


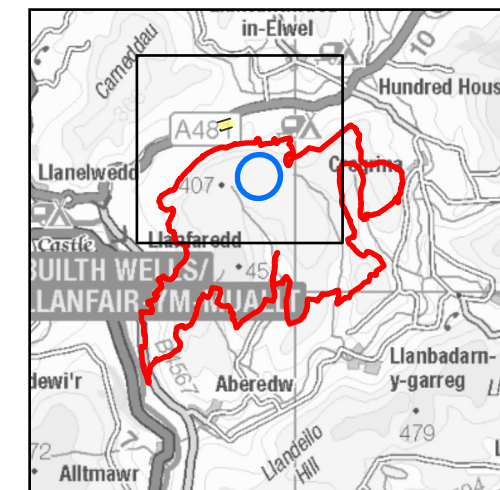


Aberedw Grid Connection -  
Routing Alignment Report  
for Green GEN Cymru



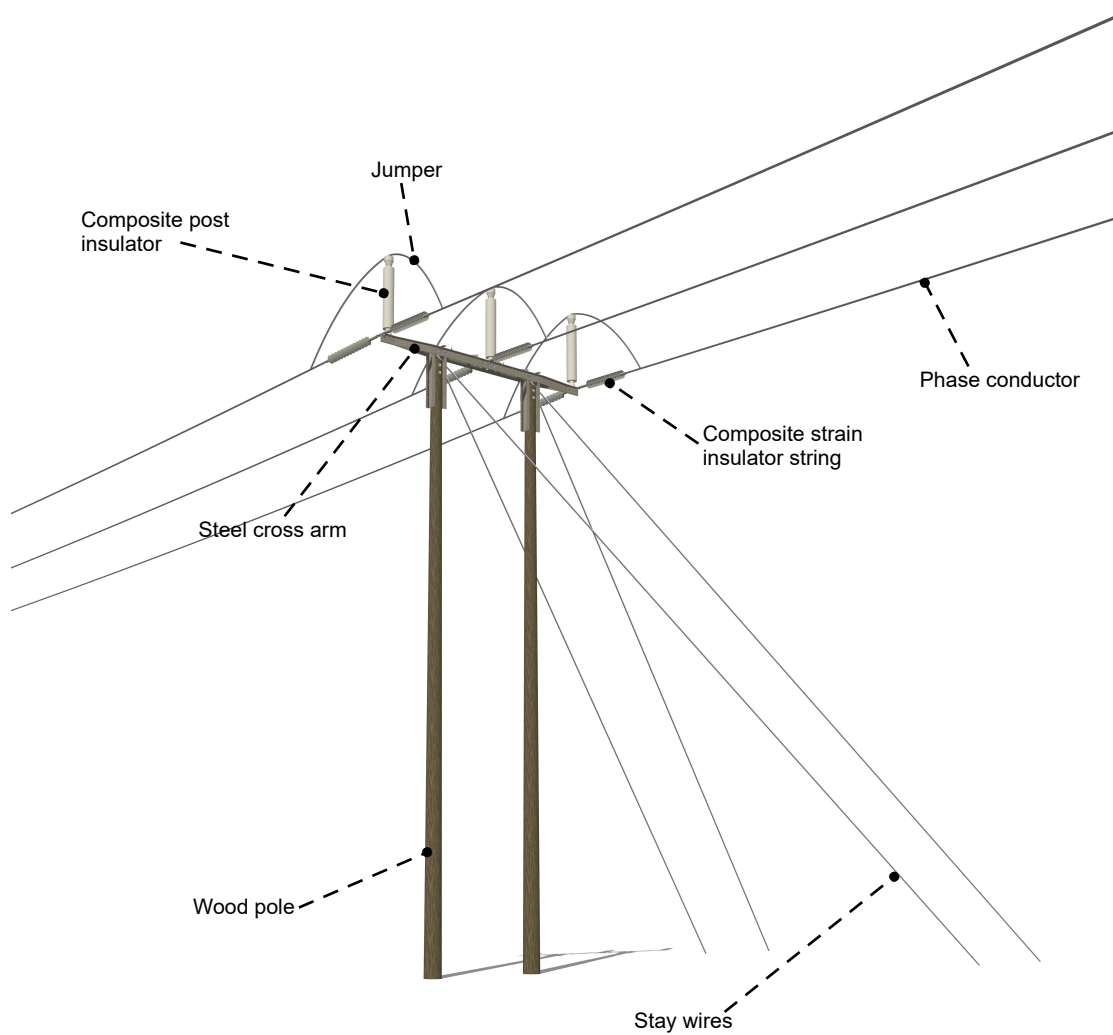
**Figure 1.1: Aberedw 132kV Connection  
Project Location**

-  Bute Energy's Proposed Aberedw Energy Park
-  Bute Energy's Indicative Proposed Aberedw Energy Park substation location
-  Indicative Towy Usk switching station location





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

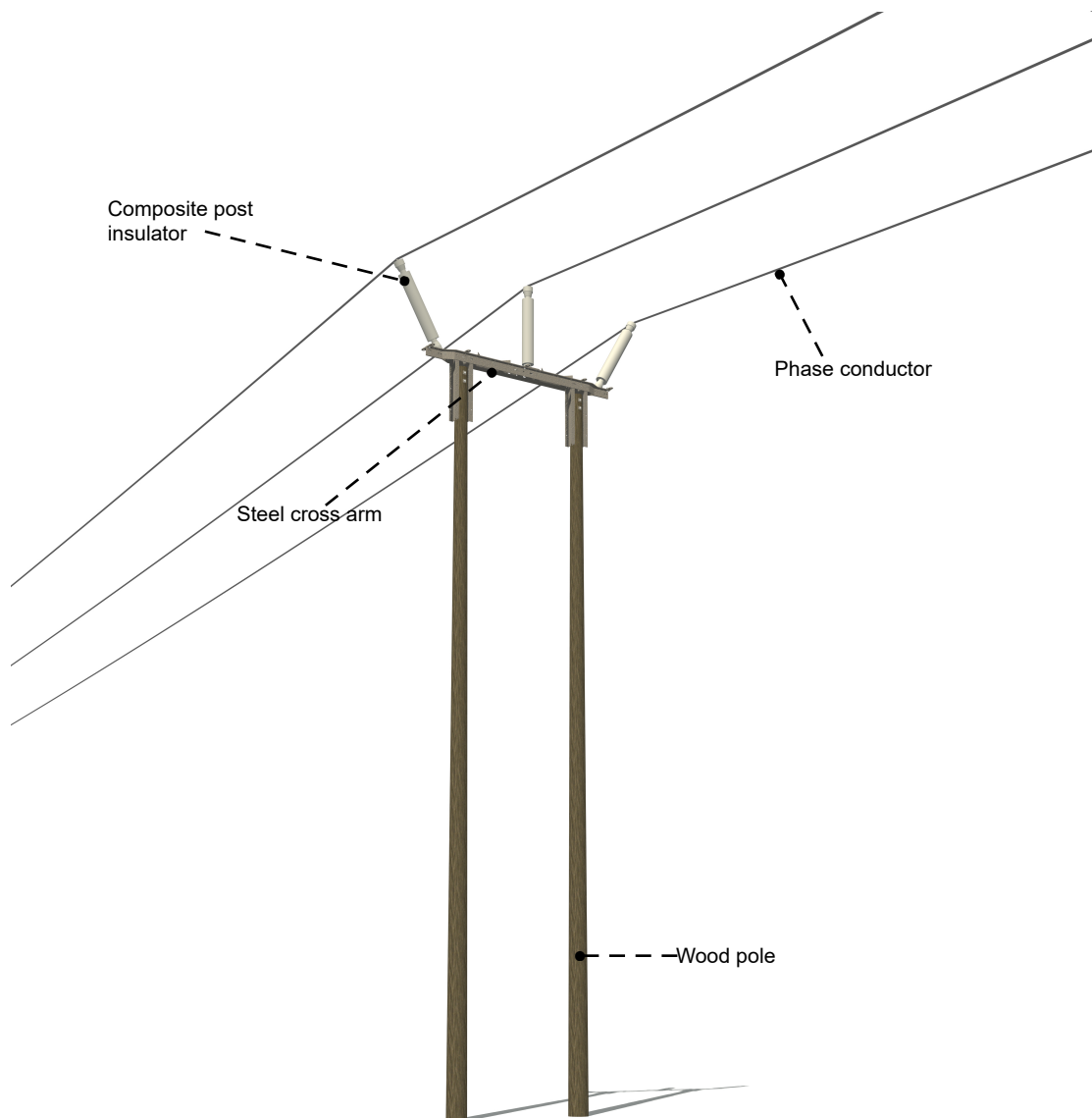


Component parts of 132kV design wood pole:  
Angle (H Pole)

ENATS 43-50 Wood Pole (H-Pole)



