

APPENDIX 3 – STRATHY SOUTH AND STRATHY WOOD GRID CONNECTION – ALTERNATIVE NORTHERN SECTION: COMPARATIVE APPRAISAL OF ALIGNMENT OPTIONS

Table 1 below summarises environmental constraints for the Baseline Alternative Alignment, opportunities and constraints for the variants and an environmental alignment preference.

Table 1: Environmental Constraints

Category	Sub-Topic	Summary of Constraints for Baseline Alternative Alignment	Opportunities and Constraints for Variants	Alignment Preference
Natural Heritage	Designations	<p>The Baseline Alternative Alignment is located between the Caithness and Sutherland Peatlands Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site and West Halladale Site of Special Scientific Interest (SSSI) to the south, and the Strathy Point SAC, Strathy Coast SSSI and North Caithness Cliffs SPA to the north.</p>	<p>As per the Baseline Alternative Alignment, Alignment Variants 1 to 4 do not overlap any statutory designated sites and they are all located at a similar distance from the sites listed under the Baseline Alternative Alignment constraints. Alignment Variant 5 (in combination with the Optimal Alignment) would not overlap any statutory designated sites, but would be located in closer proximity to the Caithness and Sutherland Peatlands designated sites compared to the Baseline Alternative Alignment, at 0.5 km to the east at its closest point. It would also involve a watercourse crossing of the Achridigill Burn, as per the Baseline Alternative Alignment. The implementation of standard good practice mitigation measures during construction would therefore be required.</p> <p>Potential effects on qualifying features of nearby statutory sites are likely to be of a similar magnitude as the Baseline Alternative Alignment for all alignment variants, with</p>	<p>Alignment Variant 5 combined with the Optimal Alignment is the least preferable option due to its closer proximity to the designated sites but the difference is considered to be marginal.</p>
		<p>The Baseline Alternative Alignment involves crossings of the Achridigill Burn and Allt na h-Eaglaise, both of which have hydrological connectivity with the Caithness and Sutherland Peatlands SPA, SAC and Ramsar site and West Halladale SSSI, although the alignment is downstream of the designations and implementation of standard good practice mitigation measures during construction will avoid the risk of indirect effects, such as pollution, via these watercourses.</p>		
		<p>The qualifying features of the Caithness and Sutherland Peatlands designated sites and West</p>		

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		<p>Halladale SSSI include a range of upland breeding bird species, marsh saxifrage, otter, freshwater habitats and numerous upland habitats including blanket bog. At the closest point, the Baseline Alternative Alignment is located approximately 0.8 km west of these statutory sites.</p> <p>Strathy Point SAC is designated for its vegetated sea cliffs, while Strathy Coast SSSI, which overlaps the SAC but covers a longer stretch of coast, is designated for a range of coastal habitats and its vascular plant assemblage. At the closest point, the Baseline Alternative Alignment is located approximately 3.3 km southwest of the SAC and 1.6 km west of the SSSI.</p> <p>North Caithness Cliffs SPA is designated for a number of breeding seabird species, breeding peregrine and its breeding seabird assemblage. At the closest point, the Baseline Alternative Alignment is located approximately 1.7 km southwest of this SPA.</p> <p>Signs of otter, which is a qualifying interest of the Caithness and Sutherland Peatlands SAC, have been recorded along the Halladale River and some of its tributaries, as well as the Allt na Clèite watercourse. Signs included several holts. Additionally, breeding territories of several qualifying features of the Caithness and</p>	<p>similar mitigation measures required to avoid and reduce potential impacts on these features.</p>	

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		<p>Sutherland Peatlands SPA, including hen harrier, red-throated diver and golden plover, have been recorded in close proximity to the Baseline Alternative Alignment.</p> <p>With regards to ecological features associated with these designated sites, the Baseline Alternative Alignment is unlikely to affect these, with habitats present not functionally linked to designated sites. Since otter, which is a qualifying interest of the Caithness and Sutherland Peatland SAC is present in proximity to the Baseline Alternative Alignment, mitigation to avoid disturbance to any breeding sites and reduce the risk of pollution events will be required.</p> <p>Although the Baseline Alternative Alignment does not overlap any statutory sites, breeding bird populations associated with them could make use of surrounding habitat for breeding and/or foraging. Mitigation measures will therefore be required to avoid and reduce potential effects, particularly disturbance and collision risk, on SPA bird species.</p>		
	Protected Species	<p>No signs of wildcat were observed during recent surveys and suitable habitat for this species in proximity to the Baseline Alternative Alignment was very limited. A number of other protected species were recorded, as summarised below.</p>	<p>Proximity to protected species habitat is broadly similar between the Baseline Alternative Alignment and all variants. However, Alignment Variant 4 is located in close proximity to a main badger sett and</p>	<p>In terms of proximity to protected species habitat, overall, the Baseline Alternative Alignment is marginally preferable to Alignment Variant 1, while Alignment Variant 2</p>

