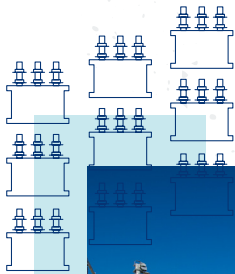


# Netherton Hub

Pre-application consultation

May 2024



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## The consultation event will take place on:

22 May (2–7pm)  
 Longside Parish Church Hall, Inn Brae, Longside AB42 4XN



# Powering change together



**The time has come to further enhance Scotland’s energy infrastructure, providing power for future generations as we move towards net zero.**

The shift to a cleaner, more sustainable future is about more than climate change. It’s about ensuring future generations have the same opportunities to thrive as we have all had.

Countries around the world are investing in their energy infrastructure to support the demands of modern economies and meet net zero targets. The UK is leading the way in building a modern, sustainable energy system for the future.

## We all have a part to play

When it comes to net zero, we have to be in it together. The UK and Scottish governments have ambitious net zero targets, and we’re playing our part in meeting them.

We work closely with the National Grid Electricity System Operator to connect vast renewable energy resources—harnessed by solar, wind, hydro and marine generation—to areas of demand across the country. Scotland is playing a big role in meeting this demand, exporting two thirds of power generated in our network.

**But there’s more to be done. By 2050, the north of Scotland is predicted to contribute over 50GW of low carbon energy to help deliver net zero. Today, our region has around 9GW of renewable generation connected to the network.**

At SSEN Transmission, it is our role to build the energy system of the future.

**We’re investing £20 billion into our region’s energy infrastructure this decade, powering more than ten million UK homes and 20,000 jobs, 9,000 of which will be here in Scotland.**



Scan the QR code with your smartphone to find out more about how these policies have been assessed and determined.

## Who we are

We’re responsible for maintaining and investing in the electricity transmission network in the north of Scotland. We’re part of SSE plc, one of the world’s leading energy companies with a rich heritage in Scotland that dates back more than 80 years. We are also closely regulated by the GB energy regulator Ofgem, who determines how much revenue we are allowed to earn for constructing, maintaining and renovating our transmission network.

## What we do

We manage the electricity network across our region which covers a quarter of the UK’s land mass, crossing some of the country’s most challenging terrain. We connect renewable energy sources to our network in the north of Scotland and then transport it to where it needs to be. From underground and subsea cables and overhead lines to electricity substations, our network keeps your lights on all year round.

## Working with you

We understand that the work we do can have an impact on communities. So we’re committed to minimising our impacts and maximising all the benefits that our developments can bring to your area. We’re regularly assessed by global sustainability consultancy AccountAbility for how we engage with communities. That means we provide all the information you need to know about our plans and how they will impact communities like yours. The way we consult is also a two-way street. We want to hear people’s views, concerns, or ideas and harness local knowledge so that our work benefits their communities: today and long into the future. You can share your views with us at: [ssen-transmission.co.uk/talk-to-us/contact-us](https://ssen-transmission.co.uk/talk-to-us/contact-us)

# The Pathway to 2030

Building the energy system of the future will require a significant acceleration of work over the next few years. In partnership with the UK and Scottish governments, we're committed to meeting our obligation of connecting new, renewable energy to where it's needed by 2030.

## Achieving Net Zero

By 2030, both the UK and Scottish governments are targeting a big expansion in offshore wind generation of 50GW and 11GW respectively. The Scottish Government has also set ambitious targets for an additional 12GW of onshore wind by 2030.

Across Great Britain, including the north of Scotland, there needs to be a significant increase in the capacity of the onshore electricity transmission infrastructure to deliver these 2030 targets and a pathway to net zero.

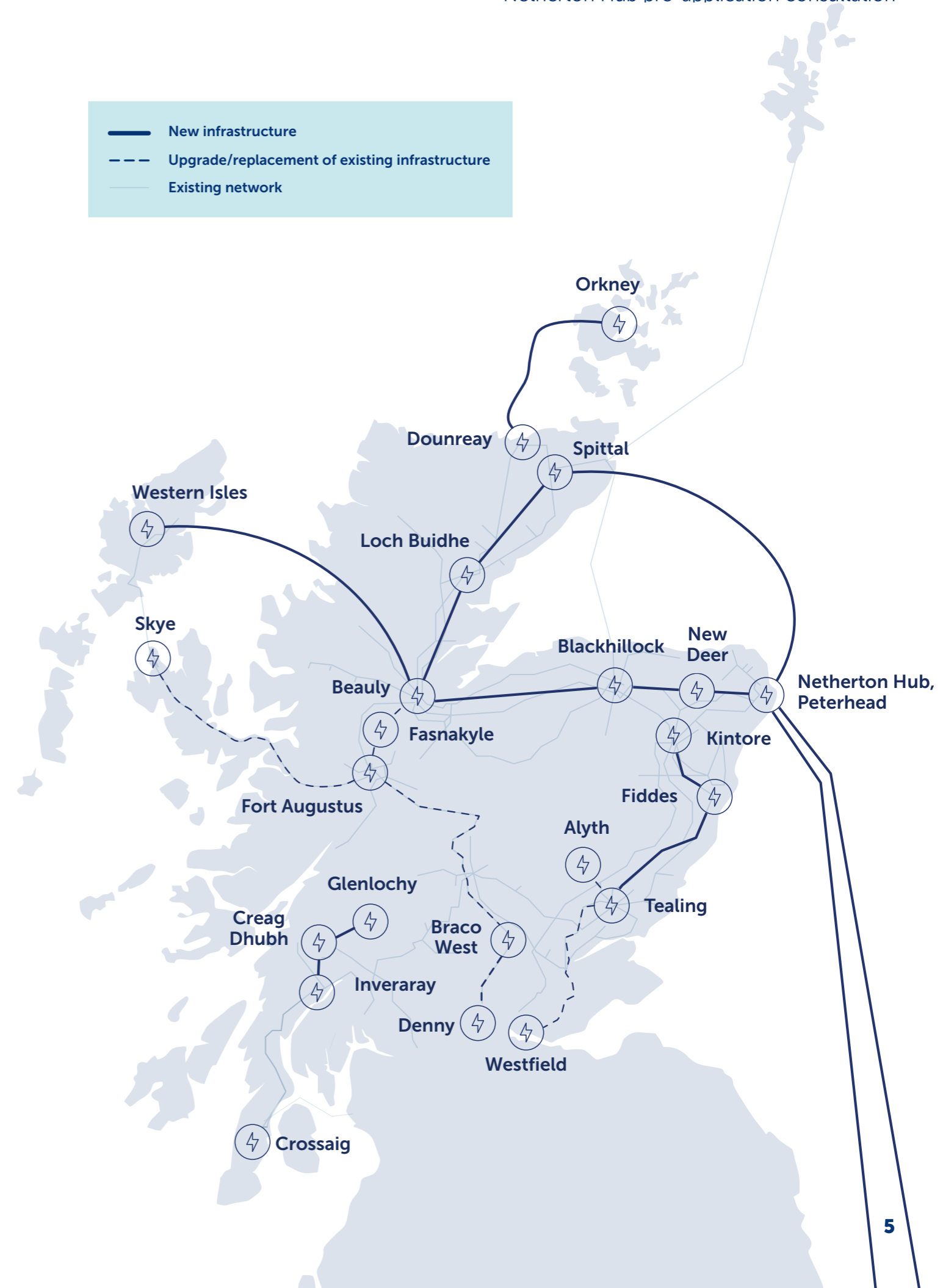
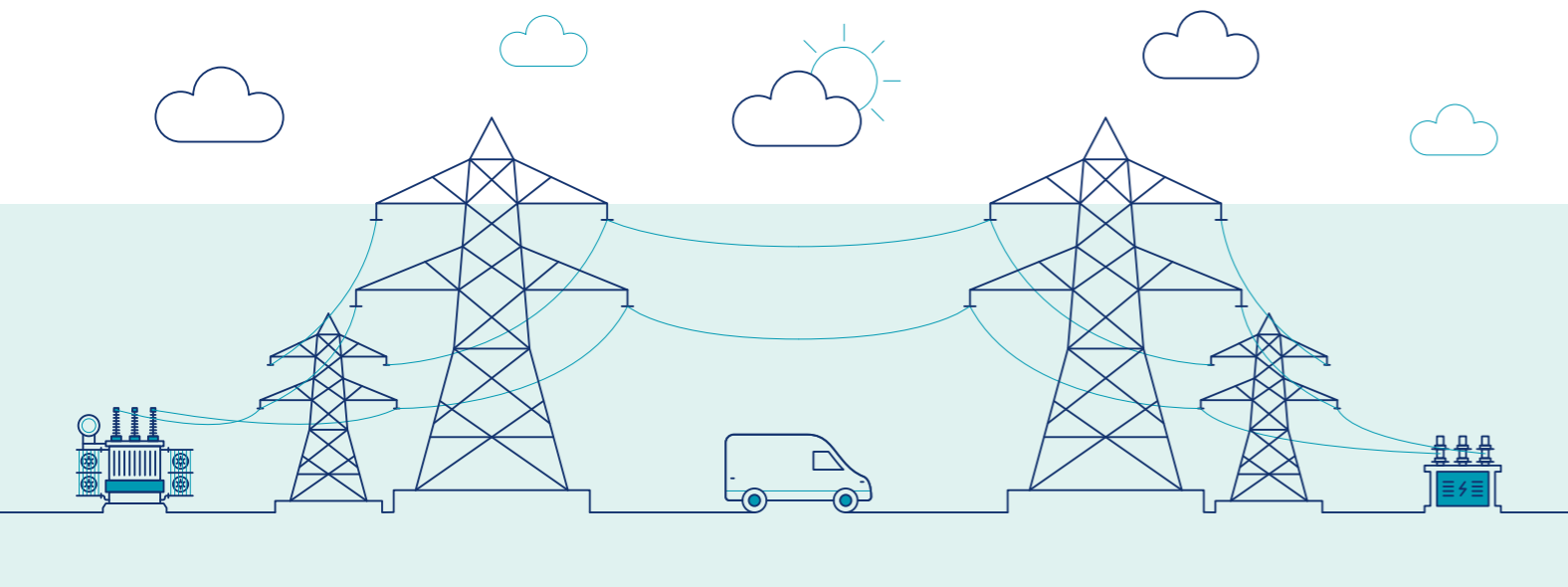
## Securing our energy future

And it's not just about net zero. It's also about building a homegrown energy system, so that geopolitical turmoil around the world doesn't severely impact the UK and push up energy prices.

The UK Government's British Energy Security Strategy further underlines the need for this infrastructure, setting out plans to accelerate homegrown power for greater energy independence. The strategy aims to reduce the UK's dependence on and price exposure to global gas wholesale markets through the deployment of homegrown low carbon electricity generation supported by robust electricity network infrastructure.

## Meeting our 2030 targets

In July 2022, National Grid, the Electricity System Operator (ESO), published the Pathway to 2030 Holistic Network Design (HND). This set out the blueprint for the onshore and offshore transmission infrastructure that's required to support the forecasted growth in the UK's renewable electricity. It's an ambitious plan that will help the UK achieve net zero.



# The Pathway to 2030

## What does this mean for the north-east of Scotland?

The north and the north-east of Scotland will play a key role in meeting these goals. The extensive studies that informed the ESO's Pathway to 2030 Holistic Network Design confirmed the requirement to reinforce the onshore corridors between Beaully and Peterhead, Beaully and Spittal in Caithness, and an offshore subsea cable between Spittal and Peterhead.

Providing a 400kV overhead line and high voltage subsea cable (HVDC) connection between these sites provides the significant capacity required to take power from large-scale onshore and offshore renewable generation (mainly wind farms) to the north-east mainland of Scotland.