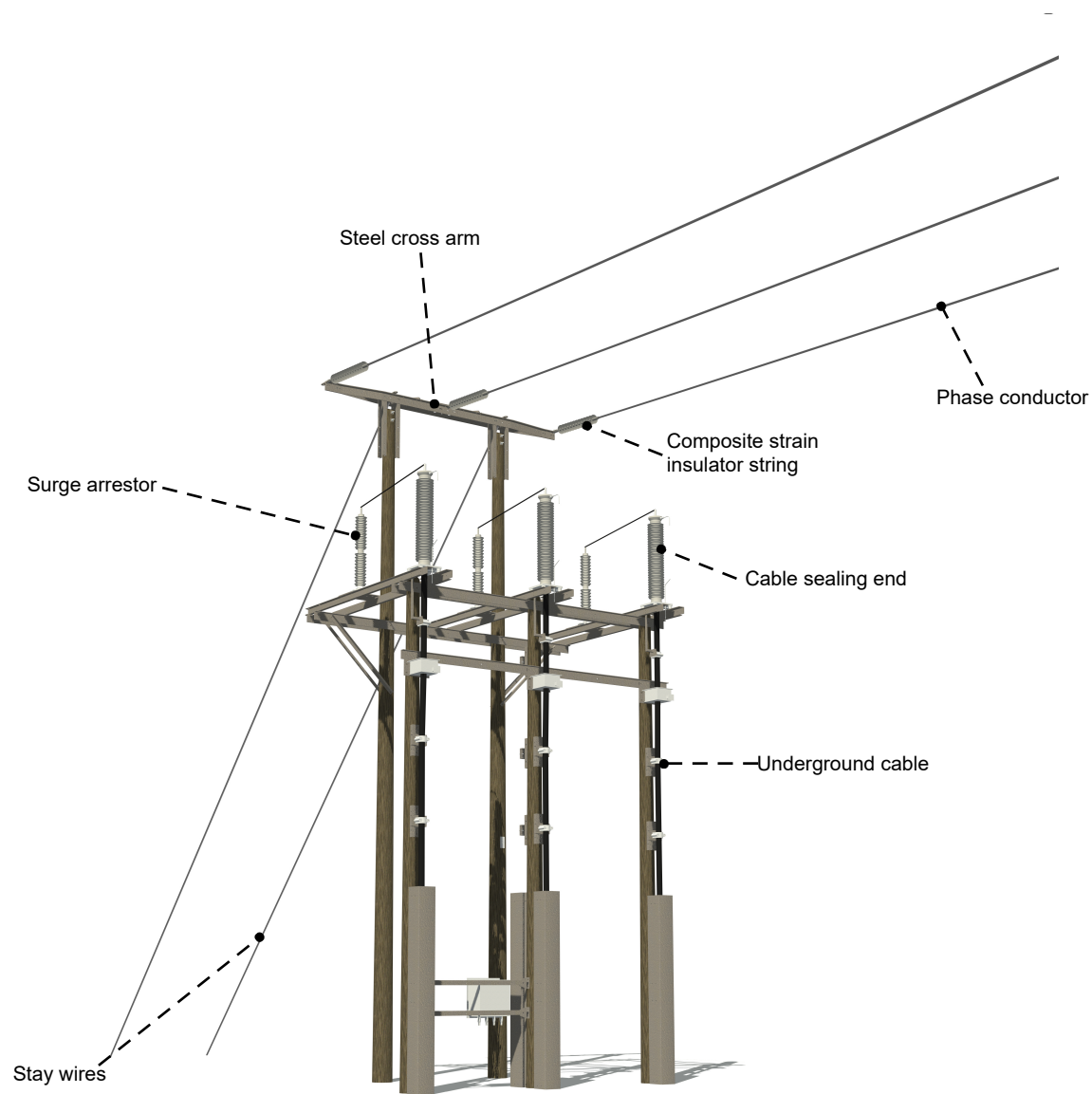
**Figure 2.1b: Typical Wood Pole  
(Component Parts of 132kV Design Wood  
Pole - Intermediate)**



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

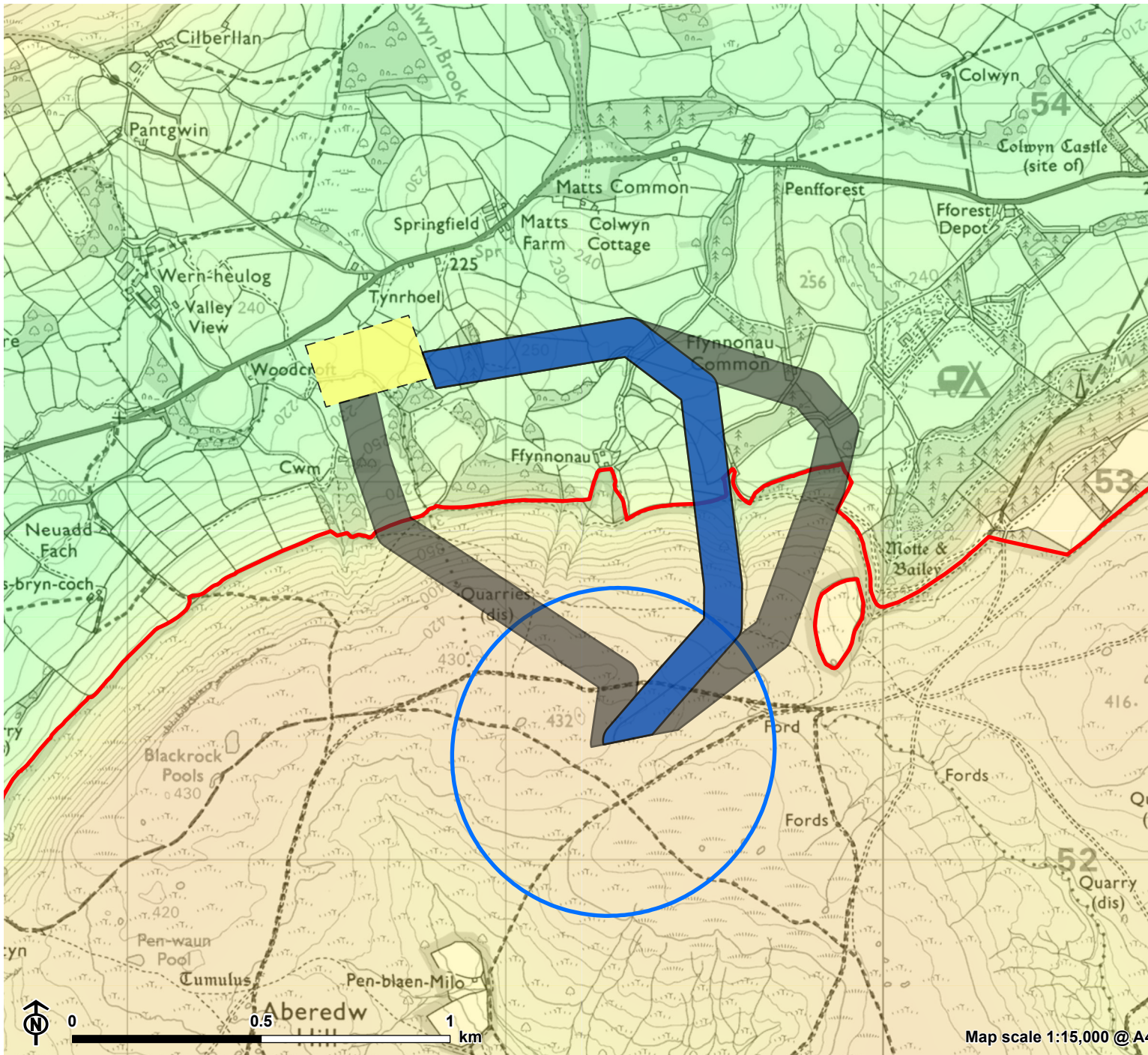
ENATS 43-50 Cable Termination Pole



The map shows the proposed Colwyn Bay to Ffynnonau Greenway. The route starts near Woodcroft (highlighted in yellow) and follows a path through the hills, passing Ffynnonau (highlighted in blue) and ending near Fford. The route is highlighted in green and grey. The map includes contour lines, place names, and various geographical features. The map scale is 1:15,000 @ A4.

