

# Appendix D

Site Options Appraisal Table

## BT Route Tie-in and Associated Ladyburn 132 kV Collector Substation



# Site Options Appraisal Table

The appraisal set out below only refers to designated sites and features which are present within the study area. **Please note that all distance measures provided are approximate.**

Criterion	Consideration	Site Option 1	Site Option 2	Site Option 3	Preference
Landscape and Visual Amenity	Designated Landscapes	None of the substation site options are located near any nationally or locally designated landscapes. The nearest Regional Scenic Area (RSA) is Mochrum Lochs, approximately 5km to the southeast of Glenluce.			<p><b>Site Option 2 is marginally preferred</b> as it offers good opportunities for additional screen planting. While part of the existing scrub woodland would need to be cleared to create and maintain the overhead line servitude corridor, this would be less extensive than for Site Option 1.</p> <p>Site Option 2 is the least preferred as it would affect a landscape of hummocky scrub woodland.</p> <p>Site Option 3 features smaller-scale, more varied terrain along the Glenjollie Burn, with diverse vegetation cover providing greater scenic interest.</p>
	Landscape character (and its susceptibility to a new 132kV substation)	<p>All three sites are located in Naturescot’s online National Landscape Character Assessment as Landscape Character Type (LCT) 172: Upland Fringe - Dumfries and Galloway. The key characteristics of this LCT include:</p> <ul style="list-style-type: none"> <li>• <i>‘Improved and rough grassland in close proximity.</i></li> <li>• <i>Dry stone dykes.</i></li> <li>• <i>Squared areas of forestry.</i></li> <li>• <i>Contrast between wide open areas and more intimate landform.</i></li> <li>• <i>Panoramic views over the valley and coastal lowlands.</i></li> <li>• <i>Small bridges over incised burns.</i></li> <li>• <i>Notable landmark features, including Iron Age fortifications, designed landscapes and grand houses’.</i></li> </ul>			
		<p>The study area gradually rises from Glenluce and the coastal plain towards the north. The region drained by the shallow valleys of the Lady Burn, Vennal Strand, and Glenjorrie Burn is characterised by locally uneven terrain, featuring minor ridges, hollows, and small valleys. Pasture dominates the land use, comprising a mix of improved and rough grassland.</p> <p>The landscape has a transitional character between the lowlands and uplands, shaped by the balance between agriculture and forestry. The uplands form prominent skylines and backdrops to the north, with wind farms clearly visible on the higher ground and, to a lesser extent, in areas south of the A75.</p> <p>The northern part of the study area, particularly around Site Options 1 and 2, is characterised by an open landscape where fields are primarily used for livestock grazing and silage production. Much of the eastern and northeastern area is covered by fairly low growing hawthorn scrub, while a higher density of trees in the southern part provides a greater sense of enclosure. Field and lane hedgerows remain largely intact and are important in defining and maintaining the local pattern of enclosure.</p>			

