

Green Hill Solar Farm

EN010170

Outline Construction Traffic Management Plan

Revision **BC**

Prepared by: Lanpro Services

Date: ~~December 2025~~ March 2026

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APFP Regulation 5(2)(q)



Schedule of Changes

Revision	Section Reference	Description of Changes	Reason for Revision
B	[cover]	Updated to Revision A	As required for submission at Deadline 3.
	[throughout]	Updates to document references	As required for submission at Deadline 3.
	[throughout]	Typographical and nomenclature amendments	Applicant's due diligence
	Section 1	Figure 1.1 removal of study area	Study area is not relevant to CTMP
	Section 2	Clarification on compound strategy	In response to Issue Specific Hearing 2
	Section 3	Table 3.1 minor amendments to two-way HGV movements	To address rounding errors, which does not impact assessment
	Section 3	Table 3.2 and 3.3 corrections to vehicle flows to align with assessment.	To correspond with construction trip generation assessed.
	Section 3	Table 3.4 additional information provided	To align with level of information provided in other tables within Section 3
	Section 4	Table 4.1 added	To provide further information on each access and the duration of use
	Section 5	Further information / clarification on mitigation measures provided	In response to Issue Specific Hearing 2
	Section 6	Further information / clarification on mitigation measures provided	In response to Issue Specific Hearing 2
C	[cover]	Updated to Revision C	As required for submission at Deadline 6.
	[throughout]	Updates to document references	As required for submission at Deadline 6.
	Section 6	Additions to specific uses where adaptations to working hours may be required	In response to Issue Specific Hearing 5



Green Hill Solar Farm

Outline Construction Traffic Management Plan Revision C

Document Reference: EN010170/EX6/GH7.9 C

March 2026

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This report has been prepared by KMC Transport Planning Ltd ('KMC') on behalf of its client to whom this report is addressed ('Client') in connection with the project described in this report and takes into account the Client's particular instructions and requirements. This report was prepared in accordance with the professional services appointment under which KMC was appointed by its Client. This report is not intended for and should not be relied on by any third party (i.e. parties other than the Client). KMC accepts no duty or responsibility (including in negligence) to any party other than the Client and disclaims all liability of any nature whatsoever to any such party in respect of this report.

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1 Introduction

1.1 Outline

1.1.1 This Outline Construction Traffic Management Plan (OCTMP) has been prepared by KMC Transport Planning (KMC) on behalf of Green Hill Solar Farm Limited (the Applicant) in relation to an application for a Development Consent Order (DCO) [EX1EX6/GH3.1_BE] for Green Hill Solar Farm (hereafter referred to as the Scheme).

1.1.2 The proposed development spans several local highway authorities:

- West Northamptonshire Council;
- North Northamptonshire Council;
- Milton Keynes City Council; and
- National Highways.

1.2 The Scheme

1.2.1 The Scheme will comprise the construction, operation, maintenance and decommissioning of a Solar Photovoltaic (PV) electricity generating facility and Battery Energy Storage System (BESS) with a total capacity exceeding 50 megawatts. The Scheme comprises nine land parcels (Sites). The Sites are connected by a Cable Route Corridor to each other and to the Point of Connection (POC) at Grendon National Grid Substation.

1.2.2 The Sites are in an area of countryside to the west and south of Wellingborough, and north, east and south east of Northampton as shown in **Figure 1.1**.

