SP ENERGY NETWORKS

Powering the future

Kendoon to Tongland 132kV Reinforcement Project

A 132kV overhead line, similar to some of those required between Kendoon and Tongland

Public consultation - October 31 until December 21, 2016
Deadline for feedback January 13, 2017

Background

Last year SP Energy Networks consulted communities about our plans to modernise Dumfries and Galloway's ageing electricity network and expand its capacity. The Dumfries and Galloway Strategic Reinforcement Project included proposals for a new 400,000-volt (400kV) west-to-east overhead line from the South Ayrshire coast to Cumbria, four new high voltage substations and new 132,000-volt (132kV) north-to-south overhead lines between Kendoon and Tongland.

Since then the future needs of the transmission network have changed. To make sure our proposals are the most efficient and economical, we carried out a cost-benefit analysis with National Grid, the GB Transmission System Operator. As a result, the scope and scale of our original proposals have been reduced. However, we still need the new 132kV overhead lines to replace existing ones that are at the end of their operational life so that we can guarantee local electricity supplies for generations to come.

That means we are only going ahead with proposals for the new 132kV overhead lines between Kendoon and Tongland. To avoid confusion with the original scheme, the reduced proposal will be called the Kendoon to Tongland 132kV Reinforcement Project, or KTR Project, from now on.

More information

This leaflet is just a guide to the project and the consultation. For more detailed information about the project, the process, and the work we've done so far please visit our website www.spendgsr.co.uk

The second round of consultation

Hundreds of people responded to our first round of consultation in 2015, helping us identify the best broad corridor of land within which the new KTR Project could be built. Since then we have been working to find potential routes for new overhead lines within that area, and now we want to know what people think about them.

See inside for more information, a map, details of public exhibitions, how you can make contact and how you can give us your views.

Please make sure you send us your feedback by midnight on January 13, 2017

The Kendoon to Tongland 132kV Reinforcement Project

The project involves replacing the following existing 132kV overhead lines, which are all supported on steel towers at the moment:

1. Polquhanity (3km north of Kendoon) to Kendoon
This will involve building a new 132kV double circuit overhead line supported on steel towers (type L7).

2. Kendoon to Glenlee
This will involve building a new 132kV double circuit overhead line supported on steel towers (type L7).

3. Carsfad to Kendoon
This will involve building a new 132kV single circuit overhead line supported on wooden poles.

4. Earlstoun to Glenlee
This will involve building a new 132kV single circuit overhead line supported on wooden poles.

5. Glenlee to Tongland
This will involve building a new 132kV double circuit overhead line supported on steel towers (type L4).

In addition, although we will not need to build any new substations, we will need to extend our existing 132kV substation at Glenlee to the south west by approximately 90m by 40m. We may also need to carry out a minor boundary extension to the existing Kendoon substation.


Existing 132kV substation at Glenlee

We can't remove the existing overhead lines until the new ones are built. But when the project is complete, they will be taken down. Once all these new lines are built we can remove approximately 90km of existing lines, which also includes the existing overhead line between Tongland and Dumfries.

How do the new overhead lines differ?

Our new overhead lines will be mostly double circuits. This means they can carry more power compared to the existing single circuit lines. This is the most efficient way to provide the extra resilience and security the local electricity supply needs. It will also provide some extra capacity, giving us more flexibility for future developments. However, we will need to use a different, larger type of steel tower to support the new overhead lines. The diagram below shows our existing towers (PL1), which have a standard height of 20m, and our proposed new towers (L4 and L7), which have standard heights of 26m and 27m respectively. The new towers will also have six arms instead of three. That's because each of the two new circuits has three sets of wires and there is also an earth wire which runs along the top.

At some points we can still use single circuit overhead lines but these will be supported on wooden poles rather than the steel towers which are there at the moment.