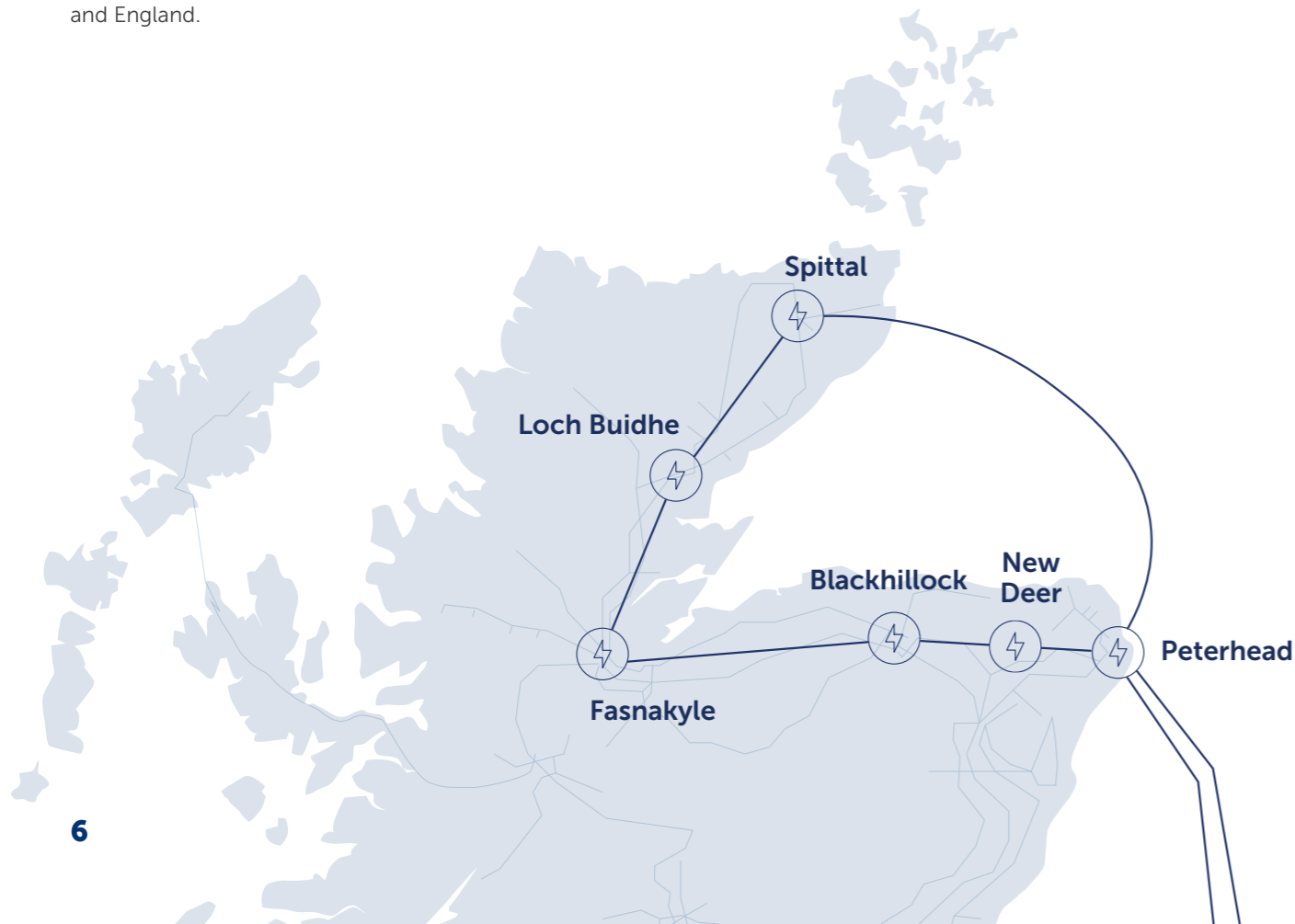
From there, it will be transported to demand centres in England via an HVDC subsea cable. To enable these new connections, new 400kV substations are also required at key locations. At Spittal, Beaully and Netherton near Peterhead, high voltage converter stations are also required to convert DC electricity to AC (and vice versa), from offshore subsea connections from the Western Isles, between Spittal and Peterhead and Peterhead and England.

## Future network investment requirements

Our 2030 targets are the first step on the transition to net zero. The UK Government has a target to decarbonise our electricity system by 2035 and fully decarbonise our economy by becoming net zero by 2050, with the Scottish Government committing to net zero five years earlier, by 2045.

To achieve these targets, further investment in new low carbon electricity generation and the enabling electricity transmission network infrastructure will be required.

The next stage of strategic network planning across Great Britain has now been outlined in the independent Electricity System Operator, National Grid ESO's, 'Beyond 2030' report, published in March this year. For the north of Scotland, the ESO's plan recommends several new and upgraded onshore and offshore reinforcements that the ESO has assessed are required to help deliver net zero targets. These projects, which will be subject to extensive public consultation, are at the very early stages of development and further details will be set out in due course.



# Project overview

We're leading some exciting projects to power change in the UK and Scotland. To support the delivery of 2030 offshore wind targets set by the UK and Scottish Governments, and to power local communities, we need to upgrade our existing network. In some key areas, we need to develop entirely new infrastructure, and quickly.

The Netherton Hub is a strategic development proposed for a site located to the west of Peterhead, near Flushing and Longside. Several components will be co-located at this site and are outlined below. The project was renamed from Peterhead Net Zero 2030 Developments to 'Netherton Hub' to reflect the area's farming history following discussions with local stakeholder groups.

## Key components of the Netherton Hub



### 400kV substation

A 400kV substation is proposed to support offshore and onshore electricity generation. The substation will be based on an enclosed Gas Insulated Switchgear (GIS) design.



### Eastern Green Link 3 HVDC converter station

This second converter station and associated HVDC underground and subsea cable will transport renewable energy from generators in the northeast of Scotland to Norfolk and beyond.



### 132kV substation

A 132kV substation is proposed to support further future generation and storage connections from third party developers. The substation will also be based on an enclosed Gas Insulated Switchgear (GIS) design.



### HVDC switching station

A switching station is required to facilitate coordinated DC connections on the network and from generation sources. This will reduce the required footprint for future HVDC connections and help to ensure a more resilient transmission network.



### Spittal to Peterhead HVDC converter station

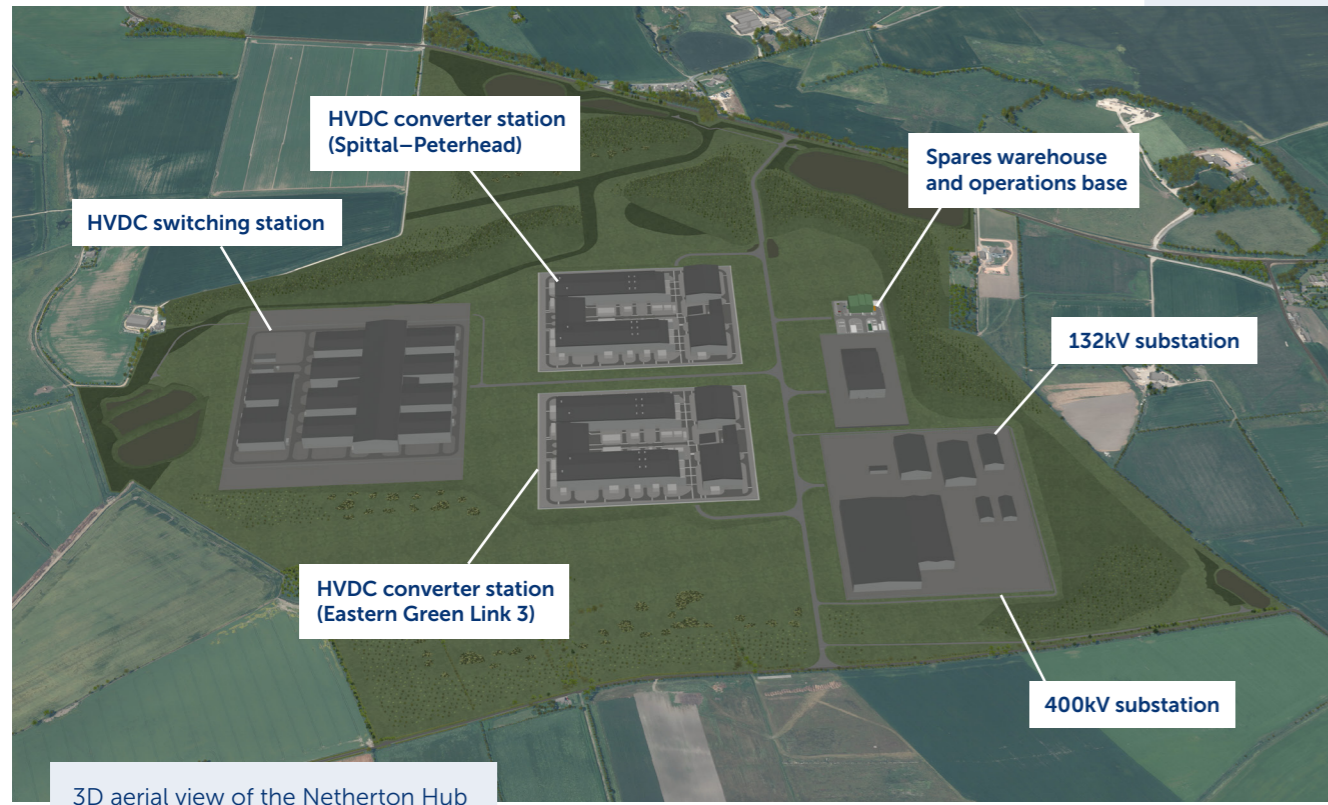
This converter station and associated high voltage direct current (HVDC) underground and subsea cable will transport renewable energy from generators in the north of Scotland via Spittal in Caithness to the Netherton Hub and on to demand centres throughout the UK.



### Spares warehouse and operations base

A spares warehouse and operations base will also be sited within the Netherton Hub.

# Project overview



## Substations - 400kV and 132kV

Two substations are proposed—a 400kV and a 132kV substation—and both will be based on enclosed Gas Insulated Switchgear (GIS) design. The substations are required to support offshore and onshore electricity generation and transmission, and future generation from third-party developers. A new 400kV overhead line between Beauly, Blackhillock, New Deer and Peterhead is proposed to connect to the 400kV substation. The existing 400kV overhead line between New Deer and Peterhead will also connect to the 400kV substation. Consultation on these proposed overhead line connections will be carried out separately.

**Overall, the 400kV substation is approximately 188m in length, 163m wide and 20m in height. The super grid transformer buildings are approximately 90m in length, 50m wide and 21m in height. The 132kV substation is approximately 74m in length, 33m wide and 16m in height.**

**Note:** All sizes are approximate and may be subject to change as the design evolves.

## What is a substation?

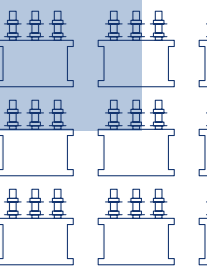
Substations play an essential role managing electricity flow around the country and improving the reliability of supply. They achieve this by connecting and disconnecting circuits and converting electricity into different voltages using large equipment called super grid transformers. Substations with Gas Insulated Switchgear, like the two we're proposing here, are smaller in size compared to Air Insulated Switchgear design.