-





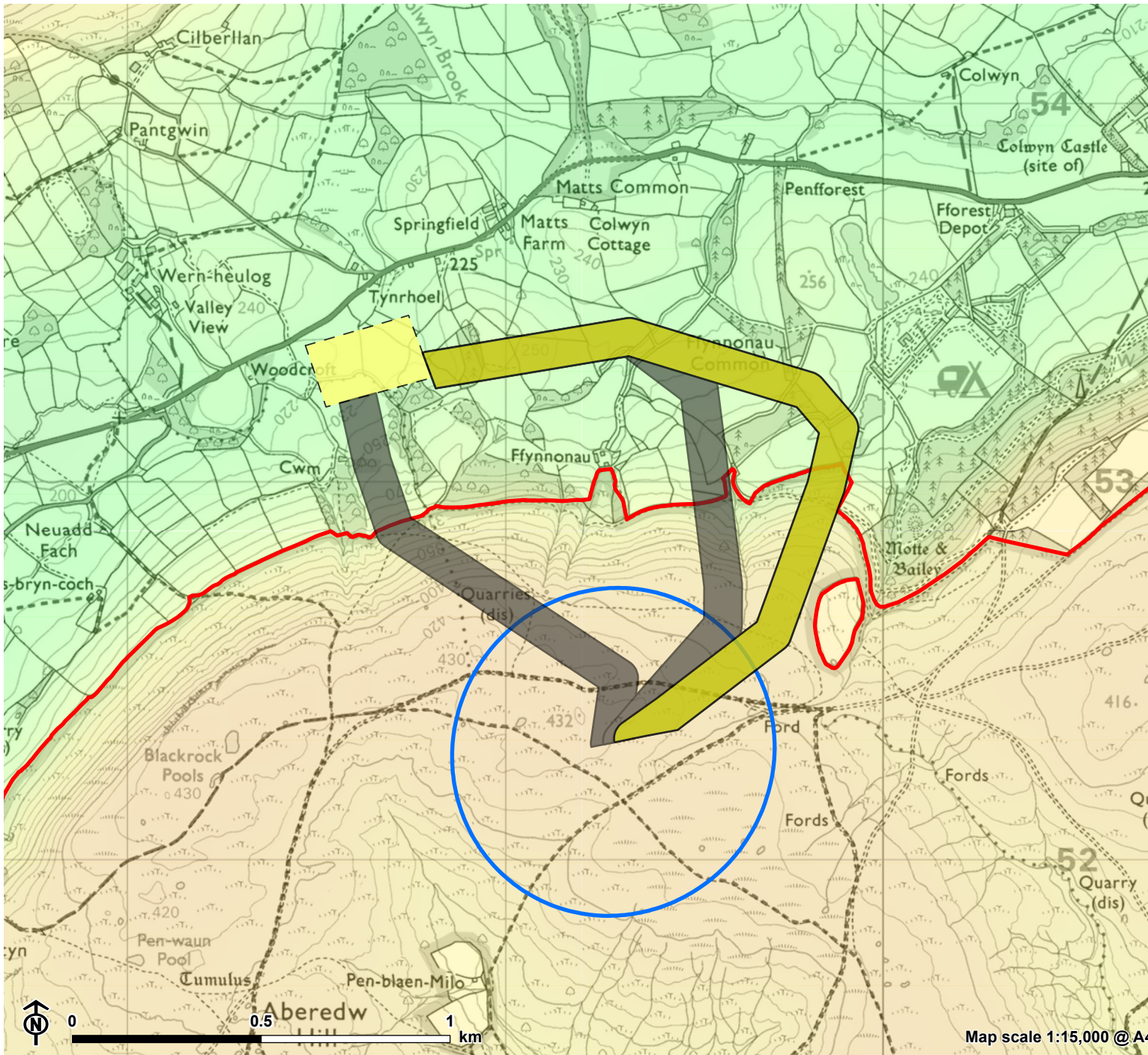
Aberedw Grid Connection -  
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**Figure 4.1.2: Aberedw 132kV Connection  
Project Route Option B**

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





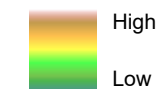
Aberedw Grid Connection -  
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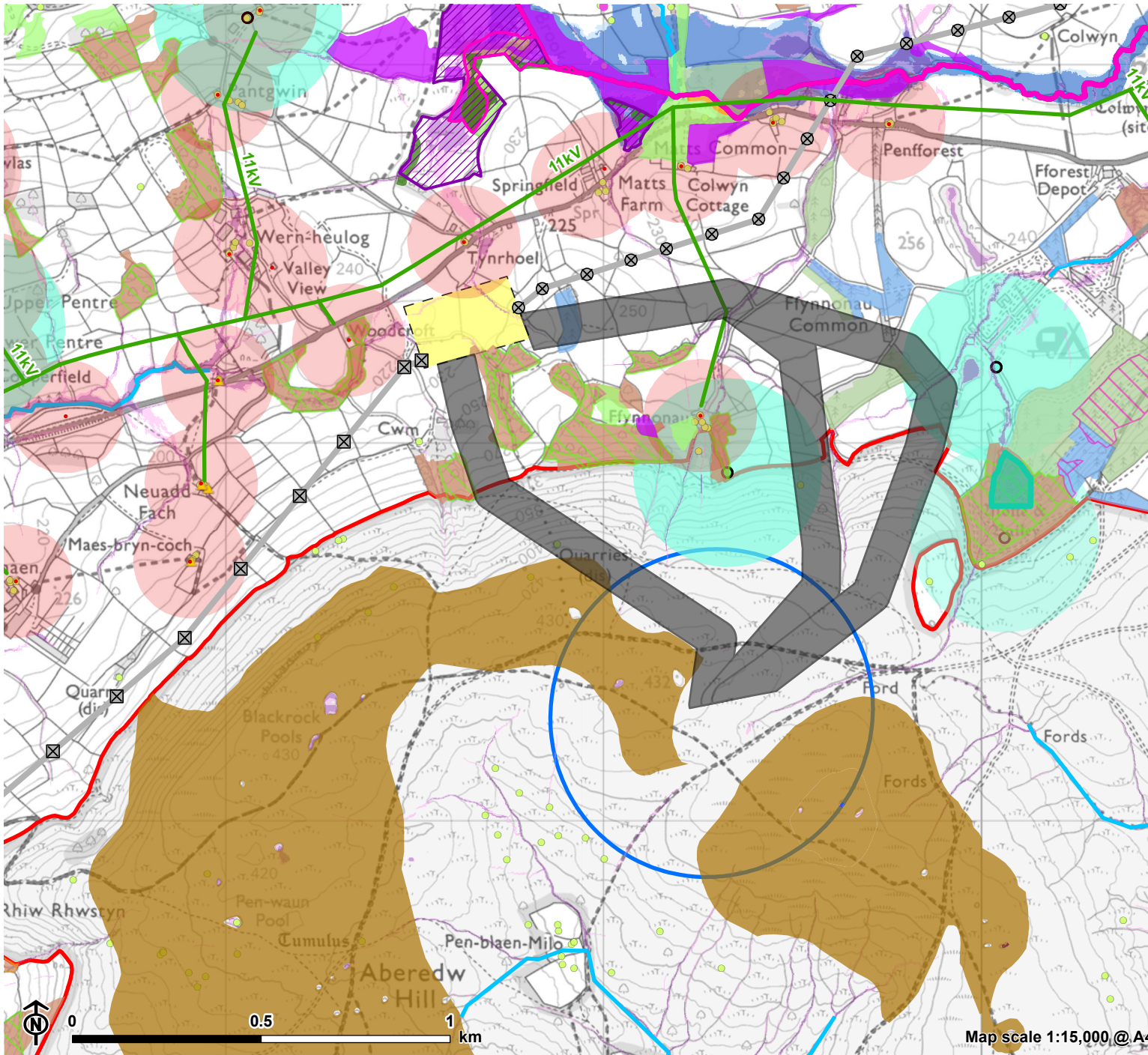
**Figure 4.1.3: Aberedw 132kV Connection  
Project Route Option C**

- Route Option C
- Other route options
- Bute Energy's Proposed Aberedw Energy Park
- Bute Energy's Indicative Proposed Aberedw Energy Park substation location
- Indicative Towy Usk switching station location

