


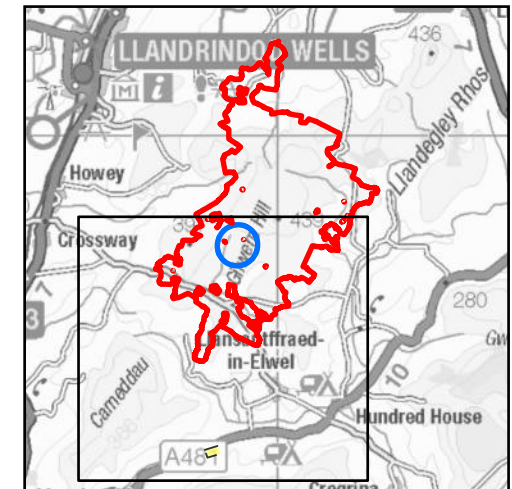


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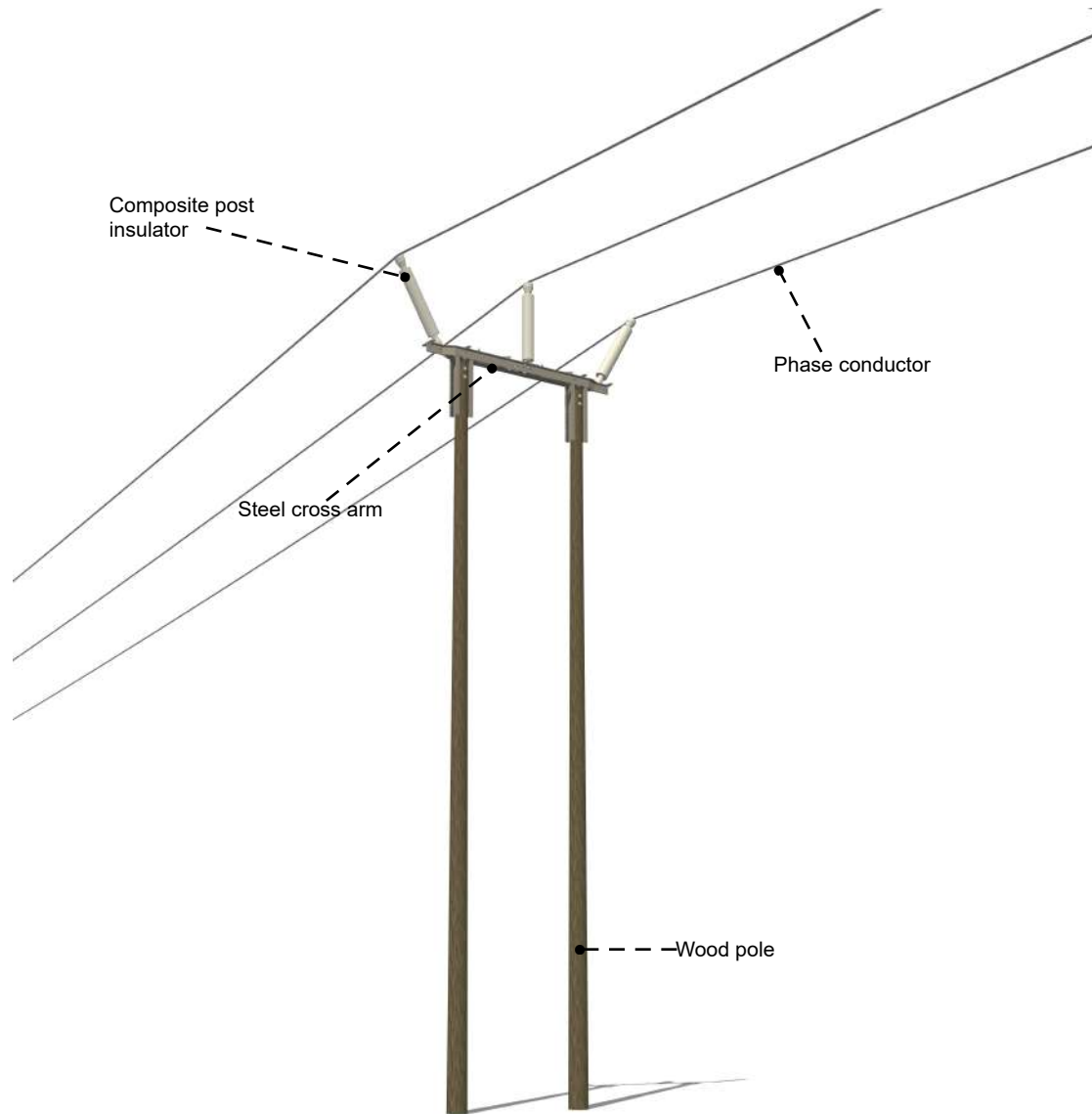
**Figure 1.1: Bryn Gilwern 132kV  
Connection Project Location**

-  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





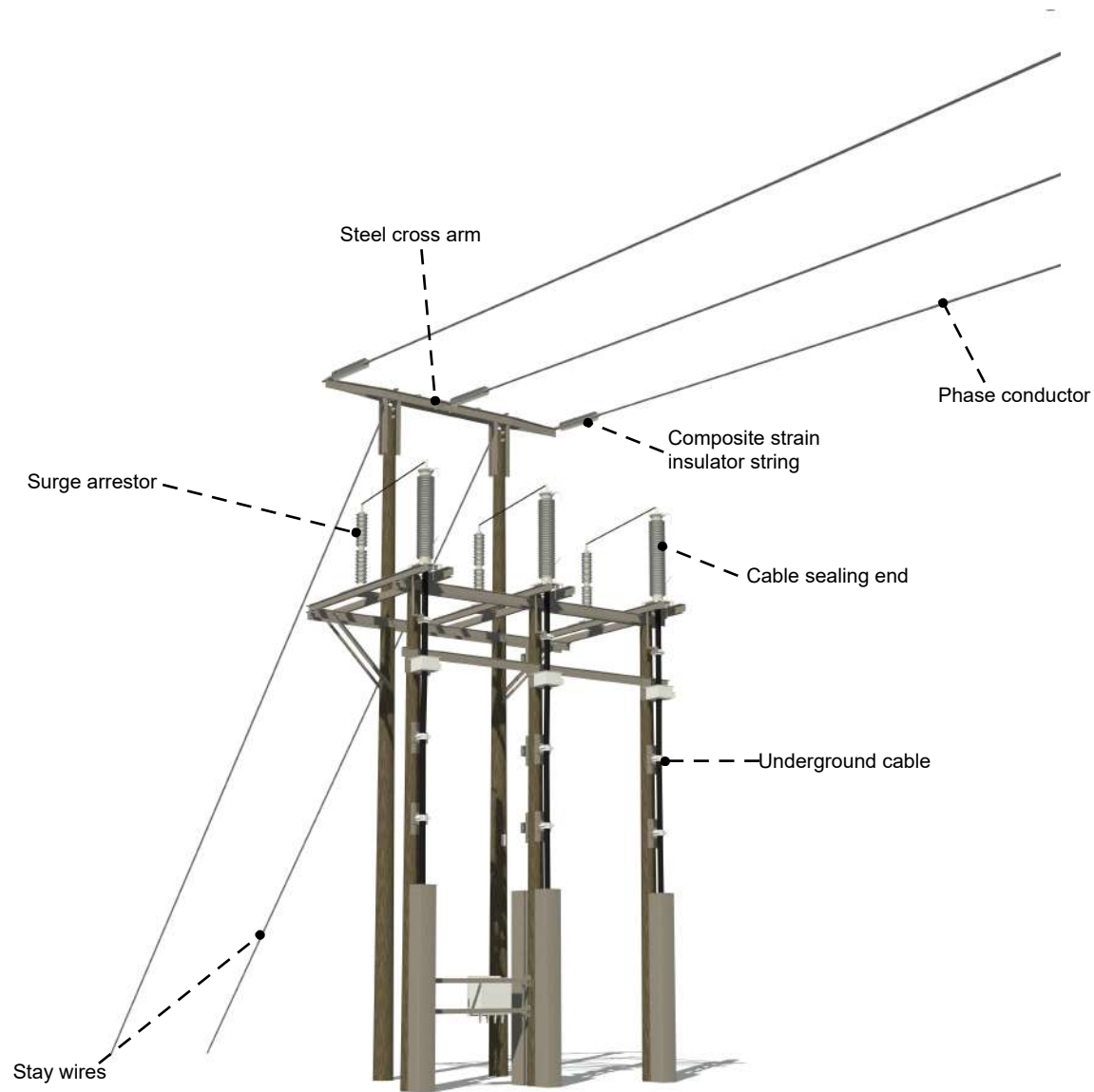
**Figure 2.1b: Typical Wood Pole  
(Component Parts of 132kV Design Wood  
Pole - Intermediate)**