The single circuit 132kV overhead line between Glenlee and Tongland

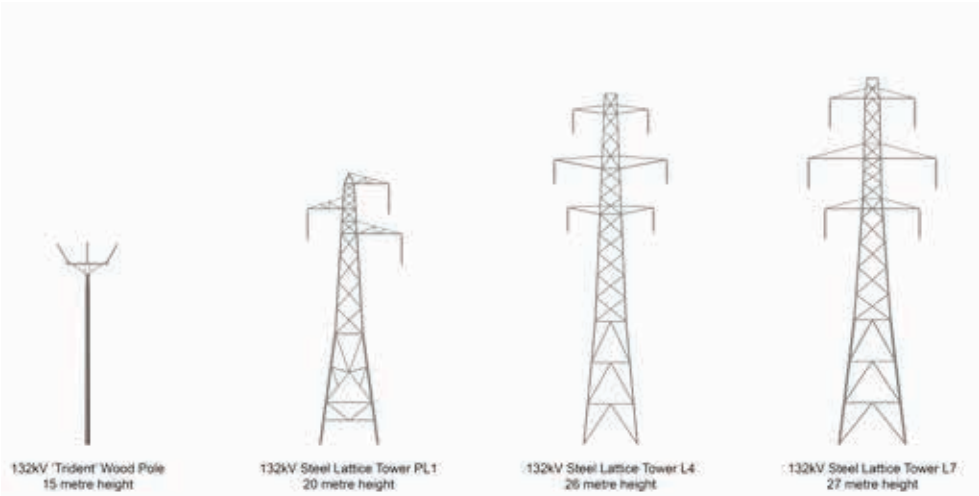


Illustration of standard heights of existing and proposed structures

The public consultation

The last round of consultation helped us identify the proposed corridors, which have formed the basis of the study area for potential route options.

You can see the corridor, the existing overhead lines and our preferred routes for the new overhead lines on the maps inside this leaflet.

A typical 132kV wooden pole overhead line

Preferred routes

View towards Loch Ken and existing 132kV line

SP Energy Networks has been working with independent environmental consultants to identify options for potential routes. We then appraised each option for its impact on various criteria including local views, the character of the landscape, biodiversity, cultural heritage, flood risk, forestry and other land uses. Our preferred routes are the ones that we believe balance our technical requirements with the impact on the environment and the people who live, work and enjoy spending their spare time in the area. However, this consultation is to help us find your views on the preferred routes so we can test our findings against your feedback before we proceed any further.

More information about the preferred routes, including details of the alternatives we considered, can be found in our KTR Project Routeing and Consultation Document (October 2016) which is available on the project website or at one of our exhibitions or information points.

What we would like your views on

In the second round of consultation we would particularly like your opinions on:

- The preferred routes;
- Any of the alternative route options we considered during the appraisal process;
- The removal of the existing overhead lines; and
- Any other issues, suggestions or feedback you would like us to consider. We would particularly like to hear your views on your local area, for example areas you use for recreation, local environmental features you would like us to consider, and any plans you may have to build along the line route.

We plan to publish the results of this consultation early in 2017 and will give you another chance to comment on the proposals as they develop in future.

See the back page for all the ways you can make your views known, or contact us with your queries:

Freephone: 0800 157 7353
Email: dgsr@communityrelations.co.uk
Post: FREEPOST SPEN DGSR

How to make your views known

Our second round of consultation will run for eight weeks from October 31 until December 21, 2016. However, due to Christmas, we are allowing people until January 13, 2017 to send in their feedback. Below are the best ways to find out more or talk to us.

Come and meet us: We're holding four public exhibitions (see inside for details). Here you can see detailed maps, see our plans first hand, talk to members of the project team and pick up a feedback form.

Visit the website: Our dedicated website www.spendgsr.co.uk has lots more information. You can view or download all the project documents, send us your feedback online and sign up for project updates by email.

Call us: Our Freephone number is 0800 157 7353. Lines are open during normal office hours. Outside these hours you can leave a message but be sure to leave your contact details so we can call you back. Call us for information or to request a feedback form.

Write to us: Email us at dgsr@communityrelations.co.uk or write to us at FREEPOST SPEN DGSR (no stamp needed, just write the address exactly as it appears in a single line).

What happens next?

SP Energy Networks attaches great importance to the effect its work may have on the environment and local communities and is keen to hear the views of local people to help develop the project in the best way.

The KTR Project is a national development and needs consent from the Scottish Ministers under Section 37 of the Electricity Act. There will be one further round of consultation before our application is submitted which will focus on the detailed route alignment. After we have submitted our application with the accompanying Environmental Statement, the Scottish Government's Energy Consents and Deployment Unit will carry out formal statutory consultation with the public and stakeholders such as Dumfries and Galloway Council. We aim to complete the project by 2023.