**Terrain (AOD)**



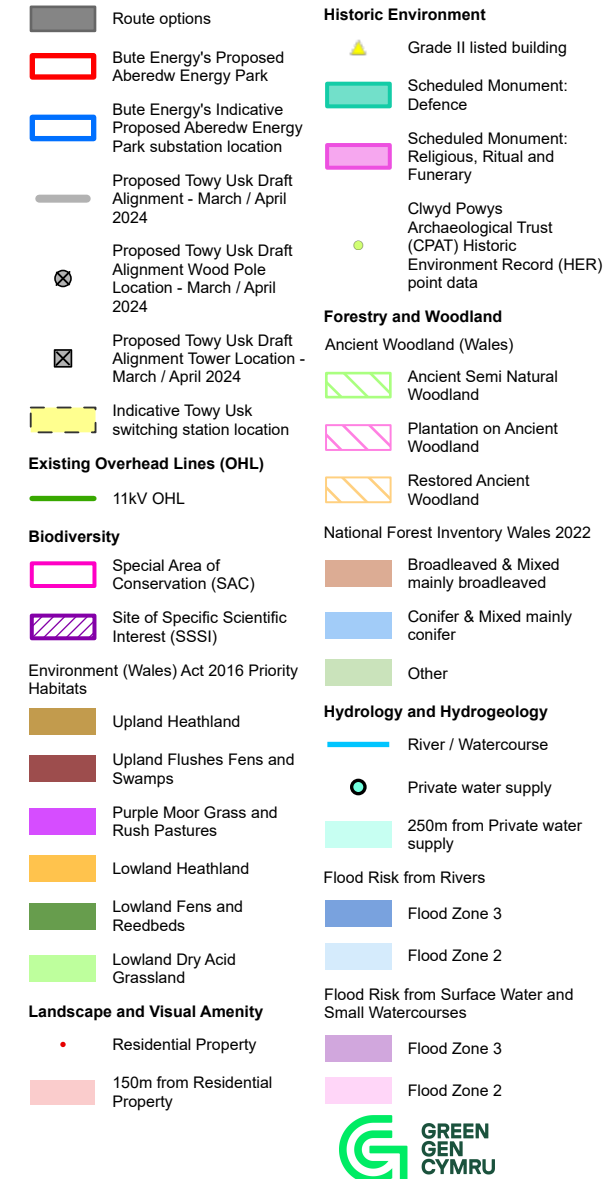




# Aberedw Grid Connection - Routing Alignment Report for Green GEN Cymru



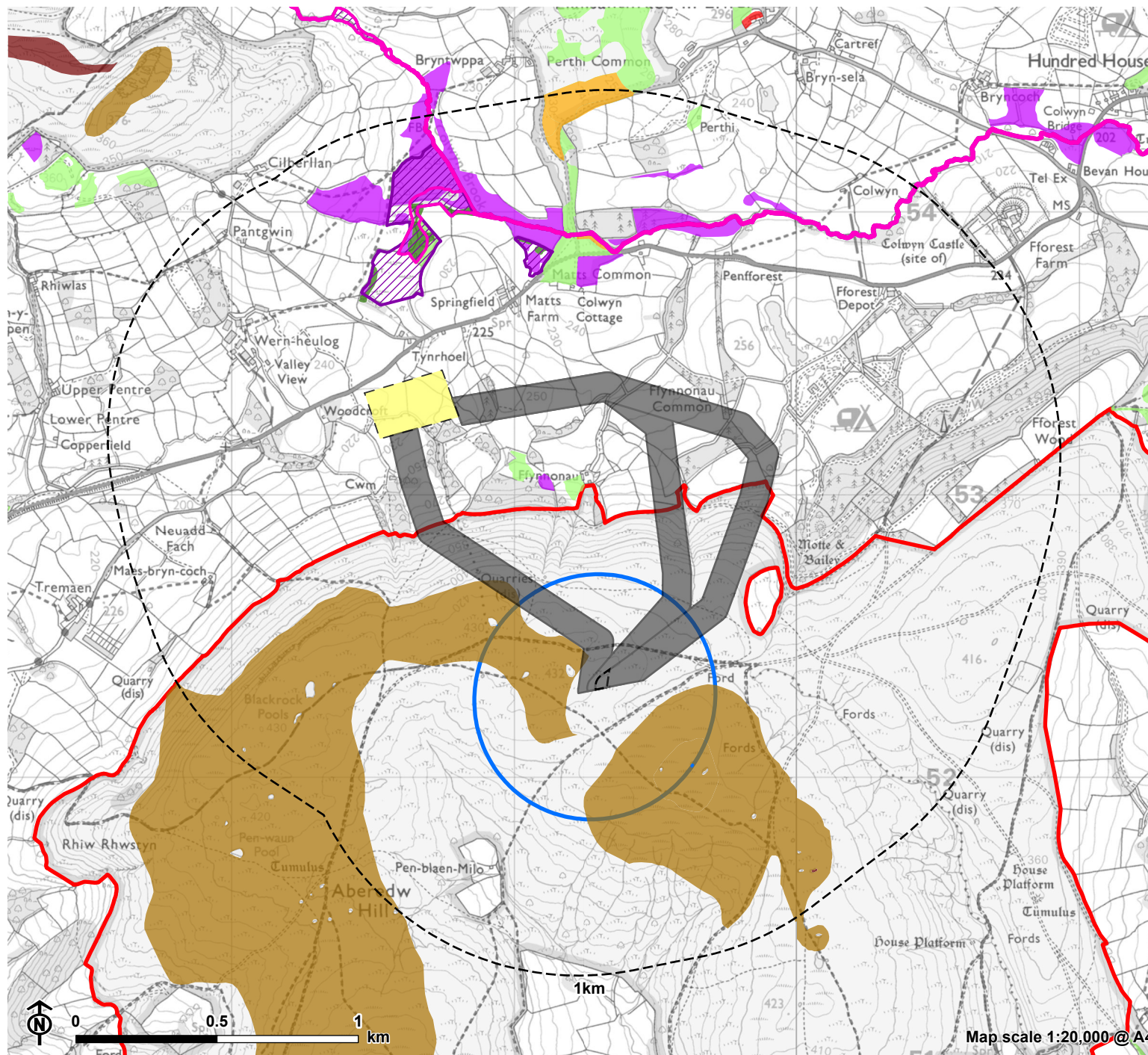
**Figure 4.2: Aberedw Route Options  
Constraints and Considerations**







**Figure 4.3: Aberedw Route Options  
Biodiversity Constraints and  
Considerations**

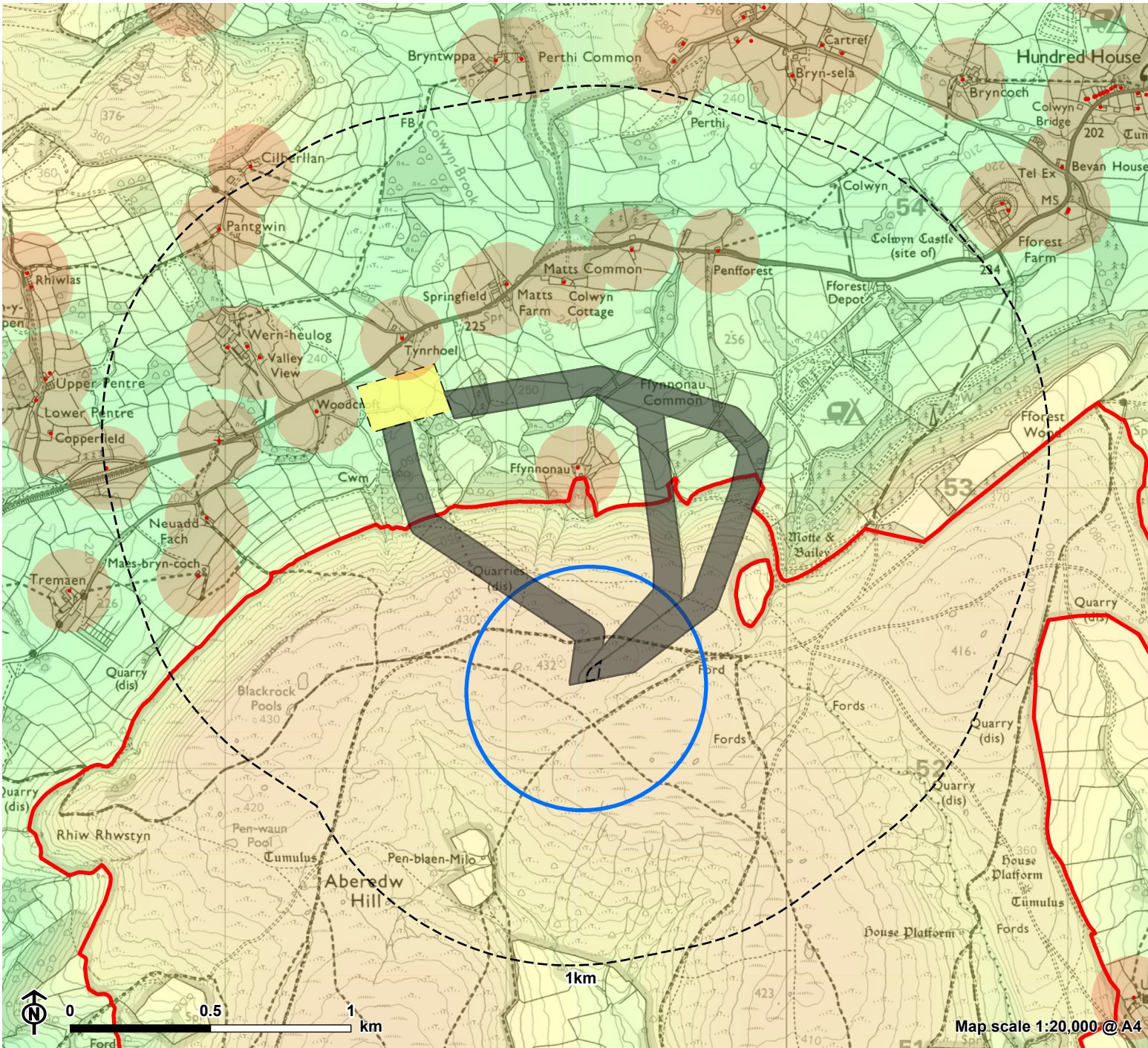


- Route options
- 1km from route options
- Bute Energy's Proposed Aberedw Energy Park
- Bute Energy's Indicative Proposed Aberedw Energy Park substation location
- Indicative Towy Usk switching station location
- Biodiversity**
- Special Area of Conservation (SAC)
- Site of Specific Scientific Interest (SSSI)
- Environment (Wales) Act 2016 Priority Habitats**
- Lowland Dry Acid Grassland
- Lowland Fens and Reedbeds
- Lowland Heathland
- Purple Moor Grass and Rush Pastures
- Traditional Orchards
- Upland Flushes Fens and Swamps
- Upland Heathland





Figure 4.4.1: Aberedw Route Options  
Landscape and Visual Amenity  
Constraints and Considerations