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

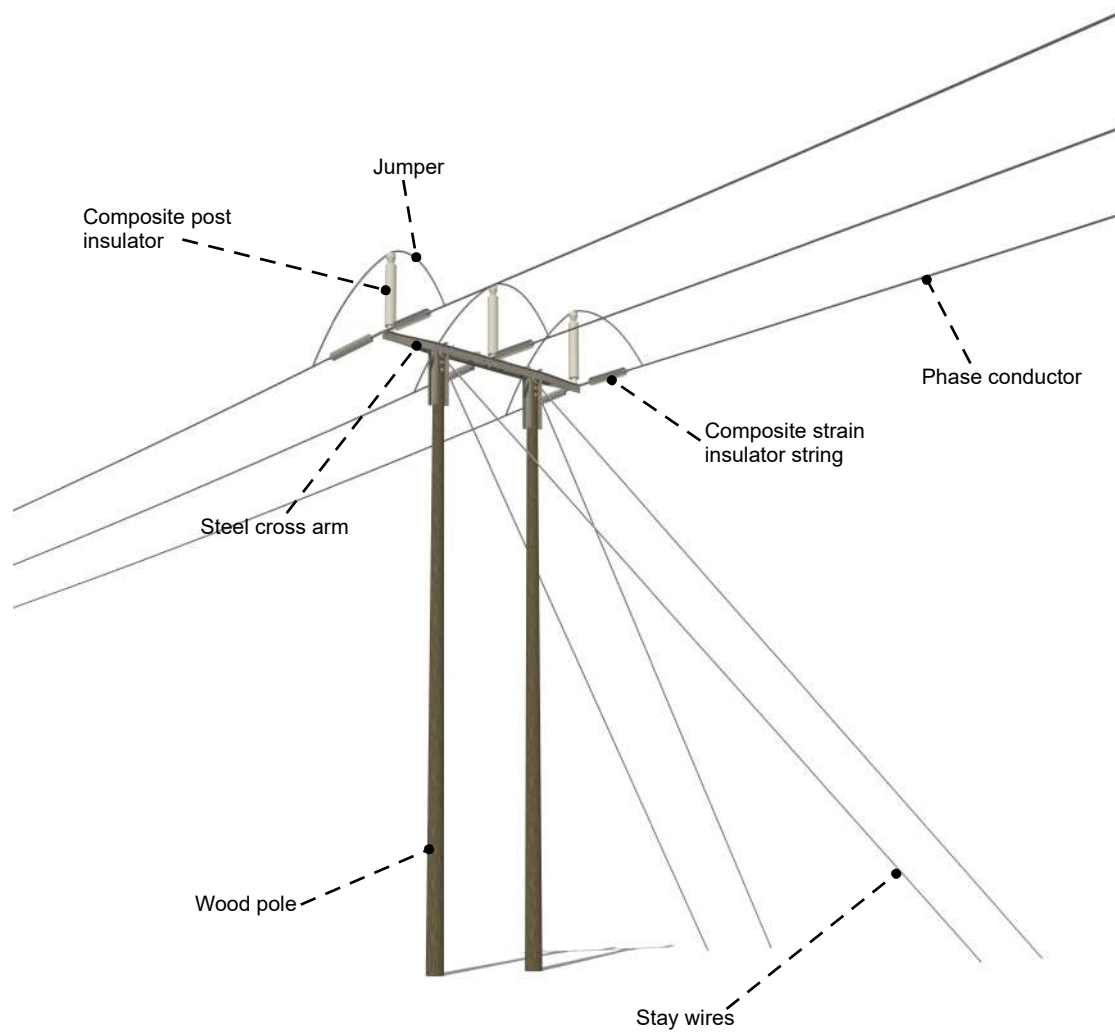


**Figure 2.1c: Typical Wood Pole  
(Component Parts of 132kV Design Wood  
Pole - Terminal)**



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

ENATS 43-50 Cable Termination Pole



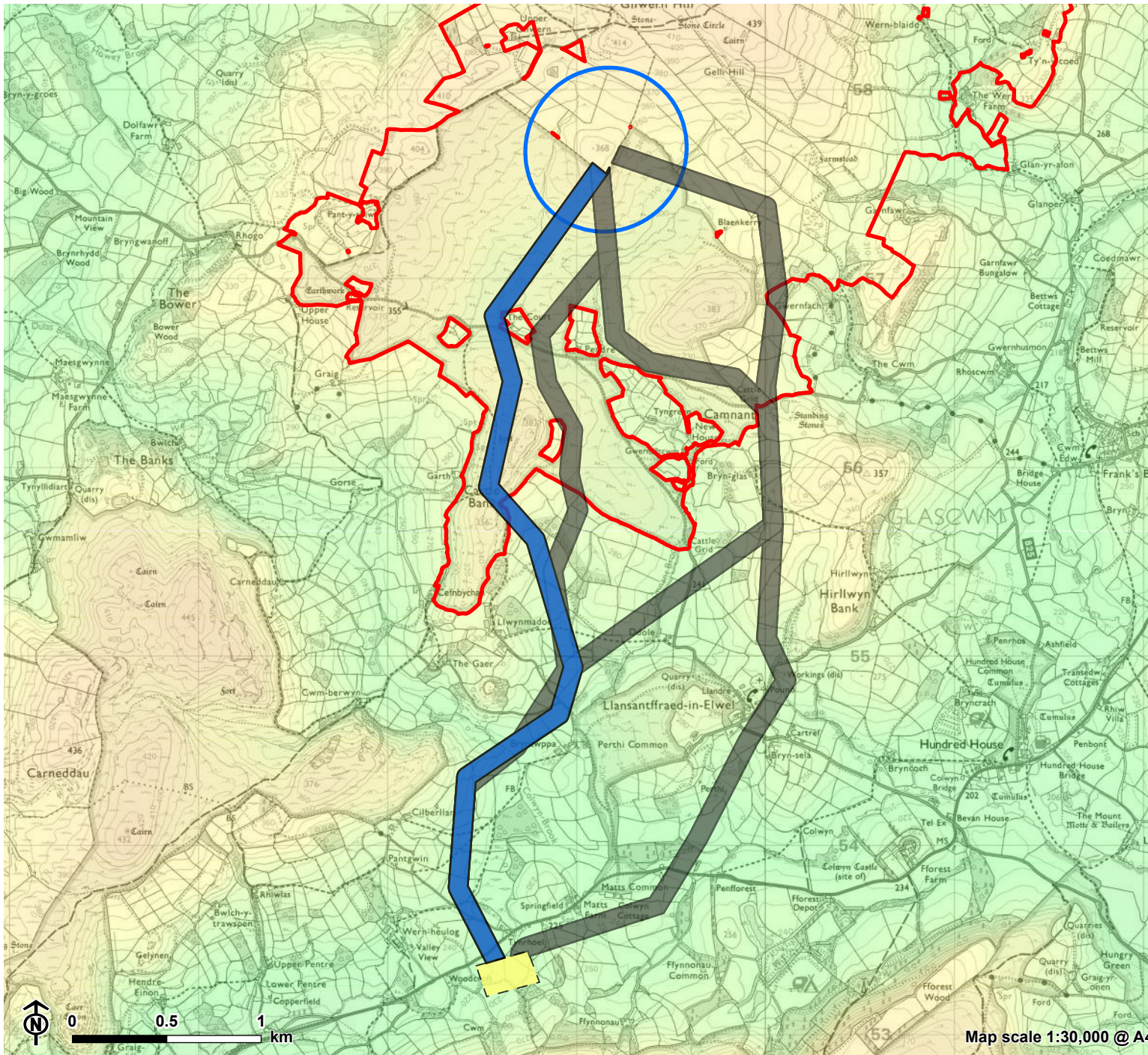
**Figure 2.1a: Typical Wood Pole  
(Component Parts of 132kV Design Wood  
Pole - Angle)**








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

ENATS 43-50 Wood Pole (H-Pole)



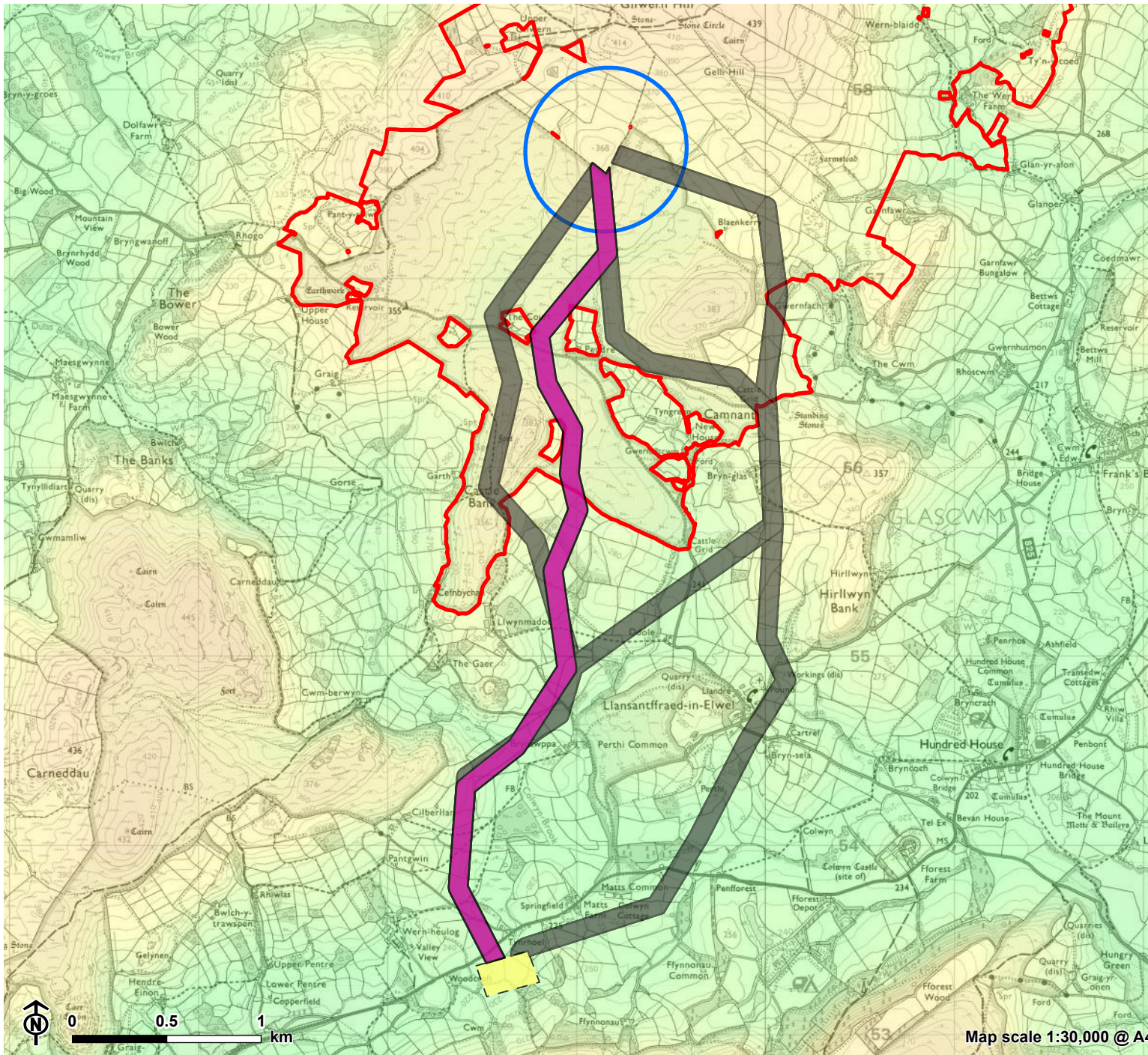
**Figure 4.1.1: Bryn Gilwern 132kV  
Connection Project Route Option 1**










-  Route Option 1
  -  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)**
-  High
  -  Low



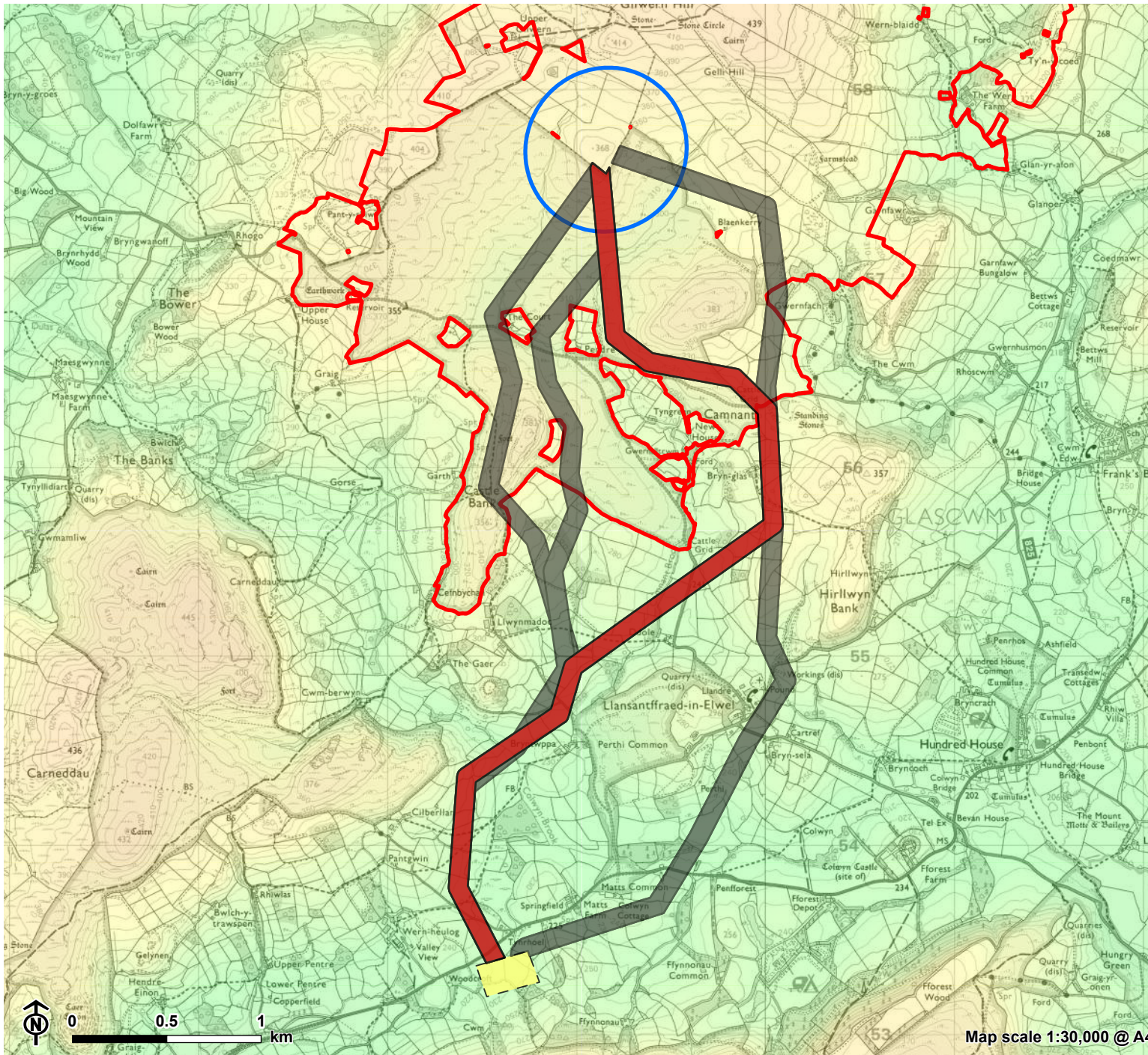
**Figure 4.1.2: Bryn Gilwern 132kV  
Connection Project Route Option 2**



-  Route Option 2
  -  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)**
-  High
  -  Low



