Appendix D Landscape Character Analysis

Table D.1 below identifies the factors which increase or decrease a landscape's sensitivity to overhead line infrastructure. The factors have been developed from criteria used in the Nature Scot guidance "Siting and Designing Wind Farms in the Landscape" (2017). Table D.2 provides a description of the special qualities of the designated landscapes within the strategic corridors along with the key characteristics of the LCTs. It also considers the sensitivity of these designated landscapes and LCTs to OHLs and their associated infrastructure. The following documents have been used to inform the analysis contained in Table D.2 along with professional judgement and focused site survey:

- Extract from: Scottish Natural Heritage (2010) The special qualities of the National Scenic Areas. SNH Commissioned Report No. 374
- Scottish Borders Council Supplementary Planning Guidance, Local Landscape Designations, August 2012
- Dumfries and Galloway Council Local Development Plan 2. Regional Scenic Areas Technical Paper, January 2018
- NatureScot 2019 Landscape Character Type interactive online database

Table D.1 Characteristics Influencing Landscape Sensitivity

Landscape Characteristic	Factors increasing Susceptibility	Factors decreasing Susceptibility
Landscape and scenic quality	Inability to accommodate towers/OHLs without fundamental change.	Existing OHL/windfarms or other tall / industrialised man-made structures.
Wilderness / remoteness	Absence of man-made structures and high increased appreciation of the natural world.	Limited sense of remoteness and strong influence of human activity, such as urban areas or highways.
Landform	Complex topography with high degree of variation in form, likely to contrast with OHL linear infrastructure.	Simple topography with little variation and unlikely to contrast with linearity of OHL.
Landscape scale	Small scale landscape elements.	Large scale landscape elements which reduce perceived scale and linearity of OHL.
Perspective	Skyline views a key characteristic.	Reduced presence of skyline views and potential for back clothing against larger landform.
Land use	Land uses dominated by natural elements.	Land uses dominated by man-made elements.
Landscape and visual pattern	Small scale fields or landscape features contrasting with large scale OHL linear infrastructure.	Large scale landscape elements or field pattern which will not contrast with OHL linear infrastructure.
Focal features	Presence of valued focal points as a key characteristic which OHL will diminish.	Absence of focal points and no strong visual elements.
Settlements and urban/industrial landscapes	Absence of urban/industrial influences.	Presence of urban/industrial influences.
Woodland or Forestry	Strong pattern of woodland or forestry which relates well to landform and would be truncated or divided by linear OHL.	Weak or discordant woodland/forestry pattern which does not relate to landform.
Cultural elements	Monuments/registered parks and gardens, listed buildings or artistic and literary associations present as a notable feature.	No or few cultural heritage or artistic and literary associations elements.

Table D.2 Landscape Analysis

Designated Landscapes	Special / Key Qualities	Landscape Sensitivity to OHLs
Eildon and Leaderfoot NSA	• Great landscape diversity within a compact area • The distinctive triad of the Eildon Hills • Spectacular views from the hill summits o The summits of the hills provide unparalleled viewpoints for long-distance panoramas over the border landscapes • A strongly united landscape pattern of lively rhythm and colour • A richly wooded scene of great variety • The Tweed, an iconic river of international renown • A rich array of historic buildings, structures and estates • The hub of Border settlement • A harmonious and varied prospect from unequalled viewpoints o Many elevated viewpoints provide broad, sweeping views encompassing both wild-looking land and areas of more richly intimate, managed character. o This varied prospect of beauty and grandeur is memorable. The balance, visual composition and variety of land use create an attractive landscape of great delight. • Inspiration for the arts, literature and painting o The picturesque scenery around Melrose, Dryburgh and the Tweed has long been an inspiration to writers, poets, dramatists and artists, and contributed to the discovery of 'Nature' and its appreciation as a major subject in literature and the arts. o This varied prospect of beauty and grandeur is memorable. The balance, visual composition and variety of land use create an attractive landscape of great delight. • Scott's View o The Eildon Hills, their shapely, heather-clad summits rising above the neatly ordered fields and woodlands of the meandering Tweed, are best seen from Scott's View, a panoramic beauty spot high on Bemersyde Hill, above Dryburgh. o This long-recognised, classic viewpoint is known to be one of Sir Walter Scott's most loved views; his funeral hearse stopped here as a mark of respect. • The Wallace Statue o A prime viewpoint to the Eildons is marked by a tall, red sandstone statue of William Wallace. He stands looking out over the Tweed, his broadsword in his right hand and his shield resting at his left. o As one of the follies within Buchan's designed landscape at Dryburgh, its siting (as with other follies) indicates awareness and appreciation of the scenic beauties of the area, allied with a conscious historical and cultural expression.	**Higher** sensitivity based on designated value at a national level and increased susceptibility evident in the following characteristics: landscape and scenic quality, striking landform, perspective, focal features and cultural elements and associations.
Tweedsmuir Uplands SLA1	• This is a highly scenic area of dramatic landform and has a significant degree of wildness. The more rugged, rocky summits in particular have a strong sense of remoteness, with little overt human influence on the landscape. • It comprises steep rolling landform, with deep valleys and rounded peaks of glacial origin. The area lacks the blanket forest cover that affects other areas and is predominantly open moorland of rough grass and heather. • The uplands are well used for recreation, with the Southern Upland Way among many signposted routes in the area.	**Higher** sensitivity based on designated value at a local level and increased susceptibility evident in the following characteristics: landscape and scenic quality,

Designated Landscapes	Special / Key Qualities	Landscape Sensitivity to OHLs
	Management recommendations: • Focus land-use management around recreational access • Positive management of valued habitats in line with LBAP, including ongoing protection of international-level designations • Seek to maintain the wildness character of the great majority of the hills • Promote the use of forest design plans for areas of proposed afforestation • Consider visual effects of tall development on views to and from the landscape • Seek cross-border cooperation on management of boundary areas such as Culter Fell.	landform characteristics, and wilderness / remoteness.
Tweed Valley SLA 2	• A strong sense of place, with certain views being instantly recognisable. • The varied mix of landscape elements is highly representative, with forestry, woodland, open hillsides and pastoral farmland all juxtaposed. • The contrast between the well settled valley and the bare heather and grass moors and landmark hills is striking. Well-designed forestry actively contributes to this visual experience in places. • There are numerous opportunities for enjoying this landscape, including the cycle routes at Glentress and elsewhere, golf courses, equestrian centres, and walking routes. • Time depth is evident in estate landscapes and historic buildings. Management recommendations: • Careful management of land use at settlement edges. • Consider landscape and visual impacts of proposed developments in and around settlements, • particularly the treatment of their edges • Seek opportunities to better integrate existing development into the landscape • Promote the restructuring of forests, and the use of forest design plans for new areas of • afforestation • Consider the effects of development on hilltops, such as masts or wind farms, which may be visible within the valley	Intermediate sensitivity based on designated value at a local level and increased susceptibility evident in the following characteristics: notable focal features, strong landscape and visual pattern and perspective likely to accentuate OHL perception.
Tweed, Ettrick and Yarrow Confluences SLA 3	• The area has a strong sense of place, and contains representative Border features, albeit that each valley retains its own character. • The enclosing uplands and upland fringes offer contrast and an attractive wider setting, and enable views across the valleys, the descending approach to Selkirk along the A699 being particularly scenic. • The Yarrow enters a narrow, picturesque section around Yarrowford, characterised by woodland and estate buildings. The Yarrow flows into the Ettrick south of Selkirk, where the valley broadens, and is characterised by parkland influences, with mixed woodland climbing the valley sides. Upland Way follows the ridge between Tweed and Yarrow, offering views across the area, before crossing the Tweed towards Galashiels, and there are numerous other paths. • Attractions in the area include Abbotsford and Bowhill, and the area is very accessible from the main Borders settlements and further afield. Management recommendations: • Continue to promote sustainable estate management to balance the needs of biodiversity, recreation and tourism • Careful management of land use at settlement edges	Intermediate sensitivity based on designated value at a local level and increased susceptibility evident in the following characteristics: strong landscape and visual pattern, landform and perspective likely to accentuate OHL perception.

Designated Landscapes	Special / Key Qualities	Landscape Sensitivity to OHLs
	• Consider landscape and visual impacts of proposed developments in and around settlements • Consider the effects of development on hilltops, such as masts or wind farms, which may be visible within the valley • Carefully consider the effects of smaller wind energy proposals, and the cumulative effects that may arise	
Tweed Lowlands SLA 4	• It is a recognisable Borders landscape of rolling mixed farmland, well-wooded and mature, with attractive vistas over its visual diversity available from several locations. • In views from the A699 it forms the foreground to the view of the Eildon Hills. • The area retains a rich cultural heritage with many historic and literary associations. • The remains of Roxburgh Castle across the river from the grandeur of Floors Castle reflect two very different • phases in the long history of the area. • The area is of importance to recreation and tourism, containing numerous opportunities for enjoying the landscape, including some key attractions such as Smailholm Tower, Floors Castle and the Borders Abbeys Way/St Cuthbert's Way. • The extensive estate landscapes give this area strong visual diversity, and add to the evident time-depth inherent in features such as Dere Street, Smailholm Tower and the battlefield monument at Lilliardsedge. Management recommendations: • Encourage the sustainable management of hedges, and where possible seek the reinstatement of hedges and hedgerow trees • Seek to direct farm diversification towards aims in keeping with the landscape, such as the creation of native broadleaf woodland	**Highe**r sensitivity based on designated value at a local level and increased susceptibility evident in the following characteristics: landscape and scenic quality, landscape scale, landscape and visual pattern, focal features and cultural elements.
Teviot Valleys SLA 5	• This area covers a series of distinctive Borders valleys and hills, and has been defined to draw together a number of landmark features with their pastoral and woodland settings. • Visually prominent hills include Minto Crags, Peniel Heugh, Dunion Hill, Minto Hills and Rubers Law, each of which has a strong relationship with the adjacent valleys and the wider landscape. • Minto Crags are a dramatic feature contrasting strongly with the gentle farmed valley Teviot below. • Rubers Law has a distinctive craggy summit, dissected and rocky. Bonchester Hill is almost a reduced version of the same, while Dunion Hill is a landmark above Jedburgh. • The Jed valley is important as a key gateway into the Borders along the A68, including the sense of sudden arrival at Jedburgh after the scenic drive through the wooded valley. Rocky cliff features of red sandstone along the Jed are particularly attractive against spring green of trees. Management recommendations: • Continue to promote sustainable land management to balance the needs of biodiversity, recreation and tourism • Encourage the sustainable management of hedges, and where possible seek the reinstatement of hedges and hedgerow trees • Promote the restructuring of forests, and the use of forest design plans for new areas of afforestation • Consider the effects of development on hilltops, such as masts or wind farms, which may be visible within the valleys	**Higher** sensitivity based on designated value at a local level and increased susceptibility evident in the following characteristics: notable landscape and scenic quality, landform, landscape and visual pattern and focal features.
Langholm Hills	• This RSA centres on the combinations of Upland Glen and other attractive valley landscapes of Eskdale and the Ewes Water valley, and the adjacent Southern Uplands.	**Lower** sensitivity based on designated value at a local level and decreased

Designated Landscapes	Special / Key Qualities	Landscape Sensitivity to OHLs
Regional Scenic Area	• The strong visual watershed of Great Hill has been selected to form the boundary, to include the major areas of heather moorland within the Southern Uplands. To the south, the boundaries were modified to follow the immediate visual envelope of the Esk Valley. • The smooth, rounded, multi-ridged peaks of the Southern Uplands on either side of the Ewes valley are covered with extensive areas of unenclosed heather moorland. The Ewes valley itself is an archetype long, straight sided, U shaped glaciated Upland Glen with improved pastures in the valley floor and long, contained views from the A7 running along it. • Scattered small to medium scale plantations break up the valley sides but the valley retains an essentially open character.	susceptibility evident in the following characteristics: simple topography, open landscape and visual pattern and potential for integration with forestry.

Table D.2 Landscape Character Types

Landscapes Character Type	Key characteristics	Landscape Sensitivity to OHLs
LCT 103: Undulating Upland Fringe	• Large scale, moderately to steeply sloping and undulating landform incised in places by steep gullies and narrow valleys. • Unity of land cover characterised by improved pastures, with prominent field pattern delineated by a well maintained network of drystone dykes, and scattered small to medium sized coniferous plantations. • Medium density settlement with small villages and farmsteads sited typically in sheltered valleys and on lower slopes. • A simple, uniform landscape of smooth flowing curves, open in character with distant views over adjoining valley types and the Lammermuir and Moorfoot hills. • Boundaries clearly defined by major river valleys.	**Lower** sensitivity based on undesignated value and decreased susceptibility evident in the following characteristics: simple landform, landscape and visual pattern, forestry and land use incorporating man-made elements.
LCT 91: Plateau Grassland-Borders	• Large scale, rolling plateau topography with gentle slopes and smooth relief. • Vegetation cover dominated by coarse grassland with localised patches of heather moorland, rush pasture and scattered small coniferous plantations and shelterbelts. • Low density settlement with widely dispersed farm buildings. • Wind farm development in the northern and central parts of the Landscape Character Type. • Remote, isolated quality. • Open, panoramic views.	**Lower** sensitivity based on undesignated value and decreased susceptibility evident in the following characteristics: simple topography, land use incorporating man-made elements, landscape and visual pattern and potential integration with woodland or forestry.
90: Dissected Plateau Moorland	• Plateau landform consisting of a series of level-topped hills and ridges. • Strong topographic identity and overall grandeur of scale. • Individual hill masses separated by steep sided valley features of differing scales. • Semi-natural peatland, heather moorland and grassland communities dominant, with a high degree of perceived naturalness of vegetation cover. • Very low settlement density with isolated, dispersed pattern.	Intermediate sensitivity based on undesignated value, increased susceptibility evident in the following characteristics: wilderness/ remoteness, natural and

Landscapes Character Type	Key characteristics	Landscape Sensitivity to OHLs
	• Scattered prehistoric settlement and burial mounds above water courses. • Sense of wildness created by wide horizons and long distance, unobstructed views.	cultural elements and decreased susceptibility due to simplicity of landform, and landscape and visual pattern.
114: Pastoral Upland Valley	• Flat valley floor with smooth moderately sloping sides incised by narrow tributary valleys and enclosed by rolling dissected plateau uplands. • Land cover of permanent pastures on valley floor and sides with frequent woodlands, merging with unimproved grassland and heather on upper slopes. • Scattered farms and villages along the valley floor and lower sides typically built around road junctions and river crossings. • A medium scale enclosed landscape of smooth curves, strongly influenced by the surrounding uplands.	Intermediate sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: landform enclosure and form, landscape and visual pattern and decreased by woodland or forestry pattern.
116: Upland Valley with Woodland	• Meandering river valley, strongly enclosed by uplands. • Flat valley floor, broad and open in places, narrow and more intimate in others. • Prominent terraces (haughlands) caused by fluvial and glacial action. • Strong influence of woodland, with extensive coniferous forest prominent on valley sides, and mature hedgerow tree lines, broadleaf, and mixed policy woodlands on valley floor. • Traditional dwellings, farmsteads and hamlets clustered at the foot of valley side slopes. • Mill towns prominent on valley floor and sides. • Tower houses and mansions common along river banks. • Prehistoric hillforts common on gently rounded hill tops. • Designed policies and parklands significantly contribute to woodland cover and character.	Intermediate sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: landform enclosure and form, landscape and visual pattern, cultural elements and decreased by woodland or forestry pattern.
93: Southern Uplands with Scattered Forest-Borders	• Large-scale rolling landform with higher dome or cone-shaped summits. • Significant areas of peatland and heather moorland. • Mosaic of grassland, bracken and rushes on lower ground. • Locally-prominent scattered large areas of forestry. • Degree of remoteness, wild character and grandeur of scale unique within the region.	**Lower** sensitivity based on undesignated value and decreased susceptibility evident in the following characteristics: large-scale rolling landform, landscape scale, landscape and visual pattern and woodland or forestry pattern.
94: Rolling Moorland	• Large-scale rolling landform with ridges and intervening shallow basins. • Significant areas of grassland, peatland and heather moorland. • Mosaic of grassland, bracken and rushes on lower ground. • Locally-prominent scattered areas of forestry.	**Lower** sensitivity based on undesignated value and decreased susceptibility evident in the following characteristics: simple large-

Landscapes Character Type	Key characteristics	Landscape Sensitivity to OHLs
	• Occasional small lochs. • Sparse settlement of scattered steadings and cottages, along minor roads that traverse the area.	scale landform, landscape scale, landscape and visual pattern and woodland or forestry pattern.
96: Southern Uplands with Forest- Borders	• Large scale rolling landform with higher dome or cone-shaped summits. • Dominant coniferous forest cover characterised by Sitka spruce plantations with occasional areas of pine and larch. • Dispersed settlement pattern of farmsteads and forestry buildings, mainly within sheltered valleys. • Scattered pockets of past landuse from prehistoric to post-medieval times • Simple, uniform character. • Strong sense of enclosure, quietness and tranquillity.	**Lower** sensitivity based on undesignated value and decreased susceptibility evident in the following characteristics: simple large-scale landform, landscape scale, landscape and visual pattern and woodland or forestry pattern.
113: Upland Valley with Pastoral Floor	• Glaciated valleys with moderately to strongly sloping sides and flat floor modified by river bluffs and glacial moraine. • Improved pastures with occasional small woodlands and tree lines on valley floors. • Rough unimproved grazing, heather moorland or coniferous forest on valley sides. • Scattered stone built villages with farmsteads and dwellings dispersed along river terraces, lower valley sides and tributary valleys. • A simple, distinctive landscape strongly enclosed by uplands with intermittent long views along valley corridors.	Intermediate sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: landscape scale, landscape and visual pattern and woodland or forestry pattern and increased by perspective likely to accentuate OHL perception.
117: Pastoral Upland Fringe Valley	• Medium scale pastoral valley with flat floor enclosed by upland fringe pastures, often with rough grassland and moorland covered hills above. • Smooth large-scale landform modified in places by bluffs and moraine on valley floor, scree slopes or rock outcrops on valley sides. • Narrow, often wooded tributary side valleys. • Broadleaf woodlands and scrub on bluff slopes and scattered trees along riverbanks, occasional coniferous plantations and shelterbelts on valley sides. • Valley floor pastures enclosed by drystone dykes with occasional hedgerows, interspersed with occasional patches of scrub, coarse grass and rushes. • Scattered villages, farmsteads and mansion houses with policy woodlands.	Intermediate sensitivity based on undesignated value and decreased susceptibility evident in the following characteristics: simple landform and increased susceptibility due to complex landscape and scenic quality and smaller scale landscape and visual pattern.
99: Rolling Farmland - Borders	• Undulating relief, becoming more pronounced at higher elevations. • Distinctive areas of flat or constant gentle gradients, giving wide horizons and skyscapes. • Large-scale strong geometric field pattern, enclosed by hedgerows, with scattered coniferous woods. • Mix of arable, ley pasture and permanent grazing land.	**Intermediate** sensitivity based on undesignated value and decreased susceptibility evident in the following characteristics: landform, large-scale landscape and

Landscapes Character Type	Key characteristics	Landscape Sensitivity to OHLs
	• Moderately densely settled, with frequent farmsteads and small villages. • Well kempt, prosperous appearance.	visual pattern and increased sensitivity based on dense settlement land use and perception.
109: Lowland Margin with Hills	• Distinctive topography consisting of conical and dome shaped hill groups and crags rising prominently above more gently rolling landform. • Land cover of pasture and arable fields divided by hedgerows or drystone dykes, with scattered mature broadleaf, coniferous and mixed woodlands. • Well-maintained beech and thorn hedgerows with mature hedgerow trees in lower areas. • Moderately dense settlement of frequent, evenly scattered small villages and farmsteads along minor roads and tracks. • A predominantly large-scale open landscape of strong curves, and intermittent distant views over the Tweed lowlands.	Intermediate sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: smaller scale landscape and visual pattern/land use and decreased by large scale landform.
120: Lowland Valley with Farmland	• Broad, shallow, flat-bottomed valleys with gently sloping/undulating sides. • Neat pattern of medium to large sized arable and pasture fields divided by prominent hedgerows with some mature broadleaf tree lines. • Bluffs and terraces cut by rivers. • Occasional prominent volcanic hills, knolls and rock outcrops. • Broadleaf woodland common on strips on river bluffs and in side valleys, small blocks, shelterbelts and policy woodlands on lower slopes and valley floor. • Scattered small towns, stone built farmsteads, villages, and mansion houses along well-developed road network. • Fertile, neat, prosperous appearance.	**Intermediate** sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: landscape and visual pattern, perspective, land use and decreased by woodland or forestry pattern.
119: Wooded Upland Fringe Valley	• Small scale, intimate, enclosed character. • Strong visual containment. • Deeply-incised river channels with frequent cliffs and steep slopes. • Heavily wooded valley floors and lower valley sides. • Contrasting open rolling slopes at higher levels above rivers. • Generally tranquil, unspoilt character.	**Higher** sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: small scale landscape and visual pattern with enclosure and perspective contrast between valley and upland, and landscape and scenic quality.
98: Rolling Foothills	• Discrete dome and cone-shaped hills and ridges, with occasional rock outcrops on steeper slopes and hill tops. • Wide visual influence, forming attractive backdrop from adjoining upland and Upland Fringe landscapes. • Grassland cover dominant, but with locally significant coniferous forestry. • Settlement includes small villages in the lower reaches of valleys. • Important group of bastle houses and cultivation remains of the late medieval period. • Open, expansive, unobstructed views.	Intermediate sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: landform variation, perspective and open views, decreased by

Landscapes Character Type	Key characteristics	Landscape Sensitivity to OHLs
		presence of woodland or forestry.
102: Upland Fringe with Prominent Hills	• Typically steep, cone or dome-shaped hills, frequently of volcanic or igneous rock giving strong landform identity. • Diverse surrounding landform types, ranging from smooth undulations to strongly elongated ridges and hollows. • Land cover dominated by permanent pasture. • Locally frequent woodland cover. • Generally low settlement density with isolated farmsteads and occasional small settlements. • Rich in visual contrasts, with individual hills as dominant focal points of views. • Diversity of landscape scale.	**Intermediate** sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: landform variation, infrequent woodland or forestry and diversity of landscape and visual pattern.
101: Rocky Upland Fringe	• Distinctive irregular strongly undulating and angular landform. • Frequent knolls, ridges and rock outcrops. • Small lochans and mires in depressions. • Land cover characterised by permanent pastures with patches of gorse and rushes and scattered small woodlands, giving a strong sense of place. • Farmsteads and dwellings dispersed along minor road network. • Drystone dykes common. • Diversity of scale.	**Intermediate** sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: variation in landform and scale.
178: Southern Uplands with Forest- Dumfries and Galloway	• Large, smooth dome-shaped hills with large scale dark green forests on slopes and over lower summits. • Predominantly simple, gently rolling landform. • Some areas of more complex and smaller-scale landscapes, with steep slopes enclosing heads of valleys and/or where uplands remain open. • Changing landscapes with large scale forestry operations and wind farm development. • Forested areas dominated by Sitka Spruce, interspersed with mixed conifers and broadleaf planting, and undergoing felling and replanting in large coupes. • Wind farms are a key characteristic in some areas. • Expansive scale.	**Lower** sensitivity based on undesignated value and decreased susceptibility evident in the following characteristics: landform, landscape scale, land use, landscape and visual pattern.
177: Southern Uplands-Dumfries and Galloway	• Large, smooth dome/conical shaped hills, predominantly grass-covered. • Open and exposed character except within incised valleys. • Dramatically sculpted landforms and awe-inspiring scale. • Distinctive dark brown/purple colour of heather on some of the higher areas. • Pockets of woodland in incised valleys. • Stone dykes occasionally define the lower limit. • Legacy of lead and other mining activity, with extensive archaeological remains	**Lower** sensitivity based on undesignated value and decreased susceptibility evident in the following characteristics: simplicity of landform, landscape scale, land use, landscape and visual pattern.