Key project documents

The following documents are also available which provide more detail about the project. You can find them on our website and at information points:

- **KTR Project: Routeing and Consultation Document (October 2016)** - For information about the process we followed to identify our preferred routes.
- **Summary of Feedback from 2015 Consultation, which remains relevant to a revised scheme** - Which contains the feedback we got in the first round of consultation and how this influenced our proposed corridors.
- **Dumfries and Galloway Strategic Reinforcement Project Conclusions Report, Executive Summary** - An excerpt from the document submited to Ofgem explaining how studies into the original DGSR Project resulted in the reduced KTR Project.
- **SP Energy Networks: Approach to Routeing and Siting Major Transmission Infrastructure** - Describing the approach SPEN takes to routeing overhead lines.

If you would like a large text or alternative version of this document please contact us on 0800 157 7353 or go to our website www.spendgsr.co.uk.

Overview of the routeing process so far

The first stage in deciding on a route for any new overhead line is to identify a study area within which possible routes can later be identified.

Our first round of consultation invited people to comment on corridors for the new 132kV overhead line between Kendoon and Tongland. After carrying out detailed studies and taking account of what people told us we confirmed our proposed corridor in July 2016. This corridor forms the basis for our study area.

Since then we have been looking for potential routes within this corridor. There are certain points on our network which need to be linked as part of the KTR Project. These points are Polquhanity, where we need to connect to a new overhead line which is currently under construction, and existing substations at Kendoon, Glenlee and Tongland. As part of this we also need to provide replacement connections between Kendoon & Carsfad and between Earlstoun & Glenlee.

The complete circuit is made up of three parts: Polquhanity to Kendoon, Kendoon to Glenlee, and Glenlee to Tongland. We call these Zones A, B and C. This map shows an indicative outline of the proposed corridor and various route options we identified in each zone.

Our preferred routes are shown in bold. These are the ones we think provide the best overall balance of our environmental, socio-economic and technical considerations. Please see inside for our preferred routes in more detail.

Key

- Substation
- Substation and hydro electricity generating station
- New sealing end and terminal tower
- Existing 132kV overhead line to remain
- Existing 132kV overhead line to be removed
- New 132kV wood pole line currently under construction
- New 132kV overhead line currently under construction

Section

- Carsfad to Kendoon
- Earlstoun to Glenlee
- Zone A - Polquhanity to Kendoon preferred route
- Zone A - Polquhanity to Kendoon alternative routes
- Zone B - Kendoon to Glenlee preferred route
- Zone B - Kendoon to Glenlee alternative routes
- Zone C - Glenlee to Tongland preferred route
- Zone C - Glenlee to Tongland alternative routes
- Proposed corridor

0 5 10 km

Visit an information point from October 21, 2016

Folders containing this leaflet and all the project information will be available throughout the consultation period at the following venues. Please check in advance as opening times may vary.

Dalry Library. Main Street, St. John's Town of Dalry, DG7 3UP. Tel: 01644 430234.
Kirkcudbright Library. High Street, Kirkcudbright, DG6 4JW. Tel: 01557 331240.
Dumfries Ewart Library. Catherine Street, Dumfries, DG1 1JB. Tel: 01387 253820.
Dumfries Planning Office. English Street, Dumfries, DG1 2HS. Normal office hours.

Come and see us

Exhibitions will be held in the following locations. No need to make an appointment. Just drop in any time between 2pm and 8pm on the dates mentioned.

Tuesday November 1, 2016
Dumfries
Cairndale Hotel (Solway Suite), English Street, DG1 2DF

Wednesday November 2, 2016
Kirkcudbright
Kirkcudbright Parish Church Hall, St. Mary Street, DG6 4AQ