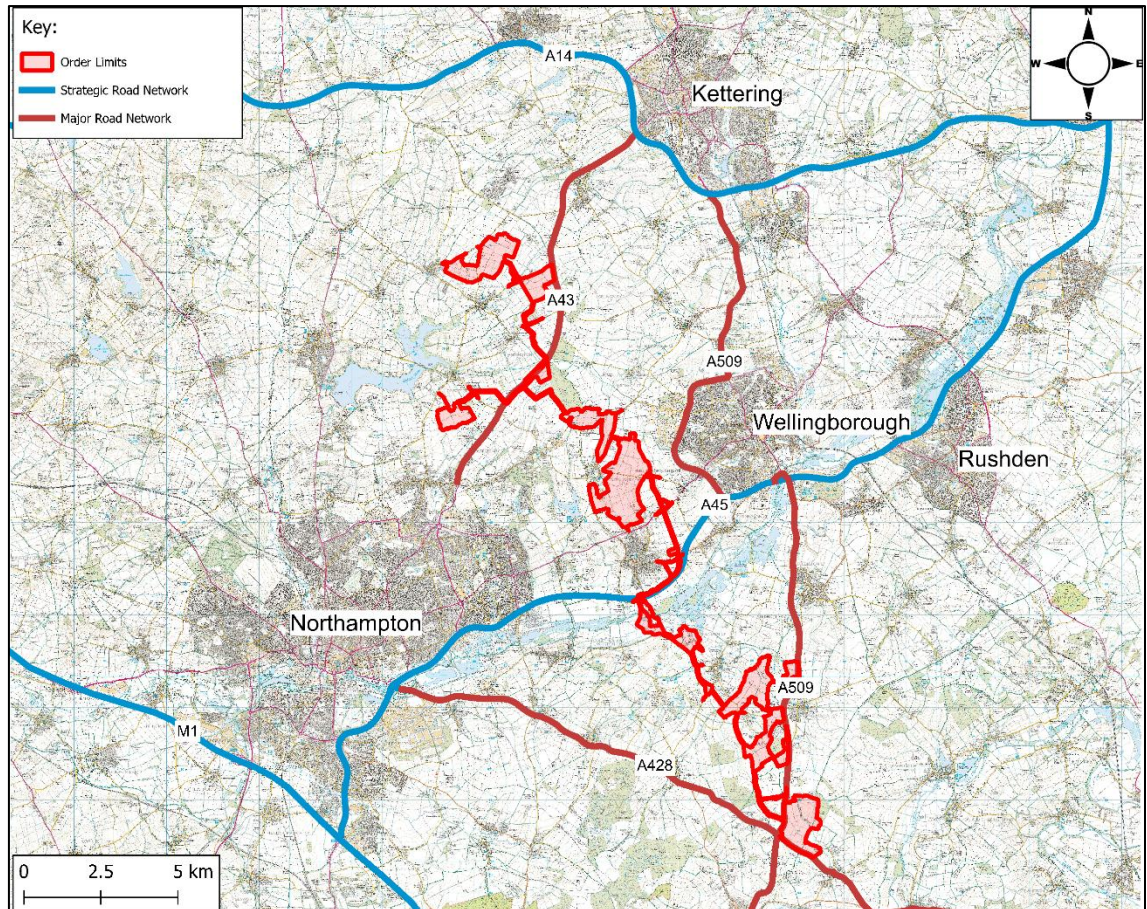


Figure 1.1 – Order Limits and Highway Network Context

1.3 Outline CTMP

- 1.3.1 This OCTMP provides a framework for the management of vehicle movements to and from the Scheme during the construction phase, to reduce, as far as practicable, impacts of the Scheme on the highway network. It is a live document that will be updated prior to commencement of construction to reflect any amends or comments made during the DCO process, and to add detail once a contractor is appointed.
- 1.3.2 A final CTMP will be prepared prior to commencement of construction for approval of the relevant planning authorities, in consultation with the relevant highway authorities.
- 1.3.3 The OCTMP has the following objectives:
- Minimise the number of construction vehicles;
 - Ensure the safe movement of equipment, material and construction workers; and
 - Minimise the effects of construction traffic on the local community and other road users.
- 1.3.4 It will be the responsibility of the Applicant to ensure that the appointed contractor complies with all statutory regulations and guidelines in relation to construction and movement activities.

- 1.3.5 This OCTMP has been prepared following various stages of consultation, and should be read in conjunction with **Environmental Statement Chapter 13 Transport and Access (Revision A) [REP2-003]** and the **Transport Assessment Parts 1-3 (Revision A) [GH6.3-13.2-AREP3-066]** also submitted as part of the DCO application.

2 Proposed Development

2.1 Introduction

2.1.1 This section provides an overview of the Scheme and the construction programme.

2.2 Solar Arrays

2.2.1 The main element of the Scheme comprises nine Sites that will accommodate the solar arrays. These are referred to as:

- **Green Hill A** – Accessed via Access A-1: Broughton Road
- **Green Hill A.2** – Accessed via Access A.2-1: Kettering Road
- **Green Hill B** – Accessed via Access B-1: Sywell Road
- **Green Hill C** – Accessed via Access C-1: Sywell Road/Glebe Road junction
- **Green Hill D** -Accessed via Accesses:
 - Access-D-1: Highfield Road adjacent to Sywell Road
 - Access-D-2: Highfield Road adjacent to the access to Highfield Happy Hounds
 - Access-D-3: Highfield Road, c.200m south of the access to Highfield Happy Hounds
 - Access-D-4: Highfield Road adjacent to Access-E-1
- **Green Hill E** – Accessed via Accesses:
 - Access-E-1: c.200m south of the access to Highfield Happy Hounds
 - Access-E-2: Mears Ashby Road
- **Green Hill BESS** – Accessed via Accesses:
 - Access-BESS-1: c.600m northwest of Grendon Substation access
 - Access-BESS-2: c.190m northwest of Grendon Substation access
 - Access-BESS-3: c.60m southeast of Grendon Substation access
 - Access-BESS-4: c.175m southeast of Grendon Substation access
- **Green Hill F** – Accessed via Accesses:
 - Access F-1: Off the A509, north of Bozeat.
 - Access F-2: Easton Lane/Private Access to Motorcycle Dealership junction
 - Access F-3: Off the A509 to the west of Bozeat.
- **Green Hill G** – Accessed via Access G-1: off the A428, c.100m to the east of the junction with the A509.

2.2.2 A number of crossing point accesses are included to provide access to parts of the Site or the Cable Route Corridor whilst minimising or avoiding the use of unsuitable highways.

2.2.3 The Sites and Cable Route Corridor associated with the Scheme and the accesses and crossing point accesses are shown in **Figures 2.1, 2.2, 2.3, 2.4, and 2.5.**

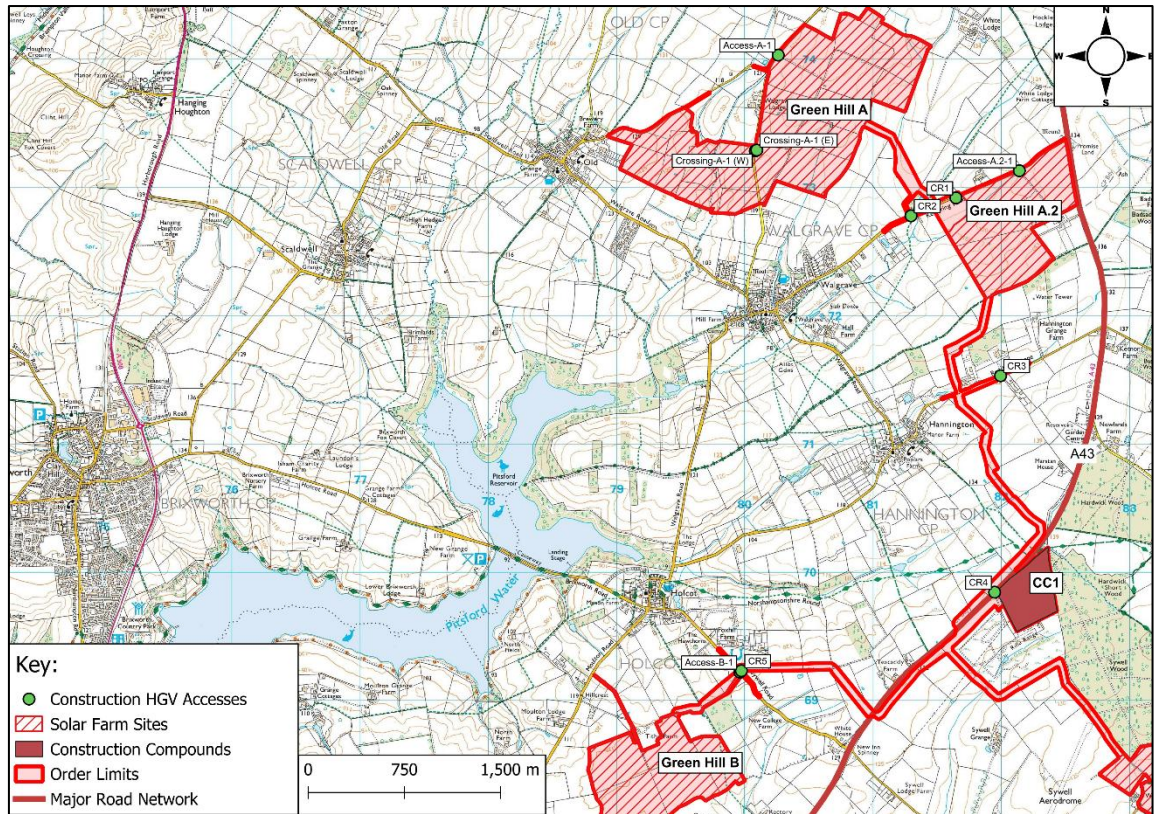


Figure 2.1 – Access Locations for Sites and Cable Route Corridor (North Area)

