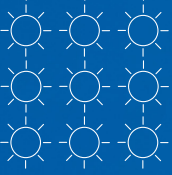




Scottish & Southern
Electricity Networks

TRANSMISSION



Fanellan 400kV substation and converter station

Pre-application consultation

March 2024



Contents

Powering change together	03	3D visualisations	16
The Pathway to 2030	04	Development considerations	18
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Project overview	06	Environmental mitigation	22
Help shape our plans	10	Delivering a positive environmental legacy	23
How we've selected the substation and converter site	11	Project timeline	24
The Town and Country Planning Process	13	Other projects in the local area	26
PAN Red Line Boundary map	14	Finding common ground with landowners	28
		Notes	29
		Have your say	30
		Your feedback	31

The consultation events will be taking place on:

Tuesday 26 March, 12.30–3.30pm, 6–8pm
Kiltarlity Village Hall, Beauly, IV4 7HH

Thursday 28 March, 2–7pm Phipps Hall, Beauly, IV4 7EH



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.

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 our host 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/



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

The Pathway to 2030

Building the energy system of the future will require delivery of significant infrastructure 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.

What does this mean for you?

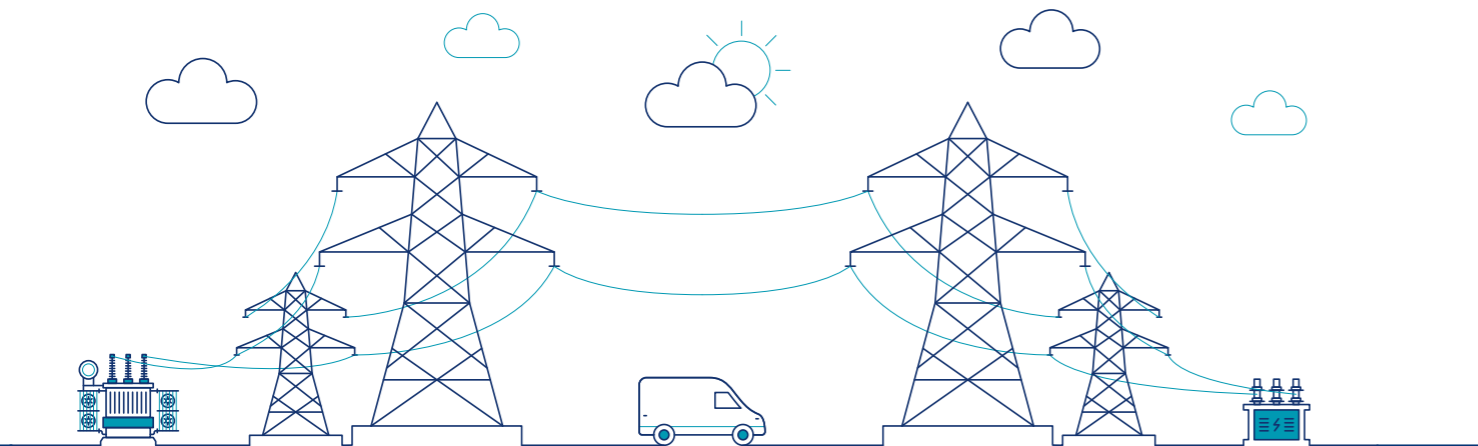
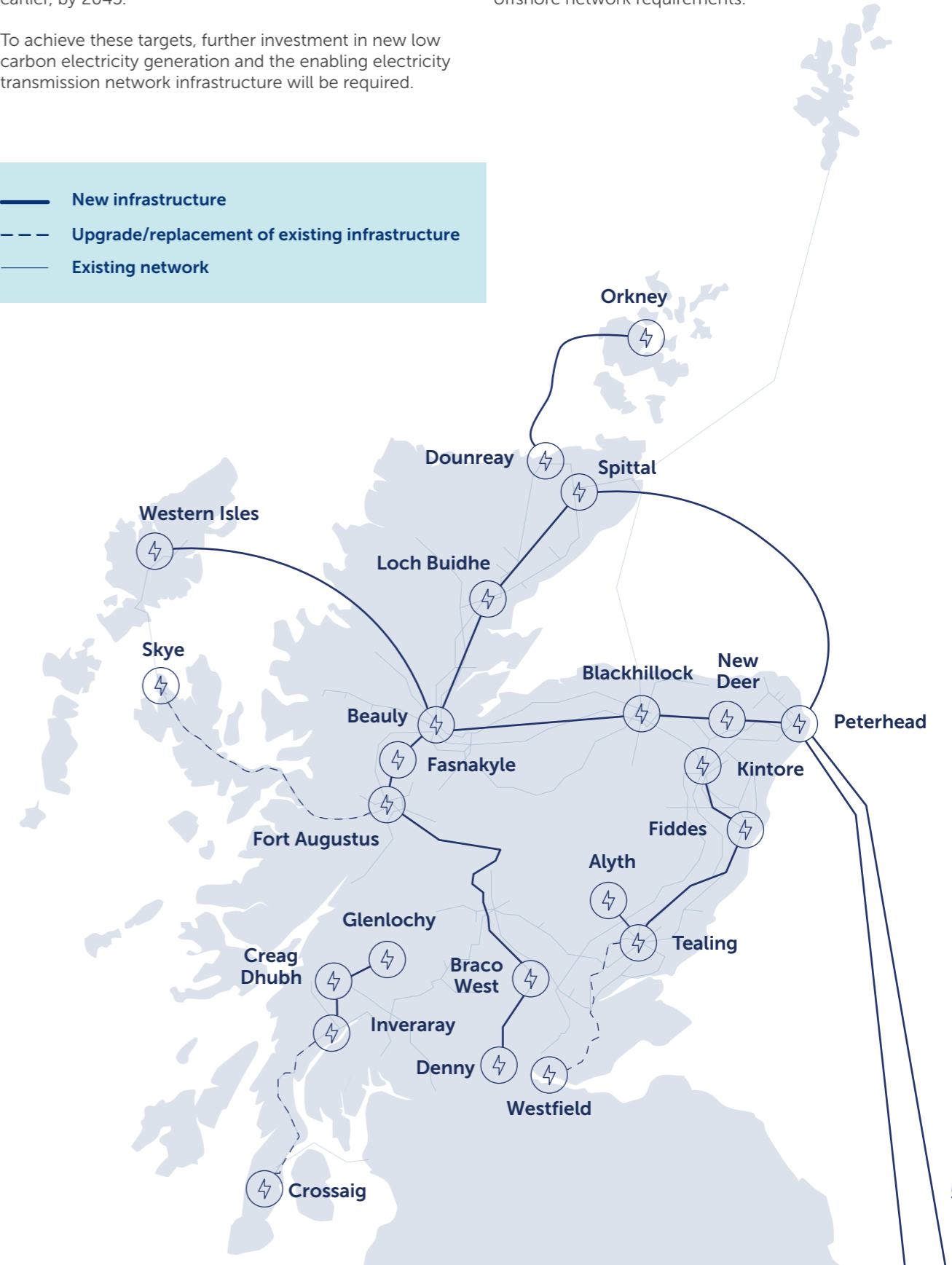
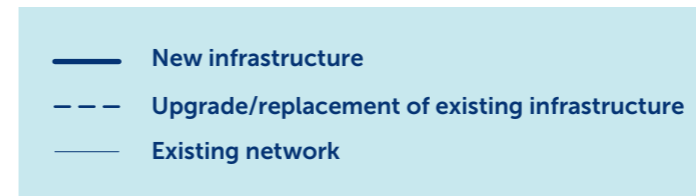
The North Highlands will play a key role in meeting these goals. The extensive studies that informed the ESO's Pathway to 2030 HND confirmed the requirement for a new 400kV substation in the Beaulay area to connect the proposed new 400kV overhead line reinforcements from Spittal and Peterhead, together with the new Western Isles link. 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.

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.

The next stage of strategic network planning across Great Britain is underway and we expect the independent Electricity System Operator, National Grid ESO, to publish details of this in March this year. It is expected this will include a combination of new onshore and offshore network requirements.

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



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.

Fanellan 400kV substation and converter station

The proposed new Fanellan substation and converter station is a strategic development which is required in the Beauly area.

It will provide connections for the Western Isles Connection project, the Beauly to Peterhead 400kV and the Spittal to Beauly 400kV overhead line projects. In addition, a section of the existing Beauly–Denny overhead line near Fanellan will initially be diverted around the new 400kV substation and converter station and will tie-in to the substation.

