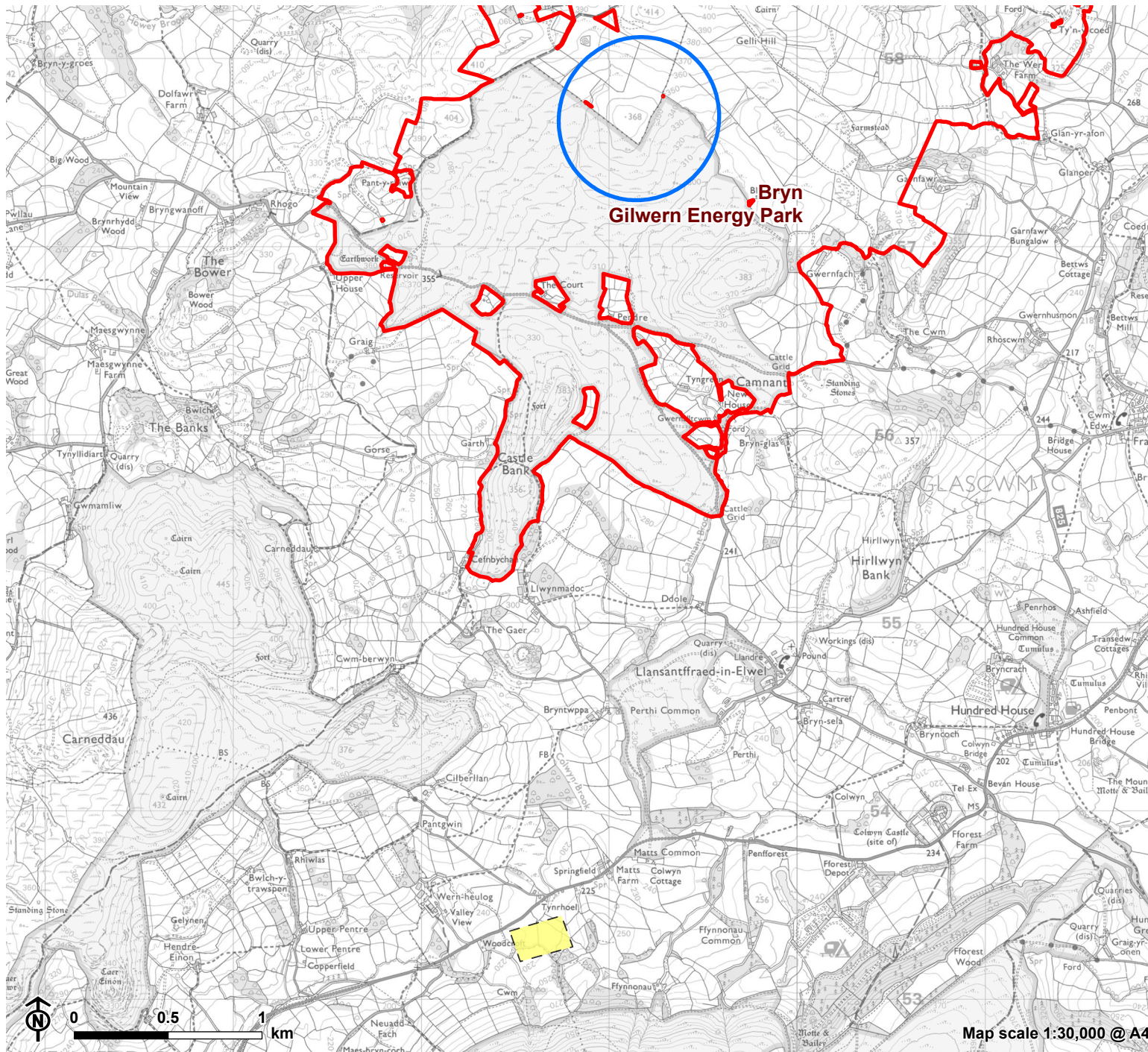


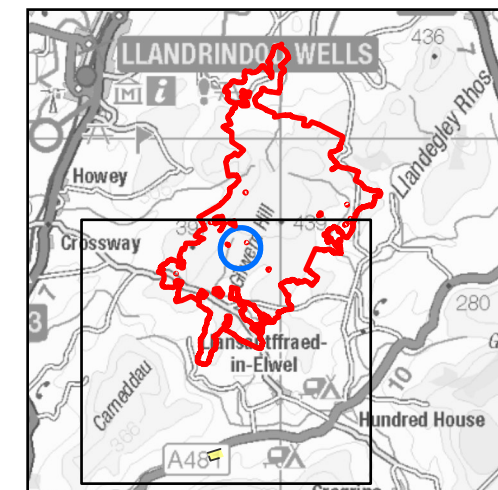


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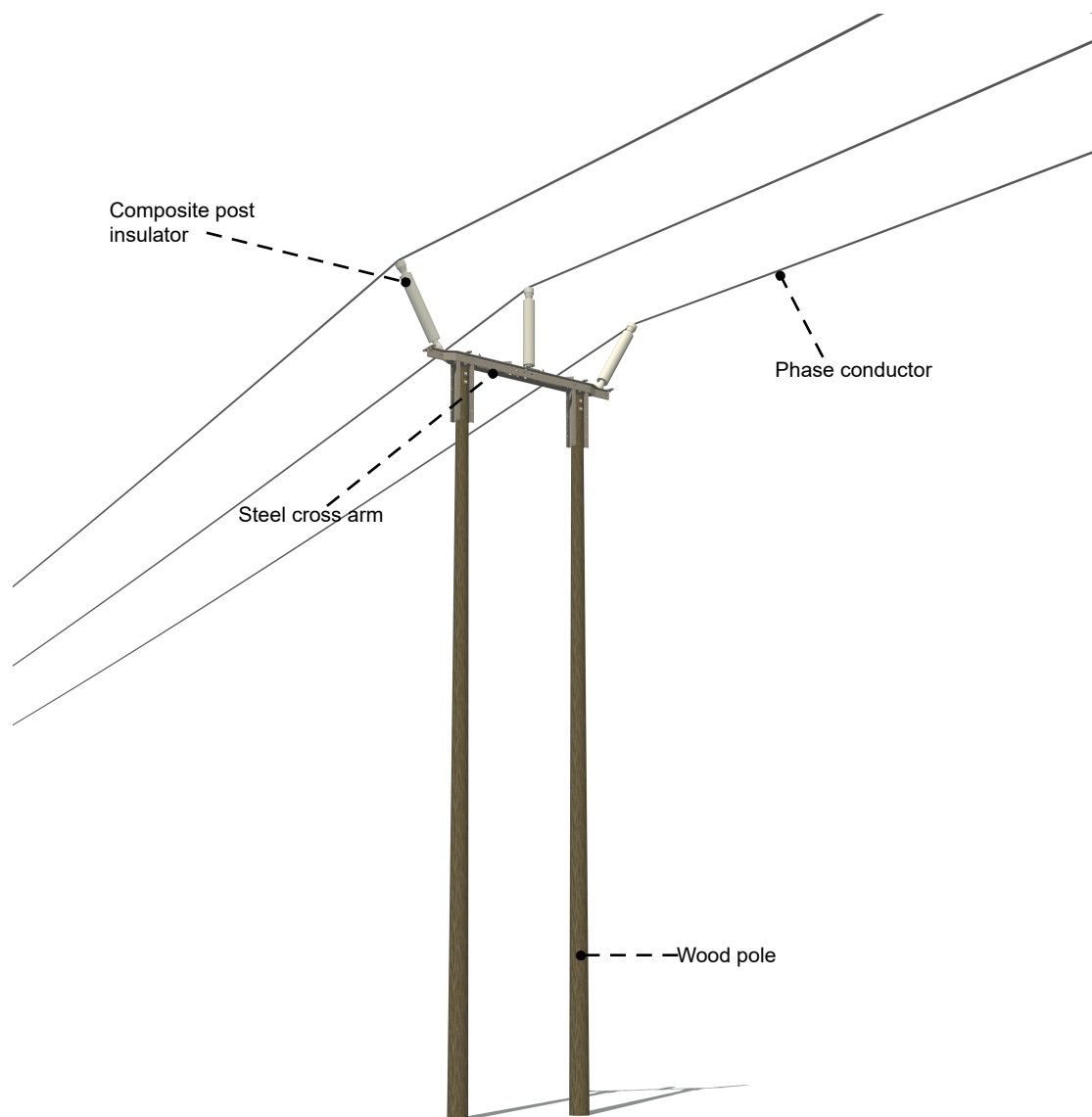
**Figure 1.1: Bryn Gilwern 132kV
Connection Project Location**

- ▭ Bute Energy's Proposed Bryn Gilwern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
- ▭ Indicative Towy Usk switching station location





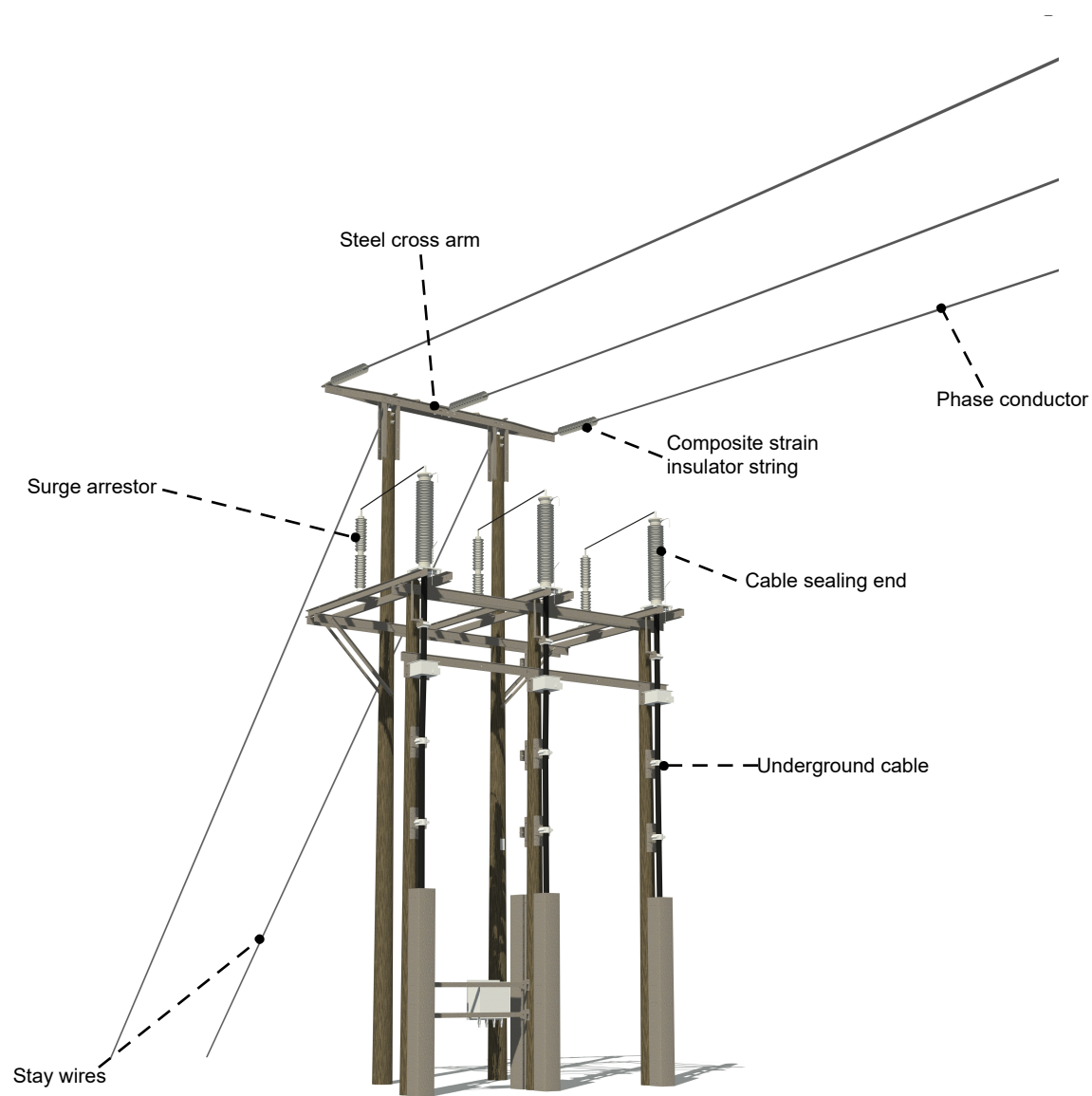
**Figure 2.1b: Typical Wood Pole
(Component Parts of 132kV Design Wood
Pole - Intermediate)**



Component parts of 132kV design wood pole:
Intermediate (H Pole)



