation event

Spring 2019

Submission of Section 37 and Town and Country Planning applications

Spring 2020

Section of St Fergus to Peterhead 132kV overhead line undergrounding

Autumn 2022

Overhead line tie-ins

Autumn/Winter 2018

Surveys

Autumn/Winter 2019

Planning and Section 37 determination

Summer 2020 - Summer 2022

Substation and overhead line construction works

October 2022

Final commissioning and energisation

Planning application

We currently have an active planning consent (APP/2014/1437), which was granted planning approval in 2014. Due to our review of the requirements, we intend to submit a new application for consent under the Town and Country Planning (Scotland) Act 1997 in early 2019.

We will also submit an application for consent from the Scottish Government's Energy Consents Unit through Section 37 of the Electricity Act 1989. This will cover all aspects related to the overhead line works. These works will comprise of a limited number of overhead line diversions and tie-ins to the electricity substation. This application is intended to be submitted for consideration in early 2019.

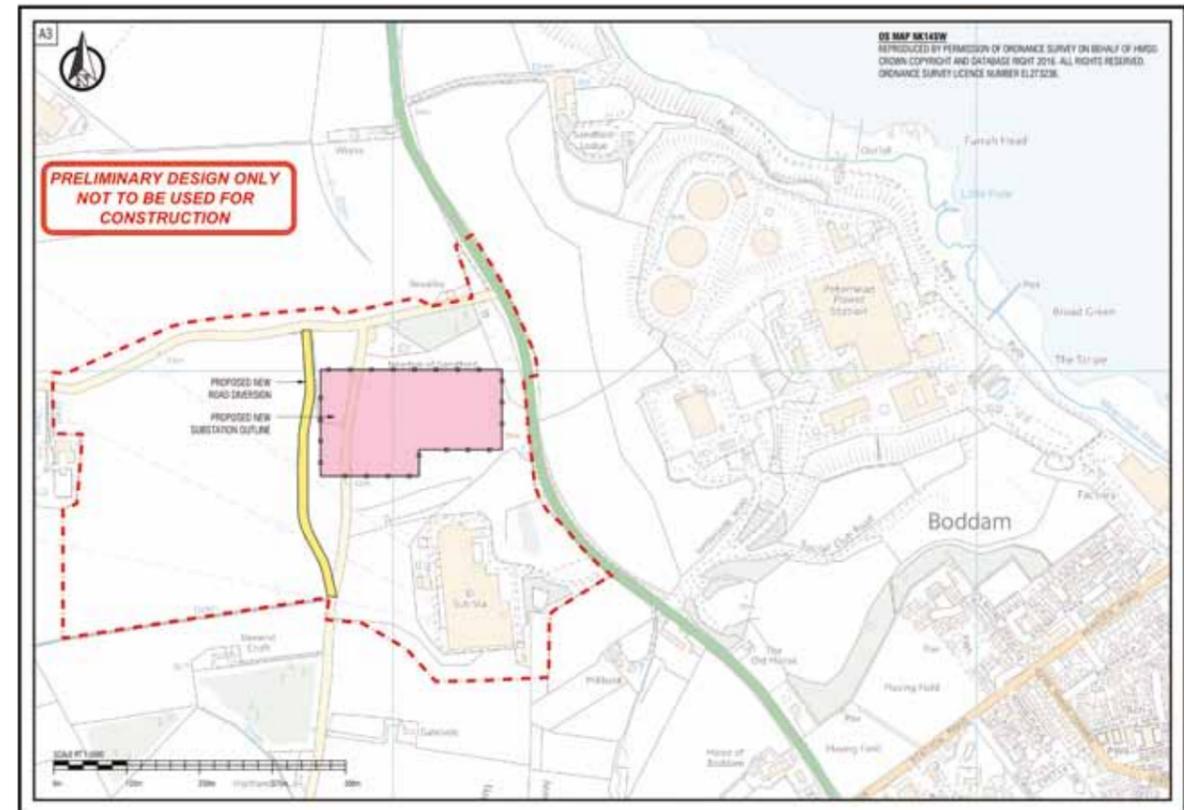
The development proposals will also require a short length of the existing 132kV St Fergus to Peterhead overhead lines to be undergrounded, as cables, to allow us to tie-in the existing 275kV overhead lines. These works will not require formal planning consent.