Landscapes Character Type	Key characteristics	Landscape Sensitivity to OHLs
	• around the former mining village of Wanlockhead. • Wind farms locally characteristic, away from the more dramatic, scenic and sculptural • slopes and skylines.	
160: Narrow Wooded River Valley- Dumfries and Galloway	• Narrow incised valleys with wooded slopes enclosing pasture floors. • Small pastures and arable fields enclosed by hedges/fences in lower reaches and drystone dykes in upper reaches. • Dominant broadleaf (semi-natural) woodland character with conifers on higher slopes. • Lush trough-shaped river valleys with pasture/arable floors enclosed by deciduous wooded slopes. • Riparian trees and woodlands following meandering river courses in lower reaches. • Narrow lanes following valleys and linking isolated houses, occasional settlements and providing access to higher moorland. • Numerous arched stone bridges over the rivers. • Intimate unspoilt landscape focussing on river views with some adjacent policy landscape.	**Higher** sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: complexity of landform, landscape scale, land use, landscape and visual pattern and perspective likely to accentuate OHL perception.
175: Foothills- Dumfries and Galloway	• Generally undulating land between 170 and 250 metres, with rounded peaks. Higher in the west, up to nearly 550 metres with craggier peaks. • Foothills dissected by incised valleys. • Semi-improved pasture enclosed in medium-large fields by stone walls. Grazed by sheep and cattle. Some rough pastures and heath on higher ground. • Trees in sheltered pockets with some copses on top of hills. • Many scattered farmsteads and small settlements. • Network of minor roads. • Numerous archaeological sites particularly Bronze Age funerary and ritual sites and Iron Age settlements and forts.	**Lower** sensitivity based on undesignated value and decreased susceptibility evident in the following characteristics: simple landform, landscape scale, land use and landscape and visual pattern.
176: Foothills with Forest- Dumfries and Galloway	• Dark green blanket of forest covering undulating foothills. • Changing landscape with areas with large and medium scale forestry operations and wind farm development. • Forested areas dominated by Sitka Spruce, interspersed with mixed conifers and broadleaf planting, undergoing felling and replanting in large coupes. • Tall mature conifers at roadside. • Areas of more complex, locally distinctive and smaller-scale landscapes, with semi-improved pasture with walled enclosures on open ground, occasional lochs and estate policies, distinctive ridges and landmark summits. • Areas of relict landscape with remains of pre-improvement settlement and agriculture clustered in burn valleys. • Wind farms, locally defining the character in some areas of central Dumfries and Galloway.	**Lower** sensitivity based on undesignated value and decreased susceptibility evident in the following characteristics: simple landscape scale, land use with man-made influences, landscape and visual pattern and woodland or forestry to aid integration.
172: Upland Fringe- Dumfries and Galloway	• Elevated rolling pastures. • Improved and rough grassland in close proximity. • Hedgerow banks and treelines along roads in some lower areas. • Dry stone dykes.	**Lower** sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: perspective, focal features and cultural elements and decreased by

Landscapes Character Type	Key characteristics	Landscape Sensitivity to OHLs
	• Squared areas of forestry. • Contrast between wide open areas and more intimate landform. • Panoramic views over valley and coastal lowlands. • Small bridges over incised burns. • Notable landmark features, including Iron Age fortifications, designed landscapes and grand houses.	simple landform and landscape scale.
171: Flow Plateau	• Mostly flat and gently rolling topography with an incline towards the Solway. • Occasional long views over the Solway. • Waterlogged rush infested pastures, ochre green and brown. • Large fields with hedgerows in poor condition and fences. • Cattle grazing. • Shelterbelts and small informally shaped forests. • Riparian woodlands. • Scattered farmsteads.	Intermediate sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: perspective/views and decreased by simple landform, landscape scale, land use and landscape and visual pattern.
163: Middle Dale-Dumfries and Galloway	• Broad valley with complex undulating topography and locally narrow sections. • River meanders eroding bluffs in the valley moraines. • Landcover predominantly improved pastures, lush green, sheep and cattle grazed. • Medium scale field enclosures, a mixture of hedgerows and dry stone dykes. • Extensive pattern of shelterbelts and farm woodlands with semi-natural woodlands on bluff slopes. • Dale contained by uplands with forests and rough grazing on horizons. • Semi-natural hanging woodlands on steep bluff slopes. • Country houses and designed landscapes. • Settlements of high townscape quality. • Communication routes. • ‘Red-earth” qualities relating to underlying red sandstones.	Intermediate sensitivity based on undesignated value and increased susceptibility evident in the following characteristics: landscape and scenic quality, complex landform, landscape scale, land use, landscape and visual pattern, presence of focal features and cultural elements.

Appendix E Routeing and Siting Considerations

Appraisal Topic	Constraints and Features within the Study Area	Routeing and Siting Objectives	Project Routeing and Siting Considerations
Landscape	• Eildon and Leaderfoot NSA (Holford Rule 1 and Horlock Rule 2) • Locally designated landscapes comprising multiple SLAs and RSAs (Holford Rule 2 and Supplementary Notes and Clarifications) • Landscape Character Types (LCTs) including landscape sensitivity (Holford Rules 4, 5 and 6 and Horlock Rule 4)	• To develop route and site options which avoid nationally and locally designated landscapes as far as possible while accounting for other routeing considerations. • To develop route and site options which take account of landscape character and sensitivities and utilise landform and vegetation and integrate within the landscape as much as possible to reduce potentially adverse landscape effects.	The Eildon and Leaderfoot NSA is the only statutory landscape designation or area of the highest environmental value within the Study Area and therefore must be avoided by route and site options. There are other nationally designated landscapes present in the immediate vicinity of the Study Area including the Upper Tweeddale NSA to the west and the Northumberland National Park to the east. While effects on these areas should be avoided consideration of potential landscape setting effects may be required if route options are located on the margins of the Study Area. There are a number of local landscape designations in the Study Area including multiple SLAs in the Scottish Borders and one RSA in Dumfries and Galloway. These areas are considered to be of moderate environmental value. While it is preferable to avoid these areas as much as possible, the scale and distribution of SLAs within the Scottish Borders means that some routeing within them will be unavoidable. Where routeing through local landscape designations regard should be had for the key features and attributes of the local designations and sensitivity to OHLs.
Visual Amenity	• Settlements (Holford Rule 4 and Supplementary Notes and Clarifications and Horlock Rules 4 and 5) • Scattered individual rural properties or clusters of properties (Holford Rule 4 and Supplementary Notes and Clarifications and Horlock Rule)	• To develop route and site options which avoid settlements as far as possible in order to reduce potentially adverse effects on visual amenity. • To develop route and site options which avoid rural residential properties as much as possible in order to reduce potentially adverse effects on visual amenity.	Settlements within the Study Area comprise a number of towns and larger villages which should be avoided as much as possible to prevent or reduce views from residential areas. The rural nature of large parts of the Study Area means that there are scattered individual properties or small clusters of properties present throughout. These should be avoided as much as possible in order to reduce potential adverse effects on views from residential receptors, however, this may require to be balanced against other routeing and siting considerations.
Ecology and Biodiversity	• Seven SACs including the River Tweed SAC (Holford Rule 1 and Horlock Rule 2) • Langholm-Newcastleton SPA (Holford Rule 1and Horlock Rule 2) • More than 60 SSSIs (Holford Rules 1 and 2and Horlock Rule 2) • Multiple LBS (Holford Rule 2 and Supplementary Notes and Clarifications)	• To develop route and site options which avoid sites designated for nature conservation or ecological interests as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features.	There are a number of internationally and nationally designated sites (i.e. sites of the highest or high environmental value) present within the Study Area as well as locally designated sites (i.e. sites of moderate or low environmental value), however, they vary in terms of the basis of the designation as well as in scale from small discrete sites to larger scale or linear sites. Route and site options should avoid designated sites as much as possible in order to prevent or reduce potential adverse effects on them. Where sites cannot be avoided due to the extent of designation or because of other constraints, consideration should be given to the designations qualifying interests, the location of substation sites or where they are crossed by

Appraisal Topic	Constraints and Features within the Study Area	Routeing and Siting Objectives	Project Routeing and Siting Considerations
			overhead line routes in order to provide opportunities to develop a detailed design which reduces the potential for adverse effects on them.
Cultural Heritage and Archaeology	• Almost 400no. Scheduled Monuments scattered throughout the Study Area (Holford Rule 1 and Horlock Rule 2) • Three Inventory Battlefields (Holford Rule 1 and Horlock Rule 2) • 16 Inventory Gardens and Designed Landscapes (Holford Rule 1 and Horlock Rule 2) • More than 2,000no. Listed Buildings (Holford Rule 1 and Horlock Rule 2) • Archaeologically Sensitive Areas and non-inventory gardens and designed landscapes (Holford Rule 2 and Supplementary Notes and Clarifications)	• To develop route and site options which avoid sites designated for archaeological or cultural heritage conservation purposes as much as possible in order to avoid or reduce potentially adverse effects on them including upon their setting.	There are a number of cultural heritage and archaeological designations which are of the highest or high environmental value. These vary in geographic scale (from small discrete sites to larger areas) and well as in distribution (from individual areas or sites to clusters of sites which are closely located and in some cases may be interrelated). Route and site options should avoid designated sites as much as possible in order to prevent or reduce potential adverse effects on them including effects on their setting. This may include using existing landscape features such as landform or woodland to avoid or reduce effects.
Forestry and Woodland	• More than 500 Ancient Woodland Inventory sites (Holford Rule 1 and Horlock Rule 2) • Native Woodland Survey of Scotland (Holford Rules 2, 4 and 5) • Other woodland or forestry sites (Holford Rules 4 and 5 and Horlock Rule 4).	• To develop route and site options which avoid forestry and woodland as much as possible in order to prevent or reduce the loss of tree cover.	There are a range of forestry and woodland resources present within the Study Area ranging from Ancient Woodland Inventory sites which are considered to be areas of high environmental value to large-scale commercial forestry which support land use and recreational functions and are of moderate or low environmental value. Route and site options should avoid forestry and woodland as much as possible, in particular Ancient Woodland Inventory sites, in order to prevent tree loss. Where route or site options cannot avoid woodland due to other constraints, effects should be reduced as far as possible with routes or sites identified having regard to forestry design as well as planting/restocking plans.
Water resources	• Waterbodies / watercourses • Flood Zones	• To develop route and site options which adhere to a minimum 50m separation zone from watercourses or bodies in order to prevent or reduce adverse effects on water quality • To develop route or site options which avoid routeing or siting within flood zones or where they cannot be avoided by route options can be crossed at their narrowest point	There are a number of waterbodies and watercourses present within the Study Area, however, in general they are not considered to significantly constrain the development of route or site options. Route options should maintain a minimum separation distance of 50m in order to ensure watercourses could be spanned by OHL routes where they require to be crossed. Site options for the new substation should be sited away from watercourses as much as possible in order to reduce the potential for pollution of watercourses.

Appraisal Topic	Constraints and Features within the Study Area	Routeing and Siting Objectives	Project Routeing and Siting Considerations
Ground Conditions	• Eight geological SSSIs and/or Geological Conservation Review sites (Holford Rule 1) • Priority Peatland Habitats (Class 1 and Class 2) (Holford Rule 1) • Peatland Habitats (Classes 3, 4 and 5)	• To develop route and site options which avoid sites designated for geological conservation as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features. • To develop route and site options which avoid priority peatland and peatland habitats as much as possible in order to avoid or reduce the loss of peatland or other carbon-rich soils as much as possible.	There are a small number of sites designated only for geological conservation purposes within the Study Area. These are typically small discrete sites which should be avoided by route and site options as much as possible. Where sites cannot be avoided due to the extent of designation or because of other constraints, consideration should be given the location of substation sites or where they are crossed by overhead line routes in order to provide opportunities to develop a detailed design which reduces the potential for adverse effects on them. Priority and other peatland habitats and other carbon rich soils are present throughout the Study Area. Route and site options should avoid peatland habitats as much as possible in order to reduce the loss of peat. Where peatland areas cannot be avoided losses should be minimised as far as possible, for example by routeing across peatland as directly as possible in order to minimise the length of routes within peat.
Tourism and Recreation	• Long distance walking and cycling routes or trails • Sites or areas supporting outdoor recreational activities • Other regionally important visitor attractions	• To develop route and site options which avoid or reduce impacts on recreational routes and areas as well as other visitor attractions as much as possible in order to prevent impacts on the amenity of users or visitors.	There is a range of tourism and recreational interests present within the Study Area. Route and site options should avoid tourism and recreational interests as much as possible in order to reduce potential adverse effects on the amenity of users of or visitors to routes, trails or other visitor attractions. Where routeing or siting cannot avoid tourism or recreational interests, regard should be had for the landscape setting of the attraction and visual amenity of visitors/users for example using existing landscape features such as landform or woodland to avoid or reduce effects.
Land Use	• Agricultural land capability • Commercial forestry	• To develop route and site options while having regard to existing land uses including the nature and extent of agricultural land or commercial forestry and seeking to reduce impacts on existing land use as much as possible.	The majority of the land within the Study Area is not suitable for arable farming based on the National Land Capability Map for Agriculture. Route and site options should avoid or reduce impacts on agricultural land as much as possible. Large areas of commercial forestry are present throughout the Study Area. Route and site options should avoid commercial forestry as much as possible but where it cannot be avoided, effects should be reduced as far as possible with routes or sites for example having regard to forestry design and felling/restocking plans.
Engineering Constraints	• Route length (Holford Rule 3) • Topography, altitude and slopes • Existing electricity transmission infrastructure • Wind Farms	• To develop as short and direct a route as possible taking account of other routeing constraints and considerations. • To develop route and site options taking account of topography, altitude and side slopes which could affect constructability (including accessibility) and/or operability. • To develop route and site options having regard to existing and proposed wind farms and the application of an appropriate separation distance.	Route options between the proposed Gala North Substation and new Teviot Substation as well as new Teviot Substation and the Scotland-England border should be as direct as possible subject to other routeing constraints considerations in order to reduce overall OHL route lengths. Consideration should be given to the impact of siting Teviot Substation on the overall directness and length of route options. Altitudes and slope angle have been derived from digital terrain data and reviewed as part of technical reviews of route options. Altitudes within the Study Area are highly variable from less 100mAOD in some river valleys to

Appraisal Topic	Constraints and Features within the Study Area	Routeing and Siting Objectives	Project Routeing and Siting Considerations
			more than 500mAOD in upland areas. Subject to other routeing constraints and considerations, route options should take account of altitudes in order to reduce potential exposure to increased ice and wind loads as much as possible (<200mAOD/low risk, 200-500mAOD/medium risk and >500mAOD/high risk). While routeing at higher altitudes is feasible it can require tower strengthening works as well as shorter spans (i.e. more towers) in order to mitigate exposure to wind and ice loads. The variable altitudes also influence the steepness of slopes within the Study Area with steep slopes often present within narrow V-shaped river valleys. Route options should take account of slopes which require to be routed over and/or along avoiding steep slopes where possible in order to reduce construction access risks. Sites for the new Teviot Substation should also take account of slopes seeking to avoid areas where significant earthworks may be required to establish a level platform for the substation where possible. There is a range of existing and proposed energy infrastructure within the Study Area including transmission assets as well as wind farms at various stages of development (pre-application, application, construction, operation). Existing infrastructure has been identified and should be taken account of in the identification of route and site options. This includes consideration of proximity to and/or requirements to cross other transmission infrastructure such as the 132kV OHL route (V route) which is routed north to south through the Study Area as well as application of appropriate separation distances to wind farms in line with industry guidance.

Appendix F New Teviot Substation Siting Appraisal

Appraisal Topic	Routeing and Siting Objectives	TEV-01 (located to the west of the sub-Study Area)	TEV-02 (located to the west of the sub-Study Area)	TEV-03 (located to the northwest of the sub-Study Area)	TEV-04 (located to the south of sub-Study Area)	TEV-05 (located to the east of the sub-Study Area)	TEV-06 (located to the north of the sub-Study Area)
Landscape	• To develop route and site options which avoid nationally and locally designated landscapes as far as possible while accounting for other routeing considerations. • To develop route and site options which take account of landscape character and sensitivities and utilise landform and vegetation and integrate within the landscape as much as possible to reduce potentially adverse landscape effects.	There are no landscape designations in proximity to TEV-01. This site lies within the Southern Uplands with Scattered Forest LCT. It is located within the narrow valley of the Phaup Burn which is surrounded by steeply rising slopes covered with grassland which provide a degree of containment to the site. However, due to the topography extensive earthworks would be required to accommodate the necessary platform which would contrast with the narrow valley landscape. Pockets of native woodland follow the Burn although the site is positioned to avoid directly impacting them. To the immediate east lies an area of forestry some of which has been felled.	There are no landscape designations in proximity to TEV-02. This site lies within the Southern Uplands with Scattered Forest LCT. It is located within a series of gently rising pastoral fields bound to the west along the A7 corridor by a short belt of mature vegetation. A small burn crosses the site and is surrounded by mature trees which would have to be removed to accommodate the site. To the north, the Linhope Burn follows the valley with pockets of mature woodland along its course, particularly along the northern side surrounding the cluster of buildings. The site is partially enclosed to the southeast and southwest by shelterbelt planting which provides some enclosure within the landscape and could be further strengthened through mitigation design.	There are no landscape designations in proximity to TEV-03. This site lies within the Southern Uplands with Scattered Forest LCT with a very small section falling into the adjacent Pastoral Upland fringe Valley LCT although the site doesn't exhibit characteristics of the latter. It is located within an area of rising ground covered by upland grazing across uneven terrain. Landform steeply rises from the Northhouse Burn to the southwest and continues across the site which occupies a relatively large area of exposed upland landscape on the north facing slope of Southdean Rig. Earthworks would be required to establish a platform and would be particularly apparent within the local landscape. Large areas of forestry are characteristic of the immediate landscape with an extensive area to the southeast of the site and an area to the northwest which	TEV-04 lies on the northern extent of the Langholm Hills RSA. This site lies within the Southern Uplands LCT. It is located in open rolling upland to the south of the minor road between Fiddleton and Hermitage. The site is typical of the wider landscape in which simple, gently rolling landform predominates exhibiting an open and exposed character. Trees and woodland are limited to the incised valleys including to the northeast although none are present across the site which occupies an open position in the landscape. Whilst the larger scale landscape could accommodate the site, it would be a noticeable element within this remote upland, locally designated landscape.	There are no landscape designations in proximity to TEV-05. This site lies within the Southern Uplands with Scattered Forest LCT and borders the Southern Uplands with Forest LCT which directly informs the setting of the site. It is located within a large-scale rolling landform on the north facing slopes of Black Rig, between Leap Hill to the northeast and Sundhope Rig to the south. The incised valley containing the Black Cleugh lies to the immediate east of the site. The site comprises a mosaic of open grassland and moorland surrounded by large tracts of forestry to the north, northwest and east which are locally prominent. The larger scale of the landscape combined with the backcloth of forestry would be relatively able to accommodate the site compared with the other sites considered.	There are no landscape designations in proximity to TEV-06. This site lies within the Southern Uplands with Scattered Forest LCT and is bordered to the north by the Southern Uplands with Forest LCT. It is located on the north facing slopes of White Hill on more gently sloping ground. The site comprises open grassland and within the wider landscape occasional tree planting is present along watercourses along with blocks of shelterbelt planting and plantation forestry. Cultural heritage features are present within the immediate landscape which increase the local landscape value and time depth which reduces the ability of the landscape to accommodate the site.

Appraisal Topic	Routeing and Siting Objectives	TEV-01 (located to the west of the sub-Study Area)	TEV-02 (located to the west of the sub-Study Area)	TEV-03 (located to the northwest of the sub-Study Area)	TEV-04 (located to the south of sub-Study Area)	TEV-05 (located to the east of the sub-Study Area)	TEV-06 (located to the north of the sub-Study Area)
				provides some visual separation from the upland fringe valley landscape.			
Visual Amenity	• To develop route and site options which avoid settlements as far as possible in order to reduce potentially adverse effects on visual amenity. • To develop route and site options which avoid rural residential properties as much as possible in order to reduce potentially adverse effects on visual amenity.	The site is not located close to any settlements, however, two individual properties, Frostley Burn and Phaup Cottage are located to the west and east respectively. The proximity of these properties increases the potential for visual amenity impacts (as well as noise).	The site is not located close to any settlements. There is a cluster of buildings including residential property referred to as Linhope to the north of the site as well as a property, Braehead to the south. Existing woodland provides some screening, however, their proximity increases the potential for visual amenity impacts (as well as noise).	The site is not located close to any settlements, however, it is located in a relatively prominent position on the north-facing slope of Southdean Rig. It is likely that it will be partly visible from the A7 to the north, particularly for those travelling southbound. There is a cluster of properties to the west of the site as well as some to the north. While landform may help to screen some views, there is potential for some visual amenity impacts (as well as noise).	The site is not located close to any settlements. The valley in which the site is located is sparsely settled largely owing to the steep hillslopes to the north and south. There are some individual properties present where the landform widens and flattens including Carrett Rig to the west and Billhope to the east. While these are relatively distant to the site the rural nature of the valley means some visual amenity impacts are likely to occur (as well as noise).	The site is not located close to any settlements. There are some individual properties present along the B6399, however, these are usually well-screened from TEV-05 by a combination of distance, landform and/or commercial forestry. A result the potential for visual amenity related impacts (as well as noise) is considered to be lower relative to the other sites.	The site is located within a generally remote area and distant from settlement, however, some individual properties which could experience visual amenity impacts (s well as noise) are present including Penchrise Farm to the east of the site on the northeast of White Hill as well as properties on the local road to the west including Dodburn and Shankfoot.
Ecology and Biodiversity	• To develop route and site options which avoid sites designated for nature conservation or ecological interests as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features.	Frostley Burn lies to the west of the site and is part of the River Tweed SAC. While it is unlikely to be directly affected by the site, TEV-01 is directly adjacent to and would require a new access crossing of the Phaup Burn which drains into the Frostley Burn and River Tweed SAC. This increases the potential to impact on the River Tweed SAC.	The site is bounded to the west and east by watercourses (Combe Sike and Linhope Burn) which drain into Frostley Burn which is part of the River Tweed SAC. An unnamed watercourse drains the hill into Combe Sike and would require to be diverted or culverted in order to accommodate a substation on the site. As a result, TEV-02 has increased potential to	Northhouse Burn lies to the north/northeast of the site and is part of the River Tweed SAC. While sufficient separation can be provided between the site and watercourse there remains the potential to impact the River Tweed SAC.	The site is generally remote from ecological designations. The Langholm-Newcastle SPA and SSSI lies to the south, less than 1 km at its nearest point.	There are no ecological designations of the highest or high environmental value near to the site.	There are no ecological designations of the highest or high environmental value near to the site.

