

# Dun Law Extension to Galashiels 132kV Reinforcements -

*Preferred Route Option Update*

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**Prepared for:**

SP Energy Networks  
320 St Vincent St  
Glasgow, G2 5AD

**Prepared by:**

AECOM Limited  
1 Tanfield  
Edinburgh EH3 5DA  
United Kingdom

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# Dun Law Extension to Galashiels 132kV Reinforcements - Preferred Route Option Update

## Introduction

In early summer 2024, SP Energy Networks consulted on its preferred route option for a new 132 kilovolt (kV) overhead line which would connect Dun Law Extension Wind Farm to the electricity transmission system (referred to as the ‘Grid Reinforcement’). Since the identification of the preferred route option (referred to as the ‘2024 preferred option’), SP Energy Networks has undertaken further studies to modify and refine the 2024 preferred route option in response to consultation feedback and information received. This Technical Note describes how the 2024 preferred route option has been modified and sets out a revised preferred route (referred to as the ‘2025 preferred option’) which will be subject to further consultation.

## Previous Routeing Study

In the original routeing study (see Dun Law Wind Farm - Grid Connection, Routeing and Consultation Document), the study area was split into three sections (sections 1-3) in which alternative route options were identified and assessed (Figure 1). This concluded with the identification of the 2024 preferred route option. This was routed across undulating agricultural land between an existing 400 kV overhead line (known as ‘ZA route’) and the A68, from Dun Law Extension Substation to the proposed Gala North Substation. From here, the route largely followed an existing 132 kV overhead line (known as ‘P route’), which would be removed following construction of the Grid Reinforcement, to the north of Galashiels where the Grid Reinforcement would tee-in to a new 132 kV overhead line between the existing Galashiels and Eccles substations.

There were a number of constraints which influenced the selection of the 2024 preferred route option including:

- sites or areas of the highest or high environmental value such as scheduled monuments, Sites of Special Scientific Interest (SSSIs);
- scattered settlements and residential properties along the A68 and in the wider area; and
- technical constraints in particular the existing 400 kV overhead line (ZA route) and the existing 132 kV overhead line (P route).

## Assessment of Route Options and Modifications

The following sections provide an overview of key constraints which influenced routing and set out how the 2024 preferred route option has been modified in response to feedback. Route options are also illustrated in Figure 1.

### Section 1. Dun Law Wind Farm to west of Lauder

In section 1 route option 1B was previously identified as preferred. A key constraint influencing route selection is the existing ZA route as it is generally preferable to avoid crossing higher voltage overhead lines with lower voltage lines. In response to feedback that the 2024 preferred route option is too close to settlements further consideration has been given to the Grid Reinforcement crossing ZA route and keeping to the west of it as much as possible. This would require a section of the Grid Reinforcement to be undergrounded with sealing end compounds located where the route transitions from overhead line to underground cable and vice versa. The options considered included a crossing within the original route option 1A as well as one to the west referred to 1A-1 and new crossing 1B-3, which would enable a route option to switch from option 1A to 1B providing opportunities to avoid or reduce potential impacts on some settlements along the A68.

- Route Option 1A – this option is not considered to provide a feasible crossing point of ZA route. A combination of steep topography, crossing of the Raughy Burn and the proximity to Kirktonhill and Over Hartside scheduled monuments as well as proximity to Hartside Farm make this option less preferable compared to alternatives. Sealing end structures would require to be located to north of ZA route in proximity of Kirktonhill scheduled monument, and to the south in proximity to Over Hartside scheduled monument and Hartside Farm with the potential for increased impacts compared to alternatives.
- Route Option 1A-1 – this option provides an opportunity to avoid some of the constraints which affect route option 1A but would affect the overall directness of the Grid Reinforcement. It would require an overhead line crossing the Dere Street scheduled monument between Turf Law and Over Hartside towards ZA route. It would cross ZA route between Toddleburn Wind Farm and Hartside Rig. It would require a sealing end structure on the hillslopes above a scheduled monument at Over Hartside with increased potential for setting impacts as well as require a crossing of a relatively narrow valley and watercourse.
- Route Option 1B-3 – this option would cross from Route Option 1A to 1B between Mountmill and Threeburnford. It avoids a requirement to cross the Dere Street scheduled monument but is routed to the west of Oxton Roman Camps. A sealing end structure would be located within the valley adjacent to the existing gas compressor station with the underground cable routed southwest up the hillslope between Airhouse Wood SSSI and Airhouse Wood Cottages crossing ZA route in a



comparatively flatter area without a requirement to install underground cables through a watercourse.