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		<p>Low levels of bat activity by three bat species have been recorded along the Baseline Alternative Alignment during recent surveys. Several badger setts and other badger signs were recorded in proximity to the southeastern end of the Baseline Alternative Alignment. A single pine marten scat was recorded towards the southeastern end of the Baseline Alternative Alignment and an area of suitable habitat for this species was also noted further south.</p> <p>Signs of otter, including several holts and couches, were recorded along the Halladale River and some of its tributaries (including multiple couches along both the Achridigill Burn in the north-east and Allt na h-Eaglaise towards the south-east). Otter signs, including a holt, were also recorded along the Allt na Clèite watercourse, which is near the north-eastern section of the Baseline Alternative Alignment. Water vole burrows were recorded on the Alltan Domhaich watercourse just to the north of the Baseline Alternative Alignment and the Allt na Clèite watercourse. Water vole feeding stations and potential burrows were also recorded in proximity to the south-eastern end of the Baseline Alternative Alignment and suitable habitat was recorded in several additional areas.</p> <p>Fish species including Atlantic salmon and brown / sea trout are known to be present within the</p>	<p>closer proximity to two otter holts than the corresponding section of the Baseline Alternative Alignment, while the latter is closer to a single otter holt. In contrast, Alignment Variant 3 is located further away from badger setts and otter holts than the Baseline Alternative Alignment.</p> <p>Compared with Alignment 5 combined with the Optimal Alignment, the Baseline Alternative Alignment is closer to more otter couches along the Allt na Clèite, but one fewer otter holt along the Halladale River. The two are broadly similar in terms of proximity to badger setts.</p> <p>Compared with the Baseline Alternative Alignment, Alignment Variant 2 is further away from the stretch of the Achridigill Burn where several otter couches) were recorded. Alignment Variant 1 is closer to potential water vole burrows and suitable habitat along the Alltan Domhaich watercourse than the Baseline Alternative Alignment.</p> <p>As per the Baseline Alternative Alignment, Alignment Variants 1 to 2 cross watercourses at multiple locations. Compared with the corresponding sections of the Baseline Alternative Alignment, however, Alignment Variants 3 and 4 involve fewer crossings of the Halladale River and, overall, are located</p>	<p>is marginally preferable to the Baseline Alternative Alignment. However, the differences are minor and the optimal option could change depending on the number and locations of watercourse crossings required.</p> <p>Alignment Variant 5 in association with the Optimal Alignment is considered to be slightly optimal to the Baseline Alignment, but the difference is marginal.</p> <p>In the south-east, Alignment Variant 3 is the optimal option overall because it is the furthest away from badger setts and otter holts. It also crosses the Halladale River only once (compared with four times for the corresponding section of the Baseline Alternative Alignment) and is further away from it than the corresponding section of the Baseline Alternative Alignment.</p>

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		<p>Halladale catchment and the associated watercourses which flow in proximity to the Baseline Alternative Alignment.</p> <p>The Baseline Alternative Alignment crosses watercourses at multiple locations; whether or not crossings are required, construction works in proximity to watercourses would increase the risk of potential pollution events, which could affect aquatic and semi-aquatic species (including fish species, otter and water vole) that breed and/or forage in the watercourses. Therefore, limiting the number of watercourse crossings is advantageous in this respect and mitigation to minimise the risk of pollution would also be required.</p> <p>Without appropriate mitigation, potential effects on terrestrial protected species include accidental mortality or injury, damage or destruction of habitat features, and/or disturbance to breeding animals. Additionally, habitat loss could adversely affect protected species, while pollution could adversely affect otter and water vole foraging and breeding habitat.</p>	<p>further away from it. As such, the risk of a major pollution event that could affect aquatic and semi-aquatic species is likely to be lower for Alignment Variants 3 and 4.</p> <p>As per the Baseline Alternative Alignment, appropriate mitigation would be required to avoid and reduce potential impacts on protected species, including disturbance and pollution of watercourses.</p>	
	Habitats	Habitats along the Baseline Alternative Alignment are typical of the wider landscape and comprise predominantly of dry modified bog and wet dwarf shrub heath, with smaller areas of	Habitats along Alignment Variants 1 to 5 are considered typical of the wider landscape and consist of similar habitat mosaics to the Baseline Alternative Alignment. Sensitive	The Baseline Alternative Alignment and Alignment Variants 1 and 2 cross similar habitats. Due to this there is no clear preference

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		<p>other habitats such as marsh/marshy grassland, acid neutral flushes, improved and semi-improved grassland, bracken, scrub and blanket bog. Habitat type is primarily driven by peat depth, topography and drainage, and the level of human activity including peat cutting and livestock grazing over a significant period that has modified habitats' quality and the associated species assemblages.</p> <p>Habitats of greatest conservation value include those which have greater reliance on hydrological influences including bog and wet heath. In areas surrounding watercourses, flushes are occasionally present which have the potential to be classified as Ground Water Dependent Terrestrial Ecosystems (GWDTEs).</p> <p>Mitigation measures, such as micrositing during the construction process, should be applied to reduce potential effects on these sensitive habitats wherever possible. Consideration should also be given to GWDTEs and potential effects to groundwater from construction of towers in proximity to such habitats.</p>	<p>habitats are present along all of the alignment variant options.</p> <p>Although it is furthest away from the Halladale River, Alignment Variant 4 passes through areas of more sensitive habitat, such as wet modified bog, than both the Baseline Alternative Alignment and Alignment Variant 3. Alignment Variant 3 is further away from the Halladale River than the Baseline Alternative Alignment, however, it runs through a more varied habitat mosaic, including a large area of acid neutral flush, which has high potential for GWDTEs, as well as areas of dry modified bog and marsh/marshy grassland. The comparable section of the Baseline Alternative Alignment runs predominantly through improved grassland but involves multiple crossings of the Halladale River.</p> <p>Similar to the Baseline Alternative Alignment, Alignment Variant 5 combined with the Optimal Alignment passes through areas of sensitive habitats such as dry and wet modified bog, as well as areas of blanket bog. It also crosses the Achridigill Burn. Alignment Variant 5 combined with the Optimal Alignment also passes through a relatively large area of acid neutral flush, which has high potential to support GWDTEs.</p>	<p>between these alignment options with regards to the habitats that are present.</p> <p>Similarly, Alignment Variant 5 combined with the Optimal Alignment crosses sensitive habitats similar to the Baseline Alternative Alignment. However, it crosses a relatively large area of acid neutral flush and a large extent of wet modified bog in the south. This suggests that the Baseline Alternative Alignment may be preferable overall, although this would be dependent on tower locations.</p> <p>In the south-east, the Baseline Alternative Alignment is closest to the Halladale River and involves the highest number of watercourse crossings; it is therefore the least optimal option with regards to habitats. Although Alignment Variants 3 and 4 pass through more complex/sensitive habitats than the corresponding section of the Baseline Alternative Alignment, there is no clear preference between Alignment Variants 3 and 4</p>