Criterion	Consideration	Site Option 1	Site Option 2	Site Option 3	Preference
	Land cover, terrain and opportunities for additional mitigation	<p>Site Option 1 is situated adjacent to the BT Route in an area of scrub woodland and rough grassland on the lower slopes of Barmain Hill near High Glenjorrie farmstead northeast of Glenluce. The hummocky terrain lies around 75mAOD.</p> <p>Part of the existing scrub woodland would need to be removed to facilitate the overhead line, its associated servitude corridor and the substation.</p> <p>Although not suited to tall woodland screen planting, this site option lies to the south of Barmain Hill, which would reduce the influence of a substation on the landscape to the north. Similarly, the rising land to the east of the Old Military Road, towards the A75, would help to contain the influence of a substation on the landscape to the south.</p>	<p>Site Option 2 is located near Site Option 1, slightly higher up the slopes of Barmain Hill. It comprises an area of grazed pastures outside the scrub woodland.</p> <p>The sloping terrain rises between 75 and 85mAOD lies around 75mAOD.</p> <p>Part of the existing scrub woodland would need to be cleared to create and maintain the overhead line servitude corridor, but this would be less extensive than for Site Option 1.</p> <p>Although the field is more open than those containing Site Options 1 and 3, the site is close to Balloch-A-Heathry Wood. As such, if designed sensitively, woodland screen planting would be consistent with the local landscape character and help lessen the influence of a substation on the wider landscape.</p>	<p>Site Option 3 is situated to the north of Glenluce village in grazed pastures adjacent to Glenjorrie Burn on the eastern side of Vennal Hill.</p> <p>Lying around 55mAOD it occupies the sloping western side of the shallow valley through which the Glenjorrie Burn flows.</p> <p>The relatively high tree cover around the edge of Glenluce and along the course of the Glenjorrie Burn, means that woodland screen planting around the new substation would not be inappropriate in the context of the wider landscape character.</p>	
	Visual Amenity	<p>Site Option 1 is situated 1.2km northeast of Glenluce. Views from the edge of the village are screened by the rising landform and vegetation, as well as by</p>	<p>Site Option 2 is located 1.3km northeast of Glenluce. Views from the edge of the village are screened by the rising landform and vegetation, as well as by</p>	<p>Site Option 3 is located 250m north of Glenluce. Views from the edge of the village are screened by the rising landform and vegetation, as well as by a disused railway</p>	<p><b>Site Option 2 is marginally preferred</b> in terms of general visual amenity. This is because it is further from potential visual receptors, particularly those using the lane leading from Glenluce to the Three Lochs Area, and it provides</p>

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		<p>a disused railway line, which features a combination of vegetated cutting and embankment, marking much of the northern boundary of the settlement.</p> <p>The main viewing opportunities would be for people using the (typically private) access tracks to residential properties.</p> <p>Users of the A75 to the south of the substation siting area, and those on the wider local road network generally have limited views of the surrounding landscape.</p> <p>An exception is the transient receptors travelling along sections of the minor lane, which crosses the western edge of the substation siting area and runs northeast from Glenluce towards the Three Lochs area. Although intact hedgerows and the rising landform partly restrict visibility along sections of this lane, there are some open views towards this site option.</p> <p>Hedgerow planting along this road would be in keeping with the local landscape character, but tree planting would risk obscuring the panoramic views towards the Galloway Hills and Luce Bay.</p>	<p>a disused railway line, which features a combination of vegetated cutting and embankment, marking much of the northern boundary of the settlement.</p> <p>The main viewing opportunities would be for people using the (typically private) access tracks to residential properties.</p> <p>Users of the A75 to the south of the substation siting area, and those on the wider local road network generally have limited views of the surrounding landscape.</p> <p>An exception is the transient receptors travelling along sections of the minor lane, which crosses the western edge of the substation siting area and runs northeast from Glenluce towards the Three Lochs area. Although intact hedgerows and the rising landform partly restrict visibility along sections of this lane, there are some open views towards this site option. Hedgerow planting along this road would be in keeping with the local landscape character, but tree planting would risk obscuring the panoramic views towards the Galloway Hills and Luce Bay.</p>	<p>line, which features a combination of vegetated cutting and embankment, marking much of the northern boundary of the settlement.</p> <p>The main viewing opportunities would be for transient receptors travelling along sections of the minor lane, which crosses the western edge of the substation siting area and runs northeast from Glenluce towards the Three Lochs area. Although intact hedgerows and the rising landform partly restrict visibility along sections of this lane, there are some open views towards this site option.</p> <p>However, a substation would be set back 120m from the road, and there are opportunities for additional screening through planting along the roadside. The substation would also mainly be seen against a backdrop of landform and existing vegetation, which would help visually integrate the new infrastructure into the surrounding landscape.</p>	<p>opportunities for additional perimeter screening.</p> <p>No nationally or regionally promoted cycling or walking trails would be affected in terms of the views experienced.</p> <p>However, all three site options are visible from various points along the Moors of Wigtownshire Walk, especially where it follows the lane connecting Glenluce with the Three Lochs area.</p> <p>Site Option 3 is the least preferred because it is closer to Glenluce village, with more potential visual receptors using the local roads and footpaths leading north out of the village.</p> <p>In terms of residential visual amenity, <b>Site Option 3 is marginally preferred</b> as there are no residential receptors with potential views close by.</p>