Appraisal Topic	Routeing and Siting Objectives	TEV-01 (located to the west of the sub-Study Area)	TEV-02 (located to the west of the sub-Study Area)	TEV-03 (located to the northwest of the sub-Study Area)	TEV-04 (located to the south of sub-Study Area)	TEV-05 (located to the east of the sub-Study Area)	TEV-06 (located to the north of the sub-Study Area)
			impact on the River Tweed SAC.				
Cultural Heritage and Archaeology	• To develop route and site options which avoid sites designated for archaeological or cultural heritage conservation purposes as much as possible in order to avoid or reduce potentially adverse effects on them including upon their setting.	There are no cultural heritage or archaeological sites of the highest of high environmental value close to the site.	There are no cultural heritage or archaeological sites of the highest of high environmental value close to the site.	There are four scheduled monuments lying in relative proximity to the north and west of the site. While there would be no direct physical impacts there is some potential to impact on the setting of the scheduled monuments. Setting impacts may be reduced due to landform and limits on intervisibility.	There are no cultural heritage or archaeological sites of the highest of high environmental value close to the site.	There are a small number of cultural heritage designations present including the Catrail, a linear earthwork broadly running eastwards through commercial forestry to the north of the site as well as some smaller sites to the north/northwest. The distribution of these designations as well as intervening commercial forestry and/or landform is such that setting impacts from a substation should be avoided.	There are a number of scheduled monuments present within the immediate vicinity of the site. These include hillforts and earthworks thought to date from the Iron Age as well as a number of sites related with Stobs camp which was used for military training before and during the First World War. The location and distribution of these sites means that some setting impacts would be unavoidable.
Forestry and Woodland	• To develop route and site options which avoid forestry and woodland as much as possible in order to prevent or reduce the loss of tree cover.	While there are no Ancient Woodland Inventory sites close to TEV-01, some wet woodland as identified by the NWSS is present along the Frostley Burn and could be impacted by works required to enable access to the site.	There are no Ancient Woodland Inventory sites or woodland identified by the NWSS. Some mature woodland is present within the site on the banks of the unnamed watercourse which drains the hill. This would require to be removed as part of the development of a substation on the site.	There are no Ancient Woodland Inventory sites or woodland identified by the NWSS.	There are no Ancient Woodland Inventory sites or woodland identified by the NWSS.	There are no Ancient Woodland Inventory sites or woodland identified by the NWSS, however, the site is located on the margins of commercial forestry. Subject to micro-siting some forestry removal would be required to establish access and/or the substation site itself.	There are no Ancient Woodland Inventory sites or woodland identified by the NWSS.
Water resources	• To develop route and site options which adhere to a minimum 50m separation zone from watercourses or bodies in order to prevent or	The site is bounded to the north by the Phaup Burn (which drains into Frostley Burn) and to the east by Beathill Sike	The site is located to the south of a confluence where the Linhope Burn and Combe Sike meet. These watercourses	Northhouse Burn and Cromrig Burn lie to the north and east of the site respectively with the latter draining into the	Carewoodrig Burn lies to the south of the site within the valley formed by the hills to the north and south. The	There are no watercourses within or immediately adjacent to the site. The Black Cleuch and Sundhope	There are no watercourses within or immediately adjacent to the site.

Appraisal Topic	Routeing and Siting Objectives	TEV-01 (located to the west of the sub-Study Area)	TEV-02 (located to the west of the sub-Study Area)	TEV-03 (located to the northwest of the sub-Study Area)	TEV-04 (located to the south of sub-Study Area)	TEV-05 (located to the east of the sub-Study Area)	TEV-06 (located to the north of the sub-Study Area)
	reduce adverse effects on water quality • To develop route or site options which avoid routeing or siting within flood zones or where they cannot be avoided by route options can be crossed at their narrowest point	(which drains into Phaup Burn). There is sufficient space to maintain appropriate separation distances and prevent or reduce impacts on water quality. The site is not in area identified as being at risk of river or surface water flooding based on SEPA Flood Maps, however, adjacent areas along the Phaup Burn which would require to be crossed to access the site are at risk of flooding.	bound the site to north/northeast and north/northwest. While these watercourses can be avoided and an appropriate separation maintained the unnamed watercourse which drains the hill would require to be diverted or culverted in order to accommodate a substation on the site. SEPA Flood Maps do not indicate that the site is at risk of river or surface water flooding, however, land adjacent to the site on the Linhope Burn is at risk of flooding.	former to the north of the site. There is sufficient space to maintain appropriate separation distances and prevent or reduce impacts on water quality. The site is not in area identified as being at risk of river or surface water flooding based on SEPA Flood Maps.	watercourse flows east to west eventually draining into the River Tweed SAC via a number of other watercourses. The site is not in area identified as being at risk of river or surface water flooding based on SEPA Flood Maps.	Burn both drain the hillslope in a generally southern direction. The site is not in area identified as being at risk of river or surface water flooding based on SEPA Flood Maps, however, land adjacent to watercourses downstream of the site are identified as being risk of surface water flooding.	The site is not in area identified as being at risk of river or surface water flooding based on SEPA Flood Maps, however, land adjacent to watercourses downstream of the site are identified as being risk of surface water flooding.
Ground Conditions	• To develop route and site options which avoid sites designated for geological conservation as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features. • To develop route and site options which avoid priority peatland and peatland habitats as much as possible in order to avoid or reduce the loss of peatland or other carbon-rich soils as much as possible.	There are no geological SSSIs or GCRSs present at or in the vicinity of the site. The Carbon and Peatland map does not show the site as being underlain by any peatland. Similarly, the British Geological Survey (BGS) Online viewer does not identify any peat within or immediately adjacent to the site.	There are no geological SSSIs or GCRSs present at or in the vicinity of the site. Neither the Carbon and Peatland map or the BGS Online Viewer show the site as being underlain by any peatland.	There are no geological SSSIs or GCRSs present at or in the vicinity of the site. Neither the Carbon and Peatland map or the BGS Online Viewer show the site as being underlain by any peatland.	There are no geological SSSIs or GCRSs present at or in the vicinity of the site. Neither the Carbon and Peatland map or the BGS Online Viewer show the site as being underlain by any peatland. The Carbon and Peatland map shows some peatland (classes 1, 4 and 5) lying to the south of the site.	There are no geological SSSIs or GCRSs present at or in the vicinity of the site. The Carbon and Peatland map indicates that the site is partly underlain by peatland (classes 1 and 5). While the amount of peatland affected could be reduced through micro-siting some permanent loss of peat is unavoidable.	There are no geological SSSIs or GCRSs present at or in the vicinity of the site. The Carbon and Peatland map indicates that the site is partly underlain by peatland (class 4). The BGS Online Viewer shows peat is present within the wider area on the lower slopes of the hill.
Tourism and Recreation	• To develop route and site options which avoid or reduce impacts on recreational routes and areas as well as other visitor	There are no tourism or recreational interests present within the immediate vicinity of the site.	There are no tourism or recreational interests present within the immediate vicinity of the site.	There are no tourism or recreational interests present within the immediate vicinity of the site.	There are no tourism or recreational interests present within the immediate vicinity of the site.	There are no tourism or recreational interests present within the immediate vicinity of the	There are no tourism or recreational interests present within the immediate vicinity of the site.

Appraisal Topic	Routeing and Siting Objectives	TEV-01 (located to the west of the sub-Study Area)	TEV-02 (located to the west of the sub-Study Area)	TEV-03 (located to the northwest of the sub-Study Area)	TEV-04 (located to the south of sub-Study Area)	TEV-05 (located to the east of the sub-Study Area)	TEV-06 (located to the north of the sub-Study Area)
	attractions as much as possible in order to prevent impacts on the amenity of users or visitors.					site. Hermitage Castle lies more than 4km away.	
Land Use	• To develop route and site options while having regard to existing land uses including the nature and extent of agricultural land or commercial forestry and seeking to reduce impacts on existing land use as much as possible.	The site has no discernible use, however, livestock grazing is apparent in the wider area. An existing track is routed through the site from Frostley Burn in the west to commercial forestry to the east of the site.	The site or parts of it appear to be used for grazing livestock.	The site or parts of it appear to be used for grazing livestock.	The site has no discernible use, however, livestock grazing is apparent in the wider area.	Commercial forestry is present within and to the north and northeast/east of the site. As noted above subject to micro-siting some forestry removal would be required to establish access and/or the substation site itself.	The site or parts of it appear to be used for grazing livestock.
Engineering Constraints	• To develop as short and direct a route as possible taking account of other routeing constraints and considerations. • To develop route and site options taking account of topography, altitude and side slopes which could affect constructability and/or operability. • To develop route and site options having regard to existing and proposed wind farms and the application of an appropriate separation distance.	The access to the valley is well established with a wide junction connecting to the A7. The access runs broadly west to east up the valley into the commercial forestry. Owing to topography the site is located on the southern side of the valley and would require a new crossing of the Phaup Burn to provide into TEV-01. The site is located the lower slopes of Meg's Hill. While the slope is more gentle to the north/north east of the site land rises up steeply to the south. Extensive earthworks would be required to establish a platform for the substation.	While the site is adjacent to the A7 it is constrained in terms of access. The existing access to the properties at Linhope is narrow and includes a bridge over the Frostley Burn. This would require significant upgrading in order to facilitate access. Alternatively, a new access could be established off of the A7 but would require a new crossing of the Combe Sike. TEV-02 is located on the north/northwest facing slope of Dod Hill. The slopes on this part of the hill are more gentle and should reduce the extent of earthworks required compared to other sites. In relation to the new OHL, the location of TEV-	Access to the site is via an established local road which is routed east/southeast following the landform. The majority of the road is single carriageway with passing places. An access track including a crossing of the Northhouse Burn could provide access into the site but would require upgrading. The site is located on a more gently sloping part of the site, however, land slopes down quite steeply to the north and east while rises up steeply to the south. Earthworks would be required to establish a platform for the substation.	Access to the site is via an existing local road which runs from west to east between Fiddleton and Hermitage. This is formed of a single track with passing places. Significant upgrades would be required to provide access to the site. While the valley has steeply sloping hills to the north and south, the site is located in area where slopes are more gentle in relative terms. Earthworks would be required to establish a platform for the substation. In relation to the new OHL, the location of TEV-04 is considered to be more constrained than other options. This is	Access to the site is via existing tracks within the commercial forestry which in turn are accessed from the B6399. A new access would be required to be constructed from the existing access tracks within the forestry. The site is located on more gently sloping land which forms a plateau before sloping away in a generally southern direction. The location of TEV-05 provides opportunities for the development of route options coming from the east of the Study Area only as well as from west of the Study Area and crossing over to the north of the proposed Teviot Wind	The site is considered to be significantly constrained in terms of access. An existing single carriageway track is routed southwards from the B6399 at Stobs to Penchrise Farm. This would require significant upgrading to enable access for construction of a substation. The site is located on the north facing slopes of White Hill. While slopes are more gentle within the site land on all other sides is more steeply sloping. Extensive earthworks would be required to establish a platform for the substation. In relation to the new OHL, the location of TEV-06 is considered to

Appraisal Topic	Routeing and Siting Objectives	TEV-01 (located to the west of the sub-Study Area)	TEV-02 (located to the west of the sub-Study Area)	TEV-03 (located to the northwest of the sub-Study Area)	TEV-04 (located to the south of sub-Study Area)	TEV-05 (located to the east of the sub-Study Area)	TEV-06 (located to the north of the sub-Study Area)
		In relation to the new OHL, the location of TEV-01 is considered to provide opportunities for the development of route options to the west of the Study Area. In relation to contracted customer connections TEV-01 lies to the west of the proposed Teviot and Liddesdale Wind Farms. While in closer proximity to the former, the latter is located further east.	02 is considered to provide opportunities for the development of route options to the west of the Study Area. In relation to contracted customer connections TEV-02 lies to the west of the proposed Teviot and Liddesdale Wind Farms. While in closer proximity to the former, the latter is located further east.	In relation to the new OHL, the location of TEV-03 is considered to provide opportunities for the development of route options to the west of the Study Area as well as those crossing over to the north of the proposed Teviot Wind Farm to the east of the Study Area. In relation to contracted customer connections TEV-03 lies to the west of the proposed Teviot and Liddesdale Wind Farms. While in closer proximity to the former, the latter is located further east.	because it is located to the south of the proposed Teviot Wind Farm within a valley formed by a series of hills to the north and south. The nature of the landform and topography constrains the development of OHL route options towards TEV-04 compared to other options on the western or eastern margins of the proposed wind farm. In relation to contracted customer connections TEV-04 lies to the south of the proposed Teviot and southwest of Liddesdale Wind Farms.	Farm to the east of the Study Area. In relation to contracted customer connections TEV-05 lies to the immediate east of the proposed Teviot Wind Farm and the west of the proposed Liddesdale Wind Farm.	provide opportunities for the development of route options coming from the west of the Study Area and crossing over to the north of the proposed Teviot Wind Farm to the east of the Study Area. In relation to contracted customer connections TEV-06 lies to the north of the proposed Teviot Wind Farm and the west of the proposed Liddesdale Wind Farm.

Appendix G Strategic Route Corridors Appraisal

Table G.1 Strategic Route Corridors – North of proposed Teviot Wind Farm

Strategic Routeing Consideration	Route Corridor A (NW Quadrant) Gala North to west of Teviot	Route Corridor B (NE Quadrant) Gala North to east of Teviot	Comparative Assessment
Areas of highest or high amenity value	While Route Corridor A has been developed to avoid larger sites of the highest or high environmental value as much as possible, some sites are unavoidable. These are typically smaller ecological and cultural heritage sites of highest or high environmental value including SSSIs and scheduled monuments. The River Tweed SAC and SSSI includes the River Tweed which flows broadly west to the east through the Corridor as it crosses the Tweed Valley as well as the tributaries which include a number of watercourses including the Yarrow Water and Ettrick Water draining the hillslopes within the Corridor in a northeastern direction. The River Tweed and its tributaries cannot be avoided as routes are required to cross them, however, potential impacts on it can be addressed through the identification of more detailed route alignments and consideration of tower positions and appropriate standoff distances to the designated watercourses. Additional sites within Route Corridor include Bowland Garden and Designed Landscape, Wiliamshope, Glenkinnon Burn, Kirkhope Linns, Kingside Loch and Alemoor West Loch and Meadow SSSIs as well as a number of scheduled monuments. The Corridor is generally wide enough that it provides opportunities to develop route options which avoid smaller sites of highest or high environmental value within it subject to other routeing considerations.	Route Corridor B has been developed to avoid larger sites of the highest or high environmental value as much as possible, however, there is a small number of ecological and cultural heritage sites of highest or high environmental value including SSSIs and scheduled monuments. The River Tweed SAC and SSSI flows through the Corridor west to east. The designation also includes a number of tributaries which are within the Corridor including the River Teviot and Jed Water. Subject to the identification not all of these tributaries would necessarily require to be crossed by a route option. As with Route Corridor A, potential impacts on the River Tweed and its tributaries can be addressed through the identification of more detailed route alignments and consideration of tower positions and appropriate standoff distances to the designated watercourses. Additional sites of highest or high environmental value within Route Corridor B include the Borders Woods SAC (which coincides with the Cragbank and Wolfehopelee SSSI), the Jed Water Woodland SSSI as well as a number of scheduled monuments. The Corridor is generally wide enough that it provides opportunities to develop route options which avoid smaller sites of highest or high environmental value within it, however, there are localised pinch points which increase the potential for adverse effects.	With the exception of the River Tweed SAC and SSSI, Route Corridors A and B both largely avoid sites of the highest or high environmental value. Where sites are located within the corridors there is scope to avoid these through the identification of route options. The distribution of high value constraints to the east of the Study Area, in particular a number of Gardens and Designed Landscapes to the east of the River Tweed Valley means that Route Corridor B is generally narrower than Route Corridor A. The number of potential crossings of the River Tweed SAC and SSSI is lower in Route Corridor B compared to Route Corridor A, however, as noted in the appraisal potential effects on the designated watercourses can be mitigated through the detailed route alignment. There is generally more scope to develop route options within Route Corridor A with greater potential to avoid or increase separation distances from sites of high environmental value compared to Route Corridor B. There are some localised narrow areas within Route Corridor B that increase the potential for pinch points and for adverse effects on areas of highest or high environmental value.
Settlement	Settlement pattern is varied within and immediately adjacent to Route Corridor A. A large part of the corridor, coinciding with upland moorland or forestry is sparsely settled. Smaller settlements or individual/clusters of residential properties are present, however, these are typically confined to lower lying valleys which run across the corridor, for example Clovenfords to the north of the River Tweed, Yarrow which comprises properties coalescing along the A6088 and the Yarrow Water or Teviothead long the A7 and the confluence of the Teviot Water and Frostley Burn.	Route Corridor B has been developed to avoid larger settlements as much as possible. Much of the Corridor comprises low-lying river valley which includes scattered individual/clusters of residential properties. The Corridor provides scope to avoid smaller settlements as well as scattered residential properties, however, the distribution of the latter may result in some properties being within or in closer proximity to route options and require further consideration in the development of a detailed route alignment.	Both Corridors avoid larger settlements and traverse land which is generally sparsely settled. There are some slightly larger villages within Route Corridor A typically present on the A and B roads which cut across the Corridor, however, there is scope to avoid these in the identification of Route Options. A key constraint in both corridors is the distribution of individual or small clusters of residential properties within the open countryside. While many of these will be avoidable, they may be in closer proximity to or within potential route options and

Strategic Routeing Consideration	Route Corridor A (NW Quadrant) Gala North to west of Teviot	Route Corridor B (NE Quadrant) Gala North to east of Teviot	Comparative Assessment
	The Corridor provides scope to avoid smaller settlements as well as scattered residential properties, however, the distribution of the latter may result in some properties being within or in closer proximity to route options and require further consideration in the development of a detailed route alignment.		require further consideration in the development of a detailed route alignment.
Landscape character and sensitivity	Approximately equidistant to the Upper Tweedale NSA to the west (outside of the Study Area) and the Eildon and Leaderfoot NSA to the east (inside of the Study Area). Route Corridor crosses three SLAs that extend along the River Tweed Valley between the two NSAs: Tweedsmuir Uplands SLA1, Tweed Valley SLA 2 and Tweed, Ettrick and Yarrow Confluences SLA 3. To the north of the River Tweed, the landscape is undulating relatively open upland with forestry/woodland typically more prevalent on the steeper slopes of valley sides, such as along Gala Water and the River Tweed. Existing influence of OHLs lines is limited to the far northern section of the corridor to the east of Allanshaws and to the west of the A7 in the southern corridor extents. The northern section of the corridor encompasses LCT 103 Upland Fringe, LCT 91 Plateau Grassland and LCT 114 Pastoral Upland Valley. The enclosed and populated nature of the valleys increases sensitivity and where accommodating settlement, such as at Stow, sensitivity is further increased. This applies both to Gala Water and the River Tweed, the latter being in the SLA. South of the River Tweed, Corridor A remains in SLA designated landscapes to Yarrow Water. Within the SLA the route crosses the Southern Upland Way, impacting an inherently sensitive long-distance route. Once beyond the SLA, the corridor enters an open and elevated upland landscape and then the highly forested Craik Forest in the west and land west of Hawick comprising rolling moorland and upland fringe in the east of the Corridor. In the west, the corridor encompasses large scale and expansive landscapes which are sparsely populated. In the east there is increased proximity to settled, partially enclosed farmland west of Hawick in which the Borders Abbeys Way is located, with greater settlement, recreational use and increased sensitivity.	Directly to the east of Eildon and Leaderfoot NSA and would cross SLA 4 Tweed Lowlands. The Eildon and Leaderfoot NSA forms a prominent landmark and triad of landforms and there is a high degree of inter-visibility towards it from SLA 4 and the rolling farmland outside of it. To the south, the Corridor would cross SLA 5 Teviot Valleys. The corridor encompasses LCT 103 Upland Fringe, LCT 117 Pastoral Upland Fringe Valley, a small section of LCT 99 Rolling Farmland, LCT 109 Lowland Margin with Hills and LCT 120 Lowland Valley with Farmland. The lowland farmland has a strong intact field pattern, with woodland and landform forming an attractive combination, reflected in the SLA designation but also in the wider landscape, increasing sensitivity. Much of this area of rolling mixed farmland forms the foreground to views of the Eildon Hills and is an important aspect of the setting of the NSA. Where present, existing OHLs and towers are widely visible and a prominent element, for example to the north and east of Earlston. South of SLA 4 Corridor B continues through LCT 120 Lowland Valley with Farmland and LCT 99 Rolling Farmland before entering SLA 5 and then LCT 96 Southern Uplands with Forest. The landscape remains broadly similar to the lowland farmland north of SLA 4 in that it has a strong intact field pattern of enclosed arable and pasture, with woodland and landform forming an attractive combination, increasing sensitivity. The A68 is a notable tourist route of scenic value and recreational access is high, as indicated by both the Borders Abbeys Way and St Cuthbert's Way, as well as scenic destinations such as Jedburgh. The proximity to Jedburgh is notable, albeit actual visibility is potentially limited by landform. The smaller scale of landscape elements and the more highly populated context increases sensitivity to OHLs.	Route Corridor A largely lies outside of designated landscapes, entering them in the steep sided valley of the River Tweed in the central part of the corridor. Route Corridor B passes through a more extensive area of SLA 4 Tweed Lowlands and in relative proximity to the east of Eildon and Leaderfoot NSA. There is therefore greater potential for impacts on the designated landscapes from Corridor B including the setting of the NSA. As a result of the striking landforms, views towards the NSA are important and perhaps more so than views outwards from the NSA, with the exception of the views from the Eildon hill summits. Corridor B would impact these views, whereas effects and inter-visibility from Corridor A is less likely. In addition, the settled and enclosed farmland to the north of SLA 4 is itself inherently more sensitive, populated and accessible than the open plateau upland associated with Corridor A. South of SLA 4 the landscape of Corridor B is inherently more sensitive to OHLs than the southern sections of Corridor A, due to scale, enclosure, recreational access and population potentially impacted, including visitors. On entering LCT 96 Southern Uplands with Forest the scale of the landscape, simplicity of landform and forested land use reduces sensitivity. There is generally more scope to develop route options within Route Corridor A with greater potential to avoid landscape and visual effects compared to Route Corridor B.

Strategic Routeing Consideration	Route Corridor A (NW Quadrant) Gala North to west of Teviot	Route Corridor B (NE Quadrant) Gala North to east of Teviot	Comparative Assessment
	The southern section of the corridor, south of Yarrow Water and terminating at the A7, encompasses LCT 93 Southern Uplands with Scattered Forest and the similar LCT 96 Southern Uplands with Forest, both expansive landscapes with large scale elements of landform and land use with a decreased sensitivity to OHLs.		
Substation siting considerations	Route Corridor A finishes to the west of the proposed Teviot Wind Farm adjacent to the A7. The Corridor enables the development of direct route options to TEV-01, TEV-02 and TEV-03. Connections to TEV-05 and TEV-06 would require route options extending across the north of the proposed Teviot Wind Farm using Corridor Link A-B.1 or A-B.2.	Route Corridor A finishes to the east of the proposed Teviot Wind Farm in commercial forestry adjacent to the B6399. The Corridor enables the development of direct route options to TEV-05 only. Connections to TEV-01, TEV-02 and TEV-03 and TEV-06 extending across the north of the proposed Teviot Wind Farm using Corridor Links A-B.2 or Corridor Link B-A.1.	With the exception of TEV-04, both corridors provide scope to connect to the substations under consideration but may result in increases in the length of route options when crossing the Study Area, for example crossing from west to east to connect to TEV-05 or TEV-06 compared to TEV-01, TEV-02 or TEV-03 (or vice versa).