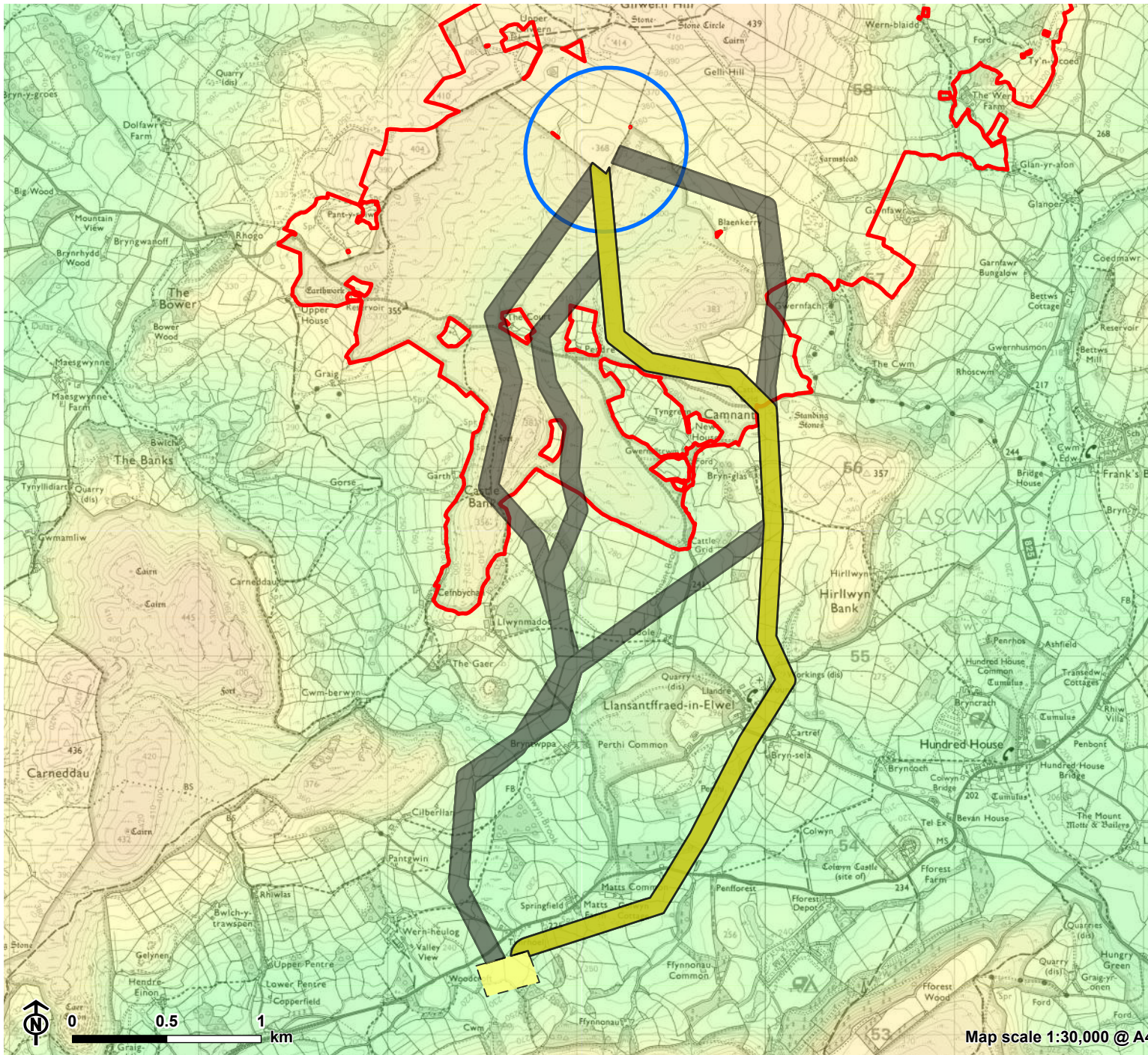
**Figure 4.1.3: Bryn Gilwern 132kV  
Connection Project Route Option 3**



- 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)**
- High
  - Low



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



- Route Option 4
  - 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)**
- High
  - Low

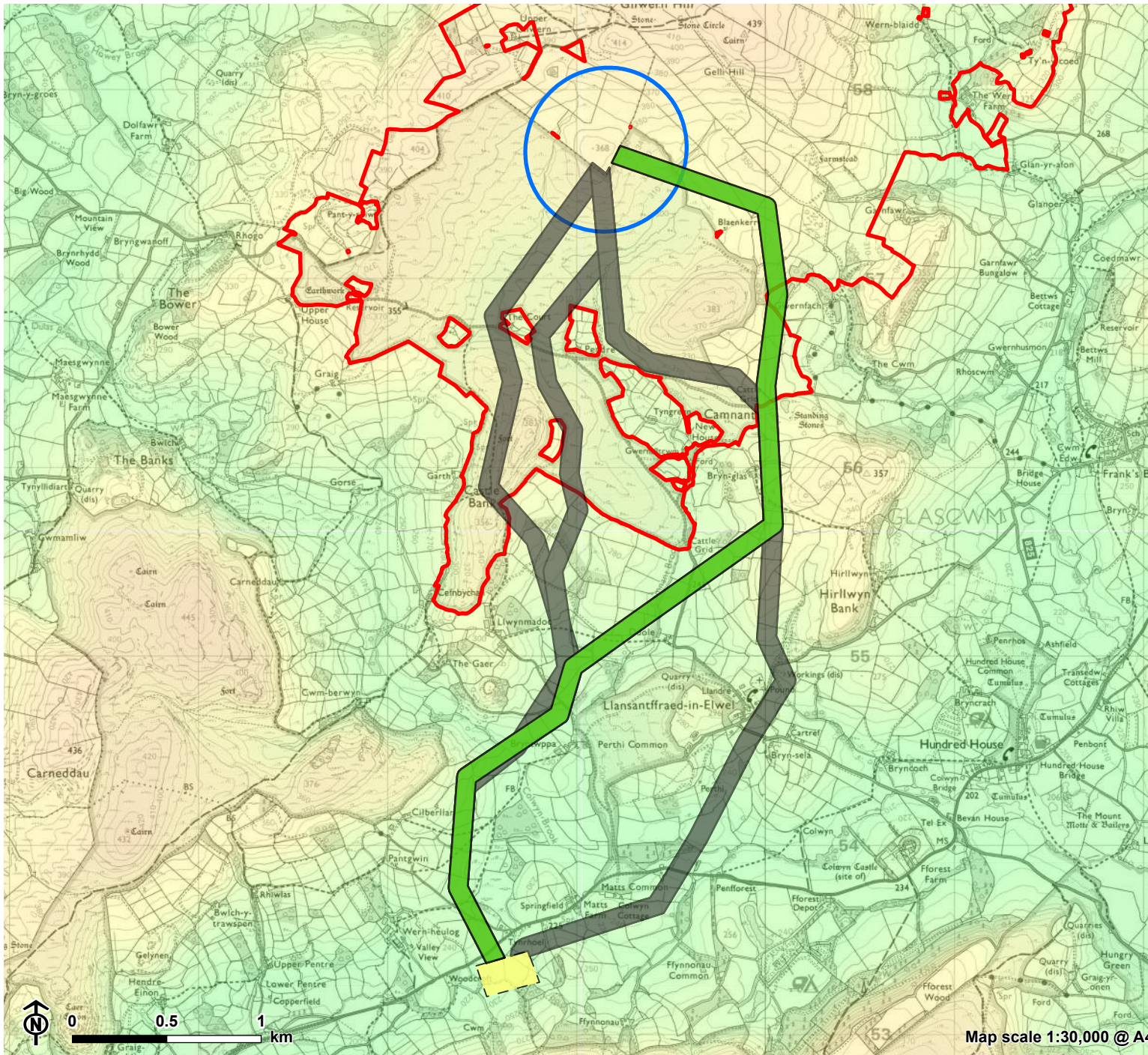
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**Figure 4.1.5: Bryn Gilwern 132kV  
Connection Project Route Option 5**



-  Route Option 5
  -  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)**
-  High
  -  Low