Thursday November 3, 2016
Mossdale
Mossdale Village Hall, Mossdale, DG7 2NF

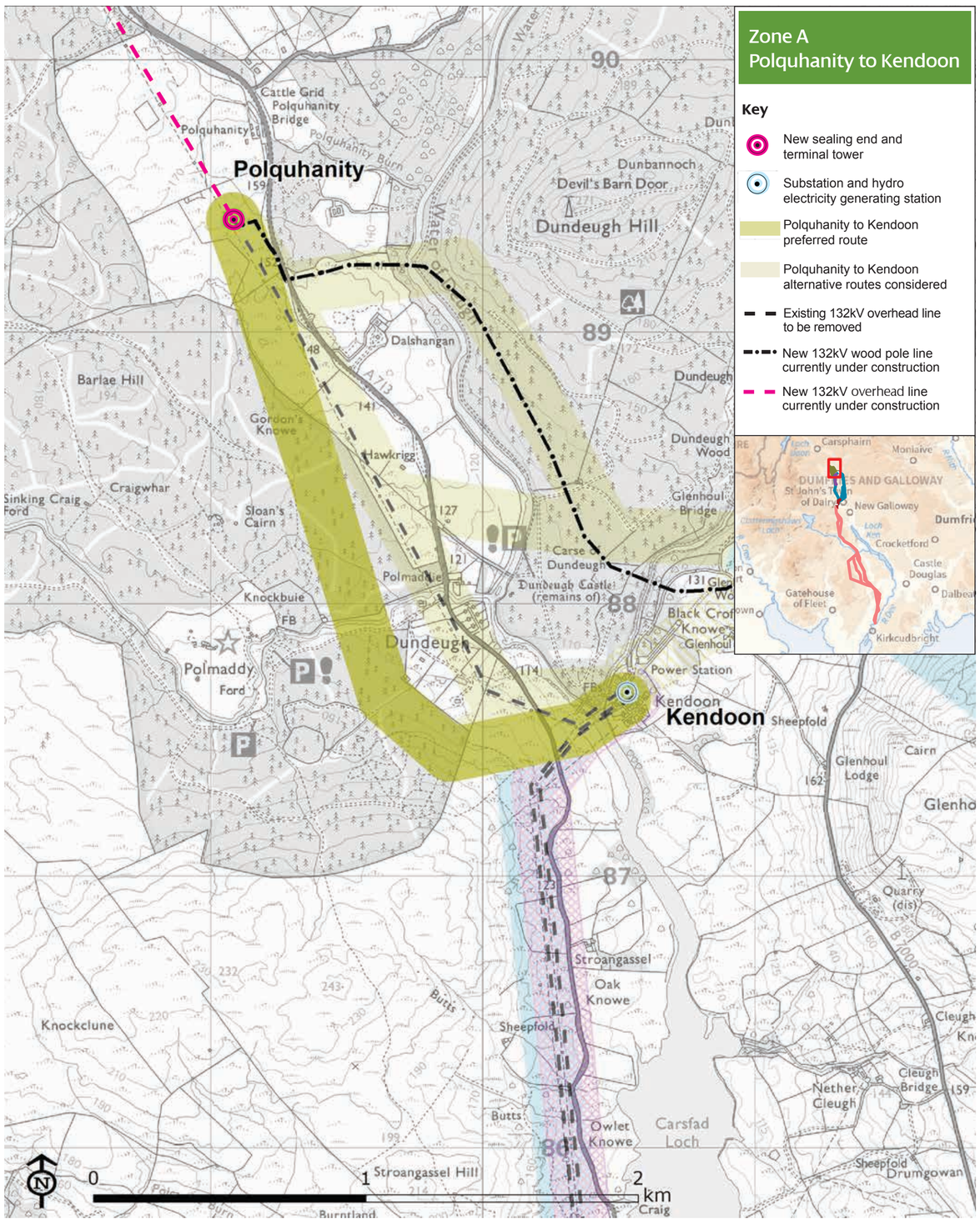
Friday November 4, 2016
New Galloway
New Galloway Town Hall, High Street, DG7 3RL

Our preferred routes

After studying landscape, environment, technical requirements and stakeholder feedback we identified a number of possible routes in each zone. Each was compared against the others in the same zone for:

- Length;
- Biodiversity and geological conservation (natural heritage);
- Landscape and visual amenity (including recreation and tourism);
- Cultural heritage;
- Land use (including committed development and forestry); and
- Flood risk.

The one we felt delivered the best overall balance in each zone became our preferred route in that zone. You can find full descriptions of all the routes we considered, our assessment of them and our conclusions in our Routeing and Consultation Document (October 2016).