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

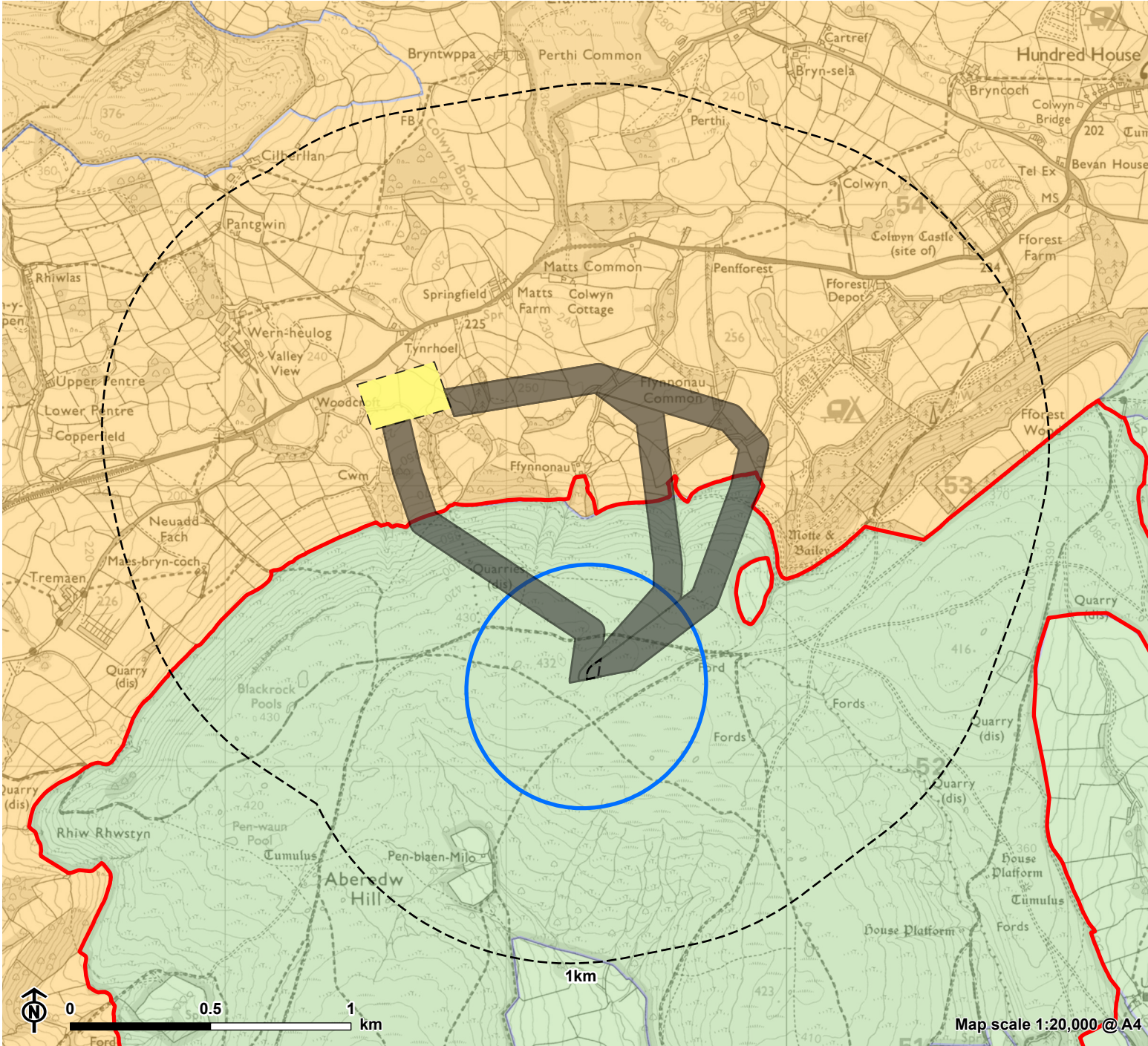
- Landscape and Visual Amenity**
- Residential Property
  - 150m from Residential Property

- Terrain (AOD)**
- High
  - Low





Figure 4.4.2: Aberedw LANDMAP Aspect  
Areas: Visual Sensory



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

**LANDMAP Visual and Sensory - Overall Evaluation**

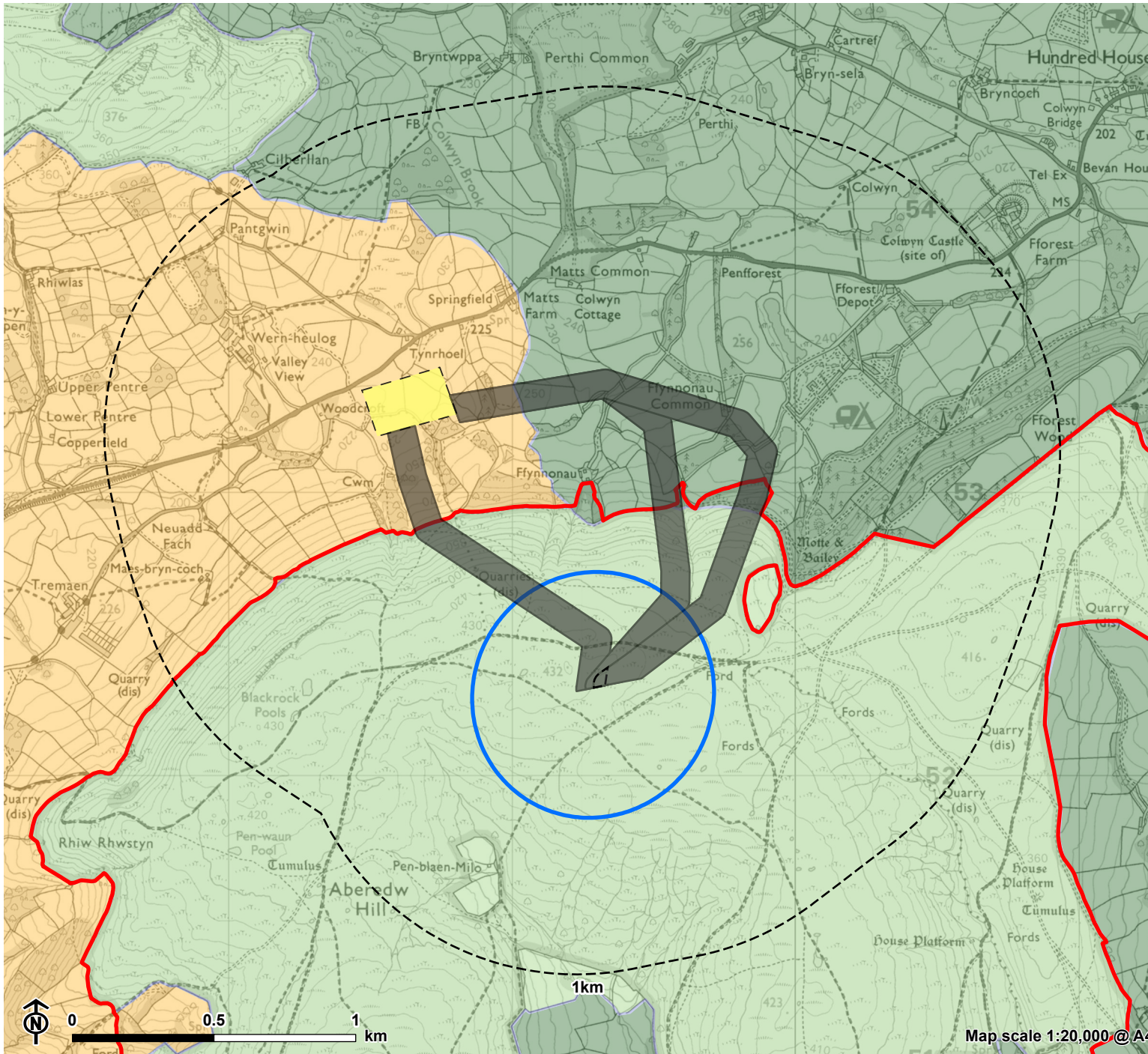
- High
- Moderate



The map shows the Colwyn Bay area with various geographical features and place names. The proposed Colwyn Bay to Tynrhodol Greenway is highlighted in red. The map includes contour lines, place names, and various geographical features. A red line indicates the proposed greenway route, which starts near the Colwyn Bay station and runs through the Tynrhodol area. A blue circle highlights a specific area of interest near the Tynrhodol station. A scale bar at the bottom indicates a distance of 1 km.