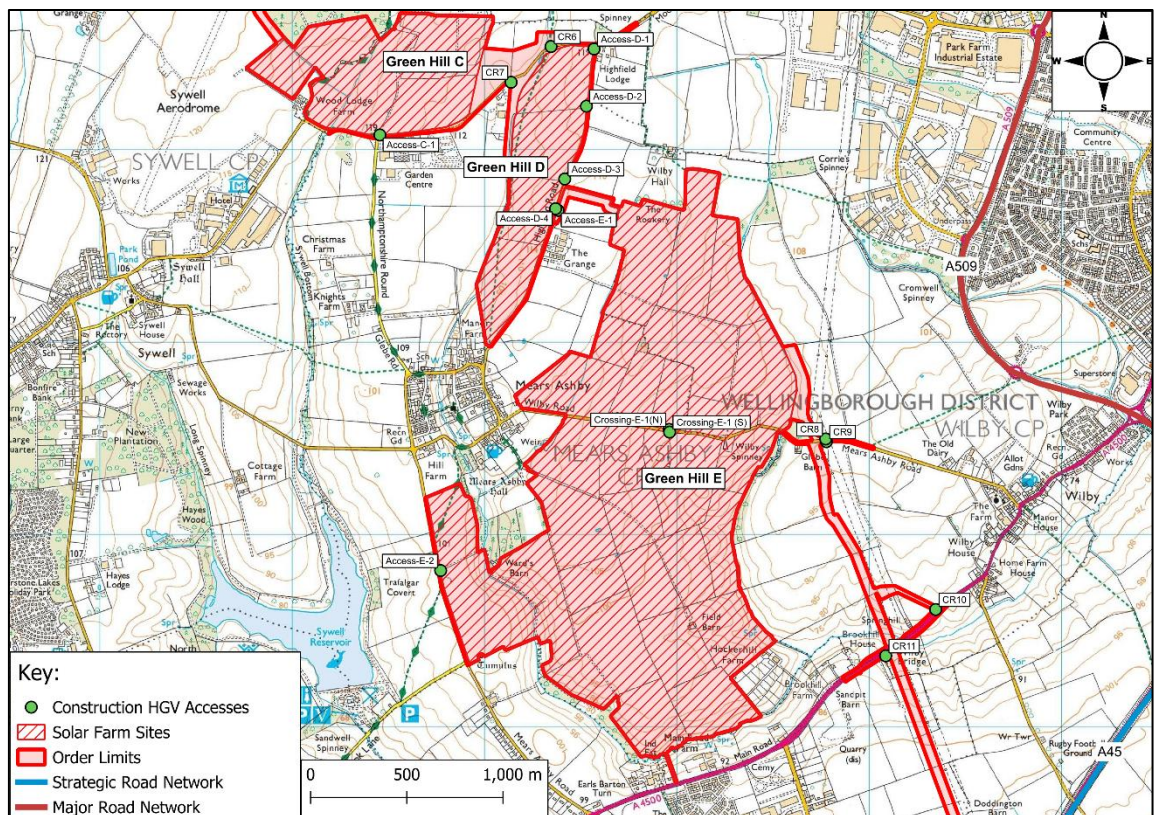


Figure 2.2 – Access Locations for Sites and Cable Route Corridor (Central Area)

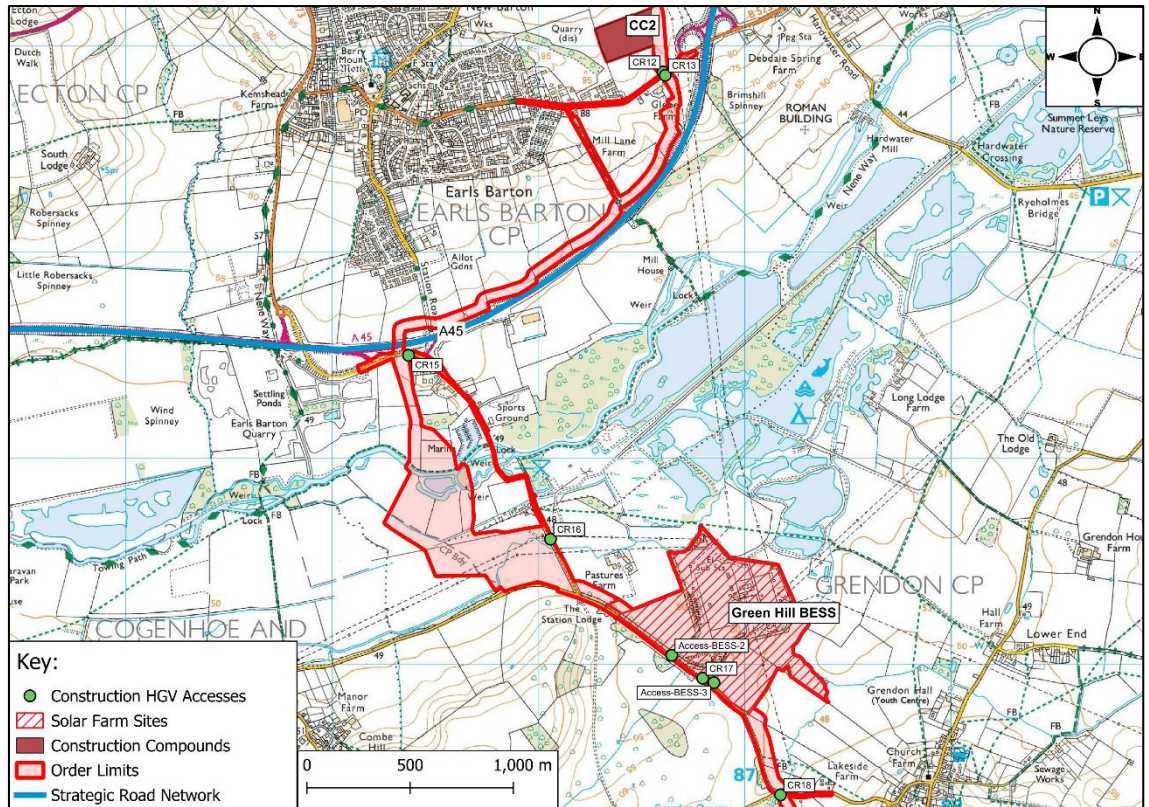


Figure 2.3 – Access Locations for Sites and Cable Route Corridor (South Area Part 1)

