

Gate Burton Energy Park Environmental Statement

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Gate Burton Energy Park – Transport Scoping Note

Discipline Transportation	Date April 2022	Project number 60664324	
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Revision History

Revision	Revision date	Details	Authorised	Name	Position
-	04/04/2022	FOR LHA REVIEW	MRW	Mark Watson	Associate Director

1. Introduction

This Transport Scoping Note has been prepared to set out the proposed approach for the transport chapter/ documents which will support the DCO Application including the Transport Assessment (TA) and Chapter 13 Transport and Access which will form part of the Preliminary Environmental Impact Report (PEIR) and the Environmental Statement (ES). A request for an EIA Scoping Opinion was sought from the Secretary of State through the Planning Inspectorate in 2021 as part of the EIA Scoping Process. A copy of the Transport and Access scoping chapter is provided in **Appendix A**. An EIA Scoping Opinion was subsequently received on 20th December 2021, and a summary of the comments relating to transport and access is provided in **Appendix B**. Reference has been made to the comments within this note where appropriate and further details of how these comments have been addressed will be provided within the TA, PEIR and ES.

A Framework Construction Traffic Management Plan (CTMP) will also be prepared in support of the DCO Application. It should be noted that a standalone Travel Plan (TP) is not expected to be required given that measures to encourage sustainable travel and car sharing for construction staff will be included in the Framework CTMP and there are expected to be very few staff/ movements associated with the operational phase.

An initial access appraisal was carried out in September 2021 to review three potential site accesses for the Energy Park Site, one on the A156, as well as two potential accesses on Kexby Lane; one on the northern and one on the southern side of the carriageway. In addition, one potential site access was reviewed for the Grid Connection Route on Cottam Road near to the Power Station. The findings of this appraisal have informed the proposed site access strategy set out in Section 5 (please note additional access points have been identified since the initial access appraisal was prepared).

This report has been prepared following a Transport Scoping Meeting on the Energy Park Site with Lincolnshire County Council (LCC), West Lindsey District Council (WLDC), Nottinghamshire County Council (NCC) and Bassetlaw District Council (BDC) on 22nd March 2022. The presentation for the meeting is provided in **Appendix C** with the associated meeting minutes in **Appendix D**.

In line with the Transport Scoping Meeting, this report primarily focuses on the Energy Park Site which is located in Lincolnshire as there is currently limited information available for the proposed Grid Connection Route, which is located within both Lincolnshire and Nottinghamshire. Information has however been provided for the indicative Grid Connection Route corridor where possible.

2. Scheme Summary

Gate Burton Energy Park (the 'Scheme') is a proposed solar farm which will generate renewable energy for export to the National Grid. The Scheme will comprise the construction, operation, maintenance, and decommissioning of a solar photovoltaic (PV) electricity generating facility and energy storage facility with a total capacity exceeding 50 megawatts (MW) and export connection to the National Grid. The Scheme will be located within the 'DCO Site' (as described below) and is the subject of the DCO Application.

The DCO Site comprises an area of circa. 1425 ha which straddles the boundary between the counties of Nottinghamshire and Lincolnshire, within the districts of Bassetlaw (in Nottinghamshire) and West Lindsey (in Lincolnshire). The DCO Site comprises the Energy Park Site and the Grid Connection Route. The Grid Connection Route comprises an area which will connect the Energy Park Site to Cottam Substation. A site location plan is held in **Appendix E**.

The Energy Park Site comprises:

- Solar PV Array Works Area;
- Battery Energy Storage System (BESS) Compound(s);
- On-Site Substation (for transformers, switchgear and metering equipment);
- Ancillary Infrastructure;
- The On-Site Substation; and
- Landscape Works Area.

The areas immediately surrounding the DCO Site comprise several small rural villages, including Gate Burton and Knaith approximately 50m and 200m to the west of the Scheme respectively, Marton approximately 500m to the southwest, as well as Willingham by Stow and Kexby circa. 700m and 1.8km to the east respectively. There are limited industrial or commercial land uses within the immediate vicinity of the DCO Site. The A1500 (Stow Park Road/Till Bridge Lane) and A156 (Gainsborough Road) cross the southern and western part of the study area, contrasting with the north-south alignment of the River Trent and the railway line connecting Lincoln and Doncaster, the latter which runs through the site. The B1241 intersects the northern part of the DCO Site, whereas Marton Road and Willingham Road border the southern extent of the DCO Site.

The assessment scenarios that are being considered are outlined below:

- Existing baseline (2022) – traffic surveys undertaken in March 2022;
- Construction (2025-2027) – the peak construction year is currently estimated to be 2026, with TEMPro growth factors applied to the 2022 baseline traffic data (as well as any committed development traffic);
- Operation (2028-2088) – the Scheme is planned to open in 2028; and
- Decommissioning (2088) – the Scheme is expected to be operational for at least 60 years and the impact of the decommissioning phase is expected to be equal or less than the construction phase.

3. Policy and Guidance

The following list identifies the policy documents to be reviewed as part of the transport chapter/ documents:

- National Policy Statement (NPS EN-1 and NPS EN-3);
- National Planning Policy Framework;
- National Planning Practice Guidance;
- Central Lincolnshire Local Plan;
- Fourth Lincolnshire Local Transport Plan 2013/14 to 2022/23;
- Gainsborough Transport Strategy;
- Nottinghamshire Local Transport Plan 2011-2026; and
- Nottinghamshire Local Transport Plan Implementation Plan 2018/19 to 2020/2021.

In addition, 'Guidelines for the Environmental Assessment of Road Traffic' (1993) (IEMA) provides guidance on examining the environmental impacts of developments in terms of traffic and transportation.

4. Baseline Conditions

The transport chapter/ documents will outline the local networks for vehicles, public transport and walking and cycling, including Public Rights of Way (PRoW), for both the Energy Park Site and Grid Connection Route. A summary is provided in the following paragraphs for the Energy Park Site.

Highway Network

A summary of the surrounding highway network for the Energy Park Site is provided below:

- The A156 High Street/ Gainsborough Road (western side). The A156 is the key strategic route in the vicinity of the Energy Park Site and provides access to the A631 strategic east-west route and the A159 (route through Gainsborough to the north) and the A57 in the south, which subsequently provides east-west access to Lincoln in the east and Worksop in the west;
- The A1500 Stow Park Road/ Marton Road / Till Bridge Lane (southern side);
- The B1241 Kexby Road/ Willingham Road (northern side); and
- The B1241 Willingham Road/ Gainsborough Road/ Normanby Road/ Sturton Road/ Stow Road (eastern side).

All of the above routes are single carriageway roads with a single lane in each direction. Speed limits on the routes vary from 30mph where they pass through settlements and frequently feature footway provision and street lighting to the national speed limit (60mph).

Within the study area there are a number of other local roads which run through, alongside or in the vicinity of the Energy Park Site. These include:

- Willingham Road/ Marton Road – a narrow, single lane road with passing places which runs west to east along the southern border of the Energy Park Site from the A156 before turning north (within the redline boundary) to join the B1421 in the village of Willingham by Stow. This route has signing stating it is unsuitable for HGV use;
- Stow Park Road – a narrow, single lane rural road which provides a north east/ south west link between the A1500 (Till Bridge Lane) and the B1421 (Sturton Road) to the south east of the Energy Park Site;
- Knaith Hill/ Station Road – a single lane road with passing places which links the A156 in the west with the B1241 Willingham Road in the north and partially runs within the north western part of the Energy Park Site; and
- Clay Lane – a no-through single lane track (with passing places) accessed via the A156 to the southwest of the Scheme and passing underneath the railway via a relatively narrow and low underpass within the Energy Park Site.

Public Transport

The transport chapter/ documents will outline any relevant bus and rail routes which could potentially be utilised by construction staff to travel to/from the Scheme. A summary of the local bus and rail facilities is provided below.

Bus

Bus stops are located on the A156 and B1421 (north and east) which broadly surround the Energy Park Site. The following bus routes serve these bus stops:

- A156 Gainsborough Road – Bus service 107 – Gainsborough to Lincoln – Two services in the AM peak and two services in the PM peak;
- B1241 Willingham Road – Bus service 100 – Scunthorpe to Lincoln – Three services in the AM peak, three services in the PM peak and otherwise one service per hour during the day; and
- B1241 Willingham Road – Bus service 105 (school days only) – Gainsborough to Lincoln – One service in the AM peak and one PM service (bus service 106 replaces 105 during school holidays and on Saturdays).

The nearest bus stops to the potential access point on Cottam Road (to serve the Grid Connection Route) are situated approximately 1.3km to the west on Cottam Lane/ Green Lane on the eastern side of Treswell. Bus Route 190 serves these stops, with the service running between Retford to Tuxford (via Rampton).

Rail

Gainsborough is located to the north of the Energy Park Site and has two railway stations, Gainsborough Central and Gainsborough Lea Road.

Gainsborough Central Station is located approximately 6km to the north of the Energy Park Site and is managed by Northern Rail, running services from Sheffield to Gainsborough to Lincoln/ Cleethorpes. The only passenger services calling at the station during a weekday are two services in the AM peak and two services in the PM peak.

Gainsborough Lea Road Station is located approximately 4.5km to the north of the Energy Park Site and is served by rail services operated by both Northern Rail and East Midland Trains, running services from Sheffield to Lincoln/ Cleethorpes and Peterborough to Doncaster.

Saxilby Station is located approximately 10.5km to the south of the Energy Park Site and is served by the same rail services as Gainsborough Lea Road.

The frequency of the rail services and the likelihood of rail as a potential travel mode for construction workers will be identified within the transport chapter/ documents.

Pedestrian and Cycling

Due to the location of the Energy Park Site in rural Lincolnshire, there is limited footway provision in the surrounding area. Footways are limited to the settlements that surround the Energy Park Site, as follows:

- A156 – footways on both sides of the A156 within Marton village; as well as footways on the western side of the A156 to the north of Marton (towards Gate Burton) and further north between Knaith and Lea;
- B1241 (North) – footway provision which varies from both sides to one side between Lea and Knaith Park, running on the northern side of B1241 between the Upton Rd/ Willingham Road junction and the western extent of residential dwellings on the eastern part of Kexby Lane;
- B1242 (East) – footway provision on at least one side of the carriageway along the full extent of the route from the Kexby Lane junction in the north to the A1500 junction in the south; and
- A1500 – other than in the settlements of Marton and Sturton by Stow (at either extent of the A1500 within the study area) there is no footway provision along this route.

There is one PRow within the Energy Park Site, which is identified below. Further details of the PRow within the Grid Connection Corridor will be identified within the transport chapter/ documents:

- PRow Knai 44/2 – a footway which runs for 452m along the northern boundary of the Energy Park Site (in its northwest corner) from Knaith Hill/ Station Road to the railway line to the east.

In addition, there are two further PRow which run along the boundary of the Energy Park Site; these are:

- PRow Knai 44/1 – a footway which runs for 330m within the vicinity of the northern extent of the Energy Park Site boundary, running in an east-west direction between the railway line in the west and B1241 to the east; and
- PRow Mton 69/1 – a footway which runs for 339m and meets the Energy Park Site boundary to the southwest, running in a north-south direction between the Energy Park Site boundary in the north and A1500 Stow Park Road in the south.

There are no on or off-road dedicated/ marked cycling facilities within the immediate vicinity of the Energy Park Site; the nearest National Cycle Network route (between Harby and Lincoln) is located approximately 12km to the south. Whilst it is likely that relatively fast vehicle speeds and high traffic flows on the two A-roads (A156 and A1500) may deter cyclists, the B1421 to the north and east of the Energy Park Site, as well as the local roads situated closer to and within the Energy Park Site itself, such as Willingham Road and Upton Road, are likely to be more attractive to leisure cycling. The Energy Park Site could be potentially accessed by cyclists from Lea, Willingham, Stow, Upton and Brampton as all are located within an approximate 2.5km cycle distance.

5. Construction Phase: Transport Information Overview

The following identifies the existing parameters and assumptions for the Scheme which were discussed with the LHAs during the meeting on 22nd March 2022. The information presented to the LHAs regarding site access arrangements is contained with **Appendix C**.

Access

The proposed construction accesses for the Energy Park Site are as follows based on the current access strategy (which has been developed since the initial access appraisal was prepared):

- A156 (primary access located to the north of Gate Burton). An alternative option is being considered and was discussed with the Local Highway Authorities (LHAs), namely using a one-way 'loop' via Clay Lane and Willingham Road;
- Kexby Lane North (secondary access located between Knaith Park and Kexby);
- Kexby Lane South (secondary access located between Knaith Park and Kexby); and
- Marton Road (secondary access located by Willingham by Stow, utilising an existing farm access and track).

The exact locations of the A156 access and the Kexby Lane (north and south) site accesses are currently being determined. During the meeting with the LHAs, both options for the A156 were considered to be acceptable from a highway's perspective, albeit the first option (primary access to the north of Gate Burton) would be preferred from an air & noise/ amenity perspective given this would be further away from residential properties. In terms of Kexby Lane, two potential options were discussed including a crossroads option with the northern and southern accesses opposite each other, as well as a staggered option with two separate T-junctions. Further clarification will be provided within the transport chapter/ documents, including visibility splays and swept path analysis for the indicative site access junction layouts.

As mentioned previously, the proposed construction accesses for the Grid Connection Route are currently being determined for the preferred option, however they are likely to be as follows:

- The existing Power Station access to the south of Cottam Road;
- A new access on the northern side of Cottam Road, in the vicinity of the Power Station; and
- A new access on the A156, to the south of Marton.
- A new access on the eastern side of the A156 or the southern side of the A1500 (to be confirmed).

At this stage, it is expected that all of the above accesses will be retained during the operational phase to provide maintenance access. However, further clarification will be provided within the transport chapter/ documents.

Programme and Working Hours

The following assumptions have been adopted:

- The shortest expected construction programme will be 28 months, which provides a worst-case in terms of monthly (and therefore daily) construction vehicle trips;
- The summer construction working hours will be Monday to Friday (07:00-19:00) and Saturday (09:00-13:00) with no Sunday or Bank Holiday working;
- The winter construction hours will be Monday to Friday (08:00-18:00) and Saturday (09:00-13:00) with no Sunday or Bank Holiday working;

- To provide a robust assessment, the winter weekday working hours will be adopted so that staff travel patterns are more closely aligned with the traditional network hours of 08:00-09:00 and 17:00-18:00;
- As such, staff arrivals are expected between 07:00-08:00 and staff departures are expected between 18:00-19:00 (Monday to Friday);
- An uplift of the forecast daily HGVs and staff will be applied within the TA (to allow for daily variation where necessary). Further details of this was provided in the meeting with the LHA/LPAs on 22nd March 2022 and included in **Appendix C**;
- HGV and LGV movements will be distributed across an 8-hour window, avoiding the weekday peak hours, arriving and departing between 09:00-17:00; and
- A weekday assessment will be carried out for the peak construction phase based on the above (and it is not proposed to carry out a Saturday assessment).

Trip Generation and Distribution

At this stage, the peak daily number of HGVs, LGVs and construction staff required for the Energy Park Site (excluding the Grid Connection Route) are as follows:

- 60 HGV deliveries (120 two-way movements);
- 30 LGV deliveries (60 two-way movements); and
- 200 construction staff (the forecast number of staff vehicles has been determined below).

In terms of staff movements, whilst there may be limited potential to travel to/ from the DCO site by public transport or bicycle, the potential use of these modes has been discounted to provide a robust approach in terms of the number of vehicular trips to be generated:

- 10% of construction staff (20 persons) to be transferred to/ from the Scheme by mini-bus service e.g. to/ from areas such as Gainsborough and Lincoln (or where there is sufficient demand);
- 90% of construction staff (180 persons) to travel by private vehicle with an average occupancy of 1.3 staff members per vehicle (as presented during the meeting on 22nd March 2022); and
- Based on the above this would equate to 138 staff vehicles (276 two-way daily movements) and two minibuses travelling to/ from the site in both the morning and the evening (8 two-way daily movements).

In terms of points of origin, the following has been assumed:

- 50% HGVs and LGVs to travel to/ from the A156 to the north;
- 50% HGVs and LGVs to travel to/ from the A156 to the south;
- Construction staff to be distributed based on Census Journey to Work data; and
- The mini-bus movements are assumed to be to/ from Gainsborough (one) and Lincoln (one) via the A156 and/ or the A1500.

