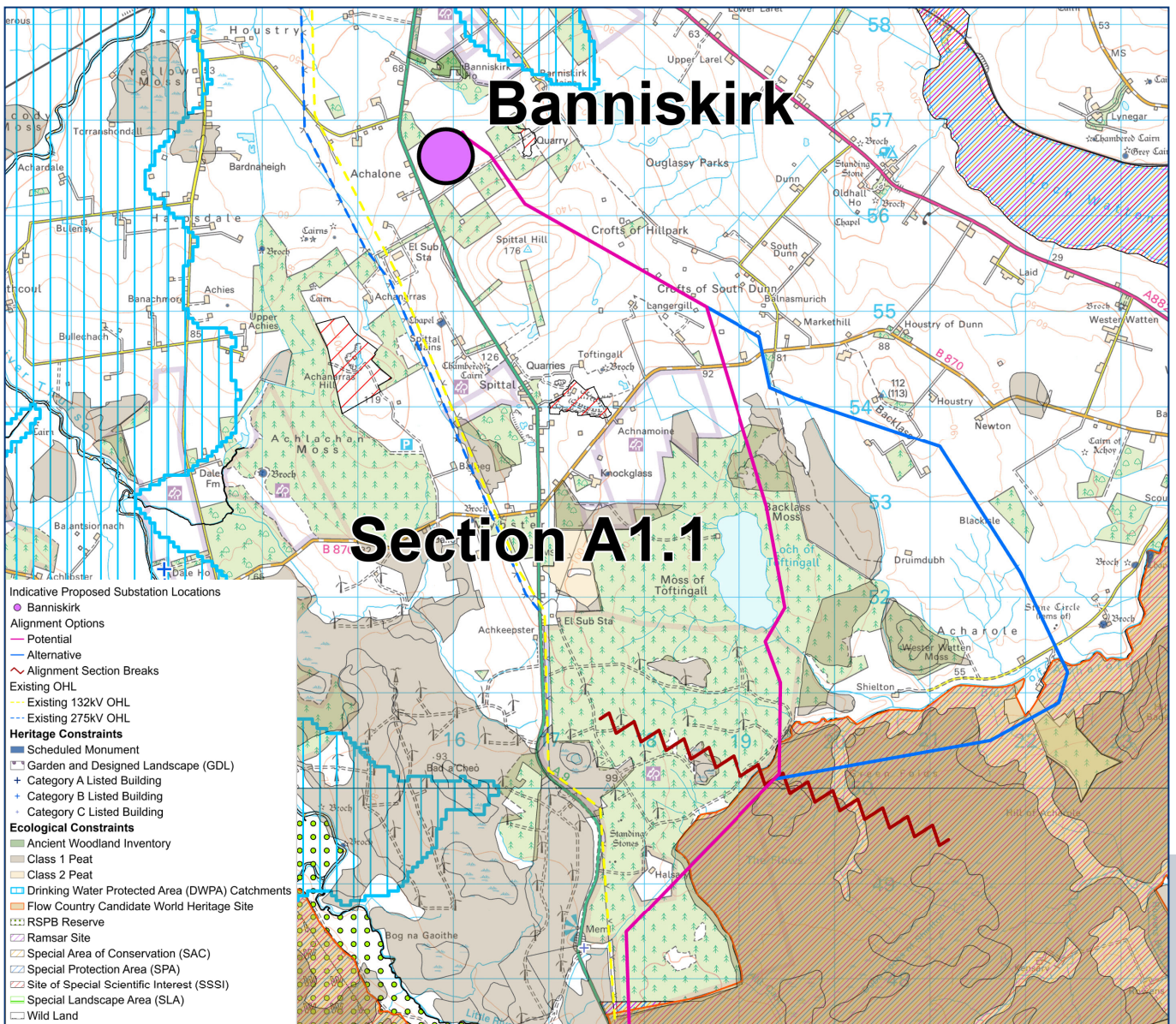




Section A1.1

Section A: Spittal to Brora



Section A1.1: Spittal to Brora

The key environmental, engineering and cost considerations which differentiate between the Potential and Alternative alignments include:



Environmental

- Potential Alignment A1.1 is least environmentally constrained.
- Alternative Alignment A1.1 passes through a greater extent of designated sites (Caithness and Sutherland Peatlands SPA/SAC/Ramsar and Shielton Peatlands SSSI).
- Alternative Alignment A1.1 passes through a larger extent of Class 1 peatland, an Annex 1 habitat and a greater extent of the proposed Flow Country World Heritage Site.