Table G.2 Strategic Route Corridors – South of proposed Teviot Wind Farm

Strategic Routeing Consideration	Route Corridor C (SW Quadrant) west of Teviot to the Border	Route Corridor D (SE Quadrant) east of Teviot to the Border	Comparative Assessment
Areas of highest or high amenity value	Route Corridor C avoids larger sites of the highest or high environmental value with the exception of a small number of watercourses which are part of the River Tweed SAC and SSSI. These tributaries cannot be avoided as routes are required to cross them, however, potential impacts on it can be addressed through the identification of more detailed route alignments and consideration of tower positions and appropriate standoff distances to the designated watercourses. Additional sites of the highest or high environmental value are present within Corridor C. These are predominantly scheduled monuments which are present throughout the Corridor as well as two smaller scale SSSIs; Bigholms Burn and Bells Flow towards the southeast of the Corridor. Much of Route Corridor C is generally wide enough that it provides opportunities to develop route options which avoid smaller sites of highest or high environmental value within it, however, there are localised pinch points which increase the potential for adverse effects. These are particularly pronounced in areas where scheduled monuments are more closely located together increasing the requirement for route options to be in closer proximity to them increasing the potential for setting effects. The River Esk valley is a notable constrained area where scheduled monuments are present along the valley with high potential for setting effects.	Route Corridor D avoids larger sites of the highest or high environmental value. The Langholm-Newcastleton SPA and SSSI lies to the west of the corridor and impacts should be avoided. The qualifying features of the SPA (hen harrier) are understood to be largely concentrated to the west of the designated site along the Tarras Water valley. Smaller sites of highest or high environmental value within Route Corridor D comprise three discrete geological SSSIs as well as a small number of scheduled monuments. The distribution of constraints within as well as the width of the Corridor is such that it provides opportunities to develop route options which avoid smaller sites of highest or high environmental value within it subject to other routeing considerations.	Route Corridor C requires crossings of the River Tweed SAC and SSSI which are avoided by Route Corridor D, however, as noted in the appraisal potential effects on the designated watercourses can be mitigated through the detailed route alignment. Both corridors contain smaller sites of highest or high environmental within them, however, there are slightly fewer in Corridor D compared to Corridor C. There is generally scope to develop route options within Route Corridor C and D which avoid small areas of highest or high environmental value, however, the distribution of scheduled monuments within Corridor C (particularly along the River Esk) increases the potential for setting effects compared to Corridor D.
Settlement	A large part of Route Corridor C encompasses upland moorland and commercial forestry and therefore provides opportunities to develop route options which avoid larger settlements. There are some exceptions within this area in particular along the River Esk valley where settlement coalesces along the B709. Moving southwards through the Corridor towards the Scotland-England border the elevation begins to fall (broadly from the B7078 to the border). Within this area there are a greater number of residential properties present throughout. While these are generally avoidable, their distribution means that route options may be in closer proximity to them.	Route Corridor D follows the Liddel Valley in a north to south direction from Route Corridor C to the Scotland-England border. Settlement is generally concentrated along the valley floor following the B6357 or B6399. Newcastleton is the largest settlement within the Corridor extending along the B6357, however, to the north and south of this there are scatted individual residential properties as well as small clusters of properties present. The Corridor provides opportunities to develop route options avoiding more densely settled areas by routeing to the west or east of the Liddel Water Valley.	Both Corridors avoid larger settlements and traverse land which is generally sparsely settled. Settlement within each corridor tends to follow landform meaning in Route Corridor C settlement is more localised extending west to east along the River Esk Valley before elevations reduce and individual properties are scattered through lower lying farmland approaching the border. Whereas Route Corridor D follows the Liddel Valley north to south with settlement including individual and small clusters of properties extending along the valley. Overall, both corridors provide opportunities to develop route options which avoid settlement, however, there is the potential to develop routes in close proximity to individual properties due to their more dispersed nature.

Strategic Routeing Consideration	Route Corridor C (SW Quadrant) west of Teviot to the Border	Route Corridor D (SE Quadrant) east of Teviot to the Border	Comparative Assessment
Landscape character and sensitivity	Langholm Hills RSA extends towards the eastern margins of the Corridor but given the forested nature of the landscape and landform variation there is likely to be limited inter-visibility between the two. The north of this corridor is highly forested, firstly in Craik Forest and then merging into Eskdalemuir Forest, covering a very large expanse of upland with reduced sensitivity to OHL. South of a line between Lockerbie and Langholm the landscape becomes more open and accessible as it enters LCT 75 Foothills, the lower lying areas of moorland and upland pasture. However, this remains a large-scale landscape, somewhat isolated between the A74(M) corridor and the A7. Lines of 33kV corridors cross the corridor in a NE/SW alignment along local B roads but exerting an influence on landscape character. As it turns east towards Langholm the corridor increases in proximity to the Langholm Hills RSA and there is increased highway and other infrastructure, along with a more populated context and greater sensitivity to OHLs.	No landscape designations lie within the Corridor, which in its eastern section is predominantly within the extensive Newcastleton and Kershope Forest areas, a simple landscape of large-scale landform and land uses. This is LCT 96 Southern Uplands with Forest and is of reduced sensitivity to OHLs due to scale and potential to accommodate them within a strongly defined landscape context. The section of the corridor to the west of the B6357 is more open and includes the western slopes of Liddesdale, albeit potentially on the western side of the ridgeline which defines the valley. LCT 160 Narrow Wooded River Valley is of higher sensitivity and likely increased impacts due to the presence of roads along the dale, the more intimate character of the landscape of narrow incised valleys, wooded slopes and enclosed pasture floors.	These two corridor options share similar broad characteristics for much of their extent, the differentiating aspects being the character of the foothills and landscape west of Langholm and in Corridor C and Liddesdale in Corridor D. On balance, the greater forested extent of the eastern section of Corridor D offers the greater opportunity to successfully accommodate the OHLs without undue landscape or visual effects. In addition, fewer visual receptors are likely given the nature of the forested upland throughout that section of the corridor compared to Corridor C and the proximity to highways and Langholm and associated smaller settlements.
Substation siting considerations	Route Corridor C begins to the west of the proposed Teviot Wind Farm adjacent to the A7. It enables more direct route options from TEV-01, TEV-02 or TEV-03. While route corridor links would provide scope to develop route options from TEV-05 or TEV-06 the overall directness of route options would depend on the Route Corridor used to the north. • A combination of Route Corridor A and Route Corridor C using TEV-01, TEV-02 or TEV-03 would enable relatively direct route options on the west of the corridor. • A combination of Route Corridor A and Route Corridor C (and corridor links) using TEV-05 or TEV-06 would be less direct overall. It would require the use of corridor links for route options to cross to the north of proposed Teviot Wind Farm but these would need to ‘doubleback’ to Route Corridor C.	Route Corridor D begins to the east of the proposed Teviot Wind Farm. It enables more direct route options from TEV-05 or TEV-06. While route corridor links would provide scope to develop route options from TEV-01, TEV-02 or TEV-03 the overall directness of route options would depend on the Route Corridor used to the north. • A combination of Route Corridor B and Route Corridor D using TEV-05 or TEV-06 would enable relatively direct route options on the east of the corridor. • A combination of Route Corridor B and Route Corridor D (and corridor links) using TEV-01, TEV-02 or TEV-03 would be less direct overall. It would require the use of corridor links for route options to cross to the north of proposed Teviot Wind Farm but these would need to ‘doubleback’ to Route Corridor C.	With the exception of TEV-04, both corridors provide scope to develop onwards route options from the substations to the Scotland-England border. Subject to the combination of route corridors utilised (north and south of the proposed Teviot Wind Farm) this may result in increases in the length of route options when crossing the Study Area, for example crossing from west to east to connect to TEV-05 or TEV-06 compared to TEV-01, TEV-02 or TEV-03 (or vice versa).

Table G.3 Strategic Route Corridors Links

Strategic Routeing Consideration	Corridor Link A-B.1 (NW to NE Quadrant)	Corridor Link A-B.2 (NW to NE Quadrant)	Corridor Link B-A.1 (NE to NW Quadrant)
Areas of highest or high amenity value	The route corridor link requires at least two crossings of the River Tweed SAC and SSSI due to tributaries flowing through the corridor, however, potential impacts on it can be addressed through the identification of more detailed route alignments and consideration of tower positions and appropriate standoff distances to the designated watercourses. There are a small number of other areas of highest or high amenity value including number of SSSIs as well as scheduled monuments. These are largely avoidable but the corridor link is relatively narrow which provides less scope for the development of route options within it and increases the potential for effects due to increased proximity.	The route corridor link requires at least four crossings of the River Tweed SAC and SSSI due to tributaries flowing through the corridor, however, potential impacts on it can be addressed through the identification of more detailed route alignments and consideration of tower positions and appropriate standoff distances to the designated watercourses. There are a small number of other areas of highest or high amenity value including number of SSSIs as well as scheduled monuments. These are largely avoidable particularly where the corridor is wider to the west, however, as it narrows to the east it provides less scope for the development of route options and the number and distribution of scheduled monuments increases. This increases the potential for setting effects to occur to the east of the corridor as it approaches TEV-05 or TEV-06.	The route corridor link requires at least three crossings of the River Tweed SAC and SSSI due to tributaries flowing through the corridor, however, potential impacts on it can be addressed through the identification of more detailed route alignments and consideration of tower positions and appropriate standoff distances to the designated watercourses. There are a small number of other areas of highest or high amenity value including number of SSSIs as well as scheduled monuments. These are largely avoidable but the corridor link is relatively narrow which provides less scope for the development of route options within it and increases the potential for effects due to increased proximity.
Settlement	The route corridor link is routed to the north of Hawick avoiding larger settlement but some smaller settlements and individual properties are present in particular to the east and south of Hawick.	There are a number of smaller settlements present including Ettrickbridge, Roberton, Branxholme and Newmill but the corridor link provides scope to develop route options which avoid them. Some scattered individual properties are present throughout which could be affected by the proximity of route options and/or affect the directness of route options.	The route corridor link avoids larger settlements, however, the corridor link extends in a southwestern direction which is contrary to settlement patterns. Smaller settlements and individual properties are typically present within valleys which require to be crossed by the corridor link. There is some scope to develop route options avoiding settlement but the potential for increased proximity and potential impacts to occur due to the pattern of settlement is more likely.
Landscape character and sensitivity	The route corridor link clips / is adjacent to the bottom end of SLA 3 Tweed, Ettrick and Yarrow Confluences and passes through the edge of SLA 5 Teviot Valleys to the north of Hawick. It runs broadly parallel or along the route of the Borders Abbeys Way north-west of Hawick. It crosses the 132kV line at Drinkstone Hill near the A7. Most of the corridor north of Hawick lies within the unenclosed but partially forested landscape of LCT 94 Rolling Moorland. LCT 94 is a sparsely settled landscape of large-scale rolling landform which is relatively open and, in this corridor, is close to the A7. Close to Hawick the landscape changes to a more enclosed field pattern of managed grassland within LCT 99 Rolling Farmland. The open nature and expansive views increase sensitivity in the section north of Hawick and through SLA Teviot Valleys. The route	The route corridor link broadly passes through the same landscapes as corridor link A-B.1 but includes an area of LCT 117 Pastoral Upland Fringe Valley encompassing the valleys of Ale Water and Borthwick in its central section. Sensitivity is largely as described for corridor link A-B.1 with added sensitivity derived from the valleys in LCT 117 counterbalanced by the relatively sparse population and the absence of designated landscapes. In the south the corridor is crossed by the A7 at a point which includes a 132kV line running parallel to the A7 valley and prominent from within it. South of the A7 the landscape is more forested and the scale of the forestry and potential to screen OHLs within it reduces sensitivity.	The majority of this corridor link falls within SLA 5 Teviot Valleys which increases sensitivity substantially compared with the other two route corridor links. Outside of the SLA the corridor link lies within LCT 101 Rocky Upland Fringe which is open and exposed in character on higher ground, with distant and panoramic views prevalent, resulting in increased sensitivity to OHLs. Overall, there is limited scope to avoid significant landscape and visual effects in this link corridor.

Strategic Routeing Consideration	Corridor Link A-B.1 (NW to NE Quadrant)	Corridor Link A-B.2 (NW to NE Quadrant)	Corridor Link B-A.1 (NE to NW Quadrant)
	corridor link passes close to Hawick, further increasing sensitivity and numbers of potential viewers. South of Hawick the route occupies LCT 101 Rocky Upland Fringe before terminating in LCT 93 Southern Uplands with Scattered Forest. LCT 101 Rocky Upland is open and exposed in character on higher ground, with distant and panoramic views prevalent, resulting in increased sensitivity to OHLs. LCT 93 is a large-scale landscape, open and exposed with a sense of remoteness and wildness which increases value and sensitivity. Overall, there is limited scope to avoid significant landscape and visual effects in this link corridor.	Overall, there is some scope to limit significant landscape and visual effects in the western and southern sections of this link corridor.	
Substation siting considerations	Enables an alternative and more direct route from the west of the Study Area towards TEV-05 and TEV-06.	Enables an alternative and more direct route from the west of the Study Area towards TEV-05 and TEV-06.	Enables an alternative and more direct route from the east of the Study Area towards TEV-01, TEV-02 and TEV-03.

Appendix H Route Options Appraisal

Table H.1 Section A Proposed Gala North Substation to the River Tweed Route Options Appraisal (Route Options 1 and 2)

Appraisal Topic	Routeing and Siting Objectives	Section A Route Option 1	Section A Route Option 2a	Section A Route Option 2b	Section A Route Link 2b to 2a
Landscape	• To develop route and site options which avoid nationally and locally designated landscapes as far as possible while accounting for other routeing considerations. • To develop route and site options which take account of landscape character and sensitivities and utilise landform and vegetation and integrate within the landscape as much as possible to reduce potentially adverse landscape effects.	Option 1 is outside of designated landscapes and in proximity to the Long Park windfarm. It lies within LCT 103 Undulating Upland Fringe and LCT 91 Plateau Grassland. It is an undulating upland and plateau landscape with an open and simple character which can accommodate large scale infrastructure.	Route 2a lies within LCT 91 Plateau Grassland, LCT 114 Pastoral Upland Valley, LCT 103 Undulating Upland Fringe and LCT 116 Upland Valley with Woodland. For much of its length Option 2a occupies high ground defined by a series of local hills, including William Law and Mains Hill at over 350mAOD. It traverses the Gala Water valley from these high points such that there is likely to be a widespread and complex interaction with the host landscapes. This would include a locally sensitive area of rural valley farmland and river landforms in the vicinity of Craigneuk, as well as a complex crossing of the A7. Whilst this option does not directly impact on Bowland GARDEN AND DESIGNED LANDSCAPE it has the potential to effect views from the GARDEN AND DESIGNED LANDSCAPE across the parkland which extend to the south and south-east of the house towards this route option. The southern section of this route option lies within the Tweed, Ettrick and Yarrow Confluences SLA 3 where it crosses the Rover Tweed which contains mature woodland vegetation and steep topography along the northern edge of the valley resulting in greater landscape effects.	Route 2b lies within the same LCTs as Route 2a. The upland and open large-scale landscapes of this route option are broadly more remote and less accessible with fewer landscape elements of value. The landscape of Gala Water valley east of Stow is of particular sensitivity but contains landform which would reduce the geographical effects on character and forestry which would assist in screening, backclothing and integration of OHLs. This route option is not likely to affect the setting of Bowland GARDEN AND DESIGNED LANDSCAPE as substantial woodland surrounds the northern and western extents of the GARDEN AND DESIGNED LANDSCAPE and the parkland and views are orientated away from this route option. Within SLA 2 Tweed Valley, the location close to the edge of the large-scale forestry of Elibank and Traquair Forest and the associated woodland of Thornylee Crags north of the Tweed, coupled with the opportunity for a perpendicular crossing of the valley at a narrowing point, suggests mitigation of landscape effects is possible.	This link lies within LCT 103 Undulating Upland Fringe and would cut across the landform and involve multiple crossings of a local road to the west of Clovenfords before entering SLA 3 Tweed, Ettrick and Yarrow Confluences at an angle which would emphasise effects on the edge of the SLA. The character of the open, western route into Clovenfords would be impacted by the scale and alignment of the OHLs in this link corridor.
Visual Amenity	• To develop route and site options which avoid settlements as far as possible in order to reduce potentially	Views from Stow, largely within the valley of the Gala Water, are unlikely due to distance and intervening landform. There are several isolated properties within the route corridor but also blocks of woodland and	Although the northern section of the route is sparsely populated it contains a core path adjacent to the B710, increasing likely visibility within a locally enclosed context of the undulating landform. Thereafter the route passes	Views from Stow and the A7 which follows the Gala Water at that point, are a constraint which would require an alignment back from the valley ridgeline and behind intervening forestry where practicable to avoid impacting on	The link option runs broadly parallel to a core path within an enclosed valley side context and crosses the local road out of Clovenfords twice, resulting in an alignment with a likely high degree of

Appraisal Topic	Routeing and Siting Objectives	Section A Route Option 1	Section A Route Option 2a	Section A Route Option 2b	Section A Route Link 2b to 2a
	adverse effects on visual amenity. • To develop route and site options which avoid rural residential properties as much as possible in order to reduce potentially adverse effects on visual amenity.	topographical variation which would allow some mitigation, depending on sensitive micro-siting of the OHL and positioning of towers.	close to Clovenfords in a landform pinch point which would emphasize the scale of the towers in proximity to the village, with no likely mitigation and relatively large numbers of viewers. South of Clovenfords within SLA3 Tweed, Ettrick and Yarrow Confluences, visual amenity would be locally significantly impacted within the open valley side of the SLA as it crosses the River Tweed, reducing somewhat on the more wooded south side of the valley.	settlement views. The wind farm at Longpark is not visible from Stow, suggesting that towers and OHLs could be similarly accommodated, even within land to the west of the wind farm. The visual effects of the crossing of the Gala Water valley would be unavoidable, potentially resulting in a pinch point between Bow Farm and the monument of Bow Castle but away from the main settlement of Stow, screened by intervening landform. In the southern section numbers of properties and potential viewers diminish and an appropriate alignment between landforms would assist in limiting visual impact. In SLA 2 an alignment between the localised high point of Cauld Face and the edge of the large-scale forestry of Elibank and Traquair Forest and Thornylee Crags represents an opportunity to minimise effects on recreational users of the Tweed Valley SLA 2 and given distance, on residents of Clovenfords.	visual impact with little mitigation possible.
Ecology and Biodiversity	• To develop route and site options which avoid sites designated for nature conservation or ecological interests as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features.	Route Option 1 avoids sites designated for nature conservation or ecological interests. The nearest site of highest or high environment value is Threepwood Moss SAC and SSSI which is located to the south of the proposed Gala North Substation and south/southeast of Route Option 1. Given the intervening distance (c.800m) it is unlikely that Route Option 1 would impact Threepwood Moss. There are no ecological sites of moderate or low environmental value within Route Option 1. The Lauder Burn Heriot Side to Threepwood Bridge LBS is located adjacent to the Route Option where it extends west from the proposed substation. The potential to	Route Option 2a is required to cross the Gala Water which is part of the River Tweed SAC south of Whitelee Farm as well as cross the River Tweed SAC and SSSI at the western/southern-most extent of the route option. Crossings of the designated site are unavoidable, however, it can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects. There are no other ecological designations of the highest or high environmental value within the vicinity of Route Option 2a. Route Option 2a would be required to cross The Nest/Laidlawstiel Wood LBS, an area moderate or low environmental value where it crosses the River Tweed.	Route Option 2b is required to cross the Gala Water which is part of the River Tweed SAC southwest of Torsonce Hill. It is also required to cross the River Tweed SAC and SSSI at Thornielee. Crossings of the designated site are unavoidable, however, it can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects. There are no other ecological designations of the highest or high environmental value within Route Option 2b, however, the Moorfoot Hills SAC and SSSI is located to the north of it. Impacts on the Moorfoot Hills should be avoided as Route Option 2b does not directly cross	The route link requires two crossings of the Caddon Water where it is part of the River Tweed SAC. There are no other ecological designations within or close to the link. The watercourse can be spanned with OHL towers carefully located to avoid/reduce the potential for adverse effects.