In terms of allocating trips across the Energy Park Site (points of destination), the following has been assumed based on the current access strategy:

- 62% of construction vehicles (both HGVs and staff) to utilise the primary site access on the A156;
- 9% of construction vehicles to utilise the Kexby Lane North secondary site access;
- 20% of construction vehicles to utilise the Kexby Lane South secondary site access; and
- 9% of construction vehicles to utilise the Marton Road secondary site access.

The forecast daily construction vehicle trip attraction associated with the Energy Park Site during the peak construction phase is summarised below in **Table 1**.

Table 1. Forecast Daily Construction Vehicles (One-Way) during Peak Construction Phase for Energy Park Site

Site Access	Proportion	HGVs	LGVs	Staff Vehicles	Minibuses	Total Vehicles (One-Way)
A156 Main Access	62%	38	18	86	2*	144
Kexby Lane North	9%	5	3	12	0	20
Kexby Lane South	20%	12	6	28	2*	48
Marton Road	9%	5	3	12	0	20
Total	100%	60	30	138	4*	232

*each minibus to depart from and arrive back to the site twice per day i.e. two mini-buses picking-up and dropping-off staff

Details of the number of HGVs, LGVs and construction staff required for the Grid Connection Route (and therefore for the Scheme) will be set out within the transport chapter for either the PEIR or ES, once these details are known.

Abnormal Loads

At this stage, the required quantity of Abnormal Indivisible Loads (AILs) including cranes is unknown for the Scheme. However, it is understood that AILs and cranes will be required for the Energy Park Site (for the large transformer and site

equipment) and that all of these would utilise the main site access on the A156. Therefore, swept path analysis of the largest AIL/crane is expected to be undertaken at the main site access on the A156 to ensure that the site access is designed to accommodate the maximum sized AIL/crane. Details of the largest vehicle dimensions and vehicle profiles will be provided within the transport chapter/ documents once known. The anticipated routing strategy for AILs/cranes will also be provided to the LHAs for review as requested during the meeting on 22nd March 2022 (**Appendix D**).

At this stage it is not expected that AILs or cranes would be required to access the Grid Connection Route via the Cottam Road or the A156 site access south of Marton.

Rail Access (Deliveries)

In terms of potentially utilising the railway for deliveries during the construction phase, whilst the existing power station is served by a rail station, it is understood that following initial conversations with Network Rail, this section of rail is no longer in use. This may therefore facilitate over-track crossings for the Grid Connection Route works if required. Furthermore, the railway running through the Energy Park Site is frequently used by mainline passenger services and is therefore not considered to be viable for serving the Scheme in terms of delivering equipment, materials etc. Further details are provided within **Appendix D**.

Cumulative Assessment

TEMPro will be used to growth the baseline traffic flows from 2022 to the peak construction year, which is expected to be 2026, to reflect growth in housing and employment in the local area.

In addition, a cumulative assessment will be undertaken to consider the potential impact of the West Burton Solar Farm Project¹ and the Cottam Solar Farm Project² which are on the Planning Inspectorate website, as well as any additional developments which are expected to come forward during the peak construction year. Further discussions will be required with the LHAs to identify and agree the committed developments and highway schemes which should be considered as part of the cumulative assessment of the construction phase.

It should be noted that discussions are currently being held with the developers of the West Burton Solar Farm and Cottam Solar Farm projects and it is expected that a 'joined up' approach will be identified and presented to the LHAs for agreement on the cumulative assessment methodology as a result of these discussions.

6. Operational Phase: Proposed Approach

It is anticipated that there will be up to three permanent staff during the operational phase, predominantly undertaking maintenance tasks. Operational staff are expected to travel to site by four-wheel drive vehicles or medium/ large vans. The Scheme is therefore expected to attract a low level of vehicle trips during the operational phase. Therefore, it is not proposed to carry out a detailed assessment of the operational phase, as agreed during the transport scoping meeting on 22nd March 2022 (see **Appendix D**). This also meets the requirements of the ID 3.8.1 of the EIA Scoping Opinion (**Appendix B**) which states the following "*On the basis of the low anticipated operational traffic volumes, the Inspectorate is content to scope this matter out from further assessment. The ES project description should confirm the likely operational traffic flows.*"

Operational access is expected to be mainly taken from Gainsborough Road (A156) and/ or via the existing Clay Lane. Routine visits by vans and four-wheel drive vehicles would utilise the Clay Lane rail underpass to access the eastern part of the Site. Larger vehicles could utilise the proposed access points along Kexby Lane and/ or Gainsborough Road, on the assumption that these are retained during the operational phase. Further detail will be provided within the transport reports.

It should be noted that a Glint and Glare Assessment will be carried out as part of the DCO Application to consider the potential impacts of the Scheme on various receptors (e.g. the surrounding highway and railway network) and determine whether any mitigation is required to avoid any potential adverse impacts. The findings of the Glint and Glare Assessment will be reviewed and considered as part of the transport chapter/ documents.

7. Decommissioning Phase: Proposed Approach

For the purposes of the EIA, the decommissioning assessment year is assumed to be 2088 (60 years from opening). The decommissioning period is expected to be similar in duration and nature to the construction phase, albeit with fewer vehicle trips over a slightly shorter duration. In addition, this scenario is considered to be too far into the future to be able to accurately predict future baseline traffic flows or road / junction layouts. Therefore, the likely impacts of the decommissioning phase, including any required mitigation, are expected to be the same as (and not great than) the

¹ <https://infrastructure.planninginspectorate.gov.uk/projects/east-midlands/west-burton-solar-project/>

² <https://infrastructure.planninginspectorate.gov.uk/projects/east-midlands/cottam-solar-project/>

construction phase. It is therefore not proposed to carry out a separate standalone assessment for the decommissioning phase given the above, as agreed during the transport scoping meeting on 22nd March 2022 (see **Appendix D**).

Notwithstanding the above, solar panels typically have a lifespan of 30-40 years and may therefore need to be replaced at least once during the operational life of the Scheme. The level of vehicle trips associated with component replacement (e.g. batteries and panels) is not expected to be any greater than the level of vehicle trips generated at the end of the Scheme (decommissioning phase) or during the peak construction phase. As such, the above approach is considered to be appropriate for assessing the decommissioning effects of the Scheme, including in the instance that any components need to be replaced. This will be confirmed during the preparation of the TA and ES, including as part of any further scoping discussions if required.

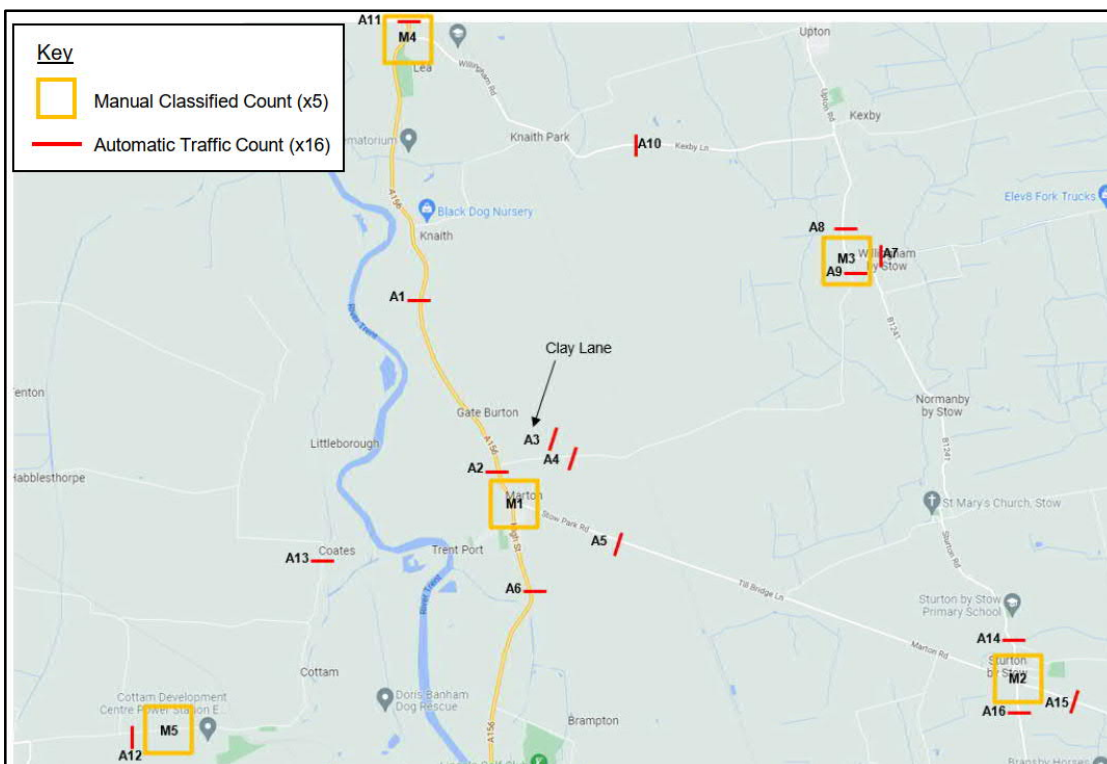
The above meets the requirements of ID 3.8.3 of the EIA Scoping Opinion (**Appendix B**) which states the following “*The Inspectorate accepts that a full assessment of traffic impacts may not be possible at the current time, however, the ES should provide commentary on the likely transport impacts of the decommissioning process in light of comments in section 3.10 of this Opinion regarding component refurbishment, where possible*”, as well as ID 3.8.10 which states “*there is a potential need for substantial removal of panel waste prior to the end of the stated operational period that should be addressed within the ES and/ or ODEMP.*”

8. Data Sources

Traffic Surveys

Various Automatic Traffic Counts (ATCs), Manual Classified Counts (MCCs) and speed surveys have been commissioned for the surrounding highway network as shown in **Figure 1** below (these locations were presented to the LHAs during the meeting held on 22nd March 2022). The surveys commenced on Tuesday 22nd March 2022 between the hours of 0600-1000 and 1600-2000 to include the construction staff peak hours and traditional highway network peak hours. The MCCs were carried out for a single day (Tuesday 22nd March 2022) whereas the ATCs were carried out for a continuous seven-day period (Tuesday 22nd March to Monday 28th March 2022).

Figure 1. Indicative Traffic Survey Locations



A summary of the locations of the traffic counts is as follows:

- A1 – ATC and Speed Survey: A156 Gainsborough Road (North of Kexby Lane);
- A2 – ATC and Speed Survey: A156 (south of clay Lane);
- A3 – ATC and Speed Survey: Clay Lane;
- A4 – ATC and Speed Survey: Willingham Road;
- A5 – ATC and Speed Survey: A1500 Stow Park Road;

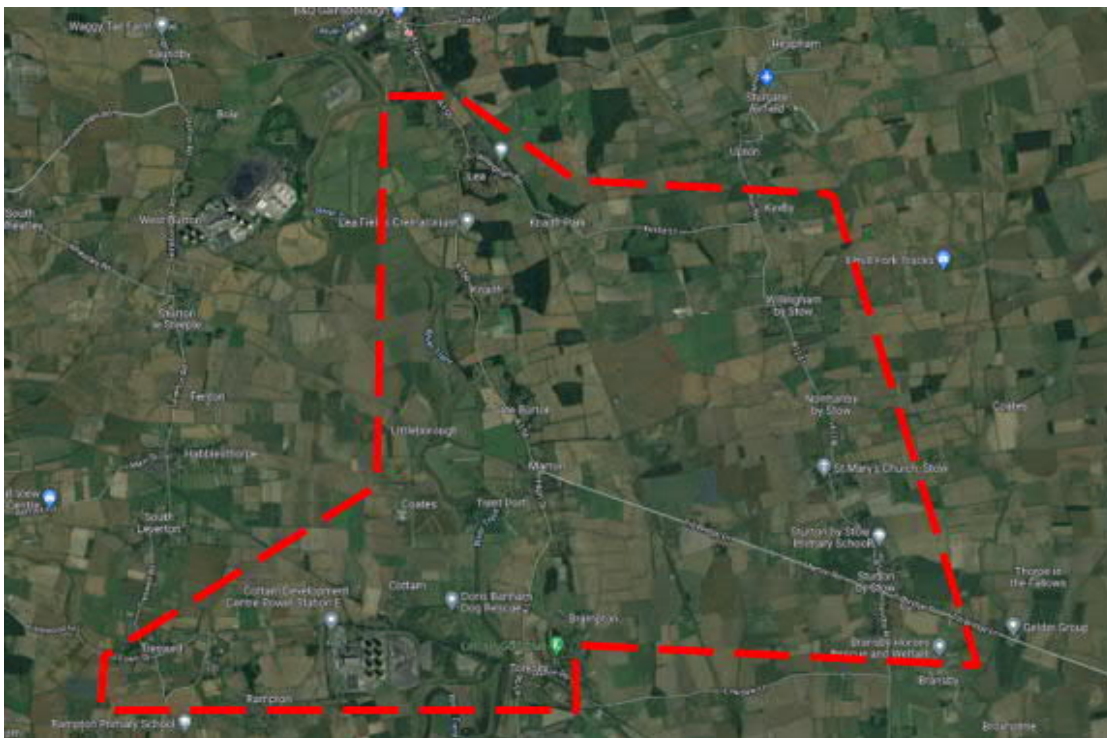
- A6 – ATC and Speed Survey: A156 (South of Marton);
- A7 – ATC and Speed Survey: High Street (Willingham by Stow);
- A8 – ATC and Speed Survey: Gainsborough Road (Willingham by Stow);
- A9 – ATC and Speed Survey: Marton Road (Willingham by Stow);
- A10 – ATC and Speed Survey: Kexby Lane;
- A11 – ATC and Speed Survey: Station Road;
- A12 – ATC and Speed Survey: Cottam Road;
- A13 – ATC and Speed Survey: Town Street/Headstead Bank;
- A14 – ATC and Speed Survey: B1241;
- A15 – ATC and Speed Survey: A1500 (East of Saxilby Road);
- A16 – ATC and Speed Survey: Saxilby Road;
- M1 – MTC: A156/A1500/Littleborough Lane staggered junction;
- M2 – MTC: A1500/B1241 T-Junction;
- M3 – MTC: Marton Road/High Street/Gainsborough Road T-Junction;
- M4 – MTC: A156/Gainsborough Road/Willingham Road Junction; and
- M5 – MTC: Cottam Road/Power Station.

At this stage, no additional traffic surveys are proposed and the requirement for any additional surveys will be agreed with the LHAs once further details of the Grid Connection Route are known.

Personal Injury Collision Data

Personal Injury Collision (PIC) data will be analysed within the transport chapter/ documents. An indicative study area is identified in **Figure 2** below which includes parts of the highway network situated within both Lincolnshire and Nottinghamshire. The PIC study area is consistent with the extents of the traffic surveys (see above) and includes the main vehicle routes that are expected to be utilised to/ from the Energy Park Site and the Grid Connection Route. The study area includes parts of the highway network which provide access to/ from Lea to the north, Kexby, Willingham by Stow and Sturton by Stow to the east, Treswell and Cottam to the south and Littleborough to the west.

Figure 2. Indicative PIC Study Area



A request will be made to each LHA to obtain available data for the most recent 5-year period once the study area for each local authority has been agreed.

Additional Data Sources

The following additional data sources will be used to support the transport chapter/ documents:

- Additional traffic data (e.g. DfT traffic counts, or traffic counts carried out in support of other nearby schemes);
- Highway boundary information (request to be made to LHAs);
- OS Mapping; and
- Topographical surveys (if available).

9. Proposed PEIR/ ES Assessment Methodology

The proposed assessment methodology for the transport and access chapter of the ES is set out within the EIA Scoping Report prepared in November 2021 and has been included within **Appendix A** for reference. Further details of the proposed methodology for the ES were also covered during the transport scoping meeting on 22nd March 2022, of which the presentation and minutes are held in **Appendix C** and **Appendix D** respectively. A few additional details are also set out below.

The proposed study area for assessing potential effects on vehicle travellers is represented by the highway network covered by the traffic surveys as shown in **Figure 1**.