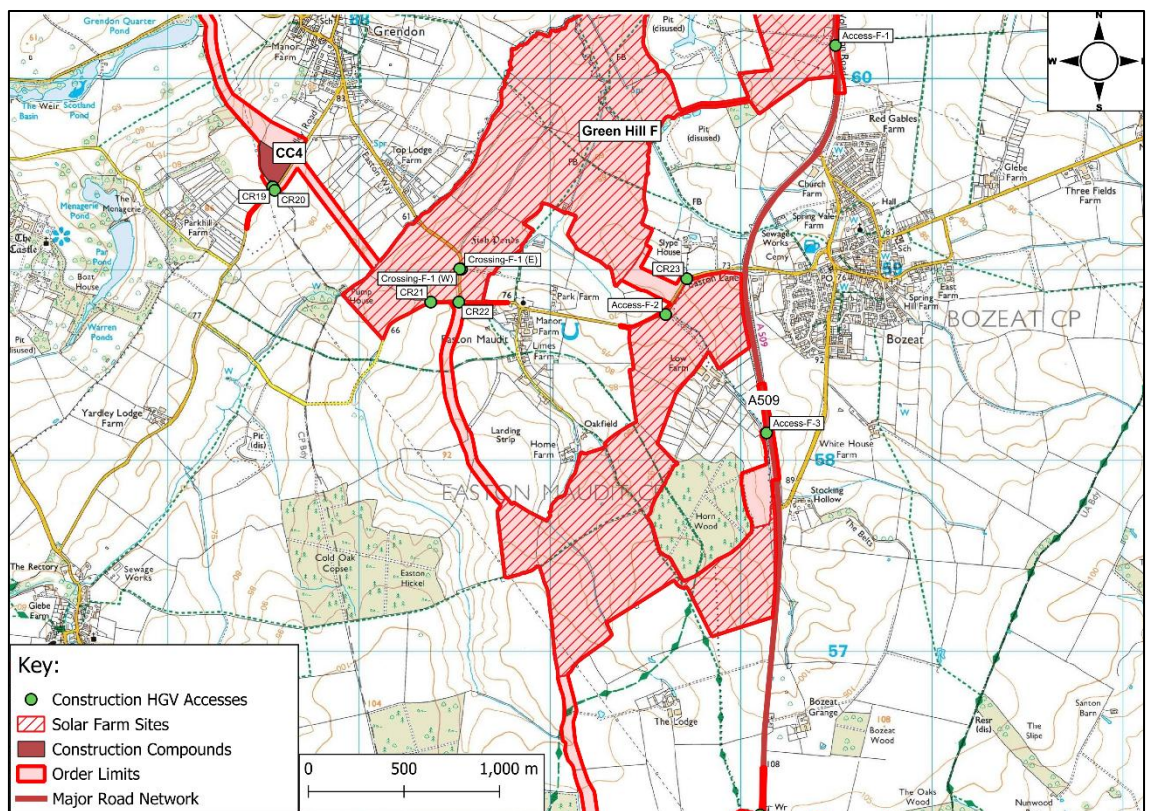


Figure 2.4 – Access Locations for Sites and Cable Route Corridor (South Area Part 2)

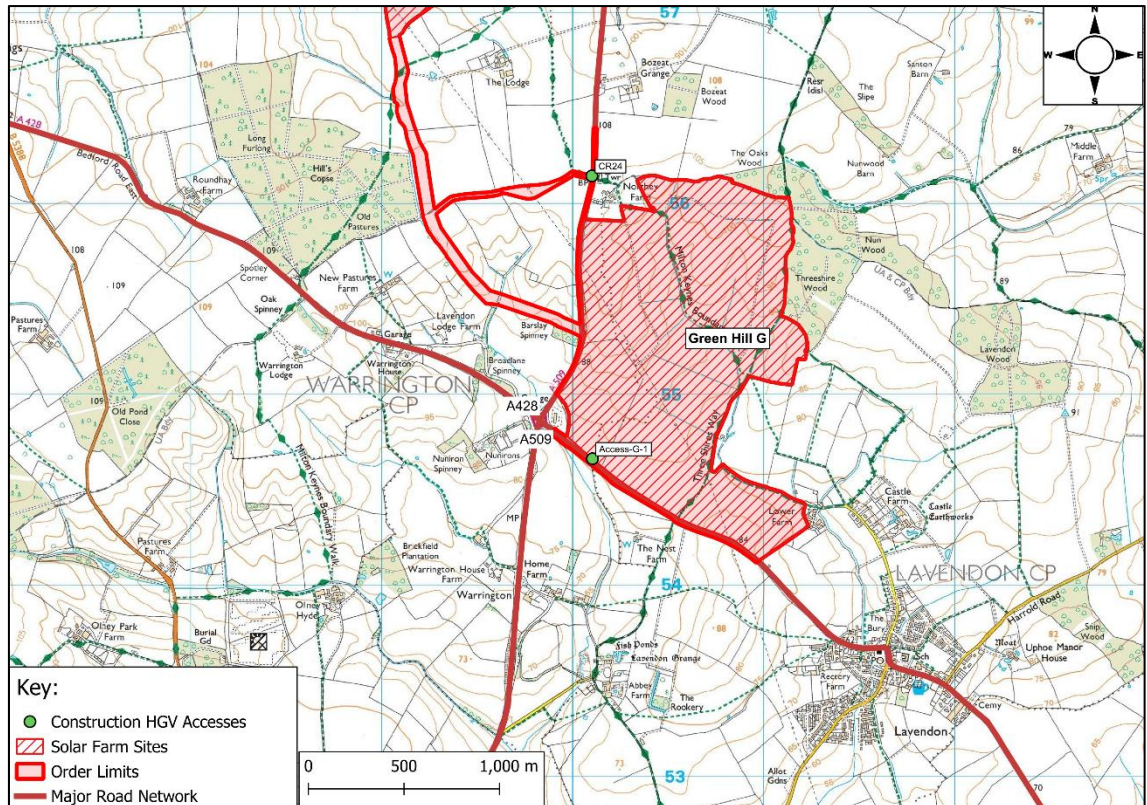


Figure 2.5 – Access Locations for Sites and Cable Route Corridor (South Area Part 3)