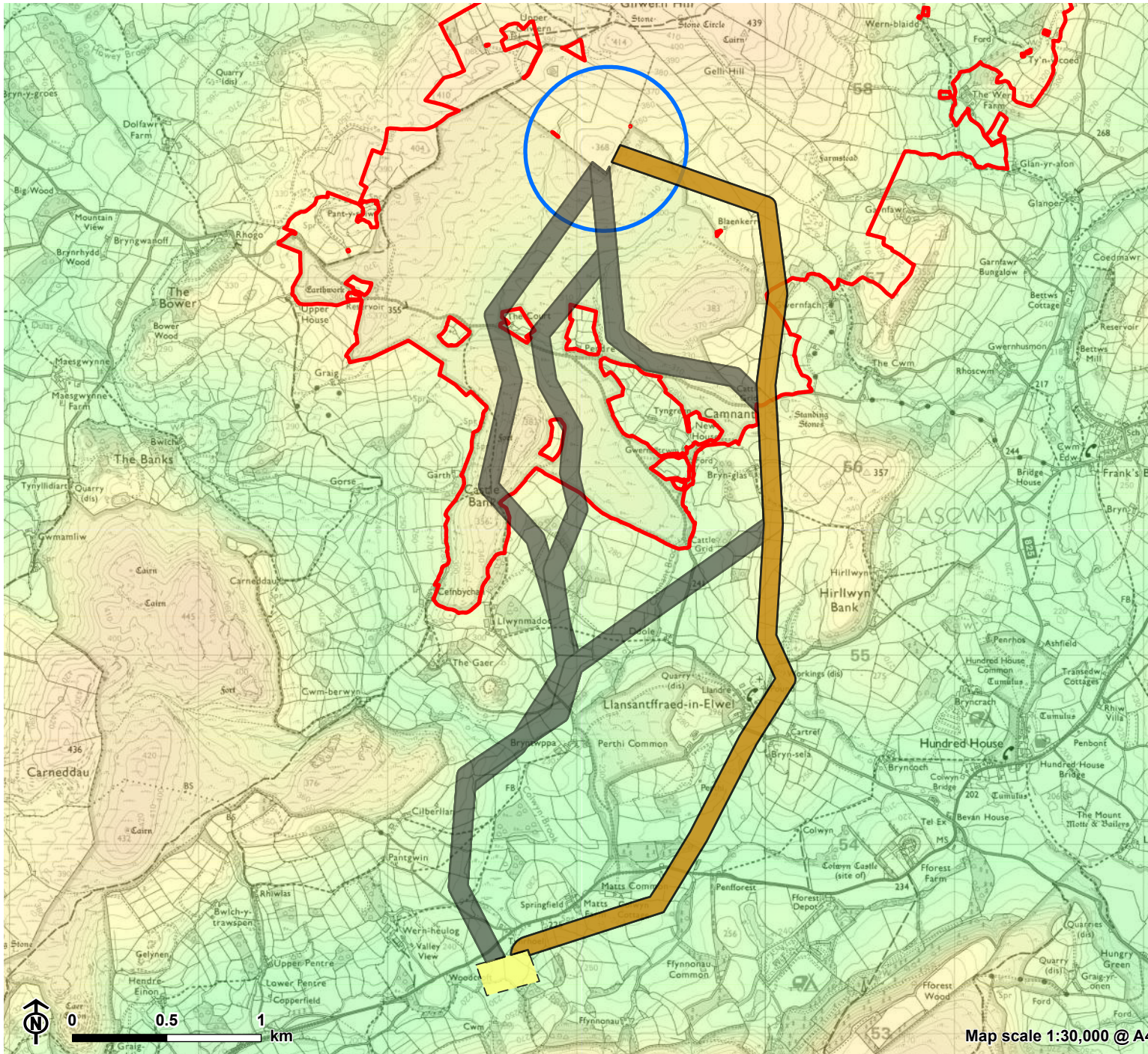









Map scale 1:30,000 @ A4

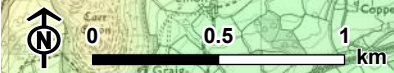




**Figure 4.1.6: Bryn Gilwern 132kV  
Connection Project Route Option 6**



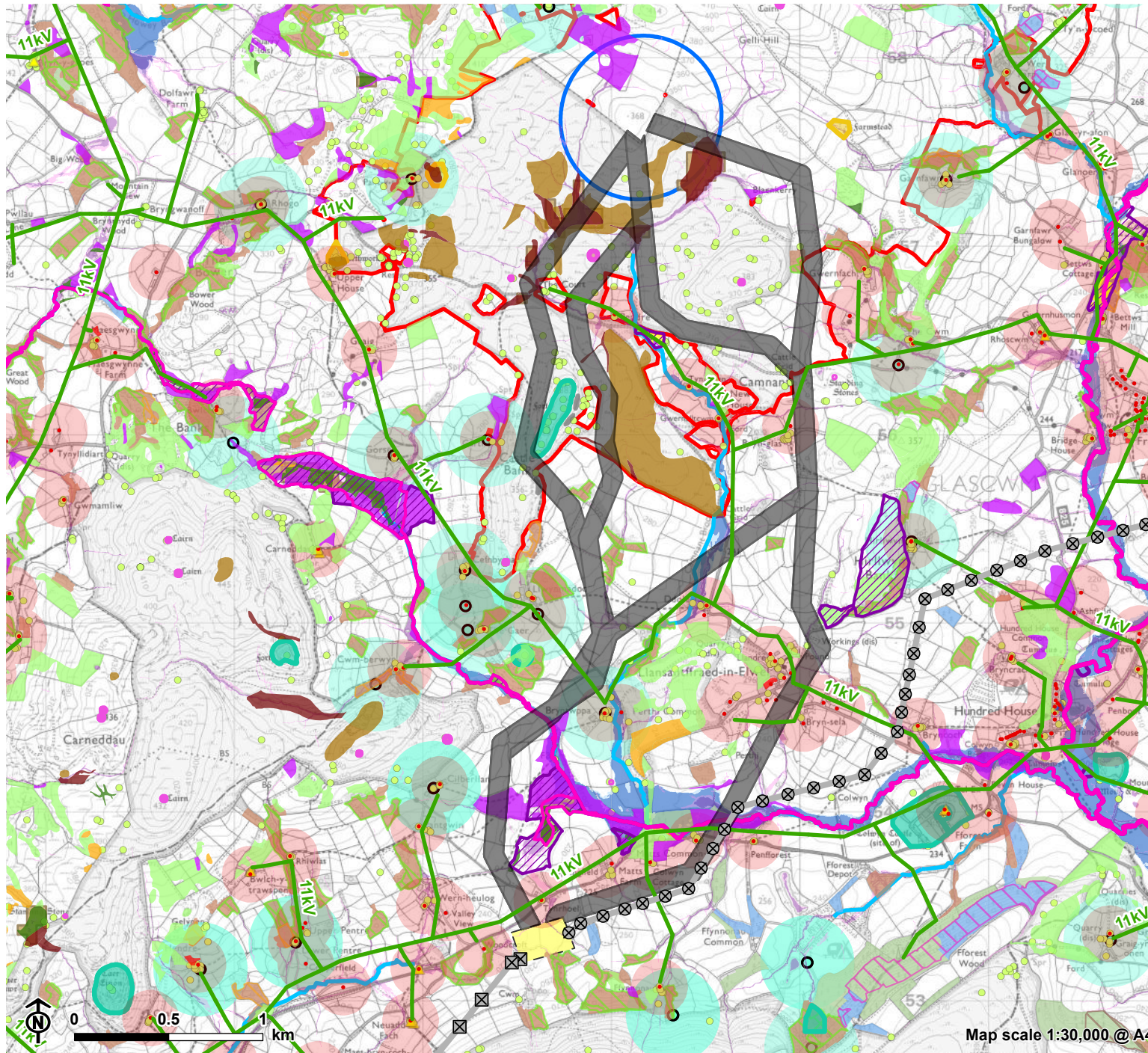
-  Route Option 6
  -  Other route options
  -  Bute Energy's Proposed Bryn Gilwern Energy Park
  -  Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
  -  Indicative Towy Usk switching station location
- Terrain (AOD)**
-  High
  -  Low



Map scale 1:30,000 @ A4



**Figure 4.2: Bryn Gilwern Route Options  
Constraints and Considerations**

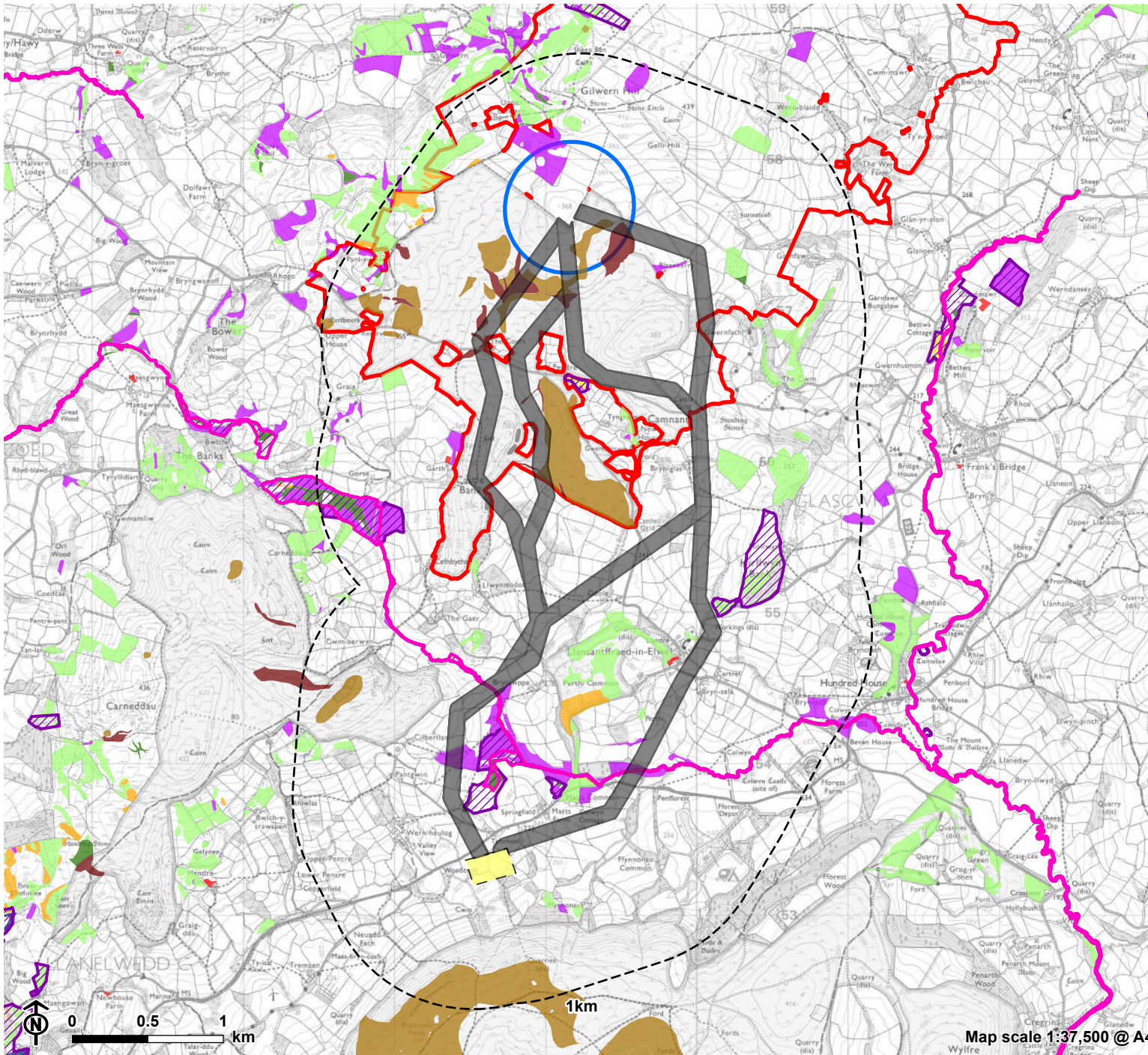


- |  |  |
|--|--|
| Route options  | Scheduled Monument: Defence  |
| Bute Energy's Proposed Bryn Gilwern Energy Park                                | Scheduled Monument: Religious, Ritual and Funerary                                   |
| Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location | Scheduled Monument: Other Class  |
| Proposed Towy Usk Draft Alignment - March / April 2024                         | Grade II listed building   |
| Proposed Towy Usk Draft Alignment Wood Pole Location - March / April 2024      | Grade II* listed building  |
| Proposed Towy Usk Draft Alignment Tower Location - March / April 2024          | Clwyd Powys Archaeological Trust (CPAT) Historic Environment Record (HER) point data |
| Indicative Towy Usk switching station location                                 | <b>Forestry and Woodland</b>   |
| <b>Existing Overhead Lines (OHL)</b>   | <b>Ancient Woodland (Wales)</b>  |
| 11kV OHL   | Ancient Semi Natural Woodland  |
| <b>Biodiversity</b>  | Plantation on Ancient Woodland   |
| Special Area of Conservation (SAC)   | Restored Ancient Woodland  |
| Site of Specific Scientific Interest (SSSI)                                    | Ancient Woodland Site of unknown Category  |
| <b>Environment (Wales) Act 2016 Priority Habitats</b>                          | <b>National Forest Inventory Wales 2022</b>  |
| Upland Heathland   | Broadleaved & Mixed mainly broadleaved   |
| Upland Flushes Fens and Swamps   | Conifer & Mixed mainly conifer   |
| Traditional Orchards   | Other  |
| Purple Moor Grass and Rush Pastures  | <b>Hydrology and Hydrogeology</b>  |
| Lowland Meadows  | River / Watercourse  |
| Lowland Heathland  | Private water supply   |
| Lowland Fens and Reedbeds  | 250m from Private water supply   |
| Lowland Dry Acid Grassland   | <b>Flood Risk from Rivers</b>  |
| Inland Rock Outcrop and Scree Habitats   | Flood Zone 3   |
| <b>Landscape and Visual Amenity</b>  | Flood Zone 2   |
| Residential Property   | <b>Flood Risk from Surface Water and Small Watercourses</b>                          |
| 150m from Residential Property   | Flood Zone 3   |
|  | Flood Zone 2   |
|  | <b>Peat</b>  |
|  | Peat (Peatlands of Wales)  |





**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)

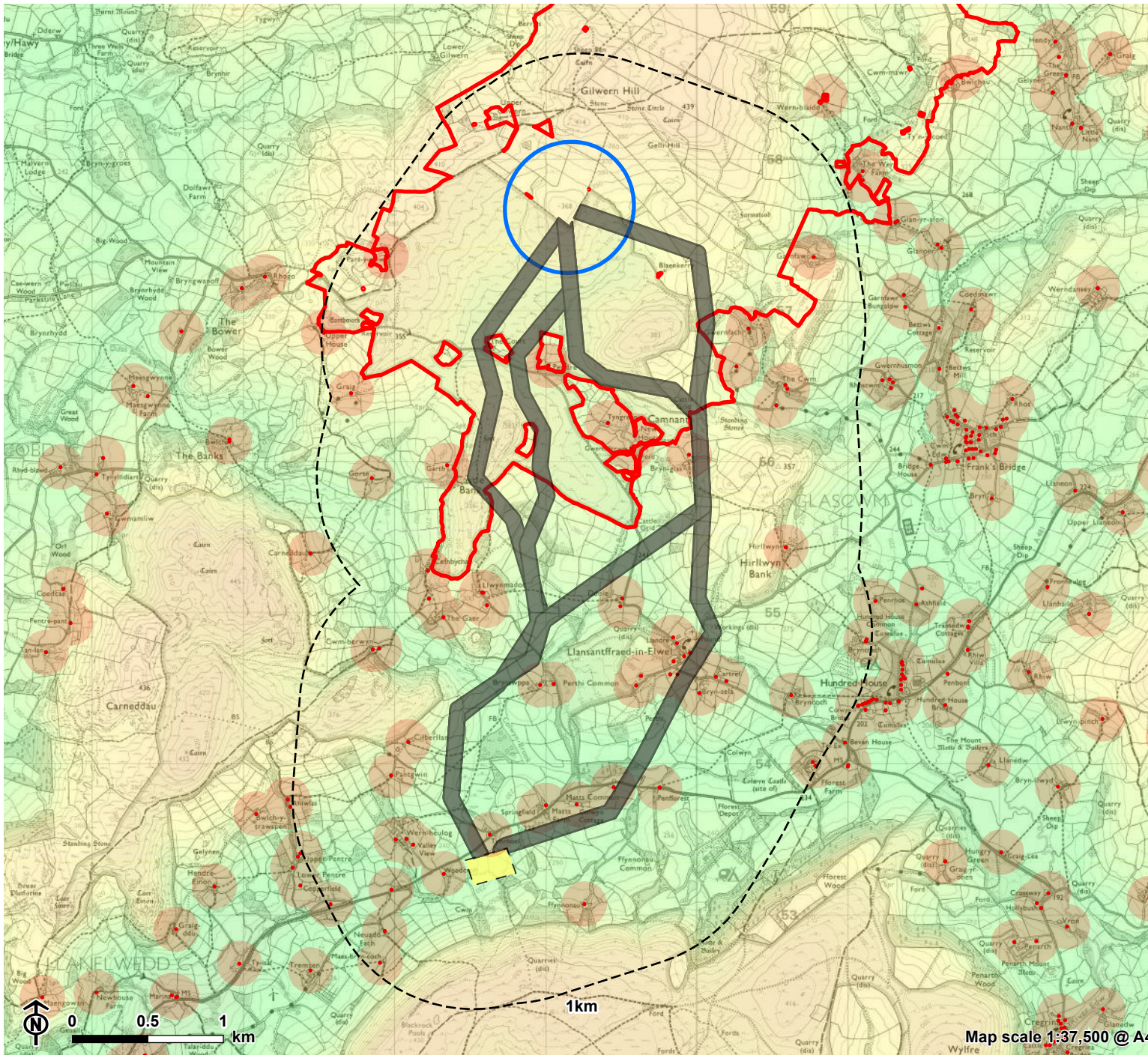
- Environment (Wales) Act 2016 Priority Habitats**
- Open Mosaic Habitats of Previously Developed Land
  - Upland Heathland
  - Upland Flushes Fens and Swamps
  - Traditional Orchards
  - Purple Moor Grass and Rush Pastures
  - Lowland Meadows
  - Lowland Heathland
  - Lowland Fens and Reedbeds
  - Lowland Dry Acid Grassland
  - Calcareous Grassland
  - Inland Rock Outcrop and Scree Habitats