It will provide connections for:

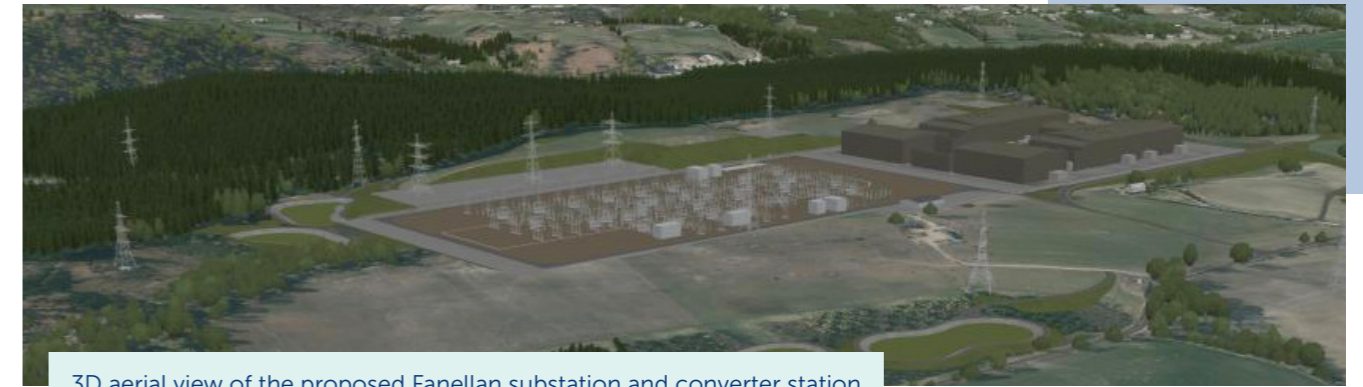
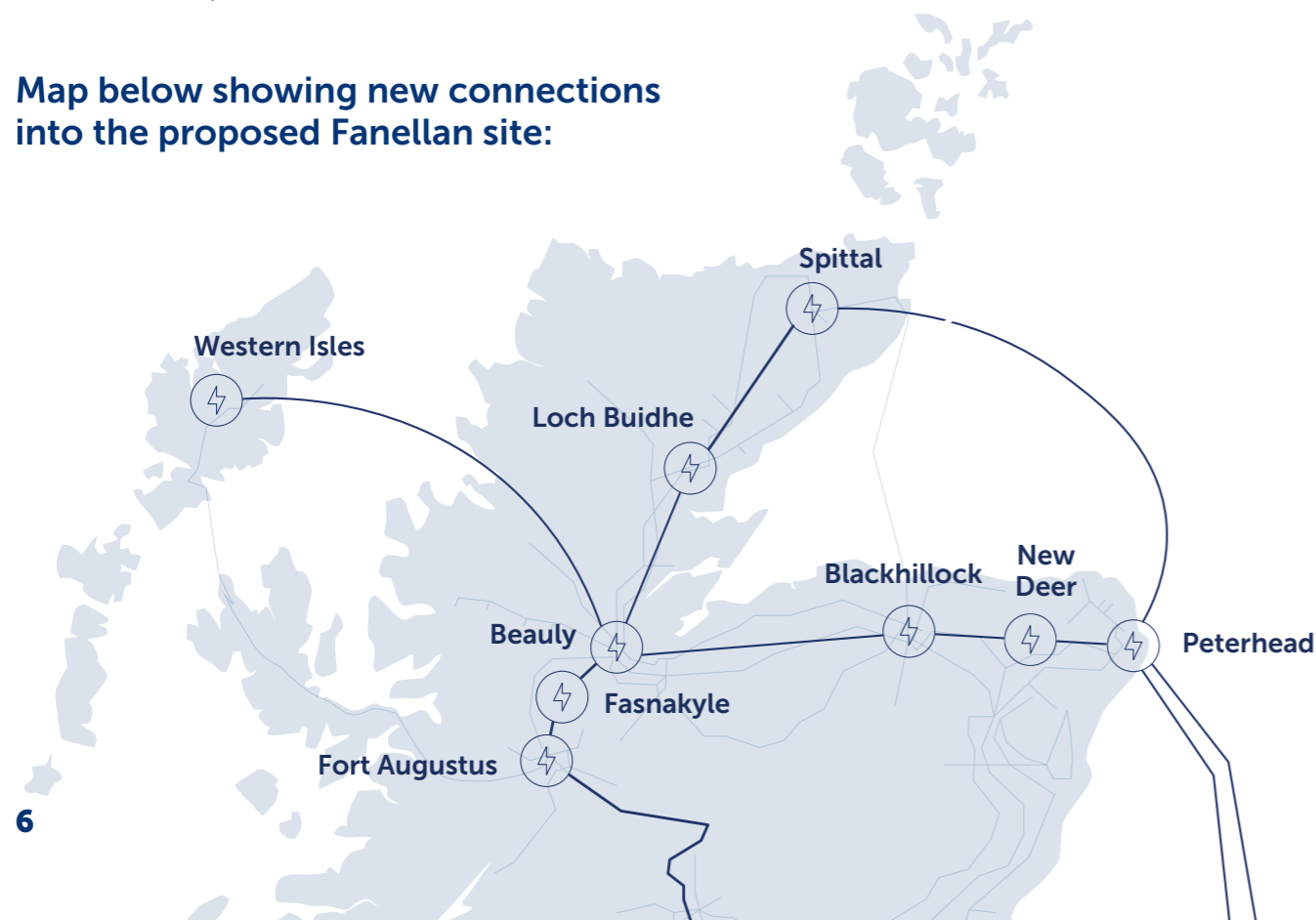
- New Spittal–Loch Buidhe–Beauly 400kV overhead line
- New Beauly–Blackhillock–New Deer–Peterhead 400kV project
- New Western Isles link connection into the HVDC converter station

A joint solution

Following extensive studies and assessments of alternative sites it was concluded that the optimum solution was to locate both new installations on a single larger site rather than two separate sites.

The advantages are the avoidance of lengthy AC (Alternating Current) connecting cables and reduced visual impact from co-locating this new infrastructure in one location.

Map below showing new connections into the proposed Fanellan site:



3D aerial view of the proposed Fanellan substation and converter station

Project elements for the substation

What is a substation?

An essential component in the energy network, substations connect sources of generation, such as wind farms and power stations. They connect overhead and underground circuits and can connect nearby utility systems. Substations manage electricity flows within the network, which can include connection and disconnection of circuits to direct the flow, transform voltages to higher or lower ratings (step-up or step-down—for example 275kV stepping-up to 400kV), manage the frequency of the electricity and increase efficiency and reliability of the power supply.

Other key substation functions

Substations are critical in maintaining an efficient and healthy energy network, as they monitor and report back to operators on statistics and events to provide live information on our network. This allows for the following functions:

- Fault monitoring and identification which allows for isolation to protect the network and allow repairs.
- Allow for redirection and disconnection of energy to allow for demand/maintenance.
- Provide data such as voltage, current and power flow to allow for efficient running and future predictions.

Substation project elements

Both the substation and converter station projects will share common access, security arrangements, site drainage and landscaping. A new access point from Fanellan Road, adjacent to the site, will be used to create the required compounds, laydown and storage areas in the initial stages. An additional access road is also being proposed further east of the site, at the main junction, which will eventually be used

as the main construction haul road and permanent access. This would then follow the route of the existing Beauly–Denny overhead line into the new Fanellan substation and converter station site to facilitate heavier construction traffic. This will reduce construction traffic on Fanellan Road. Perimeter access tracks are also required around the site.

The proposed Fanellan 400kV substation shall comprise:

- The AC substation platform, indicatively 525m x 305m.
- AIS switchgear and busbar, to connect incoming circuits and to facilitate the cable connection from the HVDC converter station.
- Step-down transformers, to provide the site with Low Voltage Alternating Current (LVAC) supply.
- A control building, indicatively 45m x 25m, maximum height 8m.
- Existing access point from Fanellan Road to be used for construction access, subject to road upgrades.
- Construction of a haul road and longer term permanent access, for heavier load vehicles and to reduce extent of public road use.
- Sustainable Drainage Systems (SuDS) including access for maintenance.
- Temporary access tracks for OHL construction activities, temporary construction compounds and temporary storage compounds for topsoil and materials (size and location to be agreed).
- Land required on a temporary basis during construction for temporary construction laydown, equipment storage, site offices and welfare facilities.
- Site clearance activities, including some tree felling.

Project elements for the converter station

What is a converter station?

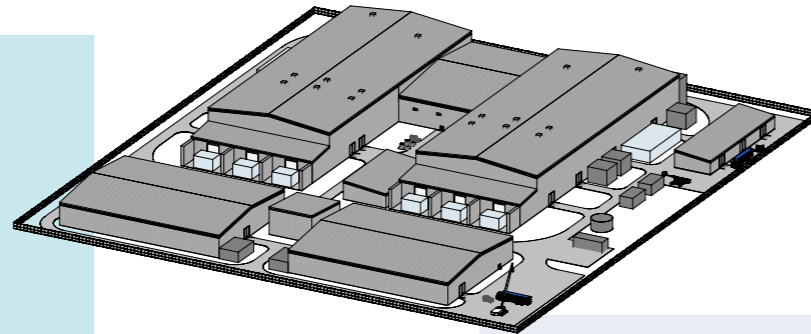
Converter stations change electricity from alternating current (AC) to direct current (DC), or vice versa. Alternating current is used in households, whereas direct current is used to efficiently transport electricity over long distances, such as via subsea cables, with fewer electrical losses.

HVDC project elements

- A converter station platform, indicatively 290m x 350m, adjacent to the new substation.
- AC Filter Buildings (Approx 80m x 100m, 26m high).
- Smaller ancillary and support buildings adjacent to the main converter station building.
- Underground cable connection from Dundonnell to Fanellan site circa 80kms.

We are currently reviewing the design with our equipment suppliers, and building designers, with a view to reducing the larger building dimensions as much as possible.

The overall platform size for the converter station and substation will be approximately 875x305m.



Indicative conceptual design for 2GW 525kV Bipole converter station



The 320kV DC 1200MW Blackhillock HVDC converter station

The total platform size (base of the site) containing both installations will be approximately 875 x 305m, which includes a 4m high security fence. Landscape forms at the front and sides of the platform will help to screen the development. The sizes and locations are in refinement.

Our consideration of Gas Insulated Switchgear (GIS) at 400kV

An Air Insulated Switchgear (AIS) substation is constructed with switchgear which relies on open air components. This means infrastructure must be positioned with sufficient clearance from other components in order to allow for safe operation and maintenance. This typically takes up a larger area of land than Gas Insulated Switchgear (GIS) which relies on housed components.

Feedback received for the substation was in favour of GIS technology and initially this was a consideration. Through project design and further study there is a fundamental difference in the GIS technology used at 132kV (such as that being built for the Beaulay 132kV project at Wester Balblair) and higher voltages, such as 400kV. It is more straightforward to connect high voltage cables directly

to 132kV GIS, this becomes more complex with 400kV GIS, which then necessitates the use of lengths of Gas Insulated Busbar (GIB). Therefore, increasing the size of the substation footprint.