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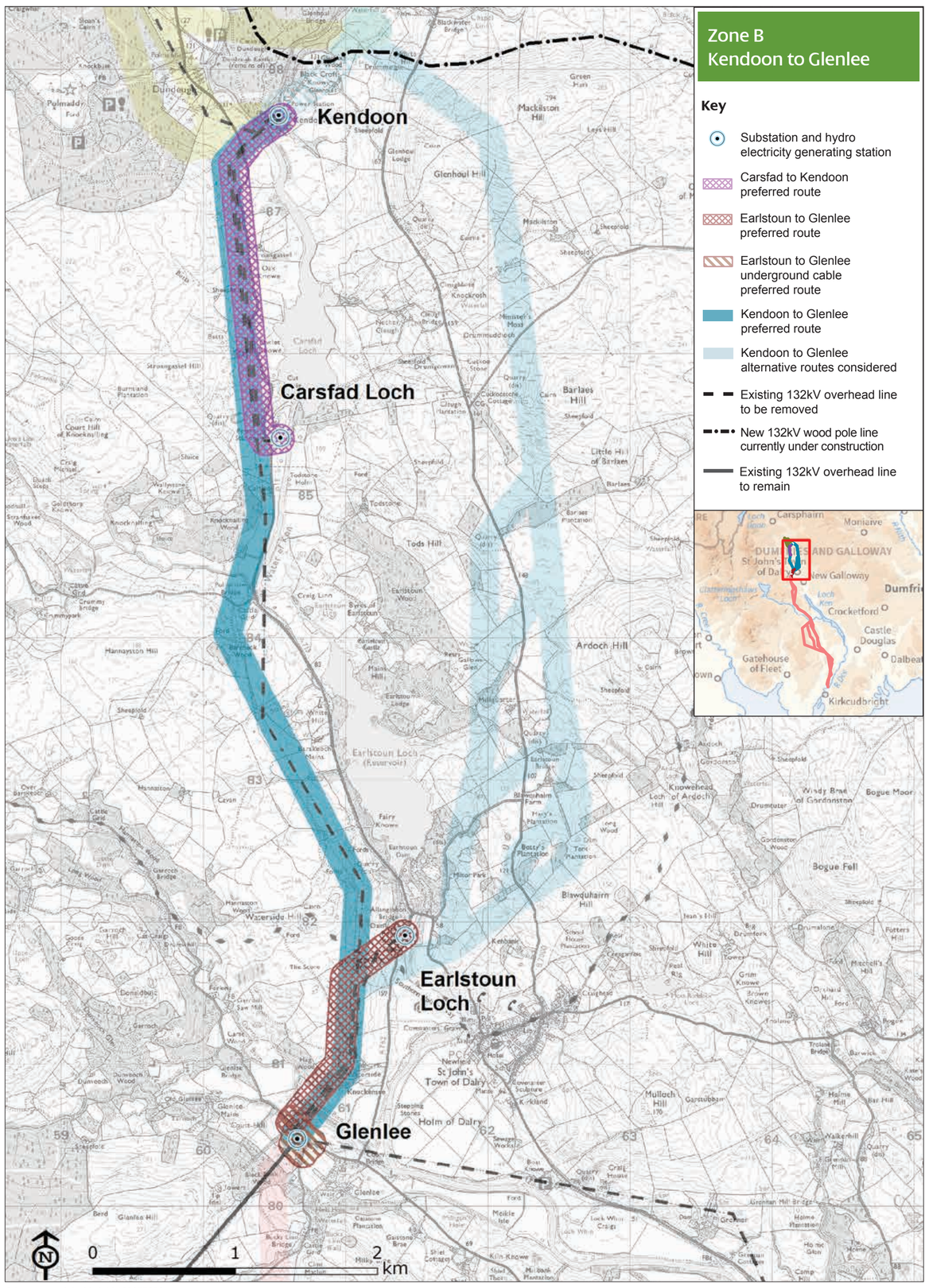
Zone A: Polquhanity to Kendoon

In this zone, the line starts at the point where another overhead line ends. It finishes at the existing Kendoon substation.

At the moment, the 132kV overhead line in this area is a mixture of single and double circuits supported on steel towers with a standard height of 20m. It will be replaced by a new double circuit 132kV overhead line supported on L7 steel towers with a standard height of 27m.

The substation at Kendoon may also need a small boundary extension to accommodate new connection works.

