



EAST PARK ENERGY

East Park Energy

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Volume 2 – Technical Appendices

Appendix 3-6: Grid Connection Corridor Appraisal

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Appendix 3-6: Grid Connection Corridor Appraisal

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Grid Connection Corridor Appraisal

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CONTENTS

1.0	Introduction	2
2.0	Background	2
3.0	Connection Requirements	3
4.0	Identification of possible Grid Connection Corridors	4
5.0	Appraisal of Options	5
6.0	Summary and Recommendation.....	18

Figures

Figure 1 Grid Connection Corridor Options

1.0 INTRODUCTION

- 1.1.1 RNA Energy Ltd ('RNA') has instructed Axis to prepare this Grid Connection Corridor Appraisal with the purpose of identifying and selecting the most appropriate corridor for a buried 400 kV grid connection for their emerging proposed solar farm development near St Neots.

2.0 BACKGROUND

- 2.1.1 RNA has a generation connection agreement with National Grid to provide 400 megawatts (MW) of electricity to the National Grid via the Eaton Socon Substation. RNA is therefore in the process of identifying a suitable site for a proposed solar farm with a 400 MW generation capacity, and following discussion and negotiation with landowners has identified a site to the north-west of St Neots, south of Grafham Water.
- 2.1.2 Axis supported RNA in identifying this site through a site selection process that has followed two broad stages:
- The first stage, set out in the Site Identification Report (SIR) identified the most appropriate location for a large-scale solar NSIP capable of utilising available grid capacity within the Eaton Socon Substation. A 15km area of search around the Eaton Socon Substation was taken as a starting point, with the land in this area of search reviewed against known planning and environmental constraints in accordance with the factors influencing site selection set out in Section 2.48 of draft NPS EN-3. This first stage concluded by identifying a 'Search Zone' to the north-west of the Eaton Socon Substation that was considered the most suitable location for a large-scale solar development. The recommendation given at the conclusion of the first stage was that RNA should approach landowners in the Search Zone to gauge interest in developing a project.
 - The second stage, set out in the LIR, followed on from the first stage and comprised a high-level review of the land offered to RNA to establish

constraints to development of the Scheme and refine the overall landholding to be taken forward. The culmination of the second stage was the identification of the Proposed Site Area to be taken forward for the Scheme.

2.1.3 The Proposed Site Area is shown on Figure 1.

3.0 CONNECTION REQUIREMENTS

3.1.1 The Scheme has a requirement for a connection with the National Grid. The point of connection provided by the National Grid ESO is the Eaton Socon Substation, however RNA has also identified and considered a possible alternative; connecting into the overhead electricity transmission lines which cross near to the east of the Proposed Site Area.

3.1.2 Following a review, RNA has established that a connection to the overhead electricity transmission lines is not feasible because of the export capacity of the Scheme at 400 MW. Supply of this level of electricity generation to the transmission network would require significant reinforcement works along the transmission lines and at the Eaton Socon Substation that would be technically and commercially prohibitive in this location. RNA has consulted with National Grid ESO on the possibility of connecting into the transmission network and National Grid has also confirmed that there would be technical and commercial constraints that rule this out as a viable option. Therefore, it is established that the Scheme must provide a direct grid connection to the Eaton Socon Substation.

3.1.3 A grid connection to the Eaton Socon Substation would comprise a 400 kV single circuit cable corridor. This cable corridor could be above or below ground, however, to minimise environmental impacts it has been determined that this should be an underground or buried cable connection. An overhead connection has therefore not been considered.

- 3.1.4 Due to the capacity of the cables and the need for cable jointing chambers the construction corridor for the grid connection is expected to be up to 25m wide and as such it would not be possible to provide a buried connection that followed roads or the public highway. It is therefore a requirement that the grid connection is buried within farmland between the Proposed Site Area and the Eaton Socon Substation.