 Moderate





**Figure 4.4.4: Aberedw LANDMAP Aspect Areas: Historic Landscape**

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

**LANDMAP Historic Landscape - Overall Evaluation**

- Outstanding
- High
- Moderate

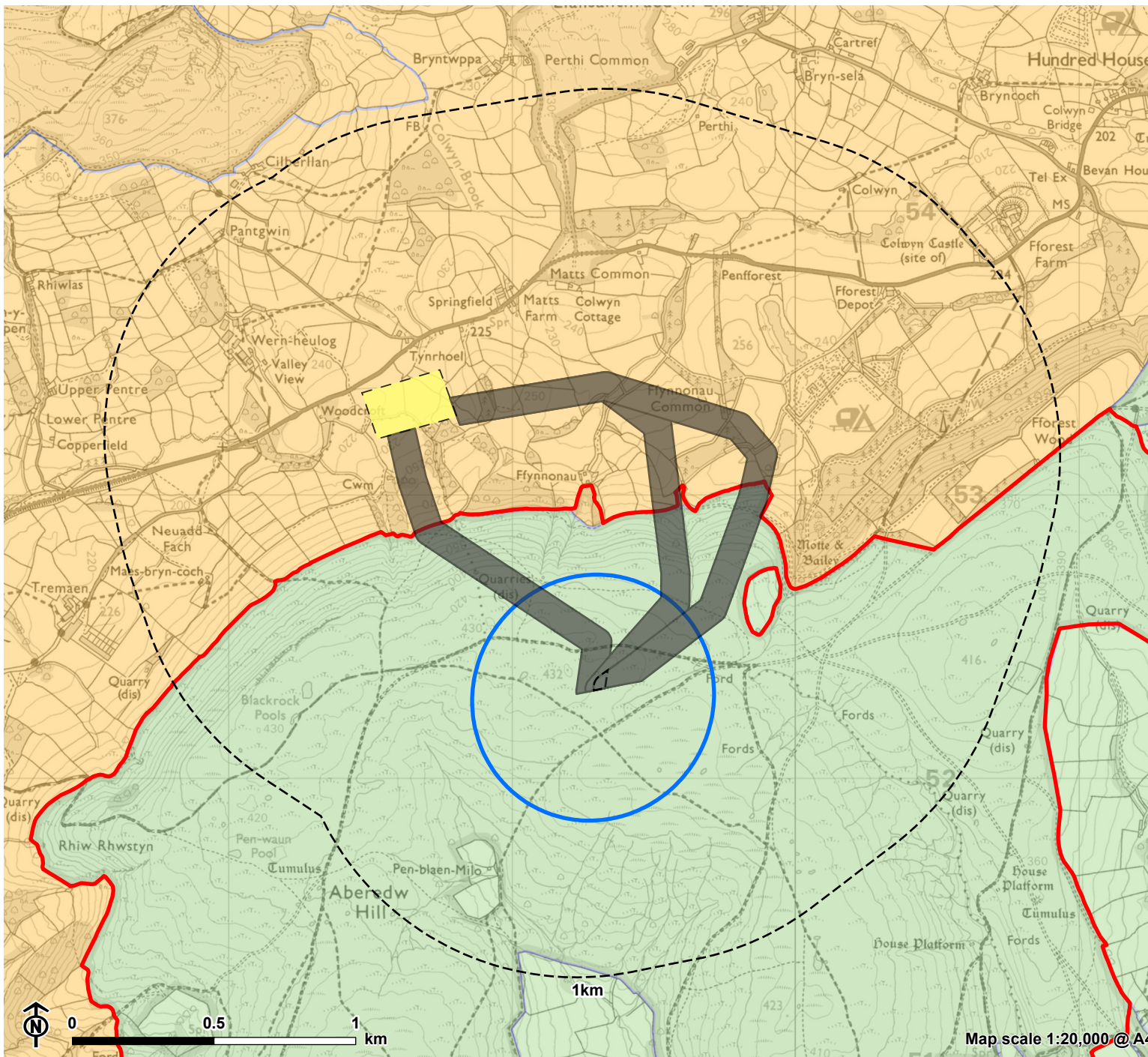


The map shows the proposed Colwyn Bay to Tynrhodol Tunnel route. Key features include:

- Tunnel Route:** A thick black line starting from a yellow rectangular area near Woodchurch and extending southwards.
- Blue Circle:** A blue circle highlighting a specific area near the tunnel's end, possibly indicating a station or a point of interest.
- Red Line:** A red line outlining a larger area, possibly a catchment or study area.
- Geographical Features:** Contour lines, roads, and various landmarks such as Bryntwppa, Perthi Common, Colwyn Brook, and Aberdwr Hill.
- Scale and Orientation:** A scale bar at the bottom indicates 1 km, and a north arrow is present.

 Moderate

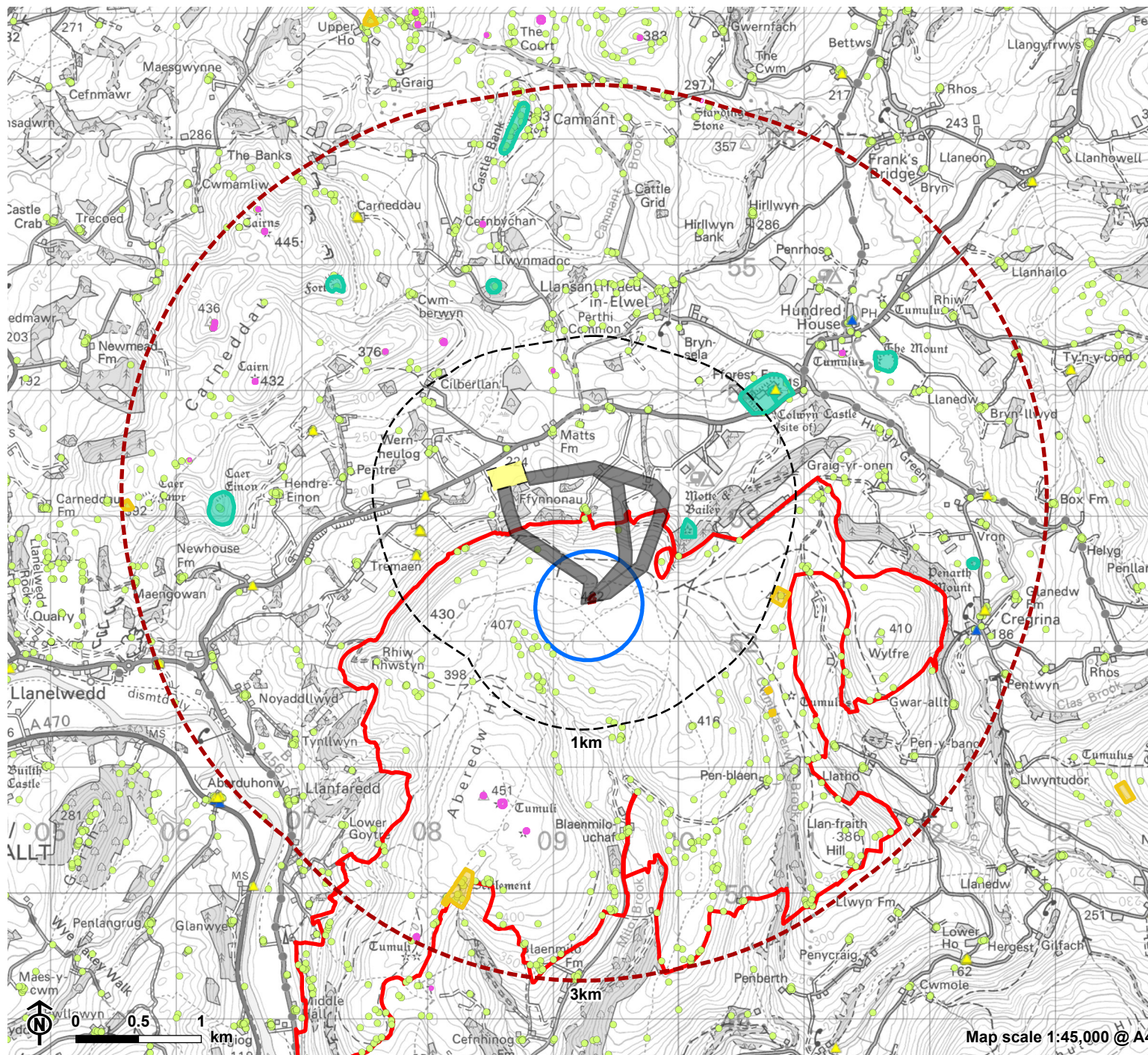




**Figure 4.4.6: Aberedw LANDMAP Aspect  
Areas: Cultural Landscape**

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





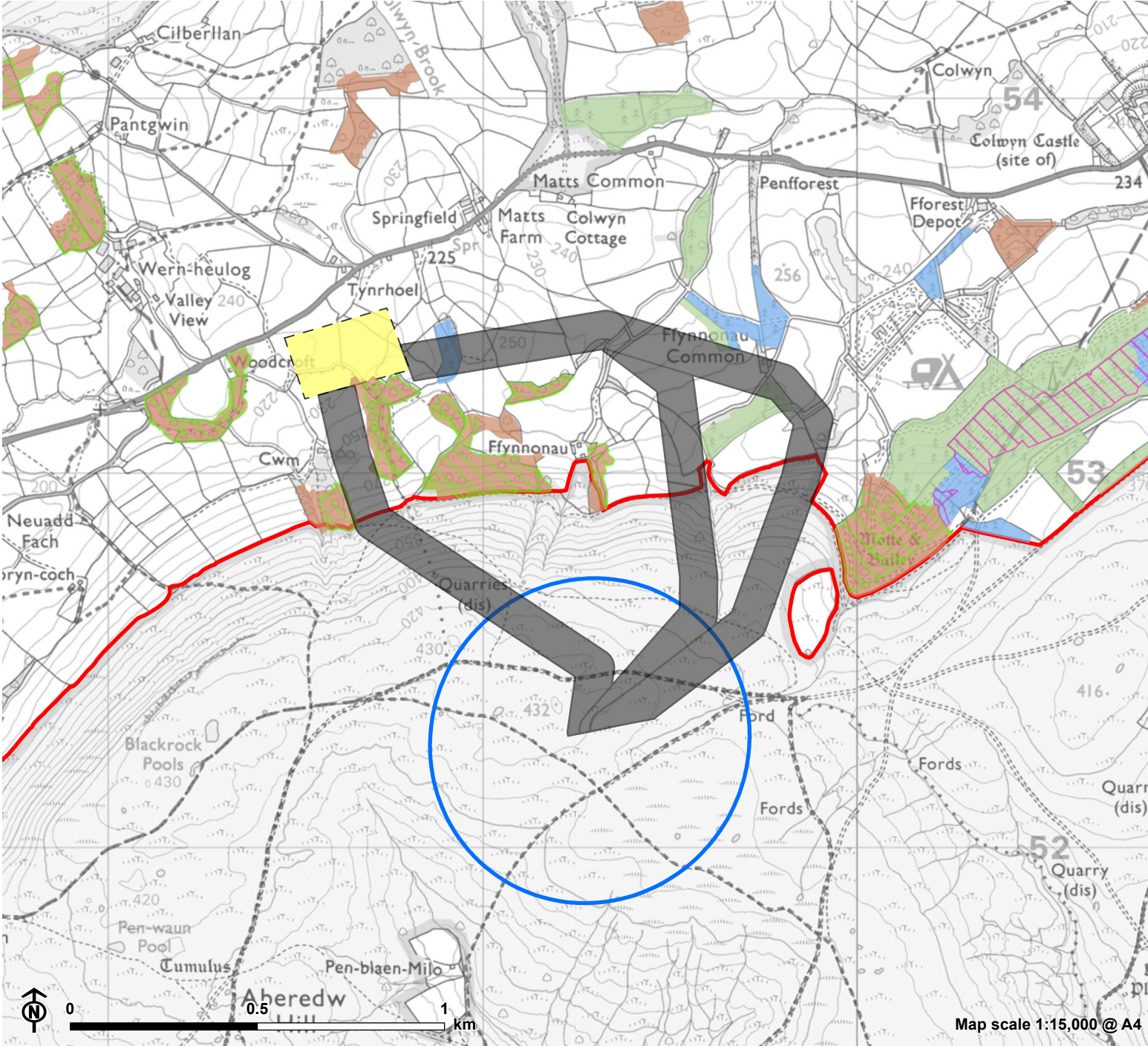
**Figure 4.5: Aberedw Route Options  
Historic Environment Constraints  
and Considerations**