**Figure 2.1c: Typical Wood Pole
(Component Parts of 132kV Design Wood
Pole - Terminal)**

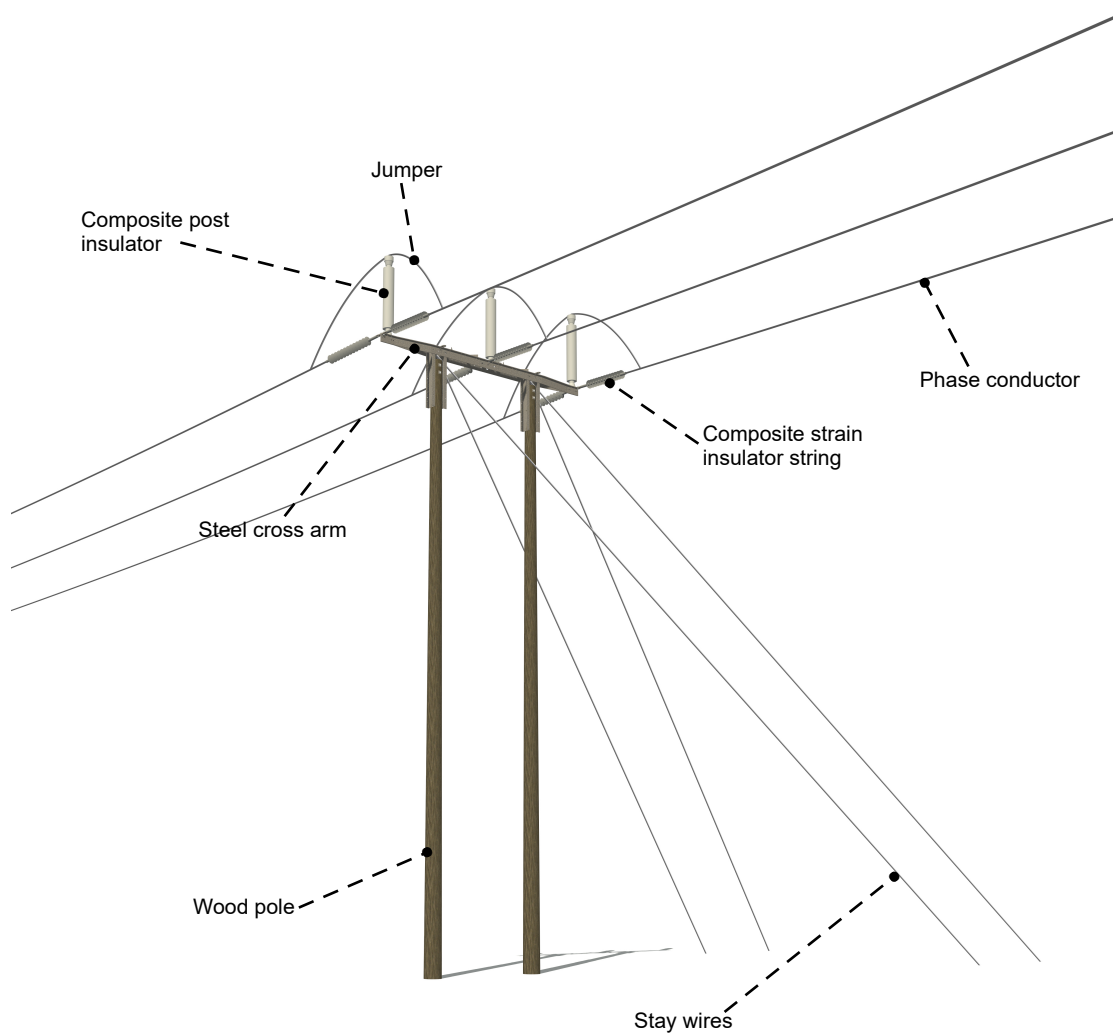


Component parts of 132kV design wood pole:
Terminal (H Pole) with cable termination

ENATS 43-50 Cable Termination Pole

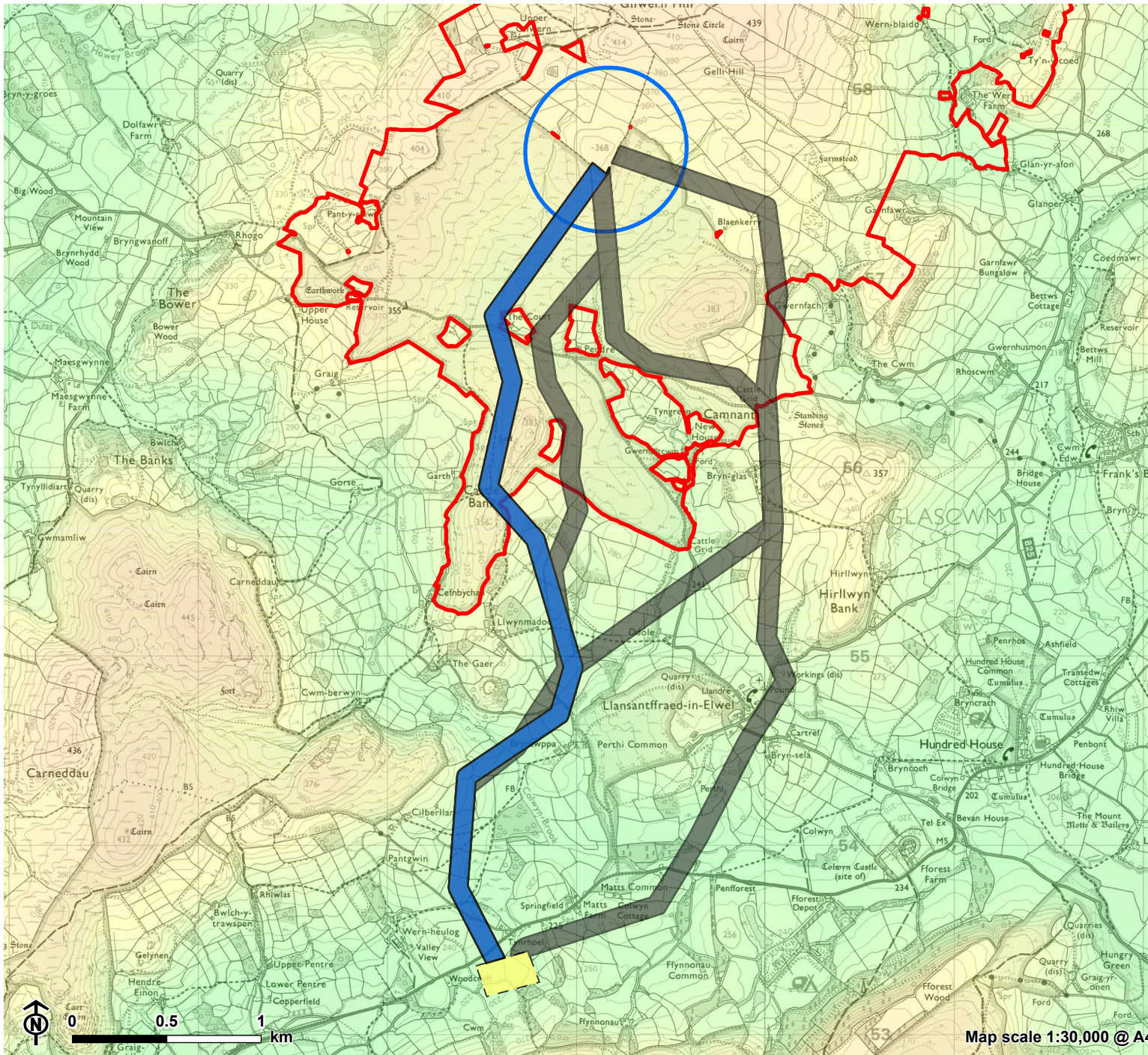


**Figure 2.1a: Typical Wood Pole
(Component Parts of 132kV Design Wood
Pole - Angle)**



Component parts of 132kV design wood pole:
Angle (H Pole)

ENATS 43-50 Wood Pole (H-Pole)



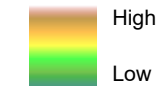
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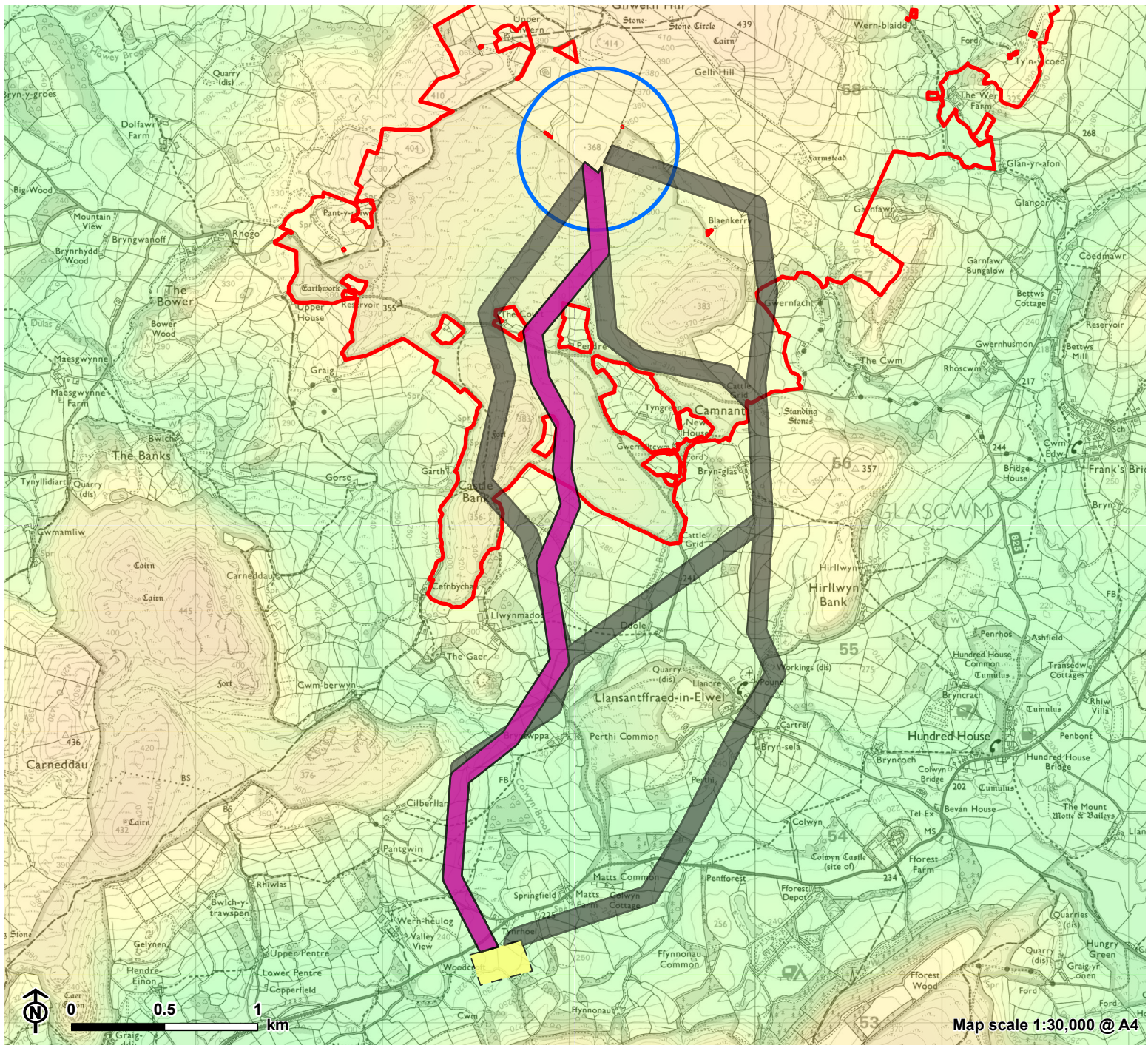
**Figure 4.1.1: Bryn Gilvern 132kV
Connection Project Route Option 1**

- Route Option 1
- Other route options
- Bute Energy's Proposed Bryn Gilvern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilvern Energy Park substation location
- Indicative Towy Usk switching station location

Terrain (AOD)



Map scale 1:30,000 @ A4



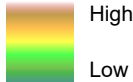
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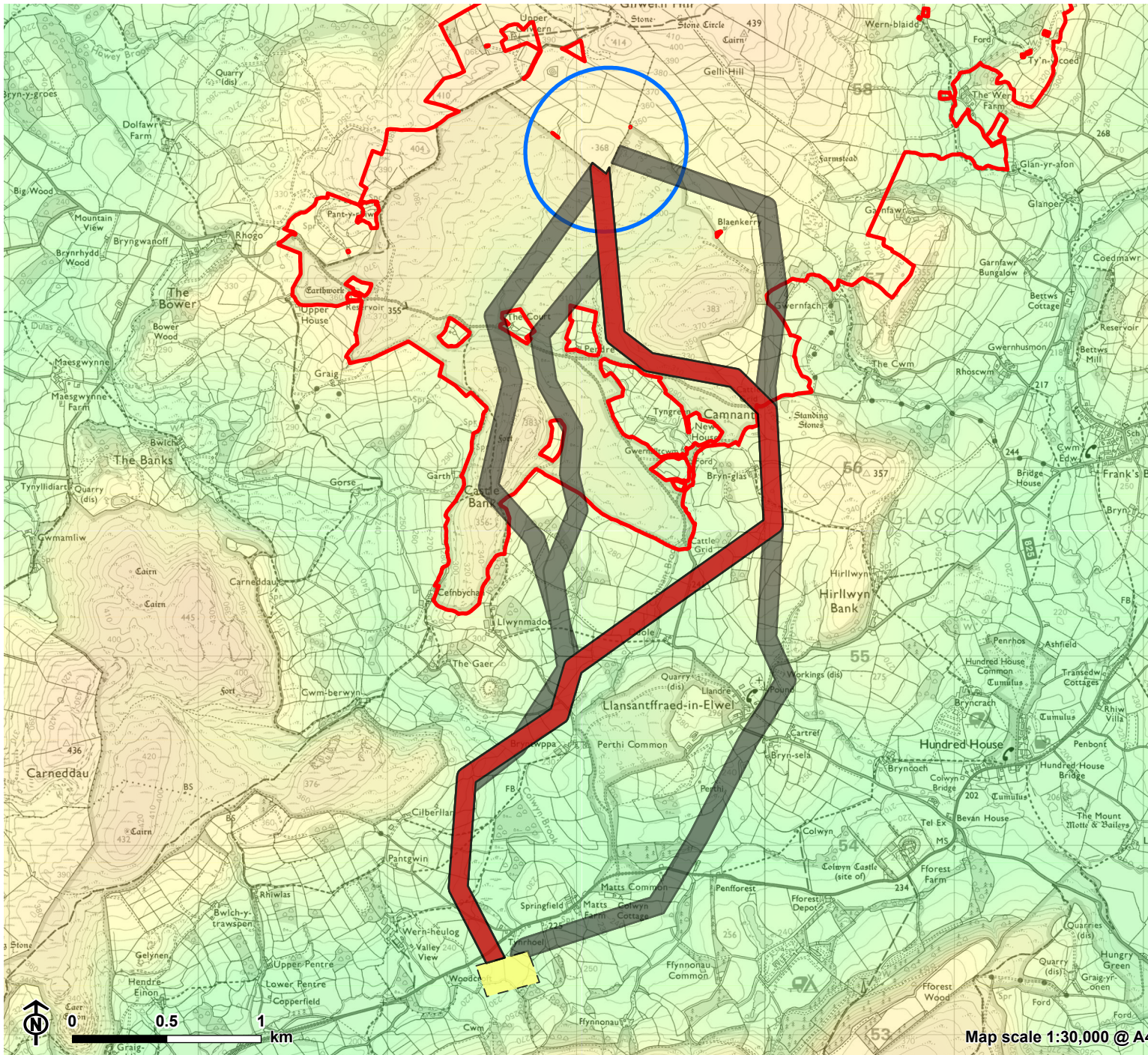
**Figure 4.1.2: Bryn Gilvern 132kV
Connection Project Route Option 2**