An example of a super grid transformer



An example of a 400kV Gas Insulated Switchgear substation



# Project overview

## Eastern Green Link 3 HVDC converter station

Eastern Green Link 3 HVDC converter station and HVDC underground and subsea cable will transport renewable electricity from the north of Scotland to centres of demand in the wider GB network. The project is being jointly developed by SSEN Transmission and National Grid Electricity Transmission and will include a converter station at Netherton Hub, a converter station in Norfolk and over 600km of HVDC cable connecting the two. You can find more information on this major subsea project here: [ssen-transmission.co.uk/eastern-green-link-3](https://ssen-transmission.co.uk/eastern-green-link-3)

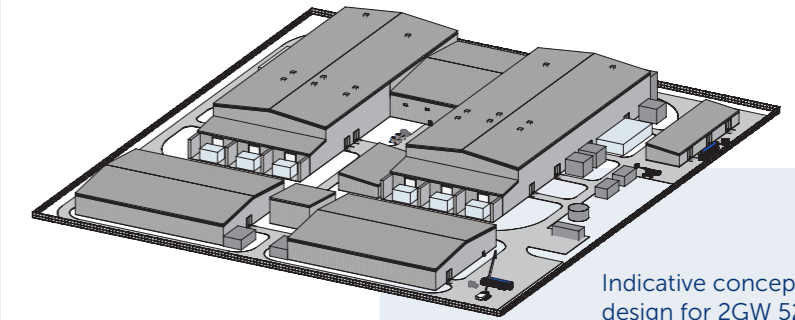
The indicative combined building dimensions of a converter station are: height 29m, width 206m and length 200m. The alternating current halls would sit separate to, but aligned with, the arms of the u-shaped building and have indicative building dimensions of height 27m, width 84m and length 64m.

## Spittal to Peterhead HVDC converter station

The Spittal to Peterhead HVDC converter station and DC Cable will transport renewable power from the north of Scotland at Spittal to Peterhead for onward transmission via the Netherton Hub. This project is being solely developed by SSEN Transmission. The converter station at Netherton will be connected via a 200km DC cable to a converter in the Spittal area. You can find more information here: [ssen-transmission.co.uk/spittal-peterhead-subsea-cable-link](https://ssen-transmission.co.uk/spittal-peterhead-subsea-cable-link)

## What is a converter station?

Converter stations change electricity from alternating current (AC) to direct current (DC), or vice versa. Alternating current is used in households, whereas direct current is used to efficiently transport electricity over long distances, such as via subsea cables, with fewer electrical losses.

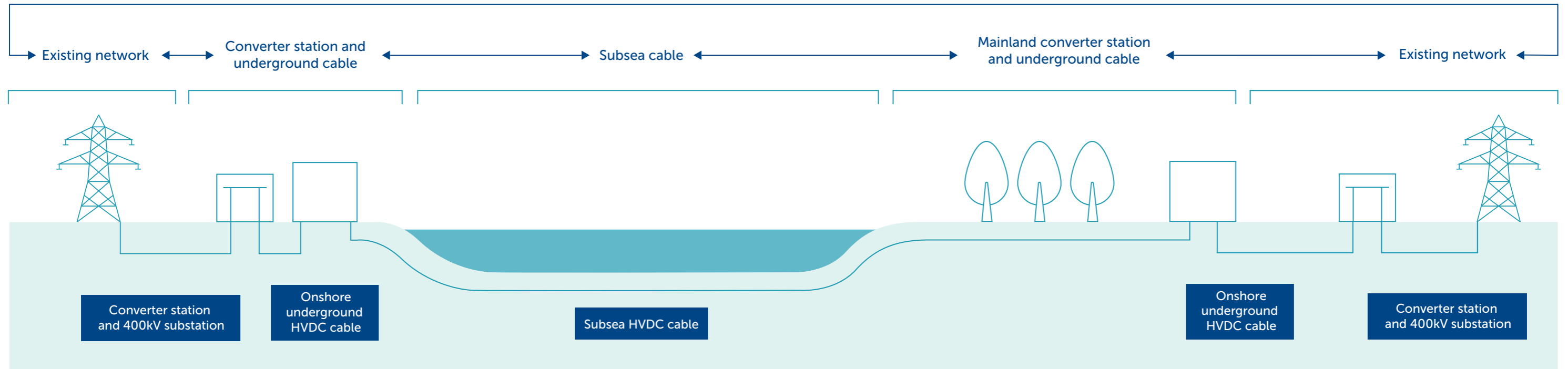


Indicative conceptual design for 2GW 525kV Bipole converter station



The 320kV DC 1200MW Blackhillock HVDC converter station

## Diagram illustrating HVDC converter station and subsea cable projects



# Project overview

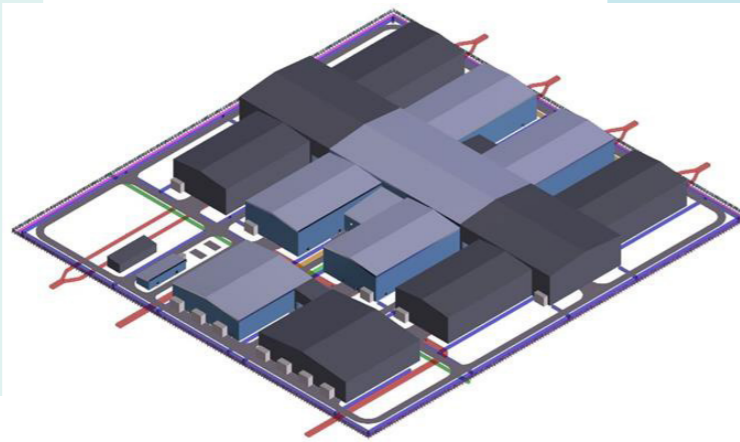
## HVDC switching station

A HVDC switching station is required to facilitate potential co-ordinated DC connections onto the network from generation sources. The benefits of this include a reduction in footprint for potential HVDC connections and a more resilient transmission network for the future.

Dimensions: Switching station is approximately 319m length, 245m width and 30m in height.

### What is a switching station?

Unlike substations and converter stations, switching stations don't change voltages or currents. Instead, they enable us to connect and disconnect electrical circuits to assist with managing faults and maintenance, reducing customer impact and sending power where it is needed. They do this through a series of switches providing resilience in the network.



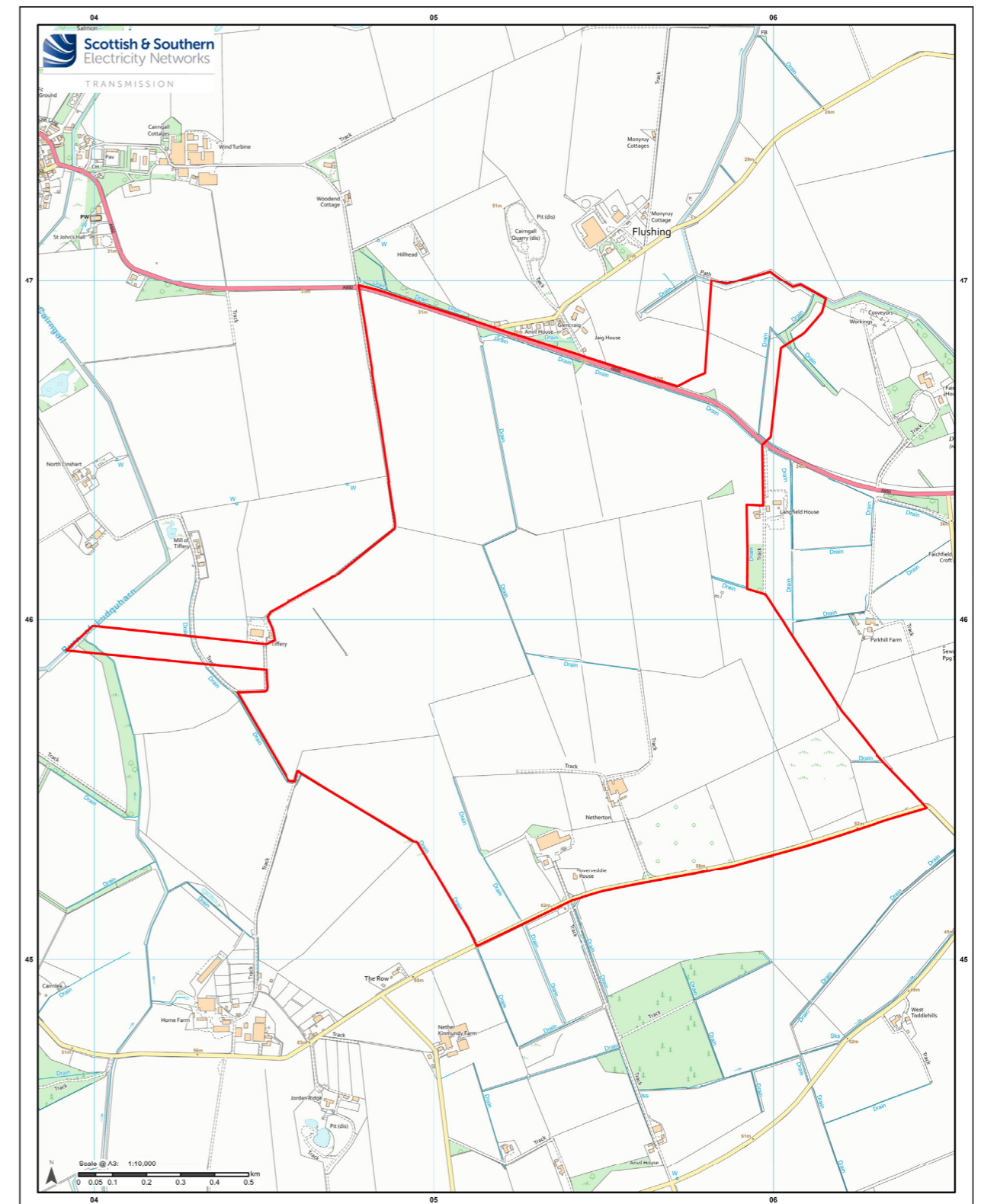
The shape of the HVDC switching station may vary from this image due to optimising design and space.

A spares warehouse and operations base will also be housed on site.

Dimensions: spares warehouse approx. 220m by 125m by 24m; operations base approx. 90m by 100m by 8m.



# Red line boundary map



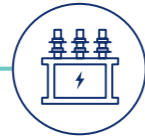
# The story so far

## January 2023



We introduced this project in January 2023, consulting on 13 potential sites as part of our initial site screening stage.

## April 2023



We shared four shortlisted sites and consulted on our preferred option, Netherton Hub, during this detailed site selection stage.

## May 2023



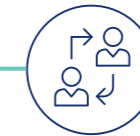
We received 39 written responses during our consultation period between 17 April and 19 May 2023, as well as feedback from statutory stakeholders.

## December 2023



We published a Report on Consultation confirming our intention to progress with Netherton Hub to the next stage of the planning process.

## February 2024



We held the first of two pre-application consultation events.

## Help shape our plans

The work we have planned is significant and has the potential to deliver massive benefits in your community, Scotland, and beyond. Yet we know that achieving our goals will require a lot of work that will impact your lives. That's why we want to work with you every step of the way throughout the planning and delivery stages of these essential and ambitious works.

We're committed to delivering a meaningful consultation process that actively seeks the views of everyone affected by our plans. That means making our plans clear and easily accessible, so that you can give us input throughout each stage of the development process.

Throughout the consultation, we'll present our approach to developing the project, including changes made since we last consulted with you. We will also provide some visualisations and maps to show you where everything would be located and to allow you to see what the proposed Netherton Hub could look like. These will all also be available to view and download from our project website.



## What we are seeking views on

We want you to share your thoughts and opinions on our plans, where you think we can make improvements, concerns about the impact of our work and what you think of the refinements or changes we've made.

This event is the second of two planned, sequential, public consultation events following the submission of the Proposal of Application Notice (PAN). The PAN submission triggered the initial formal Town and Country Planning (major/national application) consultation process for this site, including the 12-week (minimum) pre-application consultation period.

Following the initial consultation event, the project team has sought to ensure that comments or concerns raised have informed, where possible, the primary considerations for the designs as they have progressed. This includes layout design, landscaping enhancement and screening.

Outside of the formal consultation periods and events, we have continued to provide a dedicated webpage for the projects and liaise with a wide range of stakeholders to help inform the development and design.

We are therefore holding this feedback event to present our proposed Netherton Hub design, which has been informed by stakeholder feedback, and have set out our responses to feedback received to date.