Across Pathway to 2030 projects, GIS will only be progressed at sites where environmental requirements (such as coastal locations) dictate an indoor solution was required. In those cases, the downsides associated with a 400kV AIS substation indoors made GIS more favourable.

Our approach to AIS vs GIS across the whole Pathway to 2030 portfolio in general and at each site including Fanellan has been presented to Ofgem over recent months; Ofgem agreed with our approach.

Beaulay–Denny 400kV overhead line diversion

The existing Beaulay–Denny 400kV overhead line crosses the proposed Fanellan 400kV substation and converter station site.

This overhead line will therefore require a section of diversion to:

- Enable the Fanellan 400kV substation and converter station to be built
- Facilitate the connection of the Fanellan 400kV substation to the existing Beaulay–Denny overhead line which will enable the connection between the Fanellan substation and the existing Beaulay substation at Wester Balblair and the wider electricity network.

The permanent diversion will consist of six towers being installed to divert the existing overhead line around the proposed substation development on the northern side. In total the number of towers will change from 4 (existing overhead line) to 6 (newly diverted overhead line) in order to allow for redirecting the conductors and for the final tie-in to the new site. This results in approximately 1.7km of modified 400kV overhead line.

A temporary diversion will also be needed to allow for replacement of two existing towers. At this stage it is anticipated that the temporary diversion will be to the south of the existing Beaulay Denny overhead line between the new Fanellan substation and converter station and Fanellan Road.

There will also be a temporary diversion of the telecoms fibre. Access tracks, temporary compounds and laydown areas will be needed to facilitate construction of the overhead line and these may be shared with the proposed Fanellan substation and converter station to maximise efficiencies and minimise disturbance. The access tracks created will remain permanently for operational use. Drainage will also be shared with the substation and converter station site.

Some tree felling will be needed to accommodate safety clearances for the overhead line diversion. The overhead line diversion and temporary telecoms diversion will not form part of the formal planning application for the Fanellan substation and converter station and will be progressed under a separate consenting regime by the Energy Consents Unit of Scottish Government (telecoms fibre which may be covered by Permitted Development).

As all overhead lines of 132kV and above fall into the relevant regulations, an Environmental Impact Assessment (EIA) screening opinion will be sought from the Energy Consents Unit to confirm whether or not an EIA is required. If our project is deemed non-EIA (due to its scale or potential environmental impacts), a voluntary Environmental Appraisal (EA) may be produced by us to support the consent application.

This assessment would be made publicly available once submitted.

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 will be located.

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 any changes and refinements we've made. 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 you to work with us to ensure that the energy infrastructure we build will be the best it can possibly be.

Who we're 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), Historic Environment Scotland (HES).

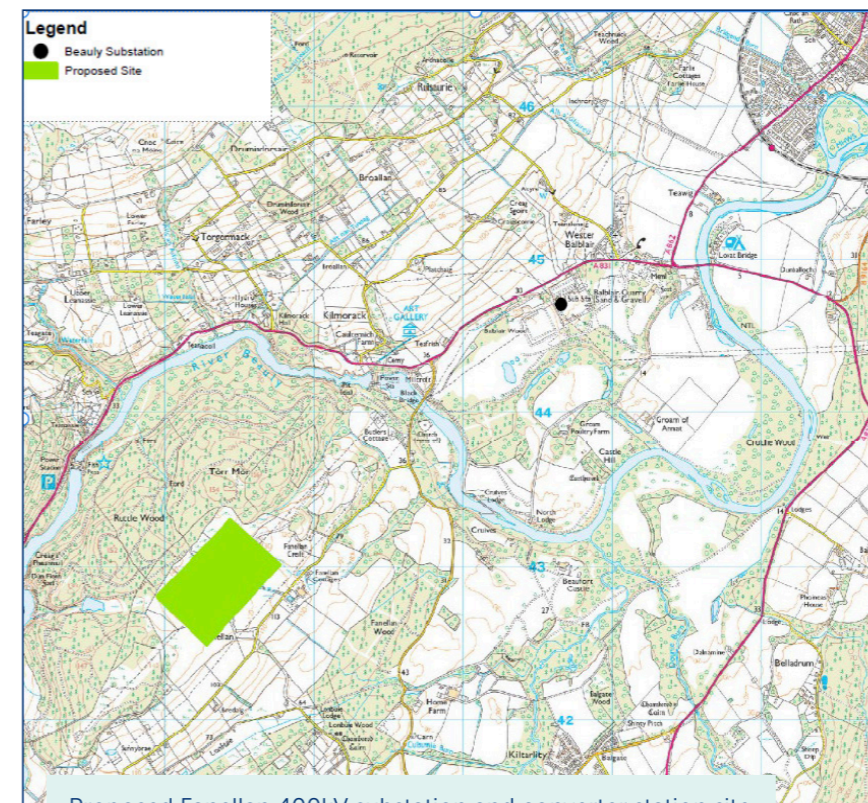
How we've selected the substation and converter site

Our site selection process makes sure the design, consenting, construction and operation of our projects are undertaken in a manner, which on balance, causes the least disturbance to the local community and environment, while ensuring the solution taken forward is economically and technically practical.

To do this we follow an internal process supported by third party environmental and technical experts. This has many key stages, each increasing in detail and definition and bringing technical, people, environmental and cost considerations together to find a balanced outcome.

Our proposed site: Fanellan 400kV substation and converter station

Following our last consultation on the proposed Fanellan substation and converter station in February–April 2023, where we asked for your views regarding shortlisted sites, in December 2023 we confirmed that the site we were proposing to progress with was the combined substation and converter station site at Fanellan.



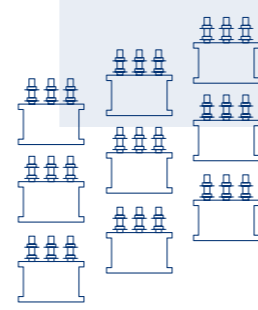
Proposed Fanellan 400kV substation and converter station site

Naming our site

Feedback from our consultation indicated that stakeholders felt the name of the substation should be more relevant to the area in which it is located. Now that a proposed site has been selected, we are changing the name of Beaulieu substation and converter station site to Fanellan 400kV substation and converter station.

Going forward, for the next consultation and submission of our planning application, the name will be formally changed to Fanellan substation and converter station.





Why this site?

Following extensive surveys and assessments this combined site performed best on balance because it reduced the engineering complexities, whilst offering the best opportunity to limit overall environmental impacts on the wider area for the following reasons:

- From a connection and environmental impacts perspective it limits the work to the Beauly–Denny OHL, the distance for the Spittal–Beauly 400kV OHL connection and removes the requirement for a 400kV underground connection, out with the site boundary, to connect both the AC and HVDC sites.
- Although there will be some environmental impacts it does present substantial opportunity to mitigate visual impacts with landform and planting opportunities.
- It is also preferred from the perspective of environmental conditions (salt pollution, flooding, SF6, contaminated land and noise) as well as from a biodiversity, geology, hydrogeology and hydrology perspective.
- Engineering: The combined Fanellan site minimizes total collective adjacent land impact through sharing a platform, maximises the space available and is considered the the most technical and cost-effective solution.

What has changed since we last consulted?

Since the public consultation event in March 2023, the project team have completed the following:

- Site selection (including assessment of additional, alternative site options)
- Publication of ‘Site selection consultation document: Beauly Area 400kV substation and Western Isles HVDC converter station’
- Publication of the Report on Consultation (ROC) report in December 2023
- Ground investigations
- Environmental surveys (these are still ongoing)
- Background noise monitoring
- Appointment of contractor(s) to produce the design for the planning application
- Appointment of environmental consultant, including a Landscape Architect, to commence the Environmental Impact Assessment (EIA) and to design the landscape forms.
- Design development
- Black Bridge assessment
- Continued engagement with the local community through the Beauly Community Liaison Group

The Fanellan site was the preferred site for consultation following an assessment of environmental, engineering and cost criteria. However, feedback from the consultation process recommended that we consider alternative sites, which included a site near West of Broallan and four sites in close proximity to the existing quarry at Balblair. This culminated in a review of potential options. These sites were assessed using the same site selection process used previously, however, it was found that none of these options performed better than the combined Fanellan site. The main challenges with each of these additional options resulted from engineering and constructability considerations, such as connection to the existing Beauly–Denny 400kV OHL, limited space for ancillary works such as temporary compounds and landscaping, proximity to residential properties and thus noise, flood risk and proximity to cultural heritage.

The Highland Council has specifically requested for us to consider the option, whereby the HVDC converter station is located at the Wester Balblair Quarry and the substation sited at Fanellan. A full assessment of this option was completed, however there are clear technical and environmental justifications for why this option is not suitable. All additional site options scored less favourably than Fanellan. The Highland council has recommended for reducing land take, to try to reduce the proposed platform level, to consider the use of GIS and involve landscape architects to ensure that the design integrates with the existing landform at Fanellan.

What’s next?

Further design development of the combined Fanellan site has been taking place and we will continue to listen to feedback and comments and implement them where feasible. We are now at the pre-application stage of our site selection process and following this consultation.

We will be engaging again in June when we will share feedback from this consultation and any subsequent changes to design prior to submitting a planning application to The Highland Council later this year.

The Town and Country Planning Process

The legislation that enables the planning of projects like the Fanellan 400kV substation and converter station is the Town and Country Planning (Scotland) Act 1997.

Engaging the right people

Local Planning Authorities determine the outcome of any applications made under the Town and Country Planning Act and establish the planning pathway our substation and converter projects must take, including which consents are required. This involves confirming whether projects require Environmental Impact Assessments (EIAs). The Fanellan substation and converter station would not automatically trigger the need for an EIA to be submitted as they do not fall within the relevant regulations. However, we are progressing this project as EIA development due to its intrinsic connection to the proposed 400kV overhead lines from Spittal and Peterhead which, due to their scale and capacity, are subject to mandatory EIA.