4.0 IDENTIFICATION OF POSSIBLE GRID CONNECTION CORRIDORS

- 4.1.1 The Proposed Site Area can broadly be divided into three Areas; Area A, B and C as indicated on Figure 1.
- 4.1.2 There would be a requirement for an on-site substation within the Proposed Site Area. The electricity generated on site would be relayed from the on-site transformers to this substation which will include equipment to control and operate the solar PV arrays, and to step up the voltage from the on-site transformers (typically 33 kV) to the voltage at the National Grid's point of connection: 400 kV. The grid connection will directly connect the on-site substation with the Eaton Socon Substation.
- 4.1.3 There is a degree of flexibility as to where the substation can be sited within the Proposed Site Area, however, the more proximate it is to the Eaton Socon Substation the better, as the length of the grid connection can be a significantly prohibitive factor in the commercial feasibility of a project. The on-site substation would therefore either be in Area B or C due to the distance to Area A.
- 4.1.4 The identified Grid Connection Corridor Options are therefore as follows:
- **Option 1** – This grid connection corridor begins at Area B, at its closest point to Eaton Socon Substation. This corridor runs south from Area B, along the western edge of Little Staughton across agricultural land crossing the W End and St Neots Road carriageways. The cable route

then runs east crossing Little Staughton Road, before crossing further agricultural fields, crossing Cadbury Lane and Staploe Road, before reaching Eaton Socon Substation.

- **Option 2** – This grid connection corridor begins at Area C, at its closest point to Eaton Socon Substation. This corridor runs south-east from Area C through agricultural fields, crossing Moor Road, then running to the west of the existing Little Staughton Solar Farm. The cable route then heads south across Staploe Lane, east across Shakers Way, south across Bushmead Road and further agricultural fields, before reaching Eaton Socon Substation.
- **Option 3** – This grid connection corridor begins at Area C, at its closest point to Eaton Socon Substation. This corridor runs east from Area C, crossing Moor Road, running through agricultural fields to the west of Hail Weston, before heading south, crossing Duloe Road and Bushmead Road, before entering Eaton Socon Substation.

4.1.5 No other potentially viable corridor options between Area B and C, and the Eaton Socon Substation have been identified due to constraints relating to the pattern of existing land uses including settlement and vegetation, and environmental constraints such as Bushmead Priory and other designated heritage assets.

4.1.6 Regardless of whether the substation is located in Area B or Area C there would be a requirement for internal cabling connecting Areas A, B and C, and this cabling is therefore discounted from the appraisal of different grid connection options, although their likely location are shown on Figure 1.

5.0 APPRAISAL OF OPTIONS

5.1.1 An appraisal has been undertaken for each of the three Options. This Appraisal has been undertaken in Table 1 and considers a wide range of potential issues under the broad headings of Environmental Impact, Commercial Impact and Social Impact in order to identify the most sustainable

solution. This approach differs from the approach taken as part of the site selection process, but is considered to be the most appropriate method to compare options for linear infrastructure where construction works would be short-term and temporary, and once operational the land could be restored to its existing use.

5.1.2 For the purpose of this appraisal, 'Option 1' has been taken as the 'reference option'. This does not make it the preferred option, but a reference against which Option 2 and 3 are compared.

5.1.3 For each topic area in Table 1, Option 2 and Option 3 are compared against Option 1 as being either better, worse or neutral than the impacts of Option 1 as follows:

Major Benefits	++	The option would be notably or substantially better than Option 1
Benefits	+	The option may have some benefits when compared to Option 1
Neutral	o	The option would not be perceptibly different than Option 1
Worsening	-	The option may be somewhat worse when compared to Option 1
Major Worsening	--	The option would be notably or substantially worse than Option 1

5.1.4 The purpose of rating each Option in this way is to give an illustrative indication of the likely advantages and disadvantages, and should not be taken as a quantitative scoring exercise. It should be noted that a single advantage or disadvantage could be enough to justify one Option as better or worse than another.