By telling us what you think, you will help shape our proposals. We want to harness your local knowledge so that we spot any unforeseen challenges early and maximise the potential benefits and opportunities for your communities. Because, ultimately, we want to work with you to ensure that the energy infrastructure we build will be the best it can possibly be.

## Who we are consulting with

As well as communities, we are keen to hear feedback from a broad range of other stakeholders including but not limited to landowners, businesses, non-statutory consultees and statutory consultees such as local authorities, NatureScot, Scottish Environment Protection Agency (SEPA), and Historic Environment Scotland (HES).



Scan the QR code to read our Report on Consultation.



# Feedback

**Following submission of the PAN in January 2024, the first of two pre-application consultation events were held at Longside Parish Church Hall on 28 February 2024. A total of 247 attended.**

During the 8-week feedback period, which closed on 9 April 2024, 103 responses were received specific to this project. We were also provided with the outcomes of a survey conducted by the Longside and District Community Council which we have assessed alongside the formal feedback received.

We have included both event feedback and statutory stakeholder feedback through the PAN and pre-application process, as well as design feedback, within the following pages.

Many of the responses posed general questions covered in our Frequently Asked Questions (FAQ) page and additional handouts such as project need, mental health, why all infrastructure cannot be placed offshore, sustainability considerations and compensation. More information regarding these topics and more can be accessed at: [ssen-transmission.co.uk/2030faqs](https://ssen-transmission.co.uk/2030faqs)

Event feedback	Response
<p><b>Project need</b> Questions were raised over the need for the proposed development</p>	<p>The Netherton Hub is a National Development that is supported by national policy, the Electricity System Operator, and the energy regulator. It would contribute significantly towards the delivery of the UK and Scottish Government's Net Zero targets and help reduce the UK's dependence on imported oil and gas. Further details on the need for SSEN Transmission's Pathway to 2030 projects is available at: <a href="https://ssen-transmission.co.uk/2030-need">ssen-transmission.co.uk/2030-need</a></p>
<p><b>Landscape and Visual Impact</b> A wide range of feedback and questions were received around screening, these included:</p> <ul style="list-style-type: none"> <li>• Acknowledgement of the efforts being made to screen the Netherton Hub.</li> <li>• Request for more information on the extent and type of screening and landscaping planned.</li> <li>• Questions around the extent of screening proposed to the south of the site.</li> <li>• Concerns over the visual impact of the deer fencing along the northern boundary and the security fencing around the platforms and request to screen them.</li> <li>• Request for early planting of trees.</li> <li>• Concern trees won't grow and questions over time for trees to establish effective screening.</li> </ul> <p>Concerns were also raised with respect to landscape and visual impacts.</p>	<p>The indicative landscape mitigation plan on page 25 and the landscape masterplanning section on page 26 provides further detail on the extent and type of planting being considered. This includes the woodland planting being proposed at the south of the site. The suggestion to screen the deer fencing along the northern boundary is being considered. We will look to start planting as early as possible, particularly around the edges of the site. However, the exact timing cannot be established until contractors are appointed. The delivery of the landscape mitigation plan would likely be a condition of any future planning consent and would be required to ensure we achieve our biodiversity net gain commitments. It is anticipated that trees will be planted as relatively dense belts of saplings (40-60cm height) as these establish better than larger trees and, given the fertile soil available, they are expected to grow about 4m every 10 years.</p> <p>Landscape and visual impact will be fully assessed in the Environmental Impact Assessment that will accompany the planning application.</p>

Event feedback	Response
<p><b>Biodiversity</b> We received a number of questions around biodiversity. There were requests for further detail on what our plans are with respect to biodiversity net gain, concerns were raised over potential loss of habitat and we were asked why we are proposing to deer fence the site.</p>	<p>The planting, habitat enhancement and reinstatement works are being designed to create a variety of natural habitats, characteristic of this part of Aberdeenshire and seek to deliver a minimum biodiversity net gain of 10%.</p> <p>Local types of habitats have been identified with an emphasis on delivering target habitats considered desirable such as wetland and broadleaved and mixed woodland. The proposed landscape strategy will fill hedgerow gaps, creating a series of natural wildlife corridors to assist in movement across the site and connecting with the surroundings.</p> <p>Perimeter deer fencing would be installed around the site boundary to exclude grazing animals and allow the establishment of the planting. The diagram on page 25 provides an indication of the type of habitat creation being considered.</p>
<p><b>Ornithology</b> Concerns have been raised over the potential impacts on red listed birds.</p>	<p>Habitat lost for the Netherton Hub will largely comprise modified grassland and arable crops of relatively low value for birds. However, it is acknowledged that there would be some habitat loss for species red listed within Birds of Conservation Concern. The main species affected would be an estimated two territories for corn bunting and three territories for yellowhammer. Despite their red listed status these species are passerines (songbirds) that have relatively large populations in the context of the low number of territories estimated to be affected. These species can breed in relatively high densities and can produce multiple broods a year. The area surrounding the site includes extensive farmland habitat which would remain suitable for them. Mitigation would be put in place during construction to minimise potential impacts.</p> <p>In the wider context of land occupying the footprint of the site and the proposed soft landscape plan including species-rich and marshy grassland areas, shrubs, and detention basins which would benefit many of the species. The landscape strategy is expected to improve the quality of the existing habitat outwith the footprint of the platform/buildings and hard standing areas. The habitat within and surrounding the site is considered unsuitable breeding habitat for merlin which requires upland moorland. Outside the breeding season merlin disperse to lowland habitat such as the farmland dominating the site and surrounding area. Any effects from disturbance/displacement on a non-breeding merlin would be negligible given this species opportunistic wide ranging non-breeding behaviour, when a merlin would be expected to occupy a very large range while hunting for flocks of songbirds.</p>

Event feedback	Response
<p><b>Terrestrial Ecology</b> Concerns were raised over the potential impacts on local wildlife, including bats and badgers and whether these are being considered.</p>	<p>An extensive suite of environmental surveys has been undertaken to establish the full extent of wildlife and protected species on and in the vicinity of the Netherton Hub.</p> <p>The Environmental Impact Assessment will fully assess the significance of any impacts and identify mitigation measures where necessary, as well as opportunities for habitat enhancement.</p>
<p><b>Salmon &amp; Trout</b> The Ugie District Salmon Fisheries Board (DSFB) advised that there may be salmon and sea trout in the burns we plan to discharge in to and noted their concerns over potential impacts.</p>	<p>We are confident significant impacts can be avoided and are in consultation with Ugie DSFB with respect to surveys and mitigation.</p> <p>The details of these measures will be captured in the Environmental Impact Assessment Report for the project, which will be submitted alongside the planning application.</p>
<p><b>Agriculture and Food Security</b> Concerns have been raised over the Netherton Hub being located on agricultural land and the potential impacts this could have on food security.</p>	<p>The area of prime agricultural land that could potentially be impacted by the proposed development represents less than 0.04% of mapped prime agricultural land in Aberdeenshire.</p> <p>Further, given the impact weather patterns have on UK and global agricultural outputs and food security year on year, any loss in food production because of this development should be assessed alongside the benefits of this project to the country's climate future—decarbonisation of the energy system and contributing to mitigating climate change.</p> <p>An assessment of the impacts on land use and agriculture will be included in the Environmental Impact Assessment that will accompany the planning submission.</p>
<p><b>Lighting</b> Concerns over the extent of lighting required during construction and operation, and the potential for it to disrupt neighbours' sleep patterns.</p>	<p>Floodlights would be installed but would only be used in the event of a fault during the hours of darkness; during the over-run of planned works; or when sensor activated as security lighting for nighttime access. The access roads would not be lit under normal operation. A light would also be provided permanently at access gates.</p> <p>Construction work is likely to be during daytime periods only. Any out of hours working would be agreed in advance with Aberdeenshire Council.</p>
<p><b>Noise</b> Concerns were raised over the potential noise impacts during construction and operation.  A consultee requested the noise report and raised a question regarding the background noise monitoring.</p>	<p>Potential noise impacts during construction and operation will be assessed within the Environmental Impact Assessment. The proposed development would be required to meet noise limits set by Aberdeenshire Council. Appropriate mitigation would be implemented to ensure these limits are met at all noise sensitive receptors.</p>

Event feedback	Response
<p><b>Noise (cont.)</b></p>	<p>The environmental impact assessment (which will include details on the background noise monitoring) will be publicly available when the application is submitted to Aberdeenshire Council.</p>
<p><b>Community Benefits</b> A number of suggestions were received with respect to possible community benefits. These include:</p> <ul style="list-style-type: none"> <li>• Reduction in electricity bills/free electricity.</li> <li>• Community infrastructure projects.</li> <li>• Surfacing of local paths.</li> <li>• Repairs to local roads.</li> <li>• Installation of fiber broadband/improvements to local wifi.</li> <li>• Support for solar installations.</li> <li>• Triple glazing.</li> <li>• Flood defences.</li> <li>• Fisheries projects.</li> </ul> <p>More detail on community benefits was also requested.</p>	<p>We would like to thank residents for suggesting potential community benefits. While some of the suggestions are outside of the scope of the project to deliver, it is our intention to work with the community to further explore opportunities in this area.</p> <p>When it is appropriate to do so, we will establish a community liaison group, and the project team will work with them together with the Community Council and our community benefit fund team to examine the suggestions made and better understand local needs, with a view to identifying initiatives that could be developed during the design refinement and construction phases.</p> <p>SSEN Transmission is in the process of establishing a Community Benefit Fund which will enable us to work directly with local communities to support initiatives across northern Scotland. We want to give back to the communities hosting our transmission network and to help fund projects that can leave a lasting, positive legacy in those areas.</p> <p>In terms of broader community benefits, our Pathway to 2030 projects will boost the economy, support local jobs and businesses. Recent studies show our Pathway to 2030 programme could contribute over £6 billion to the UK's economy, support 20,000 jobs across the UK and benefit Scotland by around £2.5 billion, supporting 9000 Scottish jobs. We typically hold 'Meet the Buyer' events prior to the construction phase to connect our principal contractors with local businesses and this has proven to be an effective means of sharing the economic benefits of our projects with local communities. We are also actively seeking opportunities to accommodate our workers in a way that provides a range of local benefits.</p>
<p><b>Consultation process</b> Many respondents expressed that they had a good understanding of what is being proposed. Others suggested the consultation and feedback process and the information provided at events and the maps shared in webinars were inadequate.  Some reported the level of information provided was overwhelming.</p>	<p>We are committed to meaningful and constructive engagement with local communities and residents throughout the development process to seek input and feedback into our proposals. As we consult and develop our projects, we aim to be open and transparent with communities, engaging as early as possible to seek input into our early plans.</p> <p>We share our plans and images in a number of formats, and we are also open to feedback as to how we could improve the way we do things.</p>