Our Proposed Solution

Our chosen site for this new substation is south of Newton of Sandford, Boddam, Peterhead, Aberdeenshire. This site was chosen as it is adjacent to the existing substation in Peterhead and within proximity to the existing Peterhead Power Station.

The following additional factors were considered during the site selection appraisal: ecology, drainage, topography, flood risk, ground conditions, access constraints and proximity to the existing transmission network.

Construction of the substation will require plant and machinery, along with vehicles to transport materials and workers to site. The largest plant items for the substation will be the installation of four 1200MVA super grid transformers.



Proposed substation layout

Temporary construction compound

Temporary offices, welfare and storage facilities will be established during the planned construction period. These will be located in close proximity to the substation platform and overhead line access routes.

Project Details

To enable the reinforcement proposals at Peterhead there is a requirement to undertake development, including public road improvements for transportation of transformers, formation and construction of an electricity substation and associated overhead line works and tie-ins.

Substation

The substation development works would involve:

- Construction and installation of a substation platform
- Installation of four 1200MVA supergrid transformers
- Installation of gas insulated switchgear busbar and a substation control building; and
- Associated civil engineering works and electrical infrastructure.



Overhead line

The overhead line diversion works will comprise:

- The undergrounding of the existing 132kV St Fergus to Peterhead overhead line in to the Peterhead 275kV substation
- Erection of new steel lattice terminal towers; and
- Diversion of the 275kV Blackhillock and Kintore overhead line.



Road alterations and improvement works

- Minor widening of the minor road of the junction from the A90 (N) and the unnamed road to the North of Newton of Sandford
- Minor widening of the unnamed road to the north of Newton of Sandford
- Potential widening or realignment of the minor road to the west of Newton of Sandford; and
- Formation of a site entrance.



Screening

There may be the need to screen this site to lessen the visual impact of our proposal. This is a decision that will be taken in conjunction with Aberdeenshire Council. At this early stage of the process we do not have detailed designs of screening measures, however if required, these would most likely involve earth bunding and planting a variety of trees around designated areas of the footprint of the site.

Environmental Considerations

The formation of the new Peterhead 400kV Substation and associated terminal towers permits the reinforcement of the existing electricity transmission network in the North East region of Scotland. To ensure that we follow the best practice guidelines, we are taking the following environmental elements into consideration:

Landscape and Visual

The appearance of the substation within the landscape and how it is seen from nearby homes and roads will be carefully considered as part of an appraisal of the landscape and visual impacts.

Landscape mitigation measures would be developed as part of the substation proposal to minimise potential effects on the surrounding area as far as practicable. The approach to landscape mitigation will be discussed with Aberdeenshire Council following the appraisal.

Terrestrial Ecology (Habitats and Species)

The proposed substation site lies within enclosed fields used for a mixture of livestock and arable pasture. The site is not located within any sites designated for their natural heritage.

Previous protected species surveys at the site did not identify any signs or places of shelter for protected species, and there was little obvious habitat suitable for protected species.

Protected species surveys will be updated prior to submission of the planning application and species protection plans would be put in place to minimise potential effects to protected species, where required.

Ornithology

Breeding bird surveys carried out at the site recorded thirty-two species, including eleven species of conservation importance (Herring gull, Skylark, Song thrush, Yellowhammer, Barn swallow, Black-headed gull, Bullfinch, Common gull, Meadow pipit, Oystercatcher and Willow warbler).

No Schedule 1 or Annex 1 species were recorded.

The findings of these surveys will help inform where mitigation measures are required to minimise effects on these birds during the construction phase.

Cultural Heritage

There are a number of designated historic sites within 2km of the site. An archaeological appraisal of the substation site and its surrounding area would be undertaken to understand the potential effects on the historic environment and inform mitigation measures where required.