The IEMA guidelines set out two rules in identifying potential links for analysis:

- **Rule 1:** include highway links where traffic flows will increase by more than 30% (or the number of HGVs will increase by more than 30%); and
- **Rule 2:** include any other specifically sensitive areas (e.g. accident black spots, conservation areas, hospitals, links with high pedestrian flows etc) where traffic flows have increased by 10% or more.

Based on this, it is proposed to assess any links where traffic flows are expected to increase by 30% or more during the peak hours of the peak construction phase (2026). It is not proposed to assess any links where there is expected to be a less than 30% increase in traffic flows as a result of the Scheme, unless any specifically sensitive areas are identified.

The potential effects on Driver Delay will be determined through the analysis of any junction capacity assessments carried out as part of the TA where deemed required. Should any junction capacity assessments be required following the completion of the traffic surveys and the initial construction trip generation and distribution exercise, then the scope of these will be confirmed with the local highway authorities. Where junction capacity assessments are not required, it is proposed to consider the forecast impacts on Driver Delay to be negligible given that no adverse impacts are envisaged for these parts of the network (in terms of additional delay to road users).

Lastly, whilst it is proposed to include sub sections for the Energy Park Site and the Grid Connection Route when introducing the proposed site access arrangements and trip attraction within the TA, only the overall impacts of both elements of the Scheme (combined) will be assessed.

10. TA Methodology

The purpose of the TA will be to demonstrate that the Scheme is acceptable in transport and highway terms, following the pre-application scoping discussions held with Lincolnshire County Council (LCC) and Nottinghamshire County Council (NCC) as the local highway authorities. The development of the TA will be supported by an ongoing consultation process, to agree the approach for the TA, allow mitigation measures to be incorporated into the Scheme design and to minimise adverse effects.

The proposed structure for the TA is as follows, with further details relating to the Site, Scheme and proposed assessment approach identified further above:

- Introduction
 - Context
 - Document Purpose
 - Consultation
 - Additional Reports
- Site Location and Existing Use
 - Site Location
 - Surrounding Area
 - Study Area
- Policy Context
 - National Planning Policy
 - Local Planning Policy
- Accessibility Appraisal and Existing Conditions
 - Highway Network
 - Public Transport
 - Walking and Cycling
- The Scheme
 - Scheme Summary
 - Programme

- Vehicular Access Arrangements
- Additional Construction Considerations
- Vehicle Types, Plant Requirements and Abnormal Loads
- Vehicle Routing
- Parking
- Pedestrian and Cycle Access
- Proposed Trip Attraction and Distribution
 - Construction
 - Operation
 - Decommissioning
- Committed Developments/ Schemes
 - Future Baseline
 - Cumulative Schemes
 - Timescales
- Highway Assessment
 - Assessment Scenarios
 - Existing Baseline (2022)
 - Future Baseline (2026)
 - Construction Phase (2026 Peak)
 - Operational Phase (2028-2087) – qualitative only
 - Decommissioning Phase (2088) – qualitative only
- Walking and Cycling Review
 - Assessment Scenarios
 - Existing Baseline (2022)
 - Future Baseline (2026)
 - Construction Phase (2026 Peak)
 - Operational Phase (2028-2087) – qualitative only
 - Decommissioning Phase (2088) – qualitative only
- Summary

Further details relating to the proposed scope of the TA are set out within the presentation for the transport scoping meeting which was held on 22nd March 2022 (**Appendix C**) and the associated meeting minutes (**Appendix D**).

11. Framework Construction Traffic Management Plan

Summary

A Framework CTMP will be prepared in support of the DCO Application to focus on the management of construction traffic (HGVs, LGVs and construction staff) along the local highway network within the vicinity of the Scheme during the construction period of the works, in order to limit any potential disruptions and implications on the wider transport network, as well as for the existing road users.

Objectives

The objectives of the Framework CTMP will be to provide outline measures that would be developed in the full CTMP including to:

- Minimise the volume of HGV and staff vehicles associated with the construction phase as far as reasonably practicable;
- Maximise the safe and efficient movement of materials and staff required during the construction phase as far as reasonably practicable;
- Minimise the restrictions imposed and ensure efficient management of the local PRoW within the Scheme boundary during the construction phase;
- Minimise the impacts both for the local community and visitors to the area by using the strategic road network as far as reasonably practicable; and
- Set out any measures to be adhered to by those travelling to and from the Scheme to reduce the impact of the construction of the Scheme.

Structure

The proposed structure for the Framework CTMP is as follows:

- Introduction
 - Context
 - Document Purpose and Scope
 - Objectives
- Existing Conditions

- Site Location
- Surrounding Area
- Site Accessibility
- Future Highway Network
 - Future Network Changes
 - Committed Developments/ Schemes
 - Timescales
- Policy and Best Practice
 - National Policy
 - Local Planning Policy
- Construction Movements
 - Introduction
 - Construction Programme
 - Construction Vehicle Movements
 - Construction Vehicle Distribution
 - Vehicle Types, Plant Requirements and Abnormal Loads
- Site Access, Layout and Routing
 - Introduction
 - Scheme Elements
 - Solar Farm Site
 - Grid Connection Route
- Management and Mitigation
 - Introduction
 - Highway Network
 - Pedestrian and Cycle Routes
 - Management Measures and Controls
 - Staff Vehicle Measures and Controls
 - Management Structure
 - Monitoring and Review
- Compliance and Enforcement
 - Best Practice
 - Contractual Conditions
 - Information Packs and Communications
 - Enforcement
- Conclusion

Embedded Mitigation

A few examples of the types of embedded mitigation that will be considered within the Framework CTMP is set out below:

- Managing the arrival and departure times of HGVs to minimise the number of HGVs travelling to/ from the Scheme during the network peak hours;
- Encouraging local construction staff to car share to reduce single occupancy car trips, by promoting the benefits of car sharing, implementing a Car Share Scheme to match potential sharers and by providing dedicated parking spaces for those car sharing;
- Implementing a shuttle service to transfer construction staff to/ from local worker centres (e.g. within Lincoln or Gainsborough) to reduce vehicle trips on the surrounding highway network;
- Providing adequate space within the Scheme to ensure no overspill queuing is caused onto the surrounding road network;
- Where PRoW are required to be crossed, providing temporary diversion routes (clearly marked along with appropriate signage at either end of the diversion) to avoid any PRoW closures subject to the agreement of the LHAs;
- The inclusion of a self-contained wheel washing facility near the site accesses before vehicles egress the site onto the highway network; and
- Any proposed traffic management measures to accommodate the provision of cable crossings or to manage vehicles travelling to/ from the site accesses where appropriate.

The above it not an exhaustive list of measures and further details will be provided within the Framework CTMP.

12. Next Steps

The next steps following submission of this scoping note to the LHA are as follows:

- Review actions from the LHA meeting on 22nd March 2022;
- Arrange and hold a follow-up meeting in due course following the completion of the traffic surveys, to review the latest (updated) position on the Scheme including with respect to the Grid Connection Route and to agree the remaining scope of the transport chapter/ documents;
- Prepare the PEIR; and
- Prepare the ES, TA and Framework CTMP.

Appendix A EIA Scoping Report (Traffic & Access)

13. Transport and Access

13.1 Introduction

- 13.1.1 This chapter outlines the anticipated traffic and transport scope of assessment. A Transport Scoping Note/Access Strategy will also be prepared, which will set out the proposed scope specific to the future Transport Assessment (TA), which will follow the approach set out below.

13.2 Study Area

- 13.2.1 Due to the nature of the Scheme and proposed access strategy, consideration will be given to a number of locations within the surrounding highway network which could potentially be impacted. Links and junctions likely to require consideration are identified below.

Site Boundary (Lincolnshire)

- A156 (Gainsborough Road) (running north-south, bordering the Site to the west) between and including its junctions with the A631 (Thorndike Way and The Flood Road)/ A159 (Gainsborough Road) within Gainsborough to the north and the A57 to the south-west of Saxilby to the south;
- B1241 (Kexby Lane) (running east-west, bordering the Site to the north) between and including its junctions with the A156 (Gainsborough Road) to the west and B1241 Kexby Lane/Upton Road/ Willingham Road to the east;
- B1241 (running north-south, to the east of the Site) between and including its junctions with the B1241 Kexby Lane/Upton Road/Willingham Road to the north and A1500 Till Bridge Lane to the south; and
- A1500 (Stow Park Road/Till Bridge Lane) (running east-west, to the south of the Site) between and including its junctions with the A156 (Gainsborough Road) to the west and the B1241 (High Street) to the east.

Grid Connection Corridor (Nottinghamshire)

- 13.2.2 Cottam Road (located approximately 6km to the south-west of the Site) between its junction with Rampton Road/Green Lane to the west and the village of Cottam to the east.

Summary

- 13.2.3 The extent of the study area for assessment in terms of highway impact will be subject to discussion, and agreement will be sought, with LCC and NCC as Highway Authorities for the Local Road Network (LRN). National Highways (formerly Highways England) will also be consulted if deemed necessary, as the location of the Site is a significant distance away from the motorway and trunk road network. The Scheme itself is 'severed' by a north to south running rail line (the Sheffield to Lincoln line) and so consultation with Network Rail is also proposed.

13.3 Planning Policy Context and Guidance

- 13.3.1 Planning policy and guidance relating to transport and pertinent to the Scheme comprises:

National Planning Policy

National Planning Policy Framework (July 2021)

- 13.3.2 The Government's National Planning Policy Framework (NPPF) (Ref. 7) was originally published in March 2012 and later revised in July 2021, outlining the Government's planning policies and how they are expected to be applied. The most relevant paragraphs in the context of transport are set out below:

- Paragraph 104 outlines that “transport issues should be considered from the earliest of stages of plan-making and development proposals”;
- Paragraph 110 outlines the key considerations when assessing sites to be allocated for development in plans or specific development applications;
- Paragraph 111 states that development should only be prevented or refused on highways grounds where there would be an unacceptable impact on highway safety, or the residual cumulative impacts of development on the road network would be severe;
- Paragraph 112 states that applications for development should give priority first to pedestrian and cycle movements and then, as far as possible, to facilitating access to high quality public transport; and
- Paragraph 113 outlines that all developments that generate significant amounts of movement should be required to provide a Travel Plan, and the application should be supported by a Transport Statement or TA so that the likely impacts of the proposal can be assessed.

National Policy Statement for Energy, EN-1 (September 2011)

13.3.3 The National Policy Statement (NPS) for Energy (EN-1) (Ref. 6) was published in 2011 and provides the basis for decisions regarding nationally significant energy infrastructure. Section 5.13 outlines the planning policy for traffic and transport, including guidance on undertaking relevant parts of the EIA. The most relevant paragraphs for this purpose are Paragraphs 5.13.3 to 5.13.5 which are set out as follows:

- Paragraph 5.13.3, which states that if a project is likely to have significant transport implications, a Transport Assessment should be included with the ES;
- Paragraph 5.13.4, which states that where appropriate, a Travel Plan to include demand management measures to mitigate transport impacts should be prepared; and
- Paragraph 5.13.5, which states that where additional transport infrastructure is proposed, this should be discussed with the relevant network providers (in terms of the possibility of co-funding by the Government for any third-party benefits).

13.3.4 The NPS EN-1 is currently under review and an updated draft was published for consultation in September 2021, where the above paragraphs are proposed to be relocated to Section 5.14, supported by the following proposed updates:

- Paragraph 5.14.4, which also states that the assessment should consider any possible disruption to services and infrastructure (such as road, rail and airports); and
- Paragraph 5.14.8, which states that the Secretary of State (SoS) should only consider preventing or refusing development on highways grounds if there would be an unacceptable impact on highway safety, or residual cumulative impacts on the road network would be severe.

National Policy Statement for Renewable Energy Infrastructure, EN-3 (September 2011)

13.3.5 The NPS for Renewable Energy Infrastructure (EN-3) (Ref. 73) was published in 2011 and sets out the policies relating to electricity generation from renewable sources of energy, to be considered in conjunction with NPS EN-1. It should however be noted that solar farms are not explicitly included within the document.

13.3.6 The NPS EN-3 is currently under review and an updated draft was published for consultation in September 2021, which the inclusion of solar photovoltaic generation impacts within Section 2.54. The most relevant paragraphs are set out as follows:

- Paragraph 2.54.3, which discusses the importance of assessing various potential routes to the site for the delivery of materials and components during the construction period;
- Paragraph 2.54.4, which considers the suitability of access roads for vehicles transporting components and the need to identify potential modifications where required;
- Paragraph 2.54.9, which states that consistent with EN-1, the SoS should be satisfied, taking into account the views of the relevant local highway authorities, that any abnormal loads can be

safely transported whilst minimising inconvenience to other road users and that the environmental effects of this and other construction traffic, after mitigation, are acceptable; and

- Paragraph 2.54.10, which states that once solar farms are in operation, traffic movements to and from the site are expected to be generally very light, and it is therefore very unlikely that traffic or transport impacts from the operational phase of a project would prevent it from being approved by the SoS.

National Guidance

National Planning Practice Guidance

13.3.7 The Government's Planning Practice Guidance; Travel Plans, TAs and Transport Statements in Decision Taking (2014) (Ref. 165) provides advice on when TAs and Transport Statements are required, and what they should contain. The most relevant paragraphs are summarised below:

- Paragraph 002: assessing and mitigating the negative transport impacts of a development in order to promote sustainable development;
- Paragraphs 004 and 005: evaluating the potential transport impacts of a development proposal and may propose mitigation measures to promote sustainable development;
- Paragraph 006: positively contributing to encouraging sustainable travel, reducing traffic generation and detrimental impacts, reducing carbon emissions and climate impacts, creating accessible, connected and inclusive communities, improving health outcomes and quality of life, improving road safety and reducing the need for new development to increase existing road capacity of providing new roads;
- Paragraph 007: discusses early stage consultation and, tailored to local circumstances, collaborative ongoing working between the local planning authority/transport authority, transport operators, rail network operators, as well as National Highways where there may be implications for the strategic road network and other relevant bodies; and
- Paragraphs 013 to 015 discuss the potential scope and establishes what information should be included.

Local Planning Policy

13.3.8 A summary of the local planning documents which will be reviewed within the ES and TA are set out below.

Lincoln Transport Strategy 2020 to 2036

13.3.9 The new Lincoln Transport Strategy (Ref. 166) has been developed by LCC, City of Lincoln Council, North Kesteven District Council and WLDC. It aims to provide a clear vision for the future of transport across the Lincoln area up to 2036, the strategy includes:

- Enhancing connectivity across the network for all modes;
- Increasing the capacity of the network and supporting the reduction in traffic in the urban area; and
- Rebalance movement towards walking and cycling.

Adopted Central Lincolnshire Local Plan

13.3.10 Policy LP19 of the adopted Central Lincolnshire Local Plan (Ref. 52) identifies the factors which will be considered when assessing proposals for renewable energy:

- Proposals for non-wind renewable energy development (renewable technology will be assessed on their merits, with the impacts). Proposals will be supported where the benefit of the development outweighs the harm caused and it is demonstrated that any harm will be mitigated as far as is reasonably possible; and

- Renewable energy proposals which will directly benefit a local community, have the support of the local community and/or are targeted at residents experiencing fuel poverty, will be particularly supported.

13.3.11 Policy LP20 identifies the considerations which will be considered when assessing proposals which aims to maintain and improve the green infrastructure network in the area:

- Proposals that cause loss or harm to the network will not be permitted unless the need for and benefits of the development demonstrably outweigh any adverse impacts;
- Where adverse impacts on green infrastructure are unavoidable, development will only be permitted if suitable mitigation measures for the network are provided;
- Development proposals should ensure that existing and new green infrastructure is considered and integrated into the scheme design from the outset; and
- Development proposals must protect the linear features of the green infrastructure network that provide connectivity between green infrastructure assets, including PRoW, bridleways, cycleways and waterways, and take opportunities to improve such features.

Fourth Lincolnshire Local Transport Plan 2013/14 to 2022/23

13.3.12 The Fourth Lincolnshire Local Transport Plan (LTP4) (Ref. 167) builds on the strategies and policies adopted by previous Local Plans, the transport goals set out within this document include:

- Providing a reliable, resilient transport system which supports a thriving economy and growth whilst encouraging sustainable and healthy travel;
- Improving access to key services, particularly enabling employment and training opportunities; and
- Minimising the impacts of transport on people's lives, maximise opportunities to improve the environment and help tackle carbon emissions.