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		<p>The Southern Upland Way is approximately 4 km to the north of the study area, and there are no promoted long-distance trails within or near the substation siting area.</p> <p>Similarly, there are no National Cycle Network (NCN) Routes or Core Paths in the study area. The nearest is NCN Route 83, which connects Newton Stewart with Wigtown, Glenluce and the coastal town of Stranraer. This route follows the eastern side of the Water of Luce and the Old Military Road west of Glenluce.</p> <p>All identified Core Paths are located in or to the southwest of Glenluce and do not provide views towards the site options.</p> <p>The Moors of Wigtownshire Walk is a locally promoted 29km circular route that begins and ends in Glenluce, passing through the Luce Valley and surrounding moorlands. The route follows the lane linking Glenluce with the Three Lochs area and provides some long panoramic views. All three site options are visible from various points along this route, especially where it follows the lane connecting Glenluce with the Three Lochs area.</p> <p>The Old Military Road, which runs from Glenluce broadly following the route of the disused rail line, serves as a local footpath. Users of the Old Military Road have views of the steel lattice tower line (BT Route) and other lower voltage lines, which run in a broadly parallel alignment.</p>			
	Residential Visual Amenity	<p>Whitecairn Holiday Park (partly residential) is located approximately 1.1km from Site Option 1 and has extensive elevated views. Although the ZTV map in Figure 7b indicates that there could be views from the edge of the holiday village, the site survey suggests that Barmain Hill would largely screen a substation at this site option.</p> <p>The closest residential receptors to Site Option 3 are the occupants of High Glenjorrie and High Glenjorrie Cottage, situated along the private access road leading to High Glenjorrie. These are</p>	<p>Whitecairn Holiday Park (partly residential) is located approximately 875m from Site Option 2 and has extensive elevated views. Although the ZTV map in Figure 7d indicates that there could be views from the edge of the holiday village, the site survey suggests that Barmain Hill would largely screen a substation at this site option.</p> <p>The closest residential receptors to Site Option 3 are the occupants of High Glenjorrie and High Glenjorrie Cottage, situated along the private access road leading to High Glenjorrie. These are</p>	<p>Whitecairn Holiday Park (partly residential) is located approximately 1.5km from Site Option 3 and has extensive elevated views. Although the ZTV map in Figure 7f indicates that there could be views from the edge the holiday village, the site survey suggests that the intervening landform and vegetation would largely screen a substation at this site option.</p> <p>The nearest residential receptors to Site Option 3 are the occupants of two dwellings 300m away. Marked as 'Officer's Croft' on OS maps, they are situated west of the lane</p>	

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		<p>located approximately 500m and 700m to the southwest, respectively. While there is potential for views of a substation on Site Option 1 from High Glenjorrie in particular, these views would be oblique to the farmstead's main orientation and would be partially blocked by the large agricultural buildings situated in between.</p> <p>Glenhowl Farm is located 650m north of Site Option 1, near Whitecairn Holiday Park. Elevated views of a substation from this farm would be mostly, but not completely, blocked by Barmain Hill.</p>	<p>located approximately 500m and 700m to the southwest, respectively. While there is potential for views of a substation on Site Option 1 from High Glenjorrie in particular, these views would be oblique to the farmstead's main orientation and would be partially blocked by the large agricultural buildings situated in between.</p> <p>Glenhowl Farm is situated 500m north of Site Option 1, near Whitecairn Holiday Park. Elevated views of a substation from this farm would be mostly, but not completely, blocked by Barmain Hill.</p>	<p>connecting Glenluce to Whitecairn Holiday Park, set within a hollow partly screened by surrounding trees. Combined with the rising landform of Vennal Hill to the east of the lane, there would be limited visibility of a substation on Site Option 3 from these properties.</p>	