In section 1 on the basis of undergrounding a section of the Grid Reinforcement crossing ZA route, the 2025 preferred option comprises the northern part of route option 1A from Dun Law Extension Wind Farm to Mountmill, route option 1B-3 crossing the ZA route towards Threeburnford and from there route option 1A towards the B6362 at Lauder Common.

## **Section 2. West of Lauder to Gala North Substation**

In section 2, route option 2C was previously identified as preferred. This lies to the east of ZA route and would largely run parallel to it, towards the proposed Gala North Substation where both the Grid Reinforcement and ZA route would connect before then continuing onwards towards Galashiels and Coldstream respectively.

As a result of changes within section 1 to move the Grid Reinforcement further west it is preferable to continue through route option 2A instead of crossing Lauder Common north of the B6362 in a southeastern direction towards route option 2C where it would need to cross ZA route and P route. While P route would be removed, this would not be until after the Grid Reinforcement has been constructed. A benefit of keeping to the west is that it increases the distance between the Grid Reinforcement and the larger settlement of Lauder as well as avoids paralleling part of the Southern Upland Way close to the proposed Gala North Substation. However, in order to utilise route option 2A, a section of the Grid Reinforcement will require to be undergrounded as it connects to the proposed Gala North Substation. This prevents any conflict with the preferred route for the Cross Border Connection which is routed westwards from the proposed substation.

In section 2, the 2025 preferred option is therefore route option 2A. This accounts for the change in section 1 and ensures the Grid Reinforcement remains as direct as possible, avoids unnecessary changes of direction and avoids crossing the existing ZA route and P route.

## **Section 3. Gala North Substation to new 132 kV Overhead Line**

In section 3, route option 3B was previously identified as preferred and included some optionality around Over Langshaw and at Avenel Plantation before connecting to the new Galashiels to Eccles 132 kV overhead line north of Langlee.

The main change in this section is the location of where the Grid Connection tees into the new Galashiels to Eccles 132 kV overhead line. The tee-in point has moved further east to the north of Wester Housebyres. Around Over Langshaw it is considered preferable to utilise the eastern-most part of the option. This avoids crossing P route and avoids routeing between Over Langshaw and Langshaw but increases proximity to

properties at Bluecairn. The existing P route is located to the northeast of a residential property and to the west of a farm which is currently partially screened by a strip of mature woodland. Further south, the eastern-most part of the option is also considered preferable as it enables a more direct route to the tee-in point to the new 132 kV overhead line, increases the distance from Avenel Hill and Gorge SSSI, avoids a crossing of the Allan Water and also avoids more recently planted woodland.

In section 3 the preferred route option remains route option 3B utilising the eastern-most sub-options to avoid crossing P route and enable a more direct route to the proposed tee-in point on the new Galashiels to Eccles 132 kV overhead line.