Cost

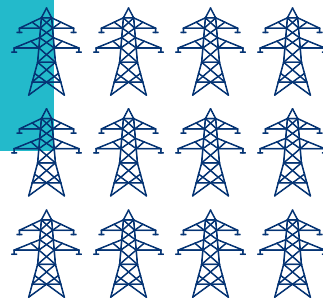
- Both alignment options are estimated to be within 120% of the lowest capital cost option, so both options are considered acceptable from a capital cost perspective.

Engineering

- No major infrastructure crossings.
- Generally flat ground with limited slopes, with areas of peatland found of varying depths.
- No residential properties within 170m of both alignment options.
- Potential Alignment A1.1 traverses between an existing and proposed wind farm. Alternative Alignment A1.1 outside of a proposed wind farm site.
- Potential Alignment A1.1 is the technically least constrained option from an engineering perspective as it navigates through the lesser areas of peat and is shorter in length than the alternative, reducing longer term maintenance requirements.

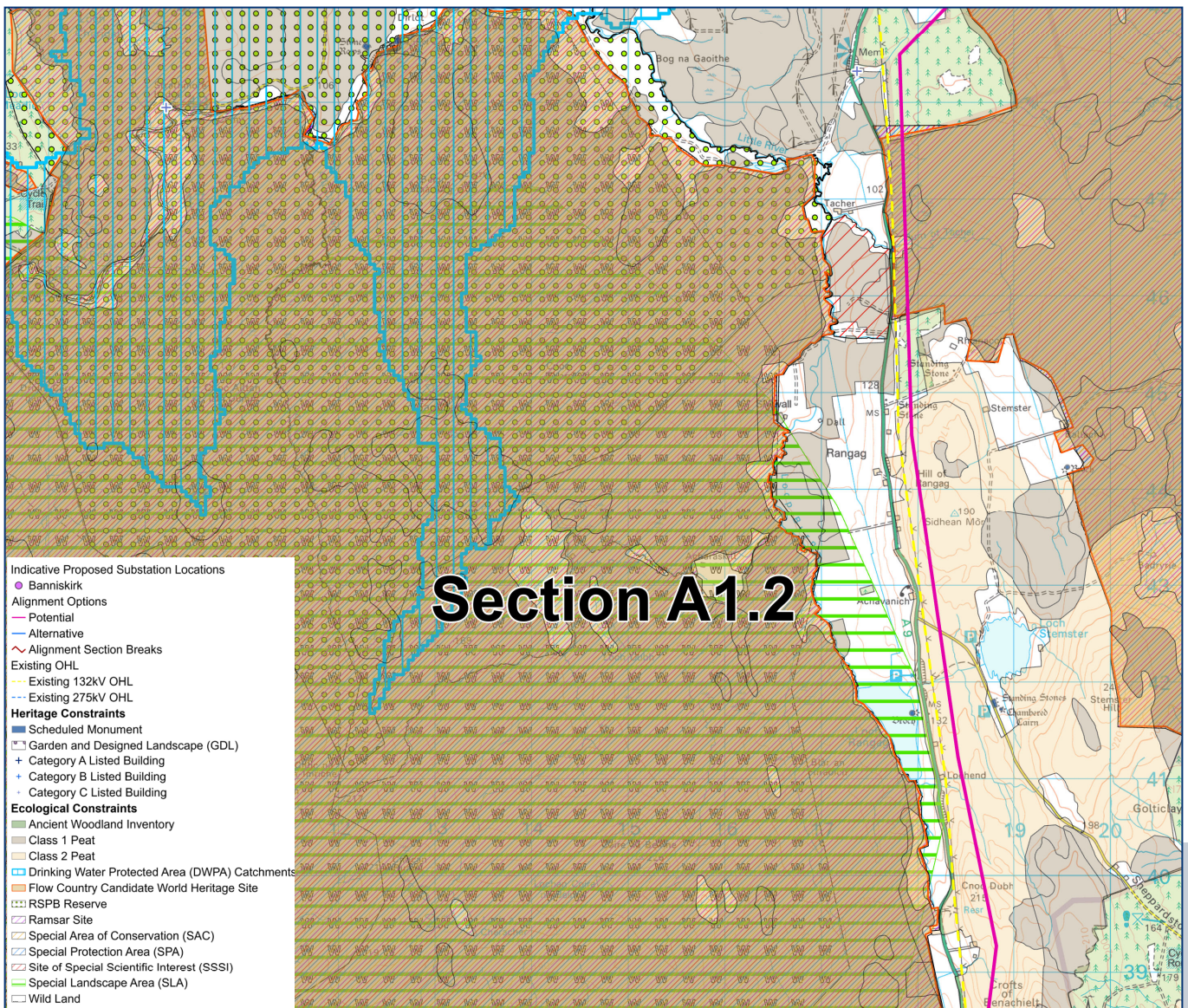
Conclusion

Potential Alignment A1.1 has been selected as on balance it is the least constrained option from both an environmental and engineering. Both options were considered equally acceptable from a cost perspective.



Section A1.2