Event feedback	Response
<p><b>Consultation process (cont.)</b>                      Respondents questioned their ability to influence the project. Concerns that we hadn't presented our full plans in early 2023 at the start of the consultation.</p> <p>We received two suggestions for a scale model to be produced for the PAC2 event.</p>	<p>We commit to engage early with the communities where we may have an impact, which means that the plans we shared in January and April 2023 were at a very early stage of development and therefore subject to change as they evolve. It is our preference to engage early with the community rather than wait until the formal planning stage before sharing plans.</p> <p>We favour the use of a 3D animation rather than scale models. This tool provides residents with personalised vantage point views and are very popular with the residents who engage with them. We believe the animations provide a more realistic and useful representation of our proposals than a 3D model would, as it puts the development in its proper context.</p>
<p><b>Site size</b>                      Respondents expressed concern over the scale of the site, especially in relation to the neighbouring Longside village and the rural location and questioned whether the size is justified.</p> <p>Concerns over whether the site would be expanded in the future.</p> <p>Concerns over a perceived significant increase in size of buildings and site since the start of consultation in early 2023.</p>	<p>A smaller land buffer around our buildings would compromise screening of the site from neighbouring residents and reduce our ability to provide biodiversity net gain (BNG) and drainage solutions. Only a proportion of the site will house structures, with the remainder used for soft landscaping for screening and drainage solutions and to achieve our biodiversity net gain goals. These goals will leave the site in a better environmental condition than currently. Transmission network development requirements are principally based on an assessment of the changes in generation and demand, as well as recommendations from the ESO and Government policy, and these would form the need case for any future expansion.</p> <p>We commit to engage early with the communities where we may have an impact, which means that the plans we shared in January and April 2023 were at a very early stage of development and therefore subject to change as they evolve. It is our preference to engage early with the community rather than wait until the formal planning stage before sharing plans.</p>
<p><b>Site location and site selection process</b>                      Respondents suggested alternative locations such as brownfield sites, sites in already industrialised areas, offshore locations, Longside Airfield or next to Peterhead Power Station, rather than Longside.</p> <p>The Community Council requested a numerical explanation of our site selection process.</p>	<p>The consideration of alternative sites will be included in the environmental information accompanying any subsequent planning application. The purpose of the consultation is to engage with interested parties in relation to the site proposed, and not to reconsider how other sites that have already been discounted may be better suited to the proposed development.</p> <p>This site was selected due to:</p> <ul style="list-style-type: none"> <li>• Fewer environmental constraints</li> <li>• Sufficient size to support landscaping and biodiversity net gain improvements</li> <li>• Locality in relation to main access routes</li> <li>• Connectivity for existing and proposed overhead line infrastructure and local services</li> </ul>

Event feedback	Response
<p><b>Site location and site selection process (cont.)</b>                      Respondents suggested alternative locations such as brownfield sites, sites in already industrialised areas, offshore locations, Longside Airfield or next to Peterhead Power Station, rather than Longside.</p> <p>The Community Council requested a numerical explanation of our site selection process.</p>	<ul style="list-style-type: none"> <li>• Sufficient size to house all proposed infrastructure works</li> <li>• Supports the construction requirements (including laydown and compound) without the need to extend beyond the boundary</li> </ul>
<p><b>Cumulative impacts</b>                      Concerns over the potential for additional infrastructure from developer projects who may connect into the Hub. Dissatisfaction over our inability to share information about developer projects.</p> <p>Concerns over the cumulative impacts of all of SSEN Transmission's Pathway to 2030 projects across the north of Scotland.</p>	<p>The cumulative impact of the development with other known energy infrastructure development in the area will be assessed as part of the Environmental Impact Assessment process. Cumulative assessment will have regard to any known proposed infrastructure in the search area. Any connection projects that are progressed at a later stage would need to similarly take cognisance of other known infrastructure in their assessment of cumulative impact whether existing or proposed. This could include the proposed hub. SSEN Transmission can only refer to known infrastructure proposals in undertaking such an assessment.</p> <p>SSEN Transmission does not decide on the overall need for the Pathway to 2030 projects; this is the role of the ESO and Ofgem. We also do not have the ability to control or influence the volume or location of infrastructure proposed by third parties.</p> <p>In terms of cumulative assessment with other Pathway to 2030 projects, limited interaction is envisaged with the majority of projects in the north east of Scotland in a cumulative sense beyond the projects that will directly interact with the hub, most notably the Beauly to Blackhillock to New Deer to Peterhead overhead line project.</p> <p>We know that local stakeholders are keen to understand the full extent of renewable developments being proposed in the area. Applications to connect to the transmission network in our licence area are made to National Grid ESO and undergo a lengthy process of assessment before we begin to develop a network connection for those developments. We aim to be transparent but we are not permitted to disclose details of these developments until they are in the public domain. A list of projects that hold contracts for Transmission Entry Capacity with National Grid, the Electricity System Owner, is available from their website: <a href="https://www.nationalgrideso.com">nationalgrideso.com</a></p>
<p><b>Construction impacts</b>                      Traffic - Impacts from construction traffic, such as deterioration of road surface, traffic on local roads, suitability of local roads for heavy loads and volume of traffic. Potential for construction traffic to compromise safety on A950.</p>	<p>An outline Construction Traffic Management Plan is currently in development and will be included in the Planning Application. This will detail expected traffic volumes and will be utilised during detailed design to optimise vehicle routes to and from the site.</p>

Event feedback	Response
<p><b>Construction impacts (cont.)</b> Concern that the C43B through Flushing would be a diversion route for traffic trying to avoid any traffic calming measures on A950. Questions over whether additional fill would be required to be imported into site.</p> <p>Where will access road be located along the A950?</p>	<p>Any deterioration or damage to the existing road network during the construction period would be repaired and maintained by our chosen Principal Contractor for the hub site. SSEN Transmission will liaise with the Local Planning Authority to ensure any traffic management and traffic calming measures are implemented for the duration of the works, and all permanent works required are installed. The proposed access to the site is shown on the site layout contained within this booklet, this may be subject to change pending the Planning determination.</p>
<p><b>Worker accommodation</b> Questions over where contractors would be housed, and concern over the potential for poor contractor conduct including whether home or personal security would be at risk.</p>	<p>The accumulated need for workforce accommodation in the area is being assessed for all SSEN Transmission developments as part of a refreshed approach to our housing strategy. Discussions are continuing with Aberdeenshire Council and our contractors to develop a strategy to meet the housing needs of the women and men who will be working on this project and at the same time leave a positive impact. Workers will not be housed within the Netherton Hub site. We are working closely with the Council to find a site within reasonable commuting distance, that also provides an opportunity to leave a housing legacy for the community. We are actively seeking opportunities to accommodate our workers in a way that provides a range of local benefits. Any accommodation solution would follow a separate consenting process.</p>
<p><b>Impact on internet</b> Potential impact on internet signal.</p>	<p>SSEN Transmission will establish new infrastructure required to provide internet connectivity to the hub site for both construction and operational purposes. In terms of existing internet signal for surrounding residents, it is not expected that the proposed development will have any adverse impact. If any local stakeholder has any internet signal or connectivity issues when the construction commences, SSEN Transmission will endeavour to do whatever possible to limit any adverse effects.</p>
<p><b>Private water supplies</b> Concerns over the potential for impacts of construction on private water supplies.</p> <p>Claims that SSEN Transmission has already caused contamination of private water supplies since test boreholes were drilled in 2023.</p>	<p>Surveys of private water supplies (PWS) in proximity to site are being undertaken to understand the full impact of the development and any mitigation measures required to preserve residents' PWS provision.</p> <p>Residents within proximity of the site will either have already received a survey or will receive a letter in due course regarding water supplies. Anyone with further information on private water supplies should respond to the questionnaires previously issued or email the Community Liaison Manager with details of their PWS.</p>
<p><b>Flooding and drainage</b> Concerns about whether the proposed flood mitigation solutions will be adequate given the historic issues of flooding in the region.</p>	<p>The proposed drainage design will provide suitable attenuation for substantial flooding events up to and including a 1 in 200 year storm and also includes capacity for future climate change.</p>

Event feedback	Response
<p><b>Flooding and drainage (cont.)</b> Request to conduct a culvert survey given historic problems.</p>	<p>Furthermore, SSEN Transmission have committed to undertaking a full Drainage Impact Assessment which will look at the wider drainage network and will provide options for any further drainage improvement works that may assist with the overall flooding issues in the local area. The findings of this assessment will be shared with the Local Authority to determine if any further works may be required outwith the development site.</p> <p>SSEN Transmission and their specialist drainage designer have utilised verified data to undertake all modelling of the site, including allowance for increases due to climate change provided by SEPA. Currently, the surface water on the site is uncontrolled and due to the topography of the site runs to the natural low points to the North at the A950. The proposed design will provide flow control in the form of open ditches and filter drains that will reduce the velocity of the runoff into the surrounding water environment. Furthermore, detention basins will be installed prior to outfall from the site which provides storage capacity in the event of extreme rainfall events and restricts the flow to the surrounding water environment to within SEPA guidance.</p> <p>Please refer to the Drainage section on page 26 for more information on our drainage proposals.</p>
<p><b>Tourism impacts</b></p>	<p>For each project we develop, including the Netherton Hub, we conduct a Landscape and Visual Impact Assessment. This is an element of the Environmental Impact Assessment. In this assessment, we consider visual impact from centres of population, popular spots, like walking paths and tourist sites, and where possible reduce any potential negative visual impacts.</p>
<p><b>Concerns about property value and requests for compensation</b></p>	<p>We understand that there are concerns about the potential impact of our proposed developments on properties within the vicinity of SSEN Transmission's proposed overhead line alignments and substations sites.</p> <p>Throughout the development of the Netherton Hub we have engaged with property owners and listened to their concerns on this topic.</p> <p>SSEN Transmission will look to mitigate impacts on residential properties as far as possible and these impacts will be assessed as part of the Environmental Impact Assessments that will accompany our applications for consent. We have conducted extensive surveys at identified receptors, including selected residential properties so that we are able to model potential impacts on the wider area.</p> <p>Concerns in relation to impacts on property are being noted by our team however, as a regulated business, SSEN Transmission is obliged to follow a statutory legal framework under the Electricity Act 1989 and Land</p>

Event feedback	Response
<p><b>Concerns about property value and requests for compensation (cont.)</b></p>	<p>Compensation Act 1961. If you are entitled to compensation under the legal framework we will assess any claim on a case-by-case basis under the direction of this legal framework.</p>
<p><b>Sustainability credentials</b> Questions over whether this project would be carbon neutral, and the carbon footprint to build and transport the material required in its construction.</p>	<p>The Pathway to 2030 scheme of projects is due for delivery by 2030. The projects are still in the early stages of development and therefore it is not possible to confirm the quantities of steel and concrete required or carbon cost associated with it, as this will be subject to change once detailed information relating to the site is available.</p>
<p><b>Health</b> Some respondents stated that the proposal may cause or is causing feelings of stress and anxiety.  Concerns over perceived risks from electro magnetic fields emitted from energy infrastructure.</p>	<p>We are mindful of the uncertainty that our proposals can pose to communities who may be affected. Our process for project development seeks to identify options that provide an appropriate balance across a variety of considerations and interests. We aim to do this as swiftly as possible to minimise the duration of uncertainty for affected communities. However, we are also committed to providing sufficient time and opportunity for all stakeholders to feed into each stage of our project development process, so that views can be understood and wherever possible incorporated into design decisions. This is a balance which has to be carefully managed. We understand that everyone may be impacted in different ways and would be interested in residents' views regarding any additional activities that would help to address their specific concerns.</p> <p>Our responses to these topics can be found at <a href="https://ssen-transmission.co.uk/2030faqs">ssen-transmission.co.uk/2030faqs</a>.</p> <p>Our statement on EMFs can also be found at <a href="https://ssen-transmission.co.uk/2030faqs">ssen-transmission.co.uk/2030faqs</a></p>

### Feedback from statutory and non-statutory consultees

We invited Aberdeenshire Council, NatureScot, Historic Environment Scotland (HES) and SEPA to a virtual statutory consultee meeting on 26 February 2024. NatureScot and HES both attended. HES noted that it was valuable to see the work that had gone into the project and to hear what stage the design was at. Consultation is ongoing with HES over the scope of the EIA. NatureScot noted that they had no new comments to make, having previously provided feedback in May 2023 and through the EIA Scoping in November 2023.

Aberdeenshire Council and SEPA provided no comments on the PAC 1 material but have provided feedback through previous consultation and EIA Scoping. Consultation is ongoing with both of these statutory consultees. NFU thanked us for the information provided through the PAC 1 consultation.

Consultation is ongoing with the Ugie District Salmon Fishery Board.