Table 1: Appraisal of Grid Connection Corridor Options

Topic	Option 1 (Reference)	Option 2	Rating	Option 3	Rating
Environmental Impact					
Agricultural Land	According to Defra's provisional agricultural land classification mapping, this cable route option is located wholly within Grade 2 best and most versatile agricultural land.	According to Defra's provisional agricultural land classification mapping, this cable route option is located wholly within Grade 2 best and most versatile agricultural land. Option 2 is therefore neither better nor worse than Option 1.	0	According to Defra's provisional agricultural land classification mapping, this cable route option is located wholly within Grade 2 best and most versatile agricultural land. Option 3 is therefore neither better nor worse than Option 1.	0
Air Quality	Air quality impacts in this case relate to dust and vehicle / machinery exhaust emissions during construction. As the Option 1 cable route is longer than Options 2 and 3, air quality impacts have the potential to be slightly worse. However, the difference is not likely to be perceptible.	Air quality impacts in this case relate to dust and vehicle / machinery exhaust emissions during construction. Option 1 is slightly longer than Option 2 and as such, air quality impacts have the potential to be slightly worse. However, the difference is not likely to be perceptible. Option 2 is therefore neither better nor worse than Option 1.	0	Air quality impacts in this case relate to dust and vehicle / machinery exhaust emissions during construction. Option 1 is slightly longer than Option 3 and as such, air quality impacts have the potential to be slightly worse. However, the difference is not likely to be perceptible. Option 3 is therefore neither better nor worse than Option 1.	0
Biodiversity	The majority of this route comprises agricultural land. This Option does not contain any statutory or non-statutory	The majority of this route comprises agricultural land. This Option does not contain any statutory or non-statutory	+	The majority of this route comprises agricultural land. This Option does not contain any statutory or non-statutory designated sites for nature conservation. However, it does run	+

Topic	Option 1 (Reference)	Option 2	Rating	Option 3	Rating
	<p>designated sites for nature conservation.</p> <p>This option has the longest route, and would require the highest number of hedgerow, tree belt and ditch crossings.</p>	<p>designated sites for nature conservation.</p> <p>This option would require less hedgerow, tree belt and ditch crossings than Option 1.</p> <p>Option 2 is therefore slightly better than Option 1.</p>		<p>adjacent to the Huntingdon Wood Ancient Woodland. Given the construction corridor required is just 25m wide, this feature could easily be avoided, and a minimum 15m development buffer provided between the woodland and any construction works. Direct impacts to this Ancient Woodland could therefore be avoided.</p> <p>This option would require less hedgerow, tree belt and ditch crossings than Option 1.</p> <p>Option 3 is therefore slightly better than Option 1.</p>	
Greenhouse Gas	<p>Greenhouse gas impacts in this case relate predominantly to vehicle / machinery exhaust emissions during construction. As the Option 1 cable route is longer than Options 2 and 3, greenhouse gas impacts have the potential to be slightly worse. However, the difference is not likely to be perceptible.</p>	<p>Greenhouse gas impacts in this case relate predominantly to vehicle / machinery exhaust emissions during construction. Option 1 is slightly longer than Option 2 and as such, greenhouse gas impacts have the potential to be slightly worse. However, the difference is not likely to be perceptible.</p> <p>Option 2 is therefore neither better nor worse than Option 1.</p>	O	<p>Greenhouse gas impacts in this case relate predominantly to vehicle / machinery exhaust emissions during construction. Option 1 is slightly longer than Option 3 and as such, greenhouse gas impacts have the potential to be slightly worse. However, the difference is not likely to be perceptible.</p> <p>Option 3 is therefore neither better nor worse than Option 1.</p>	O

Topic	Option 1 (Reference)	Option 2	Rating	Option 3	Rating
Historic Environment	Option 1 does not contain any statutory designated heritage sites, however, runs directly adjacent to two Grade II listed buildings (Dairy Farmhouse & Chestnuts Farmhouse) at Honeydon. The Little Staughton Conservation Area also sits circa 700m to the east.	<p>Option 2 includes the 'Roman Site, Rushey Farm' Scheduled Monument. Given that this Scheduled Monument has such a small footprint, the 25m construction corridor could easily avoid this asset, thereby avoiding any direct impact.</p> <p>Option 2 also runs directly adjacent to the Grade II listed '35 Staploe' at Staploe, and in close proximity to Bassmead Manor which is a Scheduled Monument.</p> <p>Option 2 is therefore slightly worse than Option 1.</p>	-	<p>Option 3 includes the 'Roman Site, Rushey Farm' Scheduled Monument. Given that this Scheduled Monument has such a small footprint, the 25m construction corridor could easily avoid this asset, thereby avoiding any direct impact.</p> <p>This Option also runs directly adjacent to the Grade II listed 'The Ankor' at Duloe.</p> <p>Option 3 is therefore slightly worse than Option 1.</p>	-
Landscape and Visual	<p>This Option does not cross any statutory or non-statutory landscape designations.</p> <p>Option 1 is crossed by multiple Public Rights of Way and is in close proximity to the North Bedfordshire Heritage Trail (long distance promoted route). Construction works would likely be clearly visible from these routes.</p> <p>Option 1 runs to the west of the settlement of Little Staughton, to the north of Church End, north of</p>	<p>This Option does not cross any statutory or non-statutory landscape designations.</p> <p>Option 2 is crossed by multiple Public Rights of Way. Construction works would likely be clearly visible from these routes</p> <p>Option 2 runs between Staploe and Duloe. As well as in close proximity to some singular and more remote dwellings (albeit, fewer than Option 1). Eaton Socon lies to the east of</p>	+	<p>This Option does not cross any statutory or non-statutory landscape designations.</p> <p>Option 3 is crossed multiple Public Rights of Way. Construction works would likely be clearly visible from these routes</p> <p>Option 3 also runs to the south of the settlement of Hail Weston and to the east of Duloe. As well as in close proximity to some singular and more remote dwellings (albeit, fewer than either Option 1 or 2).</p>	+