2.2.4 The key equipment within the Solar Array Works Areas are:

- The Solar Photovoltaic panels (Solar PV Panels) which convert sunlight/daylight into electrical current;
- Solar PV Mounting Structures will be metal frames, typically aluminium or steel. The metal frames are typically installed by driving the piles directly into the ground;
- A tracker system which involves attaching the Solar PV Panels to a motorized table that can move in relation to the sun. This allows for optimal power generation throughout the day and may be utilised across Sites;
- Conversion Units incorporate the inverters, transformers and associated equipment and are required to manage the electricity generated by the PV Panels; and
- Transformers are required to step up the voltage of the AC electricity generated by the inverters across the solar sites before it reaches the Site substation.

2.3 Energy Storage Facility

2.3.1 An Energy Storage Facility (also referred to as a Battery Energy Storage System (BESS)) is proposed. The preferred location for the BESS is at Green Hill BESS adjacent to Grendon National Grid Substation, however BESS may also or alternatively be located within Green Hill C.

2.3.2 The BESS is designed to provide peak generation and balancing services to the grid by allowing excess electricity generated either from the solar PV panels, or imported from the grid, to be stored in batteries and dispatched when required.

2.4 Substations

- 2.4.1 The Scheme includes two 400kV Substations. These substations are to be located within Green Hill BESS and Green Hill C. The Green Hill C 400kV Substation will be air insulated switchgear, whereas Green Hill BESS will either be air insulated switchgear or gas insulated switchgear.
- 2.4.2 The 400kV Substations would also step down the voltage from 400kV to 132kV and 33kV. This would allow for both electricity provided from the grid at 400kV and provided from the Sites to be stored within the BESS.
- 2.4.3 On Green Hill A, B, E, F and G, there will be the need for a 132kV Substation on each of the Sites.
- 2.4.4 There will be a requirement for 33kV Substations on Green Hill A.2 and D.

2.5 Grid Connection

- 2.5.1 The electricity generated and stored by the Scheme will be exported to the National Grid at the existing Grendon Substation. The Sites will be linked to Grendon Substation via underground cables within the Cable Route Corridor. The underground cables will also transfer electricity from the National Grid to the BESS.
- 2.5.2 The Cable Route Corridor will comprise underground electrical cables to connect the Sites to the Point of Connection (PoC) at Grendon Substation. The Cable Route Corridor runs for approximately 31km from Green Hill A at its most northern extent to Green Hill G at its southernmost point.
- 2.5.3 The Cable Route Corridor has a typical width of 50m, however the Cable Route Corridor incorporates a number of wider areas, for example to allow additional working area for trenchless techniques such as Horizontal Directional Drilling (HDD), enable flexibility around areas of environmental sensitivity and temporary construction compounds.
- 2.5.4 Twenty-four access points to the Cable Route Corridor are proposed (CR1-CR24). These are shown in **Figures 2.1, 2.2, 2.3, 2.4** and **2.5**.

2.6 Construction Compounds

- 2.6.1 Three Construction Compounds will be built to serve the Cable Route Corridor as shown in **Figures 2.1, 2.3** and **2.4**. In addition, construction compounds will also be provided within the Green Hill Sites, in the areas shown as Work No. 7 on the Works Plan [**EX3EX6/GH2.4_DG**]. The compounds are proposed to accommodate the following elements:

- Material and equipment storage;
- Construction vehicle parking;
- Site office; and
- Construction worker welfare facilities.

2.6.2 The Construction Compounds for the Cable Route Corridor are proposed to be provided at the following locations:

- CC1: Off the A43 near Holcot;
- CC2: Adjacent to the A45/B573 Junction; and
- CC4: Located South of Grendon, accessed via an internal haul route accessed via Station Road.

2.6.3 The provision of the construction compounds will ensure that there will be no parking by contractors, visitors or delivery vehicles on the local highway network and visitors will be advised of the parking arrangements in advance of travelling to the Site. The Site Managers will monitor that parking is taking place in the designated area on a regular basis.

2.7 Internal Haul Routes

2.7.1 The Scheme will include haul routes throughout the Solar Array Sites and along the Cable Route Corridor to allow for the movement of some construction vehicles through the proposed development off the public highway.

2.7.2 In order for construction vehicles to cross between the Solar Array Sites, crossings will be provided across various sections of public highway. These are shown connecting the Sites in **Figures 2.1, 2.2, 2.3, 2.4 and 2.5**.

2.7.3 The following pairs accesses must be utilised as crossing points, with HGVs restricted from access from the highway:

- Crossing A-1 (E) and Crossing A-1 (W)
- Crossing E-1 (N) and Crossing E-1 (S)
- Crossing F-1 (E) and Crossing F-1 (W)
- CR8 and CR9
- CR19 and CR20
- CR21 and CR22 (via approximately 150m of Yardley Road, Easton Maudit)

2.8 General Works

2.8.1 Across the Scheme there will be a need to undertake general works associated with construction and development of individual Sites. These works include the following:

- The formation of temporary and permanent access tracks;
- Fencing, security and lighting;
- Landscaping and habitat management;
- Water management and drainage; and
- Construction laydown areas/compounds.

2.9 Programme

2.9.1 The Scheme currently has a grid connection date of 2029. It is anticipated that construction works will commence, at the earliest, in Q1 2027 and will run to 2029. The construction programme for the entire Scheme is anticipated to be 24 months with overlapping construction works on the different Sites.

2.9.2 **Figure 2.6** indicates the potential construction durations across the different parts of the Scheme, showing a series of overlapping stages.