# The Netherton Hub site

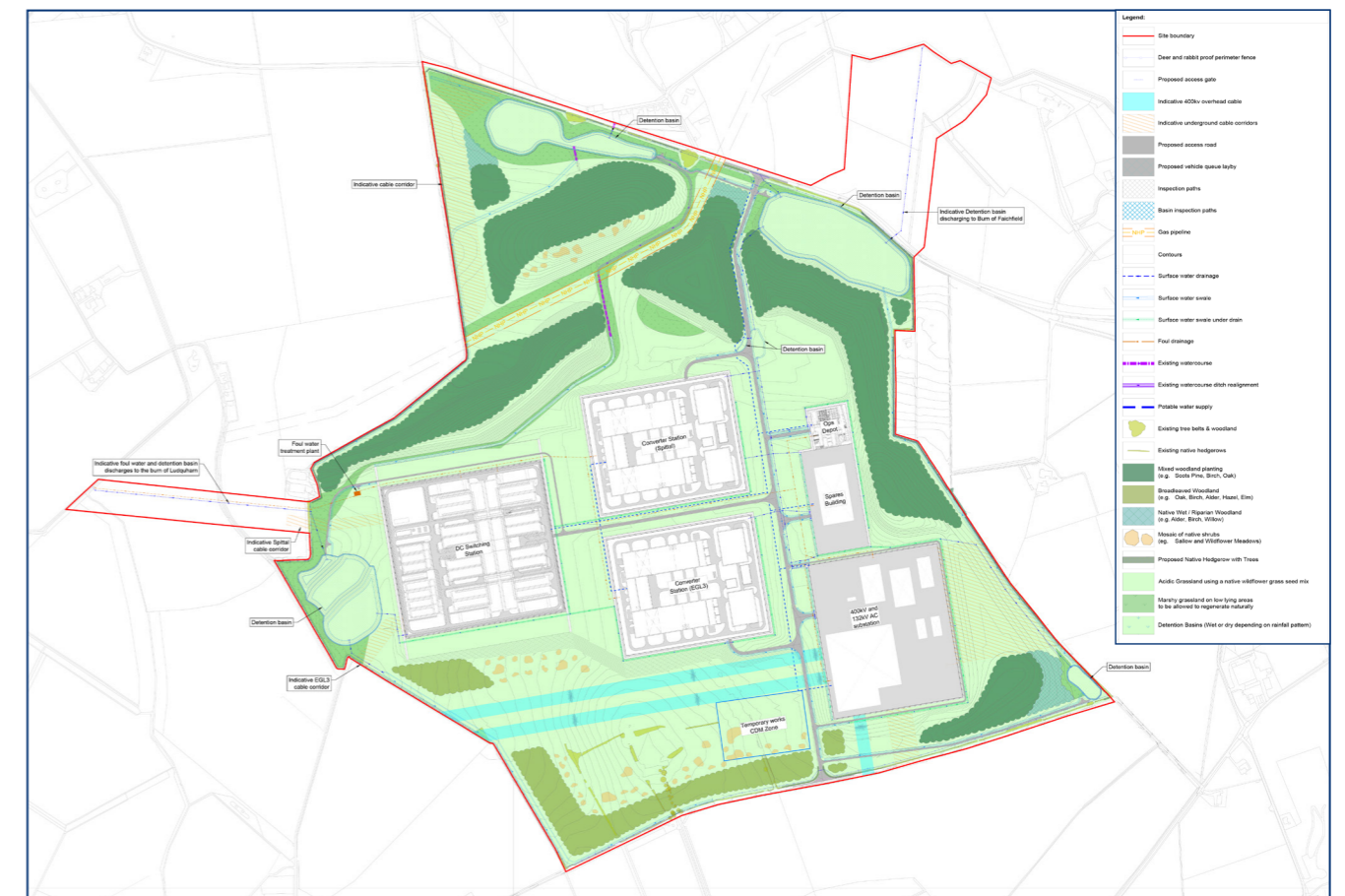
## About the site

Following site selection consultation, in December 2023, we advised within our Report on Consultation that site 4 had been selected as our proposed location for the Netherton Hub ahead of our first Pre-Application Consultation event earlier this year.

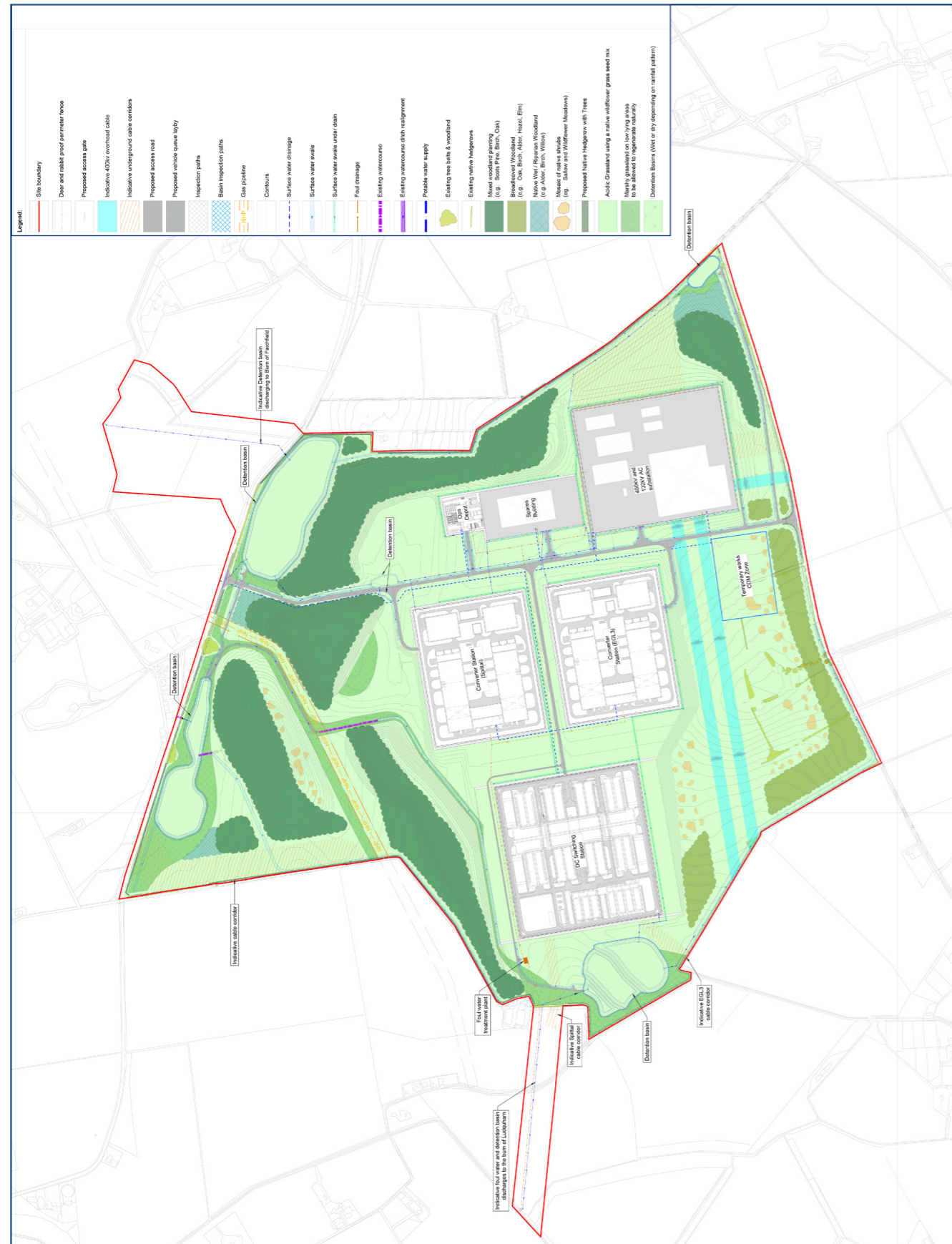
The site is located to the west of Peterhead, near Flushing and Longside, and is considered best on balance due to the following reasons:

- Fewer environmental constraints.
- Large enough to house the proposed components and to support landscaping and biodiversity net gain improvements.
- Locality in relation to main access routes for transport.
- Connectivity for existing and proposed overhead line infrastructure and local services.
- Supports the construction requirements (including laydown and compound) without the need to extend beyond the boundary.

Having reviewed and considered the stakeholder feedback along with the results from our detailed site selection process, there have been no issues raised that we believe would lead us to reconsider our proposals for the location of the Netherton Hub.



A larger scale version of the above site layout can be accessed on the Project Documents tab at [ssen-transmission.co.uk/netherton-hub](https://ssen-transmission.co.uk/netherton-hub) and viewed overleaf.



### What size is the site?

The total area of the Netherton Hub site measures around 229 hectares, with a considerable area of the site consisting of landscape mitigation, drainage requirements and enabling us to meet Biodiversity Net Gain (BNG) commitments.

### Overview of key design changes

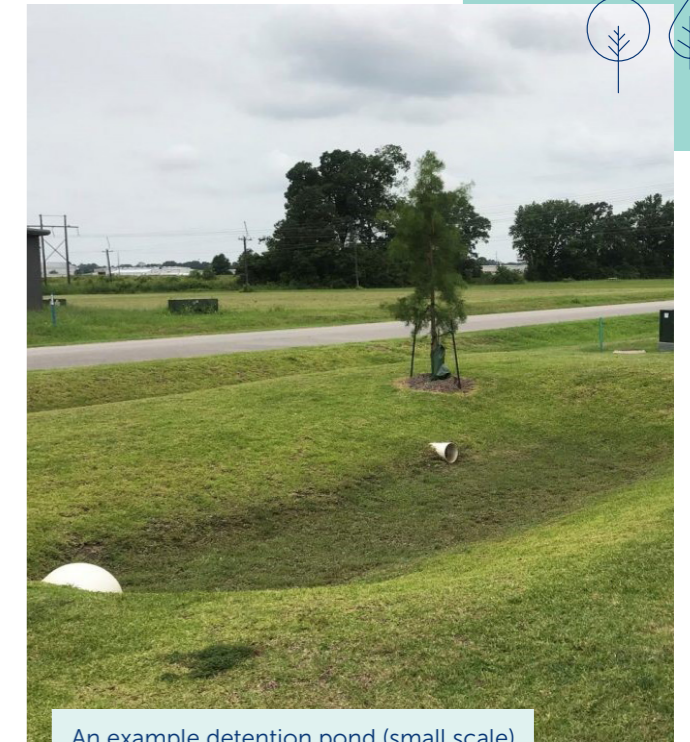
#### Drainage

Since the initial consultation, the design team have been working with specialist consultants to optimise the site drainage arrangement to ensure the most effective solution for the surrounding environment is developed. The original detention basins have been re-sized to accommodate site surface water storage volumes including an allowance for climate change in accordance with SEPA guidelines. Additional detention basins have been proposed to further control overland flows coming into the site and outflows at the existing culvert which crosses the A950. Also, drainage infrastructure within the site including open ditches and swales have been developed to further control flows and provide further treatment prior to outfall to the receiving watercourses.

SSEN Transmission has also commissioned a specialist consultant to undertake assessments of the receiving watercourses (Burn of Ludquharn, Burn of Faichfield and waterway directly south of Flushing) to analyse their existing state and simulate any further impacts from our proposed drainage system. The study will provide conceptual solutions to alleviate any potential flooding of these watercourses during extreme rainfall events. Results of this study will be due in the coming months and will be shared with SEPA and the Local Planning Authority for discussion and further consideration.

#### Landscape masterplanning

An illustrative landscape masterplan has been produced (see page 25) following ground investigations and extensive design work from expert engineers and landscape architects. Screening would be provided by a mix of landform and planting. To the north and northwest, the new landforms would screen large parts of the buildings in most views, reinforced in the longer term by woodland planting on the upper slopes. From the east, existing woodland provides some screening and landform would screen the lowest parts of the proposed development, again reinforced by extensive woodland planting over the longer term. From the south, the buildings would mostly be sat slightly below the existing ground level and screening would be provided by large blocks of woodland. Parts of the proposed development would however remain open to view from the west, south and east because of the constraints around planting under overhead lines and over high voltage cables.