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			<p>As per the Baseline Alternative Alignment, mitigation measures, such as micro-siting during construction and avoidance of GWDTEs, would be required to reduce potential effects on sensitive habitats.</p>	<p>as tower locations are currently unknown.</p>
	Biodiversity	<p>The Baseline Alternative Alignment passes through a range of habitats of varying sensitivity, including areas of Annex I bog and heath habitats which will be of high biodiversity value. It is also notable that the Baseline Alternative Alignment is located in close proximity to the Halladale River, which again will be of high biodiversity value, and involves multiple river crossings.</p>	<p>All alignment variants are of similar length and it is assumed that a similar number of towers would be required, with the extent of habitat loss resulting from the tower footprints therefore likely to be comparable for each one. Without tower locations, however, it is not possible to determine whether there will be marked differences in the extent of loss of sensitive habitats.</p> <p>Alignment Variants 1, 2, and Variant 5 combined with the Optimal Alignment, all pass through a similar mosaic of habitats to the Baseline Alternative Alignment, including sensitive habitats, and therefore impacts due to habitat damage, disturbance and fragmentation are likely to be of a similar magnitude for these alignment options.</p> <p>Of the alignment variants in the south-east, the Baseline Alternative Alignment is located closest to the Halladale River and involves the most crossings of it. Although Alignment Variants 3 and 4, as well as Variant 5 combined with the Optimal Alignment, pass</p>	<p>There is no clear preference between the Baseline Alternative Alignment and Alignment Variants 1, 2 and 5 with regards to biodiversity.</p> <p>In the south-east, the Baseline Alternative Alignment is closest to the Halladale River and involves the highest number of watercourse crossings. However, Alignment Variants 3 and 4, as well as the Optimal Alignment (combined with Variant 5) pass through areas of more sensitive habitat compared with the Baseline Alternative Alignment. At this stage, without tower locations, there is no clear preference between these Variants with regards to biodiversity.</p>

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			<p>through areas of more sensitive habitat compared with the Baseline Alternative Alignment, it is not possible to compare impacts due to habitat damage, disturbance and fragmentation until tower locations are identified.</p>	
	Ornithology	<p>Based on the survey results and core foraging ranges of SPA species, it is considered that there is connectivity with the Caithness and Sutherland Peatlands SPA but not the North Caithness Cliffs SPA. In addition to SPA species, sensitive breeding birds recorded during surveys included curlew and lapwing.</p> <p>A single hen harrier breeding territory was recorded in close proximity to the Baseline Alternative Alignment during the 2023 surveys and several flights associated with the territory were also recorded close to the Baseline Alternative Alignment. Hen harrier was the only breeding raptor species that is a designated feature of the Caithness and Sutherland Peatlands SPA and/or listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) that was recorded during the surveys.</p> <p>Black-throated divers were recorded on Loch Baligill to the south of the Baseline Alternative Alignment in 2023, while red-throated diver activity was recorded around Loch Sgiathanach.</p>	<p>Proximity to sensitive breeding bird territories is broadly similar between the Baseline Alternative Alignment and all alignment variants. However, there were some differences.</p> <p>Alignment Variant 2 is located in much closer proximity to the 2023 breeding hen harrier territory than the corresponding section of the Baseline Alternative Alignment, while the latter is closer to areas of red-throated diver activity as well as several breeding wader (including golden plover and curlew) territories. Alignment Variant 1 is slightly closer to two golden plover breeding territories recorded in 2023. Alignment Variant 5 is also located in close proximity to a golden plover territory and an area of red-throated diver activity.</p> <p>At the south-eastern end of the alignment options where several breeding wader territories were recorded in 2023, overall, Alignment Variant 3 appears to be furthest</p>	<p>Overall, in terms of ornithological sensitivities, Alignment Variant 2 is not a preferred option because it is located in closer proximity to the 2023 breeding hen harrier territory than both the Baseline Alternative Alignment and Alignment Variant 5.</p> <p>The Baseline Alternative Alignment is preferable to Alignment Variants 1 and 5 due to the increased distance from the 2023 golden plover territories; of these three alignments, Alignment Variant 5 combined with the Optimal Alignment is the least preferable due to its proximity to a potential red-throated diver breeding territory (although it is located further away from several wader territories in the south-east, compared with the Baseline Alternative Alignment).</p>

