

# 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 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.**



### Find out more

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 subsea cables and overhead lines (OHL) 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.

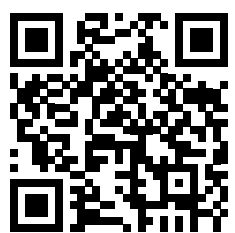
We want to hear people's views, concerns, or ideas and harness local knowledge so that our work benefits their communities: today and long into the future. You can share your views with us at:

[ssen-transmission.co.uk/talk-to-us/contact-us](https://ssen-transmission.co.uk/talk-to-us/contact-us)



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# 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?

Extensive studies informing the ESO's Pathway to the 2030 Holistic Network Design confirmed the need to upgrade the second circuit of the Beaulay – Denny OHL from 275kV to 400kV.

To do this, we require to construct two new 400kV substations at Braco West and in the Fasnakyle area. We'll also require modifications or extensions to other substations along the route, including Fort Augustus, Errochty, Kinardochy and Tummel.

Connections to existing substations will also be required as part of the upgrade.

The upgrade of the Beaulay – Denny circuit will help deliver the significant increased capacity needed to transport energy from new large scale onshore and offshore renewable generation (mainly wind farms) to demand centres via onshore and HVDC subsea links.

These projects have been highlighted as critical to delivering the UK and Scottish Government's targets, with the development of them accelerated to meet the target dates of energisation by 2030.

## 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.

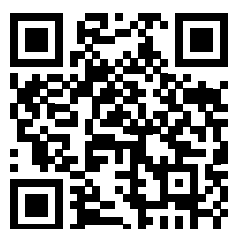
The next stage of strategic network planning across Great Britain is underway and we expect the independent Electricity System Operator, National Grid ESO, to publish details of this in March this year.

It is expected this will include a combination of new onshore and offshore network requirements.



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# Project overview

## Beauly - Denny Upgrade Project

The Beauly-Denny line was constructed for 400kV operation on each of its two circuits but put into service with one operating at the lower voltage of 275kV. This project will see the second circuit being uprated from 275kV to 400kV, to allow new renewable energy generation to be connected to the transmission network in the coming years. As the line was built to run at 400kV no alterations are required to the existing OHL.

However, existing 275kV connections along the OHL will need to be upgraded to allow them to continue to connect to the uprated circuit. This means the following will be required at sites along the route:

- A new 400kV substation near Braco.
- A new 400kV substation in the Fasnakyle area.
- Connections from the new substations to both the Beauly - Denny OHL (via small diversions) and the existing substations (via underground cable).
- In addition, modifications or extensions are required to other substations along the route, including Fort Augustus, Errochty, Kinardochy and Tummel.

## Braco West 400kV substation

This consultation is related to our proposed new substation located near Braco. The project will involve construction of a new outdoor 400kV Air Insulated Switchgear (AIS) substation.

Following completion of site selection, the proposed substation has been renamed to **Cambushinnie 400kV substation**, due to its location at Cambushinnie Hill. This will be the name used for our pre-planning consultation and the planning application.



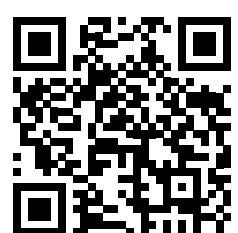
## Proposed development description

- The approximate maximum dimensions of the proposed substation platform are 420m x 230m, not including the earthworks required to create a level platform.
- Space provision to allow for connection of future renewable energy generation projects.
- Areas for drainage, landscaping/screening and habitat enhancement.
- Permanent and temporary access roads, including a new diversion access track near Braco village.
- Temporary areas required during construction for laydown and welfare.
- The new substation will require OHL tie in works, comprising a new terminal tower adjacent to the substation. The new terminal tower will be of a similar height (up to 63m) and type to the existing towers. A temporary OHL diversion will also be required during the construction phase to allow the new tower to be built. The OHL tie in will not form part of the formal planning application for the Cambushinnie 400kV substation. Instead, an application will be made to the Scottish Government's Energy Consents Unit (ECU) for consent under Section 37 of the Electricity Act.