Topic	Option 1 (Reference)	Option 2	Rating	Option 3	Rating
	<p>Honeydon, and to the north of Wyboston. As well as in close proximity to multiple singular and more remote dwellings.</p> <p>In terms of topography, this cable route option runs through an undulating landscape with various heights, generally rising to the west.</p> <p>Due to the topography along this route, construction works would be visible from nearby receptors.</p>	<p>this route on the opposite side of the A1.</p> <p>In terms of topography, this cable route option runs along low level slightly undulating land.</p> <p>The landscape character at Option 2 has a greater influence of existing infrastructure such as major highway, solar farm and overhead pylons than the landscape around Option 1.</p> <p>Option 2 is therefore slightly better than Option 1.</p>		<p>Eaton Socon lies to the east of this route on the opposite side of the A1.</p> <p>In terms of topography, this cable route option runs along low level ground, with fairly flat topography.</p> <p>The landscape character at Option 3 has a greater influence of existing infrastructure such as major highway and overhead pylons than the landscape around Option 1.</p> <p>Option 3 is therefore slightly better than Option 1.</p>	
Materials & Waste	<p>Materials and waste impacts are only likely to be relevant during the construction phase. As the Option 1 cable route is longer than Options 2 and 3, impacts with regards to materials and waste have the potential to be slightly worse. However, the difference is not likely to be perceptible.</p>	<p>Materials and waste impacts are only likely to be relevant during the construction phase of the cable. Option 1 is longer than Option 2 and as such, impacts have the potential to be slightly worse. However, the difference is not likely to be perceptible.</p> <p>Option 2 is therefore neither better nor worse than Option 1.</p>	O	<p>Materials and waste impacts are only likely to be relevant during the construction phase of the cable. Option 1 is longer than Option 3 and as such, impacts have the potential to be slightly worse. However, the difference is not likely to be perceptible.</p> <p>Option 3 is therefore neither better nor worse than Option 1.</p>	O
Noise and Vibration	<p>Option 1, being the longest cable route option, has the greatest potential for noise and vibration</p>	<p>Options 2 and 3 are of similar length and therefore subject to similar scale of disturbance during construction.</p>	+	<p>Options 2 and 3 are of similar length and therefore subject to similar scale of disturbance during construction.</p>	+

Topic	Option 1 (Reference)	Option 2	Rating	Option 3	Rating
	<p>impacts due to its length and increased works required.</p> <p>Option 1 runs in close proximity to a number of settlements, including to the west of the settlement of Little Staughton, to the north of Church End, north of Honeydon and to the north of Wyboston. As well as multiple singular and more remote dwellings.</p> <p>Option 1 runs in close proximity to the largest amount of dwellings and represents the longest cable route. Background noise and vibration levels are likely to be very low in this location due to the rural nature of its surroundings. Thus, noise and vibration impacts are likely to be highest.</p>	<p>Option 2 runs between Staploe and Duloe. As well as in close proximity to some singular, more remote dwellings (albeit, fewer than Option 1). Eaton Socon lies to the east of this route on the opposite side of the A1 which is a major noise and vibration source, and as such, impacts with regards to a grid connection cable would not likely be perceptible from this settlement.</p> <p>Option 2 runs in close proximity to less dwellings than Option 1, and also represents a shorter route in terms of length. Background noise and vibration levels west of Duloe are likely to be lower due to the more rural nature of the surroundings. Option 2 sits circa 200m west of the A1 along its southern section, which is a major noise source. This is likely to increase background levels to the east of Duloe, thereby likely reducing noise impact associated with the construction of the cable.</p> <p>Option 2 is therefore slightly better than Option 1</p>		<p>Option 3 runs to the south of the settlement of Hail Weston and to the east of Duloe. As well as some singular, more remote dwellings (albeit, fewer than Option 1). Eaton Socon lies to the east of this route on the opposite side of the A1 which is a major noise and vibration source, and as such, impacts with regards to a grid connection cable would not be perceptible from this settlement.</p> <p>Option 3 is the most remote from residential properties, and also represents a shorter route in terms of length than Option 1. Furthermore, its location adjacent to the A1 along the southern half of its route means baseline noise and vibration levels are likely to be higher, and impacts associated with construction of a grid connection cable lower.</p> <p>Option 3 is therefore slightly better than Option 1</p>	