Section A: Spittal to Brora



Section A1.2: Spittal to Brora

The key environmental, engineering and cost considerations which differentiate between the Potential and Alternative alignments include:



Environmental

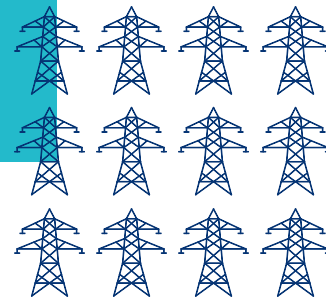
- Potential Alignment A1.2 passes through the Caithness and Sutherland Peatlands Special Protection Area, Ramsar and Special Area of Conservation, Shielton Peatlands Site of Special Scientific Interest.
- Passes through the proposed Flow Country World Heritage Site.
- Adjacent to Causeymire—Knockfin Flows Wild Land Area and The Flow Country and Berriedale Coast Special Landscape Area.
- Runs parallel to the existing overhead line and visible to road users on the A9.

Engineering

- No major infrastructure crossings, the Potential Alignment runs parallel to the existing 132kV transmission line.
- Most of the alignment is across generally flat ground with slope angles varying from 1°–5°.
- There is an existing network of tracks and roads within 1km of the Potential Alignment.
- No residential properties are within 170m of the Potential Alignment.