An example detention pond (small scale)

Platform levels have been refined to not only have the buildings sitting lower in the landscape, but also to have a cut fill balance with the proposed landform screening. This will reduce the volume of traffic associated with the Netherton Hub.

The buildings would be painted primarily in dull natural colours to reduce their visual impact, and a colour study is being undertaken to see how to make this most effective. The plan on page 25 provides detail on the locations and type of planting being considered and the visualisations on the following pages illustrate the effectiveness of the proposed landscape mitigation measures.

# 3D visualisations

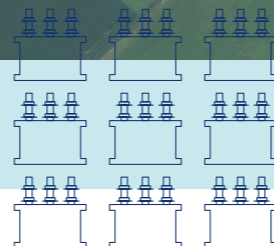
We understand that local stakeholders need to be able to visualise what the development may look like in their local area. We've commissioned 3D visualisations to help show the appearance of the development within the landscape.

The following are some images taken from the 3D model created for the Netherton Hub from a range of different vantage points.

To get a better sense of the proposals in full, a flythrough video is also available to view from the project webpage and our consultants, 3D Webtech, will be assisting us at our consultation events with copies of the model that attendees can interact with during the events.



Scan the QR code to find the 3D flythrough video.



## Photomontages

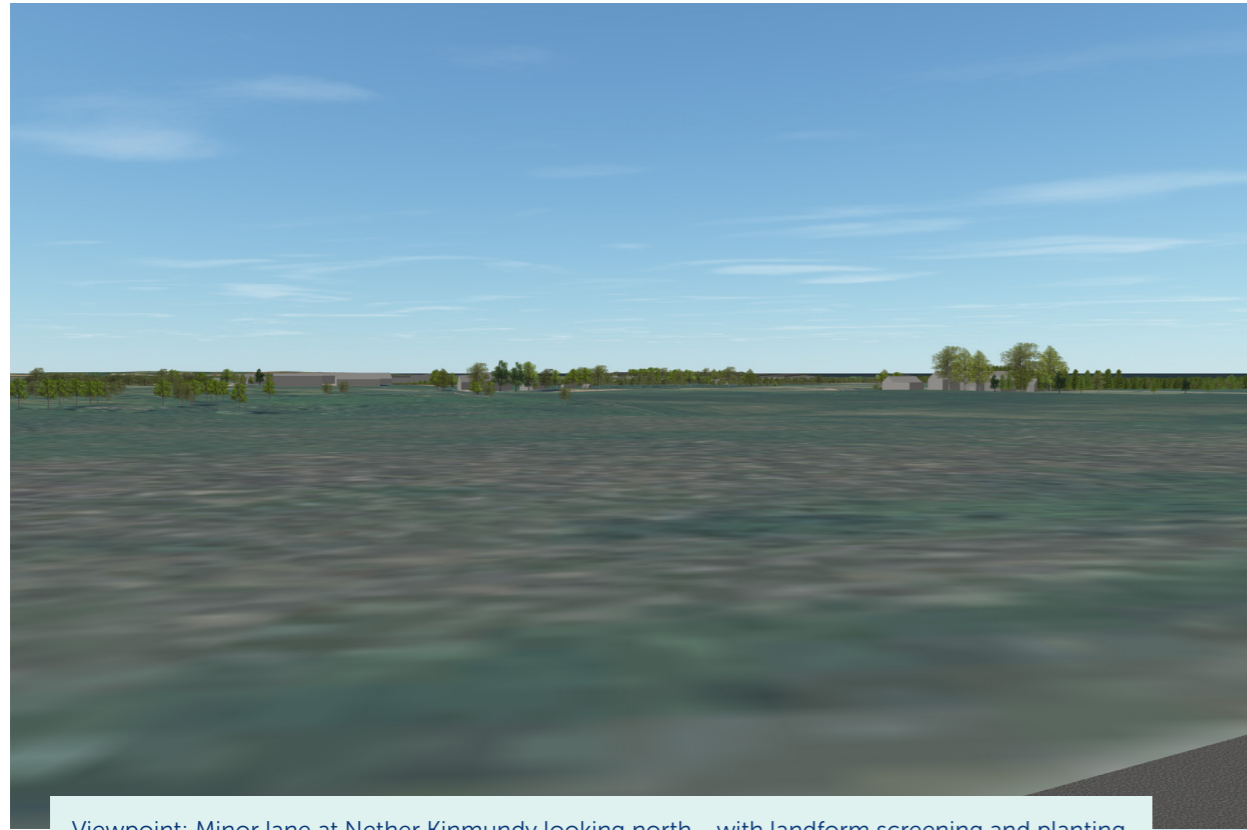
Photomontage visualisations will also be produced as part of the Environmental Impact Assessment (EIA). Once the EIA is completed, we'll ensure these photomontages are available to view.



Viewpoint: Flushing, on A950 looking south - with landform screening and planting



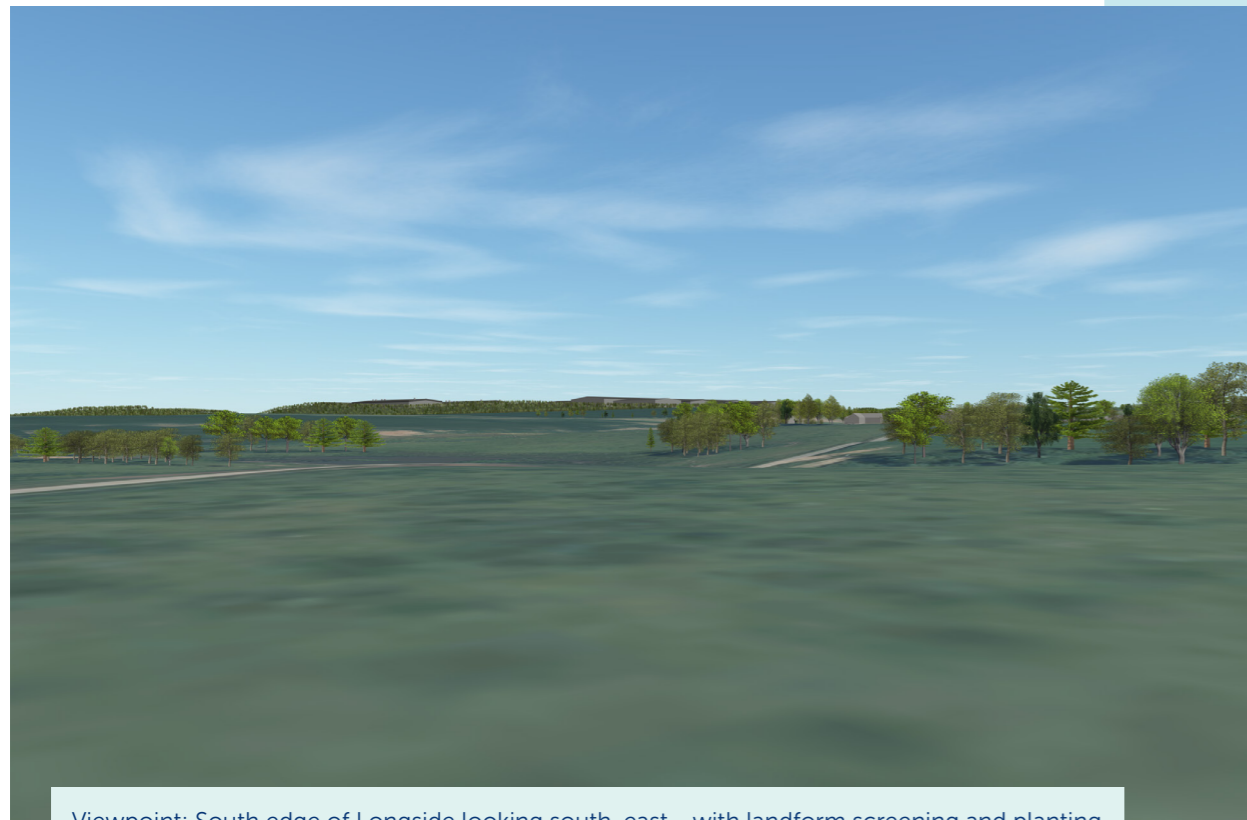
Viewpoint: Flushing, on A950 looking south - with landform screening only



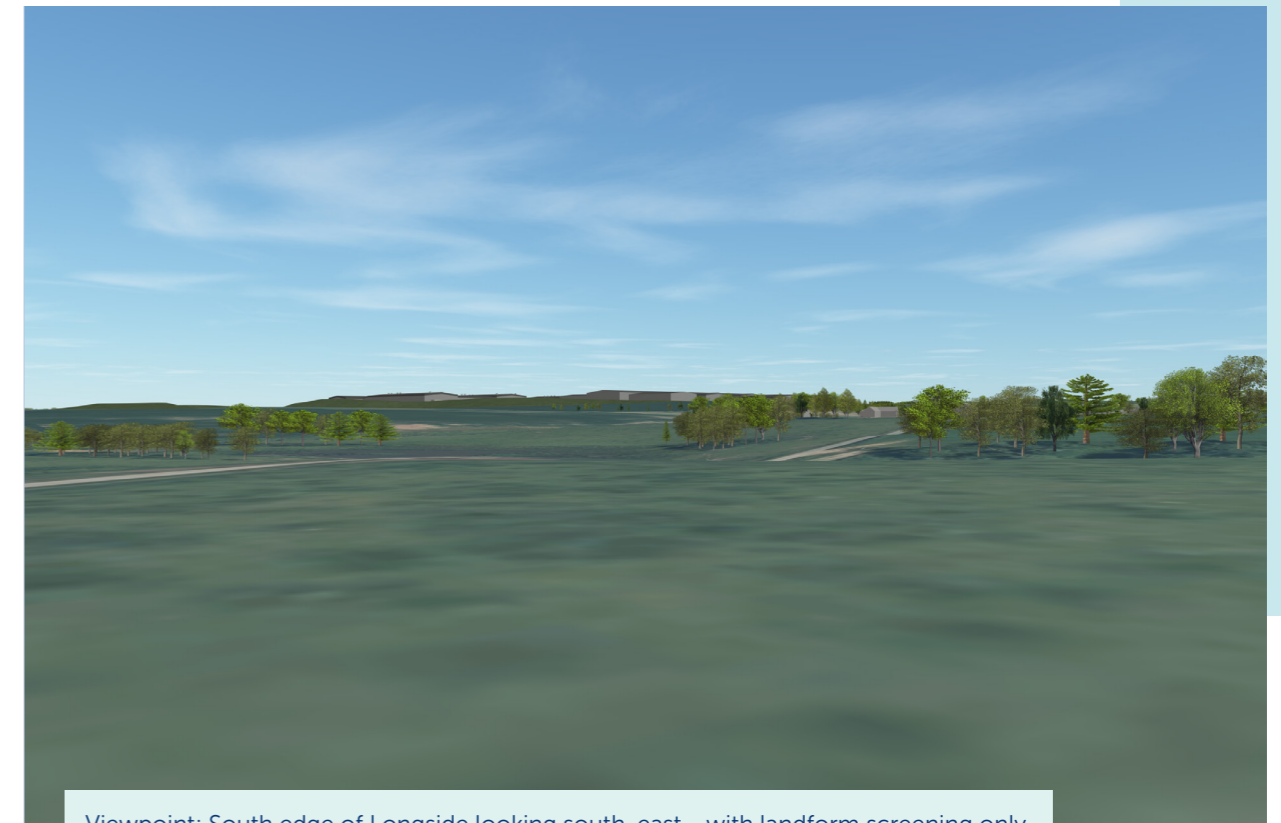
Viewpoint: Minor lane at Nether Kinmundy looking north - with landform screening and planting



Viewpoint: Minor lane at Nether Kinmundy looking north - with landform screening only