Topic	Option 1 (Reference)	Option 2	Rating	Option 3	Rating
Socio-Economic	Socio-economic impacts in this case relate to the increase in workforce population, and resulting increase in use of local services and expenditure during the construction phase. As the Option 1 cable route is longer than Options 2 and 3, impacts have the potential to be slightly higher. However, the difference is not likely to be perceptible.	Socio-economic impacts in this case relate to the increase in workforce population, and resulting increase in use of local services and expenditure during the construction phase. Option 1 is slightly longer than Option 2 and as such, impacts have the potential to be slightly higher. However, the difference is not likely to be perceptible. Option 2 is therefore neither better nor worse than Option 1.	0	Socio-economic impacts in this case relate to the increase in workforce population, and resulting increase in use of local services and expenditure during the construction phase. Option 1 is slightly longer than Option 3 and as such, impacts have the potential to be slightly higher. However, the difference is not likely to be perceptible. Option 3 is therefore neither better nor worse than Option 1.	0
Traffic & Transport	Option 1 sits further away from the A1 than Options 2 and 3, which would be the main route to / from the site during construction.	Option 2 is closer to the A1 than Option 1, which would be the main route to / from the site during construction. Thus, benefitting from more convenient access. Option 2 is therefore slightly better than Option 1.	+	Option 3 sit closer to the A1 than Option 1, which would be the main route to / from the site during construction. Thus, benefitting from more convenient access. Option 3 is therefore slightly better than Option 1.	+
Water	The majority of this Option falls within Flood Zone 1 and as such, is not at risk of flooding. However, the Option crosses Flood Zones 2 and 3 in three locations, at Duloe Brook, Honeydon Brook and to the west of Eaton Socon Substation.	The majority of this Option falls within Flood Zone 1 and as such, is not at risk of flooding. However, the Option crosses Flood Zones 2 and 3 in one location at Duloe Brook. Option 2 is therefore slightly better than Option 1.	+	The majority of this Option falls within Flood Zone 1 and as such, is not at risk of flooding. However, the Option crosses Flood Zones 2 and 3 in one location at Duloe Brook. Option 3 is therefore slightly better than Option 1.	+

Topic	Option 1 (Reference)	Option 2	Rating	Option 3	Rating
Social Impact					
Community Impact	<p>Option 1 represents the longest cable route option in terms of length and therefore has the greatest potential for disruption during the construction phase.</p> <p>Option 1 runs in close proximity to a number of settlements, including to the west of the settlement of Little Staughton, to the north of Church End, north of Honeydon and to the north of Wyboston. As well as multiple singular and more remote dwellings.</p> <p>The construction of this cable route would cross a number of Public Rights of Way and roads including W End, St Neots Road, Little Staughton Road, Cadbury Lane, the unnamed road running through Honeydon, and Staploe Road.</p> <p>Due to its length, proximity to sensitive receptors and construction across the largest number of roads, Option 1 is likely to result in the most disruption and impact to the local community.</p>	<p>Option 2 runs between the settlements of Staploe and Duloe. As well as some singular, more remote dwellings (albeit, fewer than Option 1). Eaton Socon lies to the east of this route, however on the opposite side of the A1.</p> <p>The construction of this cable route would cross a number of Public Rights of Way and roads including Moor Road, Staploe Lane, Shakers Way and Bushmead Road.</p> <p>Option 2 represents a shorter route than Option 1, is located in close proximity to fewer dwellings than Option 1 and would require crossing of fewer public roads. Thus, is less likely to result in disruption and impact to the local community than Option 1.</p> <p>Option 2 would have a greater impact on local communities than Option 3 as it runs through Staploe and Duloe in close proximity to dwellings within those settlements.</p>	+	<p>Option 3 runs to the south of the settlement of Hail Weston and to the east of Duloe. As well as some singular, more remote dwellings (albeit, fewer than Option 1). Eaton Socon lies to the east of this route, however on the opposite side of the A1.</p> <p>The construction of this cable route would cross a number of Public Rights of Way and roads including Moor Road, Duloe Road and Bushmead Road.</p> <p>Option 3 represents a shorter route than Option 1, is located in close proximity to fewer dwellings than Option 1 and would require crossing of fewer public roads. Thus, is less likely to result in disruption and impact to the local community than Option 1.</p> <p>Option 3 would have the most limited impact on local communities, due to its location away from local settlements and associated dwellings.</p>	++