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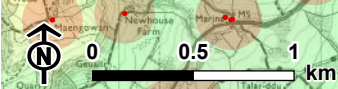
**Figure 4.4.1: Bryn Gilwern Route Options  
Landscape and Visual Amenity  
Constraints and Considerations**



-  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

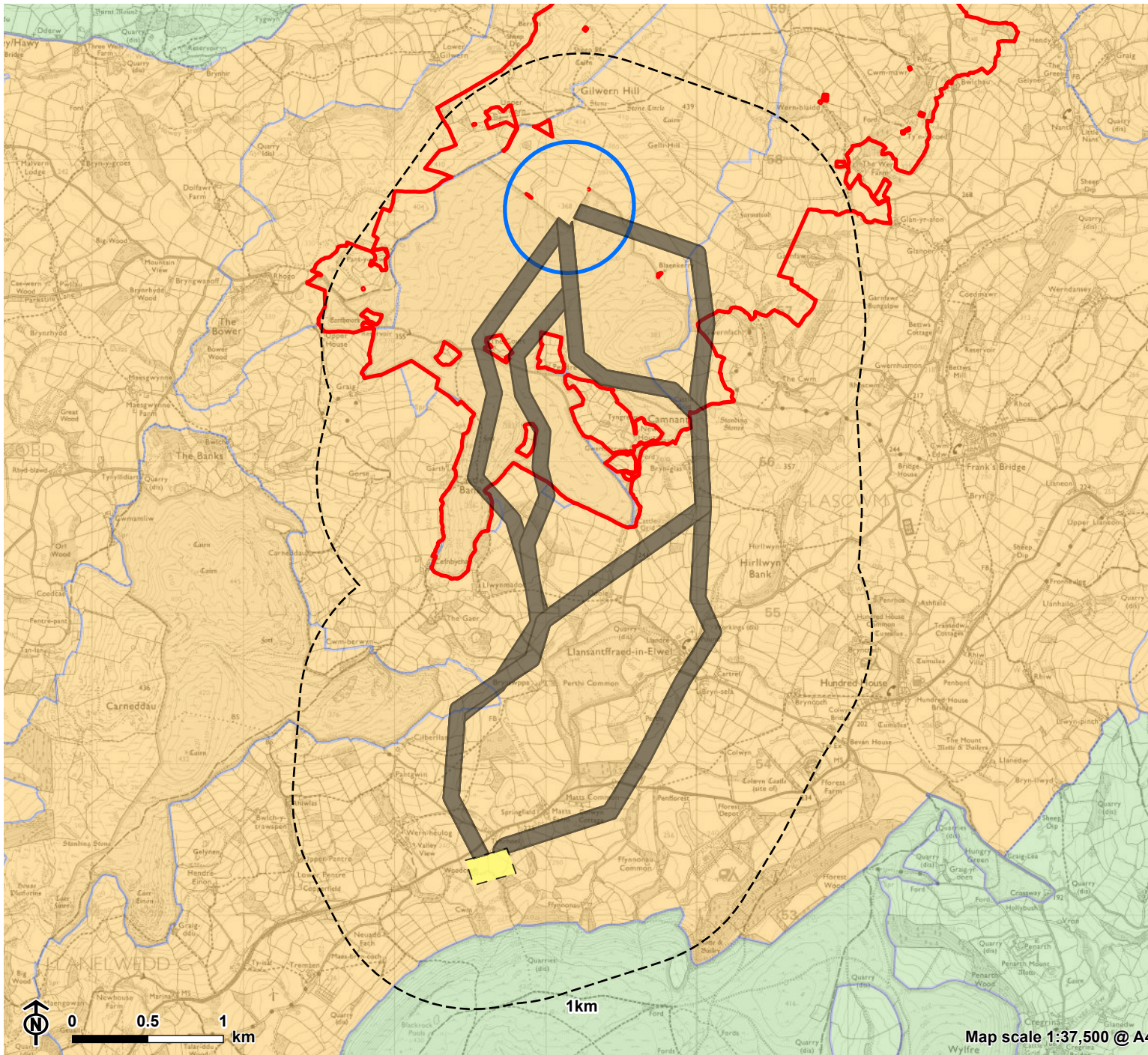


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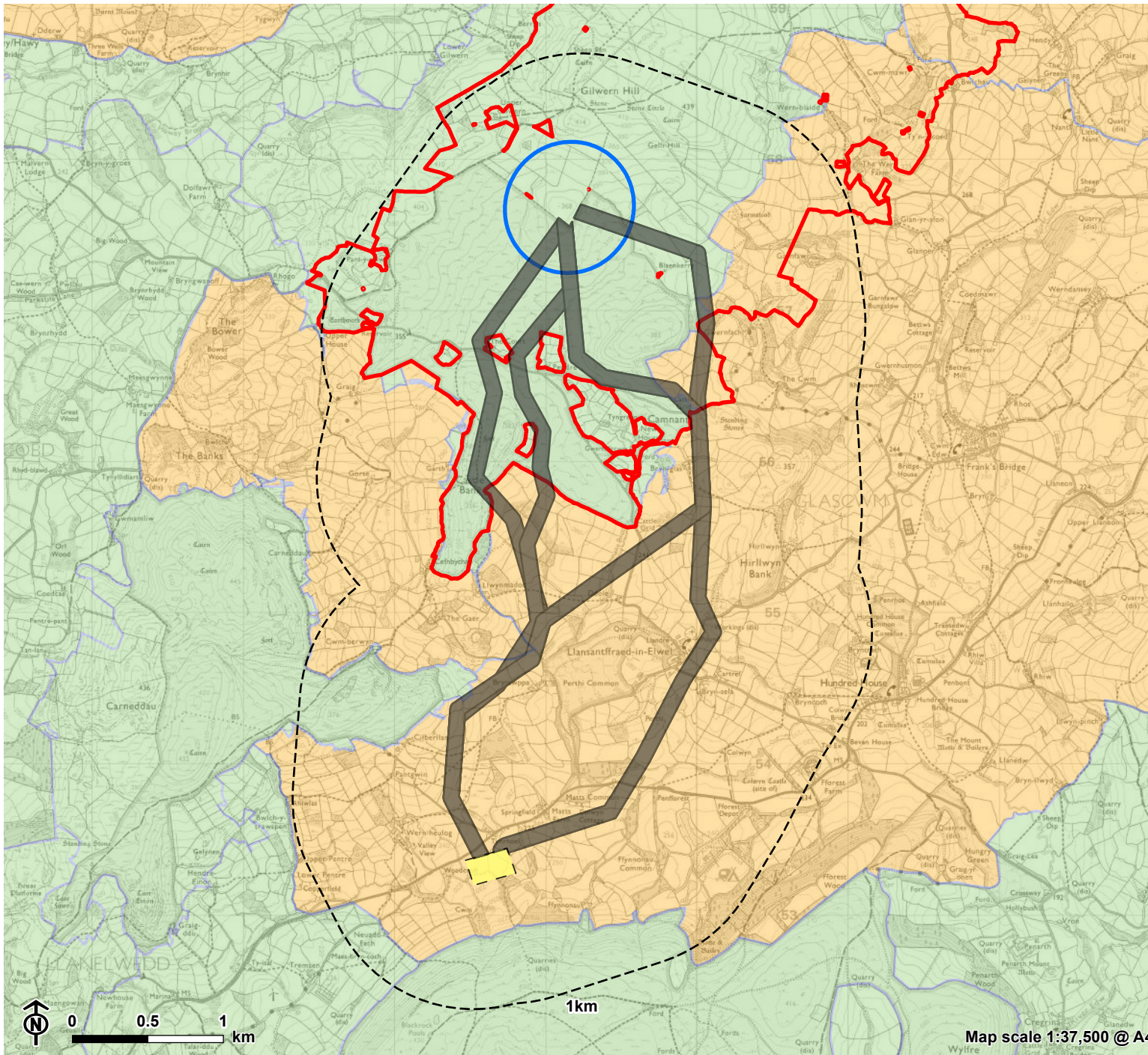
**Figure 4.4.2: Bryn Gilwern LANDMAP  
Aspect Areas: Visual Sensory**










- 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



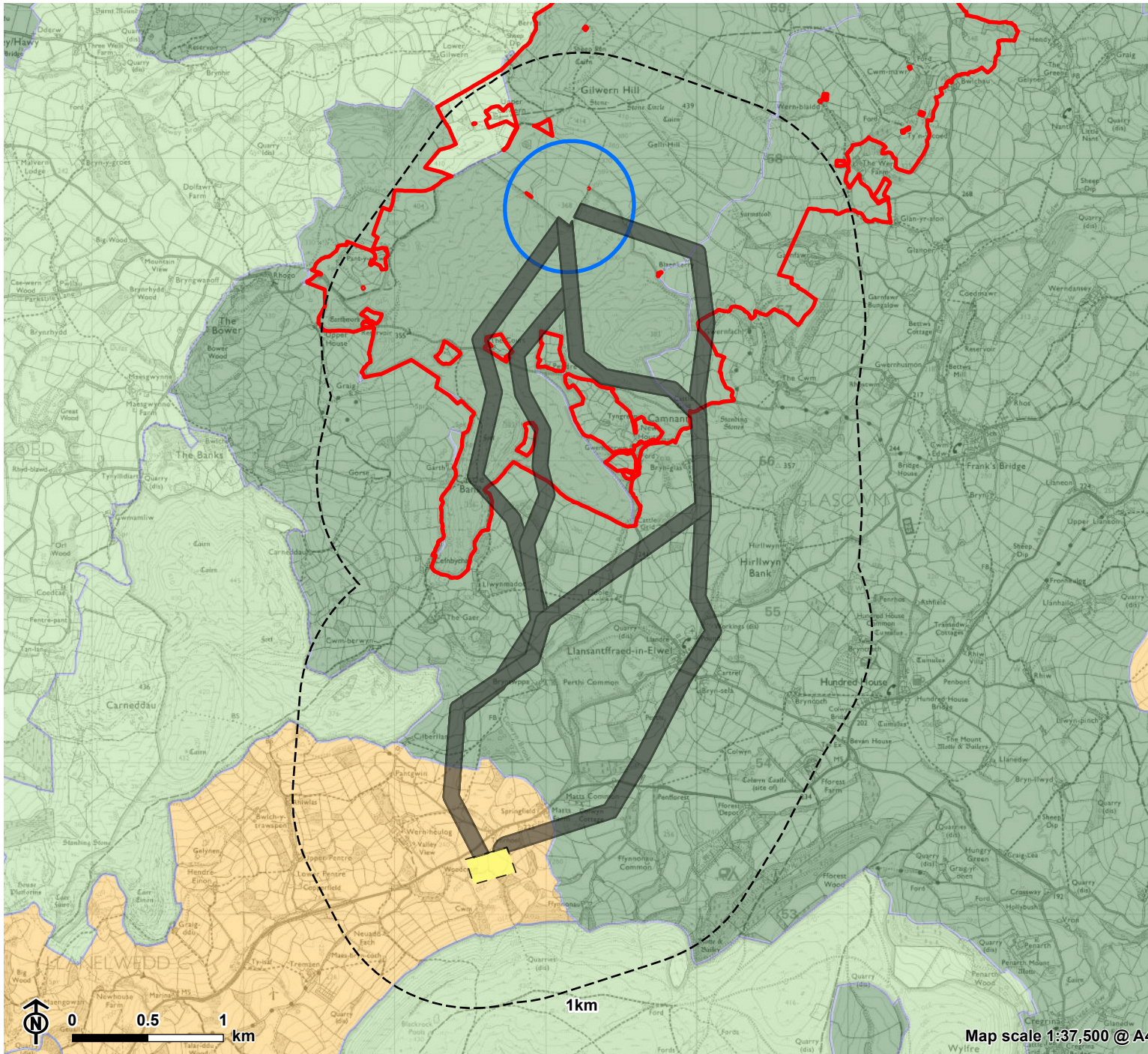
**Figure 4.4.3: Bryn Gilwern LANDMAP  
Aspect Areas: Landscape Habitat**



-  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 Landscape Habitat - Overall Evaluation**
-  High
  -  Moderate



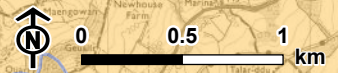
**Figure 4.4.4: Bryn Gilwern LANDMAP  
Aspect Areas: Historic Landscape**