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<b>Biodiversity and Geological Conservation</b>	<p>Statutory Designated Sites, including:                      Site of Special Scientific Interest (SSSI)                      Special Area of Conservation (SAC)                      Special Protection Area (SPA)                      Ramsar Sites                      Geological Conservation Review Sites (GCR)</p>	<p>No impacts on statutory designated sites for nature conservation are anticipated due to spatial separation.                      The nearest are the Loch of Inch and Torrs Warren SPA and Ramsar site, Torrs Warren – Luce Sands SSSI, Luce Bay and Sands SAC and Luce Sands GCR.                      These areas overlap the southern edge of the study area and are associated with Luce Bay, which has important habitats and migratory and wintering bird populations.</p>	<p>No impacts on statutory designated sites for nature conservation are anticipated due to spatial separation.                      The nearest is the Flow of Dergoals SSSI and SAC. These overlap the eastern edge of the study area, and the Flow is one of the few remaining extensive areas of unafforested blanket bog in southwest Scotland.</p>	<p>No impacts on statutory designated sites for nature conservation are anticipated due to spatial separation.                      The nearest is the Flow of Dergoals SSSI and SAC. These overlap the eastern edge of the study area, and the Flow is one of the few remaining extensive areas of unafforested blanket bog in southwest Scotland.</p>	<p><b>Site Option 2 is Preferred.</b></p> <p>There is no strong preference for any option based on protected/designated biodiversity considerations.</p> <p>None of the substation options would directly affect any areas designated for their biodiversity value, and none lie within 500m of any designated sites.</p> <p>None of the Site Options will directly affect or are close to any Local Nature Conservation Sites (LNCS) or Scottish Wildlife Trust Sites.</p> <p>Designated sites are not, therefore, considered a differentiator in site selection.</p> <p>Site Option 1 is the least preferred site because it is located in an area of hawthorn scrub, which is recorded as broadleaved native woodland in the Survey of Scotland (NWSS) and the National Forest Inventory (NFI). Scrub woodland is likely to have higher potential habitat value due to its ecological richness now and its capacity to support habitat expansion and resilience into the future. Site Option 3 is adjacent to the Glenjorrie Burn and areas of associated damp grassland and therefore is also likely to have higher potential habitat value.</p>
	Non-Statutory Designated Sites	No impacts on non-statutory designated sites for nature conservation are	No impacts on non-statutory designated sites for nature conservation are	No impacts on non-statutory designated sites for nature conservation are	No impacts on non-statutory designated sites for nature conservation are

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		<p>anticipated due to spatial separation.</p> <p>The closest site is the Banks of Dervaird Local Nature Conservation Site (LNCS) and Local Wildlife Site (LWS), located 1km to the southeast and designated for its woodland.</p>	<p>anticipated due to spatial separation.</p> <p>The closest site is the Banks of Dervaird LNCS and LWS, located 1km to the southeast and designated for its woodland.</p>	<p>anticipated due to spatial separation.</p> <p>The closest site is the Banks of Dervaird LNCS and LWS, located 1.3km to the east-southeast and designated for its woodland.</p>	
	Ancient and Irreplaceable Habitats	<p>No impacts on ancient and irreplaceable habitats are anticipated due to spatial separation.</p> <p>No Priority Peatland, Ancient Woodland or Trees on the Woodland Trust Ancient Tree Inventory are located within 500m of the site options.</p>			
	Habitats	<p>Site Option 1 is located wholly within an area of hawthorn scrub that is recorded as <i>G-woodland, forest and other wooded land</i> in Scotland's Habitat Map.</p>	<p>Site Option 2 comprises farmland recorded as <i>I - regularly or recently cultivated agricultural, horticultural and domestic habitats</i> in Scotland's Habitat Map.</p>	<p>Site Option 3 comprises farmland recorded as <i>I - regularly or recently cultivated agricultural, horticultural and domestic habitats</i> in Scotland's Habitat Map. It is adjacent to several priority habitats (hedgerows and lowland mixed deciduous woodland).</p>	