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# How we've selected the substation site

Our site selection process makes sure the design, consenting, construction and operation of our projects are undertaken in a manner which causes the least disturbance to the environment and the local community. It also ensures 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, environmental, people, and cost considerations together to find a balanced outcome.

## Our proposed site: Cambushinnie 400kV substation

Following our last consultation on the proposed Cambushinnie substation in August 2023 where we asked for your views regarding shortlisted sites, in January 2024 we confirmed that the site we were proposing to progress with was site 2.

## What has changed since we last consulted?

There has been no change in the preference of the site, site 2, since our last consultation.

We recognise that feedback was provided from local residents that site 3 would be preferable as it is located further away and on the top of the hill, resulting in potentially less landscape and visual impact.

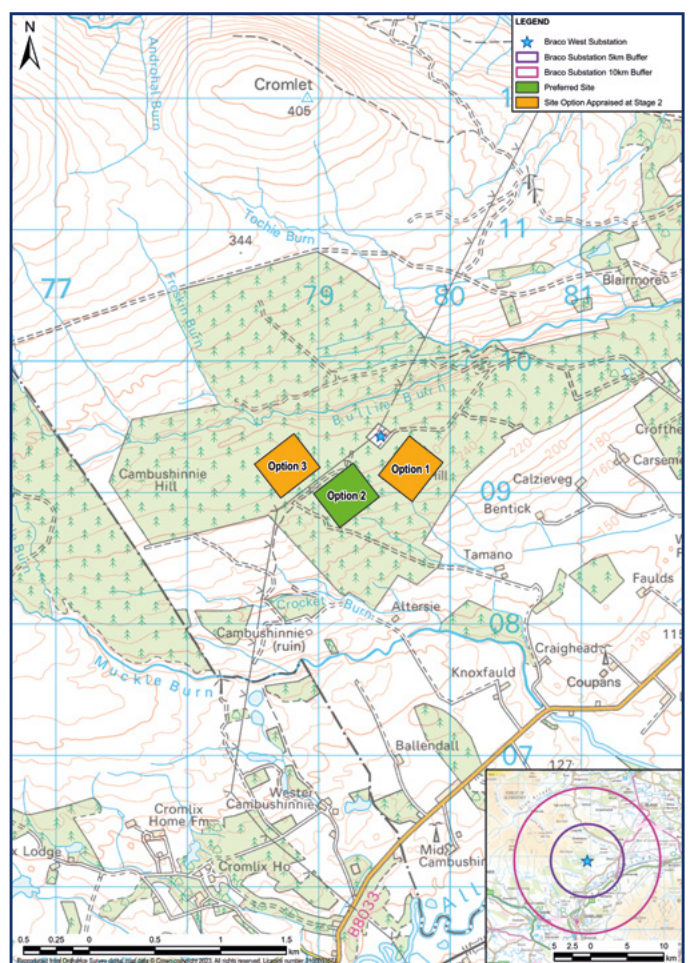
We recognise that this is a large development, and that landscape design will play an important role in reducing the landscape and visual impact.

In response, we carried out ground investigation works in November 2023 at both sites 2 and 3 to understand the suitability of ground conditions at both sites.

The presence of widespread peat at site 3, and limited peat deposits at site 2, confirmed that site 3 would have both significant environmental and engineering constraints relating to the excavation of deep peat and likely to face significant stakeholder objection.

## What next?

We are now at the 'pre-application' stage of our site selection process and following this consultation, we will engage again in June 2024, to share feedback from this consultation and any subsequent changes to design prior to submitting a planning application to the local planning authority and a Section 37 application to the Energy Consents Unit.



## Why this site?

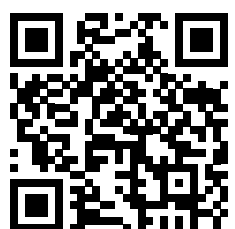
The presence of widespread peat at Site option 3, and limited peat deposits at Site option 2, confirmed that Site option 3 would have both significant environmental and engineering constraints relating to the excavation of deep peat and likely to face significant stakeholder objection.