This assessment would be made publicly available once submitted.

The Fanellan 400kV substation and converter station project is classed as “National Development” under the Town and County Planning process; therefore, pre-application consultation is required with the public and interested parties.

The pre-application process

A Proposal of Application Notice (PAN) was submitted to The Highland Council on 29 January 2024. This is the first stage in the planning application process, and the beginning of a consultation period that must allow for at least 12 weeks between the start of the pre-application consultation and feedback, and submission of a planning application.

The plans we are consulting on at this event might change between now and the submission of a planning application. The red line boundary that has been submitted with the PAN boundary represents the maximum extent of the land potentially included in the application site, but this area may be reduced or rationalised as the development proposal becomes finalised.

There is a requirement to hold at least two events to provide the opportunity for members of the public to comment on the proposals. This public event is the first event. A second event will be held in June 2024 at which feedback will be given on the views obtained at the first event. There will also be a short opportunity for comment after this second event and comments will be included in a Pre-application Consultation (PAC) Report.

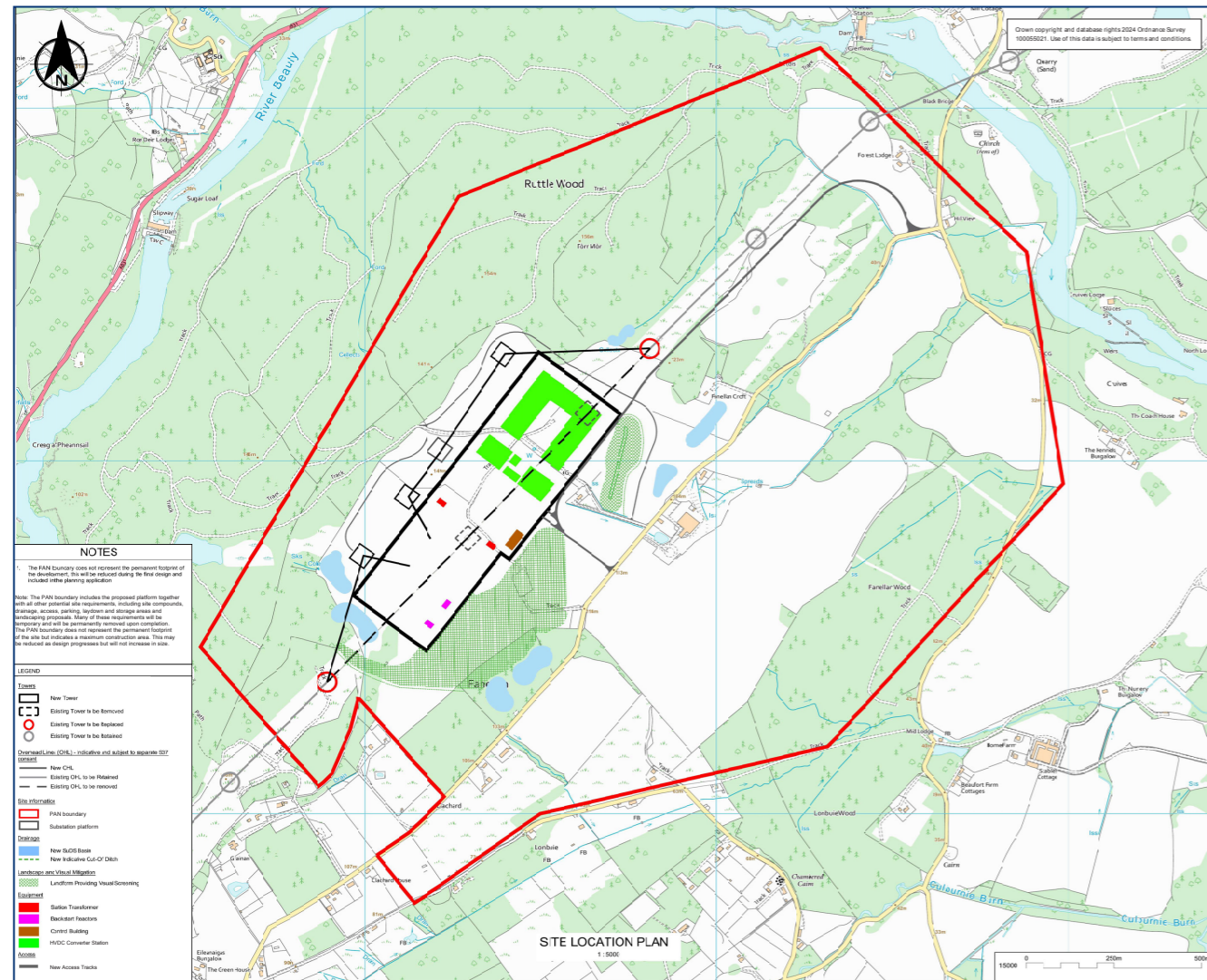
Submitting a planning application

The planning application is due to be submitted to The Highland Council in Autumn 2024. A Pre-application Consultation Report will accompany the planning application providing details of the consultation undertaken and communicating how the consultation process has influenced the proposed development. Where comments are received that cannot be addressed in the final proposal, an explanation will also be given why this is the case.

Comments made through the pre-application consultation process are not formal representations to The Highland Council. When the planning application is submitted there will be an opportunity to make formal representations to The Highland Council.



PAN boundary map



Please note: As well as the substation site footprint, the PAN (Proposal of Application Notice) boundary has to include all other site requirements, including any temporary site compounds, temporary and permanent drainage, site access and on-site parking, laydown and storage areas for materials and excavated soils, as well as hard and soft landscaping proposals.

Many of these requirements will be temporary, during the construction phase, and will be permanently removed upon completion of the project.

The PAN boundary, therefore, does not represent the permanent footprint of the substation itself but indicates the full development area.



Download a copy of the map by scanning the QR code or by visiting the following URL: <https://bit.ly/3T0wL0z>

PAN boundary map clarity and assurances

We are aware of the concerns that have arisen following the recent submission of our Proposal of Application (PAN) Notice and would like to provide some clarity on the process and reassure local residents that our designs and requirements for each site have not significantly changed from what has been shown to date.

We, like other developers, are required to submit a Proposal of Application Notice to the appropriate planning authority for large infrastructure projects, such as our substation projects, where they are classed as "Major" or National Developments under the Town and Country Planning regime. The PAN must be issued a minimum of 12 weeks prior to a planning application being submitted and must provide a location plan, including a general development area (PAN boundary), together with confirmation of the details of two rounds of public consultation events.

As well as the actual substation site footprint, the PAN boundary has to include all other site requirements, including any temporary site compounds, temporary and permanent drainage, site access and on-site parking, laydown and storage areas for materials and excavated

soils, as well as hard and soft landscaping proposals. Many of these requirements will be temporary, during the construction phase, and will be permanently removed upon completion of the project. The PAN boundary, therefore, does not represent the permanent footprint of the substation itself but indicates the full development area.

At our initial site selection consultations in 2023 we provided an illustration of what each proposed substation may look like once completed and their respective locations, but these did not detail the temporary construction requirements, nor any permanent landscaping, drainage or accesses. At that time these elements had not yet been designed and therefore the full extent of construction works, which would be used to inform a planning application red line boundary, could not be shown.

The substation footprint at this time is unlikely to differ significantly from those initial illustrations. The full layout of the proposed development will be presented at the upcoming public consultation and will be online for viewing.



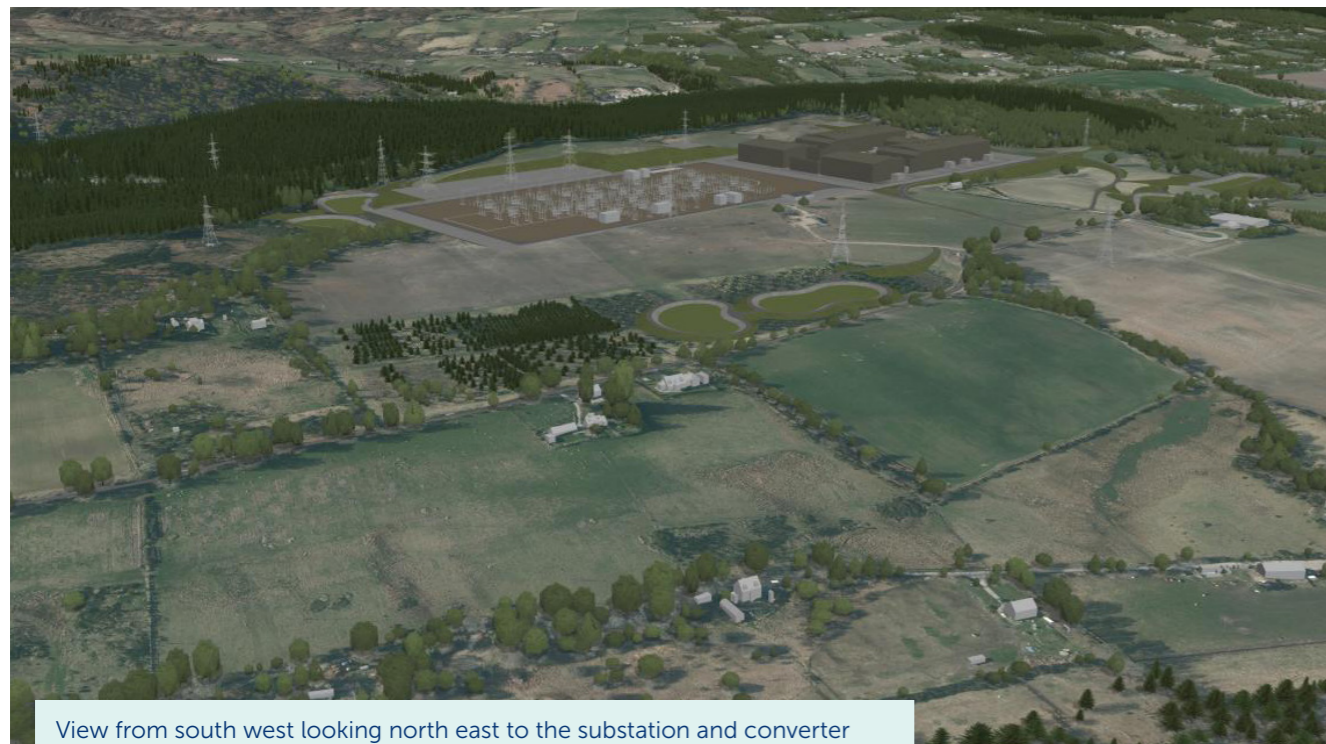
3D visualisations

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 which model the substation and HVDC converter station into the local landscape to help understanding of the proposals in terms of the visual impact, distance and height.