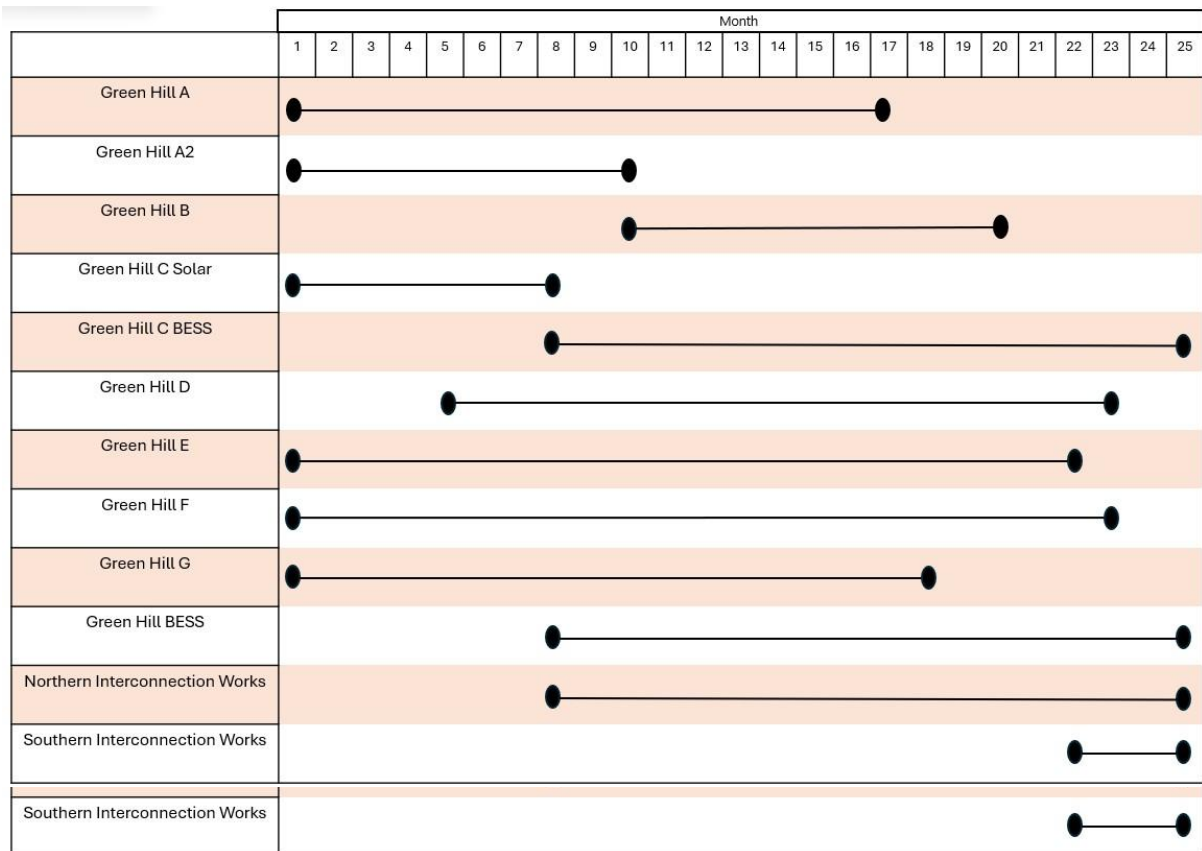


Figure 2.6 – Indicative construction programme for Green Hill Solar Farm

3 Construction Vehicle Trips

3.1 Trip Generation

- 3.1.1 A full breakdown of how construction vehicle trips have been estimated is provided in Section 5 of the **Transport Assessment Part 1 (Revision A) [GH6-3.13.2-AREP3-066]** which accompanies this application. A summary is provided within this section of the OCTMP.
- 3.1.2 Deliveries of materials to individual Sites will be made principally by Heavy Goods Vehicles (HGVs). This will vary between 16.5m long articulated HGVs and rigid HGVs 8-10m in length. There will be a small number of Abnormal Indivisible Load (AIL) deliveries associated with the Conversion Units. AIL movements are summarised separately in Section 7.

3.2 Construction Phase

Solar Sites and BESS

- 3.2.1 The forecast of HGV movements is based upon forecasts that have been agreed through consented DCO Solar Schemes at Cottam and West Burton, which do not have any discernible or design differences to the Green Hill Scheme. Based on these consented DCOs, 'HGV movements per solar module' have been calculated and is considered an appropriate trip rate to forecast the HGV movements associated with each Green Hill Site.
- 3.2.2 It is expected that there will be a relatively flat profile of deliveries across the construction period for the Scheme and each individual Site. Notwithstanding this, a peak HGV activity has been identified through the indicative programme with the delivery of HGV modules.
- 3.2.3 **Table 3.1** shows the forecast average and peak daily HGV movements expected at the Solar Sites and BESS.

Table 3.1 – Solar Sites and BESS daily HGV movements

Vehicles/day	Green Hill A	Green Hill A.2	Green Hill B	Green Hill C / BESS	Green Hill D	Green Hill E	Green Hill F	Green Hill G	BESS
Average daily HGV deliveries	3	2	2	1	2	3	4	4	2
Peak daily HGV deliveries	8	9	9	5	9	9	9	9	4
Peak HGV movements (two-way)	16	18	18	10	18	18	18	18	8

- 3.2.4 The peak number of workers is expected to be 787 workers spread across the Scheme. To account for peak periods at the different Sites, the groupings of sites across the North, Central and South areas have been assessed separately where these represent different sections of the highway network, with peak workers in each area considered. Taking these individual areas into account, and assessing the individual peak of each area, 1,099 construction workers across the

North, Central and South areas have been taken forward for assessment as a reasonable worst case.

3.2.5 **Table 3.2** shows the estimated construction worker movements expected at the Solar Sites and BESS.

Table 3.2 – Solar Sites and BESS construction worker movements

Vehicles/day	Green Hill A	Green Hill A.2	Green Hill B	Green Hill C / BESS	Green Hill D	Green Hill E	Green Hill F	Green Hill G	BESS
Total worker arrivals	68	27	27	33	8	75	76	62	27
Total worker two-way vehicle movements	136	54	54	66	16	150	152	124	54

3.2.6 **Table 3.3** shows the estimated combined Peak HGV and construction worker movements for the Solar Sites and BESS.