We identified six route options in Zone A. Our preferred one is the one furthest west. It heads south-east from Polquhanity into coniferous forestry at the eastern edge of the Galloway Forest Park. It emerges from forestry south-west of Dundeugh before turning east, north-east over the A713 and the Water of Ken to Kendoon substation.



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Zone B: Kendoon to Glenlee

This zone requires three new 132kV overhead lines. One will be supported on steel towers. The other two will be supported on wooden poles.

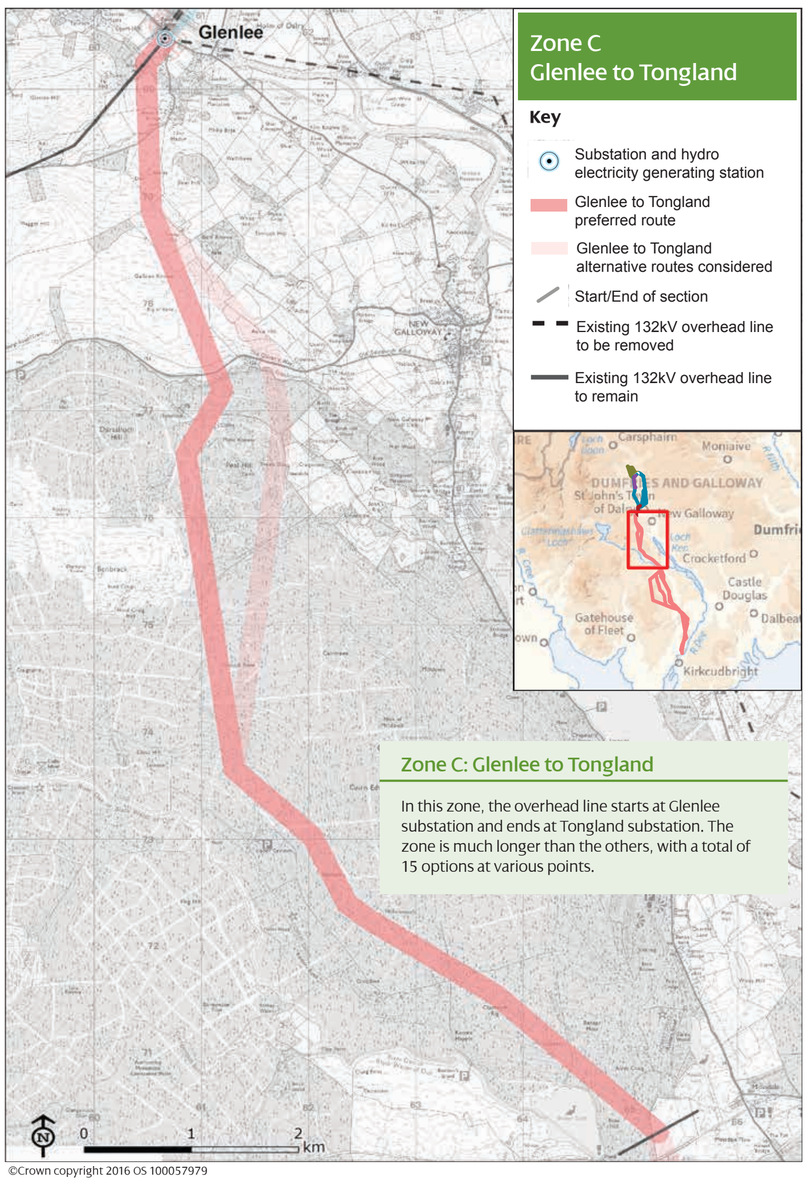
At the moment the three existing 132kV overhead lines consist of single and double circuits supported on PL1 steel towers with a standard height of 20m. They will be replaced by:

- A new double circuit 132kV overhead line between Kendoon and Glenlee supported on L7 steel towers with a standard height of 27m;
- A new 132kV overhead line between Carsfad and Kendoon on wooden poles with a standard height of 15m; and
- A new 132kV overhead line between Earlstoun and Glenlee on wooden poles with a standard height of 15m.