## Summary of Grid Reinforcement Route Options

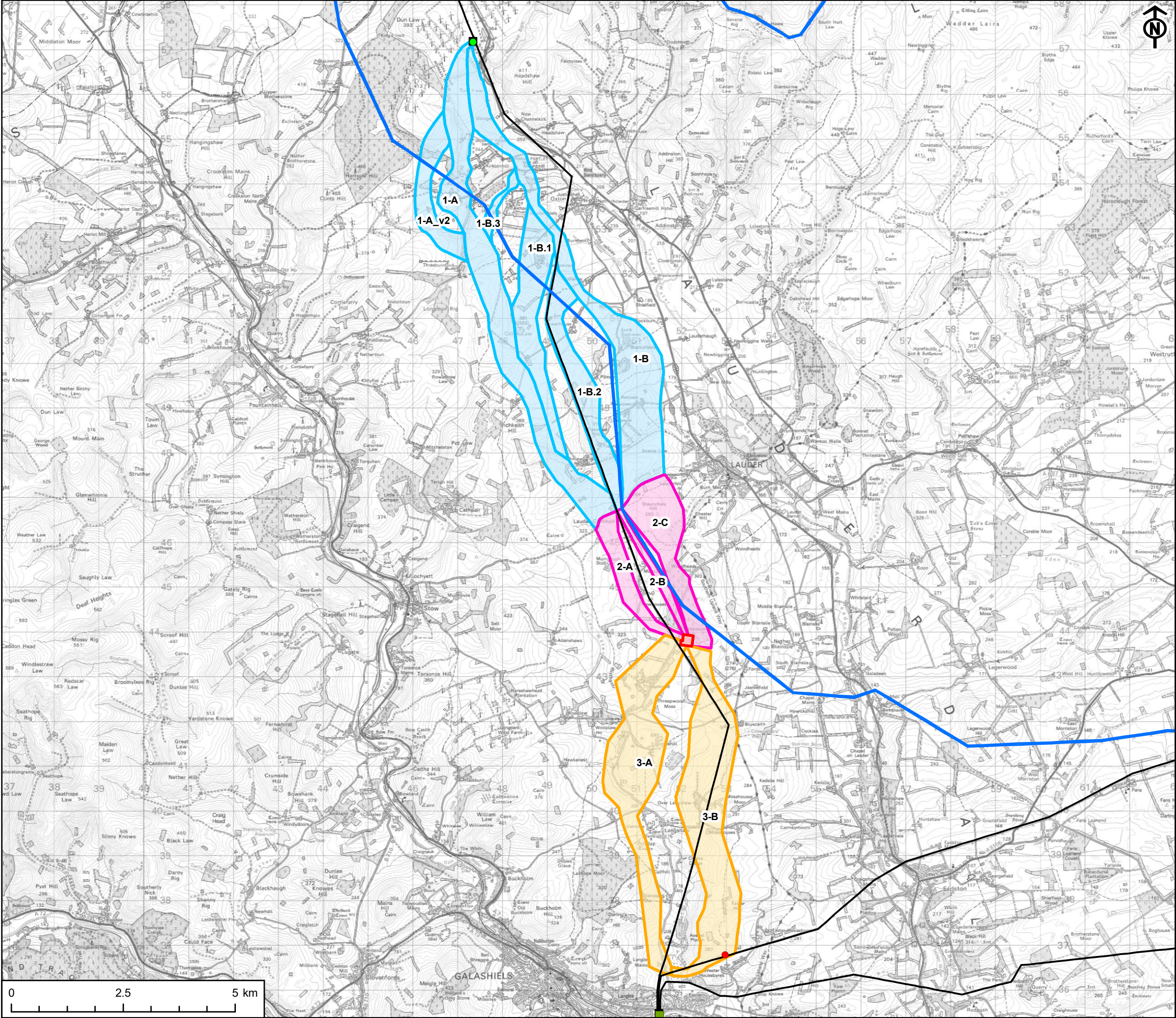
The table below provides an overview of the route options considered within each section and the make-up of the 2024 preferred option and the 2025 preferred option. Figure 2 provides a comparative overview of the 2024 and 2025 preferred options. Figure 3 provides an overview of the 2025 preferred option. Within it two sections of the route would be undergrounded where it crosses ZA route and at Gala North Substation.

Section	Previous Options Appraised	2024 Preferred Option	New Options Appraised	2025 Preferred Option
<b>1. Dun Law Wind Farm to west of Lauder</b>	1A 1B 1B-1 1B-2	1B	1A-1 1B-3	1B* 1B-3 1A**
<b>2. West of Lauder to the proposed Gala North Substation</b>	2A 2B 2C	2C	n/a	2A
<b>3. Proposed Gala North Substation to new 132 kV Overhead Line.</b>	3A 3B	3B	n/a	3B