The following are some images taken from the 3D model created for the Fanellan substation. A flythrough video is also available to view from the project webpage via the QR code.



To find the 3D flythrough video, scan the QR code or visit the following URL: <https://bit.ly/3Vmh079>



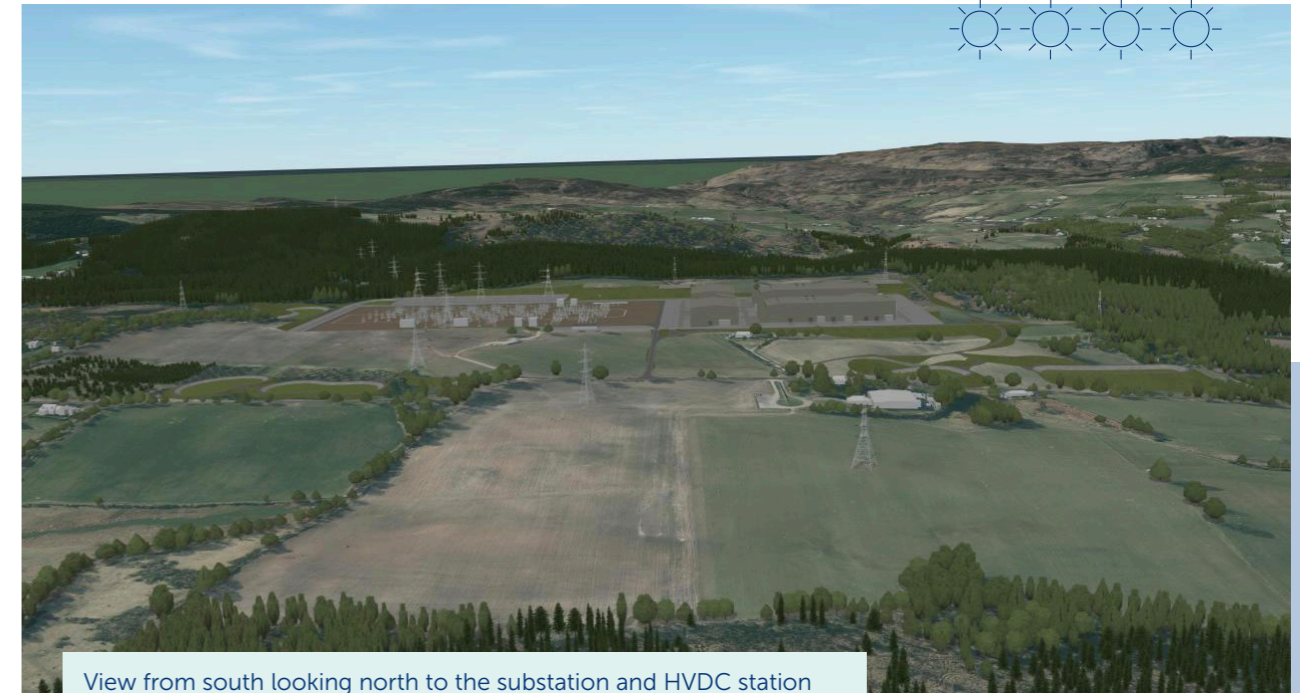
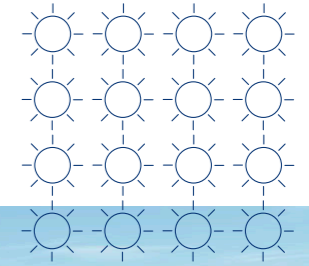
View from south west looking north east to the substation and converter station and showing indicative overhead line connections without screening

The layout and colour of our proposals may change based on feedback and further refinement of the design, if that happens, we'll update our model and video and share this on our webpage and with you at the next event.

These visualisations are shown without screening. We are currently working with a landscape architect to develop landscape forms and planting design to help to screen the substation and converter station from view.

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.



View from south looking north to the substation and HVDC station and showing indicative overhead line connections, without screening



View from Kiltarlity (south) looking north to substation and converter station and showing indicative overhead line connections, without screening

Development considerations

During our last consultation, we outlined many of the engineering, environmental and social considerations we take account of when establishing a practical site for the substation. Now that we have identified a proposed site, we are able to share further details regarding many of our development considerations.

Water soils and drainage

The following hydrological aspects are being investigated as part of the ongoing EIA:

- Groundwater and surface water bodies
- Potential for flood risk—a flood risk assessment is being produced and will form part of the EIA Report
- Site drainage—a Drainage Impact Assessment (DIA) is being produced and will form part of the EIA report
- Public and private water supplies
- Drinking water protection areas
- Groundwater dependent terrestrial ecosystems
- If any, designated sites that are hydrologically linked to the site.

An appropriate site drainage plan for both the construction and operational phases will be developed to mitigate the impact on the surrounding water environment.

Local wildlife

Some survey work has been carried out in 2023, as part of the site selection, this includes:

- **Bird Surveys:** In addition to the use of data from related projects with overlapping survey areas, novel surveys comprising breeding bird walkovers and Vantage Point surveys were undertaken in 2023
- **Habitat Survey:** detailed habitat site survey of the initial preferred site option boundary.
- **Protected Species Survey:** Preliminary protected species constraints walkovers.

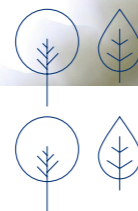
Further ecology surveys will be undertaken in Q1 and Q2 2024 which will identify the habitats in the site area together with presence/absence of relevant protected species. Surveys will inform the ecological and ornithological assessment in the EIA.

For all identified protected species the design will seek to avoid/minimise impacts wherever possible and where this is not possible, provide the appropriate levels and types of compensation. Where necessary, relevant species licences will be sought and construction will be undertaken in accordance with species specific management plans. This will ensure the careful management of protected species is undertaken by qualified ecologists, under regulatory agreement.

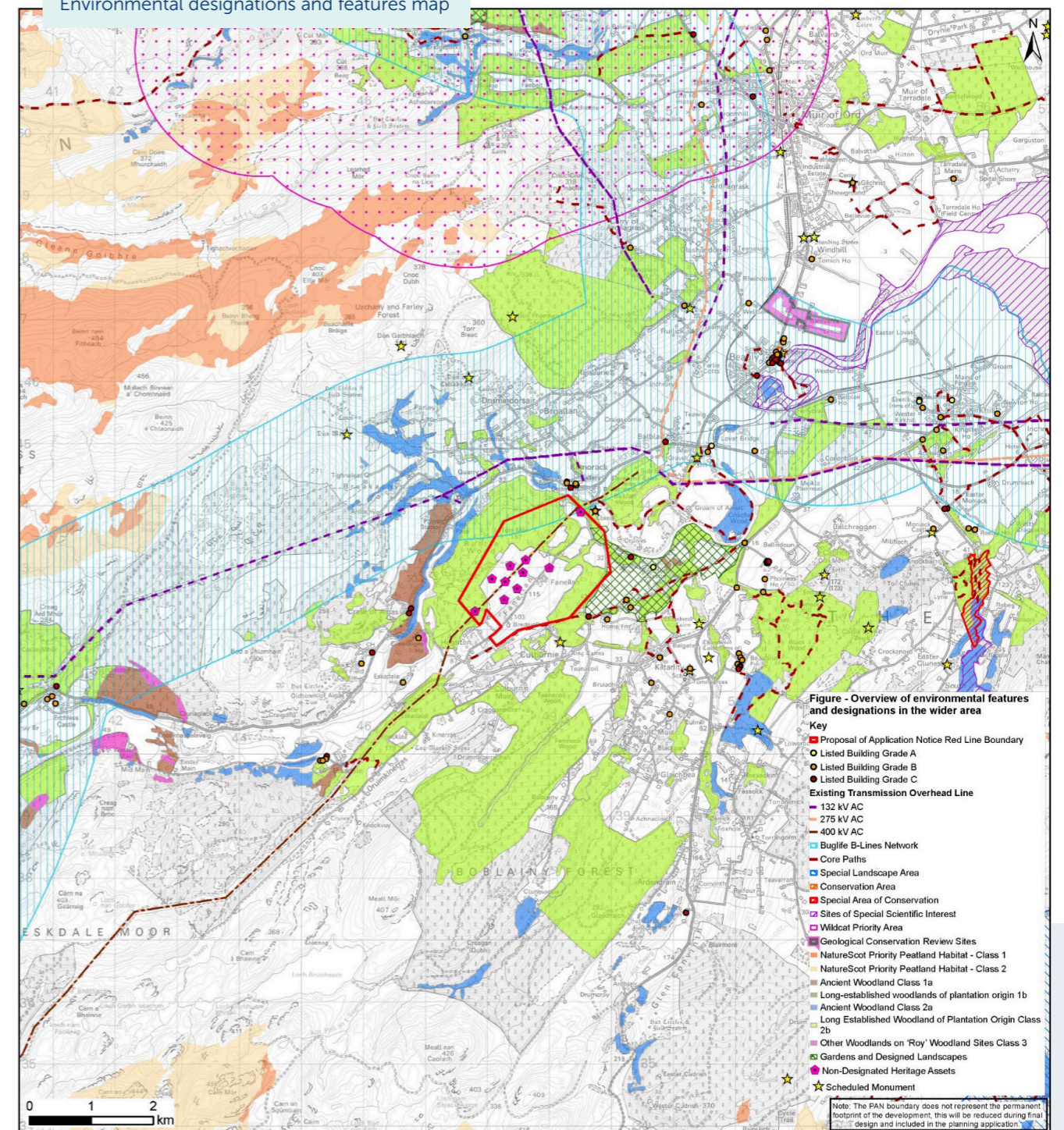
Noise

The closest noise receptors are residential dwellings in the vicinity of the site. The existing site is predominantly agricultural grassland with woodland and the Beaulie Denny overhead line dissects the site. The existing Beaulie substation, approx 2.5km to the north-east is another noise source.