Traffic and Transport

A Construction Traffic Management Plan (CTMP) will be developed and used to control vehicle movements and numbers during the construction phase of the works. This will be created in agreement with Aberdeenshire Council and Transport Scotland.

Water Environment and Soils

The substation site is not in an area identified as being at risk from flooding. However, Sustainable Urban Drainage Systems would be incorporated into the design to account for any increased surface water resulting from the development.

Private water supplies will be identified and an appraisal undertaken to determine potential risks to any supplies. Where required, measures will be identified and put in place to ensure that the quality and quantity of water from these supplies would not be adversely affected.

Noise

Construction noise is considered to be short term and intermittent and can be controlled through the implementation of a noise management plan, which would include working hours agreed with Aberdeenshire Council.

Noise monitoring surveys are being undertaken at noise sensitive receptors within the vicinity of the Proposed Development.

Appropriate mitigation measures will be considered dependent on the results of the survey.

Notes

Notes

What happens now and how do I have my say?

We understand and recognise the value of the feedback provided by members of the public during all engagements and consultations. Without this valuable feedback, the project development team would be unable to progress projects and reach a balanced proposal.

We are keen to receive your views and comments in regards to the following questions:

- Has the project information provided explained the need for the Peterhead 400kV Substation?
- Do you agree with the proposed substation at Peterhead?
- Do you have any comments on our chosen location for the Peterhead Substation?
- Do you feel SSEN have given enough consideration to potential impacts on the environment that this project may have?
- Are there any additional factors, issues or concerns which you wish to bring to the attention of the Project Team regarding our proposal?
- Following your review of the information displayed today, how would you rate your information of the 400kV Peterhead Substation?

Comments

Your views and comments can be provided to the project team by completing a feedback form or by writing to Gary Donlin, Community Liaison Manager. We will be seeking feedback from the members of the public and Statutory Bodies until 7th December 2018.

All received feedback will be assessed and the proposed options adapted where necessary.

Community Liaison Manager Gary Donlin



gary.donlin@sse.com



07384 798 101



Gary Donlin
Scottish and Southern
Electricity Networks,
1 Waterloo Street
Glasgow, G2 6AY



Additional information

Information will also be made available via the project webpage and social media channels:

Project Website:

www.ssen-transmission.co.uk/projects/north-east-400kv

Follow us on Twitter:

@ssencommunity

Follow us on Facebook:

@ssencommunity



Your Feedback

Thank you for taking the time to attend this consultation event. In order to record your views and improve the effectiveness of our consultation, please complete this short feedback form.

Please complete in **BLOCK CAPITALS**. (Please tick one box per question only)

Q1 Has the project information provided explained the need for the 400kV Substation?

Yes No Unsure

Q2 Do you agree with the proposed Substation at Peterhead?

Yes No Unsure

Q3 Do you have any comments on our chosen location for the Peterhead Substation?

Q4 Do you feel SSEN have given enough consideration to potential impacts on the Environment that this project may have?

Yes No Unsure

Q5 Are there any additional factors, issues or concerns which you wish to bring to the attention of the Project Team regarding our proposal?

Q6 Following your review of the information displayed today, how would you rate your knowledge of the Peterhead 400kV Substation?

Very well informed Know a lot Know a little
 Know very little Know nothing at all



Please use space below to provide further comments:

Full name

Address

Postcode

Telephone

Email

If you would like to be kept informed of progress on the project please tick this box.

If you would like your comments to remain anonymous please tick this box.

Do you agree with the proposed substation at Peterhead?

Yes No

Thank you for taking the time to complete this feedback form.

Please hand your completed form in at the event or alternatively by one of the methods below:

Post: Gary Donlin, Scottish and Southern Electricity Networks, 1 Waterloo Street, Glasgow, G2 6AY **Email:** gary.donlin@sse.com

Closing date for feedback is 7th December 2018

The feedback form and all information provided at the event can also be downloaded from the dedicated website:
www.ssen-transmission.co.uk/projects/north-east-400kV

Any information given on the feedback form can be used and published anonymously as part of Scottish and Southern Electricity Networks consultation report. By completing this feedback form you consent to Scottish and Southern Electricity Networks using feedback for this purpose.

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