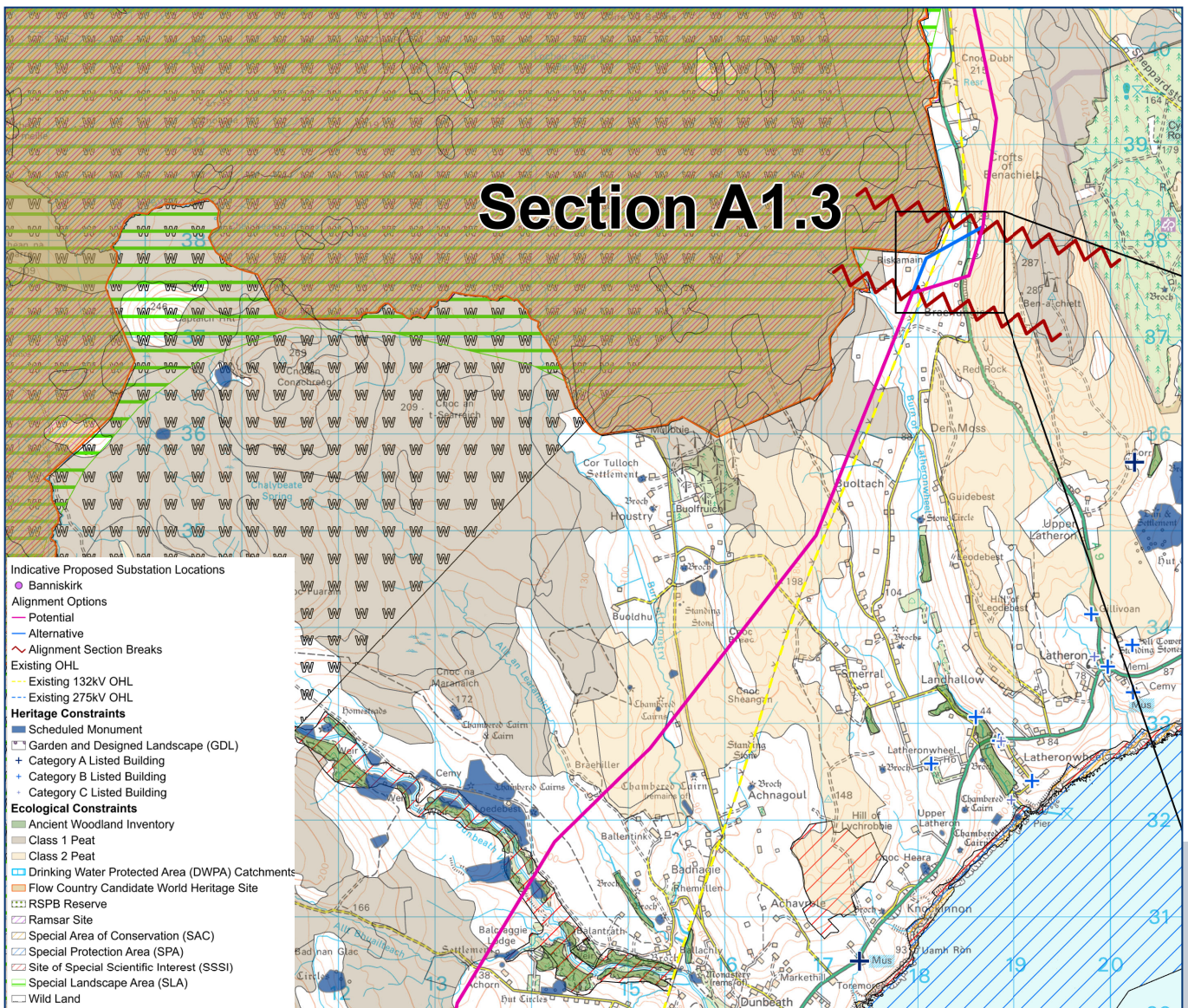
Conclusion

Owing to a number of environmental and technical constraints, there is no Alternative Alignment option identified in this section. Potential Alignment A1.2 is the only option identified in this section.



Section A1.3

Section A: Spittal to Brora



Section A1.3: Spittal to Brora

The key environmental, engineering and cost considerations which differentiate between the Potential and Alternative alignments include:



Environmental

- Passes through small areas of Grade 1a and 2a Ancient Woodland.
- Passes over Dunbeath Water Site of Special Scientific Interest (SSSI), Berriedale Water SSSI, Berriedale and Langwell Waters Special Area of Conservation and Langwell Water SSSI.
- Passes through Class 1 and 2 peatland.
- Oversails scheduled monument (Balcraggie Lodge, settlement 700m N of) (SM5230)) and has potential to affect setting of other scheduled monuments.
- Passes through The Flow Country and Berriedale Coast Special Landscape Area and is adjacent to Causeymire - Knockfin Flows Wild Land Area.