13.3.13 In addition, Section 5.17 relates to travel planning and sustainable travel within new developments whilst Section 14.33 relates to reducing the impact of traffic.

Gainsborough Transport Strategy (October 2010)

13.3.14 The Gainsborough Transport Strategy (Ref. 168) aims to understand and quantify transport problems and to develop a Transport Strategy based on short-term and long-term interventions, these include:

- Better management of movements into and through Gainsborough;
- Management of existing and future levels of congestion; and
- Addressing the impacts of existing and future movements in Gainsborough.

Nottinghamshire Local Transport Plan 2011-2026

13.3.15 The Nottinghamshire Local Transport Plan (LTP) (Ref. 169) sets out Nottinghamshire's transport strategy and outlines a programme of measures to be delivered over the short, medium and long-term. The strategy covers all types of transport including public transport, walking, cycling, cars and freight.

Nottinghamshire Local Transport Plan Implementation Plan 2018/19-2020/21

13.3.16 The Nottinghamshire LTP Implementation Plan (Ref. 170) highlights the key priorities related to transport for businesses and residents of Newark and Sherwood as being:

- Reduction of traffic congestion on roads;
- Improving walking and cycling routes; and
- Improving the safety along roads.

Industry Guidance

- 13.3.17 Institute of Environmental Management and Assessment (IEMA) Guidelines for the Environmental Assessment of Road Traffic (1993) (Ref. 171), provides guidance on examining the environmental impacts of developments in terms of traffic and transportation.

13.4 Baseline Conditions

- 13.4.1 Baseline conditions for the land within the study area will be described in detail in the ES, however for the purposes of this scoping report, they have been summarised below.

Existing Local Highway Network

Site Boundary (Lincolnshire)

- 13.4.2 The Scheme encompasses a large area of agricultural land located between four strategic A-roads and B-roads which surround the Scheme, namely:

- The A156 High Street/Gainsborough Road (western side). The A156 is the key strategic route in the vicinity of the Site boundary and provides access to the A631 strategic east-west route and the A159 (route through Gainsborough to the north) and the A57 in the south, which subsequently provides east-west access to Lincoln in the east and Worksop in the west;
- The A1500 Stow Park Road/ Marton Road/Till Bridge Lane (southern side of the Site boundary);
- The B1241 Kexby Road/Willingham Road (northern side of the Site boundary); and
- The B1241 Willingham Road/ Gainsborough Road/ Normanby Road/Sturton Road/ Stow Road (eastern side of the Site boundary).

- 13.4.3 All of the above routes are single carriageway roads with a single lane in each direction. Speed limits on the routes vary from between unrestricted (60mph) to 30mph when they pass through settlements; within the settlements the routes frequently feature footway provision and street lighting.

- 13.4.4 Within the study area there are a number of other smaller roads which run through, alongside or in the vicinity of the Scheme. These include:

- Willingham Road/Marton Road – a narrow single lane road with passing places which runs west to east along the southern border of the Site boundary from the A156 before turning north (within the Site boundary) to join the B1421 in the village of Willingham by Stow. This route has signing stating it is unsuitable for HGV use;
- Stow Park Road – a narrow, single lane rural road which provides a north east/south west link between the A1500 (Till Bridge Lane) and the B1421 (Sturton Road) to the south-east of the Site boundary;
- Knaith Hill/Station Road, which links the A156 in the west with the B1241 Willingham Road in the north and is a single lane road with passing places and partially runs within the north-western part of the Site boundary; and
- Clay Lane, a no-through road single lane track (with passing places) accessed via the A156 to the south-west of the Site boundary and passing underneath the railway via a relatively narrow and low underpass within the Site boundary.

Grid Connection (Nottinghamshire)

- 13.4.5 The Grid Connection Corridor Options run in a south-west direction from the Site boundary, crossing the A156 and the A1500, the River Trent and proceeds across agricultural land to the former Cottam Power Station. West of the River Trent, depending on the final routing, the route is expected to cross some (but not all) of Littleborough Road, Thornhill Lane, Northfield Road, Coates Road, Broad Lane, Headstead Bank and Town Street; all of which are narrow, minor, very low trafficked single-track roads with no pedestrian facilities/street lighting etc.

- 13.4.6 The Grid Connection Corridor Options is also expected to cross Cottam Road in the vicinity of the former Cottam Power Station. Cottam Road is a single carriageway road, with a single lane in each direction and subject to a derestricted speed limit. Sections of footway exist on Cottam Road around the existing power station access and to the east of the power station towards Cottam village.

Existing Walking Facilities

Site Boundary

- 13.4.7 Due to the location of the Scheme in rural Lincolnshire, there is limited footway provision in the surrounding area. Footways are limited to the settlements that surround the Site boundary, as follows:

- A156 – footways on both sides of A156 within Marton village; footways on western side of A156 north of Marton to Gate Burton and further north between Knaith and Lea;
- B1241 (North) - footway provision, varying from both sides to one side between Lea and Knaith Park and then on the northern side of B1241 between Upton Rd/Willingham Road junction and western extent of residential dwellings on eastern part of Kexby Lane;
- B1242 (East) – footway provision, on at least one side of the carriageway exists along the full extent of the route from the Kexby lane junction in the north to the A1500 junction in the south; and
- A1500 – other than in the settlements of Marton and Sturton by Stow (at either extent of the A1500 within the study area) there is no footway provision along this route.

- 13.4.8 It is understood that there is one Public Right of Way (PRoW) within the Site boundary:

- **PRoW Knai 44/2** – a footway which runs for 452m along the northern section of the Site boundary (in its north-west corner) from Knaith Hill/Station Road to the railway line to the east.

- 13.4.9 In addition, there are two further PRoW which run along the Site boundary; these are:

- **PRoW Knai 44/1** – a footway which runs for 330m within the vicinity of the northern extent of the Site boundary, running in an east-west direction between the railway line in the west and B1241 to the east; and
- **PRoW Mton 69/1** – a footway which runs for 339m and meets the Site boundary to the south-west, running in a north-south direction between the Site boundary in the north and A1500 Stow Park Road in the south.

Grid Connection Corridor

- 13.4.10 Sections of footway exist on Cottam Road around the Cottam Power Station access and to the east of the power station leading into Cottam village, however there is no other formal footway provision in this part of the study area.

- 13.4.11 There are a number of PRoW which could be impacted by the grid connection route (once confirmed) including the following:

- PRoW Sturton Le Steeple FP8, footway which runs for 1455m, along the western bank of River Trent (PRoW_FP8);
- PRoW Sturton Le Steeple BW7, bridleway which runs for 733m, along Long Farm Lane to the north of Littleborough Road (PRoW_BW7);
- PRoW Sturton Le Steeple FP6, footway which runs for 351m, through the field to the south of Littleborough Road (PRoW_FP6);
- PRoW North Leverton with Hablesthorpe BOAT14, byway which runs for 559m, through the fields along Craikbank Lane (PRoW_BOAT14);
- PRoW Mton 67/1, footway which runs for 361m, through the field to the west of Marton;
- PRoW Mton 66/1, footway which runs for 1044m, along the eastern bank of River Trent;

- PRoW North Leverton with Habbleshthorpe FP9, footway which runs for 1371m, along the western bank of River Trent (PRoW_FP9);
- PRoW North Leverton with Habbleshthorpe FP20, footway which runs for 103m, through the fields from the River Trent banks in the east to PRoW_BW19 in the west (PRoW_FP20);
- PRoW North Leverton with Habbleshthorpe BW19, bridleway which runs for 561m, through the field to the north of Corner Farm on Coates Road and to the west along March Lane (PRoW_BW19);
- PRoW Cottam BOAT5, byway open to all traffic which runs for 225m, along Rimes Lane to the north of Broad Lane (PRoW_BOAT5);
- PRoW North Leverton with Habbleshthorpe RB25, restricted byway which runs for 660m, along Southbank Lane to the west of Headstead Bank (PRoW_RB25);
- PRoW Cottam RB4, restricted byway which runs for 356m, along Okercoal Lane, west of Wells Lane, north of Cottam (PRoW_RB4);
- PRoW Cottam RB6, restricted byway which runs for 110m, along Wells Lane to the west of Town Street, north of Cottam (PRoW_RB6);
- PRoW Treswell FP4, footway which runs for 151m, to the west of Cottam Power Station (PRoW_FP4);
- PRoW Treswell FP5, footway which runs for 255m, to the west of Cottam Power Station (PRoW_FP5);
- PRoW Rampton FP6, footway which runs for 310m, to the west of the Cottam Power Station (PRoW_FP6);
- PRoW South Leverton BOAT16, byway which runs for 658m, along Cow Pasture Lane, to the north of Outgang Lane (PRoW_BOAT16);
- PRoW Cottam BW7, Bridleway which runs for 171m, to the east of the Ash Disposal Site on Town Street (PRoW_BW7);
- PRoW Treswell BW6, bridleway which runs for 177m, to the east of the Ash Disposal Site on Town Street (PRoW_BW6);
- PRoW Treswell BW18, bridleway which runs for 733m, to the south of the Ash Disposal Site on Town Street (PRoW_BW18);
- PRoW Rampton BOAT13, byway open to all traffic which runs for 1039m to the south of Cottam Power Station (PRoW_BOAT13);
- PRoW Mton 68/1, footway which runs for 453m, through the field to the west of A1500 Stow Park Road to A156 High Road (PRoW_Mton/68/1);
- PRoW Mton 66/4, footway which runs for 351m, to the fields to the east of the River Trent, west of A156 Gainborough Road (PRoW_Mton/66/4);
- PRoW Cottam FP1, footway which runs for 567m (PRoW_FP1); and
- PRoW Cottam FP3, footway which runs for 661m, to the fields to the west of the River Trent, north of Cottam (PRoW_FP3).

13.4.12 All of the PRoW potentially impacted by the Grid Connection Corridor works will be reviewed to establish their use where possible, and to identify whether they will need to be temporarily diverted to ensure safe access for members of the public during construction and potentially operation.

Existing Cycling Facilities

Site Boundary

13.4.13 There are no on or off-road dedicated/marked cycling facilities within the immediate vicinity of the Site boundary and whilst relatively fast vehicle speeds and high traffic flows on the two A-roads (A156 and A1500) may deter cyclists, the B1421 to the north and east of the Site, as well as the smaller roads

closer and within the Site boundary itself are likely to be attractive to leisure cycling. The Site boundary could be potentially accessed by cyclists from Lea, Willingham, Stow, Upton and Brampton located within an approximate 2.5km cycle distance. There are no formal cycle facilities in the vicinity of the Site boundary - the nearest National Cycle Network route (between Harby and Lincoln) is located approximately 12km to the south.

Grid Connection Corridor Options

- 13.4.14 There are no on or off-road dedicated/marked cycling facilities within the immediate vicinity of the Grid Connection Corridor Options; however, a number of the smaller roads in this area, including Cottam Road have low traffic flows and would appear to be attractive to leisure cyclists. This area could be potentially accessed by cyclists from Coates, South Leverton, Rampton and Treswell, all within a 2.5km cycle distance.

Existing Equestrian Facilities

Site Boundary

- 13.4.15 There are no formal equestrian facilities (i.e. Bridleways) in the vicinity of the Site boundary; however, some of the surrounding roads are generally lightly trafficked and therefore would not necessarily deter equestrians.

Grid Connection Corridor Options

- 13.4.16 There are formal equestrian facilities in the vicinity of the Grid Connection Corridor Options. These include Bridleways, Restricted Byways and Byways Open to All Traffic (BOAT). These are listed in Section 13.4.11 above. Also, a number of the narrow single-track roads in the vicinity of the Grid Connection Corridor Options (as listed in Section 13.4.5) appear to be very low trafficked and therefore may be appealing to equestrians.

Existing Public Transport Facilities

Site Boundary

Bus

- 13.4.17 Bus stops are located on the A156 and B1421 (north and east) which broadly surround the Site boundary. The following bus routes serve these bus stops:
- A156 Gainsborough Road – Bus service 107 – Gainsborough to Lincoln – Two services in the AM peak and two services in the PM peak;
 - B1241 Willingham Road – Bus service 100 – Scunthorpe to Lincoln – Three services in the AM peak, three services in the PM peak and otherwise one service per hour during the day; and
 - B1241 Willingham Road – Bus service 105 (school days only) – Gainsborough to Lincoln – One service in the AM peak and one PM service (bus service 106 replaces 105 on school holidays and Saturdays).

Rail

- 13.4.18 Gainsborough is located to the north of the Site boundary and has two railway stations, Gainsborough Central and Gainsborough Lea Road.
- 13.4.19 Gainsborough Central Station is located approximately 6km to the north of the Site boundary and is managed by Northern Rail, running services from Sheffield to Gainsborough to Lincoln/ Cleethorpes. The only passenger services calling at the station during a weekday are two services in the AM peak and two services in the PM peak.
- 13.4.20 Gainsborough Lea Road Station is located approximately 4.5km to the north of the Site boundary and is served by rail services operated by both Northern Rail and East Midland Trains, running services from Sheffield to Lincoln/Cleethorpes and Peterborough to Doncaster. The two operators which serve the station run services at the following combined frequency:

- Sheffield to Lincoln/Cleethorpes – two services in each of the AM and PM peaks, a total of 22 services a day in each direction (Monday to Friday); and
- Peterborough to Doncaster – four services a day in each direction (Monday to Friday).

13.4.21 Saxilby Station is located approximately 10.5km to the south of the Site boundary and is served by the same rail services as Gainsborough Lea Road.

Grid Connection Corridor Options

Bus

13.4.22 The nearest bus stops to the potential access point on Cottam Road (to serve the Grid Connection Corridor works) are situated approximately 1.3km to the west on Cottam Lane/Green Lane on the eastern side of Tresswell. Bus Route 190 serves these stops, with the service running between Retford to Tuxford (via Rampton). There are only two daily services which run from Tuxford to Retford (during the AM peak) and only three daily services which run from Retford to Tuxford (during the PM peak).

Rail

13.4.23 Retford Station is located approximately 10.5km to the west of the Grid Connection Corridor Options.

13.5 Potential Effects and Mitigation

Introduction

13.5.1 The nature of the Scheme is such that the greatest impact is likely to occur during the construction and decommissioning phases and this will be the focus of the assessment of transport effects presented in the ES.

13.5.2 The main considerations and potential effects as a result of the Scheme during the construction and decommissioning phases are:

- Increase in HGV movements;
- Abnormal loads;
- Travel to and from site by construction employees;
- Increase in delay to vehicles, pedestrians, cyclists and equestrians due to increase in HGV movements; and
- Change in route connections and amenity for pedestrians, cyclists and equestrians due to the Scheme.

13.5.3 Although the Scheme is located close to a number of small villages/settlements including Willingham by Stow, Lea and Marton, there is not expected to be a significant portion of visitors (given the nature of the Scheme) during the construction, operational or decommissioning phases. Whilst some employees originating from larger settlements nearby (e.g. Gainsborough and Lincoln) may travel by public transport or bicycle (the distance is too far to walk) these modes are not expected to constitute a significant proportion of trips to the site.