- Route Option 2
- Other route options
- Bute Energy's Proposed Bryn Gilvern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilvern Energy Park substation location
- Indicative Towy Usk switching station location

Terrain (AOD)



Map scale 1:30,000 @ A4



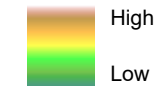
Bryn Gilwern Grid Connection -
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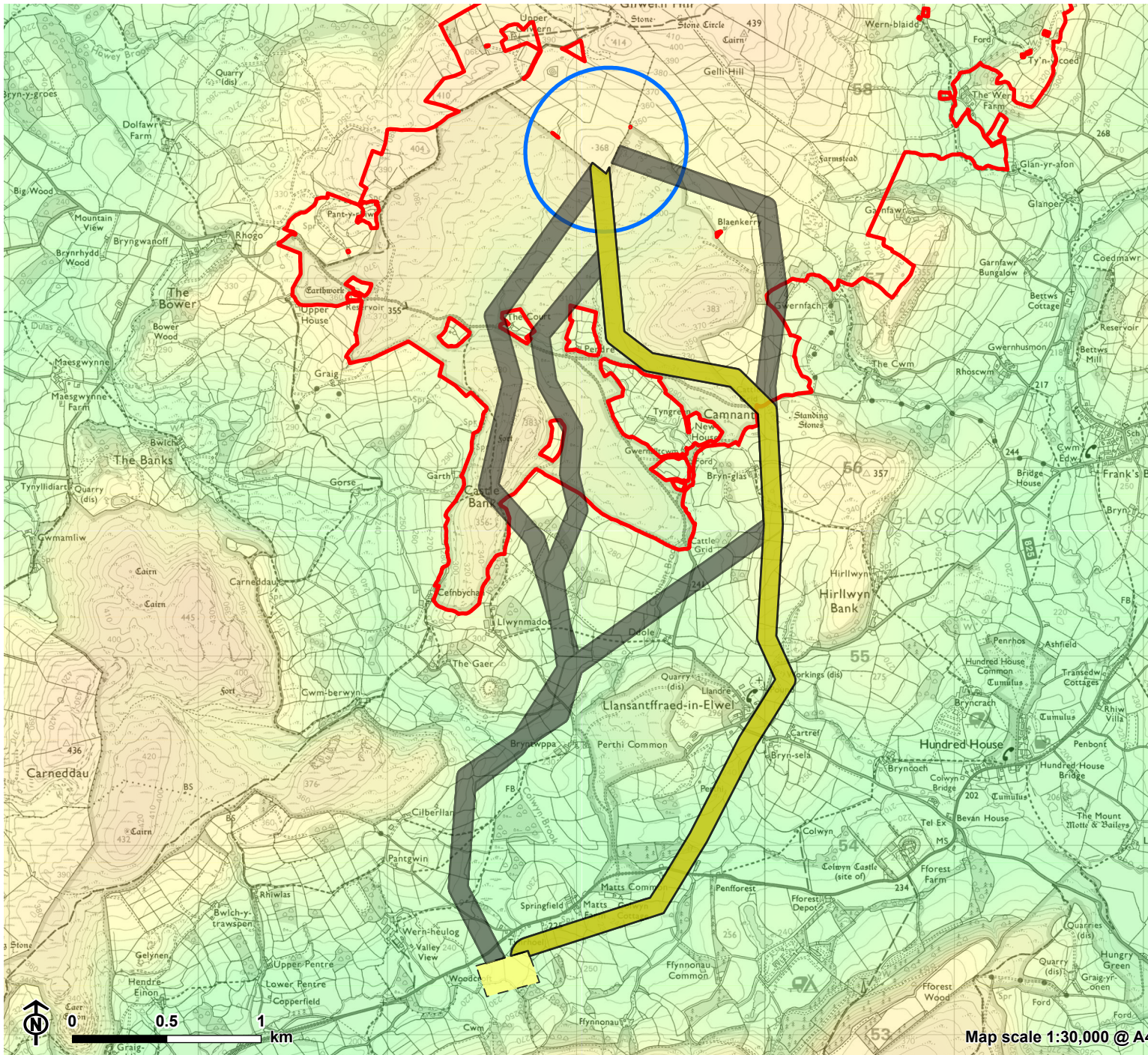
**Figure 4.1.3: Bryn Gilwern 132kV
Connection Project Route Option 3**

- Route Option 3
- Other route options
- Bute Energy's Proposed Bryn Gilwern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
- Indicative Towy Usk switching station location

Terrain (AOD)



Map scale 1:30,000 @ A4



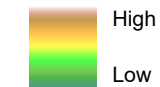
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Routing Alignment Report
for Green GEN Cymru

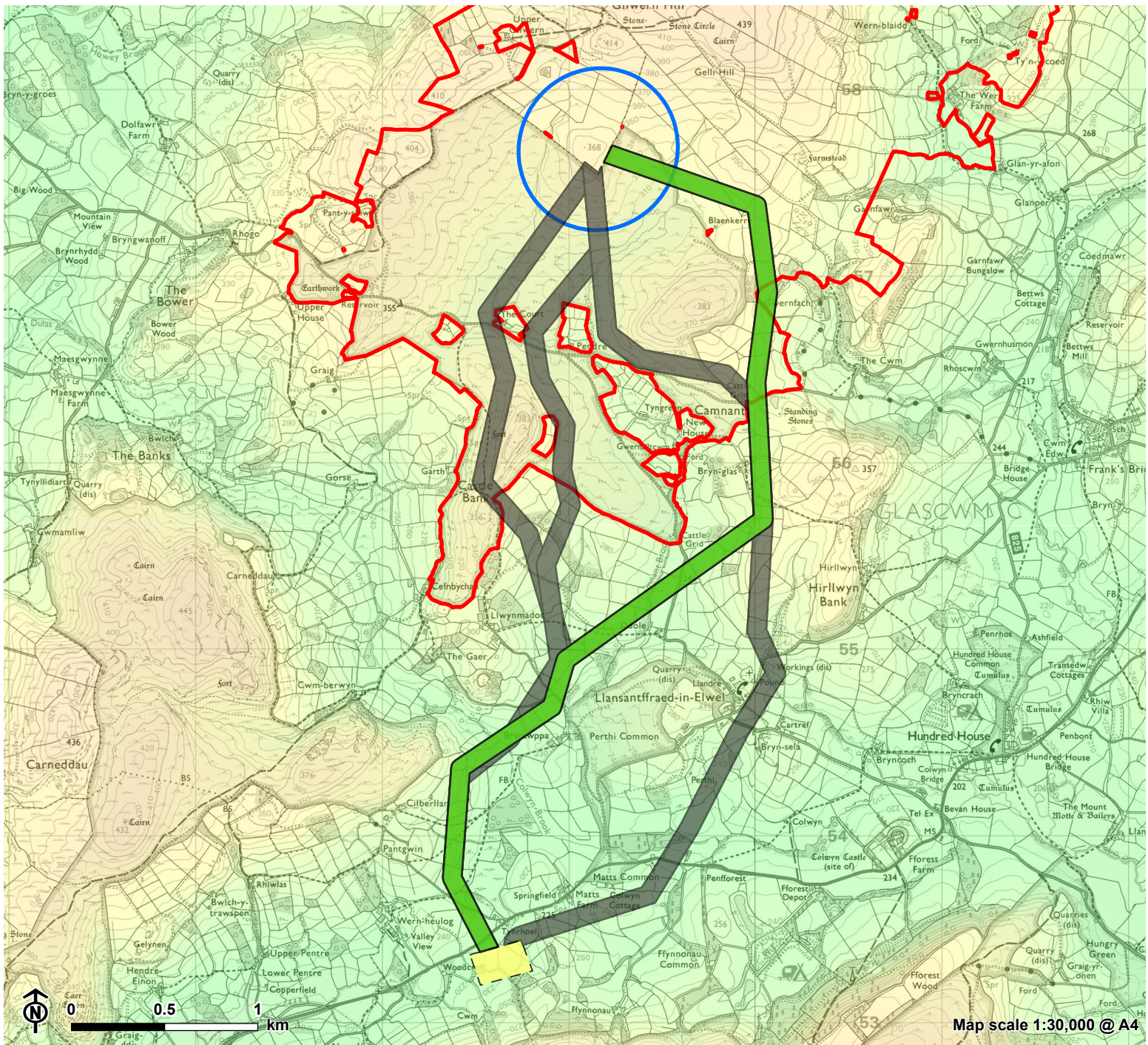


**Figure 4.1.4: Bryn Gilvern 132kV
Connection Project Route Option 4**

- Route Option 4
- Other route options
- Bute Energy's Proposed Bryn Gilvern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilvern Energy Park substation location
- Indicative Towy Usk switching station location

Terrain (AOD)





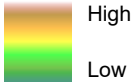
Bryn Gilvern Grid Connection -
Routing Alignment Report
for Green GEN Cymru



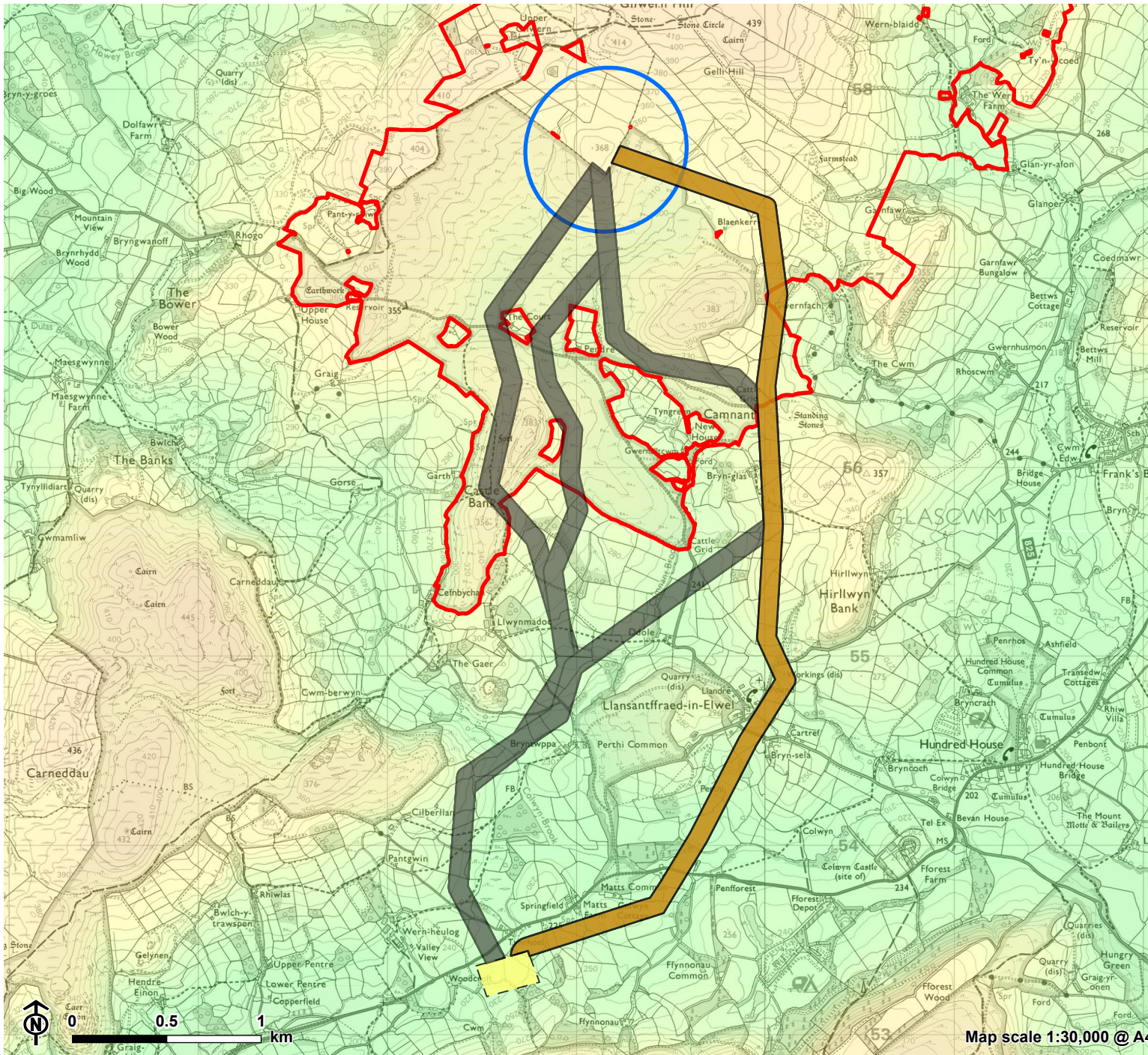
**Figure 4.1.5: Bryn Gilvern 132kV
Connection Project Route Option 5**