Topic	Option 1 (Reference)	Option 2	Rating	Option 3	Rating
		Option 2 is therefore slightly better than Option 1.		Option 3 is therefore notably better than Option 1.	
Land	<p>The Option 1 cable route crosses the proposed solar area of the proposed solar farm on land to the south and north of Bushmead Road (ref: 21/02240/EIASCR). This has the potential to become a constraint.</p> <p>This route does not appear to cross any Special Category Land.</p>	<p>The Option 2 cable route crosses the proposed solar area at High Wood Solar (ref: 22/01813/FUL) and the proposed solar area of the proposed solar farm on land to the south and north of Bushmead Road (ref: 21/02240/EIASCR). This has the potential to become a constraint.</p> <p>This route does not appear to cross any Special Category Land</p> <p>Option 2 is neither better nor worse than Option 1.</p>	O	<p>Option 3 crosses the existing Little Staughton Solar Farm access road which is also the proposed to access the High Wood Solar scheme (22/01813/FUL). Option 3 does not cross the proposed solar area of any adjacent scheme. Crossing of a private access road is a much lesser constraint than crossing a main solar area, and can be easily mitigated during construction to avoid conflict / disruption.</p> <p>This route does not appear to cross any Special Category Land.</p> <p>Option 3 is slightly better than Option 1.</p>	+
Safety and Security	Due to the nature of the development, safety and security impacts are not relevant.	Due to the nature of the development, safety and security impacts are not relevant.	O	Due to the nature of the development, safety and security impacts are not relevant.	O
Commercial Impact					