- 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



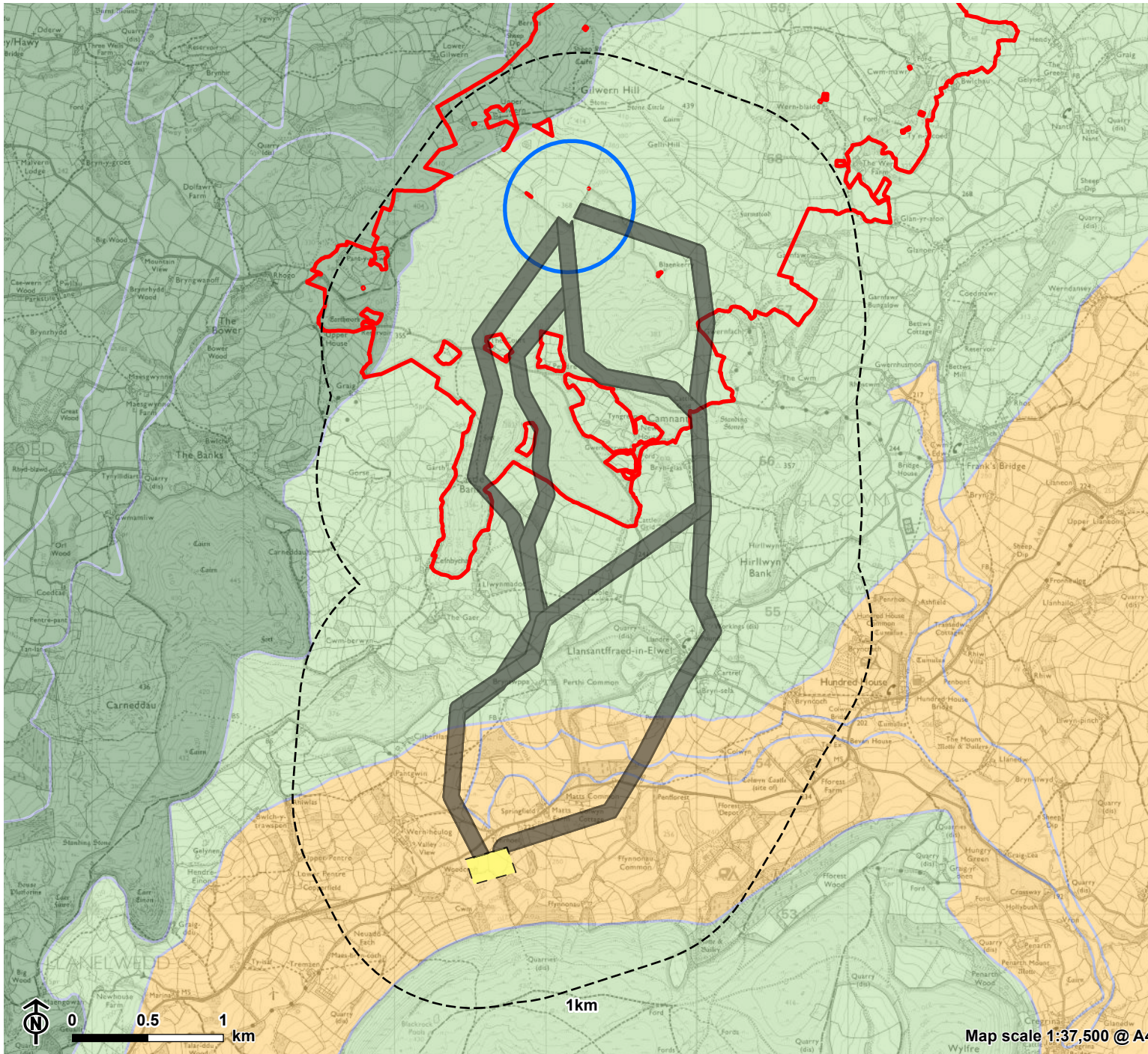
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












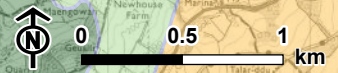
**Figure 4.4.5: Bryn Gilwern LANDMAP  
Aspect Areas: Geological Landscape**



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

**LANDMAP Geological Landscape - Overall Evaluation**

-  Outstanding
-  High
-  Moderate

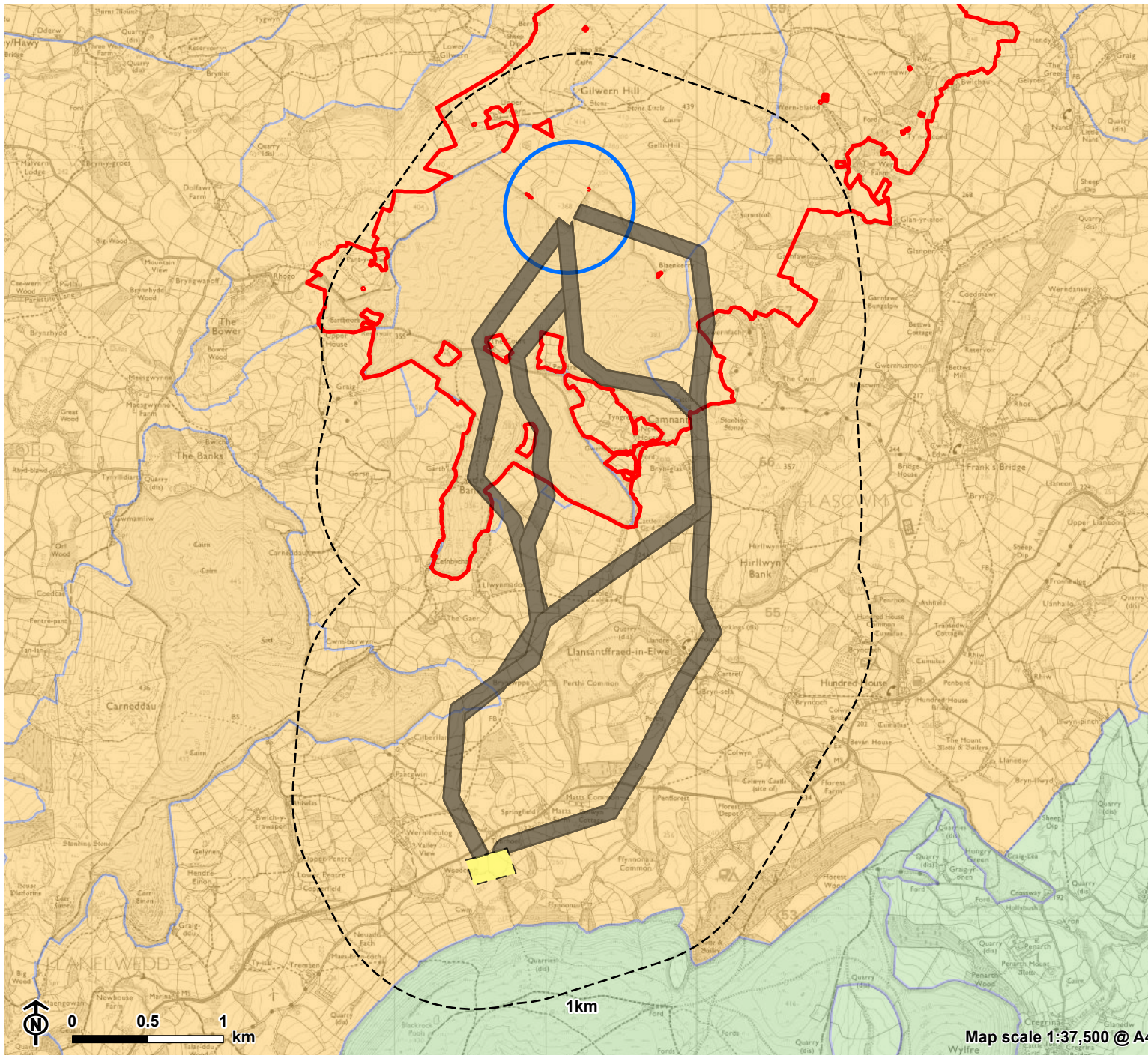









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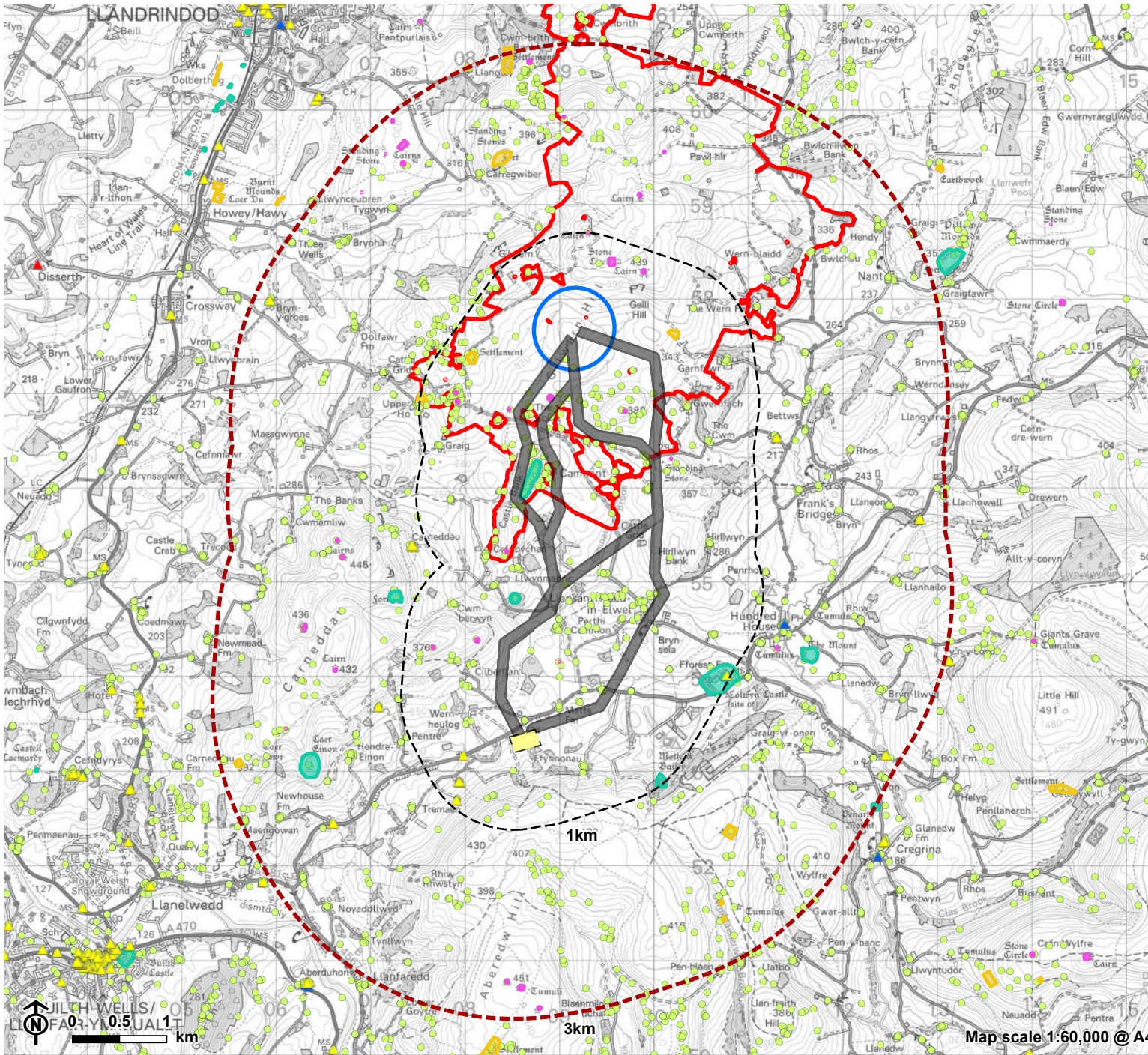
**Figure 4.4.6: Bryn Gilwern LANDMAP  
Aspect Areas: Cultural Landscape**



-  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 Cultural Landscape - Overall Evaluation**
-  High
  -  Moderate