\* Part of Route Option 1B from Dun Law Wind Farm to approx. Mountmill

\*\* Part of Route Option 1A from approx. Threeburnford to the B63662





PROJECT

Dun Law to Galashiels 132kV Reinforcement

CLIENT

SP Energy Networks

KEY

Gala North Substation Boundary

Dun Law Extension Substation - Start Point

New Galashiels to Eccles 132kV OHL - End Point

SPT Transmission Substation

Existing 33kV

Existing 132kV

SPT Overhead Transmission Network

Existing 132kV

Existing 400kV

Route Options

Section 1

Section 2

Section 3

TITLE

Figure 1  
Previous Route Options Considered

REFERENCE

DL\_20250306\_AC2\_1\_v1

SHEET NUMBER

1 of 1

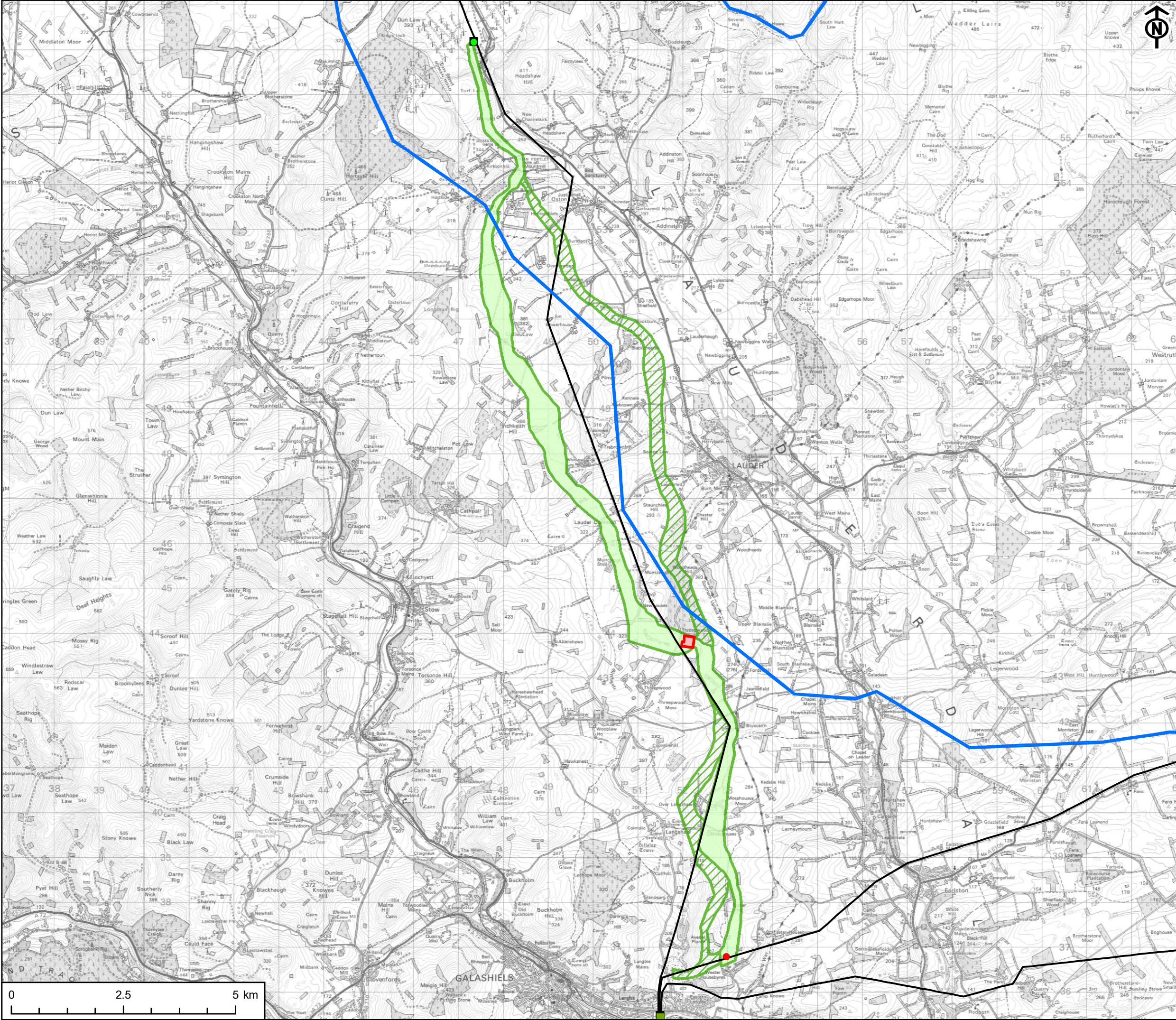
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PROJECT