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		<p>Both diver species are designated features of the Caithness and Sutherland Peatlands SPA. Although observations of both species were indicative of breeding territories, no nesting was recorded.</p> <p>Relatively low levels of wader activity were recorded during the 2022 surveys, with higher levels recorded in 2023, when registrations were concentrated along the eastern section of the Baseline Alternative Alignment, with multiple breeding wader territories present, the majority on the western side. Wader species considered to be breeding in this area include golden plover, curlew and lapwing. Breeding golden plover is a designated feature of the Caithness and Sutherland Peatlands SPA, while curlew and lapwing are Red-listed UK Birds of Conservation Concern.</p> <p>In general, low levels of flight activity by target species were recorded in proximity to the Baseline Alternative Alignment during flight activity surveys, particularly in 2022. However, mitigation should be implemented to reduce the risk of mortality due to collision with and electrocution from the OHL, e.g., use of line markers to increase visibility of the OHL to birds in flight and design considerations to reduce the risk of electrocution.</p>	<p>away from breeding territories, whilst there appear to be fewer breeding wader territories in proximity to Alignment Variant 4 and the Optimal Alignment of Alignment Variant 5 compared with the Baseline Alternative Alignment.</p> <p>As per the Baseline Alternative Alignment, appropriate mitigation would be required to avoid and reduce potential impacts on sensitive breeding bird species, with particular consideration of SPA species and any other species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) or the UK Birds of Conservation Concern Red List.</p>	<p>For the southeastern end of the alignment options, Alignment Variant 3 is the optimal alignment because it is furthest away from multiple breeding wader territories. Alignment Variant 4 is optimal to the Baseline Alternative Alignment due to relative proximity to breeding wader territories, but the difference is again marginal.</p> <p>In terms of mortality due to the risk of collisions with and electrocution from the OHL, there is no clear preference.</p>

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		<p>Mitigation measures would also be required to protect all breeding birds, with particular consideration of SPA species (hen harrier, diver species and golden plover) and any other species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) or the UK Birds of Conservation Concern Red List (e.g., curlew and lapwing).</p>		
	Hydrology Hydrogeology and Geology	<p>The Baseline Alternative Alignment is located within the surface water catchments of the River Strathy to the west, Baligall Burn and Allt na Cleite to the centre and the Halladale River to the east. The alignment will cross over several watercourses including the Halladale River.</p> <p>SEPA floodplain mapping shows a floodplain associated with the Allt na Cleite, Allt na h-Eaglaise and Halladale River. Flood extents are largely confined to watercourse crossings with the exception of the Halladale River which has a much more expansive floodplain. Approximately 1.1 km of the eastern extent of the alignment is located within the floodplain for the Halladale River.</p> <p>The Baseline Alternative Alignment is generally underlain by semipelites, psammites and granites. An area of sandstones and conglomerates of the Bighouse Formation and Lower Old Red Sandstone Group is recorded</p>	<p>All alignment variants lie within the same surface water catchments as the Baseline Alternative Alignment. They also overlay the same geology.</p> <p>Alignment Variant 1 and 2 would cross slightly less areas of Class 1 and Class 2 priority peatland compared to the Baseline Alternative Alignment and slightly shallower peat depths (up to 3.4 m and 3 m respectively).</p> <p>Alignment Variant 2 would also require an additional watercourse crossing compared to the Baseline Alternative Alignment.</p> <p>Alignment Variant 3 and 4 would only require one crossing over the Halladale River and largely avoid the mapped floodplain. However, Alignment Variant 4 would cross a larger area of Class 2 priority peatland compared to the Baseline Alternative Alignment (approximately 1.4 km more).</p>	<p>The Baseline Alternative and alignment variants are broadly similar.</p> <p>There is little difference between the Baseline Alternative Alignment and Alignment Variant 1, although slightly shallower peat depths have been recorded near Alignment Variant 1.</p> <p>Alignment Variant 2 would require an additional watercourse crossing in comparison to the Baseline Alternative Alignment but would pass over less priority peatland.</p> <p>Alignments 3, 4 and 5 would reduce the number of crossings required over the Halladale River and avoid mapped floodplain. However, Alignment Variant 4 and 5 would</p>

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		<p>beneath the north western extent of the alignment. The bedrock is generally overlain by superficial deposits of peat. Hummocky glacial deposits, alluvium, river terrace and glaciofluvial sheet deposits are noted within the eastern extent of the alignment towards the Halladale River.</p> <p>Approximately 8.3 km of the Baseline Alternative Alignment is located within Class 1 or Class 2 priority peatland.</p> <p>Phase I peat probing has been undertaken for the length of the alignment. Within 50 m of the Baseline Alternative Alignment peat depths of between 0 and 4 m were recorded with approximately 79% of probes recording a peat depth of <0.5 m. The deepest areas of peat (greater than 3 m) are noted within discrete areas within the centre of the alignment.</p> <p>Subject to best practice construction and mitigation, it is likely that impacts on soils, peat, geology, and the water environment can be mitigated. Phase II peat probing would be required and micrositing should be used to further refine the Baseline Alternative Alignment and the location of towers and access tracks to areas of shallowest peat. A peat management plan and peat landslide hazard risk assessment</p>	<p>Within 50 m of Alignment Variant 4 peat depths of between 0 and 3.8 m were recorded.</p> <p>Alignment Variant 5 (in combination with the Optimal Alignment) would also only require one crossing over the Halladale River and largely avoid the mapped floodplain.</p> <p>However, Alignment Variant 5 would cross a slightly larger area of Class 1 and Class 2 priority peatland compared to the Baseline Alternative Alignment (approximately 800 m more). Within 50 m of Alignment Variant 5 peat depths of between 0 and 3.7 m were recorded.</p>	<p>require a greater area of priority peatland to be crossed.</p> <p>Therefore, with regard to hydrology, hydrogeology and geology (including peat), Alignment Variants 1, 2 and 3 would be slightly optimal to the Baseline Alternative Alignment.</p>