- Route Option 5
- Other route options
- Bute Energy's Proposed Bryn Gilvern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilvern Energy Park substation location
- Indicative Towy Usk switching station location

Terrain (AOD)



Map scale 1:30,000 @ A4



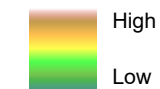
Bryn Gilvern Grid Connection -
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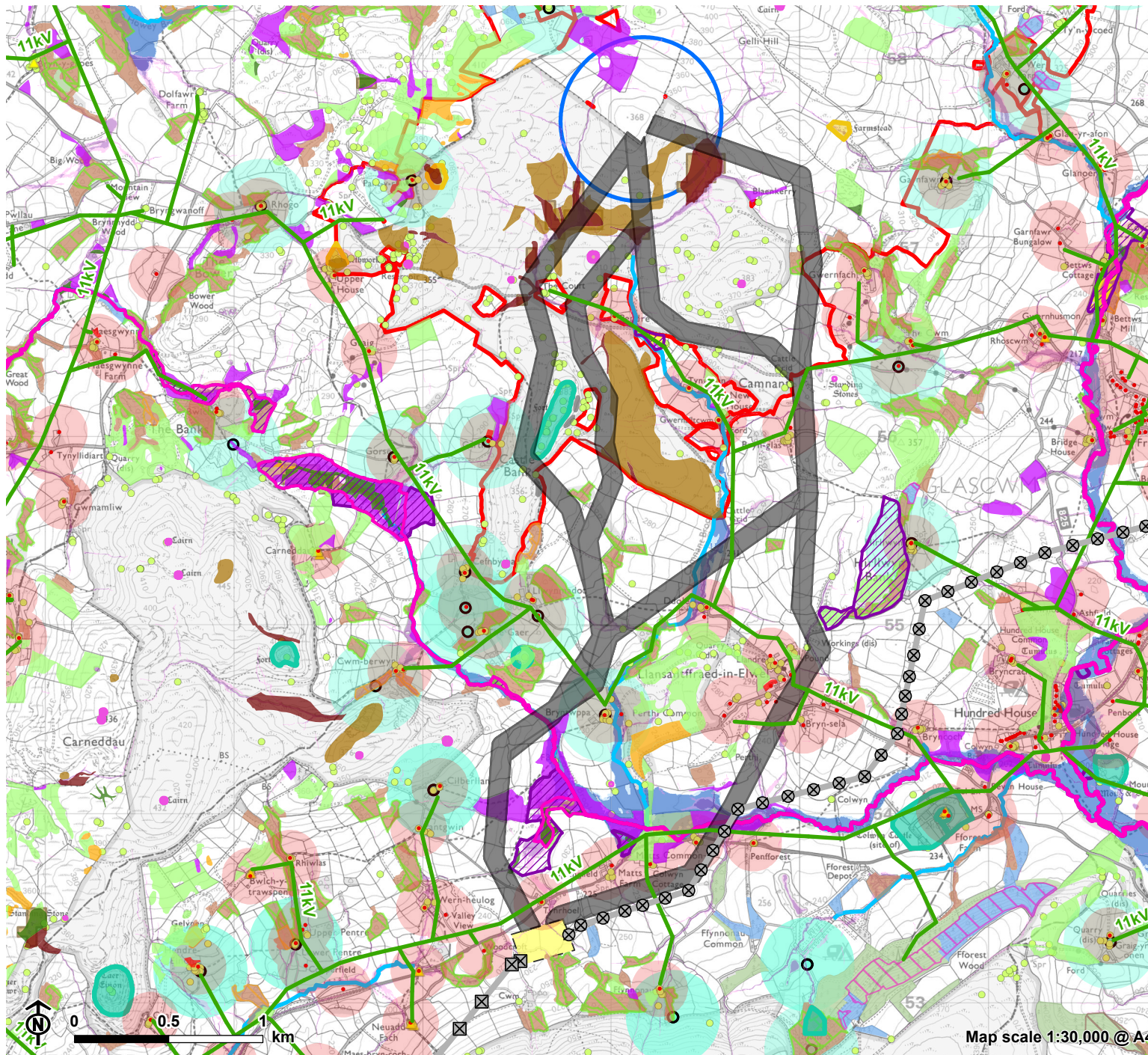


**Figure 4.1.6: Bryn Gilvern 132kV
Connection Project Route Option 6**

- Route Option 6
- Other route options
- Bute Energy's Proposed Bryn Gilvern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilvern Energy Park substation location
- Indicative Towy Usk switching station location

Terrain (AOD)

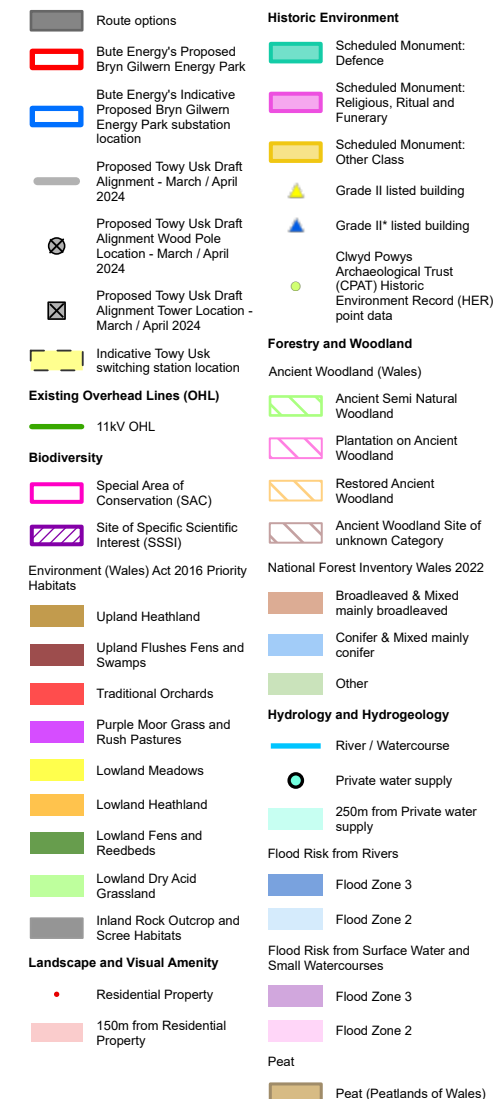


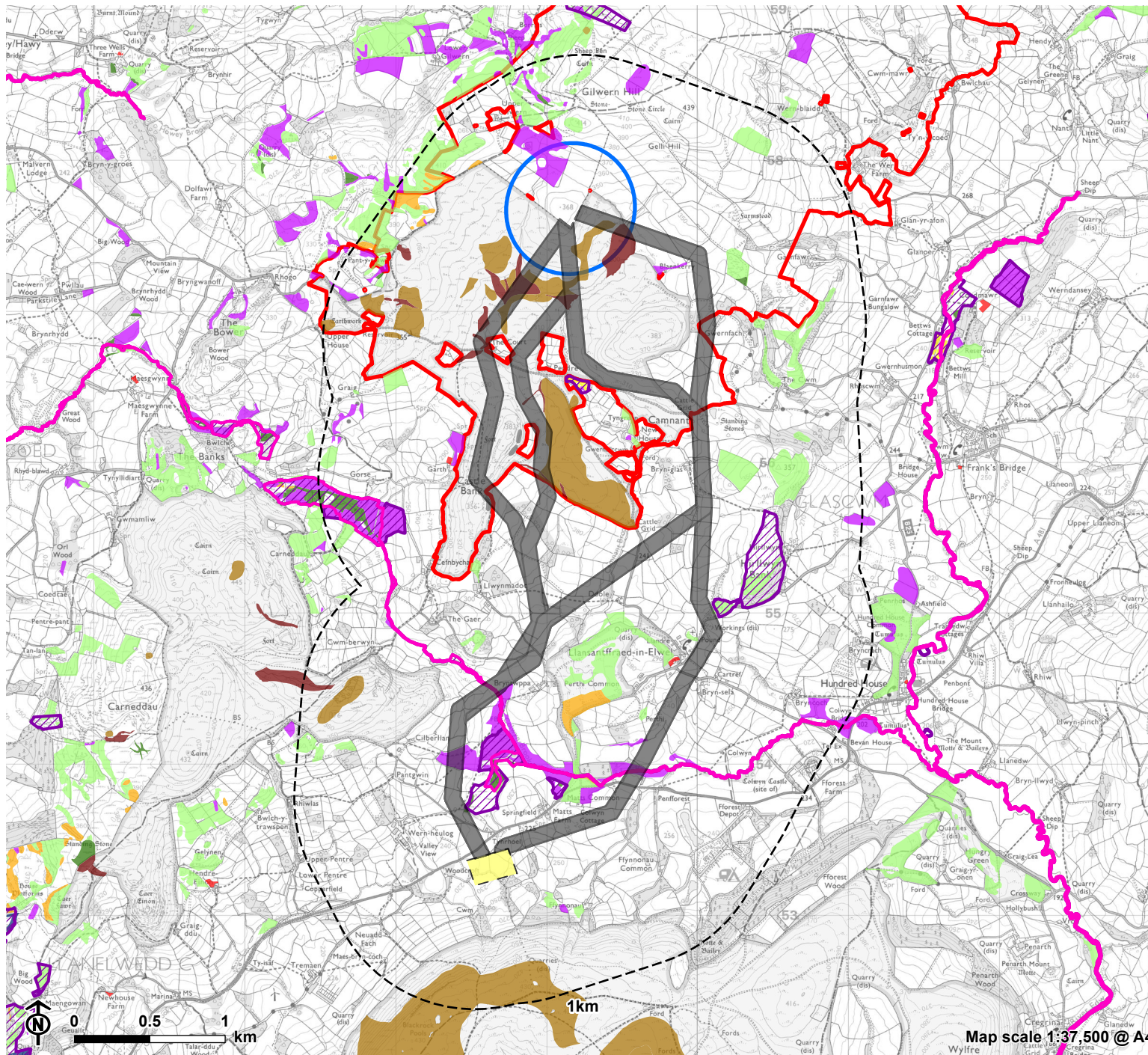


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Figure 4.2: Bryn Gilwern Route Options Constraints and Considerations





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**Figure 4.3: Bryn Gilwern Route Options
Biodiversity Constraints and
Considerations**

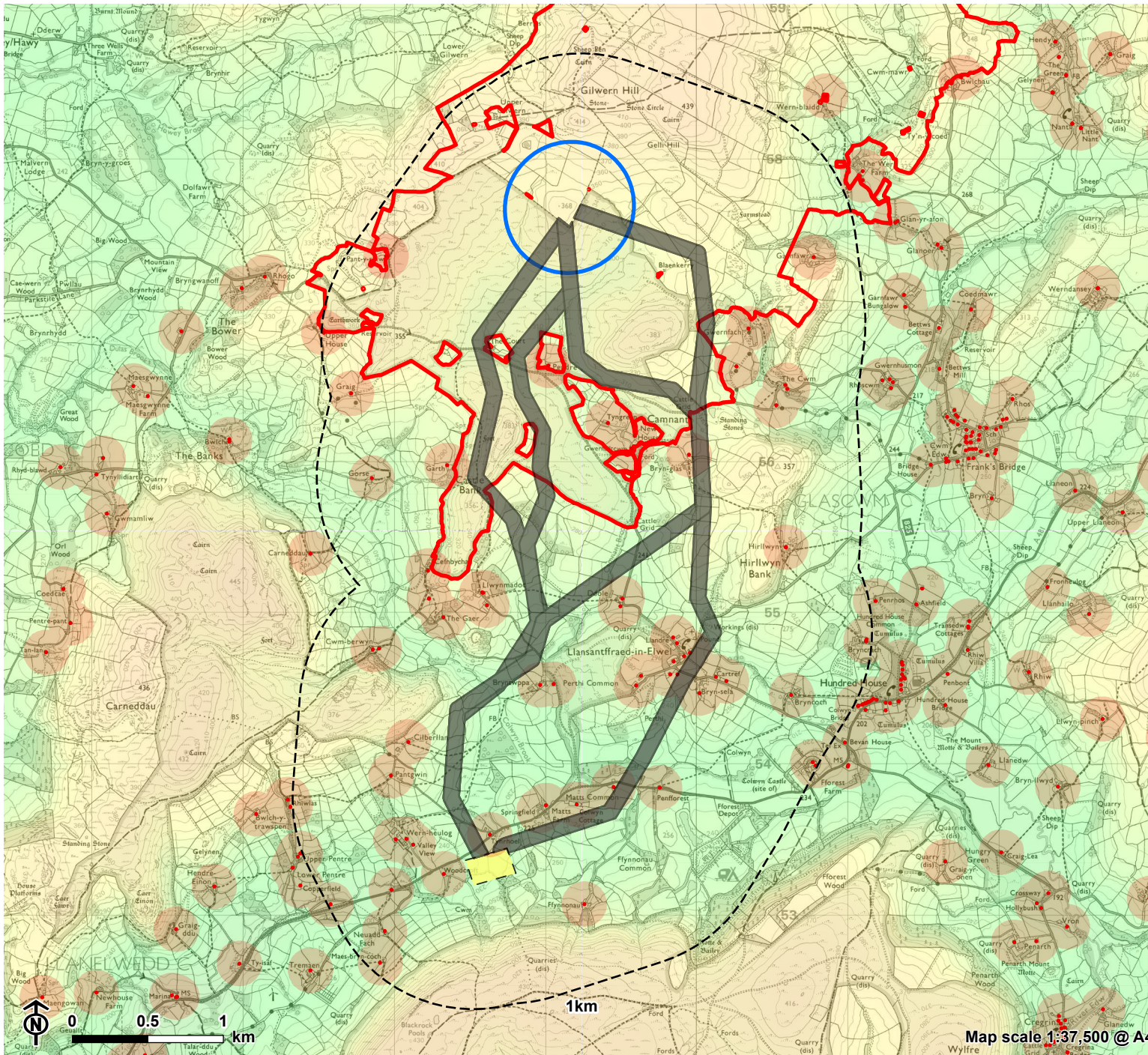
- Route options
- 1km from route options
- Bute Energy's Proposed Bryn Gilwern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
- Indicative Towy Usk switching station location