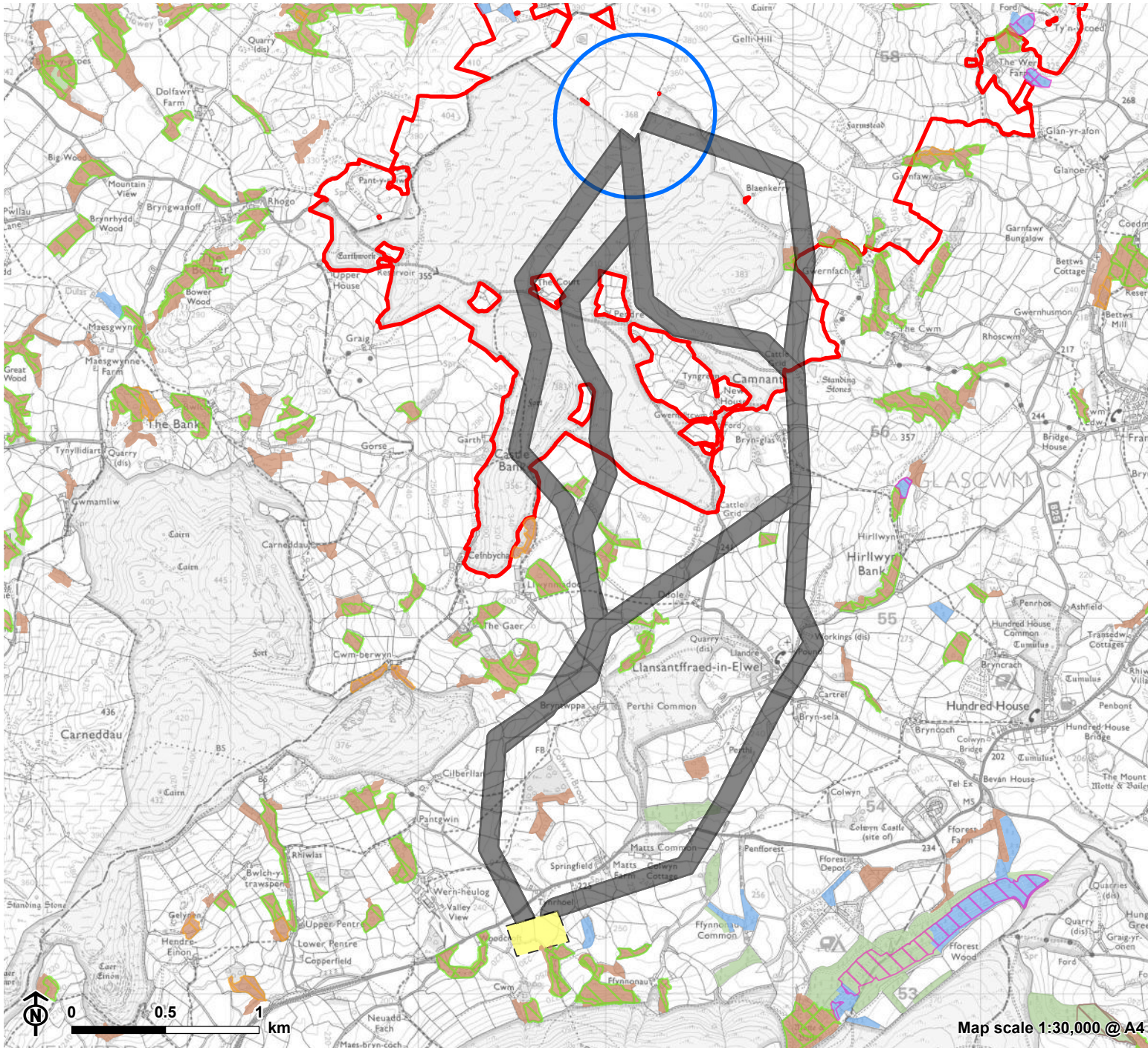
**Figure 4.5: Bryn Gilwern Route Options  
Historic Environment Constraints  
and Considerations**



- 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

Map scale 1:60,000 @ A4













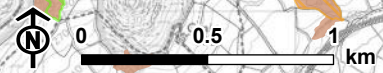


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**Figure 4.6: Bryn Gilwern Route Options  
Forestry and Woodland Constraints and  
Considerations**

-  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
- 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

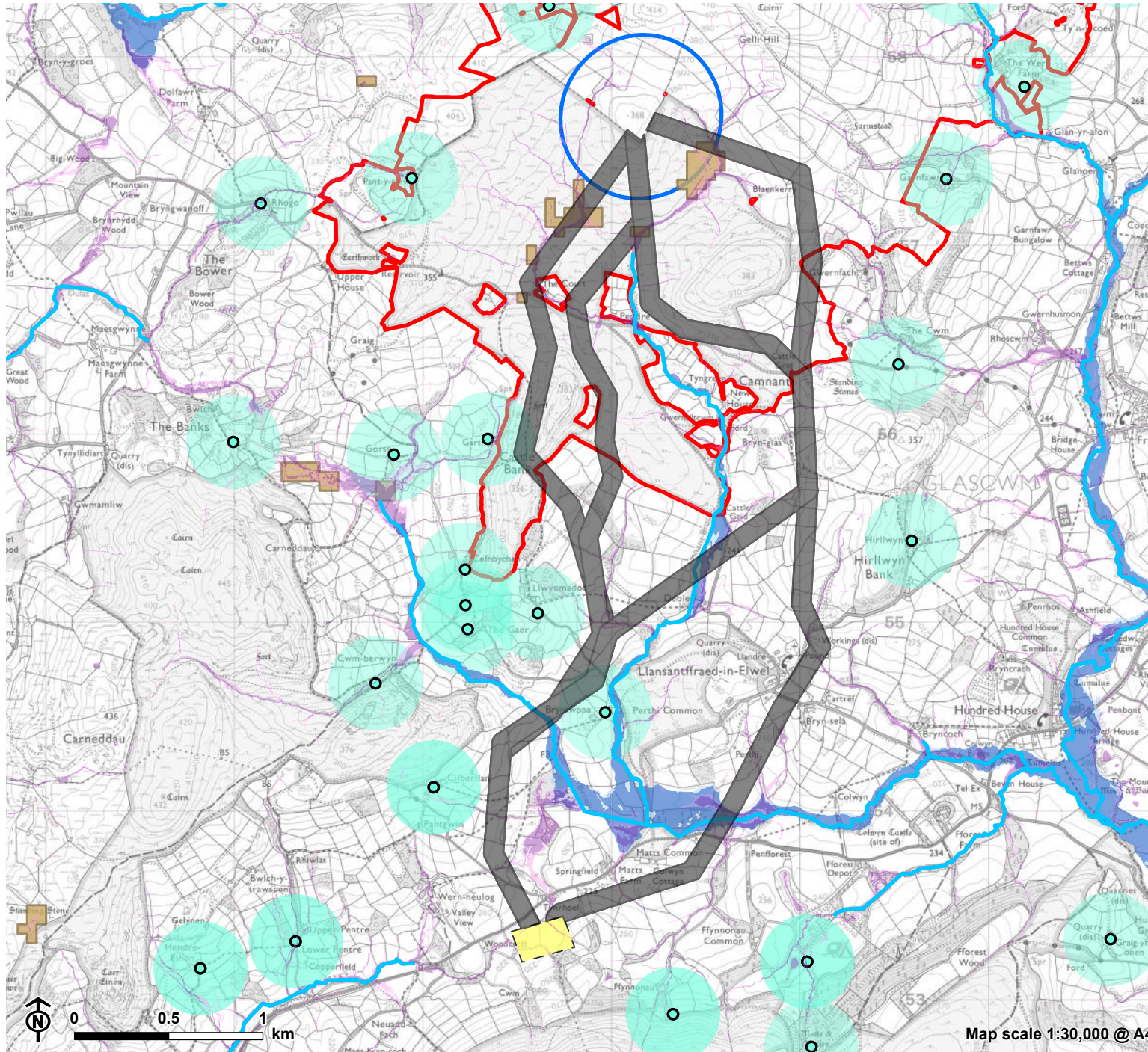






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




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




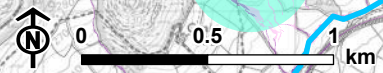
-  Route options
-  Bute Energy's Proposed Bryn Gilwern Energy Park
-  Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
-  Indicative Towy Usk switching station location

- 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)

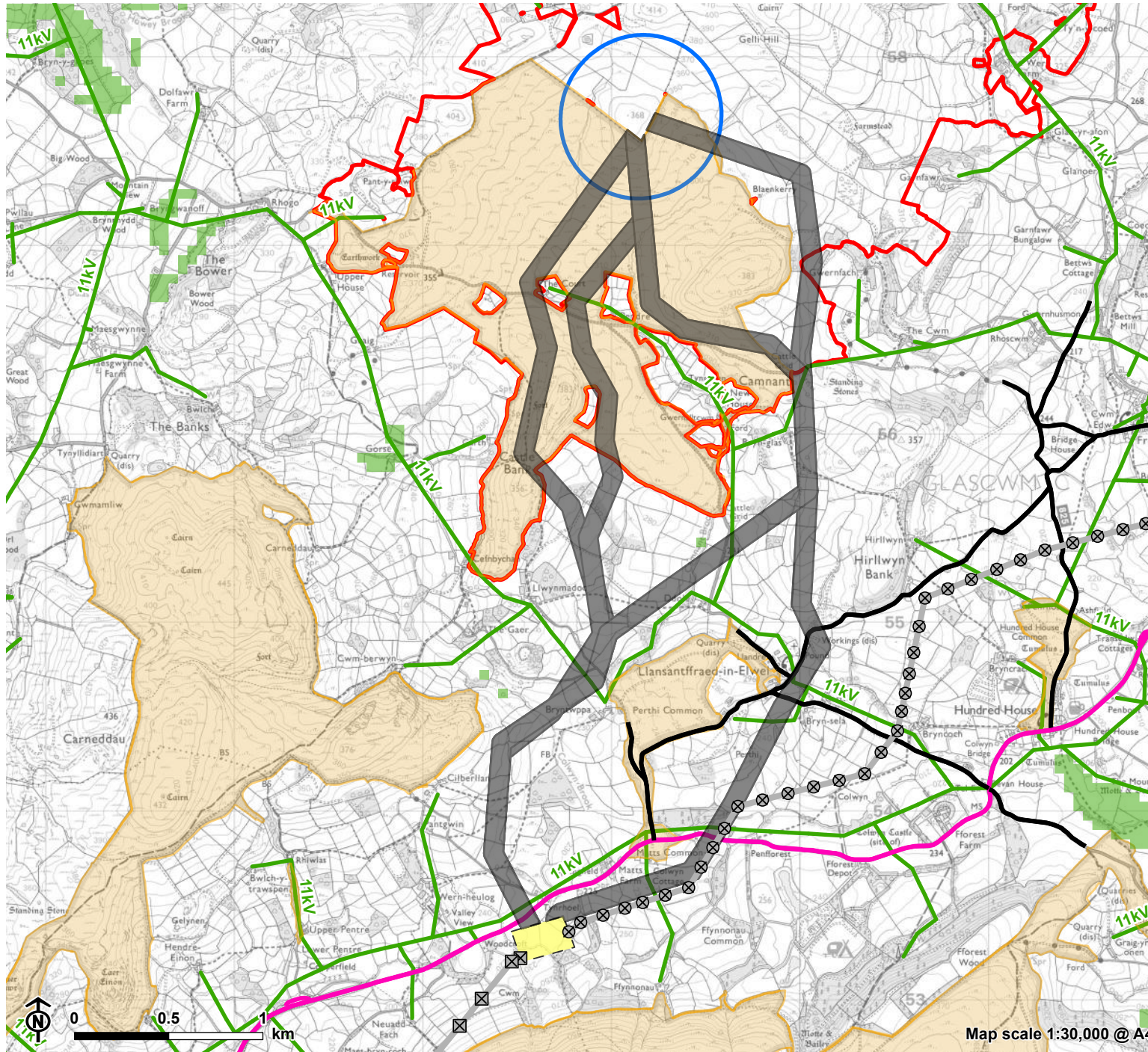


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**Figure 4.8: Bryn Gilwern Route Options  
Land Use Constraints and Considerations**