Table 3.3 – Combined HGV and construction worker movements: Solar Sites and BESS

Vehicles/day	Green Hill A	Green Hill A.2	Green Hill B	Green Hill C / BESS	Green Hill D	Green Hill E	Green Hill F	Green Hill G	BESS
Total vehicle arrivals	76	36	36	38	17	84	85	71	32
Total two-way vehicle movements	151	72	72	76	34	168	169	143	64

Cable Route Corridor construction vehicle movements

3.2.7 Based on input from construction experts, it is forecast that each compound will generate up to 11 HGV deliveries per day (22 two-way HGV movements) for the delivery of material and equipment with a further 5 light goods vehicle (LGV) deliveries per day (10 two-way LGV movements) for this purpose. There will also be up to 24 construction workers per compound, arriving by car / van and shuttle bus where a robust occupancy rate of 12 workers has been assumed per shuttle. It has been assumed that there would be 9 worker vehicle arrivals (18 two-way worker vehicle movements) per day, which would be a combination of cars and shuttle buses. The forecast vehicle movements across a typical day for the construction of the cable connections across the Cable Route Corridor, are shown at **Table 3.4**.

Table 3.4– Cable Route Corridor construction vehicle movements

Vehicles/day	CC1	CC2	CC4
Total HGV arrivals	11	11	11
Total LGV arrivals	5	5	5
Total worker arrivals (vehicle)	9	9	9

Total vehicle arrivals	25	25	25
Total two-way vehicle movements	50	50	50

Combined Solar Site, BESS, and Cable Route Corridor construction vehicle movements

3.2.8 The forecast two-way vehicle movements across the entire Scheme over a typical day are presented in **Table 3.5**.

Table 3.5– Total Scheme Daily Vehicle Movements

	North Sites				Central Sites				South Sites			
	Cars/LGVs/ shuttles		HGVs		Cars/LGVs/ shuttles		HGVs		Cars/LGVs/ shuttles		HGVs	
	Arrive	Depart	Arrive	Depart	Arrive	Depart	Arrive	Depart	Arrive	Depart	Arrive	Depart
Vehicle movements per day	136	136	36	36	158	158	33	33	152	152	29	29

4 Construction Vehicle Routing

4.1 Introduction

4.1.1 This section summarises the prescribed HGV routes and Site accesses.

4.2 HGV Routes

4.2.1 **Figures 4.1, 4.2 and 4.3** show the proposed HGV routes. These are chosen to provide routes which are the shortest distance between the various access points associated with the proposed development and the Strategic Road Network (A14 and A45), therefore minimising travel on less suitable roads.