Biodiversity

- Special Area of Conservation (SAC)
- Site of Specific Scientific Interest (SSSI)

Environment (Wales) Act 2016 Priority Habitats

- Open Mosaic Habitats of Previously Developed Land
- Upland Heathland
- Upland Flushes Fens and Swamps
- Traditional Orchards
- Purple Moor Grass and Rush Pastures
- Lowland Meadows
- Lowland Heathland
- Lowland Fens and Reedbeds
- Lowland Dry Acid Grassland
- Calcareous Grassland
- Inland Rock Outcrop and Scree Habitats



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**Figure 4.4.1: Bryn Gilwern Route Options
Landscape and Visual Amenity
Constraints and Considerations**

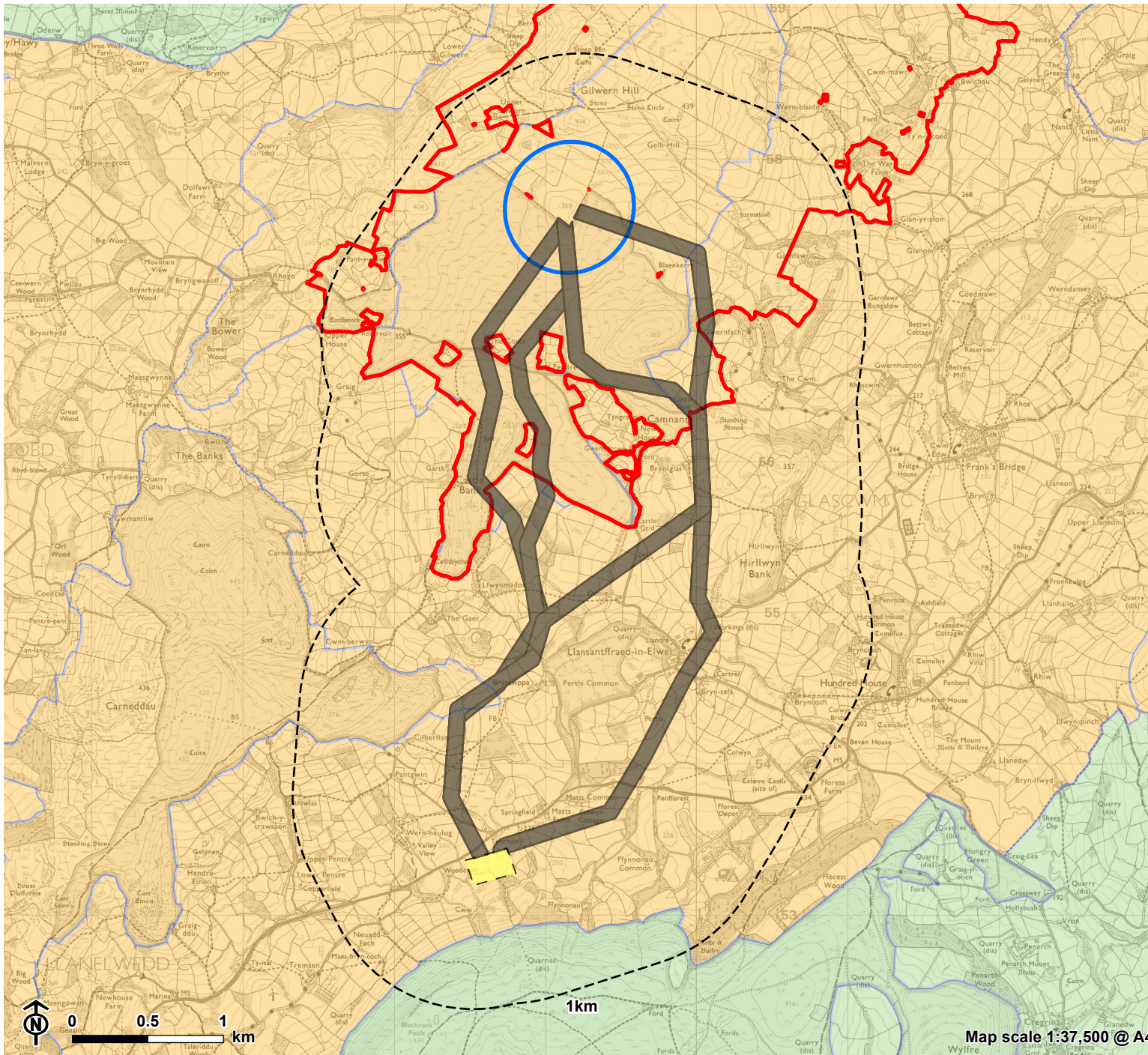
- Route options
- 1km from route options
- Bute Energy's Proposed Bryn Gilwern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
- Indicative Towy Usk switching station location

Landscape and Visual Amenity

- Residential Property
- 150m from Residential Property

Terrain (AOD)

- High
- Low

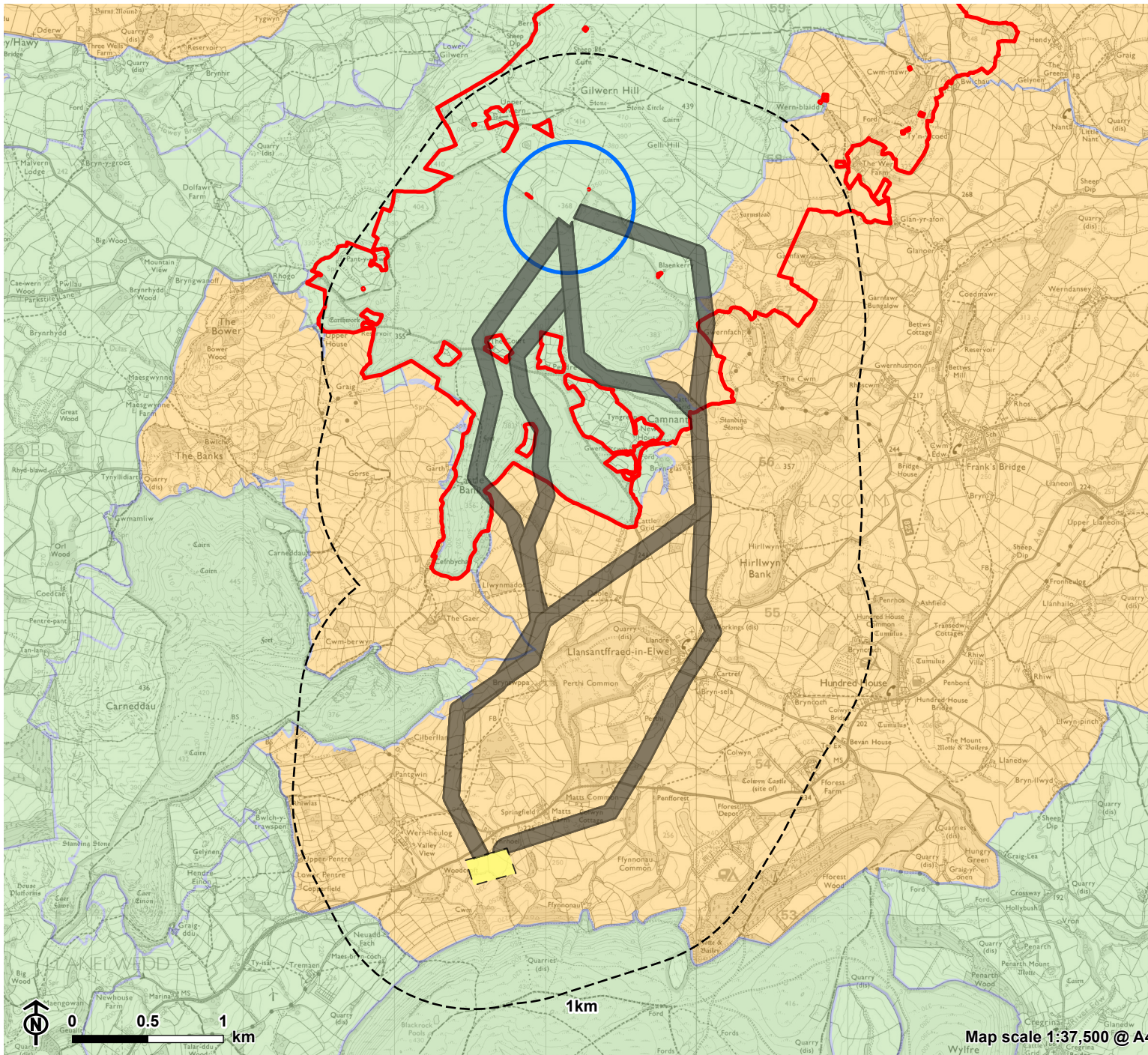


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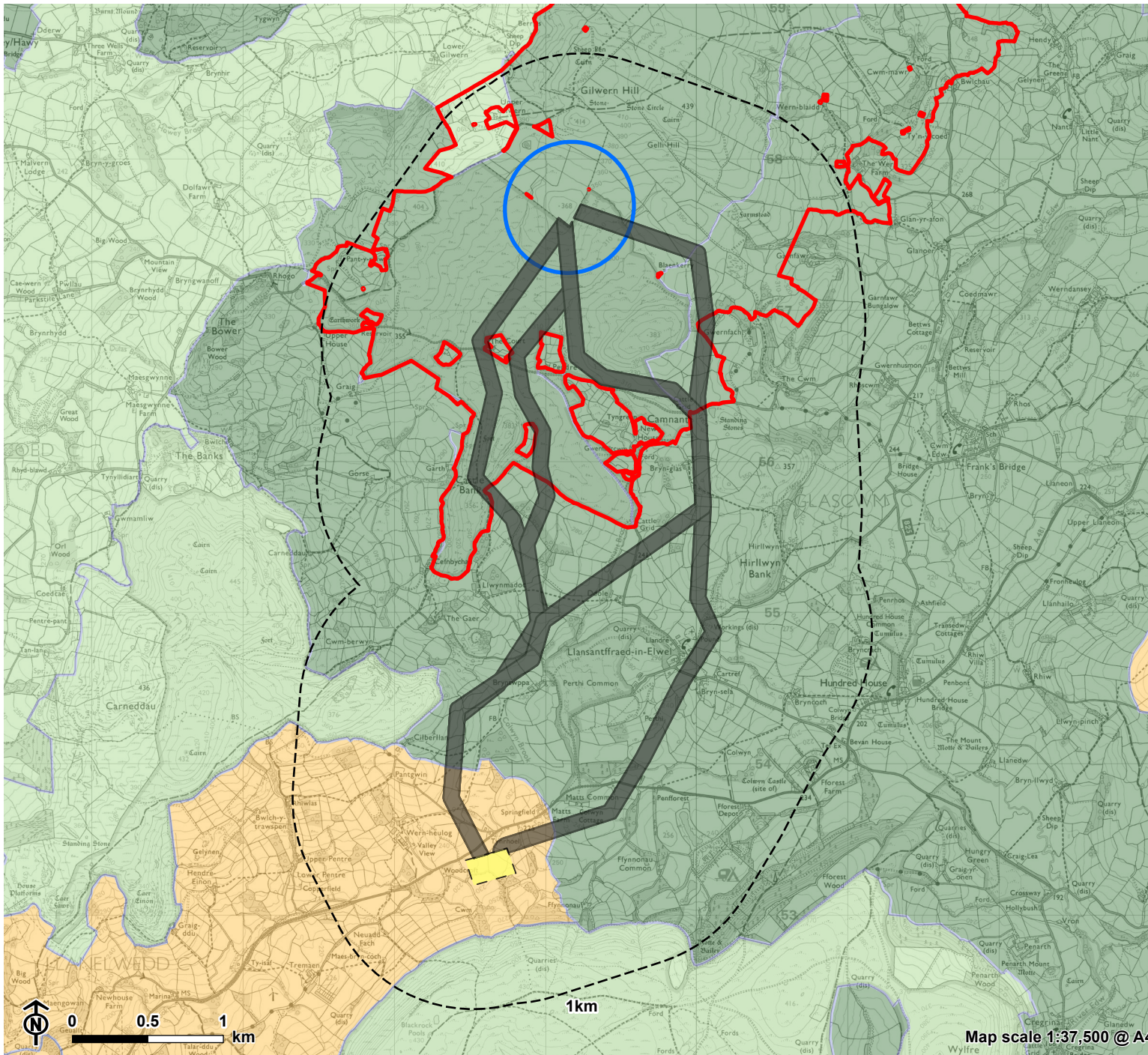
**Figure 4.4.2: Bryn Gilwern LANDMAP
Aspect Areas: Visual Sensory**

-  Route options
 -  1km from route options
 -  Bute Energy's Proposed Bryn Gilwern Energy Park
 -  Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
 -  Indicative Towy Usk switching station location
- LANDMAP Visual and Sensory - Overall Evaluation**
-  High
 -  Moderate