Overall, site 2 still remains the preferred site from an environmental and engineering perspective following the completion of the site selection process.

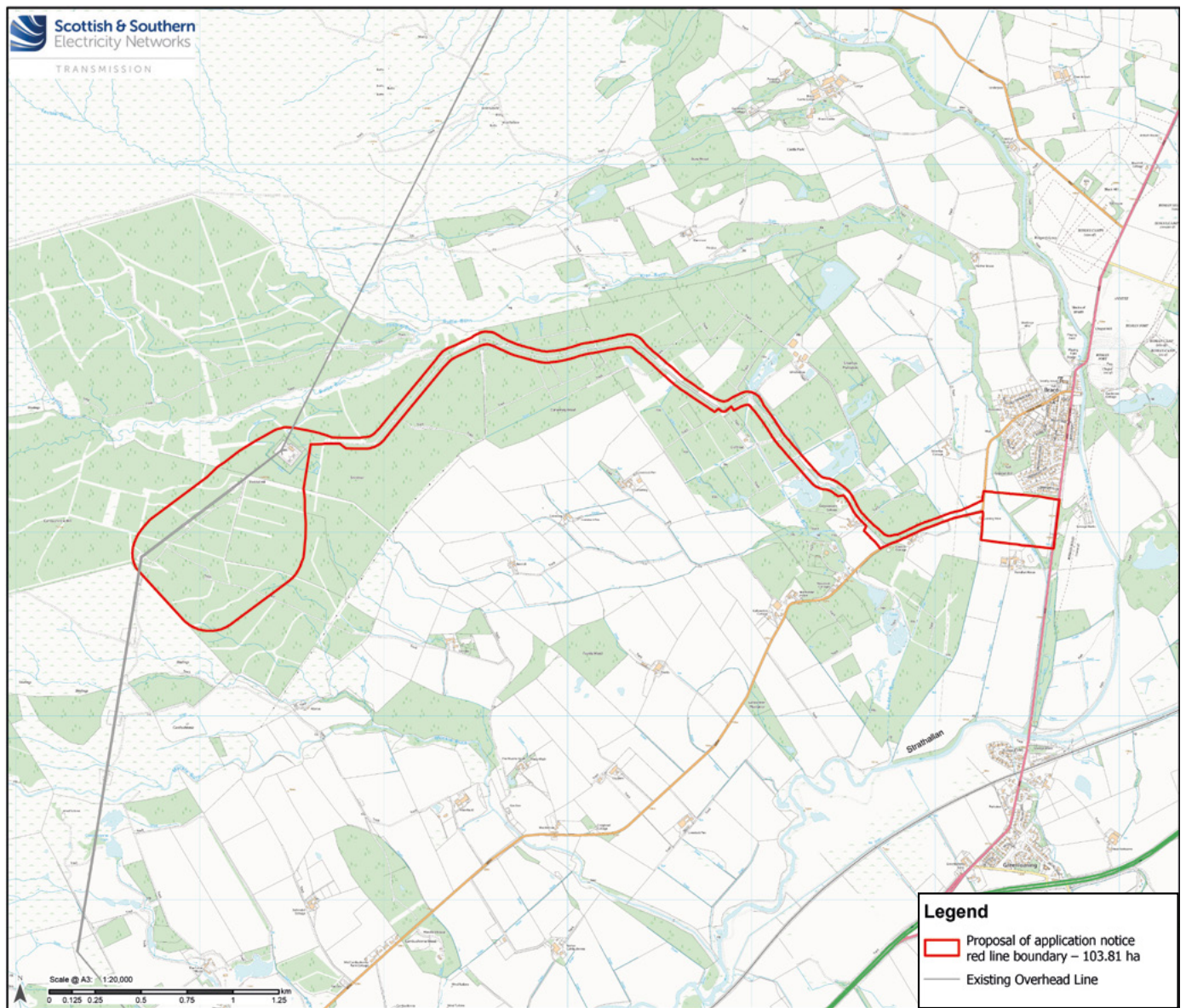


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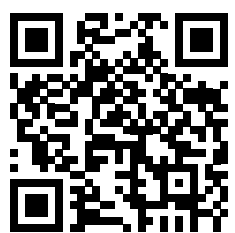