Engineering

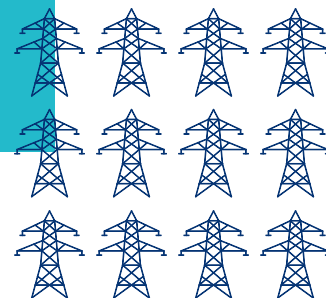
- Both options cross the existing 132kV overhead line and the A9.
- 5% of the Potential Alignment option is located within an area identified on SEPA flood maps.
- No properties are within 170m of either alignment option.
- Both the Potential and Alternative Alignment options have similar constraints technically. No option is favoured from a technical position.

Cost

- Both Alignment options are within 120% of the lowest capital and operational cost option, and both options are considered acceptable from a cost perspective.

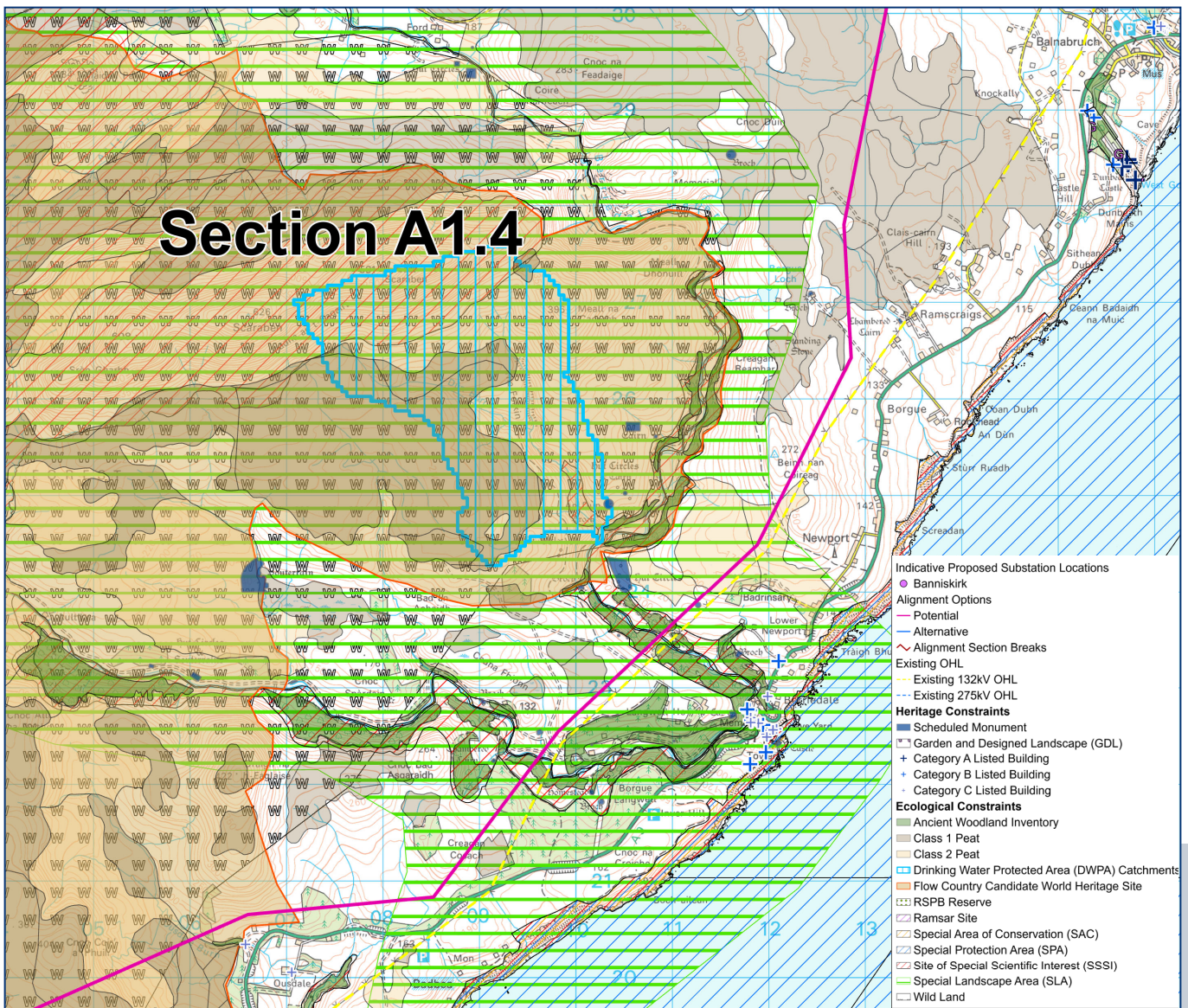
Conclusion

Potential Alignment A1.3 has been selected as on balance it is the least constrained option from both an environmental and engineering perspective. Both options were considered equally acceptable from a cost perspective.



Section A1.4

Section A: Spittal to Brora



Section A1.4: Spittal to Brora

The key environmental, engineering and cost considerations which differentiate between the Potential and Alternative alignments include:



Environmental

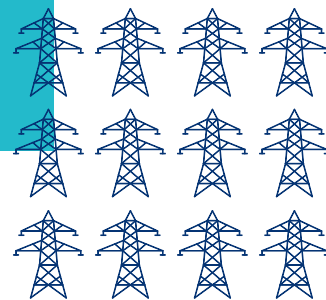
- Passes through small areas of Grade 1a and 2a Ancient Woodland.
- Passes over Dunbeath Water Site of Special Scientific Interest (SSSI), Berriedale Water SSSI, Berriedale and Langwell Waters Special Area of Conservation and Langwell Water SSSI.
- Passes through Class 1 and 2 peatland.
- Oversails scheduled monument (Balcraggie Lodge, settlement 700m N of) (SM5230) and has potential to affect setting of other scheduled monuments.
- Passes through The Flow Country and Berriedale Coast Special Landscape Area and is adjacent to Causeymire–Knockfin Flows Wild Land Area.

Engineering

- No major infrastructure crossings required, Potential Alignment A1.4 runs parallel to the 132kV line in many parts of this section.
- Traverses through elevations generally below 200mAOD in the northern part of the section which are not considered challenging. However, there are 23 towers at elevations >200mAOD, which will pose construction challenges.
- Topography is variable across the alignment with slope angles varying from 0°–22°. The flatter, less challenging ground tends to be in the north of this section.
- The majority of the alignment in this section is over 1km from the existing (public) road network. No residential properties within 170 m of the Potential Alignment.