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		<p>would be required as part of any further assessment.</p> <p>Flood risk and its potential to be affected by temporary and permanent structures in the Halladale River would also need to be given due consideration and assessed.</p>		
Cultural Heritage	Designations	<p>The Baseline Alternative Alignment runs slightly closer to the three listed buildings at Strathy but is unlikely to have a significantly increased visual impact. The buildings are not in practical terms sensitive to visual intrusions. Similarly, this alignment option runs nearer to the group of listed buildings at Bighouse and the scheduled hut circles at Halladale Bridge but with a minimal increased visibility.</p>	<p>The western extent of Alignment Variant 1 runs very slightly closer to the three listed buildings at Strathy than the Baseline Alternative Alignment but is unlikely to have a significantly increased visual impact. The buildings are not in practical terms sensitive to visual intrusions. The potential visual impact on the listed buildings at Bighouse and the Halladale Bridge hut circles is effectively identical to that of the Baseline Alternative Alignment, but on designated assets not significantly sensitive to visual impacts.</p> <p>Alignment Variants 2 to 5 would have the same potential visual impacts on designated assets as the Baseline Alternative Alignment, but on designated assets not significantly sensitive to visual impacts.</p>	<p>All alignment options are considered to be broadly comparable, with a slight preference for the Baseline Alternative Alignment over Alignment Variant 1.</p>
	Cultural Heritage Assets	<p>The Baseline Alternative Alignment would pass close to one non-designated asset adjacent to the Halladale River: Eadha farmstead</p>	<p>There would be no additional direct impacts on non-designated assets as a result of Alignment Variant 1.</p>	<p>The Baseline Alternative Alignment and Alignment Variant 1 and Variant 2 are considered comparable.</p>

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		<p>(MHG13411) at NC 8971 6058. Damage to this small group of structures and enclosure could be avoided through micro-siting of towers. More significantly is the potential impact on Connagill township, (MHG10555), centred on NC 9055 5982. This extensive early Modern settlement has been protected to minimise damage during construction of the substation and access road. It would be considered to be of Regional significance and therefore of moderate to high sensitivity to damage and the extent of buildings and associated structures and field systems would make this difficult to avoid by the route of the Baseline Alternative Alignment.</p> <p>The Baseline Alternative Alignment also passes through areas defined as being prehistoric field systems west of the Halladale River although these are without associated contemporary settlement and therefore would be considered to be of Local significance and low sensitivity to direct impacts.</p>	<p>Alignment Variant 2 passes close to, but not directly over, one non-designated asset, Achridigill hut circle and field system, (MHG9699) at NC 8875 6255. This hut circle occupies steep east-facing ground with a small field system to its north. Alignment Variant 2 would pass to the west without any direct impacts, although identifying and marking out the feature would further protect it.</p> <p>Alignment Variant 3 passes through the extensive area of Deasphollag township, (MHG10223) centred on NC 9031 6031, located immediately east of the A897 public road and north of Connagill substation. This Early Modern settlement consists of at least eleven buildings, kaleyards, rig cultivation, a corn drying kiln and a meeting house. It would be considered to be of Regional significance and therefore of moderate to high sensitivity to damage and the extent of buildings and associated structures and field systems would make this difficult to avoid.</p> <p>Although Alignment Variant 4 and Variant 5 (in association with the Optimal Alignment) pass close to Havaig Fort (MHG9696) at NC 8910 6032, neither are considered likely to have any direct impact on the structure, which occupies the south end of a rocky</p>	<p>A combination of the Baseline Alternative Alignment and Alignment Variant 4 would be comparable to Alignment Variant 5 in combination with the Optimal Alignment.</p> <p>Alignment Variant 4 and the Optimal Alignment (associated with Alignment Variant 5) both have the potential for visual impacts on Havaig Fort, but this could be minimised with careful placement of towers.</p> <p>At the eastern end of the route approaching Connagill substation both the Baseline Alternative Alignment and Alignment Variant 3 would not be considered optimal due to their potential impact on non-designated assets of Regional significance.</p>

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			<p>knoll. Any potential direct impact on the fort itself, or its associated areas of cultivation, could be minimised by careful siting of towers and marking out during construction.</p>	
People	Proximity to Dwellings	<p>The settlement of Melvich is approximately 630 m to the north-east of the Baseline Alternative Alignment at its closest point. Properties within this settlement are also located alongside the A836 which is likely to be the main construction route. The amenity of properties within this settlement are likely to be compromised and measures at construction stage will likely be required to minimise noise and other disturbance from construction traffic.</p> <p>The property of Kirkton is located approximately 625 m to the east of the Baseline Alternative Alignment, at the foot of Creag Chailein. The property sits at a lower elevation than the alignment, and although previous site surveys noted that intervening garden planting and woodland would screen it from view, an OHL of the scale considered, could still appear imposing in views. Some traffic disturbance may be experienced by this property during construction, assuming the use of the minor road to Kirkton cemetery is used by construction traffic.</p> <p>A new property is situated on the north east bank of Loch Earacha. Based on the orientation and</p>	<p>Alignment Variant 1 is slightly further from properties within Melvich compared to the Baseline Alternative Alignment, being located approximately 720 m at its nearest point. Alignment Variant 1 would result in only a very slight improvement on amenity compared to the Baseline Alternative Alignment.</p> <p>Alignment Variant 2 brings development further into the strath and is located in much closer proximity to the properties at Achrdigill, approximately 330 m to the south-west and Kirkton, approximately 220 m to the west. Given the close proximity of these properties from Alignment Variant 2, effects on amenity are anticipated to be notable.</p> <p>Alignment Variant 3 would have similar effects on the amenity of the property at Loch Earacha as per the Baseline Alternative Alignment, at a proximity of approximately 350 m at its closest point.</p> <p>The distance of Alignment Variant 4 from the property at Loch Earacha would be increased to approximately 830 m to the west. The</p>	<p>Alignment Variant 1 would be somewhat preferable over the Baseline Alternative Alignment in terms of views from properties within Melvich.</p> <p>Despite Alignment Variant 5 traversing slightly higher ground near Coulbackie woodland, it would increase the distance from properties within the strath and is therefore considered preferred over the Baseline Alternative Alignment.</p> <p>Considering the options for connecting into Connagill substation, Alignment Variant 4 would be optimal, as it would be further from a greater number of properties.</p>