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<b>Cultural Heritage</b>	Scheduled Monuments	There are 9 Scheduled Monuments within the study area. The nearest Scheduled Monument to Site Option 1 is Glenluce Roman Camp (SM7443), located 1.5km to the southwest. Although the Zone of Theoretical Visibility (ZTV) indicates potential theoretical visibility, field survey findings confirm that, due to the intervening distance, local topography, and screening provided by buildings within Glenluce and surrounding vegetation, the site would not be visible from the Scheduled Monument.	There are 9 Scheduled Monuments within the study area. The nearest Scheduled Monument to Site Option 2 is Cascreugh Castle, located 1.5km to the northeast. Although the Zone of Theoretical Visibility (ZTV) indicates potential visibility, field survey findings confirm that, due to the intervening distance, topography, and screening provided by woodland, the site would not be visible from this Scheduled Monument.	There are 9 Scheduled Monuments within the study area. The nearest Scheduled Monuments to Site Option 3 is Glenluce Roman Camp, located 1.2km southwest of Site Option 3 and Glenluce Abbey, 1.5km northwest of Site Option 3. Although the ZTV indicates theoretical visibility, site survey findings suggest that due to distance, topography and the screening effect of intervening buildings and vegetation, there will be no visibility of these sites from these Scheduled Monuments.	<b>No preferred Site Option</b> based on designated assets.
	Archaeologically Sensitive Areas (ASA)	The East Rhins Archaeologically Sensitive Area (ASA) lies around 2km to the northwest of the site options.			
	Inventory Gardens and Designed Landscapes	There are no Inventory Gardens and Designed Landscapes in the study area			
	Listed buildings (Category A, B and C)	There are 48 listed buildings within the study area (1 Category A, 10 Category B and 37 Category C). Most of these are in Glenluce and have localised settings defined by the surrounding built environment. Category C listed Carscreugh Castle, cottages (LB16760) are situated to the northwest of Carscreugh Castle,	There are 48 listed buildings within the study area (1 Category A, 10 Category B and 37 Category C). Most of these are in Glenluce and have localised settings defined by the surrounding built environment. Category C listed Carscreugh Castle, cottages (LB16760) are situated to the northwest of Carscreugh Castle,	There are 48 listed buildings within the study area (1 Category A, 10 Category B and 37 Category C). Most of these are in Glenluce and have localised settings defined by the surrounding built environment. While Site Option 3 is relatively close to the village, there is no intervisibility between the listed buildings and any of the site options, due to the	

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		<p>which is listed separately and is a Scheduled Monument. The cottages are approximately 1.5km from Site Option 1.</p> <p>Considering the separation distance and presence of intervening woodland, it is unlikely that a substation on Site Option 1 would result in significant impacts on the setting of the cottages.</p>	<p>which is listed separately and is a Scheduled Monument. The cottages are approximately 1.5km from Site Option 2.</p> <p>Considering the separation distance and presence of intervening woodland, it is unlikely that a substation on Site Option 2 would result in significant impacts on the setting of the cottages.</p>	<p>screening provided by intervening landform, built development, and existing vegetation.</p>	
<b>Woodland and Trees</b>	<p>Ancient Woodland Inventory (AWI)</p> <p>Native Woodland Survey of Scotland (NWSS)</p> <p>National Forest Inventory (NFI)</p>	<p>There is no AWI woodland within or close to Site Option 1. The nearest AWI site is the Banks of Dervaird, 800m to the southeast. Site Option 1 is entirely situated within an area of hawthorn scrub classified as native broadleaved woodland in the NWSS and NFI.</p>	<p>There is no AWI woodland within or close to Site Option 2. The nearest AWI site is Ballach-A-Heathry, a linear belt of mixed upland ash wood of long-established plantation origin, 400m to the northeast. Site Option 2 is situated next to the hawthorn scrub area marked as NWSS and NFI woodland. While the substation platform itself will not directly affect the woodland, the access requirements and the servitude corridor for the overhead line connecting the substation to the BT Route could lead to some loss of trees within the NWSS/NFI area.</p>	<p>There is no AWI woodland within or close to Site Option 3. The nearest AWI site is Glen Wood, 400m to the southeast. Site Option 3 is not situated within or next to any woodland classified as NWSS or NFI, thus avoiding direct impacts on these resources. However, the overhead line connecting the substation to the BT Route may require removing some trees from a nearby hedgerow to maintain a servitude corridor.</p>	<p><b>Site Options 2 and 3 are preferred</b> as they would result in the removal of fewer trees than Site Option 1.</p>
<b>Watercourses and Flood Risk</b>	<p>River flood risk and surface water and</p>	<p>No evident pond is within or close to Site Option 1. A very small watercourse flows</p>	<p>No evident watercourse or pond is within or close to Site Option 2.</p>	<p>The Glenjorrie Burn flows alongside Site Option 3.</p>	<p><b>Site Option 2 is marginally preferred over Site Option 1</b> as it has no obvious source of flooding.</p>