**Figure 4.4.3: Bryn Gilvern LANDMAP
Aspect Areas: Landscape Habitat**

-  Route options
 -  1km from route options
 -  Bute Energy's Proposed Bryn Gilvern Energy Park
 -  Bute Energy's Indicative Proposed Bryn Gilvern Energy Park substation location
 -  Indicative Towy Usk switching station location
- LANDMAP Landscape Habitat - Overall Evaluation**
-  High
 -  Moderate



Bryn Gilwern Grid Connection -
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for Green GEN Cymru

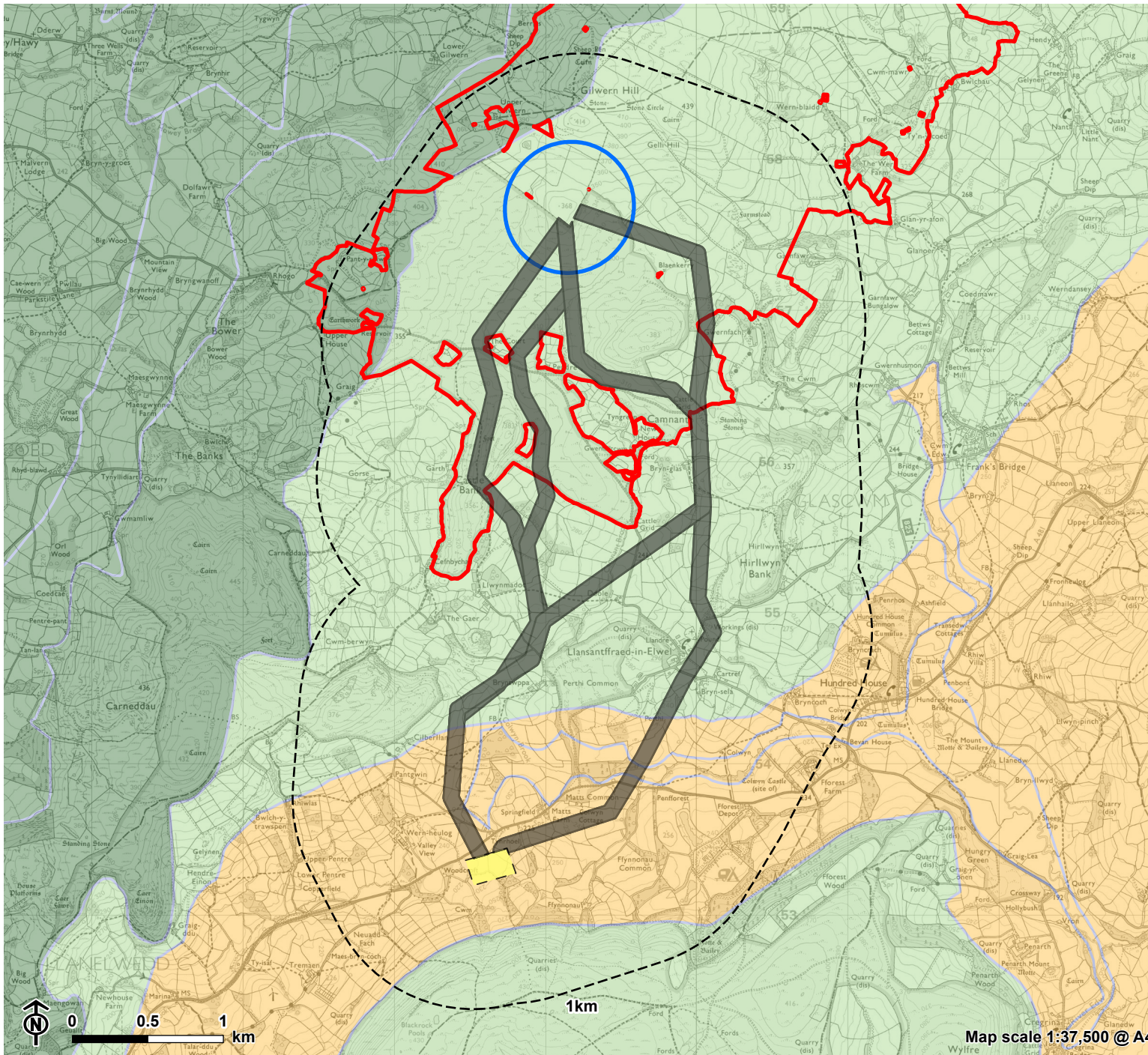


**Figure 4.4.4: Bryn Gilwern LANDMAP
Aspect Areas: Historic Landscape**

- Route options
- 1km from route options
- Bute Energy's Proposed Bryn Gilwern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
- Indicative Towy Usk switching station location

**LANDMAP Historic Landscape - Overall
Evaluation**

- Outstanding
- High
- Moderate



Bryn Gilwern Grid Connection -
Routing Alignment Report
for Green GEN Cymru

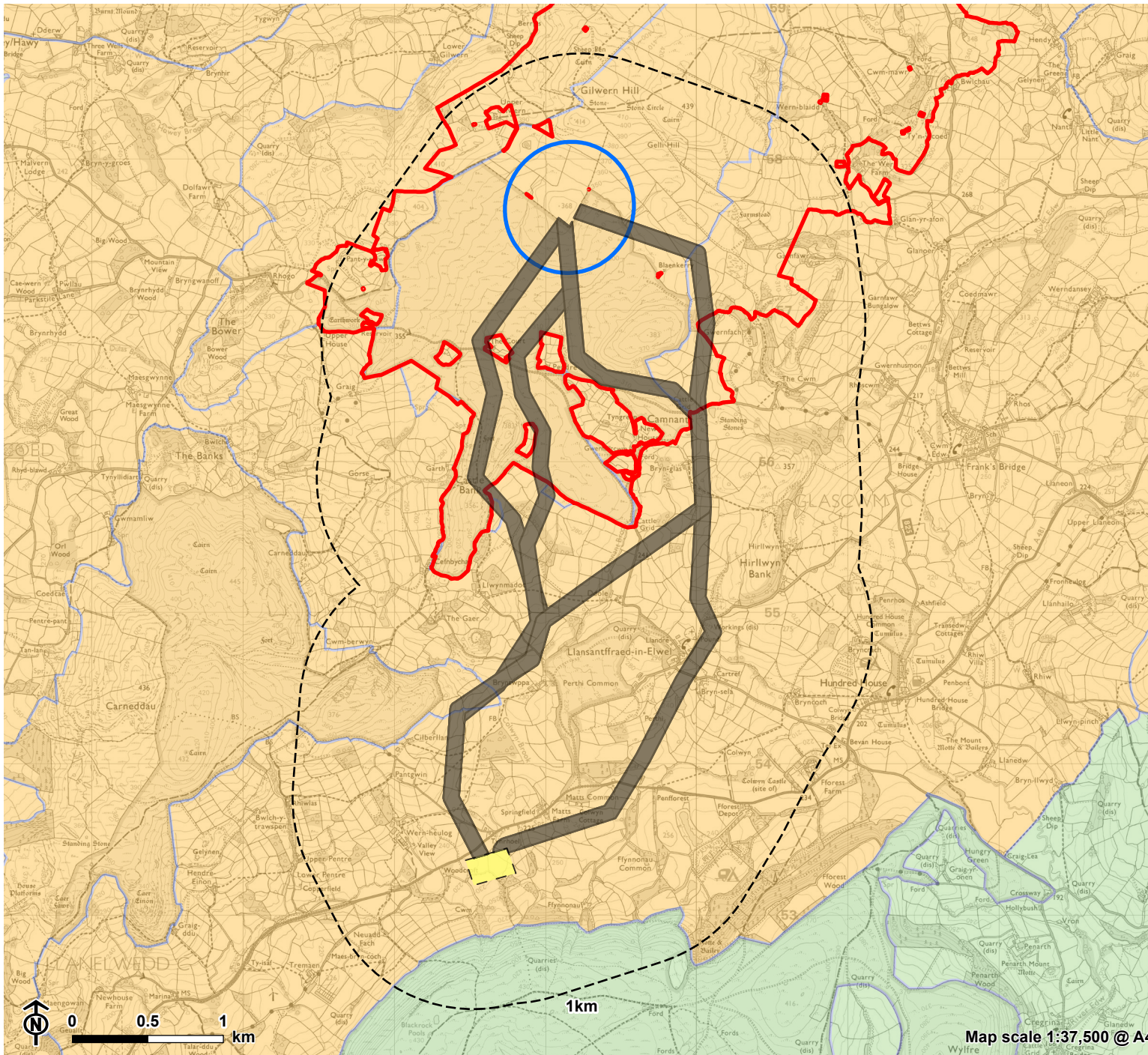


**Figure 4.4.5: Bryn Gilwern LANDMAP
Aspect Areas: Geological Landscape**

-  Route options
-  1km from route options
-  Bute Energy's Proposed Bryn Gilwern Energy Park
-  Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substitution location
-  Indicative Towy Usk switching station location

**LANDMAP Geological Landscape - Overall
Evaluation**

-  Outstanding
-  High
-  Moderate



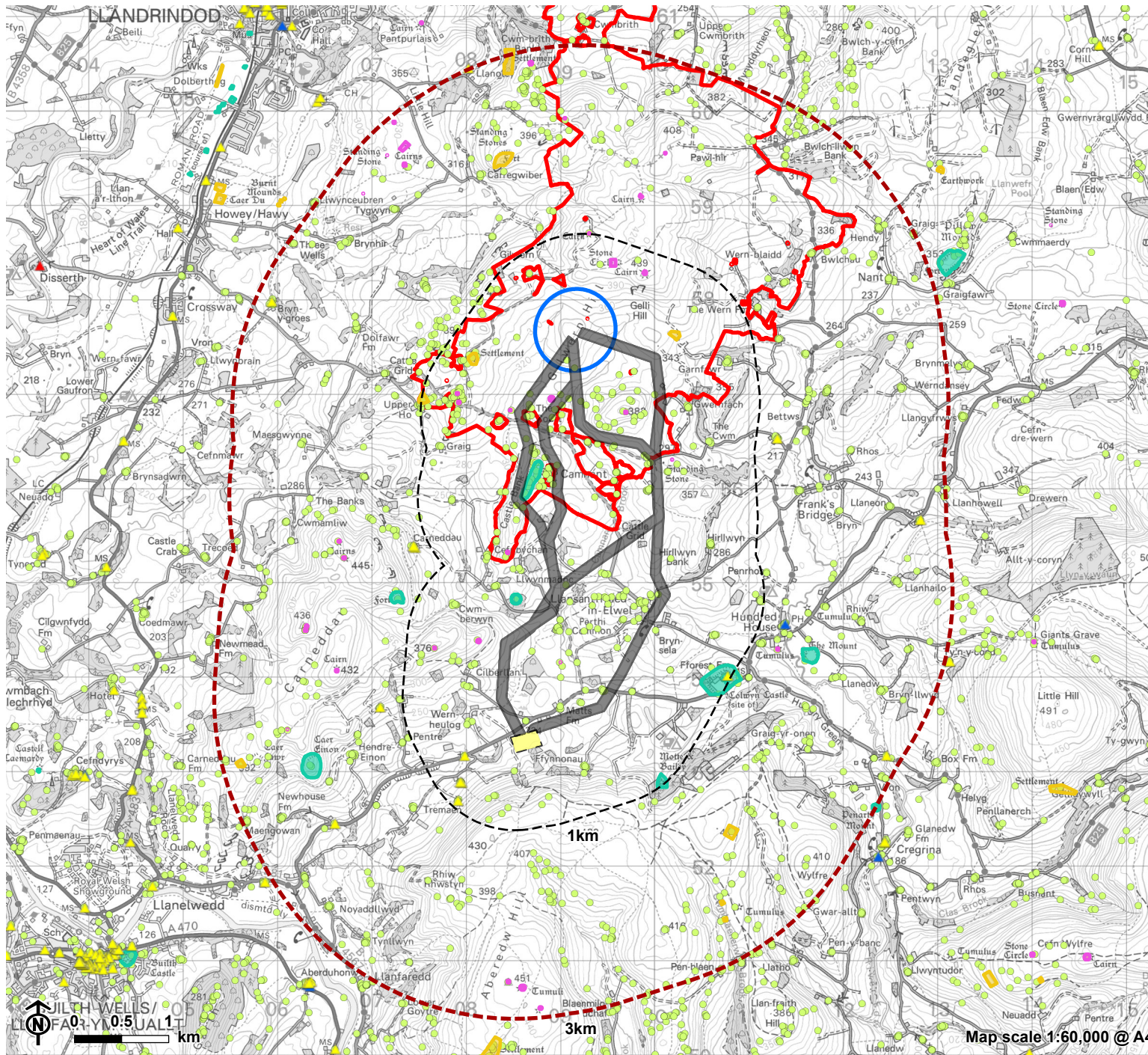
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**Figure 4.4.6: Bryn Gilvern LANDMAP
Aspect Areas: Cultural Landscape**

-  Route options
-  1km from route options
-  Bute Energy's Proposed Bryn Gilvern Energy Park
-  Bute Energy's Indicative Proposed Bryn Gilvern Energy Park substation location
-  Indicative Towy Usk switching station location
- LANDMAP Cultural Landscape - Overall Evaluation**
 -  High
 -  Moderate