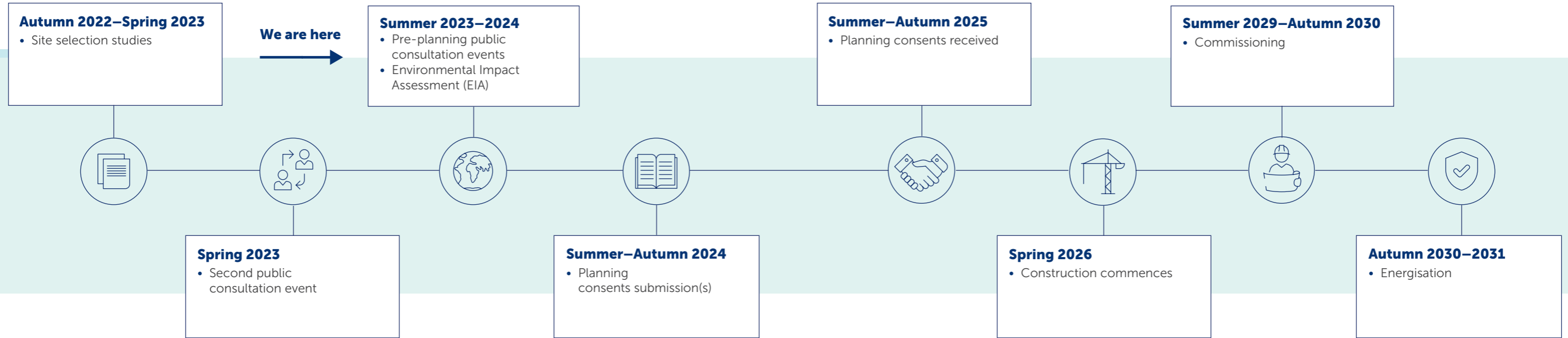
Viewpoint: South edge of Longside looking south-east - with landform screening and planting



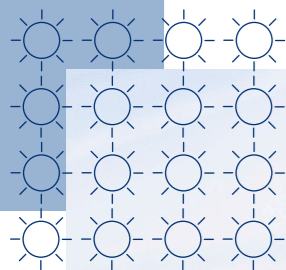
Viewpoint: South edge of Longside looking south-east - with landform screening only



# Project timeline



**Note:** this timeline is indicative and may be subject to change.



# Connections into Netherton Hub

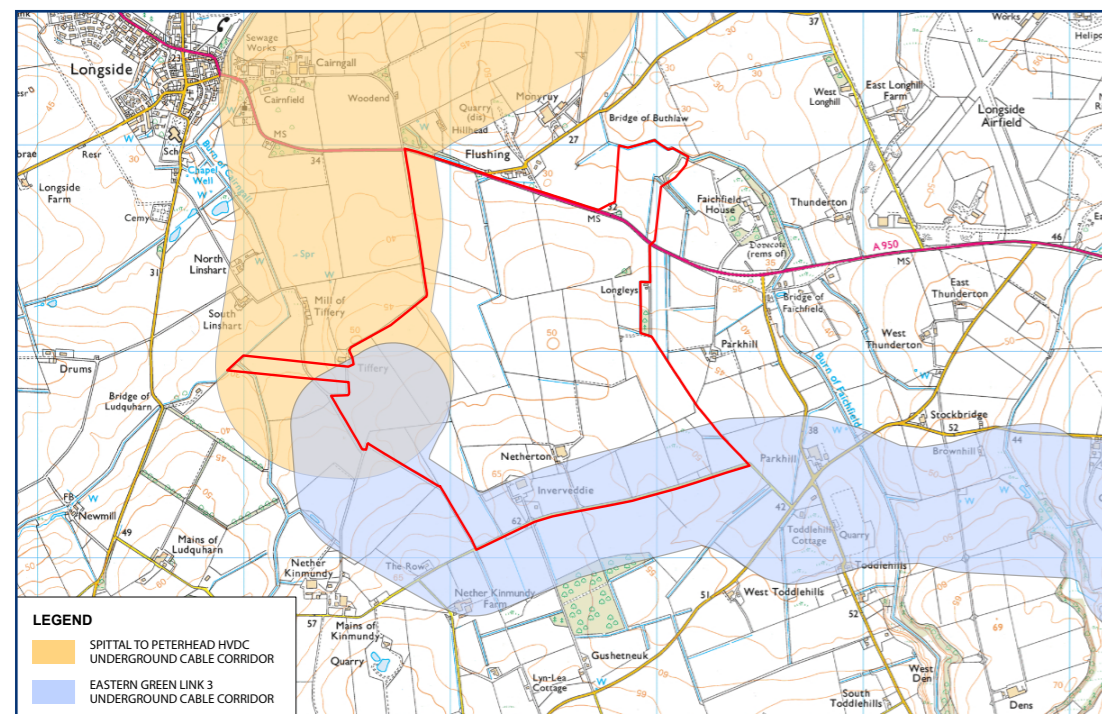
Connections into Netherton Hub are in various stages of development and are not part of this consultation process. We are presenting information below to provide an overall picture.

## Spittal to Peterhead HVDC underground cable route

The marine cable landfall for Spittal to Peterhead HVDC project has been identified north of St Fergus Gas Terminal in the vicinity of Rattray Head.

The preferred underground cable corridor from Rattray Head to Netherton Hub has also been identified however the cable route refinement within that corridor is still in progress, with ground investigation works currently underway.

The underground cable works are classed as 'Permitted Development' and therefore do not require a planning application to the Local Authority. The route corridor is shown here for information in orange, and discussions with landowners and other stakeholders will continue while we further refine the alignment. We will update the project's webpage with the latest developments as well as informing statutory stakeholders of any significant developments.



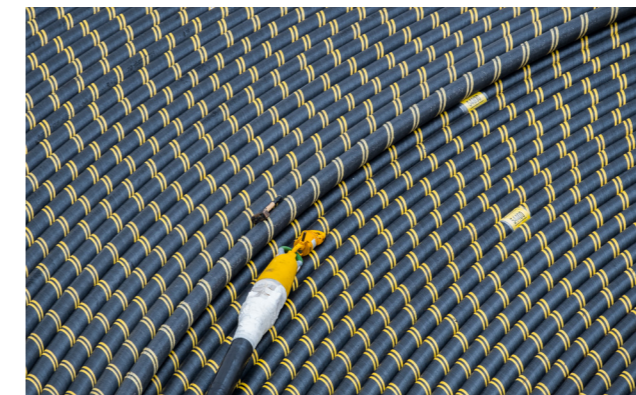
Approximate underground cable route corridors for Spittal-Peterhead HVDC Link and Eastern Green Link 3

## Spittal to Peterhead HVDC marine cable

A marine cable corridor has been selected and surveys of this corridor are underway. The information obtained from these surveys will allow us to determine our preferred route within this corridor.

Marine survey consultations are planned for 2024 following conclusion of the marine surveys and assessment of the data acquired. We will update the project's webpage with the latest developments as well as informing statutory stakeholders of any significant developments.

[ssen-transmission.co.uk/projects/project-map/spittal--peterhead-subsea-cable-link](https://ssen-transmission.co.uk/projects/project-map/spittal--peterhead-subsea-cable-link)



## Connecting back to Peterhead (New Deer –Netherton–Peterhead overhead line works)

To connect the proposed 400kV substation at Netherton Hub to other parts of our transmission network, the overhead line connection between the existing 400kV substation at New Deer and existing 400kV substation at Boddam, Peterhead, will be diverted in and out of the Netherton Hub.

Following publication of National Grid ESO's Beyond 2030 report, we are reviewing how the overhead line connection between Netherton and Peterhead could be developed and built to maximise energy transfer between the two substations.

As this piece of the wider project is at an early stage of development, we are assessing the potential route alignment options before presenting and consulting on them. We will share further information on this project later this year in advance of our consultation on the route alignment options.

## Eastern Green Link 3 HVDC underground cable route

The marine cable landfall for this project has been identified at Sandford Bay to the south of Peterhead. The preferred underground cable route to Netherton Hub has also been selected and ground investigation works will be undertaken from February 2024 with discussions with potentially impacted landowners underway.

The underground cable works are classed as 'Permitted Development' and therefore do not require a planning application to the Local Authority. The route is shown overleaf in blue for information, and discussions with landowners and other stakeholders will continue while we further refine the alignment. We will update the project's webpage with the latest developments as well as informing statutory stakeholders of any significant developments.

[ssen-transmission.co.uk/projects/project-map/eastern-green-link-3/](https://ssen-transmission.co.uk/projects/project-map/eastern-green-link-3/)

## Eastern Green Link 3 HVDC marine cable

The EGL3 HVDC marine cable preferred corridor has been selected following consultation. Surveys of the corridor are currently being completed. Information acquired from the survey will be used to inform final route alignment. Further information on the final marine cable route will be shared in Autumn 2024.

[ssen-transmission.co.uk/projects/project-map/eastern-green-link-3/](https://ssen-transmission.co.uk/projects/project-map/eastern-green-link-3/)

## Beauly to Blackhillock to New Deer to Peterhead 400kV overhead line

This project has been identified as key to connecting the growth in onshore and offshore renewables across the north of Scotland. A 400kV overhead line connection together with new substations are needed to connect new renewable power sources and transport it from source to areas of demand across the country, enabling power sharing between east and western parts of our network.

**Future consultation:** Please refer to the separate consultation information pack for further information.

[ssen-transmission.co.uk/projects/project-map/beauly-blackhillock-new-deer-peterhead-400kv](https://ssen-transmission.co.uk/projects/project-map/beauly-blackhillock-new-deer-peterhead-400kv)

# Have your say

We value community and stakeholder feedback. Without this, we would be unable to progress projects and reach a balanced proposal.

## The feedback period

We intend to submit our planning application in **autumn 2024**. Our formal feedback period will close on **3 July 2024**, however we will welcome final comments from members of the public, statutory consultees and other key stakeholders regarding our proposals until we submit our planning application. We will not provide further feedback on comments received following this round of consultation, however any comments received will be reflected in our Pre-application Consultation Report (PAC Report) that will accompany our planning application.

## How to provide feedback

Submit your comments and feedback by emailing or writing to your Community Liaison Manager.

## Our Community Liaison team

Each project has a dedicated Community Liaison Manager who works closely with community members to make sure they are well informed of our proposals and that their views, concerns, questions, or suggestions are put to our project teams.

Throughout the life of our projects, you will hear from us regularly. We aim to establish strong working relationships by being accessible to key local stakeholders such as community councils, residents' associations, and development trusts, and regularly engage with interested individuals.



To support everyone online, we provide accessibility and language options on our website through 'Recite Me'. The accessibility and language support options provided by 'Recite Me' include text-to-speech functionality, fully customisable styling features, reading aids, and a translation tool with over 100 languages, including 35 text-to-speech.

Please select "Accessibility" on our website to try out our inclusive toolbar."

## What we're seeking views on

During our last public consultation event in February, we wanted to know your thoughts on our project plans, where you thought we could make improvements, and any changes and refinements we'd made.

We are now asking for any final comments or feedback ahead of submitting planning applications for the Netherton Hub project. It would be helpful to share any opportunities to deliver a local community benefit you would like us to consider.

We'll be actively looking to mitigate the impacts of the site as much as possible over the coming months, but it would be helpful to understand what you believe we should be doing to help minimise these impacts and if there are any opportunities to deliver a local community benefit you would like us to consider.

## Community Liaison Manager

The best way to contact us regarding this project is through our Community Liaison Team.

### Gillian Doig



SSEN Transmission  
200 Dunkeld Road, Perth, PH1 3GH

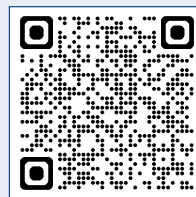


nethertonengagement@sse.com



+44 7879 288 666

## Additional information:



The best way to keep up to date is to sign up to project updates via the project webpage:

[ssen-transmission.co.uk/netherton-hub](https://ssen-transmission.co.uk/netherton-hub)

You can also follow us on social media:



@sentransmission



@SSETransmission