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	small watercourse flood risk.	through the site in a southeasterly direction.			Site Option 3 is the least preferred due to proximity to the Glenjorrie Burn.
		The SEPA Flood Risk Maps indicate that Site Options 1 and 3 are at some risk of surface water or small watercourse flooding.			
Land Use	Existing and planned developments	Aside from the proposed Artfield Forest Wind Farm Connection Project, the Craig Nab Wind Farm, and other generation projects that create the need case for the Ladyburn Collector Substation, there are no planned developments within the surrounding area that would interact with the proposed Ladyburn Collector Substation Project. Consequently, there is no potential for either direct or indirect cumulative effects arising from the project in combination with other developments.			There is little to differentiate between the three site options in terms of existing and planned developments.
	Scotland Land Capability for Agriculture (LCA) Classes 1, 2, and 3.1 (BMV).	Site Option 1 falls within LCA Class 5.2.	Site Option 2 falls within LCA Class 4.1.	Site Option 3 falls within LCA Class 3.2.	<b>Site Option 1 is marginally preferred</b> as it has the lowest grade in terms of land capability for agriculture, although none of the sites is of high grade.
	Scotland Land Capability for Forestry (LCF)	All three site options fall within LCF Class F4.			There is little to differentiate between the three site options in terms of land capability for forestry.
Technical and Economic Considerations	Future connections	The proposed Artfield Forest Wind Farm Connection would connect to Ladyburn Substation via a 132kV wood pole line approaching from the northeast. Site Option 2 offers the shortest and most efficient route for this connection, helping to minimise the overall length of the new overhead line. In addition, Ladyburn Substation is expected to accommodate several further connections from other planned generation schemes in the area. Site Options 1 and 2 are located closer to these prospective connections, making them the most cost-effective options in terms of construction efficiency and access to local infrastructure and resources.			<b>Site Option 2 is marginally preferred</b> as it is closer to the proposed Artfield Forest wind Farm Connection and other proposed connections. Site Option 3 is the least preferred as it would require longer connections.
	Existing electricity infrastructure	An existing 11kV and a 33kV overhead line run parallel to the BT Route, situated between the substation siting area and the BT Route. Both lines would require temporary diversions to facilitate the construction of the proposed substation and associated overhead line.	An existing 11kV and a 33kV overhead line run parallel to the BT Route, situated between the substation siting area and the BT Route. Both lines would require temporary diversions to facilitate the construction of the proposed substation and associated overhead line. Following construction, the 11kV and 33kV circuits would be permanently rerouted underground as part of the final arrangement.		<b>Site Options 2 and 3 are preferred</b> due to the potential need for a permanent diversion of the 11kV circuit.