Baseline noise monitoring surveys have been undertaken at noise sensitive receptors within the vicinity of the site to inform an operational noise assessment. The noise assessments (construction and operational) to be undertaken will consider all new development in the area cumulatively: the new substation and converter station; the new 400kV overhead line connection from Spittal–Loch Buidhe–Beaulie and Beaulie–Blackhillock –New Deer–Peterhead; and the Beaulie–Denny overhead line tie in. Appropriate mitigation measures will be considered dependent on the results of the assessments.



Environmental designations and features map



This map indicates environmental features and designations identified in the wider area. A copy of this map is available to download from the project webpage.

Landscape and visual

The appearance of the substation within the landscape and where it will be seen from is being carefully considered. We have appointed an independent chartered Landscape Architect to assist us with the design. A landscape and visual Impact Assessment (LVIA) is required as part of the Environmental Impact Assessment (EIA) process, to assess the impact of this substation and converter station on the landscape and visual amenity. Any impacts will be minimised and/or mitigated where possible.

The Landscape and Visual Impact Assessment will consider the effects on the following NatureScot Landscape Character Types:

- Enclosed Farmland (LCT 229)
- Farmed Strath - Inverness (LCT 227)
- Farmed and Forested Slopes - Ross and Cromarty (LCT 345)
- Open Farmed Slopes (LCT 346)
- Farmed River Plains (LCT 342)
- Rugged Massif - Inverness (LCT 220)
- Rocky Moorland Plateau - Inverness (LCC 222)

There are no designated National Scenic Areas (NSA)s or Wild Land Areas (WLA)s within the proposed 5km Study Area—the nearest are Glen Strathfarrar NSA which lies over 10 km to the west of the Site, and The Central Highlands WLA 24 which encloses Glen Strathfarrar to the north and south of the glen and is approximately 7km from the Site at its nearest point. Key views of the new substation and converter station site from the surrounding area have been selected and will be discussed in consultation with THC and Beaully Community Liaison Group. The proposed viewpoint locations are set out across the page.

Photomontages will be generated by the landscape architects, showing what the development will look like from these key viewpoints. This information will help inform the final design of the landscape forms to reduce the visual impact of the new substation as far as possible. The photomontages will be included as part of the EIA.

VP	Description
1	View from Fanellan
2	View from Bredaig
3	View from Wester Balblair
4	View from Ruisaurie
5	View from Kiltarlity
6	View from Culbrunie
7	View from Crerag
8	View from Camault Muir and Glaiachbea
9	View from Beaully
10	View from Torgormack and Broallan
11	View from Kilmorack

Mitigation to reduce visibility of the site, developed as part of a landscape-led design, includes:

- Appropriate landscape forms in front of and to the sides of the platform, that blend into the existing shape of the landscape and proposed attenuation basins.
- Reducing the platform height as far as practicable
- Selecting a suitable colour of cladding for the buildings that is sympathetic to the surroundings
- Woodland and shrub planting in suitable locations to help screen the development in the longer-term
- Retention of existing tree planting along the Fanellan Road

Forestry and biodiversity net gain

It is recognised that the project is likely to affect areas of woodland and other habitats. Ways to minimise impacts have been explored and options are being considered to mitigate/compensate for losses where unavoidable including compensatory planting, where possible with native species. This reflects our commitment to achieving a 'Net Gain' in biodiversity terms.

Discussions have begun to identify any opportunities for compensation both in the immediate proximity to the site and if required, more widely. This is at an early stage but has the potential to make compensatory provision within larger projects as part of our wider network of projects.

Land use and recreation

No long-distance routes, core paths or public rights of way are located within the sites under consideration. Fishing, stalking and driven shooting activities are undertaken on the Glenmoriston Estate within Area of Search.

The site is located in Class 3.2, 4.2 and 5.3 agricultural land and is classified as land that is capable of:

- Average production though high yields of barley, oats and grass can be obtained (3.2)
- Producing a narrow range of crops (4.2)
- Improved grassland (5.3)

The land is therefore not considered to be prime agricultural land.

Lighting

We will fully assess the requirements for construction and operational lighting as part of the Environmental Impact Assessment. The EIA will include site specific recommendations to mitigate any impacts of lighting on nearby properties. We will produce a lighting strategy for the operation of the site as par of the planning application and construction lighting will follow best practice to minimise light spillage. Our substations are not permanently floodlit but instead have motion sensor controlled security lighting, plus work lighting in case of urgent repairs during hours of darkness.

Cultural heritage

Construction of the current Beaully–Denny OHL towers located within the proposed substation and converter station footprint discovered archaeological remains related to prehistoric settlement activity. It is probable that further remains exist within the Proposed Development area, and potential impacts on these currently unknown heritage assets will be assessed within the EIA, with recommendations for archaeological works presented to ascertain the presence or absence of any further remains.

As well as direct physical impacts from the construction process, the EIA will undertake an assessment of the operational effect of the new substation and converter station on changes within the setting of cultural heritage assets.

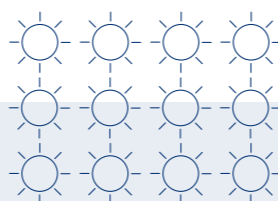
Several designated cultural heritage assets have been identified in the wider area including:

- Beaufort Castle Garden and Designed Landscape (GDL00052)
- Corff House, Fort SW of (SM3195)
- Dun A Chliabhain, Fort (SM2424)
- Kiltarlity Old Parish Church (SM5570)
- Belladrum Chambered Cairns (SM2435)
- Culburnie ring cairn and stone circle (SM2425)

The assessment will include visualisations from key viewpoints of these heritage assets, in agreement with The Highland Council and Historic Environment Scotland, and potential impacts through changes within the setting of heritage assets will be considered as part of the ongoing design development process, with screening measures potentially proposed to reduce visual intrusion.

Traffic

The primary access to the site is expected to come from the A831, and subsequently the C1106 (Fanellan Road). During the initial site works access will come directly from Fanellan Road, however we propose use of a haul road to reduce construction traffic longer term as well as predominantly for heavier delivery vehicles. In turn it is expected this haul road will form the permanent site access.

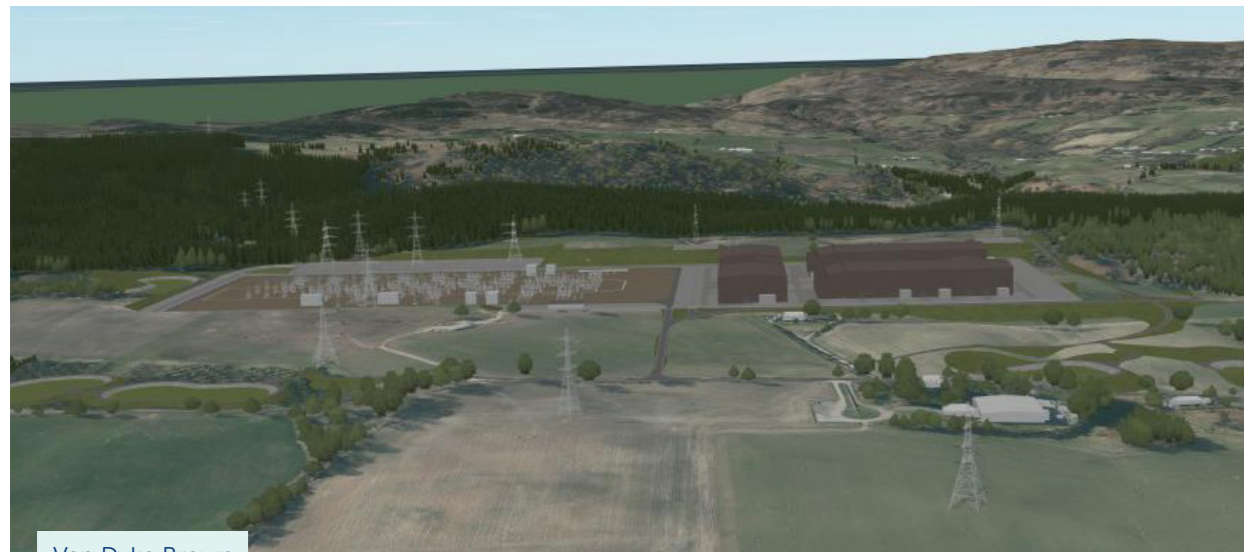


Environmental mitigation

We have indicated below some indicative colours for the buildings. We are seeking your opinion on these as part of this consultation and would welcome your feedback.