Kendoon to Glenlee: We identified six possible routes for the new 132kV overhead line on steel towers. Our preferred route follows the existing line south along the western slopes of the Glenkens Valley before turning south-west near Knocknalling Wood. It rejoins the existing line near Glen Strand before heading across the mid-slopes of the Glenkens Valley, through Hag Wood and across Coom Burn into Glenlee substation.

Carsfad to Kendoon: Only one possible route was found for this new 132kV overhead line, which will be largely on wooden poles. It heads west from Carsfad hydro power station across the A713 then turns north across the western slopes of the Glenkens Valley. At the head of Carsfad Loch it crosses the A713 towards the Water of Ken, before transferring to steel towers to cross the Water of Ken into Kendoon substation.

Earlstoun to Glenlee: Only one possible route was found for this new 132kV overhead line, which will be largely on wooden poles. It heads south-west from Earlstoun hydro power station and then turns south, following the route of the existing overhead line through the Glenkens Valley. It then heads south-west through Hag Wood and over Coom Burn. Next to Glenlee substation, the line transfers to an underground cable along a minor road and into an extension to the substation.



Zone C: Glenlee to Tongland

In this zone, the overhead line starts at Glenlee substation and ends at Tongland substation. The zone is much longer than the others, with a total of 15 options at various points.

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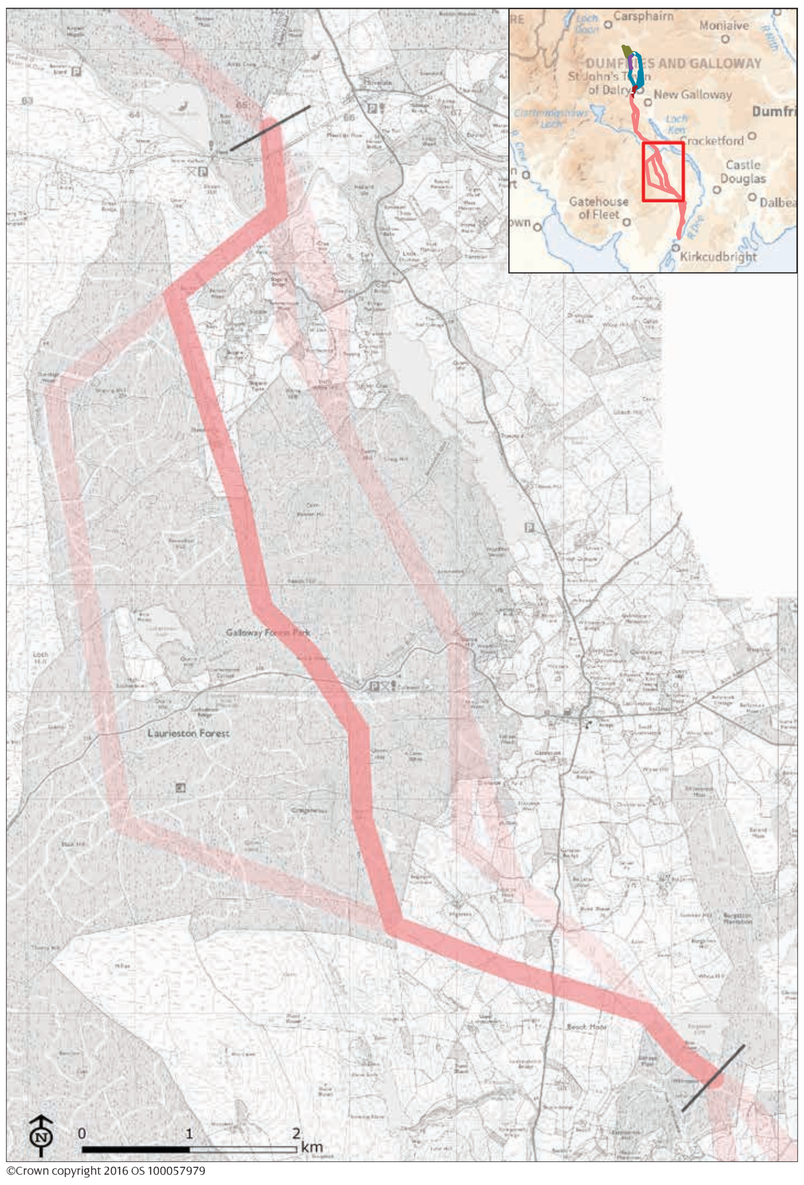
Our preferred route heads west from Glenlee, following an existing overhead line up the western slopes of the Glenkens Valley. It then turns south-west and then south, south-east near Bucks Linn Bridge to cross higher ground between Shiel Hill and Gallows Knowe. It then crosses the A712 and Knocknairling Burn to enter the coniferous forestry of Galloway Forest Park. From here it runs south, avoiding the highest ground of Peal Hill, before turning south-east around Cairn Edward Hill and Bennan Hill and east of Stroan Loch.