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		<p>Following construction, the 11kV and 33kV lines would be permanently rerouted underground as part of the final arrangement.</p> <p>The 11kV circuit, in particular, may conflict with this site and could require a permanent diversion.</p>			
	Construction requirements	<p>Site Option 1 is approximately 70 - 80m from a connection point on the BT Route.</p> <p>Two new towers (BT065A and BT066A) would need to be built, one on each side of the existing tower BT066. Existing towers BT065 and BT067 would be retained, and tower BT066 would be removed.</p> <p>While the new towers are being constructed, a temporary overhead line diversion would be needed. This temporary line is likely to be installed between towers BT065 and BT067, but the exact route would be finalised as the detailed design progresses.</p> <p>The nearby existing towers (BT065 and BT067) would need to be checked to make sure they can handle the new loads from this arrangement. If necessary, strengthening or remedial works (to the towers or their</p>	<p>Site Option 2 is approximately 200m from a connection point on the BT Route.</p> <p>Two new towers (BT065A and BT066A) would need to be built, one on each side of the existing tower BT066. Tower BT066 would be removed.</p> <p>A minimum of two new towers (BT065B and BT066B) would also be required, one between BT065A and the new substation, and one between BT066A and the new substation. Existing towers BT065 and BT067 would be retained, and tower BT066 would be removed.</p> <p>While the new towers are being built, a temporary overhead line diversion would be needed for the installation of towers BT065A and BT066A. This temporary line is likely to run between towers BT065 and BT067, but the exact route would be finalised</p>	<p>Site Option 3 is approximately 170m from a connection point on the BT Route.</p> <p>Two new towers (BT069A and BT070A) would need to be built between towers BT069 and BT071. Towers BT066 and BT070 would be removed.</p> <p>A minimum of two new towers (BT069B and BT070B) would also be required, between towers BT069A and the new substation, and one between BT070A and the new substation. Existing towers BT069 and BT071 would be retained, and tower BT070 would be removed.</p> <p>While the new towers are being built, a temporary overhead line diversion would be needed for the installation of towers BT069A and BT070A. This temporary line is likely to run between towers BT069 and BT071, but the exact route would be finalised</p>	<p>In terms of new infrastructure, the three site options are very similar, as each is located relatively close to the existing BT Route. On balance, <b>Site Option 1 is marginally preferred</b>, as it would require the construction of two new towers, rather than the four towers required for Site Options 2 and 3.</p>

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		foundations) would be carried out.	as the detailed design progresses. The nearby existing towers (BT065 and BT067) would need to be checked to make sure they can handle the new loads from this arrangement. If necessary, strengthening or remedial works (to the towers or their foundations) would be carried out.	as the detailed design progresses. The nearby existing towers (BT069 and BT071) would need to be checked to make sure they can handle the new loads from this arrangement. If necessary, strengthening or remedial works (to the towers or their foundations) would be carried out.	
	Ground and site conditions for construction	The site contains shallow rock, areas of native woodland, and a watercourse. There is a significant risk of conflict with existing underground or overhead services, which could complicate construction and increase costs. Part of the existing scrub woodland would need to be removed to facilitate the overhead line, its associated servitude corridor and the substation.	The site contains shallow rock and areas of native woodland. Part of the existing scrub woodland would need to be cleared to create and maintain the overhead line servitude corridor, but this would be less extensive than for Site Option 1.	The presence of archaeology and buried services, including a water main, potentially constrains the site. As a result, there is a significant risk of conflict with existing services, which could impact construction activities. However, in comparison to Site Options 1 and 2, this location would require less earthworks. Some hedgerow trees may need to be felled to create and maintain the overhead line servitude corridor.	<b>Site Option 2 is preferred</b> due to more favourable ground and site conditions.
	Access and services	A technical report is required to determine suitable access arrangements and confirm the extent of the new permanent access track needed for Site Option 1. The most likely access would be from the lane located approximately 750m east of the Old Military Road. Alternatively, subject to agreement,	A technical report is required to determine suitable access arrangements and confirm the extent of the new permanent access track needed for Site Option 2. The most likely access would be from the lane located approximately 750m east of the Old Military Road. Alternatively, subject to agreement,	A technical report is required to determine suitable access arrangements and confirm the extent of the new permanent access track needed for Site Option 3. The most likely access would be from the lane located approximately 130m east of the site, which connects Glenluce	<b>Site Options 1 and 2 are preferred.</b>  There is little to differentiate between Site Options 1 and 2, as both are located at a similar distance from the local road and would require comparable lengths of new access. While Site 3 is closer to the local road network, the associated risks of transporting transformers make this option less preferable.