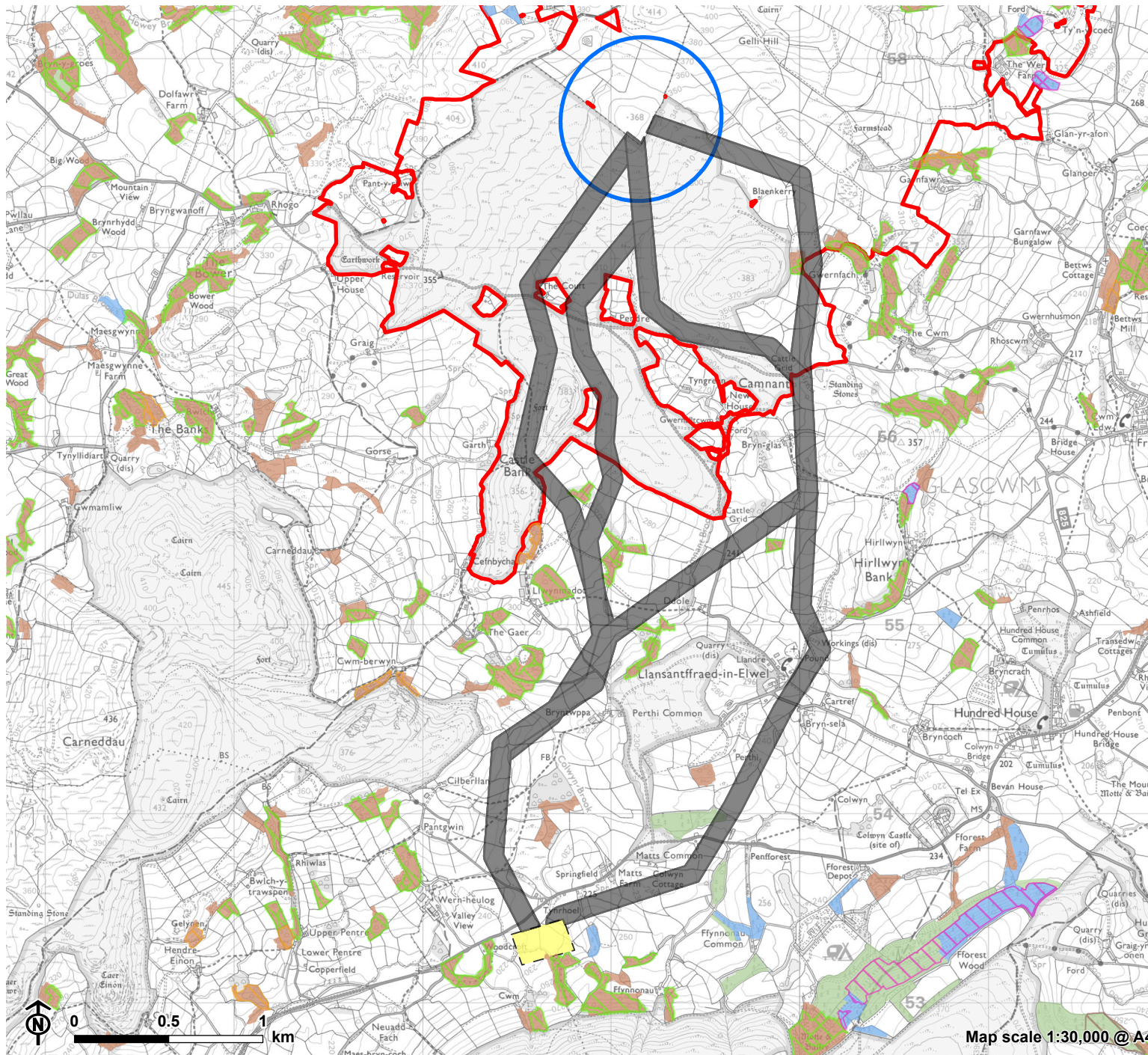


**Figure 4.5: Bryn Gilwern Route Options
Historic Environment Constraints and
Considerations**

- Route options
- 1km from route options
- 3km from route options
- Bute Energy's Proposed Bryn Gilwern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
- Indicative Towy Usk switching station location

Historic Environment

- Scheduled Monument: Defence
- Scheduled Monument: Religious, Ritual and Funerary
- Scheduled Monument: Other Class
- Grade I listed building
- Grade II listed building
- Grade II* listed building
- Clwyd Powys Archaeological Trust (CPAT) Historic Environment Record (HER) point data



**Figure 4.6: Bryn Gilvern Route Options
Forestry and Woodland Constraints and
Considerations**

-  Route options
-  Bute Energy's Proposed Bryn Gilvern Energy Park
-  Bute Energy's Indicative Proposed Bryn Gilvern Energy Park substation location
-  Indicative Towy Usk switching station location

Forestry and Woodland

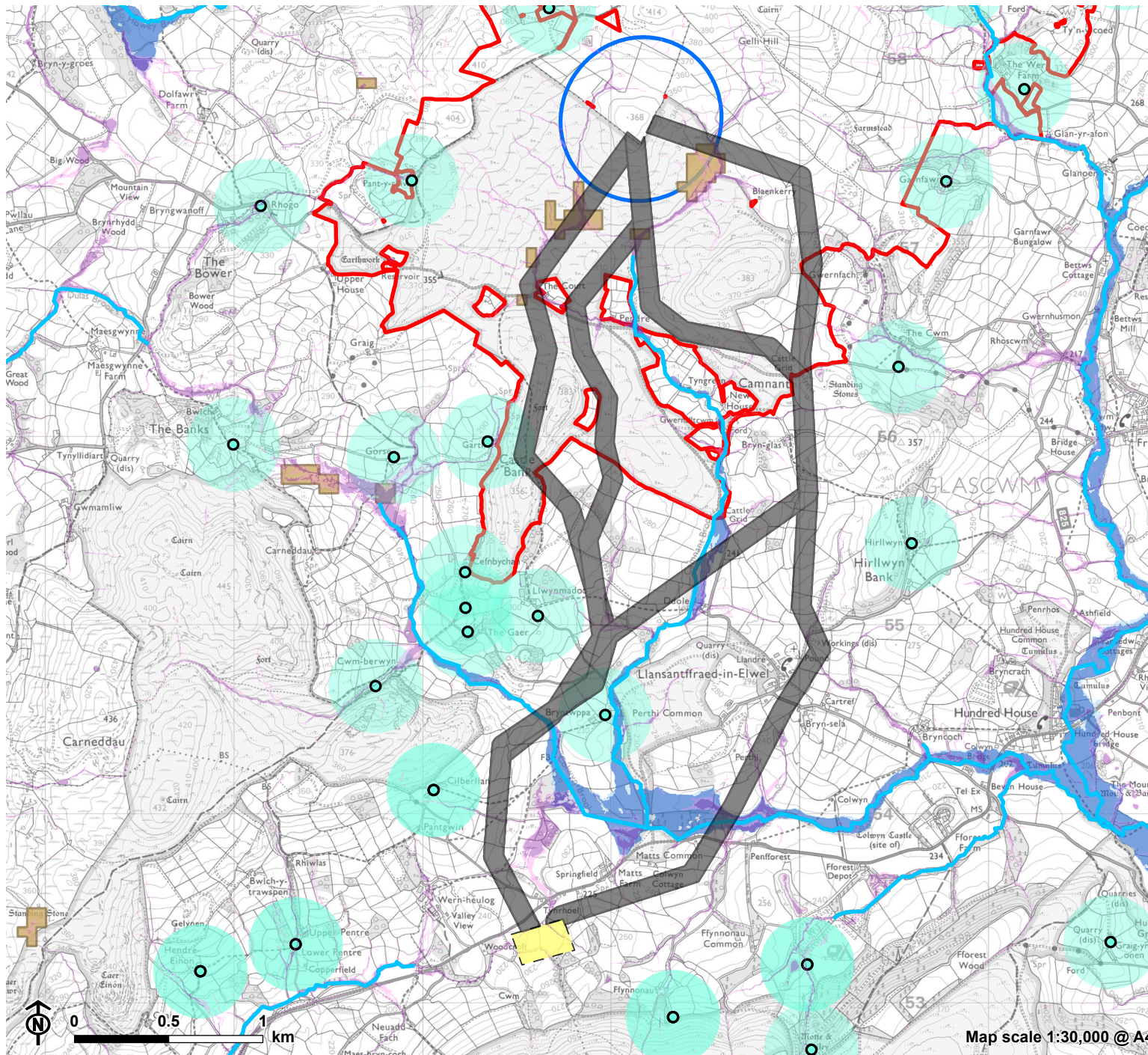
Ancient Woodland (Wales)

-  Ancient Semi Natural Woodland
-  Plantation on Ancient Woodland
-  Restored Ancient Woodland
-  Ancient Woodland Site of unknown Category

National Forest Inventory Wales 2022

-  Broadleaved & Mixed mainly broadleaved
-  Conifer & Mixed mainly conifer
-  Other

Map scale 1:30,000 @ A4



**Figure 4.7: Bryn Gilwern Route Options
Hydrology and Hydrogeology Constraints
and Considerations**

- Route options
- Bute Energy's Proposed Bryn Gilwern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
- Indicative Towy Usk switching station location

Hydrology and Hydrogeology

- River / Watercourse
- Private water supply
- 250m from Private water supply

Flood Risk from Rivers

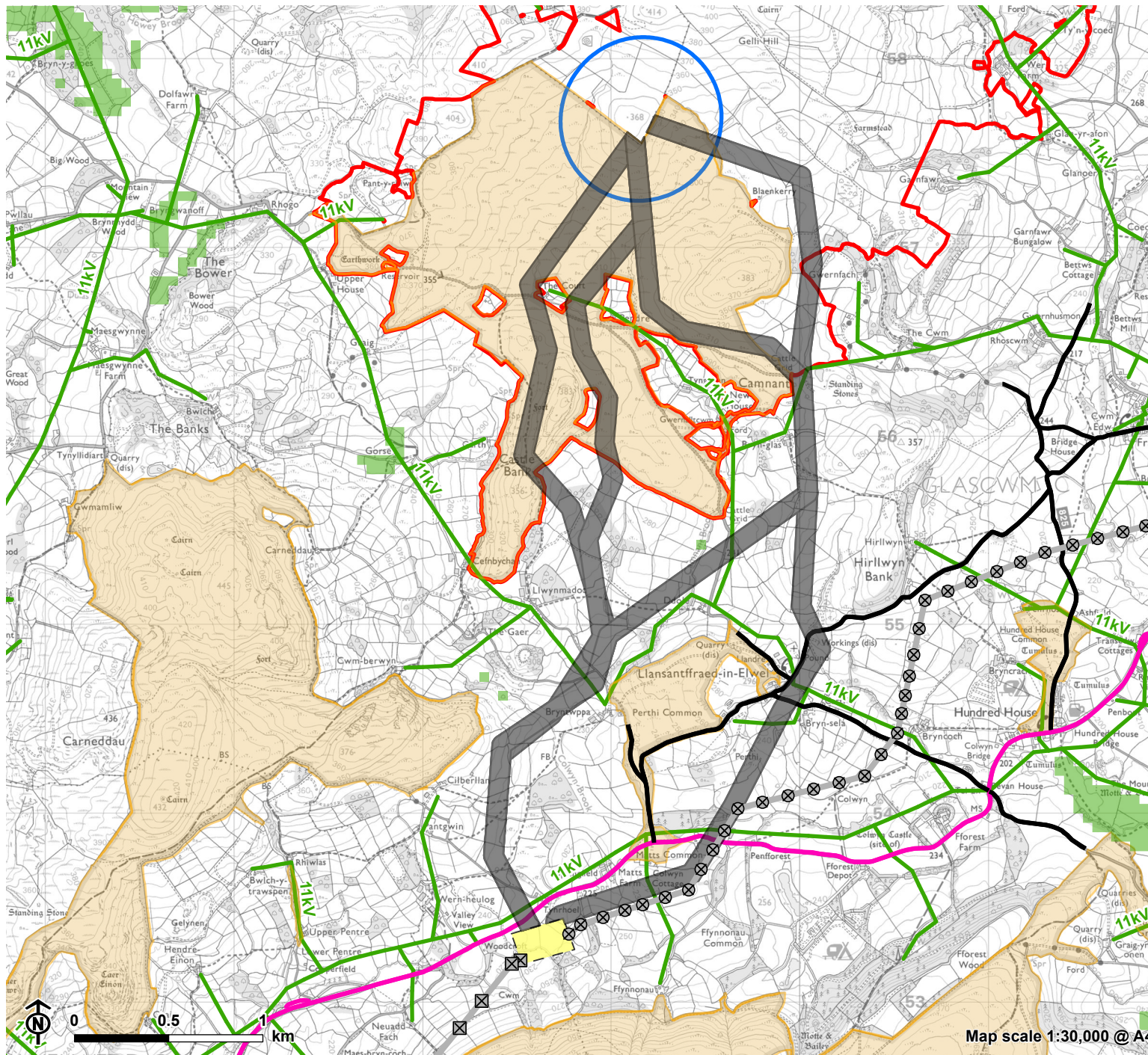
- Flood Zone 3
- Flood Zone 2

Flood Risk from Surface Water and Small Watercourses

- Flood Zone 3
- Flood Zone 2

Peat

- Peat (Peatlands of Wales)



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**Figure 4.8: Bryn Gilwern Route Options
Land Use Constraints and Considerations**

- Route options
- Bute Energy's Proposed Bryn Gilwern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
- Proposed Towy Usk Draft Alignment - March / April 2024
- Proposed Towy Usk Draft Alignment Wood Pole Location - March / April 2024
- Proposed Towy Usk Draft Alignment Tower Location - March / April 2024
- Indicative Towy Usk switching station location
- Common land
- Powys Publically Adopted Highways**
 - Class 1 (A)
 - Class 3 (C)
- Predictive Agricultural Land Classification (ALC)**
 - Grade 3a: good to moderate quality agricultural land
- Existing Overhead Lines (OHL)**
 - 11kV OHL