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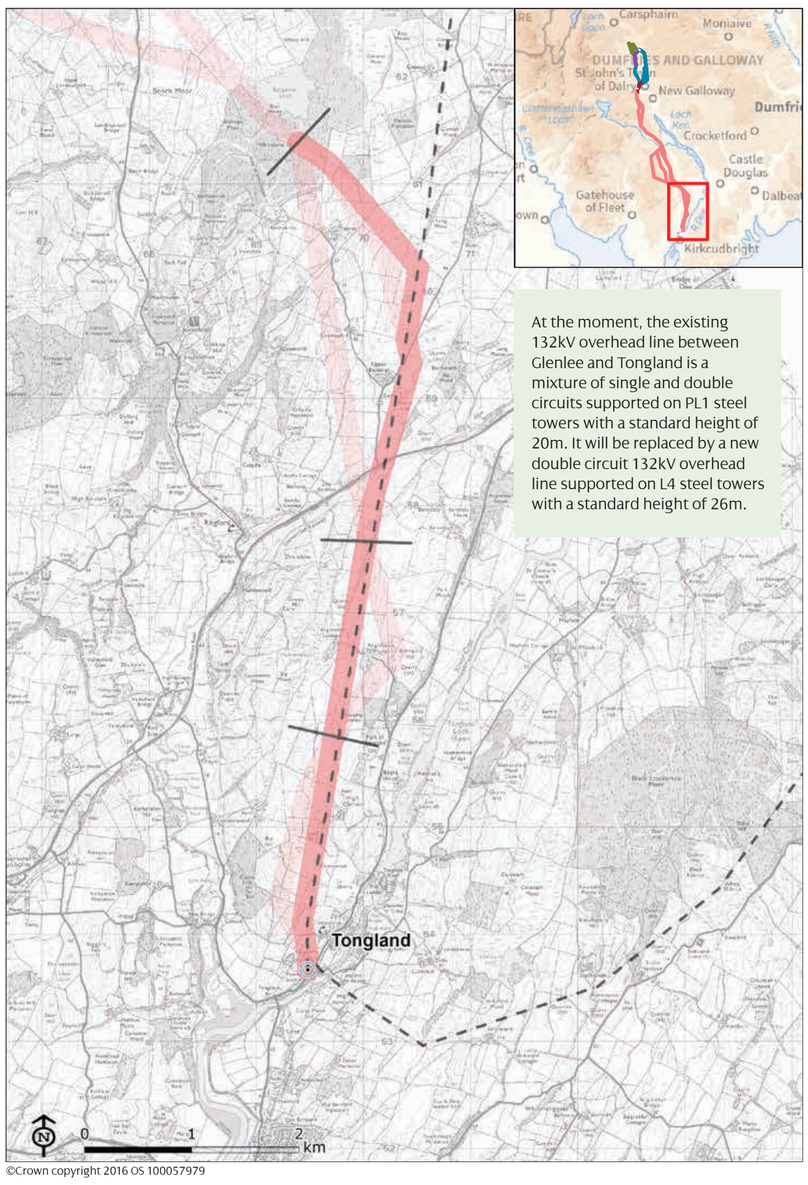
The preferred route heads south past Stroan Viaduct and then south-west through coniferous woodland. West of Bennan Hill, it turns south again, passing between the higher ground of Slogarie Hill and the designed landscape of Slogarie House. The route heads south, south-eastwards around the western flanks of Kenick Hill crossing the minor road at Kenick Wood and emerging from the coniferous forestry at the south-eastern edge of Laurieston Forest.



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From Bargatton Loch the preferred route heads south-east until reaching the existing overhead line south-west of Dunlop. It then follows the existing overhead line quite closely, passing east of Upper Balannan and crossing the A75 north-east of Ringford towards Tongland substation.