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		access could potentially be obtained via the private lane to the southwest of the site, which serves High Glenjorrie Farmstead and is located approximately 500m from Site Option 1.	access could potentially be taken via the private lane to the southwest of the site, which serves High Glenjorrie Farmstead and lies around 500m from Site Option 2.	village with the Three Lochs area. This site may pose a risk for transporting a new 90MVA transformer. Road widening at North Street, Glenluce, may be required to facilitate the transport of transformers through the area.	

### Summary and Overall Preference

#### Environmental Considerations

All three site options are situated within the Upland Fringe - Dumfries and Galloway Landscape Character Type (LCT), and there is little to differentiate them in terms of landscape character. However, Site Option 1 features more varied terrain along the Glenjollie Burn, and Site Option 3 is covered with hawthorn scrub, which makes them more vulnerable to the addition of a new substation compared to Site Option 2. The scenic quality of all sites is similarly affected by the existing steel lattice tower line (BT Route) and several wood pole lines. From a visual standpoint, Site Option 2 is marginally preferred because its slightly better natural screening by the landform would reduce the number of properties with potential views of the substation. Additionally, Site Option 2 offers better opportunities for screen planting.

Site Option 2 is preferred in terms of biodiversity. The site comprises rough grazed pasture, which is considered less sensitive to development than the hawthorn scrub habitat (identified as woodland in both the NWSS and the NFI) or the damp grassland found near the Glenjollie Burn within Site Option 3.

There is little to distinguish between the three options in terms of proximity to designated cultural heritage assets.

Site Options 1 and 2 are marginally preferred over Site Option 3 regarding flood risk. Site Option 3 is located closer to the Lady Burn and includes more extensive areas identified as being at higher risk of flooding from rivers, surface water, or small watercourses.

In terms of land capability for agriculture, Site Option 1 is marginally preferred as it is classified at a slightly lower grade. There is little to differentiate between the three sites in terms of land capability for forestry.

Overall, balancing environmental considerations, **Site Option 2 is preferred.**

#### Technical and Economic Considerations

The technical review identified Site Option 1 as the preferred location because it is both technically feasible and the most cost-effective for construction. It would require the least reconfiguration of the existing overhead line, involving the construction of only two new towers compared with four for Site Options 2 and 3.

From a constructability perspective, Site Options 1 and 3 present a significant risk of conflict with existing underground or overhead services, which could complicate construction and increase costs. Site Option 2 is therefore preferred, although it would require the more substantial earthworks to construct a level platform.

There is little to differentiate between Site Options 1 and 2 in terms of access, as both are located at a similar distance from the local road and would require comparable lengths of new access. While Site 3 is closer to the local road network, the associated risks of transporting transformers make Site Options 1 and 2 the preferred options.

Similarly, there is little to differentiate between the three site options in terms of existing overhead line infrastructure, which would require undergrounding and/or diversion.

The proposed Artfield Forest Wind Farm Connection would connect to the new substation via a 132kV overhead line approaching from the north. Site Option 2 is the closest location for this connection, helping to minimise the required route for the new overhead line. Additionally, the new substation would need to accommodate several further connections due to planned regeneration schemes in the area. Site Option 2 is situated close to these connections, making it the most economical choice in terms of construction and access to local resources.

Overall, balancing technical considerations, **Site Option 2 is preferred.**

Criterion	Consideration	Site Option 1	Site Option 2	Site Option 3	Preference
<b>Overall Preference</b>					
<p>The purpose of the appraisal has been to transparently and comparably identify and document the preferred site option for the Ladyburn 132kV Collector Substation. Balancing environmental, technical and economic considerations, the overall preference is for <b>Site Option 2</b>.</p> <p>However, when developing a detailed design for this site option, consideration must be given to minimising the impact of the connection to the BT Route on the NWSS and NFI scrub woodland.</p>					