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		<p>design of the building, it has clear views towards the Baseline Alternative Alignment, approximately 315 m to the south-west at its closest point. Given the close proximity of this property from the alignment, effects on amenity are anticipated to be notable. This property is also located alongside the A897, which is likely to be used as a construction route and measures to minimise disturbance are likely required.</p> <p>All other properties identified are over a kilometre from the Baseline Alternative Alignment, limiting adverse effects as a result of proximity of the alignment, however there are properties located along the A836 and A897 that may be affected by construction traffic movement along main roads.</p>	<p>alignment would be located through hummocky landscape, with potential for screening opportunities of lower sections of towers, thereby slightly reducing impacts on amenity from this property compared to the Baseline Alternative Alignment. However, this alignment variant would be located in closer proximity to Calgarry, which is located adjacent to the A897 to the south of Connagill substation, approximately 420 m south-west of the alignment. Previous surveys noted vegetation would likely screen the alignment from views.</p> <p>Alignment Variant 5 connecting to the Optimal Alignment would allow infrastructure to be at a greater distance from properties within the strath. The Optimal Alignment however would traverse slightly higher ground compared to the Baseline Alternative Alignment and may be more noticeable in views.</p>	
Landscape and Visual	Designations	<p>The Baseline Alternative Alignment would not pass through any designated or protected landscapes. Farr Bay, Strathy and Portskerra Special Landscape Area (SLA) is located 0.3 km to the north of this alignment option at it's closest point and the Baseline Alternative Alignment may</p>	<p>Alignment Variant 1 would offer some opportunity to reduce the prominence of the alignment on the skyline in views from the north, and may therefore be preferable in terms of the setting to the SLA. However, both the Baseline Alternative Alignment and</p>	<p>Alignment Variant 1 would be slightly preferable in terms of impacts on the SLA, as it could potentially reduce the prominence of the alignment on the skyline in views from the north. Elsewhere alignment options are comparable.</p>

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		<p>appear prominent within the inland setting affecting some localised areas.</p> <p>The eastern end of the alignment would be located 0.3 km from Wild Land Area (WLA) 39: East Halladale Flows at it's closest point, where it connects to Connagill substation. However, the presence of the substation and existing OHL infrastructure in this area reduces its sensitivity.</p>	<p>Alignment Variant 1 would still be prominent in views inland from some areas.</p>	
	Landscape Character	<p>The Baseline Alternative Alignment would mainly pass through LCT 134: Sweeping Moorland and Flows, which is considered to be of Medium sensitivity. Its exposure and extensive visibility are considered to be its main sensitivities along with its role as a backdrop to the more sensitive coastal landscapes to the north. The Baseline Alternative Alignment sits on relatively high ground, resulting in relatively extensive visibility within the open landscape. This would affect the relationship of this landscape as a backdrop to coastal landscapes.</p> <p>At the eastern end, the last 1.6 km of the alignment would pass through LCT 142: Strath - Caithness & Sutherland. This LCT is considered to be of High sensitivity due to its containment and relatively small landscape patterns and scale. The Baseline Alternative Alignment would be very prominent along the skyline of Strath Halladale and crossing the Strath where it would</p>	<p>Alignment Variant 1 would offer some opportunity to reduce the prominence of the alignment on the skyline when seen from coastal landscapes and would slightly reduce the prominence of individual towers around Cnoc Eadar Dha Allt. East of Cnoc Eadar Dha Allt, the more tucked in alignment would reduce the level of the towers on the skyline in views from the north. However both the Baseline Alternative Alignment and Alignment Variant 1 would be continue to be prominent and affect the relationship of the coastal and inland landscapes.</p> <p>Alignment Variant 2 would reduce skylining along the ridge of Strath Halladale as it would be more backclothed, but would continue to be prominent in Strath Halladale and may require greater earthworks on steep slopes.</p> <p>Alignment Variant 5 would tie in with the Strathy North to Connagill Optimal Alignment.</p>	<p>Alignment Variant 1 would be preferable to the Baseline Alternative Alignment in terms of Landscape Character as it would slightly reduce the prominence of some individual towers on the skyline of coastal lansdcaes.</p> <p>Alignment Variant 2 would continue to be prominent within Strath Halladale but would reduce skylining and would be slightly preferred to the Baseline Alternative Alignment. However Alignment Variant 5 would be the preferred option for Landscape Character as it would pull the alignment back from the skyline slightly and reduce impacts within Strath Halladale.</p> <p>For the eastern section crossing Strath Halladale, Variant 4 is</p>