- Route options
- 1km from route options
- 3km from route options
- Bute Energy's Proposed Aberedw Energy Park
- Bute Energy's Indicative Proposed Aberedw 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 II listed building
  - Grade II\* listed building
  - Clwyd Powys Archaeological Trust (CPAT) Historic Environment Record (HER) point data





**Figure 4.6: Aberedw Route Options  
Forestry and Woodland Constraints and  
Considerations**



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

**Forestry and Woodland**

**Ancient Woodland (Wales)**

- Ancient Semi Natural Woodland
- Plantation on Ancient Woodland

**National Forest Inventory Wales 2022**

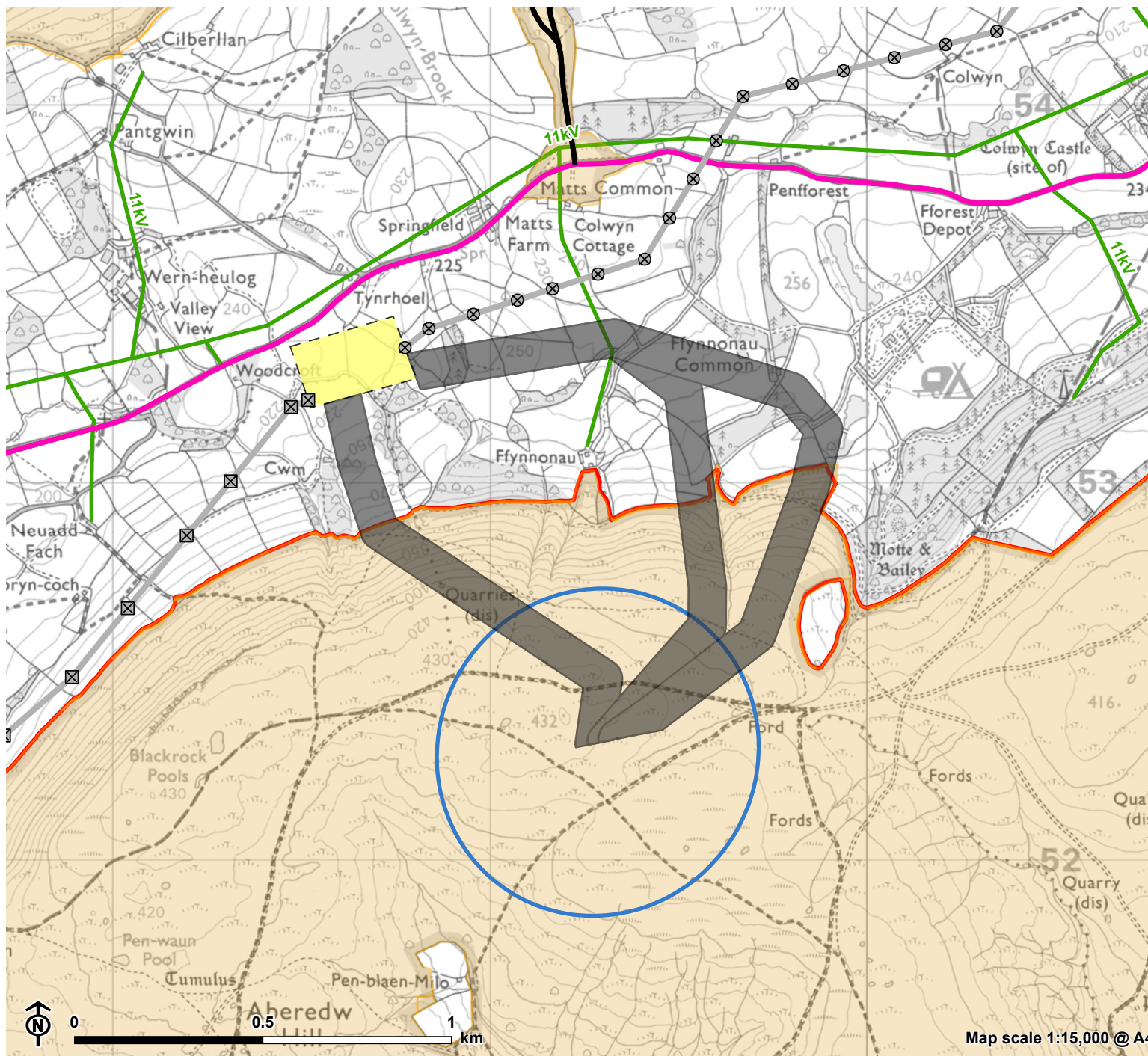
- Broadleaved & Mixed mainly broadleaved
- Conifer & Mixed mainly conifer
- Other














 Flood Zone 3

 Flood Zone 2





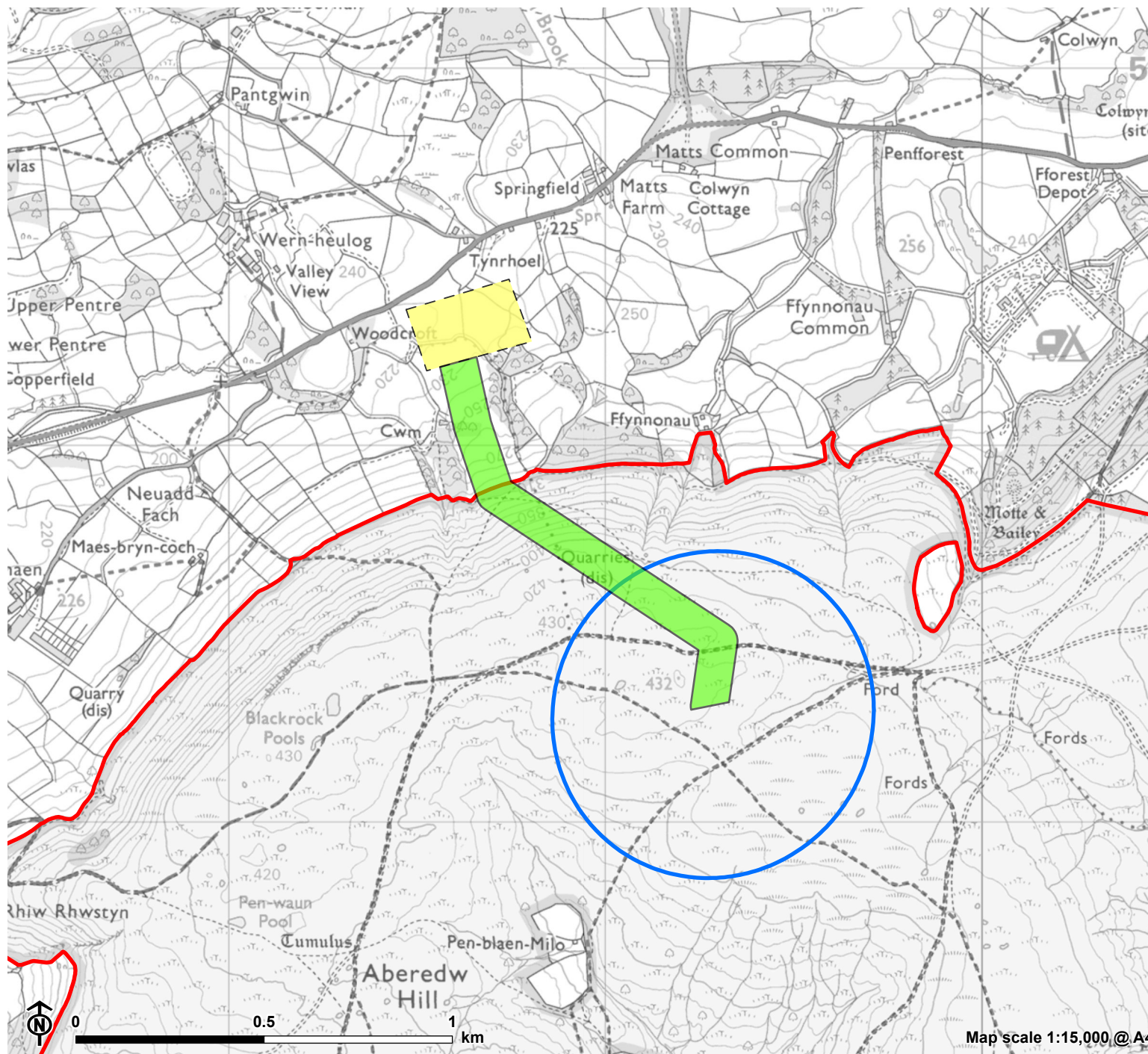
**Figure 4.8: Aberedw Route Options Land Use Constraints and Considerations**

-  Route options
-  Bute Energy's Proposed Aberedw Energy Park
-  Bute Energy's Indicative Proposed Aberedw 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)
- Existing Overhead Lines (OHL)**
  -  11kV OHL