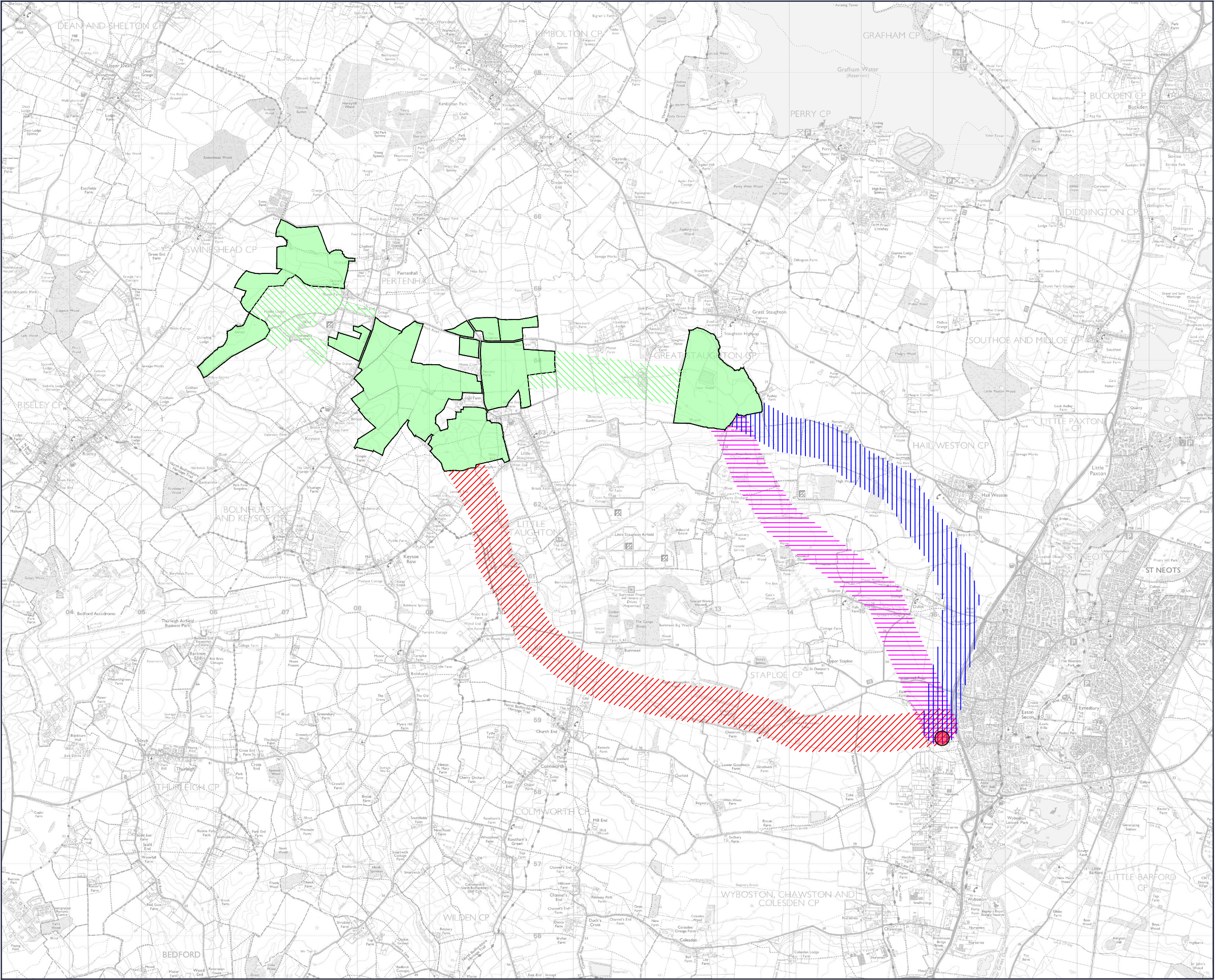
Topic	Option 1 (Reference)	Option 2	Rating	Option 3	Rating
Cost	Cost impacts in this case relate to the length of the proposed grid connection cable route. Option 1, at circa 8.5km in length, is longer than Options 2 and 3. Therefore, construction costs would be notably higher.	Cost impacts in this case relate to the length of the proposed grid connection cable route. Option 2 is substantially better than Option 1.	++	Cost impacts in this case relate to the length of the proposed grid connection cable route. Option 3 is substantially better than Option 1.	++
Buildability	Option 1 runs through undulating landscape, with varying topography. Thus, reducing ease of buildability. This cable route would require 8 ditch / brook crossings and multiple hedgerow crossings (notably more than Options 2 and 3).	In terms of topography, the Option 2 route is fairly flat. Option 2 would require 4 ditch / brook crossings and multiple hedgerow crossings (however, notably less than Option 1). Option 2 is substantially better than Option 1.	++	In terms of topography, the Option 3 route is fairly flat. This cable route would require 5 ditch / brook crossings and multiple hedgerow crossings (however, notably less than Option 1). Option 3 is substantially better than Option 1.	++
Programme	Impacts on programme during the construction period mainly depend on the length of the cable route option. As the Option 1 cable route is slightly longer than Options 2 and 3, the programme for construction would be longer.	Impacts on programme during the construction period mainly depend on the length of the cable route option. Option 1 is longer than Option 2 and as such, the programme for construction would be longer. Option 2 is notably better than Option 1.	++	Impacts on programme during the construction period mainly depend on the length of the cable route option. Option 1 is longer than Option 3 and as such, the programme for construction would be longer. Option 3 is notably better than Option 1.	++
Summary					