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		<p>affect the sense of enclosure and take away from the diversity and influence of the river and local landform features.</p>	<p>It would pull the alignment back from Strath Halladale and follow the existing Strathy North OHL more closely, therefore reducing skylining and the prominence of the OHL within the strath.</p> <p>Alignment Variants 3 and 4 would both provide opportunities to reduce the number of river crossings when crossing the River Halladale but Alignment Variet 3 would be potentially more prominent in crossing the strath as it is situated on higher and more open ground. Alignment Variant 4 would cross the Strath further to the south, away from the more open valley area with the natural landform helping to conceal it more.</p>	<p>considered to be the optimal option for Landscape Character.</p>
	Visual	<p>The Baseline Alternative Alignment would pass approximately 0.3 km to the south of the A836, which forms part of the North Coast 500 route, at its closest point and would be prominent from some sections. It may also be seen within inland views from some settlement areas along this route including Melvich, Portskerra and Strathy. However views from these receptors are generally likely to be more focused towards the coast, reducing their sensitivity.</p> <p>At its eastern end, it would be prominent along the skyline of Strath Halladale, seen from properties around Golval, the A838 descending</p>	<p>Alignment Variant 1 comprises a refinement of the Baseline Alternative Alignment which is considered to slightly reduce the prominence of closest towers in views from the A836 and Melvich, although it is unlikely that this would reduce the assessed level of visual effects, when compared with the Baseline Alternative Alignment.</p> <p>Alignment Variant 2 would pass closer to the minor road and residential properties at Kirkton and may appear potentially more imposing within some views although it would be potentially less prominent due to</p>	<p>Alignment Variant 1 is slightly preferred over the Baseline Alternative Alignment as it is likely to slightly reduce the prominence of key towers, but both alignments would continue to be prominent from the A836.</p> <p>There is no strong preference between the Baseline Alternative Alignment and Variant 2 as both are likely to be very prominent with likely significant visual effects for different receptor groups.</p>

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		<p>from the east towards Melvich, and the A897 which follows the eastern side of the strath. It would also be prominent when crossing the strath from the A897 properties around Kirkton and in particular, a property adjacent to Loch Earacha.</p>	<p>backclothing in views across the strath from the A897 and Golval.</p> <p>Alignment Variant 5 would tie in with the Strathy North to Connagill Optimal Alignment. It would pull the alignment back from Strath Halladale and follow the existing Strathy North 132 kV OHL more closely, therefore reducing skylining within Strath Halladale and moving it further from receptors at Kirkton.</p> <p>Out of the options connecting into Connagill Substation, Alignment Variant 3 would pass closer to the property at Loch Earacha, and would sit higher, likely to be more prominent in views from this property and the A897. Alignment Variant 4 makes better use of the local landform and is further from this sensitive property and as a result is likely to be slightly less prominent crossing the strath.</p>	<p>Alignment Variant 5 is preferred in terms of impacts on visual receptors, as it would slightly reduce impact on receptors within Strath Halladale.</p> <p>Considering the options for connecting into Connagill Substation, Alignment Variant 4 is preferred, as it would be further from residential receptors and would be slightly less prominent from the A897 when crossing the strath.</p>
Land Use	Agriculture	<p>The Baseline Alternative Alignment is situated predominately on Class 5.3 agricultural land: land capable of use as improved grassland and although the sward can be established, deterioration can be rapid, occupying approximately 7.4 km of this classification. The western portion of the alignment crosses two short sections of Class 6.3 agricultural land: capable of only rough grazing, with a smaller swathe also present near Connagill substation.</p>	<p>As per the Baseline Alternative Alignment, the agricultural land across all alignment variants is considered to be of limited agricultural value.</p> <p>However, Alignment Variant 2 would be located for a longer stretch through Class 4.2, due to being located further within the strath, whereas Alignment Variant 4 would cross the shortest stretch of Class 4.2; this</p>	<p>Alignment Variants 1, 3 and 5 are considered comparable with the Baseline Alternative Alignment with no preference.</p> <p>The Baseline Alternative Alignment is considered preferable over Alignment Variant 2 due to the variant crossing a longer stretch of</p>

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		<p>The remainder of the alignment crosses Class 4.2 agricultural land: land primarily suited to grassland with some limited potential for other crops.</p> <p>The agricultural land associated with the Baseline Alternative Alignment is considered to be of limited agricultural value and is not considered to present any constraint to development.</p>	<p>classification is considered of slightly greater agricultural value.</p>	<p>slightly more valuable agricultural classification.</p> <p>Alignment Variant 4 is considered preferable over the Baseline Alternative Alignment due to the variant crossing a slightly shorter stretch of more valuable agricultural classification.</p>
	Forestry	<p>The Baseline Alternative Alignment would not affect any forestry plantation, however, the National Forest Inventory (2020) shows a number of “assumed woodlands” through which the Baseline Alternative Alignment would traverse and would require clearance. These woodlands include felled and replanted shelterbelts and may include recently planted woodlands of a native character.</p> <p>The native woodland creation schemes are young and will not, at this stage, be susceptible to windblow. Furthermore, these woodlands include a higher percentage of open space by design.</p> <p>Subject to careful positioning of towers there may be a possibility to limit the removal of vegetation / forest for the construction of structures, although removal may still be</p>	<p>Alignment Variant 5 in association with the Optimal Alignment would intersect a narrow section at the edge of Coulbackie woodland; a conifer plantation.</p> <p>All other alignment variants would avoid interaction with forestry plantation.</p> <p>As per the Baseline Alternative Alignment, all alignment variants would intersect with “assumed woodlands” and would require clearance.</p>	<p>Alignment Variant 5 (in combination with the Optimal Alignment) is considered marginally less preferred due to the slight interaction with a conifer plantation.</p>