13.5.4 Consideration will also be given to those users of local facilities which could be impacted by the Scheme.

Vehicle Access

13.5.5 The main point of vehicular access for the Site boundary during the construction and decommissioning of the Scheme is anticipated to be via the A156 which runs north to south to the west of the Site boundary. At this stage access is expected to be taken from the following locations:

- The majority of HGV trips and construction worker trips are expected to access the Site via a new priority junction on the eastern side of the A156, located approximately 2km to the north of the A156/A1500 junction in the centre of Marton and 1km to the south of the A156/Knaith Hill junction;

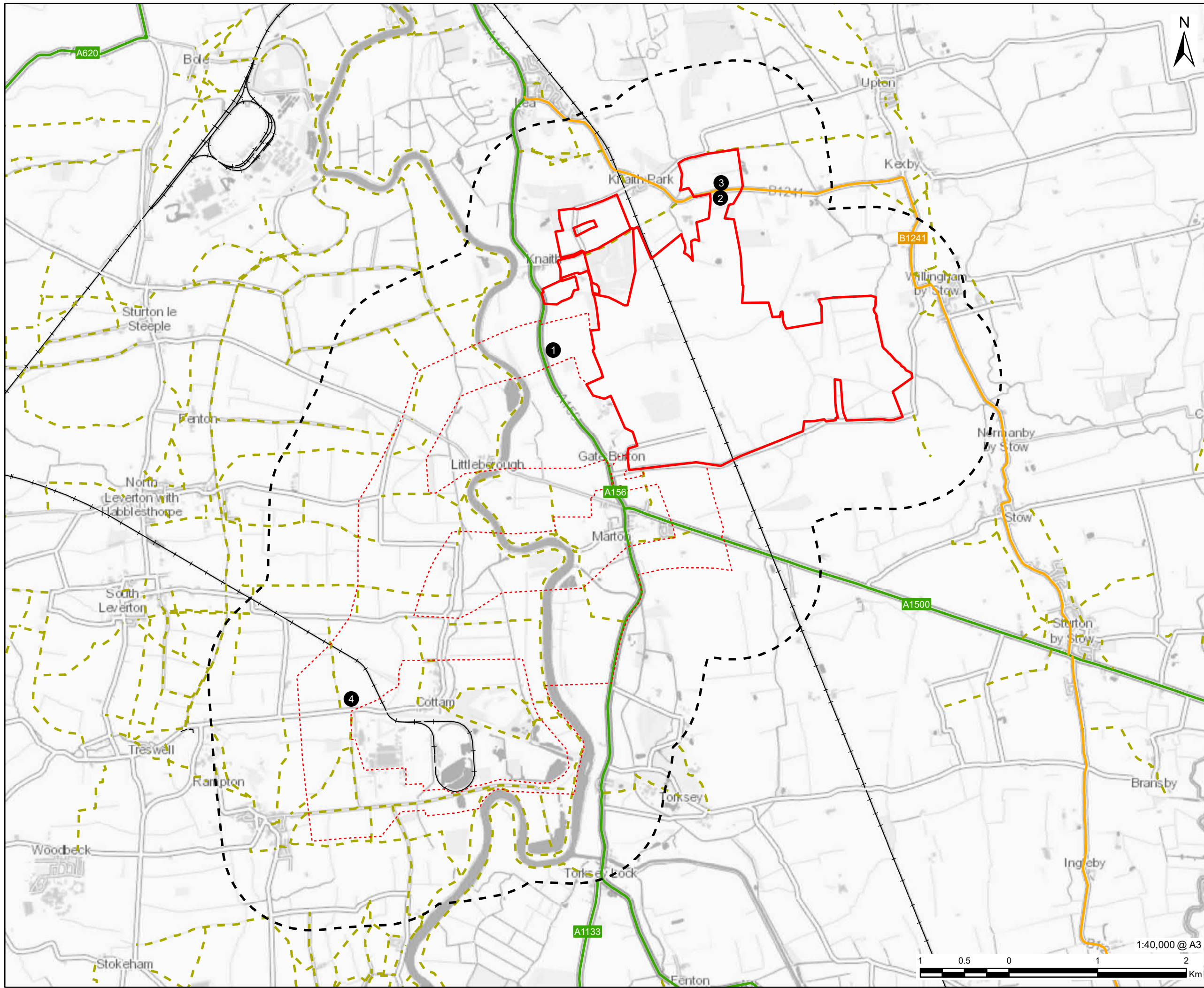
- A secondary access (for selected/limited HGV movements) is anticipated to be provided on the southern side of Kexby Lane (B1241), located approximately 1km to the east of the B1241/Station Road junction; and
- A minor access junction is expected to provide access to a small parcel of land to the north of Kexby Lane in the vicinity the above location.

13.5.6 Further to the above, a new access is expected to be constructed in the vicinity of the existing power station access to provide construction vehicle access to the Grid Connection Corridor works in this area.

13.5.7 The operational phase access is expected to be via access/egress from Gainsborough Road (A156), via Clay Lane. The majority of routine visits by vans and four-wheel drive vehicles could utilise the Clay Lane rail underpass for access to the eastern part of the Site. If larger vehicles are required to access the eastern part of the Site, these would utilise the proposed construction access points along Kexby Lane, both of which would be retained for the operational phase. However, this will be confirmed as the Scheme design progresses and in consultation with the relevant authorities.

13.5.8 Further detail on proposed access to the Scheme will be included within the ES and the TA. Figure 13-1 identifies the transport routes and potential access arrangements.

Figure 13-1: Transport routes and potential access arrangements



LEGEND

- Solar PV Site
- Grid Connection Corridor Options
- 1km Buffer
- Potential Indicative Construction Access Locations
- A Road
- B Road
- Public Rights of Way
- Railway Line

NOTES
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ISSUE PURPOSE
EIA Scoping Report

PROJECT NUMBER
60664324

FIGURE TITLE
Existing Highway Network and Proposed Access Points

FIGURE NUMBER
Figure 13-1



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Construction and Decommissioning

- 13.5.9 At this stage it is anticipated that, as a worst-case during the peak construction period, there could be up to 60 HGV deliveries per day. In addition, there will be Light Goods Vehicle (LGV) deliveries and vehicle movements associated with construction worker arrivals and departures. Construction worker numbers are anticipated to peak at around 600 staff per day; traffic forecasts associated with the above will be provided in the ES and TA.
- 13.5.10 The potential mitigation measures, which could be implemented during the construction and decommissioning phases, include the following which will also be included within the Framework Construction Traffic Management Plan (CTMP):
- Restriction of HGV movements to certain routes, days of the week and times of the day;
 - Upgrading of routes where considered necessary to cater for the additional or larger vehicles;
 - Positioning of suitably qualified banksmen at the site access points, to allow all vehicle arrivals and departures to be safely controlled during the construction period;
 - Providing road signs and/or markings to increase awareness of the site access points during the construction phase and undertaking vegetation clearance in the vicinity of the site access points;
 - Encouraging local construction staff to car share, to reduce single occupancy car trips, by promoting the benefits of car sharing such as reduced fuel costs and by providing dedicated parking spaces for those car sharing nearer to the compound;
 - Implementing a shuttlebus service to transfer non-local staff to/from local worker accommodation, to reduce vehicle trips on the surrounding highway network;
 - Implementing a Delivery Management System to control the bookings of HGV deliveries from the start of the construction period i.e. to regulate the arrival times of HGVs via timed delivery slots, as well as to monitor compliance of HGV routing; and
 - Maintaining access to PRoW during the construction phase, or otherwise providing temporary diversion routes if required.
- 13.5.11 Potential impacts during the construction and decommissioning phases are typically considered as short term, as defined in Chapter 5: Environmental Impact Assessment Methodology, as enduring for up to 12 months after construction.
- 13.5.12 The TA and Access Strategy will consider the impact of any other committed developments and/or highways improvement schemes in the vicinity which may be considered to have a cumulative impact during the construction of the Scheme.

Operation

- 13.5.13 During the operational phase, the Scheme will be manned by a nominal amount of people across the Site (three permanent staff per day), predominantly undertaking maintenance tasks. In addition, there is expected to be approximately 10 to 20 visitors per week (equating to 2 to 4 visitors per day) for deliveries, and replacement of any components that fail. Staff vehicles and those used for maintenance will primarily be four wheeled drive vehicles and vans, with HGVs rarely accessing the site during this phase. Therefore, due to the low level of trips likely to be generated within the network peak hours (with up to seven arrivals and seven departures expected daily), it is proposed to exclude operational phase transport effects from the EIA. Further detail of the operational stage transport arrangements will be set out in the ES and TA to support this approach.

13.6 Assessment Methodology

Sources of Baseline Information, Scenarios and Consultation

- 13.6.1 To inform the assessment of the Scheme, information from a number of sources will be collected. The sources which will be used are set out below:
- Local travel and network information from various sources including LCC, NCC and local rail and bus operators;
 - Personal Injury Accident (PIA) data from LCC and NCC;
 - OS/Architectural Base Mapping to ascertain an accurate geographical representation of the areas in the vicinity of the Scheme;
 - Highway boundary information from LCC and NCC;
 - Mode share data from the 2011 Census (or 2021 data if available and considered appropriate given the context of COVID-19); and
 - Various traffic count and speed survey data where required (see below).
- 13.6.2 Peak hour traffic flows will be identified from historic data held by LCC (and NCC with respect to Cottam Road) or traffic survey company databases if available. In addition, traffic counts will be undertaken, if considered necessary (and subject to any Covid-19 Pandemic restrictions) at locations in the vicinity of the Scheme to determine the baseline traffic conditions of the surrounding highway network. The extent of the traffic data and scope for any traffic surveys that may be required will be agreed with the County Highways Authorities, as statutory consultees, where possible.
- 13.6.3 To determine the impact of the Scheme, a number of scenarios will be assessed using the information collated above. The scenarios considered appropriate for assessment are:
- Baseline (2022) – AM, PM and Daily; and
 - Peak Construction Year (2026) With and Without Development – AM, PM and Daily.
- 13.6.4 The peak construction year of 2026 is considered appropriate at this stage as it corresponds with the anticipated peak construction year for the purpose of the EIA, as described in Chapter 5: Environmental Impact Assessment Methodology, of this Scoping Report.
- 13.6.5 For the purposes of the EIA, the decommissioning assessment year is considered to be 2087 (60 years from opening). This year will not be considered in the TA in terms of the highway impact assessment or any junction assessments as it is considered too far into the future to be able to accurately predict traffic flows or junction forms.
- 13.6.6 The TA Scoping Report will be formally presented to LCC and NCC as statutory consultees in order to seek to agree the scope of the TA. It is possible that some junction capacity analysis will be required, and this will be discussed and agreed with LCC and NCC, where necessary.

Impact Assessment Methodology

- 13.6.7 In accordance with the IEMA guidance for assessing the environmental impacts of road traffic (Ref. 171), the following criteria will be considered in this assessment.
- Severance;
 - Driver delay;
 - Pedestrian delay;
 - Pedestrian and cyclist amenity;
 - Fear and intimidation;

- Accidents and safety; and
 - Hazardous loads.
- 13.6.8 The significance of effect is determined through consideration of two elements; the magnitude of the impact and the sensitivity of the receptor. The following sections outline the approach that would be used to determine these factors.
- 13.6.9 The overall effect will be determined by measuring the magnitude of the impact following mitigation measures (where applicable) against criteria including; the number of activities of the population affected; the type and sensitivity of the receptor; and the type of impact. Effects are defined as beneficial or adverse, with effects further defined using the following classifications:
- **Minor** – slight, very short, or highly localised impact of no significant consequence;
 - **Moderate** – limited impact (by extent, duration or magnitude) which may be considered significant; and
 - **Major** – considerable impact (by extent, duration or magnitude) of more than local significance, or in breach of recognised acceptability, legislation, policy or standards.
- 13.6.10 The IEMA guidelines (Ref. 171) state that the magnitude of each impact should be determined as the predicted deviation from the baseline conditions. This will be undertaken for the construction and decommissioning phases.
- 13.6.11 IEMA (Ref. 171) sets out a number of criteria by which the magnitude of impact can be measured. These are outlined below. Many of the criteria do not provide specific thresholds by which such impacts can be measured, and as a result will be measured qualitatively where necessary. These are described below.
- 13.6.12 **Severance** is defined in the IEMA guidelines (Ref. 171) as the “*perceived division that can occur with a community when it becomes separated by a major traffic artery*”. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by the road itself. It can also relate to quite minor traffic flows if they impeded pedestrian access to essential facilities. IEMA guidelines suggest that a 30%, 60% and 90% increase in traffic flows will result in a low, medium, and high change in severance respectively.
- 13.6.13 **Driver Delay** will be determined through the analysis of junction capacity assessments, contained within the TA, which will be measured in terms of change in delay per vehicle (in seconds) from the baseline situation. This criterion is considered to be applicable to all modes of transport using the public highway, namely cars, motorcycles, pedal cycles and buses.
- 13.6.14 **Pedestrian Delay** is considered to be affected by the changes in volume, composition or speed of traffic, in terms of their respective impacts on the ability of pedestrians to cross roads. In general, increases in traffic levels and/or traffic speeds are likely to lead to greater increases in pedestrian delay.
- 13.6.15 **Pedestrian and Cycle Amenity** is broadly defined as “*the relative pleasantness of a journey and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic*”. The guidance suggests that a tentative threshold for judging the significance of changes in pedestrian and cycle amenity would be where the traffic flow is halved or doubled.
- 13.6.16 **Fear and Intimidation** is “*dependent on the volume of traffic, its HGV composition, and its proximity to people or the lack of protection caused by such factors as narrow pavement widths*”.
- 13.6.17 A detailed assessment of **Accidents and Safety** will be undertaken by examination of road traffic accident data for the most recent five-year period available (excluding any periods affected by Covid-19 restrictions). This analysis will be included in the TA and undertaken to highlight if there are any existing safety issues on the local road network which may be exacerbated by the Scheme. The outcome of the assessment will be presented in the ES.
- 13.6.18 With regard to **Hazardous and Dangerous Loads**, the guidance indicates that “*the Statement should include a risk or catastrophe analysis to illustrate the potential for an accident to happen and the likely effect of such an event.*” Analysis of the road network within the study area indicates that there are no

particular features, such as a significant vertical drop immediately beyond the carriageway, which would suggest that the transfer of materials poses a particular risk beyond that which would be expected on the general highway network. It is concluded that the impacts of Hazardous and Dangerous Loads do not warrant further consideration in the preparation of the ES. The projected impacts of the Scheme will be measured separately, dependent upon the receptor, for the construction and decommissioning periods of the Scheme.

13.6.19 In terms of **Severance, Pedestrian Delay, Pedestrian/Cycle Amenity** and **Fear and Intimidation**, the links within easy walking/cycling distance of the Site will be used as receptors. For the construction impacts, the sensitivity of pedestrian routes and cycle routes is based on a qualitative assessment of the 2022 baseline scenario, taking into consideration the importance and attractiveness of the route and the destinations served. The thresholds are defined as:

- **Neutral Sensitivity:** Rural road with no pedestrian/cycle facilities provided;
- **Low Sensitivity:** Strategic vehicular route in a rural setting with pedestrian/cycle facilities;
- **Medium Sensitivity:** Main vehicular route with pedestrian / cycle facilities provided in built up area; and
- **High Sensitivity:** Lightly trafficked route provided in town centre setting.

13.6.20 In terms of **Driver Delay, Accidents and Safety and Hazardous Loads**, the impacts of the Scheme, both construction and decommissioning will be assessed at junction level. The sensitivity of these receptors will be expressed in terms of Ratio to Flow Capacity (RFC) or Degree of Saturation (DoS). The worst-case peak hour junction assessments from the TA for the 2026 With and Without Scheme scenarios will be assessed, for the junctions agreed with the County Highway Authorities.

13.6.21 The thresholds for sensitivity of junctions have been defined as:

- **Low Sensitivity:** RFC / DoS below 90%
- **Medium Sensitivity:** RFC / DoS between 90% and 95%
- **High Sensitivity:** RFC / DoS above 95%

13.6.22 In order to determine the effect on specific receptors, both the sensitivity of receptors and the magnitude of impact, as outlined above, are considered. The matrix that will be used to determine the effect category is identified within Table 5-1. Effects which are classified as major or moderate are considered to be significant and feature a shaded background.

Deliverables

13.6.23 The following deliverables are anticipated to be required in support of the submission:

- Transport Scoping Report;
- Transport Assessment (TA);
- PEI Report – Transport and Access Chapter;
- ES/EIA – Transport and Access Chapter; and
- Framework CTMP.

13.6.24 It should be noted that the CTMP will include a chapter on construction worker travel patterns and measures to encourage travel by alternative modes to the single occupancy vehicle. A standalone Travel Plan is not expected to be required, as this document typically applies to the operational phase of a development. As set out above, due to the low level of trips likely to be generated within the network peak hours, it is proposed to exclude operational phase transport effects and therefore a Travel Plan from the EIA.

13.7 Assumptions, Limitations and Uncertainties

- 13.7.1 At this stage the exact extent of the study area cannot be confirmed in terms of traffic and transport as detailed discussions have not yet taken place with the respective Highway Authorities. The area proposed as part of this Scoping Report is determined by AECOM's understanding of the road network and where the likely impacts will be; however, it is anticipated that this will be formally agreed with LCC and NCC. Any additional assessment scope demanded will be assessed as part of both the TA and the ES. Given the distance of the Scheme from the strategic motorway and trunk road network, the expected relatively low traffic attraction of the Scheme, and the fact there are multiple routes between the Scheme and the strategic road network over which traffic could disperse it is not considered that discussions with National Highways will be required, however this will need to be confirmed.