# Proposed site boundary



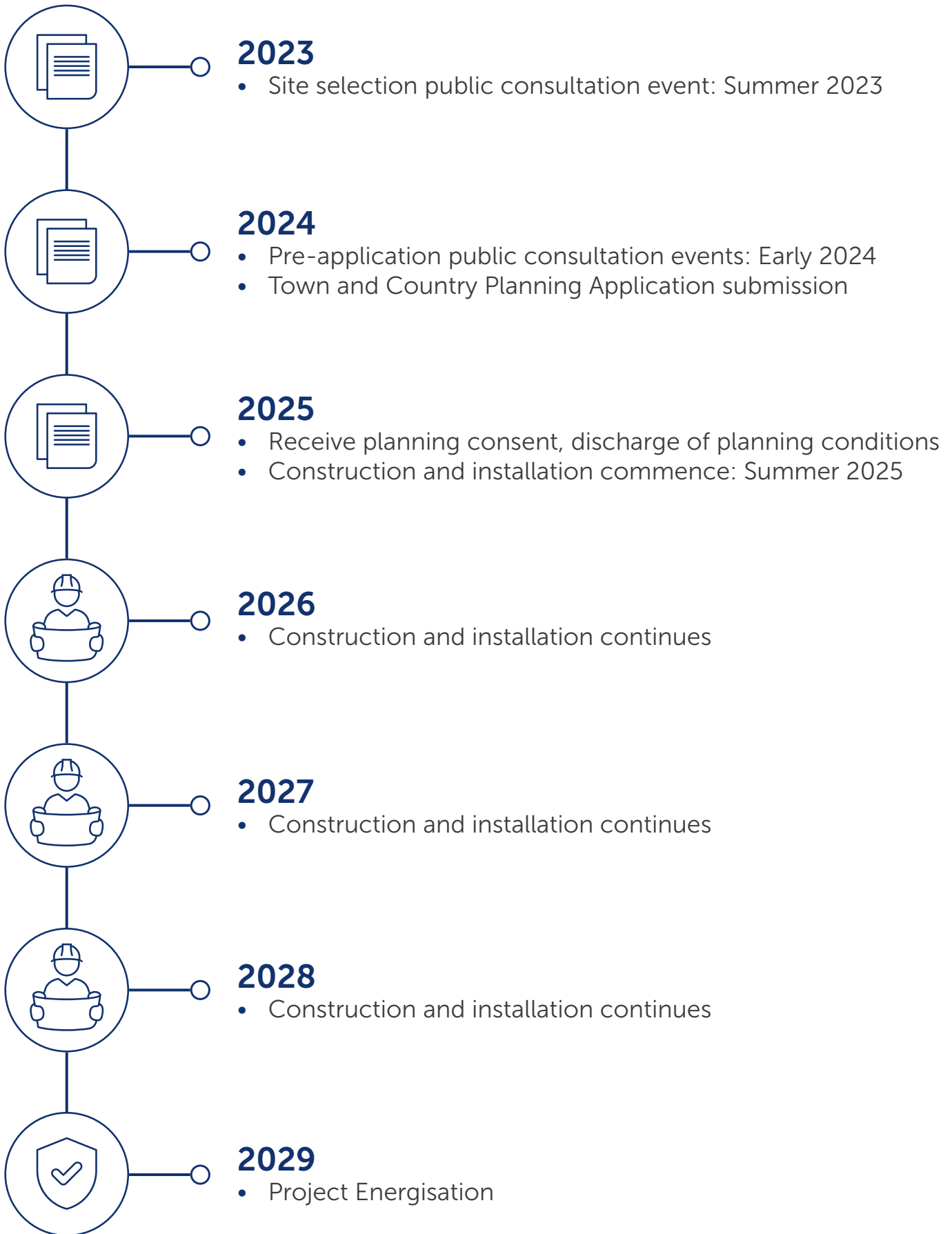
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# Project timeline



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