Appraisal Topic	Routeing and Siting Objectives	Section A Route Option 1	Section A Route Option 2a	Section A Route Option 2b	Section A Route Link 2b to 2a
		impact the LBS is low and can be addressed through detailed design.	Some loss of woodland within the site is likely to occur.	the site and blanket bog or heathland for which it is designated. There are no ecological sites of moderate or low environmental value within Route Option 2b.	
Cultural Heritage and Archaeology	• To develop route and site options which avoid sites designated for archaeological or cultural heritage conservation purposes as much as possible in order to avoid or reduce potentially adverse effects on them including upon their setting.	There are no cultural heritage or archaeology sites of the highest or high environmental value within or close to Route Option 1. There are two listed buildings located to the south approximately 600m from the route option at their nearest point. Impacts on cultural heritage or archaeological designations including on their setting are considered unlikely.	There is one listed building within Route Option 2a which could experience setting effects subject to the proximity of an OHL route. While Route Option 2a is routed to south of and avoids Bowland Garden and Designed Landscape it is directly within views from it. The Garden and Designed Landscape is orientated to have views south along the Gala Water within which Route Option 2a would be prominent. There are some scheduled monuments within the vicinity of Route Option 2a but impacts on these including their setting should be limited.	There are no cultural heritage or archaeology sites of the highest or high environmental value within Route Option 2b. There are two scheduled monuments, Bow Castle broch on Bow Hill and cultivation terraces on Cauld Face which lie to the south of the Route Option. Subject to the identification of a detailed alignment, potential setting effects may be avoided through use of landform to reduce intervisibility.	There are no cultural heritage or archaeology sites of the highest or high environmental value within or close to the route link.
Forestry and Woodland	• To develop route and site options which avoid forestry and woodland as much as possible in order to prevent or reduce the loss of tree cover.	There are small woodland shelterbelts present throughout Route Option 1 largely forming field boundaries. None of these woodlands are Ancient Woodland Inventory sites nor are they identified by the Native Woodland Survey of Scotland.	There are small woodlands present throughout including one Ancient Woodland Inventory site which slightly extends into the option where it crosses the River Tweed. Some woodland is identified in the Native Woodland Survey of Scotland including wet woodland on the Halk Burn, upland mixed ashwood on the Gala Water as well as small areas of lowland mixed deciduous woodland. The distribution of woodland within Route Option 2a means some tree removal will be unavoidable.	There is one Ancient Woodland Inventory site present, Steelburn Wood at the southern extent of Route Option 2b where is crosses the River Tweed. Other woodland is present throughout the Route Option including some areas identified in the Native Woodland Survey of Scotland The distribution of woodland within Route Option 2b means some tree removal will be unavoidable. This could include parts of Steelburn Wood which extends across the route option and would require to be crossed.	There are two small areas of woodland on the margins of the route link.
Water resources	• To develop route and site options which adhere to a minimum 50m separation zone from watercourses or bodies	There are a small number of unnamed watercourses within Route Option 1 draining in a southern or southeastern direction towards the Allan Water. An	There are a number of watercourses which require to be crossed by Route Option 2a. These range from small unnamed watercourses to larger	There are a number of watercourses which require to be crossed by Route Option 2b. These range from small unnamed watercourses to larger	As noted above the route link requires to cross the Caddon Water twice. The watercourse could be spanned with OHL towers carefully located to

Appraisal Topic	Routeing and Siting Objectives	Section A Route Option 1	Section A Route Option 2a	Section A Route Option 2b	Section A Route Link 2b to 2a
	in order to prevent or reduce adverse effects on water quality • To develop route or site options which avoid routeing or siting within flood zones or where they cannot be avoided by route options can be crossed at their narrowest point	OHL route would be required to cross the watercourses, however, impacts on them could be mitigated through design and construction.	watercourses including the Gala Water and the River Tweed. An OHL route would be required to cross multiple watercourses within Route Option 2a, however, impacts on them could be mitigated through design and construction.	watercourses including the Gala Water and the River Tweed. An OHL route would be required to cross multiple watercourses within Route Option 2b, however, impacts on them could be mitigated through design and construction.	avoid/reduce the potential for adverse effects.
Ground Conditions	• To develop route and site options which avoid sites designated for geological conservation as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features. • To develop route and site options which avoid priority peatland and peatland habitats as much as possible in order to avoid or reduce the loss of peatland or other carbon-rich soils as much as possible.	There are no sites designated for geological reasons within or in close proximity to Route Option 1. The Carbon-rich Soils and Peatland Map does not identify any peatland or other carbon rich soils within Route Option 1.	There are no sites designated for geological reasons within or in close proximity to Route Option 2a. The Carbon-rich Soils and Peatland Map does not identify any peatland or other carbon rich soils within Route Option 2a.	There are no sites designated for geological reasons within or in close proximity to Route Option 2b. A small area of Class 3 and Class 4 peat is present to the east of Route Option 2b north of the existing Long Park Wind Farm. This could be avoided in developing a detailed route alignment so adverse effects should be prevented.	There are no sites designated for geological reasons within or in close proximity to the route link. The Carbon-rich Soils and Peatland Map does not identify any peatland or other carbon rich soils within the route link.
Tourism and Recreation	• To develop route and site options which avoid or reduce impacts on recreational routes and areas as well as other visitor attractions as much as possible in order to prevent impacts on the amenity of users or visitors.	There are no major visitor attractions or recreational routes within Route Option 1.	There are no major visitor attractions or recreational routes within Route Option 2a with the exception of a section of Core Path which follows the B710.	There are no major visitor attractions or recreational routes within Route Option 2b with the exception of a section of Core Path which between Blackhaugh and Stow which would require to be crossed.	There are no major visitor attractions or recreational routes within the route link.
Land Use	• To develop route and site options while having regard to existing land	Land use within Route Option 1 is largely agricultural. The national scale land capability for agriculture map	Land use within Route Option 2b is largely agricultural. The national scale land capability for agriculture map	The national scale land capability for agriculture map indicates that the majority of Route Option 2b is underlain	Land use within the route link is mainly agricultural. The national scale land capability for agriculture map indicates

Appraisal Topic	Routeing and Siting Objectives	Section A Route Option 1	Section A Route Option 2a	Section A Route Option 2b	Section A Route Link 2b to 2a
	uses including the nature and extent of agricultural land or commercial forestry and seeking to reduce impacts on existing land use as much as possible.	indicates that the majority of Route Option 1 is underlain by land which is capable of producing a narrow range of crops or for use as improved grassland.	indicates that the majority of Route Option 2a is underlain by land which is capable of producing a narrow range of crops or for use as improved grassland. A small narrow area close to and following the River Tweed is identified as having higher capability.	by land which is capable of producing a narrow range of crops or for use as improved grassland. A small narrow area close to and following the River Tweed is identified as having higher capability.	that the majority of Route Option 2b is underlain by land which is capable of producing a narrow range of crops.
Engineering Constraints	• To develop as short and direct a route as possible taking account of other routeing constraints and considerations. • To develop route and site options taking account of topography, altitude and side slopes which could affect constructability and/or operability. • To develop route and site options having regard to existing and proposed wind farms and the application of an appropriate separation distance.	Altitudes within Route Option 1 steadily increase moving westwards from around 260mAOD close to the proposed substation to between 330 and 380mAOD to the west. Land is typically more elevated to the north of Route Option 1 where it reaches Sell Moor. To the south close to Woodplaw elevations are slightly lower. Route Option 1 widens out at its western extent where it approaches the existing Long Park Wind Farm. The Route Option avoids the wind turbines as well as maintaining an appropriate separation distance.	Altitudes with Route Option 2a are heavily influenced by the three watercourses which flow through it: Gala Water, Caddon Water and River Tweed. Elevations for much of the Route Option are between 350 and 400mAOD dropping down to 120mAOD within river valleys. This results in some localised steep slopes particularly to the north of Caddon Water and north and south of the River Tweed.	The majority of land within Route Option 2b is at altitudes of between 350 and 400mAOD. There are some areas coinciding with the Stantling Craig Reservoir, Gala Water and River Tweed where elevations are much lower. The latter two areas result in some steep topography descending Bow Hill to cross the Gala Water and Cauld Face towards the River Tweed.	Altitudes are typically around 250mAOD within the route link. It is routed across some steep side slopes in particular crossing Laidlawstiel Hill.

Table H.2 Section B River Tweed to the A7 Route Options Appraisal (Route Options 1 and 2)

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 1	Section B Route Option 2a	Section B Route Option 2b	Section B Route Link 2b to 2a
Landscape	• To develop route and site options which avoid nationally and locally designated landscapes as far as possible while accounting for other routeing considerations. • To develop route and site options which take account of landscape character and sensitivities and utilise landform and vegetation and integrate within the landscape as much as possible to reduce potentially adverse landscape effects.	This Route Option lies entirely within LCT 93 Southern Uplands with Scattered Forest and the SLA 3 Tweed, Ettrick and Yarrow Confluences, which is unavoidable as an extension of any of the Section A options. Effects on the character of the SLA would be partially mitigated and localised by an alignment along the forest edge and between localised landforms of Middle Hill and Broom Law.	The northern section passes through SLA 3 Tweed, Ettrick and Yarrow Confluences and then a small section SLA 1 Tweedsmuir Uplands and then entering LCT 93 Southern Uplands with Scattered Forest followed by LCT 113 Upland Valley with Pastoral Floor to the south. The landform is particularly complex between rounded hills and the Yarrow valley but of a scale that can potentially accommodate the towers and OHLs. However, this is a relatively remote and undeveloped area with recreational value expressed in long distance routes and the SLAs and isolated properties such that, away from the A708 along the Yarrow, there is increased sensitivity to the introduction of towers and OHL.	This Route Option is predominantly within SLA 1 Tweedsmuir Uplands and partially within SLA 3 Tweed, Ettrick and Yarrow Confluences, both designations denoting increased sensitivity. The LCTs it crosses remain the same as Route Option 2a. The northern section of 2b is forested and this increases mitigation potential through screening and backclothing opportunities, whilst the southern section is a complex series of hills within a relatively remote and undeveloped area. Careful siting in relation to these landforms would assist in localising effects on landscape character.	This Route Link lies predominantly within LCT 113 Upland Valley with Pastoral Floor with a small section falling into LCT 93 Southern Uplands with Scattered Forest. This short link would exit SLA 1 across the Yarrow Valley and up the steep hillside of Rough Knowe, resulting in effects on the enclosed valley, with limited mitigation and wider effects on the fringes of the SLAs.
Visual Amenity	• To develop route and site options which avoid settlements as far as possible in order to reduce potentially adverse effects on visual amenity. • To develop route and site options which avoid rural residential properties as much as possible in order to reduce potentially adverse effects on visual amenity.	There are a small number of isolated properties, views from which would potentially be impacted. The Southern Upland Way/Cross Borders Drove Road/Old Drove Road long distance paths cut across the corridor perpendicularly which would result in localised impacts (partially contained by forestry and landform) over approximately 2 to 3km.	In addition to views from isolated properties in a sparsely populated area, users of the Cross Borders Drove Road would cross the route perpendicularly while users of the Southern Upland Way would cross part of the route. Views from the A708 would occur within the confines of the Yarrow valley, increasing perceived magnitude in the enclosed context.	There are three isolated properties within this route option, views from which could be avoided through careful routeing. Apart from views from The Southern Upland Way/Cross Borders Drove Road/Old Drove Road long distance path in the north of the option, there are few identifiable viewpoints other than the series of isolated hills, all within the SLA.	Views would predominantly be from the A708 and isolated properties in the Yarrow Valley. The enclosed nature of the value and viewpoint locations within the lower sections of the landform would accentuate visual effects.
Ecology and Biodiversity	• To develop route and site options which avoid sites designated for nature conservation or ecological interests as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features.	There are no ecological designations of the highest or high environmental value within Route Option 1. The route option narrows at it crosses Ashistiel Hill to avoid Williamhope SSSI.	Route Option 2a is required to cross the Yarrow Water which is part of the River Tweed SAC and SSSI. A crossing of the designated site is unavoidable, however, it can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects. There are no other ecological designations of the highest or high	There are no ecological designations of the highest or high environmental value within or adjacent to Route Option 2b. Fingland Burn LBS is located to the north of Route Option 2b extending north to south along the western boundary of plantation woodland and slightly into Route Option 2b. There is scope to develop a	The route link requires to cross the Yarrow Water which is part of the River Tweed SAC and SSSI. A crossing of the designated site is unavoidable, however, it can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects.

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 1	Section B Route Option 2a	Section B Route Option 2b	Section B Route Link 2b to 2a
			environmental value within the vicinity of Route Option 2a. To the south of Route Option 2a it partly crosses Hangingshaw Wood and Rig and Lewenshope Brae LBS. Some loss of habitat within the LBS would be unavoidable, however, there would be opportunities to reduce this in developing a detailed route alignment.	detailed alignment which avoids the LBS.	
Cultural Heritage and Archaeology	• To develop route and site options which avoid sites designated for archaeological or cultural heritage conservation purposes as much as possible in order to avoid or reduce potentially adverse effects on them including upon their setting.	There are no cultural heritage or archaeology sites of the highest or high environmental value within Route Option 1. Wallace's Trench, a scheduled monument lies to the south of Route Option where it meets Route Options 2a and 2b. Subject to detailed routeing there is the potential for setting effects, however, there are opportunities to reduce potential effects through the use of landform.	Wallace's Trench scheduled monument lies to the north/northwest of Route Option 2a extending northwards from Minchmoor Road to Brown Knowe and the Southern Upland Way. Physical adverse effects on the scheduled monument can be avoided, however, there is the potential for setting impacts subject to detailed route alignment. There are no other cultural heritage designations of the highest or high environmental value within or close to Route Option 2a.	There are no cultural heritage or archaeology sites of the highest or high environmental value within Route Option 2b. Wallace's Trench scheduled monument lies to the northeast of but can be avoided. Subject to detailed route alignment there may be some potential for setting impacts. There are no other cultural heritage designations of the highest or high environmental value within or close to Route Option 2b.	There are two small scheduled monuments present within the route link: Glebe Stone and Yarrow Stone. There is scope to avoid these sites, however, subject to detailed route alignment there is some potential for setting effects.
Forestry and Woodland	• To develop route and site options which avoid forestry and woodland as much as possible in order to prevent or reduce the loss of tree cover.	Route Option 1 is adjacent to the southern or eastern boundary of Traquair Forest as it ascends Ashistiel Hill, however, there is no woodland within the route option.	A section of Route Option 2a is routed through plantation woodland between Whitehope Rig and Old Hill. Two unnamed Ancient Woodland Inventory Sites are present to the south of the option, north of the A708. Some of the woodland present is identified on the Native Woodland Survey of Scotland including upland oakwood and upland birchwood. Some tree removal including within an Ancient Woodland Inventory site will be unavoidable, however, there are opportunities to limit this following existing breaks or seeking to cross through areas of less mature planting.	Part of Route Option 2b crosses plantation forestry to the south of Tweed Valley Forest Park. There are no Ancient Woodland Inventory sites and only a very small proportion of woodland cover is identified in the Native Woodland Survey of Scotland. The extent of plantation woodland to north of this option means tree removal would be unavoidable, however, there are some opportunities to reduce this by utilising existing breaks as much as possible in developing a detailed route alignment.	There are small areas of woodland within the route link. Subject to detailed route alignment and consideration of other routeing constraints some tree removal may be required.
Water resources	• To develop route and site options which adhere to a minimum 50m separation	Some minor watercourses are present including Stiel Burn and North and South Grain. While these may require	There are a number of watercourses present draining hillslopes in a southern or southeastern direction	There are a number of watercourses present within Route Option 2b typically draining southeast or east	The Yarrow Water as well as some other smaller watercourses require to be crossed by the route link. While

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 1	Section B Route Option 2a	Section B Route Option 2b	Section B Route Link 2b to 2a
	zone from watercourses or bodies in order to prevent or reduce adverse effects on water quality • To develop route or site options which avoid routeing or siting within flood zones or where they cannot be avoided by route options can be crossed at their narrowest point	to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	toward the Yarrow Water. While these may require to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	across the route option. While a number of these may require to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	these may require to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.
Ground Conditions	• To develop route and site options which avoid sites designated for geological conservation as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features. • To develop route and site options which avoid priority peatland and peatland habitats as much as possible in order to avoid or reduce the loss of peatland or other carbon-rich soils as much as possible.	There are no sites designated for geological reasons within or in close proximity to Route Option 1. The Carbon-rich Soils and Peatland Map identifies Class 5 soils extending into the route option from the north over South Height while some Class 4 soils are present extending into the route option from the north over Middle Hill.	There are no sites designated for geological reasons within or in close proximity to Route Option 2a. The Carbon-rich Soils and Peatland Map identifies Class 3 and Class 5 are present to the south of route option extending into the east of the option south of the Yarrow Water. This includes small areas of Class 3 soils north of Craighope Burn and on Kershope Burn as well as a larger area of Class 5 soils north of Black Knowe Head.	There are no sites designated for geological reasons within or in close proximity to Route Option 2b. The Carbon-rich Soils and Peatland Map identifies a number of small areas of Class 3 and 5 soils present within Route Option 2b. The scale and distribution of these areas provides opportunities to develop detailed route alignments which could avoid them.	There are no sites designated for geological reasons within or in close proximity to the route link. Two small areas of class 3 and class 5 soils are present within the route link based on the Carbon-rich Soils and Peatland Map.
Tourism and Recreation	• To develop route and site options which avoid or reduce impacts on recreational routes and areas as well as other visitor attractions as much as possible in order to prevent impacts on the amenity of users or visitors.	Part of the Southern Upland Way is routed in an east-west direction across the southeast of the route option on the slopes of Brown Knowe. This section of the Southern Upland Way coincides with Old Drove Road and is also part of a Core Path.	A small section of the Southern Upland Way crosses the northwestern corner of the route option. Further south the Cross Borders Drove Road crosses the option in northwestern direction between Whitehope Rig and Lewenhope Rig.	Small sections of the Southern Upland Way and Cross Borders Drove Road cross this route option to the north.	There are no major visitor attractions or recreational routes within the route link.
Land Use	• To develop route and site options while having regard to existing land uses including the nature and extent of agricultural land or commercial forestry and	The national scale land capability for agriculture map indicates that the majority of Route Option 1 is underlain by land which is capable for use as improved grassland or for rough grazing.	The national scale land capability for agriculture map indicates that the majority of Route Option 2a is underlain by land which is capable for use as improved grassland or for rough grazing.	The national scale land capability for agriculture map indicates that the majority of Route Option 2b is underlain by land which is capable for use as improved grassland or for rough grazing.	The national scale land capability for agriculture map indicates that the majority of Route Option 2a is underlain by land which is capable of producing a narrow range of crops or for use as improved grassland.

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 1	Section B Route Option 2a	Section B Route Option 2b	Section B Route Link 2b to 2a
	seeking to reduce impacts on existing land use as much as possible.				
Engineering Constraints	• To develop as short and direct a route as possible taking account of other routeing constraints and considerations. • To develop route and site options taking account of topography, altitude and side slopes which could affect constructability and/or operability. • To develop route and site options having regard to existing and proposed wind farms and the application of an appropriate separation distance.	Altitudes within Route Option 1 change significantly rising up from around 200mAOD immediately south of the River Tweed to 500mAOD at the peak of Brown Knowe. There are some significantly steep slopes including the north facing slope of Ashiestiel Hill and northeast facing slope of Brown Knowe.	North of the Yarrow there is a series of relatively steep sided valley present within Route Option 2a typically orientated northwest to the southeast. Altitudes are generally between 350 and 400mAOD except within these valleys where it reduces to around 200mAOD. At the Yarrow Water landform is less steep to the north and gently slopes down from Old Hill to the watercourse. On the south-side of the valley hillslopes are steeper rising up from 200mAOD to around 400mAOD.	Altitudes within Route Option 2b are typically between 450 and 500mAOD. There are a number of steep-sided valleys preset orientated across the Route Option which would require to be crossed.	Altitudes within the route link are less than 300mAOD. The Yarrow Water flows within a lower lying valley. The Valley slopes vary in steepness; the western side of the route link (north of Yarrow) is more gentle, however the eastern side (south of Yarrow) rises up more steeply and then routes across the side slopes of Rough Knowe.

Table H.3 Section B River Tweed to the A7 Route Options Appraisal (Route Option 3)

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 3a	Section B Route Option 3b	Section B Route Option 3c	Section B Route Link 3c to 3b
Landscape	• To develop route and site options which avoid nationally and locally designated landscapes as far as possible while accounting for other routeing considerations. • To develop route and site options which take account of landscape character and sensitivities and utilise landform and vegetation and integrate within the landscape as much as possible to reduce potentially adverse landscape effects.	This Route Option falls within small sections of LCT 93 Southern Uplands with Scattered Forest and LCT 116 Upland Valley with Woodland with the majority of the Route Option sitting within LCT 94 Rolling Moorland. Option 3a will traverse the steep landform of the Ettrick Water valley on the edge of SLA 3 in a way which cuts across the topography and introduces prominent infrastructure with limited mitigation options.	This Route Option is in open, elevated and undulating landscape of LCT 93 Southern Uplands with Scattered Forest, a large-scale rolling landform with simple land use increasing ability to accommodate large scale infrastructure. In its southernmost extent the option lies within LCT 113 Upland Valley with Pastoral Floor and will traverse the steep landform of the Ettrick Water valley at a narrow point, partially mitigating effects from OHL.	This Route Option lies within the same LCTs as Option 3b. On leaving SLA 1 the route crosses LCT 93 Southern Uplands with Scattered Forest. As described for option 3b this is a large-scale rolling landform with simple land use increasing ability to accommodate large scale infrastructure.	This option will be sited in the open, elevated and undulating landscape of LCT 93 Southern Uplands with Scattered Forest, a large-scale rolling landform with simple land use increasing ability to accommodate large scale infrastructure. Whilst the Route Link doesn't entirely avoid LCT 113 Upland Valley with Pastoral Floor it would be possible to entirely avoid the more sensitive Ettrick Water valley.
Visual Amenity	• To develop route and site options which avoid settlements as far as possible in order to reduce potentially adverse effects on visual amenity. • To develop route and site options which avoid rural residential properties as much as possible in order to reduce potentially adverse effects on visual amenity.	The option traverses the valley perpendicular to the landform and views along the valley will include those from Ettrickbridge to the south-west, multiple isolated properties and from a core path along the Ettrick Water.	If the OHL is sited to the west of the corridor the majority of it will be in an isolated area with few viewers. Visual impacts will increase within the Ettrick Water valley but potentially, if located westwards, in an area less prominent and with the benefit of some forestry screening the number of views affected could be limited. Numbers of viewers are potentially low.	The main visual impact, apart from isolated properties and from the hamlets of Sundhope and Gilmanscleuch, will be for users of the A708 in the north of the corridor and B7009 in the south. Accessible elevated viewpoints are likely to be limited or visited by few people.	The main visual impact, will be experienced by isolated properties and as a result of passing between the hamlets of Sundhope and Gilmnanscleuch, equidistant from both and with likely open views towards the corridor.
Ecology and Biodiversity	• To develop route and site options which avoid sites designated for nature conservation or ecological interests as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features.	Route Option 3a is required to cross the Ettrick Water which is part of the River Tweed SAC and SSSI. A crossing of the designated site is unavoidable, however, it can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects.	Route Option 3b is required to cross the Ettrick Water which is part of the River Tweed SAC and SSSI. A crossing of the designated site is unavoidable, however, it can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects.	Route Option 3c requires crossings of the Yarrow Water and Sundhope Burn to north and the Ettrick Water to the south, all of which are part of the River Tweed SAC and SSSI. Crossings of the designated sites are unavoidable, however, these can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects.	There are no ecological designations within or close the route link between route options 3c and 3b.