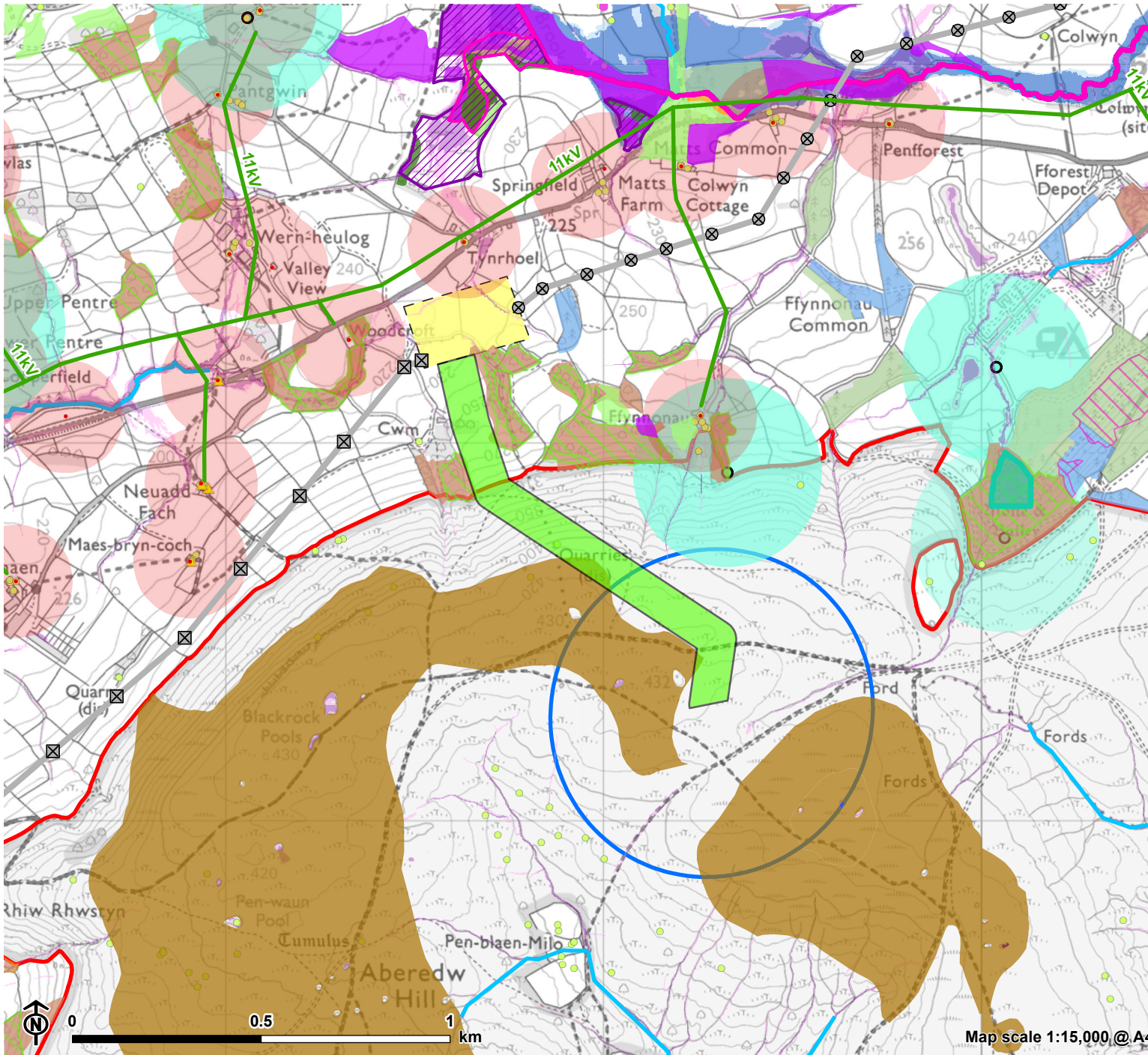


**Figure 5.1: Preferred Aberedw Route Option**



- Route Option A
- Bute Energy's Proposed Aberedw Energy Park
- Bute Energy's Indicative Proposed Aberedw Energy Park substation location
- Indicative Towy Usk switching station location





# Aberedw Grid Connection - Routing Alignment Report for Green GEN Cymru

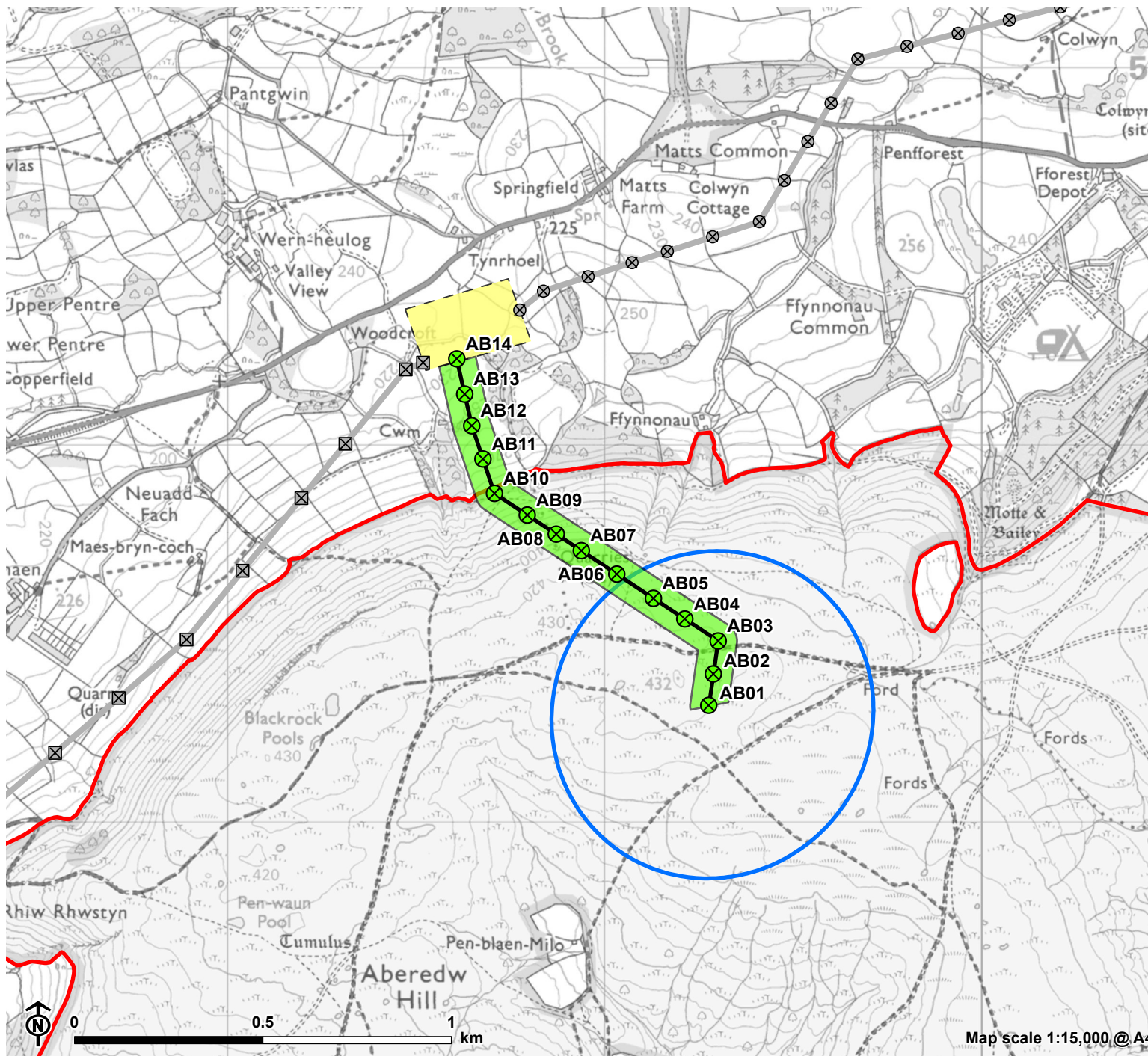


**Figure 5.2: Preferred Aberedw Route  
Option Constraints and Considerations**

- Route Option A
- Bute Energy's Proposed Aberedw Energy Park
- Bute Energy's Indicative Proposed Aberedw 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
- Existing Overhead Lines (OHL)**
  - 11kV OHL
- Biodiversity**
  - Special Area of Conservation (SAC)
  - Site of Specific Scientific Interest (SSSI)
- Environment (Wales) Act 2016 Priority Habitats**
  - Upland Heathland
  - Upland Flushes Fens and Swamps
  - Purple Moor Grass and Rush Pastures
  - Lowland Heathland
  - Lowland Fens and Reedbeds
  - Lowland Dry Acid Grassland
- Landscape and Visual Amenity**
  - Residential Property
  - 150m from Residential Property
- Historic Environment**
  - Grade II listed building
  - Scheduled Monument: Defence
  - Scheduled Monument: Religious, Ritual and Funerary
  - Clwyd Powys Archaeological Trust (CPAT) Historic Environment Record (HER) point data
- Forestry and Woodland**
  - Ancient Woodland (Wales)
  - Ancient Semi Natural Woodland
  - Plantation on Ancient Woodland
  - Restored Ancient Woodland
- National Forest Inventory Wales 2022**
  - Broadleaved & Mixed mainly broadleaved
  - Conifer & Mixed mainly conifer
  - Other
- 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







**Figure 5.3: Preferred Aberedw Indicative Alignment**

- Route Option A
- Route Option A Indicative Wood Pole Position
- Route Option A Indicative Alignment
- Bute Energy's Proposed Aberedw Energy Park
- Bute Energy's Indicative Proposed Aberedw 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