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		<p>required to accommodate wayleaves for conductors.</p> <p>Any removal of woodland or forestry would result in the requirement for compensatory planting.</p>		
	Recreation	<p>The Baseline Alternative Alignment would pass at its closest point, approximately 0.3 km to the south of the A836, which forms part of the North Coast 500 (NC500) route and National Cycle Route 1 (NCR1), and would be prominent from some sections. However, it would not interrupt views towards the coast, which are likely the key vistas for tourists.</p> <p>The Baseline Alternative Alignment would cross the A897, which runs from Helmsdale to Melvich, which is also frequently used by tourists.</p> <p>The Halladale River is popular with anglers as it is a spate Salmon River. The Baseline Alternative Alignment crosses the river on five separate occasions, increasing the potential for construction impacts (i.e. pollution) and disturbance experienced by anglers.</p> <p>The Baseline Alternative Alignment would cross Core Path SU19.03, which runs along the west of the Halladale River between Upper Bighouse and Cemy, south of the Kirkton property, near Havaig, at a point close to crossing the Halladale River. Measures would need to be put in place</p>	<p>Alignment Variant 1 is considered to slightly reduce the prominence of closest towers in views from the A836, although it is unlikely that this would reduce the assessed level of impact on recreational receptors, when compared with the Baseline Alternative Alignment.</p> <p>Alignment Variant 3 crosses the A897 at a more northerly point compared to the Baseline Alternative Alignment and Alignment Variant 4. Views experience by tourists towards the mouth of the strath and coast, may be more compromised by this variant. Whereas the crossing point of Alignment Variant 4 across the strath is considered to be slightly less prominent for users of the A897.</p> <p>Alignment Variant 4 would be in closer proximity to Core Path SU19.03 for a longer stretch compared to the Baseline Alternative Alignment. As per the Baseline Alternative Alignment, measures would need to be put in</p>	<p>Alignment Variant 1 is slightly preferred over the Baseline Alternative Alignment as it is likely to slightly reduce the prominence of key towers from recreational users of the A836, although both alignments would continue to be prominent.</p> <p>No preference between the Baseline Alternative Alignment and Alignment Variant 2.</p> <p>Alignment Variant 4 is considered optimal, as it would be further from the Halladale River (in relation to fishing interests) and would be slightly less prominent for users of the A897 when crossing the strath. Alignment Variant 4 does have the potential to impact on recreational users of a core path during construction, but these could be managed through an Outdoor Access Plan.</p>

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		<p>to ensure this path is not blocked or its users impeded during construction.</p>	<p>place to ensure this path is not blocked or its users impeded during construction.</p> <p>Alignment Variant 4 would also only cross the Halladale River once and would be further from the river compared to the Baseline Alternative Alignment and Alignment Variant 3, reducing potential for impacts during construction.</p> <p>Alignment Variant 5 (in association with the Optimal Alignment) would bring development further from the strath and the recreational receptors using the A897 and A836 (including the NC500 and NCR1) tourist routes, albeit, located on slightly more elevated ground near Coulbackie woodland. It would be located further from the Halladale River compared to the Baseline Alternative Alignment and would require only one crossing.</p>	<p>Alignment Variant 5 (in association with the Optimal Alignment) is considered slightly preferable to the Baseline Alternative Alignment in terms of reduced impacts on recreational users of tourist routes and fishing interests.</p>
Planning	Policy	<p>Compatibility to National, Regional and Local planning policy will in large depend on avoiding or minimising potential constraints, particularly in relation to potential impacts on the natural environment. Although the Baseline Alternative Alignment is not located directly within a natural heritage designated site, there is potential for indirect impact on the qualifying species of the SPA (e.g. collision risk), as well as the requirement for additional infrastructure (i.e.</p>	<p>The potential effects on qualifying features and species of nearby natural designated sites are likely to be of a similar magnitude as the Baseline Alternative Alignment, with similar mitigation to avoid and reduce potential impacts required.</p> <p>Alignment Variant 1 would reduce the prominence of an OHL on the inland setting of the regional landscape designation; Farr</p>	<p>All alignment options are considered to be broadly comparable, with a slight preference for Alignment Variant 1 compared to the Baseline Alternative Alignment.</p>

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		<p>permanent access tracks), could lead to an indirect impact on the SAC. Mitigation measures would be required, along with sensitive placement of towers, to reduce potential effects on the designated sites, to allow adherence with planning policy.</p> <p>However, it should be acknowledged that this development would be recognised in NPF4 as a National development under ND3 'Strategic Renewable Electricity Generation and Transmission infrastructure'. It therefore forms a vital element to deliver network and grid infrastructure required to deliver the Government's legally binding targets for net zero emissions and renewable energy electricity generation objectives.</p>	<p>Bay, Strathy and Portskerra SLA compared to the Baseline Alternative Alignment.</p>	
	Proposals	<p>In terms of proximity to proposals, the Baseline Alternative Alignment would traverse to the north of the Melvich wind farm, being approximately 400 m to the nearest wind turbine. It also passes approximately 730 m to the east of the nearest turbine of the proposed Kirkton wind farm. The Baseline Alternative Alignment would keep outwith the required separation buffers from the proposed turbines, however would be 47 m to the east of the proposed Kirkton wind farm on-site substation.</p>	<p>As per the Baseline Alternative Alignment.</p> <p>Alignment Variant 4 would be located in closer proximity to the proposed Kirkton wind turbines, but would remain outwith the required separation distances.</p> <p>Alignment Variant 5 would be in closer proximity to the proposed Melvich wind farm on-site substation compared to the Baseline Alternative Alignment, at approximately 140 m to the south-east at its closest point. It would also be in closer proximity to the proposed Kirkton wind turbines, at</p>	<p>All alignment options are considered to be comparable</p>

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		No other notable proposals within the planning system have been identified within the vicinity of this alignment option.	approximately 470 m at its closest point, albeit maintaining the required separation distance.	