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 3a	Section B Route Option 3b	Section B Route Option 3c	Section B Route Link 3c to 3b
Cultural Heritage and Archaeology	• To develop route and site options which avoid sites designated for archaeological or cultural heritage conservation purposes as much as possible in order to avoid or reduce potentially adverse effects on them including upon their setting.	There are two scheduled monuments present within the route option, Huntly Burn enclosure and earthwork located close together between the B7009 and Huntly Burn. While direct physical impacts on the scheduled monuments can be avoided, subject to detailed routeing there is the potential for setting effects. There are additional scheduled monuments within the vicinity of the route option including an earthwork at Brockill Burn which would experience setting effects.	A scheduled monument and listed building are present at Kirkhope tower to the northeast of Route Option 3b. The scheduled monument relates to the barmkin and barmkin wall while the listed building relates to the tower. There is scope avoid the designations within the route option, however, subject to detailed route alignment there is the potential for setting effects.	There are no cultural heritage or archaeology sites of the highest or high environmental value within Route Option 3c.	There are no cultural heritage or archaeology sites of the highest or high environmental value within the route link.
Forestry and Woodland	• To develop route and site options which avoid forestry and woodland as much as possible in order to prevent or reduce the loss of tree cover.	There are a number of small Ancient Woodland Inventory sites present within Route Option 3a including on the west and south facing slopes of Fauldshope West Hill and along the northern banks of the Ettrick Water stretching across almost the full width of the route option. Parts of the ancient woodland sites coincide with woodland identified on the Native Woodland Survey of Scotland. The extent and distribution of woodland within Route Option 3a means some tree removal including within Ancient Woodland is unavoidable.	There are pockets of woodland present within the route option including some which are identified on the Native Woodland Survey of Scotland. Woodland is typically avoidable subject to other routeing considerations and detailed route alignment.	There are pockets of woodland present within the route option including some which are identified on the Native Woodland Survey of Scotland. Woodland is typically avoidable subject to other routeing considerations and detailed route alignment.	There is limited woodland cover present within or on the margins of the route link.
Water resources	• To develop route and site options which adhere to a minimum 50m separation zone from watercourses or bodies in order to prevent or reduce adverse effects on water quality • To develop route or site options which avoid routeing or siting within flood zones or where they cannot be avoided by route options can be crossed at their narrowest point	There are a number of watercourses present within Route Option 3a draining toward the Ettrick Water. While these may require to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	In addition to the Ettrick Water, there are some smaller watercourses present which would require to be crossed by an OHL route. Adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There are a number of watercourses present within Route Option 3c. This includes larger watercourses such as the Yarrow Water broadly flowing across the route option as well as smaller unnamed watercourses some of which flow south to north or north to south draining into the larger watercourses. Adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers, however, the	There are some unnamed watercourses draining the hillslopes within the route link within a southeastern direction. Adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 3a	Section B Route Option 3b	Section B Route Option 3c	Section B Route Link 3c to 3b
				number of watercourses present may result in increased proximity to them.	
Ground Conditions	• To develop route and site options which avoid sites designated for geological conservation as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features. • To develop route and site options which avoid priority peatland and peatland habitats as much as possible in order to avoid or reduce the loss of peatland or other carbon-rich soils as much as possible.	There are no sites designated for geological reasons within or in close proximity to Route Option 3a. The Carbon-rich Soils and Peatland Map identifies Class 1, 3 and 5 soils are present within the route option. Class 3 soils occupy a large area extending across the option to the south of Hutlerburn Hill. The extent and distribution of soils means that some impacts on peatland would be unavoidable.	There are no sites designated for geological reasons within or in close proximity to Route Option 3b. The Carbon-rich Soils and Peatland Map identifies Class 3 soils are present within the route option including on Newhouse Kip and Singlie Hill. Subject to detailed route alignment impacts on peatland should be avoidable.	There are no sites designated for geological reasons within or in close proximity to Route Option 3c. The Carbon-rich Soils and Peatland Map identifies Class 3 soils are present within the route option extending across it from Black Knowe Head to Scar Hill. The extent of Class 3 soils means some impacts on peatland would unavoidable.	The Carbon-rich Soils and Peatland Map identifies Class 3 soils are present on the southern and eastern margins of the route link. The limited scale and distribution of these areas means impacts on peatland should be avoidable.
Tourism and Recreation	• To develop route and site options which avoid or reduce impacts on recreational routes and areas as well as other visitor attractions as much as possible in order to prevent impacts on the amenity of users or visitors.	There are no major visitor attractions within the route option. There are two core paths which cross Route Option 3a, one to the north of the Ettrick Water routed west to east and one to the south of Hutlerburn Hill also extending across the route option.	There are no major visitor attractions or recreational routes within the route option.	There are no major visitor attractions or recreational routes within the route option.	There are no major visitor attractions or recreational routes within the route option.
Land Use	• To develop route and site options while having regard to existing land uses including the nature and extent of agricultural land or commercial forestry and seeking to reduce impacts on existing land use as much as possible.	The national scale land capability for agriculture map indicates that the majority of Route Option 3a is underlain by land which is capable for use as improved grassland or for rough grazing.	The national scale land capability for agriculture map indicates that the majority of Route Option 3b is underlain by land which is capable for use as improved grassland.	The national scale land capability for agriculture map indicates that the majority of Route Option 3a is underlain by land which is capable for use as improved grassland or for rough grazing.	The national scale land capability for agriculture map indicates that the majority of route link is underlain by land which is capable for use as improved grassland or for rough grazing.
Engineering Constraints	• To develop as short and direct a route as possible taking account of other routeing constraints and considerations.	Altitude varies through the route option from over 400mAOD at the north/west dropping to around 160mAOD within the Ettrick Water valley and then increasing moving south of this. There are localised steep slopes descending	Altitudes within Route Option 3b are typically between 200 and 350mAOD with lower altitudes present to the south of the option along the Ettrick Water. There are localised steep slopes including on Witchie Knowe to	Altitudes within Route Option 3c are variable due to the nature of landform. The Yarrow Water and Ettrick Water flow within lower lying valleys between 200 and 250mAOD, however, some of the hills within the route option exceed	Altitudes within the route link generally reduce in a southeastern or eastern direction from more 500mAOD in the northwest on Sundhope Height to

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 3a	Section B Route Option 3b	Section B Route Option 3c	Section B Route Link 3c to 3b
	• To develop route and site options taking account of topography, altitude and side slopes which could affect constructability and/or operability. • To develop route and site options having regard to existing and proposed wind farms and the application of an appropriate separation distance.	Fauldshope West Hill to the north of the Ettrick Water and ascending Hutlerbun Hill to the south.	the north of the route option and Singlie Hill to south descending to the Ettrick Water.	500mAOD. There are particularly steep slopes on the three hills present within the centre of the option including on Black Knowe Head and Scar Hill. The route option has been developed taking account of the proposed Brown Rig Wind Farm. The option has been narrowed where it descends Black Knowe Head towards the Ettrick Water taking account of publicly available information regarding the wind farm layout.	around 250mAOD in the southeast closer to the Ettrick Water.

Table H.4 Section B River Tweed to the A7 Route Options Appraisal (Route Option 4 and Route Option 5)

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 4a	Section B Route Option 4b	Section B Route Option 4c	Section B Route Option 4d	Section B Route Option 5	Section B Route Link 4d to 4c	Section B Route Link 4c to 4b
Landscape	• To develop route and site options which avoid nationally and locally designated landscapes as far as possible while accounting for other routeing considerations. • To develop route and site options which take account of landscape character and sensitivities and utilise landform and vegetation and integrate within the landscape as much as possible to reduce potentially adverse landscape effects.	The northern section of Option 4a lies with LCT 94 Rolling Moorland indicating an open expansive, simple landscape of reduced sensitivity to OHL. The central and southern section passes through LCT 101 Rocky Upland Fringe perpendicular to the linear extent of the LCT. It then passes through LCT 117 Pastoral Upland Fringe Valley, again perpendicular such that direct effects on landscape character are localised. This is the landscape of the River Teviot, which also accommodates the A7. Although a smooth large-scale landform it also has characteristics which increase sensitivity compared to the neighbouring LCTs. These include the medium scale pastoral valley, narrow side valleys and valley floor pastures enclosed by drystone dykes, all being scale comparators which emphasize the effects of an OHL. The scattered farms and	As described for Option 4a, which crosses the same LCTs with likely similar effects but further to the west. Langhope Rig wind farm lies to the immediate west of Option 4b. influencing landscape character. Other comments as per Option 4a	In the north the route passes LCT 94 Rolling Moorland, clipping LCT LCT 93 Southern Uplands with Scattered Forest before entering LCT 96 Southern Uplands with Forest. All are similar large scale, simple landscapes, relatively remote and with characteristics which indicate lower sensitivity to OHLs and towers. This Route Option terminates with a small section in LCT 117 Pastoral Upland Fringe Valley, landscape of the River Teviot, which also accommodates the A7. Although a smooth large-scale landform it also has characteristics which increase sensitivity compared to the neighbouring LCTs. These include the medium scale pastoral valley, narrow side valleys and valley floor pastures enclosed by drystone dykes, all being scale comparators which emphasize the	Comments as per Option 4c.	Predominantly in LCT 94 Rolling Moorland of reduced sensitivity to OHLs due to open, upland nature and simple form with few scale comparators. The route transitions into LCT 101 Rocky Upland Fringe and LCT 99 Rolling Farmland north of Hawick, both of intermediate sensitivity. There is some forestry but predominantly the character is open and given the proximity to settlements and transport routes effects on character would be widespread. There would also be increased wirescape where the Route Option crosses the existing 132kV OHL within the transition in landscapes between the upland fringe and farmland which becomes more sensitive to OHL and towers.	This Route Link sits entirely within LCT 93 Southern Uplands with Scattered Forest, an isolated, open, upland landscape which indicates lower sensitivity to OHLs and towers.	This Route Link is located entirely within LCT 94 Rolling Moorland and largely through forest in the west and adjacent to Langhope Rig. This is a relatively isolated and open upland which indicates lower sensitivity to OHLs and towers.

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 4a	Section B Route Option 4b	Section B Route Option 4c	Section B Route Option 4d	Section B Route Option 5	Section B Route Link 4d to 4c	Section B Route Link 4c to 4b
		settlement along the valley floor and lower sides along with frequent woodland all contribute to this section of the Route Option being more sensitive to an OHL. Noting that the incursion into LCT 117 is limited and the valley of the Teviot already includes the 132kV OHL and the A7. The route would cross this at 90 degrees, increasing localised effects from the wirescape.		effects of an OHL. The scattered farms and settlement along the valley floor and lower sides along with frequent woodland all contribute to this section of the Route Option being more sensitive to an OHL. Noting that the incursion into LCT 117 is limited and the valley of the Teviot already includes the 132kV OHL and the A7. The route would cross this at 90 degrees, increasing localised effects from the wirescape.				
Visual Amenity	• To develop route and site options which avoid settlements as far as possible in order to reduce potentially adverse effects on visual amenity. • To develop route and site options which avoid rural residential properties as much as possible in order to reduce potentially adverse effects on visual amenity.	Option 4a is closest to Hawick and would be visible on the approach/egress on the A7 and the A711, acting as a detractor at the confluence of the main approaches to the town and from Branxholmtown. Views from Hawick itself would be unlikely due to distance/intervening elements. All Option 4 routes involve a crossing of the Teviot Valley and the existing 132 kV OHL at 90 degrees, increasing	Option 4b passes close between Roberton and Burnfoot, increasing potential for visual effects in proximity to residential properties. Comments regarding the Teviot Valley and existing 132 kV line apply and Romans and Reivers long distance trail as noted in Route Option 4a.	In its northern section Option 4c passes adjacent to and through forestry, limiting the extent of views and likely number of viewers. There are multiple isolated properties in the vicinity of Burnfoot and Hoscote and Deanburnhaugh but some scope for alignment refinement to reduce or mitigate effects. Further south, Option 4c is away from settlements	Option 4d is significantly more forested than the other options, passing through Craik Forest but also close to Craik itself. Screening from forestry would be locally beneficial, reducing visual impact compared to the other options. Comments regarding the Teviot Valley and existing 132 kV line apply and the Romans and Reivers long distance trail as	There are numerous core paths within the vicinity and the corridor also is broadly parallel to the Old Drove Road and Borders Abbeys Way long distance paths for most of its length. Numbers of viewers increase close to Hawick and in sections where it is close to the A7, resulting in the potential for extensive visual impact.	Isolated open upland with few visual receptors.	Largely through forest in the west and adjacent to Langhope Rig with few visual receptors.

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 4a	Section B Route Option 4b	Section B Route Option 4c	Section B Route Option 4d	Section B Route Option 5	Section B Route Link 4d to 4c	Section B Route Link 4c to 4b
		effects on visual amenity and wirescape. They all involve a crossing of the Romans and Reivers Route affecting views of recreational users of this long distance trail.		and benefits from an alignment on lower ground between two local hills, Holt Hill and Swanstead Hill/Dryden Fell which potentially represents an alignment more sympathetic to the landform. Comments regarding the Teviot Valley and existing 132 kV line apply and the Romans and Reivers long distance trail as noted in Route Option 4a.	noted in Route Option 4a.			
Ecology and Biodiversity	• To develop route and site options which avoid sites designated for nature conservation or ecological interests as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features.	Route Option 4a requires multiple crossings of watercourses which are part of the River Tweed SAC (and in some cases also the River Tweed SSSI). This includes Todrig Burn, Ale Water, Borthwick Water and the River Teviot. Crossings of the designated sites are unavoidable, however, these can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects.	Route Option 4b requires multiple crossings of watercourses which are part of the River Tweed SAC (and in some cases also the River Tweed SSSI). This includes Langhope Burn, Todrig Burn, Ale Water, Borthwick Water and the River Teviot. Crossings of the designated sites is unavoidable, however, these can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects.	Route Option 4c requires multiple crossings of watercourses which are part of the River Tweed SAC (and in some cases also the River Tweed SSSI). This includes the Borthwick Water and the River Teviot. Crossings of the designated sites are unavoidable, however, these can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects.	Route Option 4c requires multiple crossings of watercourses which are part of the River Tweed SAC (and in some cases also the River Tweed SSSI). This includes Rankle Burn, Clear Burn, the Borthwick Water and the River Teviot. Crossings of the designated sites are unavoidable, however, these can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects.	Route Option 5 requires a crossing of the Ale Water which is part of the River Tweed SAC. A crossing of the designated site is unavoidable, however, the watercourse can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects. Ashkirk Loch SSSI and Long Moss - Drinkstone Hill SSSI lies to the south of outside of the route option with sufficient separation to reduce the	There are no ecological designations within or close the route link between route options 4d and 4c.	There are no ecological designations within or close the route link between route options 4c and 4b.

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 4a	Section B Route Option 4b	Section B Route Option 4c	Section B Route Option 4d	Section B Route Option 5	Section B Route Link 4d to 4c	Section B Route Link 4c to 4b
			Slaidhills Moss occupies a small area to the south of the route option northwest of Teinside. The extent of the designation means that it should be avoidable.			potential for adverse effects.		
Cultural Heritage and Archaeology	• To develop route and site options which avoid sites designated for archaeological or cultural heritage conservation purposes as much as possible in order to avoid or reduce potentially adverse effects on them including upon their setting.	There are a number of cultural heritage and archaeological designations present within or on the margins of Route Option 4b. These include scheduled monuments including Wester Essenside fort to the west of the route option, earthworks at Leap Hill, cairns to the north of Mabonlaw Moss, a fort at Highchesters as well as listed buildings including Branxholme Castle. While direct physical impacts on the scheduled monuments and listed buildings can be avoided, subject to detailed routeing there is the potential for setting effects.	There are no cultural heritage or archaeology sites of the highest or high environmental value within Route Option 4b, however, some sites including scheduled monuments and listed buildings are present on the margins of the route option. While there will be no direct physical impacts on designated cultural heritage or archaeology sites there is the potential for some setting impacts subject to detailed routeing. There are opportunities to mitigate setting effects through the use of landform and other features.	There are no cultural heritage or archaeology sites of the highest or high environmental value within Route Option 4c. A small number of sites are present within the vicinity of Route Option 4c. While there will be no direct physical impacts on designated cultural heritage or archaeology sites there is the potential for some setting impacts subject to detailed routeing. There are opportunities to mitigate some setting effects through the use of landform and other features.	There are no cultural heritage or archaeology sites of the highest or high environmental value within Route Option 4d. A small number of sites are present within the vicinity of Route Option 4d. While there will be no direct physical impacts on designated cultural heritage or archaeology sites there is the potential for some setting impacts subject to detailed routeing. There are opportunities to mitigate some setting effects through the use of landform and other features.	There are no cultural heritage or archaeology sites of the highest or high environmental value within Route Option 5, however, there are two scheduled monuments present to its north. While there will be no direct physical impacts on designated cultural heritage or archaeology sites there is the potential for some setting impacts subject to detailed routeing. There are opportunities to mitigate setting effects through the use of landform and other features.	There are no cultural heritage or archaeology sites of the highest or high environmental value within the route link.	There are no cultural heritage or archaeology sites of the highest or high environmental value within the route link.
Forestry and Woodland	• To develop route and site options which avoid forestry and woodland as much as	Small areas or pockets of woodland are present through the route option. This	Small areas or pockets of woodland are present through the route option	There are some small areas of woodland present within Route Option	There are some small areas of woodland present within Route Option	Small areas or pockets of woodland are present within the route option.	There is an area of forestry plantation to the east of the link where it connects to	The western part of the route linked is routed through an extensive part of forestry plantation. While

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 4a	Section B Route Option 4b	Section B Route Option 4c	Section B Route Option 4d	Section B Route Option 5	Section B Route Link 4d to 4c	Section B Route Link 4c to 4b
	possible in order to prevent or reduce the loss of tree cover.	includes Ancient Woodland Inventory sites which are present to the south of the Borthwick Water. Some of the woodland present within Route Option 4a is identified on the Native Woodland Survey of Scotland. The distribution of woodland within the route option means that some tree removal would be unavoidable including potentially ancient woodland.	including woodlands identified on the Native Woodland Survey of Scotland. The distribution of woodland within the route option means that some tree removal would be unavoidable.	4c including some which coincide with areas identified on the Native Woodland Survey of Scotland, however, these are typically small-scale and avoidable. Larger areas of forestry plantation are present to the east of Whitehill and north of Byrelee Hill. The distribution of forestry plantation and woodland within the route option means that some tree removal would be unavoidable.	4d including some which coincide with areas identified on the Native Woodland Survey of Scotland, however, these are typically small-scale and avoidable. Larger areas of forestry plantation are present with a large part of the route option crossing through Craik Forest. he distribution of forestry plantation and woodland within the route option means that some tree removal would be unavoidable.	This includes woodland identified on the Native Woodland Survey of Scotland. There are larger areas of forestry plantation to the north of Route Option 5 and south of the Ale Water. The extent of forestry within the option means some tree removal is unavoidable, however, there may be opportunities to reduce this by utilising existing breaks.	Route Option 4c. There may be some scope to minimise tree removal, however, some would be unavoidable.	there would be opportunities to utilise existing breaks some tree removal would be unavoidable.
Water resources	• To develop route and site options which adhere to a minimum 50m separation zone from watercourses or bodies in order to prevent or reduce adverse effects on water quality • To develop route or site options which avoid routeing or siting within flood zones or where they cannot be avoided by route options can be crossed at their narrowest point	There are a number of watercourses present within Route Option 4a. While these may require to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There are a number of watercourses present within Route Option 4b. While these may require to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There is a small number of watercourses present within Route Option 4c. While these may require to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers	There is a small number of watercourses present within Route Option 4d. While these may require to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers	There is a small number of watercourses present within Route Option 5 which would require to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There are some unnamed watercourses draining the hillslopes within the route link. Adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There are a number of small unnamed watercourses within the route link as well as two relatively small lochs. Adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.
Ground Conditions	• To develop route and site options which avoid sites designated for	The Carbon-rich Soils and Peatland Map identifies Class 3 soils	The Carbon-rich Soils and Peatland Map identifies small	The Carbon-rich Soils and Peatland Map identifies	The Carbon-rich Soils and Peatland Map identifies	The Carbon-rich Soils and Peatland Map indicates that	The Carbon-rich Soils and Peatland Map identifies Class	The Carbon-rich Soils and Peatland Map identifies Class 3 and 5 soils are

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 4a	Section B Route Option 4b	Section B Route Option 4c	Section B Route Option 4d	Section B Route Option 5	Section B Route Link 4d to 4c	Section B Route Link 4c to 4b
	geological conservation as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features. • To develop route and site options which avoid priority peatland and peatland habitats as much as possible in order to avoid or reduce the loss of peatland or other carbon-rich soils as much as possible.	are present in small areas. The limited scale and distribution of these areas means impacts on peatland should be avoidable.	areas of Class 3 soils are present. The extent of Class 3 soils means some impacts on peatland should be avoidable.	extensive areas of class 3 and 5 soils are present between Whitehill and the Borthwick Water. The scale of peatland areas present means some impacts would be unavoidable.	extensive areas of class 3 and 5 soils are present. The scale of peatland areas present means some impacts would be unavoidable.	the majority of the route option avoids peatland, with the exception of Class 3 soils to the north. The extent of the area of class 3 limits opportunities to avoid it, however, overall this option avoids areas of peatland.	3 soils are present across the majority of the route link. The scale of peatland areas present means some impacts would be unavoidable.	present across the majority of the route link. Class 5 soils are present across the western extent of the link and would require to be crossed. The scale of peatland areas present means some impacts would be unavoidable.
Tourism and Recreation	• To develop route and site options which avoid or reduce impacts on recreational routes and areas as well as other visitor attractions as much as possible in order to prevent impacts on the amenity of users or visitors.	There are no major visitor attractions within the route option. The Roman and Reivers Road crosses the route option to the north of Branxholm. There is a small number of core paths present which may require to be crossed or be in close proximity to OHL routes.	There are no major visitor attractions within the route option. The Roman and Reivers Road crosses the route option over the peak of Chapel Hill. There is also a core path which crosses the route option to the south of Chapel Hill.	There are no major visitor attractions within the route option. The Roman and Reivers Road crosses the route option doglegging to the south of Muselee increasing the length of the trail present within the route option. There is also a core path which extends westwards from just within the route option at Muselee towards Craik Forest.	There are no major visitor attractions within the route option. The Roman and Reivers Road crosses the route option within Craik Forest. There is also a core path crossing the route option to the north of the Borthwick Water	The Borders Abbey Way (which also coincides with a core path) is routed through the Route Option as well as sections running almost parallel to it to the north and south of the option.	There are no major visitor attractions or recreational routes within the route link.	There are no major visitor attractions or recreational routes within the route link.
Land Use	• To develop route and site options while having regard to existing land uses including the nature and extent of	The national scale land capability for agriculture map indicates that the majority of Route	The national scale land capability for agriculture map indicates that the majority of Route	The national scale land capability for agriculture map indicates that the majority of Route	The national scale land capability for agriculture map indicates that the majority of Route	The national scale land capability for agriculture map indicates that the majority of Route	The national scale land capability for agriculture map indicates that the majority of route link	The national scale land capability for agriculture map indicates that the majority of route link is underlain by land which is

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 4a	Section B Route Option 4b	Section B Route Option 4c	Section B Route Option 4d	Section B Route Option 5	Section B Route Link 4d to 4c	Section B Route Link 4c to 4b
	agricultural land or commercial forestry and seeking to reduce impacts on existing land use as much as possible.	Option 4a is underlain by land which is capable for use as improved grassland with some lower lying areas capable of growing a narrow range of crops.	Option 4b is underlain by land which is capable for use as improved grassland with some lower lying areas such as along the Borthwick Water and River Teviot capable of growing a narrow range of crops.	Option 4c is underlain by land which is capable for use as improved grassland or for rough grazing, however, some smaller areas such as along the Borthwick Water and River Teviot capable of growing a narrow range of crops.	Option 4d is underlain by land which is capable for use as improved grassland or for rough grazing, however, some smaller areas such as along the Borthwick Water and River Teviot capable of growing a narrow range of crops.	Option 5 is underlain by land which is capable for use as improved grassland with some lower lying areas to the southeast closer towards Hawick and River Teviot valley capable of growing a narrow range of crops.	is underlain by land which is capable for use for rough grazing.	capable for use for rough grazing.
Engineering Constraints	• To develop as short and direct a route as possible taking account of other routeing constraints and considerations. • To develop route and site options taking account of topography, altitude and side slopes which could affect constructability and/or operability. • To develop route and site options having regard to existing and proposed wind farms and the application of an appropriate separation distance.	Altitudes within Route Option 4a are typically between 200 and 350mAOD. Localised high points above 300mAOD include Leap Hill, Cringie Hill and Smasha Hill. Lower altitudes coincide with river valleys. The nature of the landform within the route option means that there are localised steep slopes particularly in/adjacent to valleys. This option would require to cross the existing 132kV OHL route.	Altitudes within Route Option 4b are typically between 300 and 350mAOD, however, lower altitudes are present along river valleys. The nature of the landform within the route option means that there are localised steep slopes particularly in/adjacent to valleys. The existing Langhope Rig Wind Farm lies to the west of the route option. The option has been developed to maintain an appropriate separation distance from the wind turbines. This option would require to cross the	With the exception of within lower lying valleys which coincide with watercourses, altitudes within the route option are typically between 300 and 400mAOD. Land is generally gently undulating, however, some steeper slopes are present in localised areas including to the west of Whitehill, along the B711 and to the north of the Borthwick Water. This option would require to cross the existing 132kV OHL route.	Altitudes within Route Option 4d are variable from almost 500mAOD at the north to around 200mAOD in some river valleys. The majority of route option crosses land around 350 to 450mAOD. The nature of the landform within the route option means that there are localised steep slopes particularly in/adjacent to valleys. This option would require to cross the existing 132kV OHL route.	Altitudes are generally falling in the southeastern direction along Route Option 5 from just over 300mAOD to the north to 200mAOD to the south where the route option approaches the A7. There are some undulating hills within the route option resulting in some localised higher points as well as slopes which would require to be crossed.	Altitudes within the route link are typically around 400mAOD with a localised high point within the centre of the link of 470mAOD. There are localised steep slopes to the west of the route link.	Altitudes within the route link are relatively consistent between 300 and 350mAOD forming a plateau which broadly extends west to east between Route Options 4c and 4b. While there are some relatively steep slopes these are located to the north or south of the route link and could be avoided.

Appraisal Topic	Routeing and Siting Objectives	Section B Route Option 4a	Section B Route Option 4b	Section B Route Option 4c	Section B Route Option 4d	Section B Route Option 5	Section B Route Link 4d to 4c	Section B Route Link 4c to 4b
			existing 132kV OHL route.					