Appendix B EIA Scoping Opinion (Transport & Access)

3.8 Transport and Access

(Scoping Report Section 13)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.8.1	2.4.1 and 13.5.13	Traffic impacts during operation	<p>It is anticipated that there will be 7 operational arrivals and 7 departures daily at the site from light vehicles for maintenance and deliveries. A transport assessment is proposed to be submitted with the application and will include further details on operational traffic.</p> <p>Paragraph 2.4.1 states that there would be 10-20 visits per week from 4 wheel-drive or medium sized van vehicles.</p> <p>On the basis of the low anticipated operational traffic volumes, the Inspectorate is content to scope this matter out from further assessment. The ES project description should confirm the likely operational traffic flows.</p>
3.8.2	Table 17-1	Hazardous loads	<p>Scoping Report Table 17-1 states that "There are no nearby road features which suggest that the transfer of materials poses a risk beyond that which would be expected on the general highway network." Limited explanation is provided in Chapter 13 of the Scoping Report to support this conclusion. The Inspectorate has considered the characteristics of the Proposed Development and considers that this matter may be scoped out from further assessment, however the ES should explain the measures employed to ensure safe vehicular transport of components such as panels and batteries to and from the site.</p>
3.8.3	Table 17-1	Traffic impacts during decommissioning	<p>This is proposed to be scoped out due to uncertainties in relation to future traffic flows. The Inspectorate accepts that a full assessment of traffic impacts may not be possible at the current time, however, the ES should provide commentary on the likely transport impacts of the</p>

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			decommissioning process in light of comments in section 3.10 of this Opinion regarding component refurbishment, where possible.

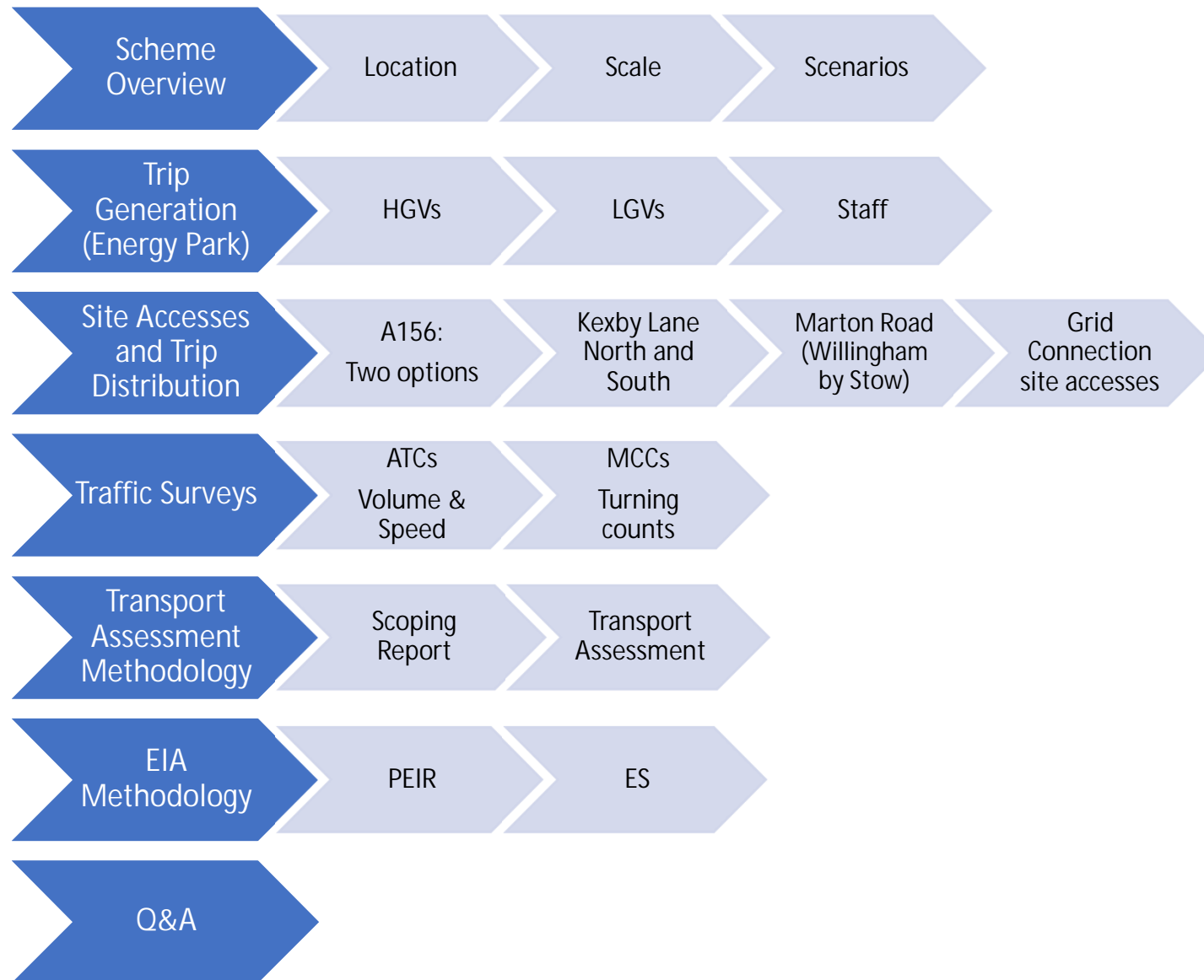
ID	Ref	Description	Inspectorate's comments
3.8.4	13.6.2	Traffic count surveys	Traffic count surveys are only proposed to be undertaken where 'considered necessary' to inform baseline conditions. The ES should be informed by robust baseline data and provide evidence of agreement with the Local Highway Authority regarding the need for traffic surveys, where possible.
3.8.5	Chapter 13	Construction traffic routing and Affected road network (ARN)	Building on information contained in Figure 13-1 of the Scoping Report, the ES should clearly identify the full extent of the ARN and construction traffic routing to inform the assessment of traffic impacts. National Highways should be consulted where effects on the Strategic Road Network are identified.
3.8.6	6.4.2, 13.4.8- 13.4.21	Rail operations	Limited reference is provided in the Scoping Report to the railway line that bisects the site. Paragraph 6.4.2 states that the Proposed Development is not anticipated to impact the operation of the railway but does not provide any supporting explanation. In light of its proximity to the railway line, the ES should explain whether the Proposed Development has considered opportunities to import materials by rail, to avoid impacts on the road network. The ES should also explain any measures required to ensure operational railway safety where significant effects are likely to occur and should describe and secure any associated embedded/additional mitigation. Measures to avoid impacts on operational rail assets such as bridges and level crossings should be set out in the ES, in particular for Clay Lane which has restricted height and width.

Appendix C Transport Scoping Presentation

Traffic and Transport

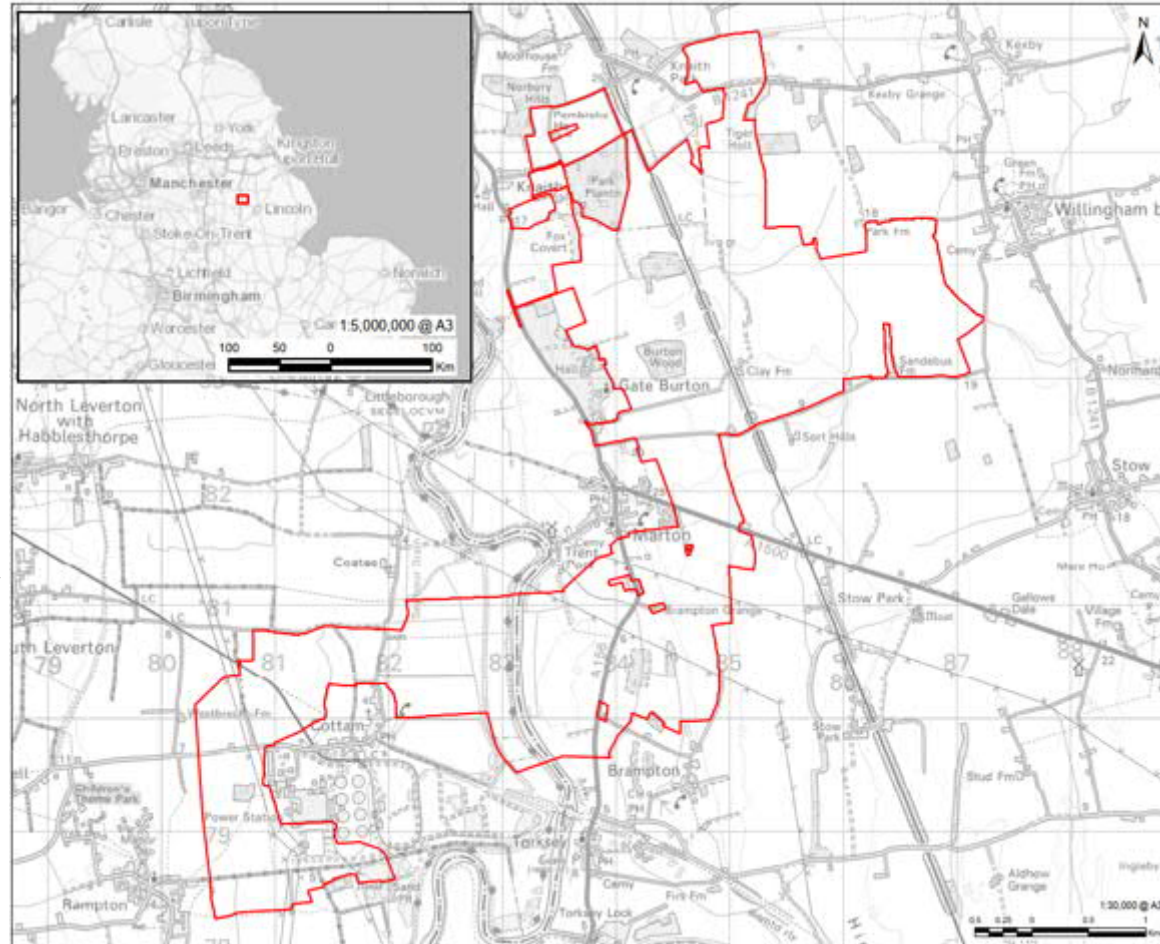


Transportation: Overview



Transportation: Scheme Overview

- The DCO Site area circa. 1,400 hectares.
- Located circa. 4km south of Gainsborough, Lincolnshire.
- Straddles the boundary between Nottinghamshire and Lincolnshire, within the districts of Bassetlaw and West Lindsey.
- Surrounding rural villages include Gate Burton and Knaith.
- The DCO Site is formed by the Energy Park Site and the Grid Connection Route.
- The Scheme is set to generate, store and export >50 MW of renewable energy for export to the National Grid.
- Grid Connection Route comprises an area which will connect the Energy Park Site to Cottam Substation.
- The Scheme includes the extension of the existing Cottam Power Station.
- Construction Period (2025 to 2027)
 - Period of 28 months.
 - To be assessed.
- Operational Period (2027 to 2087)
 - Minimal trips (no assessment).
- Decommissioning Period (2087)
 - Trips no greater than construction (no assessment)



Transportation: Energy Park Indicative Trip Generation (Construction)

Assessment: Daily Peak Forecasts	Energy Park
HGVs (vehicles)	60 (+15%)
LGVs (vehicles)	30
Staff (persons)	200 (+33%)

Construction staff

Mode share:

- 10% mini-bus from local areas
- 90% car (1.3 average vehicle occupancy)
 - 69% car driver
 - 21% car passenger

Working hours:

- Summer (0700-1900)
- Winter (0800-1800)

Sheffield
61km/38miles/60 mins

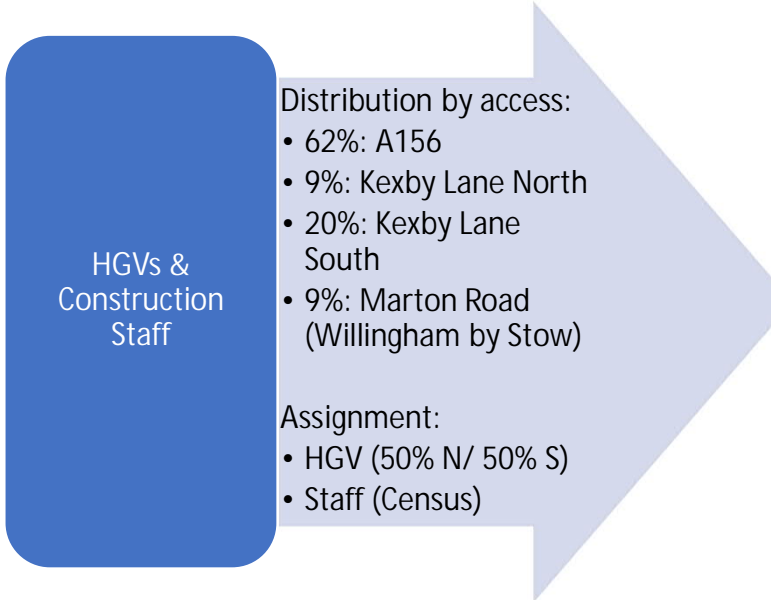
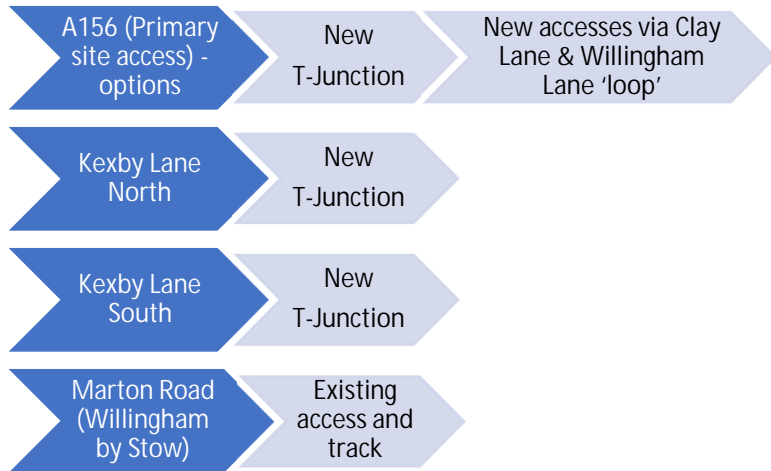
Immingham
64km/40miles/55 mins



Mansfield
45km/28miles/55 mins

Lincoln
20km/12.5miles/20 mins

Transportation: Energy Park Site Accesses and Trip Distribution (Construction)



Transportation: A156 Site Access Options

A156 Access – Option 1 (62% trips)

New T-junction on the A156 for construction access for HGVs and staff vehicles

Peak daily HGVs: 38 vehicles (76 two-way movements)

Arrivals and departures throughout the day

Peak daily LGVs: 18 vehicles (36 two-way movements)

Arrivals and departures throughout the day

Peak construction staff: 86 vehicles (172 two-way movements)

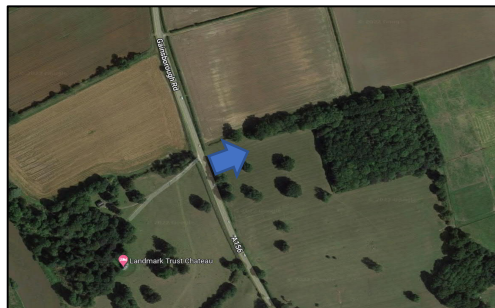
Arrivals between 0700-0800

Departures between 1800-1900

A156 Access – Option 2 (62% trips)

One-way 'loop'

Entry via Clay Lane into the site with egress via Willingham Road



A156
Gainsborough
Road

Clay Lane



Potential access
on A156
carriageway

Willingham Road



Transportation: Kexby Lane Site Accesses

Kexby Lane North Access (9% trips)

Peak daily HGVs: 5 vehicles (10 two-way movements)
Arrivals and departures throughout the day

Peak daily LGVs: 3 vehicles (6 two-way movements)
Arrivals and departures throughout the day

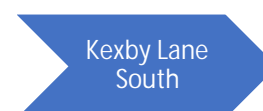
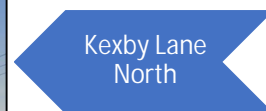
Peak construction staff: 12 vehicles (24 two-way movements)
Arrivals between 0700-0800
Departures between 1800-1900