Dun Law to Galashiels 132kV Reinforcement

CLIENT

SP Energy Networks

KEY

2024 Preferred Route Option

2025 Preferred Route Option

Gala North Substation Boundary

Dun Law Extension Substation - Start Point

New Galashiels to Eccles 132kV OHL - End Point

SPT Transmission Substation

Existing 33kV

Existing 132kV

SPT Overhead Transmission Network

Existing 132kV

Existing 400kV

TITLE

Figure 2  
2024 Preferred Route Option versus  
2025 Preferred Route Option

REFERENCE

DL\_20250306\_AC2\_2\_v1

SHEET NUMBER

1 of 1

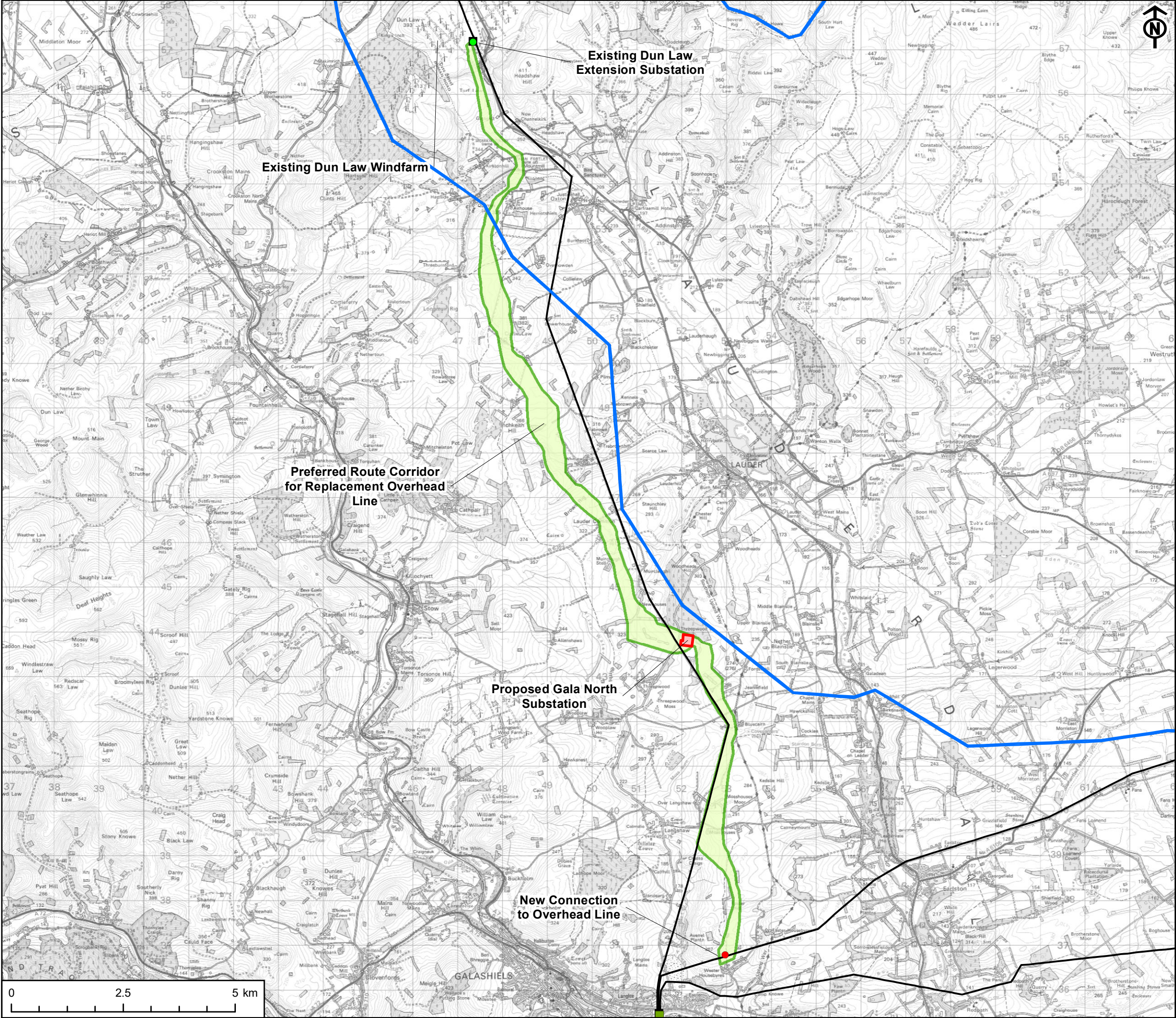
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PROJECT

Dun Law to Galashiels 132kV Reinforcement

CLIENT

SP Energy Networks

KEY

2025 Preferred Route Option

Gala North Substation Boundary

Dun Law Extension Substation - Start Point

New Galashiels to Eccles 132kV OHL - End Point

SPT Transmission Substation

Existing 33kV

Existing 132kV

SPT Overhead Transmission Network

Existing 132kV

Existing 400kV

TITLE

Figure 3  
2025 Preferred Route Option

REFERENCE

DL\_20250306\_AC2\_3\_v1

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