Table H.5 Section C: A7 to Teviot Substation Route Options Appraisal (Route Options 1 and 2)

Appraisal Topic	Routeing and Siting Objectives	Section C Route Option 1A	Section C Route Option 1B	Section C Route Option 1C	Section C Route Option 2
Landscape	• To develop route and site options which avoid nationally and locally designated landscapes as far as possible while accounting for other routeing considerations. • To develop route and site options which take account of landscape character and sensitivities and utilise landform and vegetation and integrate within the landscape as much as possible to reduce potentially adverse landscape effects.	The route commences in LCT 117 Pastoral Upland Fringe Valley associated with the River Teviot and A7 corridor. As explained previously, the valley landform, degree of enclosure and concentration of smaller scale elements increases sensitivity. The route transitions into LCT 101 Rocky Upland Fringe and LCT 93 Southern Uplands with Scattered Forest, both with characteristics which assist in accommodating OHLs, the former to a lesser extent.	The route commences at the A7 before immediately entering SLA 5 Teviot Valleys close to Hawick. It rises up White Hill in LCT 101 Rocky Upland Fringe, with few landscape elements of a scale that would mitigate the introduction of the towers and OHLs. Sensitivity theoretically reduces as it enters LCT 93 Southern Uplands with Scattered Forest but there are roads and valleys which complicate the alignments relationship with landform and landscape and are of a scale which increases sensitivity.	Largely as described for Option 1A. The route commences in LCT 117 Pastoral Upland Fringe Valley associated with the River Teviot and route of the A7. As explained previously for Option 1C, the valley landform, degree of enclosure and concentration of smaller scale elements increases sensitivity. The route transitions into LCT 101 Rocky Upland Fringe and LCT 93 Southern Uplands with Scattered Forest, both with characteristics which assist in accommodating OHLs, the former to a lesser extent.	Commencing and terminating in LCT 93 Southern Uplands with Scattered Forest with a central section in LCT 96 Southern Uplands with Forest, the northern section traverses open upland before entering large scale forestry for much of its route. Characteristics of the LCTs favour integration of OHLs in this route corridor.
Visual Amenity	• To develop route and site options which avoid settlements as far as possible in order to reduce potentially adverse effects on visual amenity. • To develop route and site options which avoid rural residential properties as much as possible in order to reduce potentially adverse effects on visual amenity.	The option is potentially close to the settlements of Broadhaugh and Dodburn and visual impact as it rises directly up The Pike in its eastern section would be increased.	There are potentially numerous sensitive receptors on the edge of Hawick and isolated properties, local roads and core paths in the route beyond it. Likelihood of multiple significant effects on visual amenity experienced by a large number of people.	Isolated properties at Branxholme and to the east of the A7 within the confines of the Teviot valley and then at Pilmuir and several isolated properties further east, with limited screening potential from landform or forestry.	Remote with very few visual receptors and potential for reducing visual impact as a result of screening by forestry. No core paths or long-distance trails and numbers of potential viewers likely to be limited.
Ecology and Biodiversity	• To develop route and site options which avoid sites designated for nature conservation or ecological interests as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features.	Route Option 1a starts within the Teviot Valley close to the River Teviot where it is part of the River Tweed SAC and SSSI. As noted elsewhere, the potential for impacts on the River Tweed SAC and SSSI can be avoided or reduced by careful siting of OHL towers to maximise separation distances as much as possible.	Route Option 1b requires to cross the River Teviot, part of the River Tweed SAC and SSSI. A crossing of the designated sites is unavoidable, however, the watercourse can be spanned with OHL towers carefully located either side to avoid/reduce the potential for adverse effects.	Route Option 1c starts within the Teviot Valley close to the River Teviot where it is part of the River Tweed SAC and SSSI. As noted elsewhere, the potential for impacts on the River Tweed SAC and SSSI can be avoided or reduced by careful siting of OHL towers to maximise separation distances as much as possible.	There are no ecological designations within Route Option 2.

Appraisal Topic	Routeing and Siting Objectives	Section C Route Option 1A	Section C Route Option 1B	Section C Route Option 1C	Section C Route Option 2
Cultural Heritage and Archaeology	• To develop route and site options which avoid sites designated for archaeological or cultural heritage conservation purposes as much as possible in order to avoid or reduce potentially adverse effects on them including upon their setting.	There are a number of cultural heritage and archaeological designations present within or on the margins of Route Option 1a. This includes a number of scheduled monuments. While direct physical impacts on the scheduled monuments can be avoided, subject to detailed routeing there is the potential for setting effects. There may be some opportunities to reduce setting effects on some of the scheduled monuments through the use of landform to reduce intervisibility.	There is one listed building, Orchard House, within the route option as well as a number of scheduled monuments in the wider area. Direct physical impacts on the listed building as well as scheduled monuments can be avoided, subject to detailed routeing there is the potential for setting effects. There may be some opportunities to reduce setting effects of the scheduled monuments through the use of landform to provide some physical separation.	There are a number of cultural heritage and archaeological designations present within or on the margins of Route Option 1c. This includes scheduled monuments within the route option as well as on its immediate margins. Direct physical impacts can be avoided in developing a detailed route alignment, however, setting effects would occur. Some setting effects may be reduced through careful routeing, however, the distribution of scheduled monuments means some effects are unavoidable.	There is a small number of scheduled monuments present within or close to Route Option 2. These include Blakebillend a 2nd World War target range as well as the Catrail a linear earthwork which extends across the majority of the route option. Direct physical impacts on scheduled monuments can be avoided, however, some setting effects would occur subject to detailed route alignment. The Catrail is a notable constraint as any OHL route within Route Option 2 (which connects to a potential substation site TEV-05) would be required to cross it with the exception of a small 'gap' within the earthwork to the west of the route option.
Forestry and Woodland	• To develop route and site options which avoid forestry and woodland as much as possible in order to prevent or reduce the loss of tree cover.	There are small woodlands present within the option. This includes some linear woodland to the east largely following the River Teviot (this woodland is also identified on the Native Woodland Survey of Scotland). There is on Ancient Woodland Inventory site, Howden Cleuch as well as some small undesignated woodlands. Subject to other routeing considerations the majority of woodland is considered to be avoidable. Once exception is the linear woodland extending across the option which would require to be crossed and result in some tree removal.	There are small woodlands present throughout Route Option 1b. This includes small areas of Ancient Woodland Inventory sites which extend into the route option as well as number of woodlands which are identified on Native Woodland Survey of Scotland. The extent and distribution of woodland within Route Option 1b means that some tree removal is likely to be unavoidable, particularly where the route crosses the River Teviot.	There are a number of small woodlands present within Route Option 1c. This includes an Ancient Woodland Inventory site on the western extent of the route option close to the River Teviot as well as woodlands which are identified on Native Woodland Survey of Scotland. In some places woodland extends across the route option meaning that some tree removal would be unavoidable.	Much of the southern part of Route Option 2 is located within plantation forestry. While there would be some opportunities to reduce tree removal by following existing breaks, permanent tree removal is unavoidable.
Water resources	• To develop route and site options which adhere to a minimum 50m separation zone from watercourses or bodies in order to prevent or reduce adverse effects on water quality	There is a small number of watercourses present within Route Option 1a which would require to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There are a number of watercourses present within Route Option 1b which would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There is a small number of watercourses present within Route Option 1c which would require to be crossed by an OHL route, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers	There is small number of watercourses present within Route Option 2 which would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.

Appraisal Topic	Routeing and Siting Objectives	Section C Route Option 1A	Section C Route Option 1B	Section C Route Option 1C	Section C Route Option 2
	• To develop route or site options which avoid routeing or siting within flood zones or where they cannot be avoided by route options can be crossed at their narrowest point				
Ground Conditions	• To develop route and site options which avoid sites designated for geological conservation as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features. • To develop route and site options which avoid priority peatland and peatland habitats as much as possible in order to avoid or reduce the loss of peatland or other carbon-rich soils as much as possible.	The Carbon-rich Soils and Peatland Map indicates that the majority of the route option avoids peatland, with the exception of Class 4 soils to the east around Penchrise. The extent of the area of class 4 limits opportunities to avoid it, however, overall this option avoids areas of peatland.	With the exception of two small areas of class 3 and class 5 soils the Carbon-rich Soils and Peatland Map indicates that the majority of the route option avoids peatland.	There are no areas of peatland within the route option.	The Carbon-rich Soils and Peatland Map indicates that large part of the south of Route Option 2 is within class 1 and class 5 soils. The extent of the area means routeing through peatland is unavoidable.
Tourism and Recreation	• To develop route and site options which avoid or reduce impacts on recreational routes and areas as well as other visitor attractions as much as possible in order to prevent impacts on the amenity of users or visitors.	There are no major visitor attractions or recreational routes within the route option.	There are no major visitor attractions or recreational routes within the route option, however, there are a number of core paths which criss-cross it and would required to be crossed by an OHL route.	There are no major visitor attractions or recreational routes within the route option.	There are no major visitor attractions or recreational routes within the route option.
Land Use	• To develop route and site options while having regard to existing land uses including the nature and extent of agricultural land or commercial forestry and seeking to reduce impacts on existing land use as much as possible.	The national scale land capability for agriculture map indicates that the Route Option 1a is underlain by land which is capable for use as improved grassland with some areas capable of growing a narrow range of crops.	While the national scale land capability map for agriculture indicates that the majority of Route Option 1b is underlain by land which is capable for use as improved grassland as well as some areas capable of growing a narrow range of crops, more capable land (i.e. capable of higher) yields is present in the lower lying wider valley to the north/northeast of Hawick.	The national scale land capability for agriculture map indicates that the Route Option 1c is underlain by land which is capable for use as improved grassland with some areas capable of growing a narrow range of crops.	The national scale land capability for agriculture map indicates that the Route Option 2 is underlain by land which is capable for use as improved grassland with some areas capable of use for rough grazing.

Appraisal Topic	Routeing and Siting Objectives	Section C Route Option 1A	Section C Route Option 1B	Section C Route Option 1C	Section C Route Option 2
Engineering Constraints	• To develop as short and direct a route as possible taking account of other routeing constraints and considerations. • To develop route and site options taking account of topography, altitude and side slopes which could affect constructability and/or operability. • To develop route and site options having regard to existing and proposed wind farms and the application of an appropriate separation distance.	Land rises up from the west of the option at the River Teviot and is typically around 250 to 300mAOD as it extends eastwards until the Allan Water. From here land rises up steeply to more than 400mAOD before falling again towards the east of the option at Penchrise Burn. The undulating valleys are typically orientated north-south with route option requiring to cross them. There are some localised steep slopes, particularly to the east around Penchrise.	Landform within the route option is generally more gentle and lower-lying. Altitudes for much of the corridor are around 250mAOD but rise up to around 300mAOD further south. Slopes are relatively gentle and where steep slopes are present they are highly localised and can be avoided.	Land rises up from the west of the option at the River Teviot and is typically around 250 to 300mAOD throughout the route option. Slopes are generally gently undulating, however, localised steep slopes are present to the south of the River Teviot valley.	Altitudes within Route Option 2 are typically between 200 and 300mAOD. The nature of some of the landform within the route option means that there are localised steep slopes particularly in/adjacent to valleys within the forestry plantation.

Table H.6 Section C: A7 to Teviot Substation Route Options Appraisal (Route Options 3 and 4)

Appraisal Topic	Routeing and Siting Objectives	Section C Route Option 3	Section C Route Option 4
Landscape	• To develop route and site options which avoid nationally and locally designated landscapes as far as possible while accounting for other routeing considerations. • To develop route and site options which take account of landscape character and sensitivities and utilise landform and vegetation and integrate within the landscape as much as possible to reduce potentially adverse landscape effects.	A small corridor with LCT 117 Pastoral Upland Fringe and LCT 93 Southern Uplands with Scattered Forest, in an open context running parallel to the A7. The OHLs would run along the plateau on top of the valley ridgeline predominantly impacting the corridor of the A7.	Traversing LCT 96 Southern Uplands with Forest and LCT 93 Southern Uplands and Scattered Forest, in a forested context in the western extent and an open eastern section with steep slopes around Blackcleuch Rig which would result in towers appearing prominently along the ridge and slope. Nonetheless characteristics of the LCTs generally favour integration of OHLs in this Route Option exhibiting large scale rolling landform with a simple, uniform character. The existing 132kV OHL would have to be crossed within the A7 corridor increasing wirescape within the narrow section of the valley.
Visual Amenity	• To develop route and site options which avoid settlements as far as possible in order to reduce potentially adverse effects on visual amenity. • To develop route and site options which avoid rural residential properties as much as possible in order to reduce potentially adverse effects on visual amenity.	Principal visual impact would be for residents at Teviothead, looking along the alignment of the OHL, increasing impacts. Conversely, users of the A7 would likely see the towers and OHL on the skyline of the valley side to the east. This would mirror and accentuate effects from the 132kV line on the western ridgeline of the valley.	Although forested there is potential for views from Craik settlement, potentially along the wayleave through the forest to accommodate the OHL. At the eastern end receptors would include users of the A7, and to a lesser extent looking along the valley from Teviothead, noting the crossing perpendicular with the existing 132kV line along the A7.
Ecology and Biodiversity	• To develop route and site options which avoid sites designated for nature conservation or ecological interests as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features.	Route Option 3 extends in northeastern direction broadly paralleling the River Teviot where it is part of the River Tweed SAC and SSSI. Any OHL within Route Option 3 would be upslope of the SAC and SSSI with some potential to impact it through runoff from within the route option. The potential impact would depend on which substation site is being connected to from Route Option 3 (TEV-03 to the north of Route Option 3 or TEV-01 to the south). Connecting to TEV-03, then Route Option 3 could be used for an onward route south to the Scotland-England border which would result in an OHL route extending north to south. Alternatively, it could be used for an OHL route coming from Section B Route Options 4c or 4d to connect to TEV-01 requiring an OHL route north to south through Section C Route Option 3.	Route Option 4 has the potential to be used for north-south OHL routes from Section B Route Option 4b to Section C Route Option 4 or for north-south OHL routes from Section C Route Option 3 to Section D Route Option 3. OHL routes within Route Option 4 would be required to cross the Limiecleuch Burn and the River Teviot, both of which are part of the River Tweed SAC and SSSI. The potential for impacts on the River Tweed SAC and SSSI can be avoided or reduced by careful siting of OHL towers to maximise separation distances as much as possible.

Appraisal Topic	Routeing and Siting Objectives	Section C Route Option 3	Section C Route Option 4
Cultural Heritage and Archaeology	• To develop route and site options which avoid sites designated for archaeological or cultural heritage conservation purposes as much as possible in order to avoid or reduce potentially adverse effects on them including upon their setting.	There are two scheduled monuments within Route Option 3 as well as other monuments and listed buildings within its immediate vicinity. Subject to which substation site is being connected to from Route Option 3 (TEV-03 to the north of Route Option 3 or TEV-01 to the south) there is the potential for setting effects, particularly on those monuments to the north of Route Option 3 close to TEV-03.	There are no cultural heritage or archaeology sites of the highest or high environmental value within Route Option 4, however, there is one scheduled monument, Lairhope Cottage present to its north. While there will be no direct physical impacts on designated cultural heritage or archaeology sites there is the potential for some setting impacts subject to detailed routeing. There are opportunities to mitigate setting effects through the use of landform and other features including forestry.
Forestry and Woodland	• To develop route and site options which avoid forestry and woodland as much as possible in order to prevent or reduce the loss of tree cover.	There is a small amount of woodland to the south of Route Option 3 which could be affected. This includes a small woodland on Bink's Hill as well as a narrow woodland extending along Phaup Burn which is also identified on the Native Woodland Survey of Scotland. Some tree removal within Route Option is unavoidable, however, there are opportunities to reduce it.	There is a large area of forestry plantation to the north of Route Option 4 where it crosses the southern extent of the Craik Forest. Moving through the Route Option there are smaller pockets of woodland including Ancient Woodland Inventory sites and woodlands identified on the Native Woodland Survey of Scotland. The extent and distribution of forestry and woodland within Route Option 4 means some tree removal would be unavoidable.
Water resources	• To develop route and site options which adhere to a minimum 50m separation zone from watercourses or bodies in order to prevent or reduce adverse effects on water quality • To develop route or site options which avoid routeing or siting within flood zones or where they cannot be avoided by route options can be crossed at their narrowest point	There is a small number of watercourses present within Route Option 3 which would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There is a number of watercourses present within Route Option 4which would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.
Ground Conditions	• To develop route and site options which avoid sites designated for geological conservation as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features. • To develop route and site options which avoid priority peatland and peatland habitats as much as	There are no constraints relating ground conditions considerations present within Route Option 3.	The Carbon-rich Soils and Peatland Map indicates that extensive areas of the route option are underlain by class 3 and class 5 soils. These are particularly extensive to the west of Route Option 4 on the margins of Craik Forest. The extent and distribution of peatland within Route Option 4 means that some impacts would be unavoidable.

Appraisal Topic	Routeing and Siting Objectives	Section C Route Option 3	Section C Route Option 4
	possible in order to avoid or reduce the loss of peatland or other carbon-rich soils as much as possible.		
Tourism and Recreation	• To develop route and site options which avoid or reduce impacts on recreational routes and areas as well as other visitor attractions as much as possible in order to prevent impacts on the amenity of users or visitors.	There are no major visitor attractions or recreational routes within the route option.	There are no major visitor attractions or recreational routes within the route option.
Land Use	• To develop route and site options while having regard to existing land uses including the nature and extent of agricultural land or commercial forestry and seeking to reduce impacts on existing land use as much as possible.	The national scale land capability for agriculture map indicates that the Route Option 3 is underlain by land which is capable for use as improved grassland.	The national scale land capability for agriculture map indicates that the Route Option 4 is underlain by land which is capable for use as improved grassland of for rough grazing.
Engineering Constraints	• To develop as short and direct a route as possible taking account of other routeing constraints and considerations. • To develop route and site options taking account of topography, altitude and side slopes which could affect constructability and/or operability. • To develop route and site options having regard to existing and proposed wind farms and the application of an appropriate separation distance.	Altitude climbs relatively steeply west to east with Route Option 3 ascending the Teviot Valley but otherwise are generally between 300 and 350mAOD north to south. The valley formed by Far Height and Bink's Hill is a notable constraint that would require to be crossed north to south. There are localised steep slopes that an OHL route would require to traverse.	Landform within Route Option 4 is formed by a series of valleys running southwest to northeast. As result altitude rises and falls moving southeast through the route option from around 200mAOD in the base of valleys to more than 300mAOD on hilltops. There are localised high points in excess of 400mAOD to the west and east of Route Option 4. As a result valley sides form steep slopes that would require to be crossed by an OHL route. This option would require to cross the existing 132kV OHL route (V route).

Table H.7 Section D: Teviot Substation to Scotland-England Border Route Options Appraisal (Route Options 1 and 2)

Appraisal Topic	Routeing and Siting Objectives	Section D Route Option 1	Section D Route Option 2a	Section D Route Option 2b	Section D Route Option 2C	Section D Route Option 2D
Landscape	• To develop route and site options which avoid nationally and locally designated landscapes as far as possible while accounting for other routeing considerations. • To develop route and site options which take account of landscape character and sensitivities and utilise landform and vegetation and integrate within the landscape as much as possible to reduce potentially adverse landscape effects.	The corridor is within an isolated area of LCT 96 Southern Uplands with Forest, passing through a highly forested area in the north before entering a sharply defined upland ridgeline of Amton Fell in the south. The route would cross the hilltop or side for a short section, locally increasing visibility and influence, albeit with some forestry to the east and west which could be used as screening and/or backclothing to partially mitigate effects. Overall lower sensitivity in the north of the Route Option with increased sensitivity as a result of the nature of the landform, and alignment crossing it, in the south.	As described for Option 1 (LCT 96 Southern Uplands with Forest) this is an area of dense large-scale forestry in an upland context of lower sensitivity to OHL. Initially, the route crosses Liddesdale, traversing the B6357 and spanning the narrow valley (LCT 113 Upland Valley with Pastoral Floor) of the Liddel Water. Towers will add infrastructure to the narrow valley, most likely on the upper slopes, increasing change in character, albeit effects are likely to be localised. Thereafter it is largely within the extensive upland forestry of Newcastleton Forest but potentially cresting a number of open hill tops at Castleton Muir and Blinkbonny Height, which the alignment could avoid in favour of adjacent forest to the east or following lower contours to avoid skylining, reducing impacts.	The landscape context comprises a short section within LCT 113 Upland Valley with Pastoral Floor followed by LCT 96 Southern Uplands with Forest, as for other Section D options. The alignment is on open upland adjacent to Newcastleton Forest edge, rising perpendicularly up the steep hillside of Larriston Fell, which will accentuate localised impacts on landscape character. Crossing small sections of shelterbelt planting some of which include ancient woodland would also be unavoidable.	Route Option 2C starts in LCT 96 Southern Uplands with Forest before extending along the western valley side of Liddesdale in LCT 113 Upland Valley with Pastoral Floor. A small section of the western part of the Route Option extends into LCT 93 Southern Uplands with Scattered Forest. The enclosed nature of the upland landform strongly contains the open character of the valley floor, which increases the sensitivity of this landscape and the relationship of the route along it to the landform. Careful routeing along contours of the valley side, to enable backclothing of the OHL could assist in limiting wider effects on the more sensitive valley landscape. The existing 11KV network runs along the valley.	This Route Option is largely in LCT 176 Foothills with Forest and LCT 172 Upland Fringe before crossing Liddel Water and terminating in LCT 160 Narrow Wooded River Valley. The majority of the northern/central section could be routed alongside or through extensive forestry, reducing impacts on character providing sections of ancient woodland are avoided. The sensitivity increases as the alignment skirts the valley south of Harelaw Pike, when the OHL and towers will dominate the enclosed narrow valley before crossing the B6357, with limited scope for mitigation.
Visual Amenity	• To develop route and site options which avoid settlements as far as possible in order to reduce potentially adverse effects on visual amenity. • To develop route and site options which avoid rural residential properties as much as possible in order to reduce potentially adverse effects on visual amenity.	There are a small number of isolated residential properties/farms within the corridor which is otherwise relatively unpopulated and with a single core path in the southern extent. Potential skyline views from hamlets of Toftholm and Shaws. Potential views from Hermitage and associated heritage sites, in which the southern section of the OHL/towers would need to	There are isolated properties and a core path at Steele Road and at Dinnlabyre on the B6357. The majority of views would be users of the B6357 within Liddesdale. South of Liddesdale there are few visual receptors although the area includes Newcastleton Forest mountain biking and walking trails which are widely used for recreational purposes. Given the dense forestry, views are	Views would be obtained from multiple properties on the B6357 at Larriston, Riccarton and Burnmouth, potentially with oversailing at Larriston and looking along the OHL as it rises on the steep landform, accentuating visual impact. Scope exists to position the OHL between linear forestry which is continuous on the	Liddesdale accommodates both the locally important B6357 and linear settlement between Newcastleton and Kershope. There are core paths at Newcastleton and multiple local roads off the B6357 to the east, connecting isolated properties. There is also a local viewpoint on the local road west to Langholm which is well used overlooking Newcastleton and the valley.	A number of isolated properties in the southern section around Harelaw Hill and along the B6357 would be impacted by the proximity and addition in the narrow valley.