Kexby Lane South Access (20% trips)

Peak daily HGVs: 12 vehicles (24 two-way movements)
Arrivals and departures throughout the day

Peak daily LGVs: 6 vehicles (12 two-way movements)
Arrivals and departures throughout the day

Peak construction staff: 28 vehicles (56 two-way)
Arrivals between 0700-0800
Departures between 1800-1900



- Exact site access locations to be defined
- Two separate T-Junctions suggested unless a single crossroad junction is preferred

Transportation: Marton Road Access (Willingham by Stow)

Marton Road Access (9% trips)

Existing track and T-Junction via Marton Road, and the Gainsborough Road/ High Street/ Marton Road T-Junction

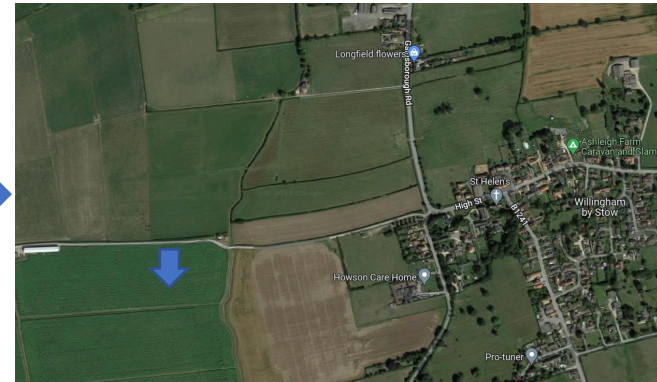
HGV routes via A156 and Kexby Lane

Peak daily HGVs: 5 vehicles (10 two-way movements)
Arrival and departure throughout the day

Peak daily LGVs: 3 vehicles (6 two-way movements)
Arrival and departure throughout the day

Peak construction staff: 12 vehicles (24 two-way)
Arrivals between 0700-0800
Departures between 1800-1900

Indicative site access location



Existing T-Junction



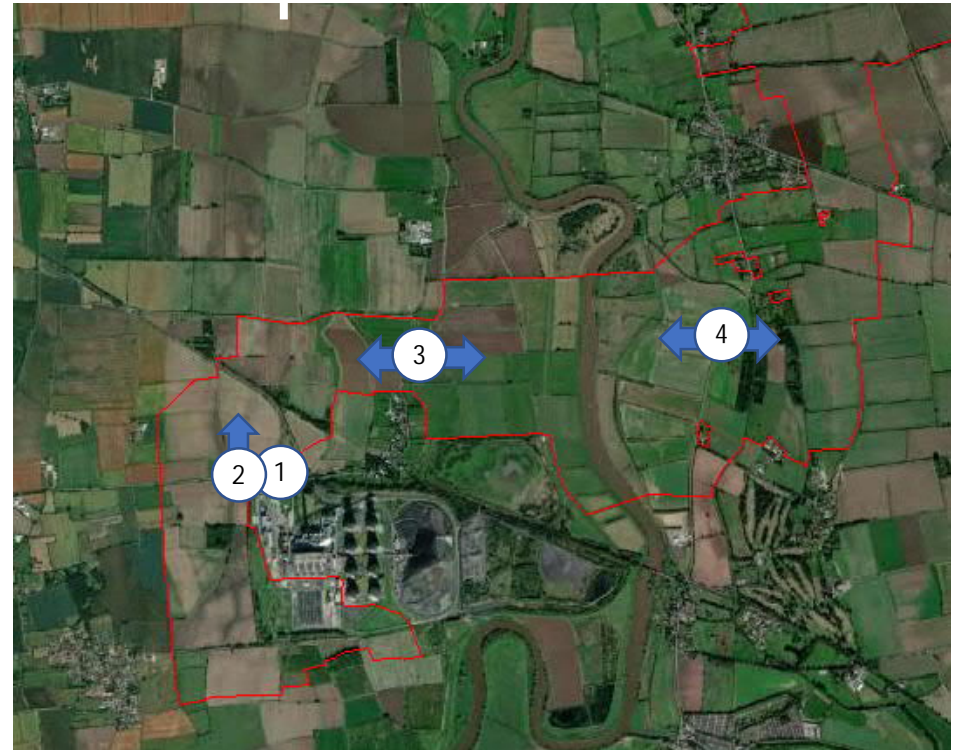
Existing track



Transportation: Grid Connection Route Access Options

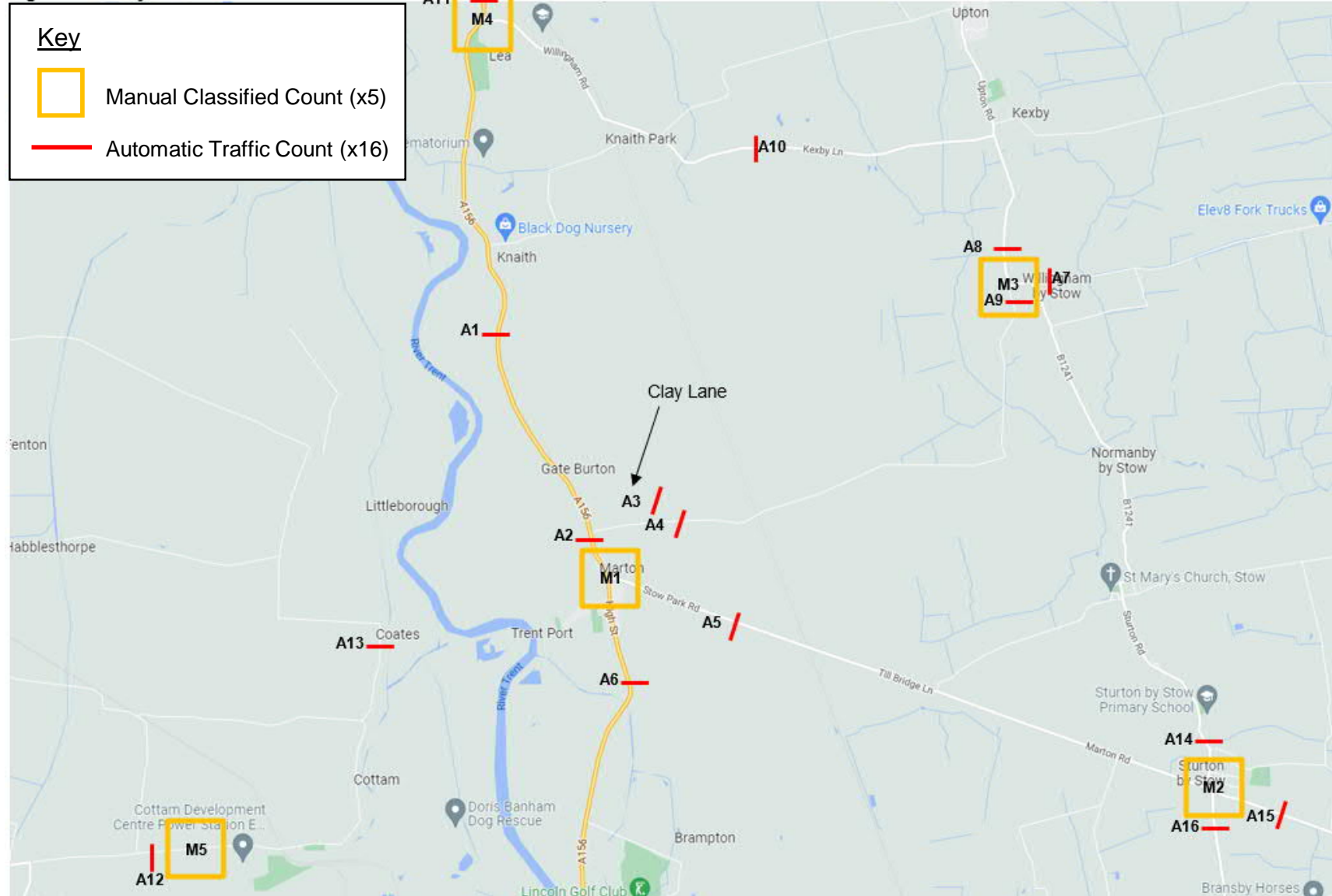
Potential Indicative Site Accesses

1. Existing Power Station Site Access
2. Cottam Road (to the north)
3. Headstead Bank/ Town Street (either side, potential for a crossroad junction)
4. A156 (either side, potential for a crossroad junction)



Transportation: Proposed Traffic Surveys

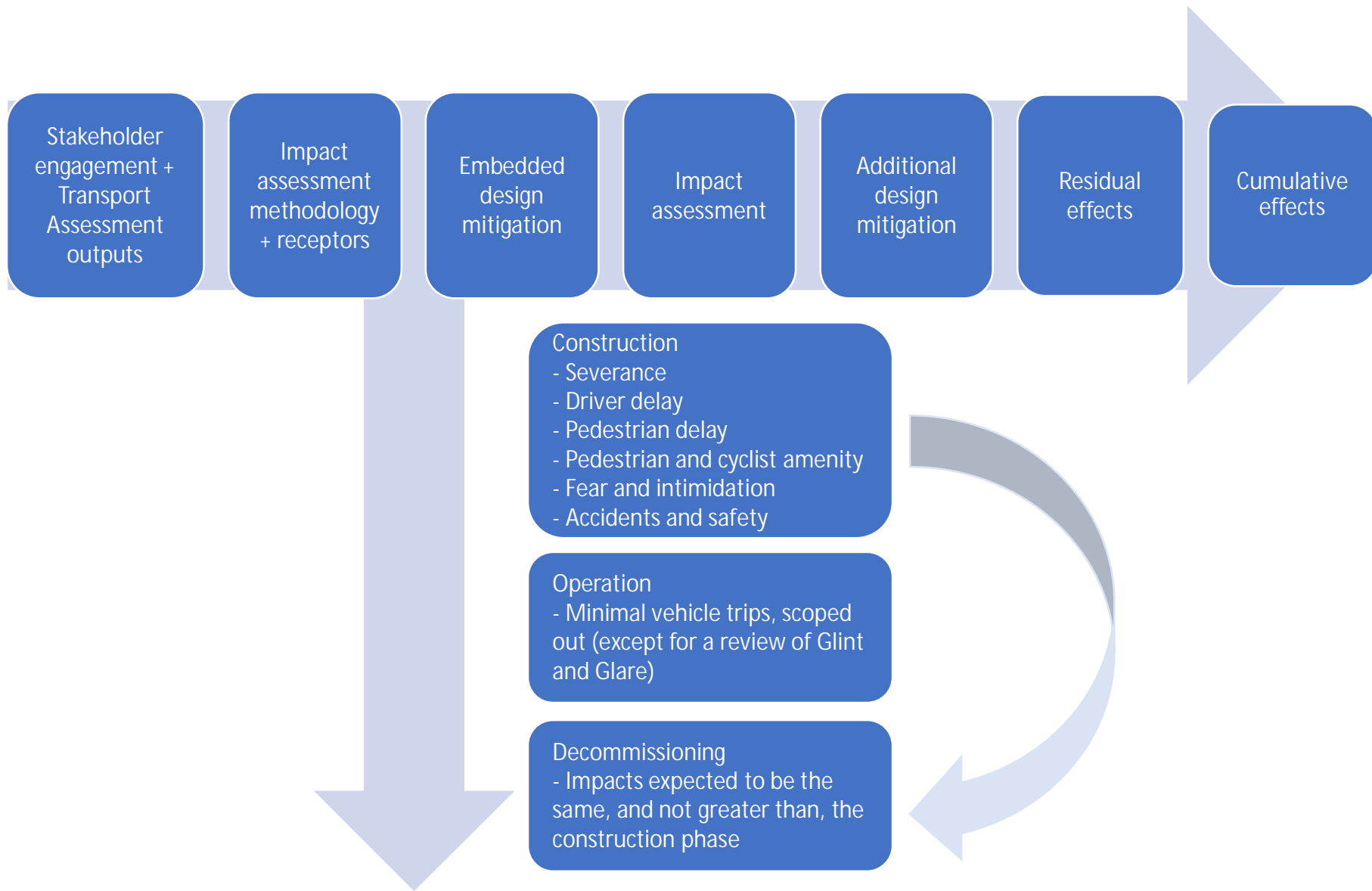
Figure 1: Survey Locations



Transportation: Approach for Transport Assessment

- Site location and existing use
- Policy context (national policy/ guidance, local policy)
- Accessibility appraisal (highways, public transport, pedestrians and cyclists)
- Development proposals (scheme, programme, access and routing)
- Trip attraction and distribution (construction, operation and decommissioning)
- Committed developments/ schemes (e.g. West Burton and Cottam)
- Assessment methodology (study area, scenarios, assessments)
- Highway assessment (baseline, impact assessment, mitigation and management)
- Walking and cycling assessment (baseline, impact assessment, mitigation and management)
- Transport Scoping Report

Transportation: EIA Methodology



Questions?

Appendix D Transport Scoping Discussion Minutes

Meeting name Transport Scoping Discussion	Meeting date 22/03/22	Attendees Alex Bullock (AB), AECOM, Planning Hayley Siers (HS), AECOM, EIA Co-ordinator Mark Watson (MW), AECOM, Transport Chris Burlton (CB), AECOM, Transport Chris Callaway (CCa), AECOM, Transport Simon Roberts (SR), Low Carbon, Technical Development Manager Lauren McGill (LM), Low Carbon, Project Manager James Hartley-Bond (JHB), Low Carbon, Head of Project Development Ian Field (IF), Lincolnshire CC, Technical Development Officer Clare Cook (CCo), Bassetlaw DC, Lead Officer John Krawczyk (JK), Bassetlaw DC, Development Team Manager Jan Witko (JW), Nottinghamshire CC, Highways Development Control
Time 10:00 – 10:50	Location Microsoft Teams	
Project name Gate Burton Energy Park	Prepared by Chris Burlton	
Apologies Will Barrett (WB), AECOM, Planning Emily Anderson, Lincolnshire CC, Planning Officer Neil McBride, Lincolnshire CC, Head of Planning Russell Clarkson, West Lindsey DC, Planning Officer Daniel Evans, West Lindsey DC, Planning Officer Matthew Neal, Nottinghamshire CC, Director of Investment and Growth		
Circulation list As per attendees and apologies		

Ref	Note	Action
01	<p>Welcome and Introductions</p> <p>All attendees introduced themselves and their roles.</p> <p>MW summarised purpose of call, to agree scope of work, run through a presentation and to have a working session/ discussion on transport and access.</p>	-
02	<p>Presentation – Overview</p> <p>MW presented overview slides, making it clear that the early slides related to just the Energy Park including four site accesses, with subsequent slides covering traffic surveys, TA and EIA methodology and AOB at the end.</p> <p>MW presented scheme overview, site location, redline boundary (including both the Energy Park and Grid Connection Route), context of surrounding area, construction period (main focus of assessment), operational period (minimal trips, no assessment proposed), decommissioning (no greater than construction, far ahead in future, no assessment proposed).</p>	-
03	<p>Presentation – Energy Park Indicative Trip Generation (Construction)</p> <p>MW presented indicative trip generation for construction phase, robust figures to reflect peak flows, HGVs, LGVs and staff, construction staff mode share (10% minibus, 90% private vehicle) with 1.3 vehicle occupancy, summer and winter working hours.</p> <p>MW: Are there any questions from anyone at this stage?</p> <p>AB confirmed that there were no questions so far.</p>	-
04	<p>Presentation – Energy Park Site Accesses Trip Distribution (Construction)</p> <p>MW: It is envisaged that the Energy Park will be served by four access points; A156 (two options being explored) to provide main access to the site (around 62% of trips) with three alternative (secondary) access points; Kexby Lane north (9%) & south (20%) and an existing access on Marton Road (9%). HGV assignment expected to be 50% from north and 50% from south. Staff trips to be distributed using Census Journey to Work data.</p> <p>JW: How will the Cottam element of the site be accessed?</p>	-