Topic	Option 1 (Reference)	Option 2	Rating	Option 3	Rating
Summary	<p>This option comprises Grade 2 best and most versatile agricultural land, and does not contain any statutory or non-statutory designated heritage assets or sites for nature conservation. However, this option does lie adjacent to two Grade II listed buildings, and circa 700m west of the Little Staughton Conservation Area. This route option is also at risk of flooding in three locations.</p> <p>This option runs across an undulating landscape, and crosses multiple Public Rights of Way as well as public roads. The option is also located in close proximity to the settlements of Little Staughton, Church End, Honeydon and Wyboston. This route would be highly visible from these locations due to the topography.</p> <p>The Option 1 cable route is the longest in terms of length and as such, has the greatest potential for landscape and visual effects, as well as noise and vibration, and disruption to local communities during the construction phase. Construction costs would also be</p>	<p>This option comprises Grade 2 best and most versatile agricultural land and does not contain any statutory or non-statutory designated sites for nature conservation. The option passes in close proximity to two Scheduled Monuments as well as listed buildings. This route option is at risk of flooding in one location.</p> <p>The topography across this route is fairly flat, although slightly more undulating than Option 3, and sits on low lying ground. This option crosses multiple Public Rights of Way and public roads (albeit, less than Option 1). This option runs in close proximity to dwellings within the settlements of Staploe and Duloe. Both Options 2 and 3 sit closer to the A1 than Option 1, which is the main route to / from the site during construction.</p> <p>Options 2 and 3 are similar in length and as such, have similar potential for landscape and visual effects, as well as noise and vibration (albeit, impacts at route Option 3 would be slightly less due to the location of the A1), and disruption to local communities</p>		<p>This option comprises Grade 2 best and most versatile agricultural land and does not contain any statutory or non-statutory designated sites for nature conservation. The option passes in close proximity to one Scheduled Monument as well as one listed building. This route option is also at risk of flooding in one location.</p> <p>This route option sits on low lying ground and the topography is fairly flat. This option crosses multiple Public Rights of Way and public roads (albeit, fewer than Option 1). Furthermore, this option runs in close proximity to the settlements of Hail Weston and Duloe. Both Options 2 and 3 sit closer to the A1 than Option 1, which is the main route to / from the site during construction.</p> <p>Options 2 and 3 are similar in length and as such, have similar potential for landscape and visual effects, as well as noise and vibration (albeit, impacts at route Option 2 would be slightly greater due to its location further from the A1), and disruption to local</p>	

Topic	Option 1 (Reference)	Option 2	Rating	Option 3	Rating
	<p>highest and construction programme the longest. Furthermore, this option is located the furthest away from the A1, which would be the main route to / from the site during construction.</p> <p>It should also be noted that this cable route option crosses the proposed solar area of the proposed solar farm on land to the south and north of Bushmead Road (ref: 21/02240/EIASCRC) which has the potential to become a constraint.</p>	<p>during the construction phase. Due to its length, impacts as a result of Option 1 would be greater.</p> <p>It should also be noted that this cable route option crosses the proposed solar area at High Wood Solar (ref: 22/01813/FUL) and the proposed solar area of the proposed solar farm on land to the south and north of Bushmead Road (ref: 21/02240/EIASCRC), which has the potential to become a constraint.</p>		<p>communities during the construction phase. Due to its length, impacts as a result of Option 1 would be greater.</p> <p>It should also be noted that this cable route option crosses the existing Little Staughton Solar Farm access road, also proposed to access the High Wood Solar scheme (22/01813/FUL). This cable route does not cross the proposed solar area of any adjacent scheme. Crossing of a private access road is a much lesser constraint than crossing a main solar area, and can be easily mitigated during construction to avoid conflict / disruption.</p>	

6.0 SUMMARY AND RECOMMENDATION

- 6.1.1 The appraisal set out in Table 1 considers the potential impacts of three corridor options, Option 1, Option 2 and Option 3, as illustrated on Figure 1.
- 6.1.2 It is clear from Table 1 that Option 2 and Option 3 are substantially better choices than Option 1 as they will each have a lesser environment impact, social impact, and are more commercially viable.
- 6.1.3 Option 3 is considered to have slight benefits over Option 2 with regards to its likely impact on local community and land uses, but otherwise the differences are more subtle, as follows:
- Option 3 has slight benefits over Option 2 with regards its potential impact on the historic environment, with Option 2 passing closer to Bassmead Manor and closer to groups of listed buildings in Duloe and Staploe;
 - Option 3 has slight benefits over Option 2 with regards landscape and visual impact, due to the pattern of fields the route corridor crosses (fewer hedgerows and trees) and the fewer potential visual receptors;
 - Option 3 is likely to have slight benefits over Option 2 with regards noise impact due to the greater separation from properties within Staploe and Duloe.
- 6.1.4 Overall, it is recommended that RNA proceed with Option 3 as the preferred route for the grid connection corridor.



- Proposed Site Area
- Internal Cabling
- Option 1
- Option 2
- Option 3
- Point of Connection

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Project

East Park Energy
Grid Connection Corridor Appraisal

Figure Number

Figure 1

Figure Title

Grid Connection Corridor Options

Scale

1:50,000 @A3

Date

August 2022