We will do our best to accommodate the most popular choice though please note that the colour of the buildings will also need to be consulted on with The Highland Council as part of the planning consent application and they will have final say over which is to be used.

Building colour examples



Van Dyke Brown



Olive Green

Delivering a positive environmental legacy

On every project we deliver, we always need to consider how we impact the environment in that area. As we enhance the transmission network in the North of Scotland, we have a responsibility to design and build our projects to protect and enhance the environment. We will always look to minimise the potential impacts from our activities and achieve Biodiversity Net Gain (BNG).

As the first developer to consult upon and implement an award-winning approach to deliver Biodiversity Net Gain (BNG) on all new sites, we're committed to delivering a "greener grid", focusing on habitat restoration and creating biodiversity growth as we invest in our network. We are committed to delivering 10% Biodiversity Net Gain on all sites gaining consent going forward. This ensures that we don't just restore our natural habitats but actively improve them for the benefit of local communities, wildlife, flora and fauna.

During the development, construction and operation of our projects, we will leave the environment in a measurably better state than before development started, ensuring a positive environmental legacy at all our sites.

As this project progresses through the development process, we will actively seek ways to avoid and minimise impacts on biodiversity, through careful routing and site design to avoid impacting areas of highest biodiversity value.

Where avoidance is not possible, we will offset this by introducing new habitats along with restoration efforts. These can be achieved within the boundary of the development site, or by providing support to local groups involved with habitat restoration or creation projects, within the locale of the development site.

If there are biodiversity improvement projects in your local area that we could get involved with, please get in touch with the project Community Liaison Manager.

Example projects

Argyll Coast and Countryside Trust (ACT)

Argyll's rainforest is a unique and rare habitat of ancient and native woodland. This collaboration with ACT will help deliver our compensatory tree planting and BNG commitments in Argyll. It also aligns with ACT's woodland planting ambitions, supporting its charitable objectives including biodiversity gain, health and wellbeing, improvement for local people, outdoor learning opportunities and climate change workshops.

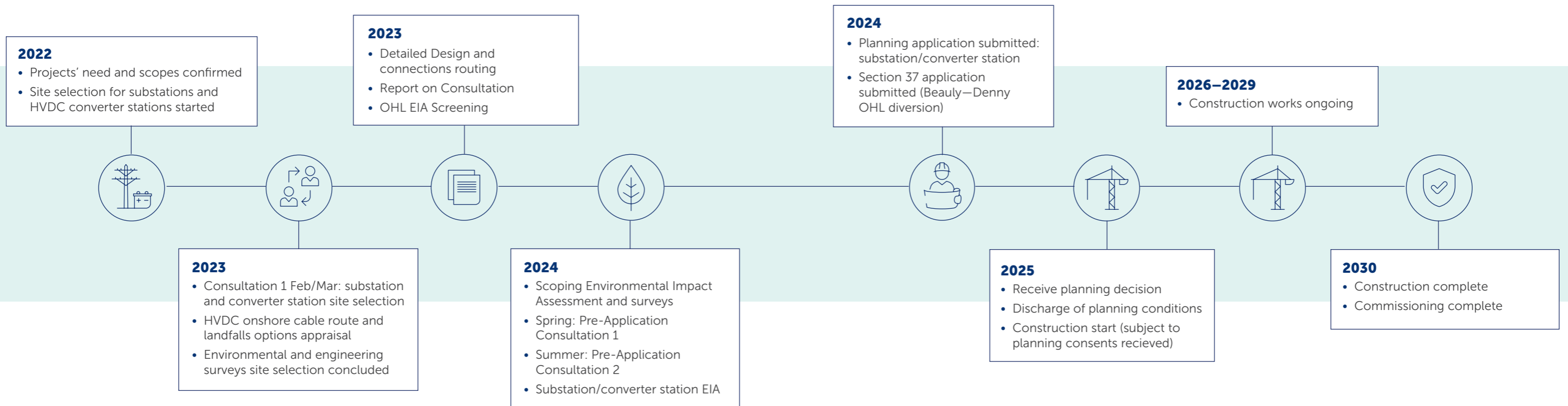
Thurso South substation and The Bumblebee Conservation Trust

We created approximately 10 hectares of bee-friendly habitat to support the pollination of the rare endemic great yellow bumblebee. This contributed to wider conservation efforts for this bee species. A collaboration with The Bumblebee Conservation Trust facilitated research on food availability for bumblebees, identifying the need for a diverse seed mix containing key flowering species to enhance early, main and late food supply to support the full lifecycle of bumblebees.



Project timeline

The project programme for the proposed Fanellan substation and converter station together with the Beauly–Denny OHL diversion, is shown in the figure.



Other projects in the local area

As the transmission operator in the north of Scotland, we need to maintain and invest in the high voltage electricity transmission network in our area to provide a safe and reliable electricity supply to our communities.

We also need to offer terms for connections to the transmission network for new generation such as wind farms and pumped storage schemes and for new sources of electricity demand. Therefore, as well as the Fanellan substation and converter station, we have a number of other projects within the local area we are currently progressing, described below.



Spittal–Loch Buidhe–Beauly 400kV overhead line

A new 400kV overhead line, approximately 170km in length connecting Spittal to Beauly via Loch Buidhe. This new overhead line will connect into the Fanellan 400kV substation.

This overhead line will not form part of the formal planning application for the Fanellan converter station and will be progressed under a Section 37 Electricity Act consent to be determined by the Scottish Government.

West of Beauly Asset Replacement projects

The proposed projects include 4 substations requiring upgrading at Deanie, Culligran, Aigas and Kilmorack. The need for the projects is driven by the operational requirements and asset conditions assessments of the existing substations serving the hydro power stations at each location. The deterioration in condition poses a risk to failure, resulting in the hydro-power stations unable to distribute renewable power and risking reliability of supply to customers.

Beauly–Blackhillock–New Deer–Peterhead 400kV overhead line

A new 400kV overhead line, approximately 180km in length connecting Beauly to Peterhead, via New Deer and Blackhillock. This new overhead line will connect into the Fanellan 400kV substation.

This overhead line will not form part of the formal planning application for the Fanellan converter station and will be progressed under a Section 37 Electricity Act consent to be determined by the Scottish Government.

Beauly 132kV redevelopment project

This project is under construction at Wester Balblair substation.

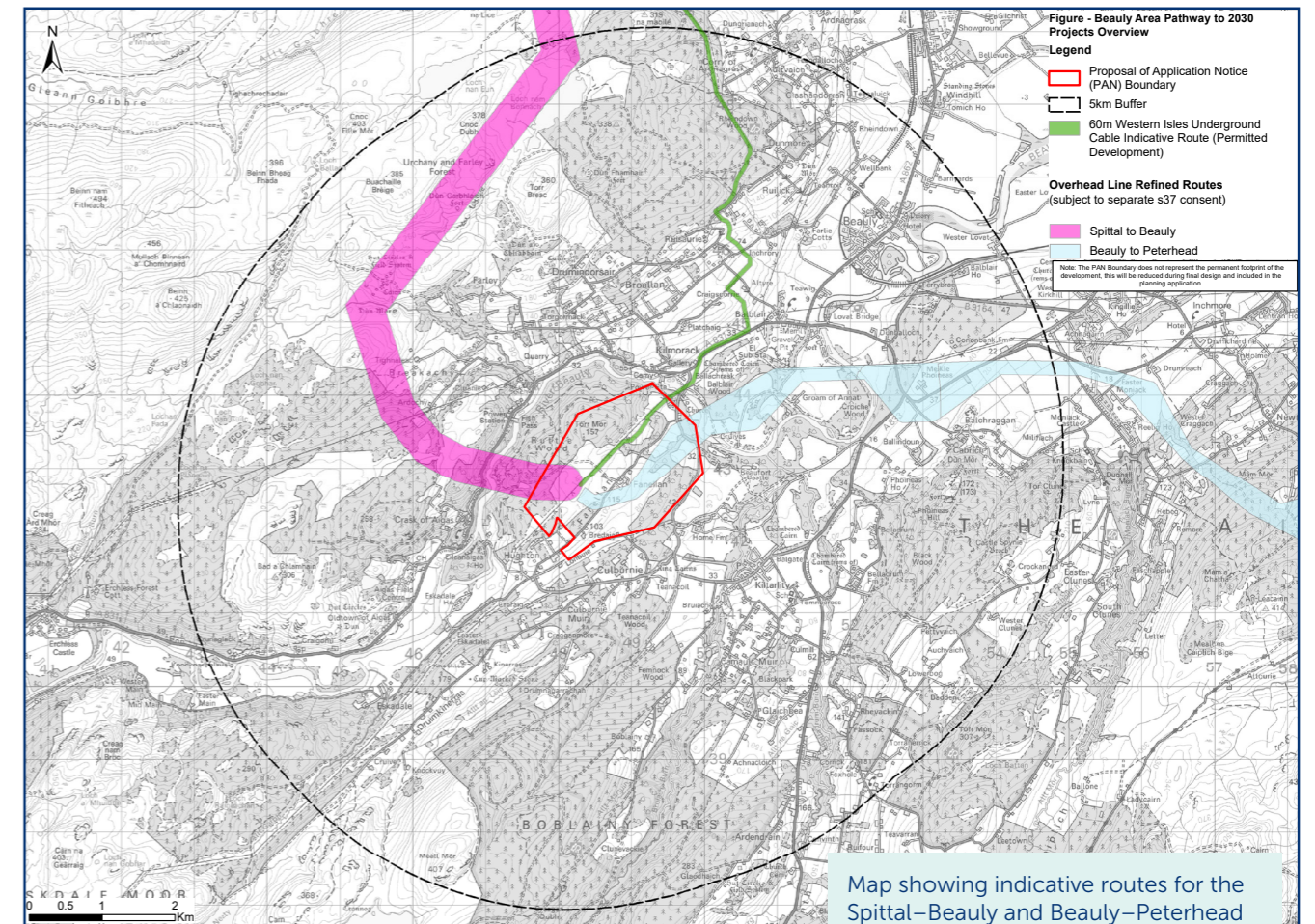


Search our projects by scanning the QR code or by visiting the following URL:
<https://bit.ly/3P6h0UG>

Western Isles HVDC underground cabling

Circa 80km of onshore underground cables to provide a link between the Western Isles and the Beauly area. This will consist of High Voltage Direct Current (HVDC) underground cables from a landfall at Dundonnell to the Fanellan converter station. The cable needs to be undergrounded as it is a HVDC connection.