Ref	Note	Action
	<p>MW: This slide covers the Energy Park Site as these proposals are more progressed, however we would expect vehicles to use Cottam Road.</p> <p>JW: Does the area within the redline boundary represent the connection works?</p> <p>MW: Yes, this includes both the Energy Park Site and the corridor for the Grid Connection Route.</p> <p>CCa: There is also a slide later on which covers access to the Grid Connection Route.</p> <p>SR: We expect to use the existing network plus internal haul roads (trackway) to access/ construct the Grid Connection Route. These works are not expected to be as significant as other works across the site.</p>	
05	<p>Presentation – Site Access Options</p> <p>Main Site Access</p> <p>MW: The A156 access (main access point) will be expected to accommodate 62% trips during construction, via a new T-junction (Option 1), equivalent to circa. 38 daily HGVs (peak construction period), fewer LGVs, 86 daily staff vehicles. The hours shown relate to the winter working hours (arrive 07:00-08:00, depart 18:00-19:00).</p> <p><i>CCa shared screen to show area of proposed A156 access on Streetview – gap in hedge where there is a gate and fencing, with good visibility to the north and south.</i></p> <p>MW: The A156 access (Option 2) would utilise existing routes. Question for IF – do you have any views?</p> <p><i>CCa shared screen to show alternative access option on A156 via Clay Lane and Willingham Road.</i></p> <p>IF: Both options look fine from a highway’s point of view. Option 1 preferred (from air & noise/ amenity perspective) as this is not near any properties, may get objections for Option 2 due to proximity to residential properties. However, from highway’s perspective both options appear to be perfectly safe, not looking at more than 500 movements per day so standard priority junction would be fine based on DMRB.</p> <p>MW: Agreed, we came to the same conclusion following a site visit.</p> <p>SR: I understood that the proposed access (Option 1) was a bit further to north than that shown?</p> <p>CCa: Yes, this is correct, however following internal discussions with WB and changes to the redline boundary, the access (A156 Option 1) was repositioned further to the south.</p> <p>SR: That’s fine, I just wanted to check changes were in line with redline boundary changes.</p> <p>MW: In summary, the concept of an access on the A156 is considered to be acceptable in principle (for either option) which will be checked using speed surveys (85th percentile speeds) to ensure a suitable access is provided.</p> <p>Kexby Lane Site Accesses</p> <p>MW: The Kexby Lane site access points are expected to accommodate very low vehicle numbers; effectively secondary accesses with the northern access to be used to access the small parcel on northern side. Question for IF – would it be better to have a crossroads or staggered junction, any thoughts including best locations along this stretch?</p>	<p>AECOM to provide further details of the proposed access arrangements in the Transport Scoping Note</p>

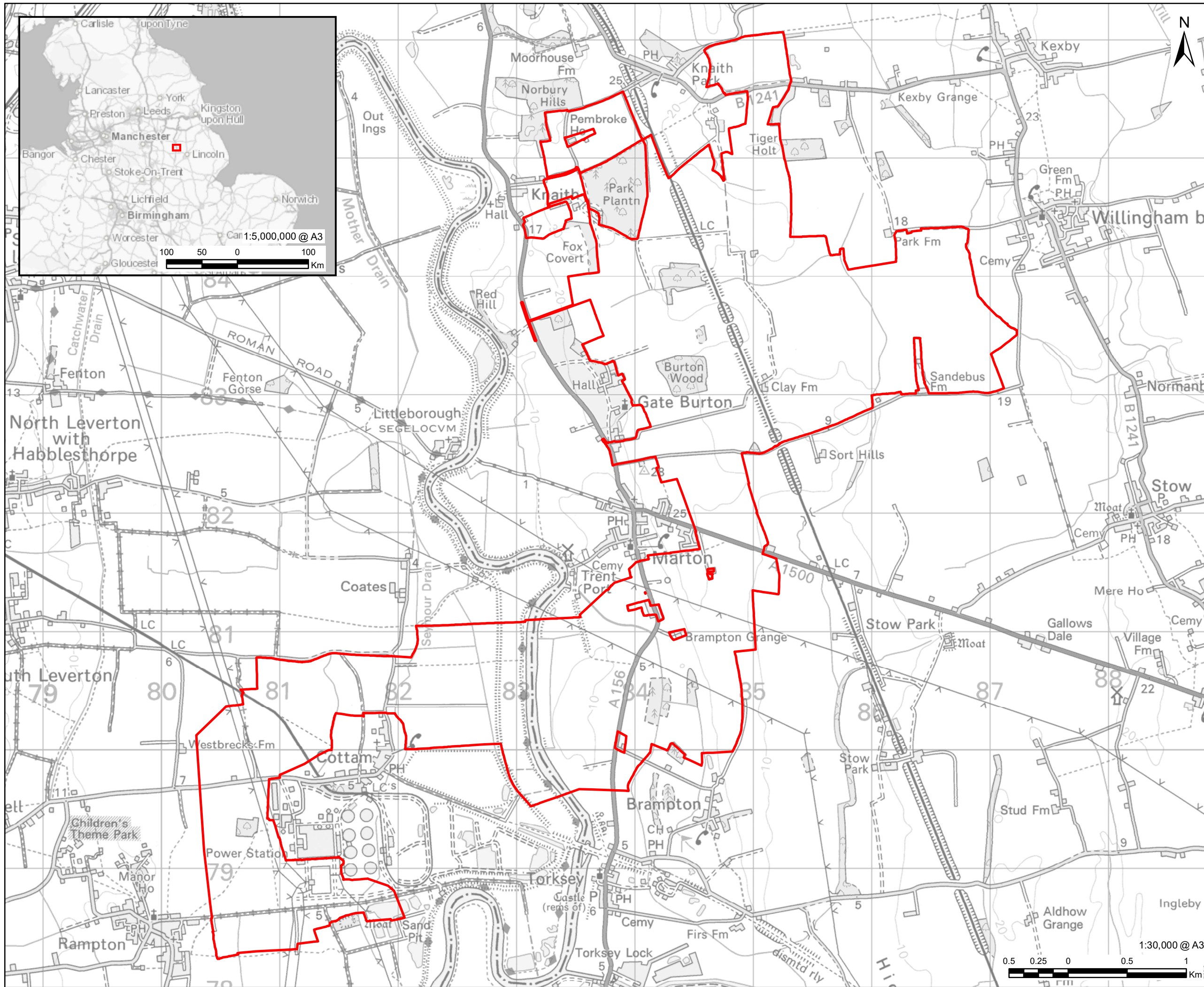
Ref	Note	Action
	<p>IF: It depends how you are planning to operate these, if using banksmen then a crossroads would be better, but if not (unmanaged, standard access) then a staggered junction would be preferred. We have accepted straight-across junctions previously but would want these to be manned.</p>	
	<p>MW: Great, SR any further thoughts?</p>	
	<p>SR: Good to know, having options is very helpful at this stage as this avoids tying the proposals down too early. Having a manned crossing point would be fine. Question for IF – would you expect traffic lights to be required or just manned?</p>	
	<p>IF: It depends what the proposals are, would the crossing movements just be vehicles? Where are the site compounds? If pedestrians/ site workers need to cross, then you may need signals. If just vehicles, then you probably won't need signals as numbers are relatively low, just a marshal to ensure crossing movements are safe. There is good visibility. Kexby Lane flows are low.</p>	
	<p>SR: Just expect vehicle crossing movements, rather than pedestrians.</p>	
	<p>MW: I agree with IF comments, plus we are getting surveys carried out to provide flows/ speeds. Are there any other comments?</p>	
	<p>IF: No further comments, standard comments/ expectations on visibility and speeds.</p>	
	<p>Marston Road Site Access</p>	
	<p>MW: The eastern-most access will be via an existing junction on Marston Road to the west of Willingham-by-Stow, then ahead to a farm track. Very low movements once again, 5 daily HGVs, fewer LGVs, 12 staff vehicles per day. Narrow track may need management. Does IF have any thoughts?</p>	<p>AECOM to carry out swept path analysis, identify visibility splays and review whether a passing place/ management may be required</p>
	<p>IF: Streetview indicates that this could be quite tight, you should carry out swept paths to show this works.</p>	
	<p>CCa: Yes, swept paths will be carried out to show what we plan to do including vehicles making this turn.</p>	
	<p>IF: You may need a passing place near the junction if a car was to meet an HGV. Therefore, please consider this to prevent the need for vehicles to reverse back.</p>	
	<p>MW: SR do you know whether there are many existing movements along this track at the moment?</p>	
	<p>SR: I am not sure but wouldn't expect there to be many movements other than during the harvest period, rest of time movements would be very light.</p>	
	<p>MW: We can look at management along here if needed.</p>	
	<p>IF: Also consider the orientation of the farm track onto road, visibility may be a concern.</p>	
	<p>MW: We picked this up on our first review and this is something which could be managed (banksmen etc.) if this is considered to be appropriate?</p>	
	<p>IF: Yes, this could be a solution, that or a passing place, or removing vegetation to improve visibility so that two-way vehicles can see what is happening and to avoid vehicles having to reverse near a junction.</p>	
	<p>MW: We will look at this, but in principle this should work.</p>	
	<p>Grid Connection Route</p>	
	<p>MW: Now to cover indicative site accesses for the Grid Connection Route. Effectively vehicles will arrive from the south and then along Cottam Road. A connection point will be needed, plus access points to bypass the railway and River Trent, including accesses from Cottam Road and the A156. Potentially also looking at Headstead Bank but this is very narrow so more thought will be</p>	

Ref	Note	Action
	<p>needed. We don't know numbers (flows) yet, this is being developed. We would like initial thoughts.</p> <p>IF: Nothing from me.</p> <p>JW: No real thoughts at the moment, need numbers and durations to provide views.</p> <p>SR: Still working though numbers, these are not too far away.</p> <p>MW: We will be in touch once we know more.</p> <p><i>Post meeting note – it appears that the area to the northeast of the railway is proposed to be accessed via Cottam Road with a route over the railway line, rather than via Headstead Bank.</i></p>	<p>AECOM to provide further details on Grid Connection Route in due course</p>
06	<p>Presentation – Proposed Traffic Surveys</p> <p>MW: This is the area that the surveys will be cover. Key junctions (MCCs) and link flows/ speeds (ATCs) which will be important for visibility splays and to provide suitable junctions. We hope that this is logical. A3 represents Clay Lane. M3 covers Marton access. Any queries?</p> <p>IF: Seems to cover what we would need/ expect.</p>	<p>AECOM to arrange for traffic surveys to be undertaken</p>
07	<p>Presentation – Approach for Transport Assessment</p> <p>MW: This sets out a standard scope including site location, policy review, accessibility appraisal, review of development proposals, trip generation and distribution. The main focus will be construction with a qualitative view of operation. In addition, the TA will include committed developments (cumulative assessment), details of the assessment methodology, and then the highway assessment and pedestrian/ cycle assessment. We are starting to put together a TA Scoping Note which we will share fairly soon, outlining how we intend to approach the TA.</p> <p>IF: Will there be a separate Travel Plan, or will this be included in the TA?</p> <p>MW: This element will be included in the CTMP, as the focus is on construction and construction workers.</p> <p>IF: That's fine, as long as it is covered somewhere. For example, staff minibus trips to minimise car trips for workers.</p> <p>MW: Agree, walking and cycling options are very limited, so we need to be realistic on where people can come from. This will be covered in the CTMP.</p>	<p>AECOM to include details of staff travel patterns/ measures within the CTMP</p>
08	<p>Presentation – EIA Methodology</p> <p>MW: We are looking to get the PEIR together as soon as possible, this slide sets out the process of how we intend to prepare the traffic & transport chapter, focus on the construction phase, assessment criteria (e.g. severance, driver delay, ped/ cycle delay and amenity, fear & intimidation, accidents and safety). We propose to scope out a quantitative assessment of operation (except glint and glare) and to base decommissioning on the assessment of construction, as nothing greater in terms of trips/ far ahead in the future. Any thoughts?</p> <p>IF: No, fine from me.</p> <p>JW: Fine from me.</p>	<p>AECOM to progress with the PEIR</p>
09	<p>Questions/ AOB</p> <p>Abnormal Loads</p> <p>MW: Another point I wanted to pick-up on is abnormal loads – it would be useful to understand what information you would expect to see. We expect the majority</p>	

Ref	Note	Action
	<p>of vehicles to be routed from Immingham and to then use the A1 to access the site, predominately via the A156 access.</p> <p>IF: We would expect to see a usual swept path assessment of junctions, details of what street furniture may need relocating etc. However, wouldn't abnormal loads be limited given only Solar Panels will be transported?</p> <p>MW: Mainly weight related. SR?</p> <p>SR: Yes, on the main site we will have large transformer/ site equipment, up to 200 tonnes, therefore not abnormal size (length) but in terms of weight. Just finalising details to inform swept path analysis. Low bridges will also need to be considered.</p> <p>MW: Weight of these the main abnormal aspect. Rather than length/ width/ height. Need to be aware of network constraints. Routes from the A1 would appear to be logical.</p> <p>JW: Would you be able to send us a copy of the route(s) that you are proposing to use(?), as we have an abnormal load officer who could review.</p> <p>MW: Yes, this would be very helpful.</p> <p>MW: Also, what about Cottam end of the scheme SR?</p> <p>SR: Nothing abnormal there, sizable cable drums for Grid Connection Route should be accommodated on standard low loaders – we will get details across so this can be confirmed.</p> <p>MW: Great, conscious this is an important part of the assessment.</p>	<p>AECOM to carry out swept path analysis of abnormal loads once further details are known.</p>
	<p>Railways</p> <p>JW: The existing power station is served by a rail station, has any thought been given to this in terms of being used in support of the Scheme?</p> <p>SR: We have spoken to Network Rail; this section of rail is not used anymore. Initial thoughts are that for the Nottinghamshire side of the Scheme, that this wouldn't probably be beneficial due to the limited number of vehicle trips (deliveries) envisaged.</p> <p>JW: OK, I was interested to know whether this part of the rail network was active, but if not, then that's understandable.</p> <p>SR: This may actually pose a slight benefit if unused, to facilitate any over-track crossings for the Grid Connection Route works. Network Rail are amenable to this at the moment. Also it is worth noting that the main railway running through the site is regularly used by mainline services, so this is unlikely to be viable for serving the Scheme (in terms of delivery of equipment, materials etc.)</p>	<p>-</p>
	<p>Committed Developments</p> <p>IF: I am aware of another Solar Farm – Burton and Cottam. Whilst this is not committed, this has a similar programme to Gate Burton and both schemes could get approval. How can we get a cumulative assessment for these? Please make sure a cumulative assessment is carried out.</p> <p>AB: The project team is engaged with Island Green Power (IGP) for the other solar parks. The similar timescales for submission are appreciated, so we propose to hold regular dialog to ensure joined up thinking. We are aware of their proposals which will feed into the ES. Is there anything specific which the highway authority would want to see?</p> <p>IF: When the documents are received these need to relate to one another, be consistent, tally up with each others' numbers etc. to avoid a requirement to re-work the assessments. Liaison is welcomed.</p>	<p>AECOM and Low Carbon to ensure committed developments are adequately considered and to continue liaison with IGP where required</p>

Ref	Note	Action
	<p>AB: Yes, we will ensure this is the case between the two teams.</p> <p>MW: The cumulative angle is also on our radar from an assessment point of view.</p> <p>SR: I echo AB's comments. LM will also make sure we are across the numbers and collaborate. We have realigned our redline boundary so we can share the Grid Connection Route where viable, link cables etc. to minimise disruption. We are doing as much as we can to collaborate. LM to lead from our side on this.</p> <p>AOB/ Next Steps</p> <p>MW: Anything else from others including those from local highway or planning authorities?</p> <p>CCo: No.</p> <p>JK: No.</p> <p>MW: OK great, we will find out more about the Grid Connection Route, complete our Transport Scoping Note which we will issue for comment/ agreement and shall move forward with our PEIR. I will drop an email to confirm email details and to allow further discussions to be arranged if needed. Please also feel free to contact CCo or CB if required.</p> <p>IF: Please could you circulate the slides and a note of the meeting?</p> <p>MW: Yes, we will circulate today.</p> <p>AB: When send this out, please can you also send the notes/ minutes?</p> <p>MW: Yes, we will do. Many thanks.</p> <p><i>Post meeting note – meeting minutes circulated on 22/03/22.</i></p>	<p>AECOM to provide further details of Grid Connection Route (once known), complete Transport Scoping Note and to circulate slides and meeting minutes to attendees</p>

Appendix E Site Location Plan



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