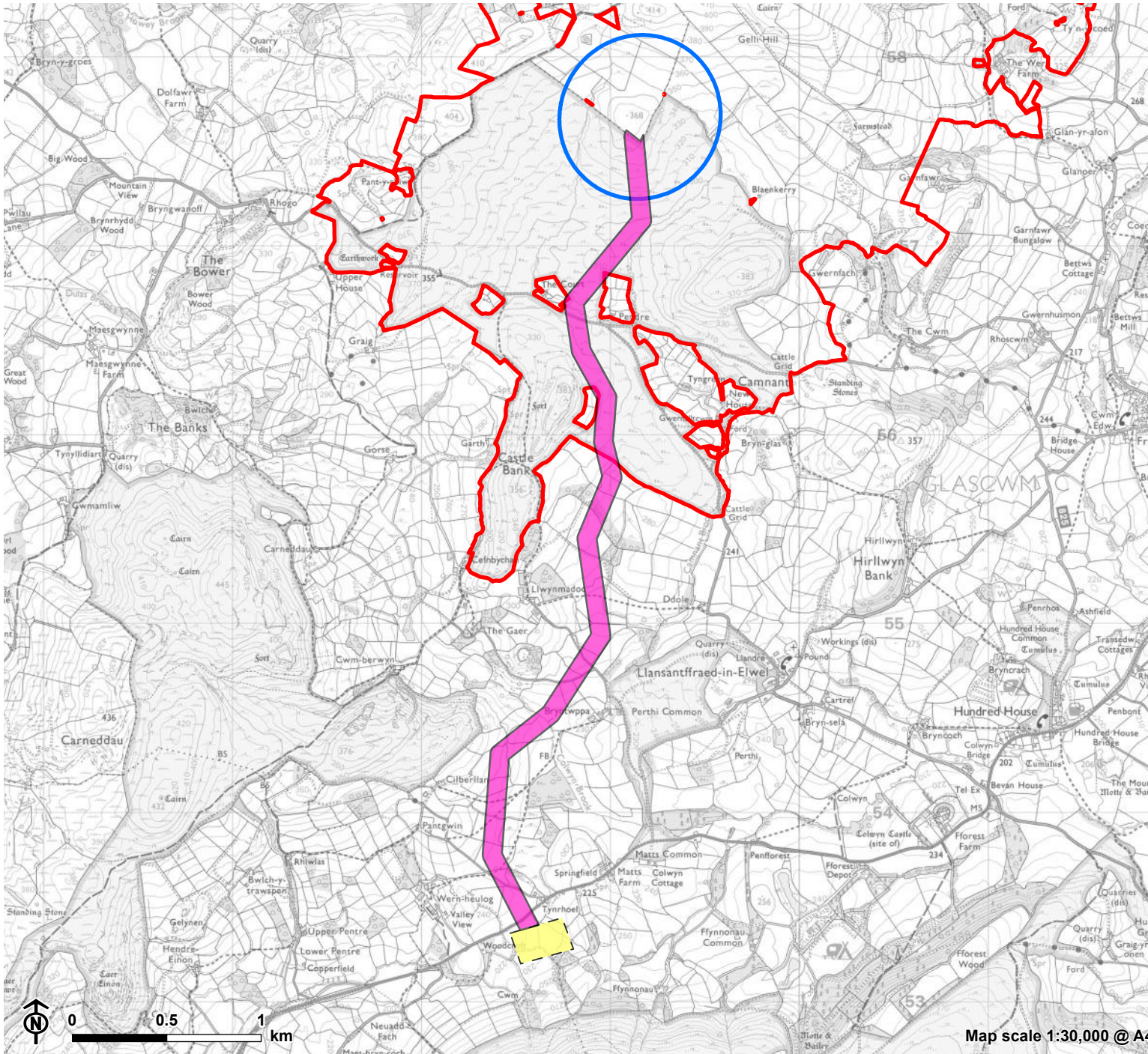
- Route options
- Bute Energy's Proposed Bryn Gilwern Energy Park
- Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location
- Proposed Towy Usk Draft Alignment - March / April 2024
- Proposed Towy Usk Draft Alignment Wood Pole Location - March / April 2024
- Proposed Towy Usk Draft Alignment Tower Location - March / April 2024
- Indicative Towy Usk switching station location
- Common land
- Powys Publicly 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

Map scale 1:30,000 @ A4

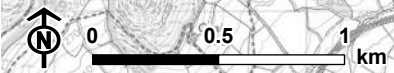




**Figure 5.1: Preferred Bryn Gilwern Route Option**



- 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

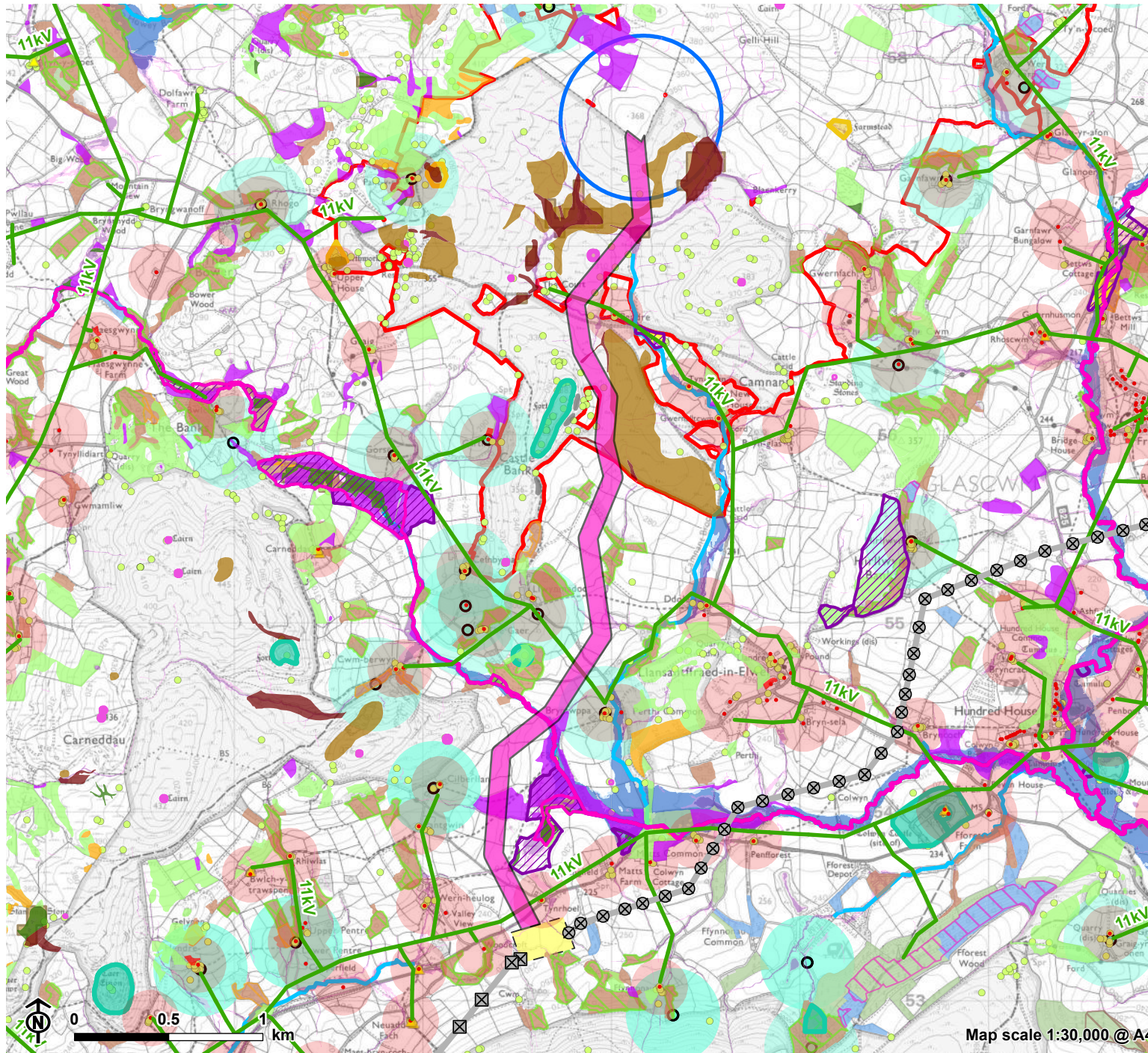


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**Figure 5.2: Preferred Bryn Gilwern Route Option Constraints and Considerations**



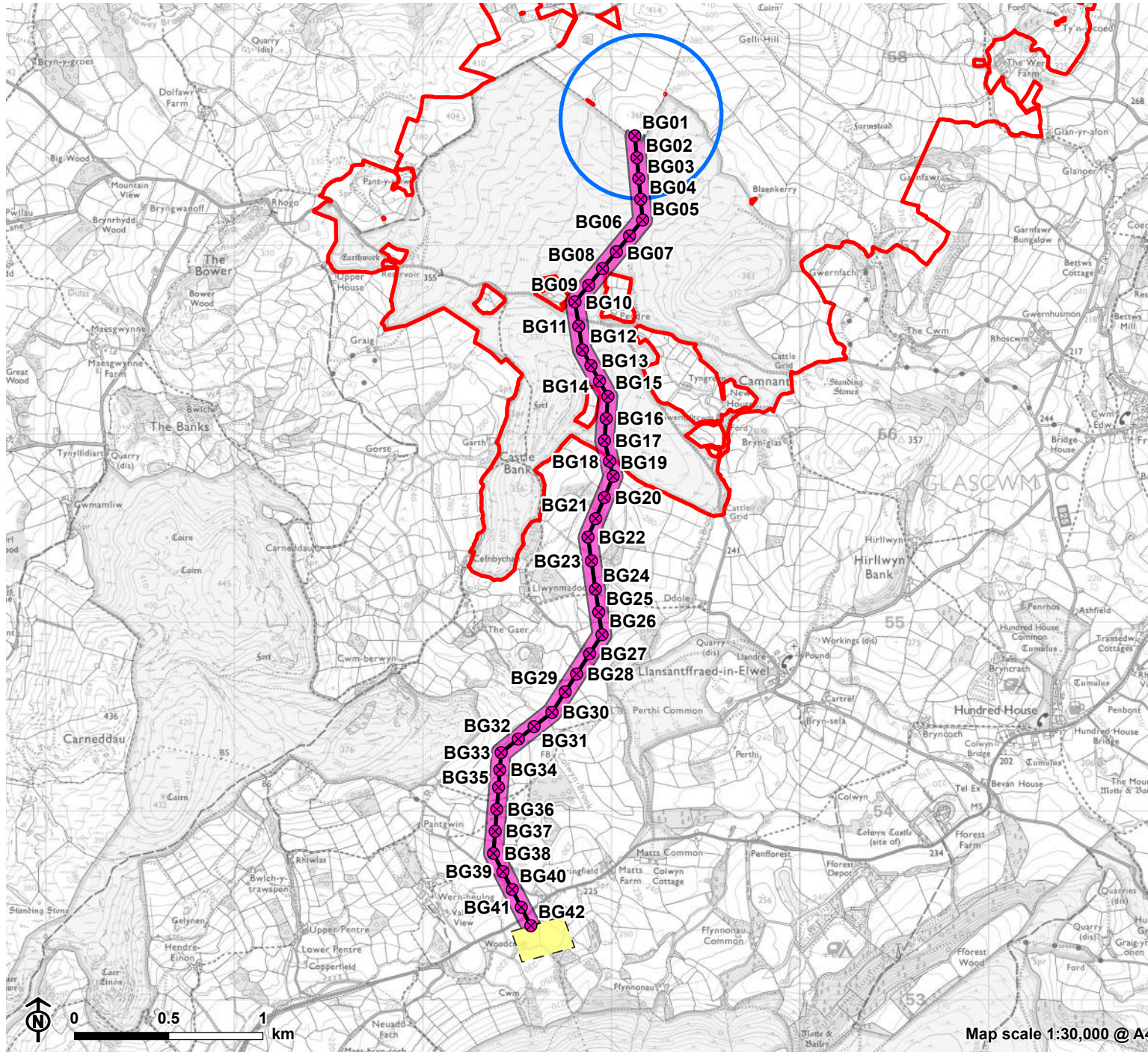
- |  |  |
|--|--|
| Route Option 2   | <b>Historic Environment</b>  |
| Bute Energy's Proposed Bryn Gilwern Energy Park                                | Scheduled Monument: Defence  |
| Bute Energy's Indicative Proposed Bryn Gilwern Energy Park substation location | Scheduled Monument: Religious, Ritual and Funerary                                   |
| Proposed Towy Usk Draft Alignment - March / April 2024                         | Scheduled Monument: Other Class  |
| Proposed Towy Usk Draft Alignment Wood Pole Location - March / April 2024      | Grade II listed building   |
| Proposed Towy Usk Draft Alignment Tower Location - March / April 2024          | Grade II* listed building  |
| Indicative Towy Usk switching station location                                 | Clwyd Powys Archaeological Trust (CPAT) Historic Environment Record (HER) point data |
| <b>Existing Overhead Lines (OHL)</b>   | <b>Forestry and Woodland</b>   |
| 11kV OHL   | <b>Ancient Woodland (Wales)</b>  |
| <b>Biodiversity</b>  | Ancient Semi Natural Woodland  |
| Special Area of Conservation (SAC)   | Plantation on Ancient Woodland   |
| Site of Specific Scientific Interest (SSSI)                                    | Restored Ancient Woodland  |
| <b>Environment (Wales) Act 2016 Priority Habitats</b>                          | Ancient Woodland Site of unknown Category  |
| Upland Heathland   | <b>National Forest Inventory Wales 2022</b>  |
| Upland Flushes Fens and Swamps   | Broadleaved & Mixed mainly broadleaved   |
| Traditional Orchards   | Conifer & Mixed mainly conifer   |
| Purple Moor Grass and Rush Pastures  | Other  |
| Lowland Meadows  | <b>Hydrology and Hydrogeology</b>  |
| Lowland Heathland  | River / Watercourse  |
| Lowland Fens and Reedbeds  | Private water supply   |
| Lowland Dry Acid Grassland   | 250m from Private water supply   |
| Inland Rock Outcrop and Scree Habitats   | <b>Flood Risk from Rivers</b>  |
| <b>Landscape and Visual Amenity</b>  | Flood Zone 3   |
| Residential Property   | Flood Zone 2   |
| 150m from Residential Property   | <b>Flood Risk from Surface Water and Small Watercourses</b>                          |
|  | Flood Zone 3   |
|  | Flood Zone 2   |
|  | <b>Peat</b>  |
|  | Peat (Peatlands of Wales)  |









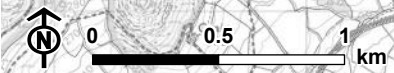




**Figure 5.3: Preferred Bryn Gilwern Indicative Alignment**



-  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