The current proposed route for this can be seen on the image below. This underground cabling will not form part of the formal planning application for the Fanellan 400kV substation and converter station and will be progressed under Permitted Development.



Map showing indicative routes for the Spittal–Beauly and Beauly–Peterhead 400kV overhead lines and Western Isles cable connecting in to the Fanellan site.

Local renewable developments

We know that local stakeholders are keen to understand the full extent of renewable developments being proposed in their local 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 about the renewable

developments looking to connect to our network but are not permitted to disclose any details of these developments until they are in the public domain.

A list of projects that hold contracts for Transmission Entry Capacity (TEC) with National Grid, the Electricity System Owner is available from their website: nationalgrideso.com

Finding common ground with landowners

We recognise that landowners and occupiers are key stakeholders in the development of our projects. At all levels, we will be transparent about our proposals and keep the conversation open and constructive when it comes to those affected and reaching effective compromise.

From the outset of the project, our land team have been identifying and contacting landowners and occupiers who may be affected by our proposals. If you are a landowner who is affected by the proposals and have not yet had contact from us, please get in touch via the contact details for the dedicated project land managers found on the relevant webpages: ssen-transmission.co.uk/fanellan

We work with landowners and occupiers to mitigate the effects of our infrastructure on their properties.

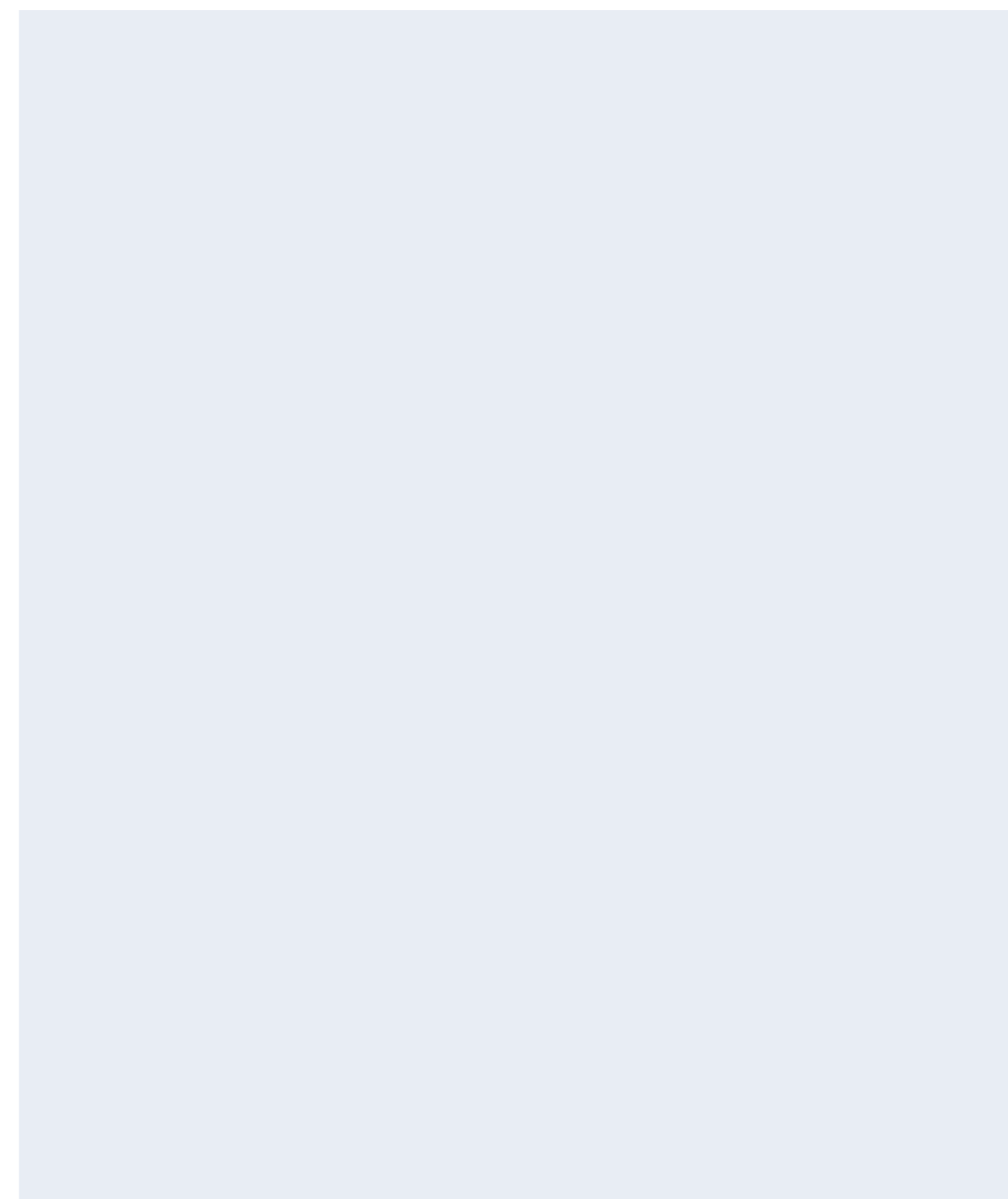
As part of this, we need to carry out various engineering and environmental surveys to inform what we design and how we build it. We will always seek consent from affected landowners and occupiers in advance for these surveys. Once we have finalised the design, we will be required to secure the appropriate land rights from landowners and occupiers in order to secure planning consent.

Our land managers will endeavour to reach a voluntary agreement with landowners and occupiers, however, as a statutory undertaker, we might need to underpin voluntary discussions with an application to Scottish Ministers for a Necessary Wayleave or Compulsory Purchase Order. Ultimately this is to ensure nationally significant infrastructure projects are delivered on time and in line with our licence obligations. We also have a duty to protect the interests of the UK bill payer. Statutory powers are not used lightly as we aim to work with landowners and occupiers to secure the necessary land rights voluntarily.

All potentially affected landowners and occupiers have the opportunity to provide feedback at our in-person consultation events and by submitting a feedback form. We would encourage all those with an interest to submit their views through this consultation.



Notes



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 will be seeking final comments and feedback from members of the public, statutory consultees and other key stakeholders regarding our proposals until **Thursday 9 May 2024**.

How to provide feedback

Submit your comments and feedback by completing and returning the feedback form at the back of this booklet which is also online via the project webpage, 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."

You can also follow us on social media:



What we're seeking views on

During our last public consultation event in March and April 2023, we wanted to know your thoughts on the substation sites under consideration and if you agreed with the one we'd identified as best.

Now that we have taken forward a proposed site, 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 any changes and refinements we've made.

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.

We encourage all interested community members to fill in a feedback form when submitting feedback, however if you prefer, you can email us to provide your feedback or ask any questions.

Community Liaison Manager

Sally Cooper

SSEN Transmission,
10 Henderson Road, Inverness IV1 1SN

+44 7918 470 281

fanellanengagement@sse.com

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/fanellan

Your feedback

Thank you for taking the time to read this consultation booklet. 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. Which consultation event did you attend?

- Tuesday 26 March 2024 - Kiltarlity Village Hall
- Thursday 28 March 2024 - Phipps Hall, Beauly
- I did not attend a consultation event

Q2. Now that we have shared updated design plans for this site, is there anything you would like to bring to our attention that you believe we may not have already considered during project development?

- Yes
- No
- Unsure

Comments:

Q3. What suggestions for social or environmental community benefit opportunities do you have that you would like us to consider, are there any local initiatives you would like us to support?

- Yes
- No
- Unsure

Comments:



Q4. In relation to Fanellan substation/converter—are there any additional visual viewpoints that we should consider during our design process?

Comments:

Q5. For the proposed new substation and converter station are there any colours or colour schemes that would help the development blend into the local environment better – this can be for the HVDC and associated buildings, noise enclosures, pallisade security fencing etc.?

Comments:

Q6. Is there anything regarding the proposed Fanellan project that you feel you required more information about? If so please detail below.

Comments:

Q7. Do you have any other comments?

Comments:

Full name: **Email:**

Telephone: **Address:**

We would like to send you relevant communications via email such as invitations to stakeholder events, surveys, updates on projects, services and future developments from the Scottish and Southern Electricity Networks group listed below. If you are happy to receive email updates please opt in by ticking the box below. You can unsubscribe at any time by contacting us at stakeholder.admin@sse.com or by clicking on the unsubscribe link that will be at the end of each of our emails.

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

Thank you for taking the time to complete this feedback form. Please submit your completed form by one of the methods below:

Post: Scottish Hydro Electric Transmission, 10 Henderson Road, Inverness IV1 1SN

Email: fanellanengagement@sse.com

Online: ssen-transmission.co.uk/fanellan

For information on how we collect and process your data please see our privacy notice available at today's event. This can also be obtained online at: ssen-transmission.co.uk/privacy

Comments forms and all the information from today's event will also be available to download from the project website.

We intend to use Artificial Intelligence (AI) to assist our experienced teams in the analysis of your feedback, so we can categorise key points raised more quickly. You can learn more about how we're utilising AI at: ssen-transmission.co.uk/AIFAQ

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

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Notes