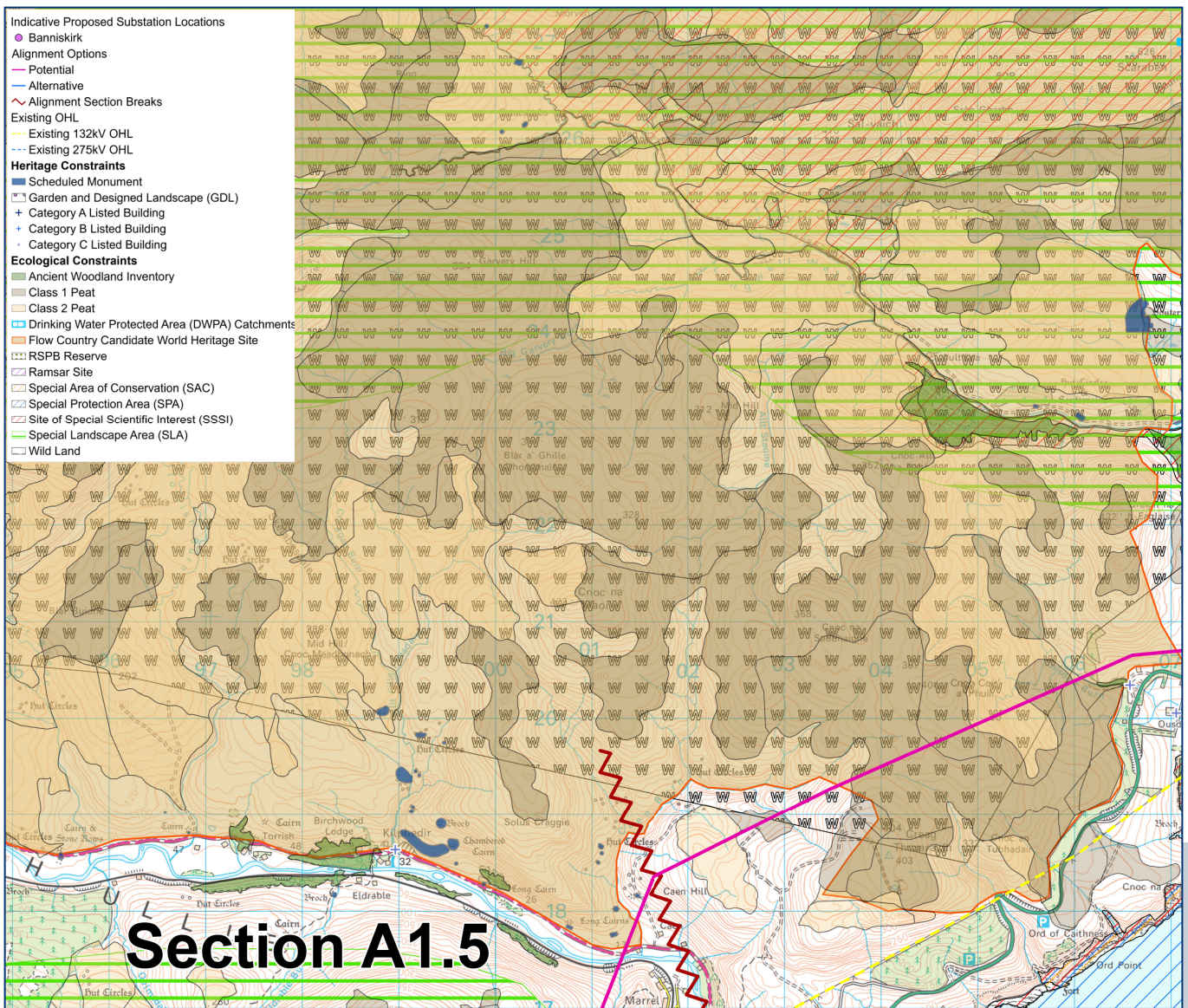
Conclusion

Owing to a number of environmental and technical constraints, there is no Alternative Alignment option identified in this section. Potential Alignment A1.4 is the only option identified in this section.



Section A1.5

Section A: Spittal to Brora



Section A1.5: Spittal to Brora

The key environmental, engineering and cost considerations which differentiate between the Potential and Alternative alignments include:



Environmental

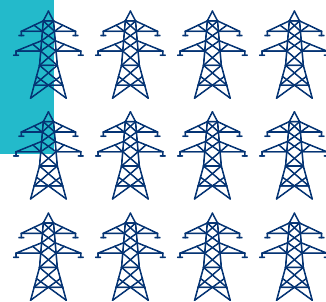
- Passes through Class 1 and 2 Peatland.
- Passes through Loch Fleet, Loch Brora and Glen Loth Special Landscape Area.
- Passes over the River Helmsdale and through Glen Loth.
- Potential to affect the setting of scheduled monuments.

Engineering

- There is one major infrastructure crossing (railway line).
- Traverses through elevations generally >200m AOD which are considered challenging for construction. Highest recorded elevation is 375m AOD.
- Topography is variable across the alignment with slope angles varying from 2°–22°. Most towers are on ground sloping 6° or more. Only one tower is on ground sloping 20°.
- Majority of the alignment in this section is over 1km from existing (public) road network.
- No residential property within 170m or 200m of the Potential Alignment.

Conclusion

Owing to a number of environmental and technical constraints, there is no Alternative Alignment option identified in this section. Potential Alignment A1.5 is the only option identified in this section.



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