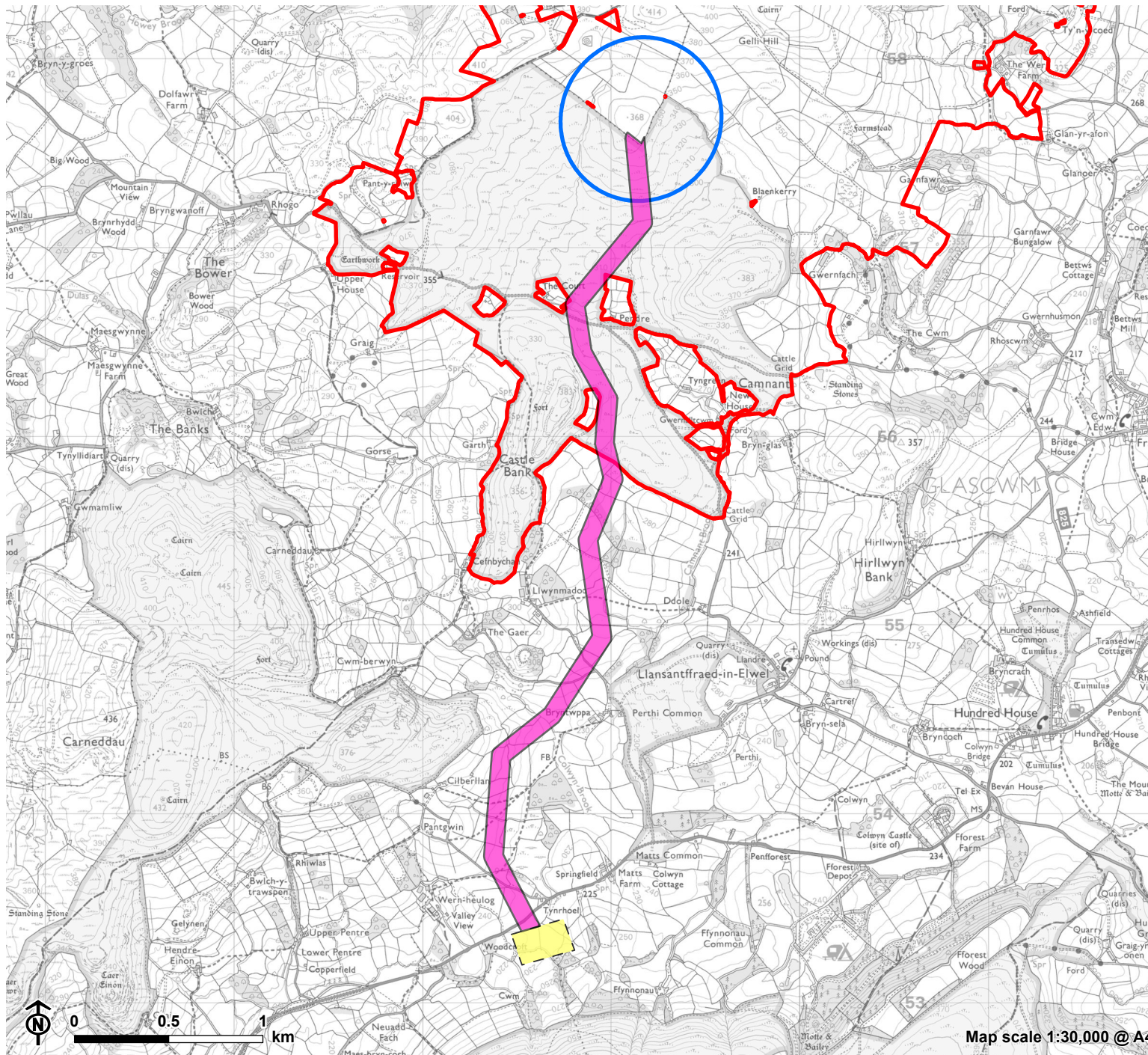
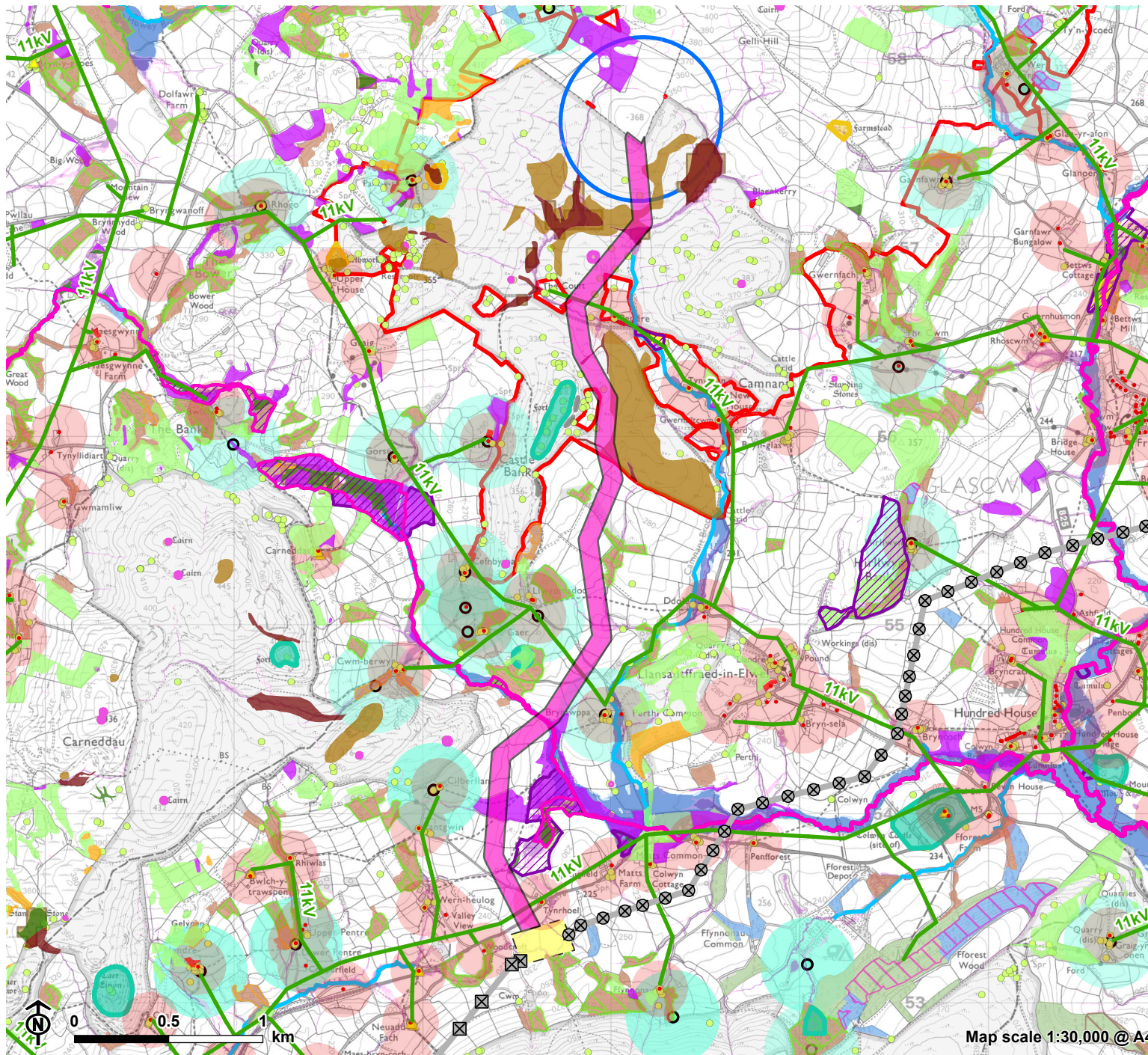


Figure 5.1: Preferred Bryn Gilwern Route Option

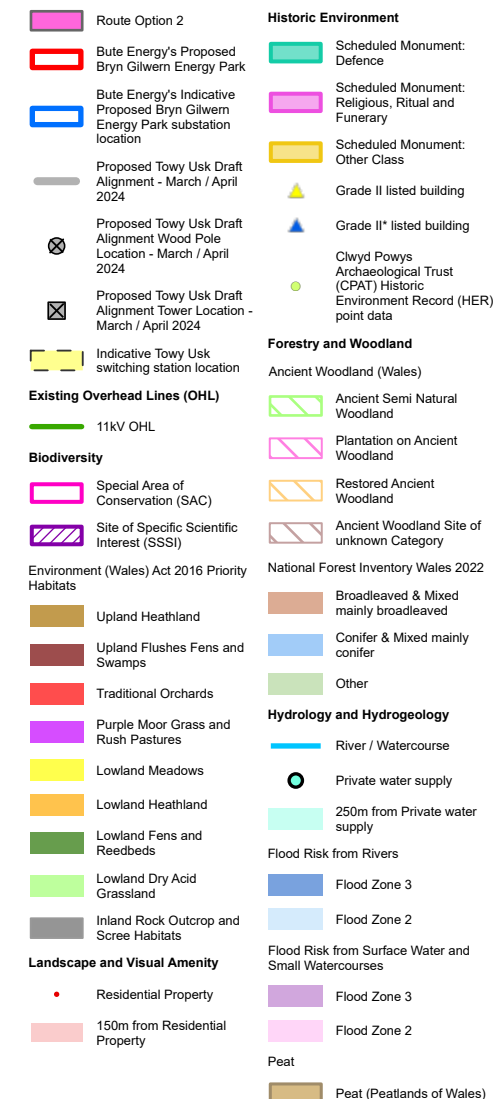
- Route Option 2
- Bute Energy's Proposed Bryn Gilwern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
- Indicative Towy Usk switching station location

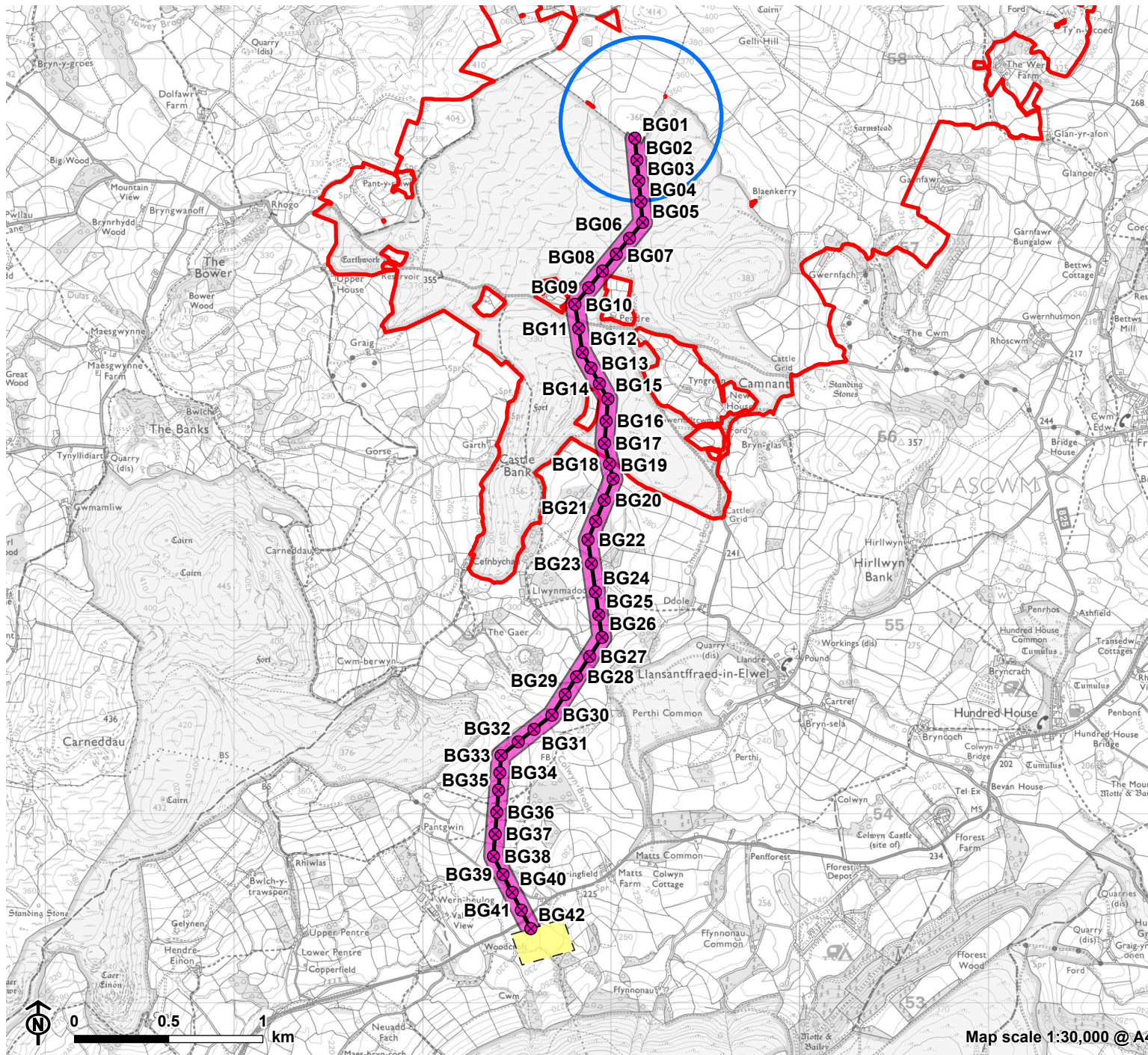


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Figure 5.2: Preferred Bryn Gilwern Route Option Constraints and Considerations





Bryn Gilwern Grid Connection -
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**Figure 5.3: Preferred Bryn Gilwern
Indicative Alignment**

- Route Option 2 Indicative Wood Pole Position
- Route Option 2 Indicative Alignment
- Route Option 2
- Bute Energy's Proposed Bryn Gilwern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
- Indicative Towy Usk switching station location

Map scale 1:30,000 @ A4