Appraisal Topic	Routeing and Siting Objectives	Section D Route Option 1	Section D Route Option 2a	Section D Route Option 2b	Section D Route Option 2C	Section D Route Option 2D
		be carefully sited to avoid appearing prominently on the skyline.	likely to be limited and localised although forestry clearance would be required to facilitate an OHL which could open up views. Distant views are also likely from the settlement of Newcastleton. Care would also need to be taken with the detailed routeing of this Route Option to avoid sections of the OHL appearing juxtaposed against the proposed Liddesdale windfarm in views from settlement and properties to the west.	southside but fragmented to the north.	Careful routeing to the west to avoid impacting this viewpoint would be required. Potential sensitive viewers are therefore relatively numerous with this Route Option, with limited scope for mitigation.	
Ecology and Biodiversity	• To develop route and site options which avoid sites designated for nature conservation or ecological interests as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features.	There are no sites designated for nature conservation or ecological interests within or immediately close to Route Option 1.	There are no sites designated for nature conservation or ecological interests within or immediately close to Route Option 2a.	Route Option 2b avoids sites designated for nature conservation or ecological interests, however, it would cross the Scotland-England border into the Kielder Forest and into an area where components of the Border Mires Kielder-Butterburn and Kielder Mires SSSI are present and would be likely to constrain onwards routeing within England.	Route Option 2c avoids sites designated for nature conservation or ecological interests. It is routed on the west of the Liddel Water valley to the east of the Langholm-Newcastleton SPA and SSSI. Routeing to the east of the designated site should prevent impacts on it. The qualifying features of the SPA (hen harrier) are understood to be largely concentrated to the west of the designated site along the Tarras Water valley which is more than 5km west of route option 2c.	There are no sites designated for nature conservation or ecological interests within or immediately close to Route Option 2d.
Cultural Heritage and Archaeology	• To develop route and site options which avoid sites designated for archaeological or cultural heritage conservation purposes as much as possible in order to avoid or reduce potentially adverse	There are two scheduled monuments within Route Option 1 as well as further scheduled monuments and listed buildings outside of it. This includes Hermitage Castle to the west of Route Option 1. While there will be no direct physical impacts on	There is one listed building within Route Option 2a as well as scheduled monuments and listed buildings within its vicinity. While there will be no direct physical impacts on designated cultural heritage or archaeology sites there is the potential for some setting	There are no cultural heritage or archaeology sites of the highest or high environmental value within Route Option 2b, however, there are listed buildings to the north. While there will be no direct physical impacts on designated cultural heritage or	There is one scheduled monument within Route Option 2c on Kirk Hill as well as scheduled monuments and listed buildings within its vicinity. The option would not result in direct physical impacts on designated cultural heritage or	There are some listed buildings within Route Option 2d as well as scheduled monuments and listed buildings present within the wider area. While there will be no direct physical impacts on designated cultural heritage or archaeology sites there is the

Appraisal Topic	Routeing and Siting Objectives	Section D Route Option 1	Section D Route Option 2a	Section D Route Option 2b	Section D Route Option 2C	Section D Route Option 2D
	effects on them including upon their setting.	designated cultural heritage or archaeology sites there is the potential for some setting impacts subject to detailed routeing. There are opportunities to mitigate setting effects through the use of landform and other features including forestry.	impacts subject to detailed routeing. There are opportunities to mitigate setting effects through the use of landform and other features including forestry.	archaeology sites there is the potential for some setting impacts subject to detailed routeing. There are opportunities to mitigate setting effects through the use of landform and other features including forestry.	archaeology sites, however, there is the potential for some setting impacts subject to detailed routeing. There are opportunities to mitigate setting effects through the use of landform.	potential for some setting impacts subject to detailed routeing.
Forestry and Woodland	• To develop route and site options which avoid forestry and woodland as much as possible in order to prevent or reduce the loss of tree cover.	A large part of Route Option 1 crosses the southwestern forestry plantation where it extends across part of Wauchope Forest. Some woodland is present which is either Ancient Woodland Inventory or identified in the Native Woodland Survey of Scotland. The former occupies only a small area. The extent of forestry present within the route option means tree removal is unavoidable, however, there may be opportunities to reduce it utilising existing breaks.	Route Option 2a crosses large areas of forestry plantation including routeing along the western margins of Newcastleton Forest. This includes crossing woodland identified in the Native Woodland Survey of Scotland. There are some limited opportunities to avoid forestry and woodland, however, the extent and distribution is such that some tree removal would be unavoidable.	Small areas of woodland as well as extensive areas of plantation forestry are present within Route Option 2b. This includes an Ancient Woodland Inventory site which extends across the option and would require to be crossed as well as areas of woodland identified in the Native Woodland Survey of Scotland. A large part of the route option crosses through forestry plantation including the northern part of Newcastleton Forest and then Kielder Forest where it crosses into England. The extent of forestry present within the route option means tree removal is unavoidable, however, there may be opportunities to reduce it utilising existing breaks.	There are small areas of woodland scattered through Route Option 2c. This includes Ancient Woodland Inventory sites as well as woodlands identified in the Native Woodland Survey of Scotland. Part of the route option also crosses forestry plantation. There are some limited opportunities to avoid forestry and woodland, however, the extent and distribution is such that some tree removal would be unavoidable.	Much of Route Option 2d has the potential to impact on forestry and woodland. The northern part of the route option crosses plantation forestry and then as it turns to cross the Scotland-England border crosses Ancient Woodland Inventory sites as well as woodland identified in the Native Woodland Survey of Scotland. The extent of forestry present within the route option means tree removal is unavoidable.
Water resources	• To develop route and site options which adhere to a minimum 50m separation zone from watercourses or bodies in order to prevent or reduce adverse effects on water quality • To develop route or site options which avoid routeing or siting within	There is a small number of watercourses which would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There is a small number of watercourses which would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There is a small number of watercourses which would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There is a small number of watercourses which would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	There is a small number of watercourses which would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.

Appraisal Topic	Routeing and Siting Objectives	Section D Route Option 1	Section D Route Option 2a	Section D Route Option 2b	Section D Route Option 2C	Section D Route Option 2D
	flood zones or where they cannot be avoided by route options can be crossed at their narrowest point					
Ground Conditions	• To develop route and site options which avoid sites designated for geological conservation as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features. • To develop route and site options which avoid priority peatland and peatland habitats as much as possible in order to avoid or reduce the loss of peatland or other carbon-rich soils as much as possible.	The Carbon-rich Soils and Peatland Map indicates that extensive areas of the route option are underlain by class 3 and class 5 soils, particularly to the north within and on the margins of forestry plantation. The extent and distribution of peatland within Route Option 1 means that some impacts on peatland would be unavoidable.	Kershope Bridge SSSI designated for geological purposes occupies a small area within the route option where it meets the Scotland-England border. There are opportunities to avoid the site and prevent impacting it. The Carbon-rich Soils and Peatland Map indicates that class 3 and class 5 soils are present within the route option. They extend across the route option where it approaches the border but elsewhere there are some opportunities to avoid them. The extent and distribution of peatland within Route Option 2a means that some impacts on peatland would be unavoidable.	The Carbon-rich Soils and Peatland Map indicates that an area of class 1 peat extends across Route Option 2b where it would cross the Scotland-England border. As a result, impacts on peatland would be unavoidable.	The Carbon-rich Soils and Peatland Map indicates that extensive areas of the route option are underlain by class 3 and class 5 soils. The extent and distribution of peatland within Route Option 1 means that some impacts on peatland would be unavoidable.	Penton Linns SSSI designated for geological purposes occupies a small area to the north of the route option where it meets the Scotland-England border. The Carbon-rich Soils and Peatland Map indicates that a large part of the route option would be required to cross class 3 and class 5 soils which extend across it. The extent of peatland within Route Option D means some impact on peatland is unavoidable.
Tourism and Recreation	• To develop route and site options which avoid or reduce impacts on recreational routes and areas as well as other visitor attractions as much as possible in order to prevent impacts on the amenity of users or visitors.	There are no major visitor attractions or recreational routes within the route option, however, Hermitage Castle lies to the west of the option.	Route Option 2a crosses part of the Newcastleton Forest which supports recreational activities. There are extensive mountain bike tracks on the west of the forestry which would require to be crossed by an OHL route.	There are no major visitor attractions or recreational routes within the route option.	There are no major visitor attractions or recreational routes within the route option.	There are no major visitor attractions or recreational routes within the route option.
Land Use	• To develop route and site options while having regard to existing land uses including the nature and extent of agricultural land or commercial forestry and seeking to reduce impacts	The national scale land capability for agriculture map indicates that the Route Option 1 is underlain by land which is capable for use as	The national scale land capability for agriculture map indicates that the Route Option 2a is underlain by land which is capable for use as	The national scale land capability for agriculture map indicates that the Route Option 2b is underlain by land which is capable for use as	The national scale land capability for agriculture map indicates that the Route Option 2c is underlain by land which is capable for use as improved grassland.	The national scale land capability for agriculture map indicates that the Route Option 2d is underlain by land which is capable for use as improved grassland with small

Appraisal Topic	Routeing and Siting Objectives	Section D Route Option 1	Section D Route Option 2a	Section D Route Option 2b	Section D Route Option 2C	Section D Route Option 2D
	on existing land use as much as possible.	improved grassland of for rough grazing.	improved grassland of for rough grazing.	improved grassland of for rough grazing.		areas for rough grazing and closer to the border in the Liddle Water valley capable of supporting a narrow range of crops.
Engineering Constraints	• To develop as short and direct a route as possible taking account of other routeing constraints and considerations. • To develop route and site options taking account of topography, altitude and side slopes which could affect constructability and/or operability. • To develop route and site options having regard to existing and proposed wind farms and the application of an appropriate separation distance.	Altitudes within Route Option 1 are typically between 300 and 400mAOD. There are some localised areas where they are below this coinciding with narrow river valleys such as along the Roughley Burn. While for large parts the route option crosses land which is gently undulating there are localised steep slopes coinciding with valleys which have to be crossed.	Route Option 2a crosses the Liddel Water valley to its north and then is routed across the eastern slopes of the valley. It largely follows the valley landform crossing land between 150 and 250mAOD. There are some localised steep slopes which would require to be crossed including the Tweeden Burn and Kershope Burn at the border where the watercourses flow across the route option within relatively steep valleys. Route 2a has been narrowed as it crosses the Newcastleton Forest to account for the proposed Liddesdale Wind Farm to the east. The route option takes account of the wind farm layout including application of an appropriate separation distance from the wind turbines.	Altitudes within Route Option 2b range from around 150mAOD within where the route option crosses the B6357 to more than 500mAOD where it crosses the Scotland-England border. Land to the north slopes down steadily towards the B6357, however, moving southeast of this there are localised steep slopes including around Larriston and ascending the hillslopes towards the border.	Route Option 2c is routed over the western side of the Liddel Water valley. With the exception of some localised high points such as Kirk Hill altitudes are typically between 100 and 200mAOD. The majority of the landform is gently undulating with relatively shallow slopes.	Altitudes within Route Option 2d range from just over 200mAOD to around 50mAOD where the route option crosses the Scotland-England border. The majority of the landform is gently undulating with relatively shallow slopes.

Table H.8 Section D: Teviot Substation to Scotland-England Border Route Options Appraisal (Route Options 3, 4 and 5)

Appraisal Topic	Routeing and Siting Objectives	Section D Route Option 3	Section D Route Option 4a	Section D Route Option 4b	Section D Route Option 5
Landscape	• To develop route and site options which avoid nationally and locally designated landscapes as far as possible while accounting for other routeing considerations. • To develop route and site options which take account of landscape character and sensitivities and utilise landform and vegetation and integrate within the landscape as much as possible to reduce potentially adverse landscape effects.	In succession this option passes through LCT 96 Southern Uplands with Forest, LCT 178 Southern Uplands with Forest, LCT 177 Southern Uplands, LCT 176 Foothills with Forest, LCT 160 Narrow Wooded River Valley and LCT 175 Foothills. These are essentially upland forested areas of lower sensitivity and of a scale to potentially accommodate OHLs/towers. The exception is LCT 160 Narrow Wooded River Valley which is of increased sensitivity. Most of the northern and central section is forested in the western area and an OHL could be routed through the forestry or on its edge. The southern section is on more open terrain or lower elevation forming a transitional landform from the upland to lowland.	The route is predominantly in LCT 175 Foothills, terminating in LCT 172 Upland Fringe, both indicating lower elevation and a transitional landform and landscape from the upland landscape further north. Apart from in the vicinity of the A708 crossing much of this route passes through open, locally undulating landscape with isolated settlements and proximity to the A708. Increased wirescape could occur where the corridor contains a section of existing 132 kV OHL around Crawthat Hill, aligned to the end of woodland/forestry. In its eastern section the route is close to Solwaybank wind farm.	Option 4b passes through LCT 175 Foothills, LCT 172 Upland Fringe and LCT 171 Flow Plateau. This marks a transition in landform from the lower areas of upland foothills and fringes to an open and low lying plain associated with the Solway Firth. Minsca and Solway Bank windfarms lie close to the corridor which is increasingly open as it approaches the Solway plain flow plateau. A section of existing 132 kV OHL crosses the Route Option where there could result an increase in wirescape particularly within the open flow plateau.	Predominantly in LCT 171 Flow Plateau in a populated area with numerous isolated properties and settlements linked by local roads. There is some limited woodland in an otherwise open and largely flat landform, defined by enclosed fields of pasture. The smaller scale landform and pattern increases sensitivity of the landscape.
Visual Amenity	• To develop route and site options which avoid settlements as far as possible in order to reduce potentially adverse effects on visual amenity. • To develop route and site options which avoid rural residential properties as much as possible in order to reduce potentially adverse effects on visual amenity.	There are very few residential receptors in much of the northern and central section until the route crosses the A709 at Baliehill and proceeds to Paddockhole, between which a local road parallel to the corridor provides access to several isolated properties. There are cycle tracks and recreational access in the forestry areas, especially in the south. Overall, this is an isolated corridor in a forested landscape with few viewers but an alignment potentially on ridgeline, in the south in particular could increase visual effects.	There are few residential receptors, the main grouping being around Winterhope, centrally within the OHL corridor and already partially impacted by the existing 132 kV. Recreational users of the core path at Gowd Muir, which runs along the corridor would be impacted. There will likely be views from the B7068 but overall, few receptors	The corridor is noticeably more populated than upland and foothills to the north and is crossed by multiple local roads. Blocks of forestry in the central section indicate possible mitigation but the settlement of Waterbeck and multiple isolated properties would view the OHL/towers, adding to existing views of the 132 kV line and 33 kV lines, exacerbating the wirescape present in views.	In addition to multiple isolated hamlets and properties the main settlements include Evertown and Canonbie, all likely to have views of the OHL in a relatively open landscape, adding to the existing 132 kV route in the vicinity of the A7 and 33 kV routes crossing the corridor centrally either side of the B6357.
Ecology and Biodiversity	• To develop route and site options which avoid sites designated for nature conservation or ecological interests as far as possible	Worms Cleuch, which is part of the River Tweed SAC, is located within the route option at its northern extent. It drains the route option in a southern/southeastern direction.	There are no ecological designations within Route Option 4a.	There are no ecological designations within Route Option 4b. Bells Flow SSSI is located to the south of it and sufficiently far enough away that it should be adversely affected.	There are no ecological designations within Route Option 5.

Appraisal Topic	Routeing and Siting Objectives	Section D Route Option 3	Section D Route Option 4a	Section D Route Option 4b	Section D Route Option 5
	in order to avoid or reduce potentially adverse effects on the sites and their qualifying features.	Potential for impacts on the River Tweed SAC and SSSI can be avoided through route selection or, should it required to crossed avoided or reduced by careful siting of OHL towers to maximise separation distances as much as possible.			
Cultural Heritage and Archaeology	• To develop route and site options which avoid sites designated for archaeological or cultural heritage conservation purposes as much as possible in order to avoid or reduce potentially adverse effects on them including upon their setting.	There are a number of scheduled monuments within and on the margins Route Option 3 as well as a small number of listed buildings. This includes Mid Raeburn to Craik Cross Hill, Roman road and watch tower which runs parallel to the north of the route option as well as the remains of settlements and hillforts within the option. While there will be no direct physical impacts on designated cultural heritage or archaeology sites there is the potential for some setting impacts subject to detailed routeing. There are opportunities to mitigate setting effects through the use of landform and other features including forestry.	There is a number of scheduled monuments and listed buildings within Route Option 4a as well as some on the margins of it. There will be no direct physical impacts on designated cultural heritage or archaeology sites, however, there is the potential for some setting impacts subject to detailed routeing. There are some opportunities to avoid or reduce setting effects through the use of landform and other features including forestry.	There are a number of listed buildings present within Route Option 4b as well as well as scheduled monuments and listed buildings just outside of it. There is the potential for some setting impacts subject to detailed routeing, however, there are some opportunities to avoid or reduce setting effects.	There are a small number of scheduled monuments and listed buildings within or close to the route option. This includes Scots Dike a linear scheduled monument which follows the boundary of the route option along part of the border as well as extends into Route Option 5. There will be no direct physical impacts on designated cultural heritage or archaeology sites, however, there is the potential for some setting impacts subject to detailed routeing.
Forestry and Woodland	• To develop route and site options which avoid forestry and woodland as much as possible in order to prevent or reduce the loss of tree cover.	The route option crosses an extensive part of Eskdalemuir Forest some of which includes woodlands identified on the Native Woodland Survey of Scotland. The route option would require large amount of tree removal within forestry plantation.	There are small areas of woodland present within the route option including sites on the Ancient Woodland Inventory which extend into it, sites on the Native Woodland Survey of Scotland which are wholly within it and forestry plantation. The extent of forestry and woodland means that some tree removal would be required. While smaller areas are avoidable subject to other routeing considerations there are localised areas such as at Gowd Muir where forestry cannot be avoided.	There are small areas of woodland and forestry present throughout the route option. This includes a number of Ancient Woodland Inventory site some of which cannot be avoided, as well as sites on the Native Woodland Survey of Scotland. The extent of forestry and woodland means that some tree removal would be required including within Ancient Woodland Inventory sites which extend across the route option and cannot be avoided.	There are small areas of woodland and forestry present throughout the route option. This includes Ancient Woodland Inventory sites as well as sites on the Native Woodland Survey of Scotland. The extent of forestry and woodland means that some tree removal could be required subject to detailed routeing.
Water resources	• To develop route and site options which adhere to a minimum 50m separation	There are a number of watercourses present within Route Option 3 which	There are a number of watercourses present within Route Option 4a	There are a number of watercourses present within Route Option 4b which	There are a number of watercourses present within Route Option 5 which

Appraisal Topic	Routeing and Siting Objectives	Section D Route Option 3	Section D Route Option 4a	Section D Route Option 4b	Section D Route Option 5
	zone from watercourses or bodies in order to prevent or reduce adverse effects on water quality • To develop route or site options which avoid routeing or siting within flood zones or where they cannot be avoided by route options can be crossed at their narrowest point	would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	including Winterhope Reservoir. Potential adverse effects on watercourses can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.	would require to be crossed by an OHL route, however, adverse effects can be avoided/reduced through the development of a detailed alignment and siting of OHL towers.
Ground Conditions	• To develop route and site options which avoid sites designated for geological conservation as far as possible in order to avoid or reduce potentially adverse effects on the sites and their qualifying features. • To develop route and site options which avoid priority peatland and peatland habitats as much as possible in order to avoid or reduce the loss of peatland or other carbon-rich soils as much as possible.	The Carbon-rich Soils and Peatland Map indicates that extensive areas of the route option are underlain by class 3 and class 5 soils while some small areas of class 1 soils are present. The extent and distribution of peatland within Route Option 3 means that some impacts on peatland would be unavoidable.	The Carbon-rich Soils and Peatland Map indicates that extensive areas of the route option are underlain by class 1, 3 and 5 soils. The extent and distribution of peatland within Route Option 4a including across Priestbutts Moss and Gowd Muir means that some impacts on peatland would be unavoidable.	The Carbon-rich Soils and Peatland Map indicates that extensive areas of the route option are underlain by class 1, 3 and 5 soils. The extent and distribution of peatland east of the B722 means that some impacts on peatland would be unavoidable.	The Carbon-rich Soils and Peatland Map indicates that small areas of the route option are underlain by class 5 soils. The extent and distribution of these means that impacts should be avoidable subject to other routeing constraints.
Tourism and Recreation	• To develop route and site options which avoid or reduce impacts on recreational routes and areas as well as other visitor attractions as much as possible in order to prevent impacts on the amenity of users or visitors.	There are no major visitor attractions or recreational routes within the route option, however, there is a core path towards its southern extent.	There are no major visitor attractions or recreational routes within the route option, however, there is a core path running through the option from the B7068 to Barnglieshead.	There are no major visitor attractions or recreational routes within the route option.	There are no major visitor attractions or recreational routes within the route option, however, there is a core path towards its southern extent.
Land Use	• To develop route and site options while having regard to existing land uses including the nature and extent of agricultural land or commercial forestry and	The national scale land capability for agriculture map indicates that the Route Option 3 is underlain by land which is capable for use as improved grassland or for rough grazing.	The national scale land capability for agriculture map indicates that the Route Option 4a is underlain by land which is capable for use as improved grassland.	The national scale land capability for agriculture map indicates that the Route Option 4b is underlain by land which is capable of growing a narrow range of crops or for use as improved grassland.	The national scale land capability for agriculture map indicates that land capability is variable with capability generally improving moving eastwards through the option. Land includes land capable of producing a narrow range of

Appraisal Topic	Routeing and Siting Objectives	Section D Route Option 3	Section D Route Option 4a	Section D Route Option 4b	Section D Route Option 5
	seeking to reduce impacts on existing land use as much as possible.				crops as well as land capable of average production on eastern most areas close to the border.
Engineering Constraints	• To develop as short and direct a route as possible taking account of other routeing constraints and considerations. • To develop route and site options taking account of topography, altitude and side slopes which could affect constructability and/or operability. • To develop route and site options having regard to existing and proposed wind farms and the application of an appropriate separation distance.	The northern part of Route Option 3 up to the River Esk is typically between 300 and 400mAOD, however, there are some small areas with higher or lower altitudes for example some the hills where route option 3 starts are around 450mAOD while the River Esk valley sits around 200mAOD. South of the River Esk elevations are lower typically between 200 and 250mAOD. There are a number of areas within the route option where locally steep slopes are present and would require to be crossed by route options. Route Option 3 was developed to avoid the proposed Faw Side Wind Farm by routeing to the west of it. It should be noted that during the course of the routeing and siting study the application was refused on appeal. Consideration was given to widening the route option, however, much of the proposed wind farm is located on highly elevated land including land greater than 500mAOD which would not provide any significant benefits in routeing terms.	Altitudes within the route option are relatively low typically between 150 and 250mAOD, however, there are some localised high points to the western side of it. While landform is gently undulating moving from west to east altitudes are falling around 150mAOD. Route Option 4a avoids the existing wind farms which are present including Ewe Hill to the north and Solwaybank to the south. This includes applying an appropriate separation distance from the wind turbines.	Altitudes within the route option are typically falling from west to east. They range from 250mAOD at the far north/west of the route option to 120mAOD at the far south/east of the route option. Sections of Route Option 4b have been narrowed to avoid existing wind farms including Minsca Wind Farm and to a lesser extent Solwaybank Wind Farm. This includes applying an appropriate separation distance from the wind turbines. Route Option 4b would be required to cross the 132kV OHL route which is routed from Ewe Hill Substation towards Gretna.	Altitudes fall from west to east from around 120mAOD to around 50mAOD close to the Scotland-England border. Land is very gently undulating in places with no significant slopes. Route Option 5 would be required to cross the 132kV OHL route which is routed north to south from Hawick towards Harker in England.