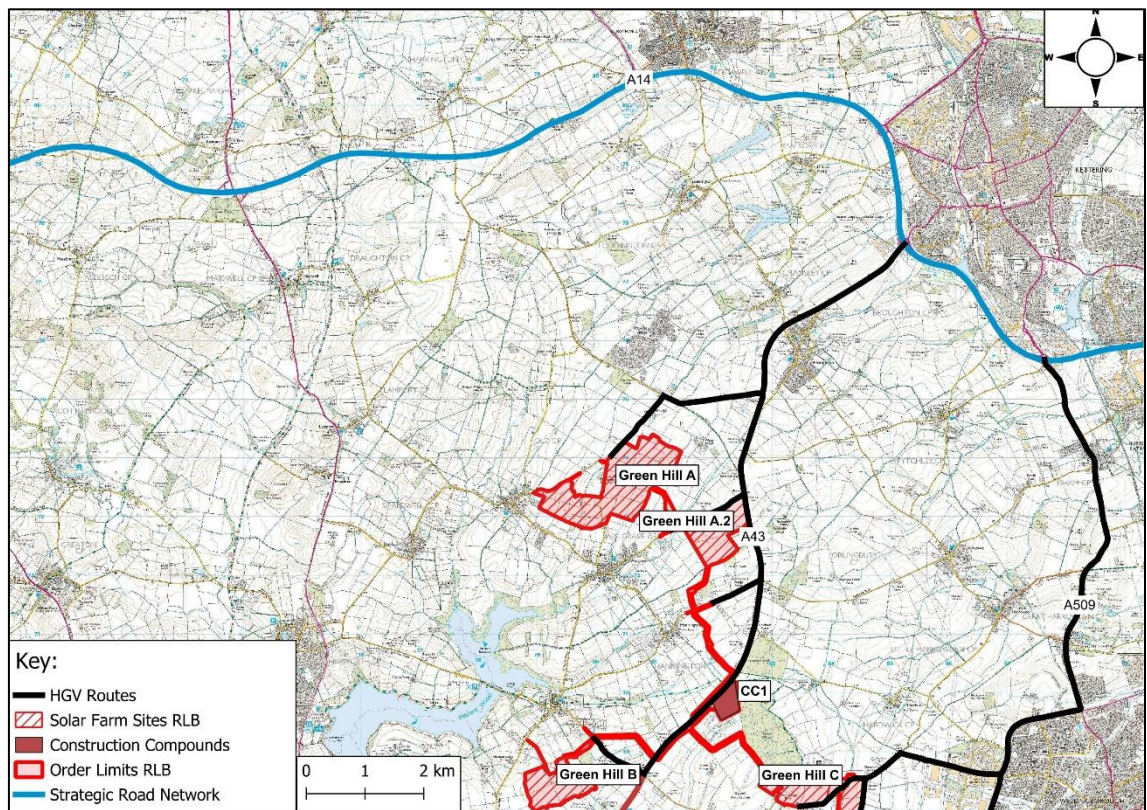


Figure 4.1 – Construction HGV Routing- North Sites

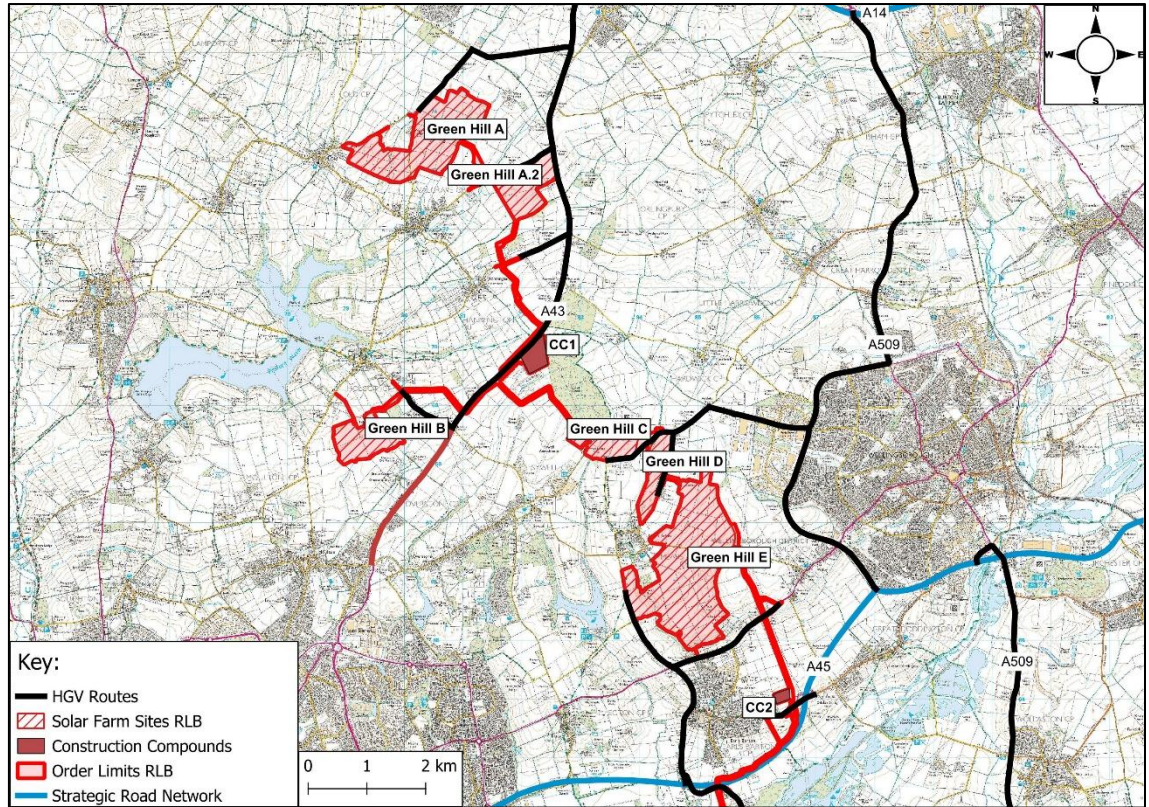


Figure 4.2 – Construction HGV Routing- Central Sites

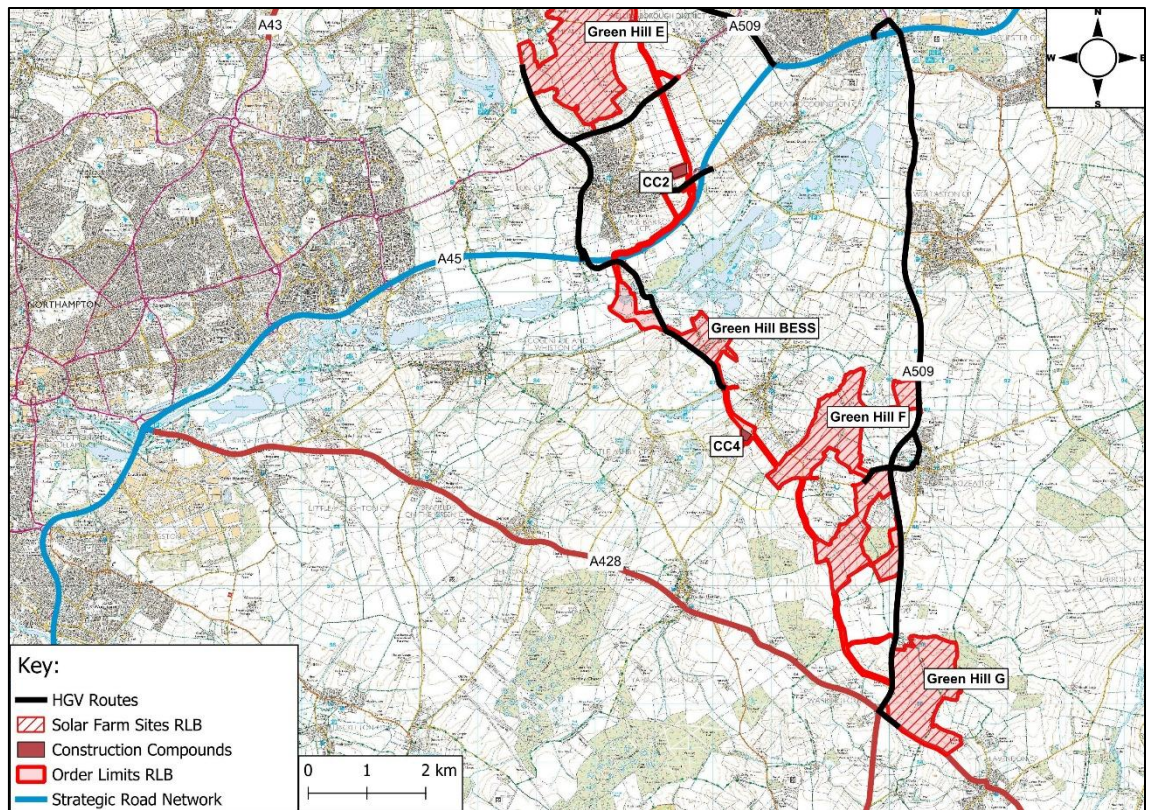


Figure 4.3 – Construction HGV Routing- Southern Sites

4.3 Construction Accesses

4.3.1 **Table 4.1** below summarises the proposed Site Accesses and Cable Route Corridor Accesses and provides a description of each access and the proposed use.

Table 4.1: Site Accesses and Proposed Use

Access Ref	Location	Description	Use
Green Hill A			
Access-A-1	Broughton Road	Improved existing field access	Construction Operation Cable Route Corridor
Access-A-2	Broughton Road	Improved existing field access	Operation
Crossing-A-1 (E)	Newland Road	New access	Construction Operation
Crossing-A-1 (W)	Newland Road	Improved existing field access	Construction Operation
Green Hill A.2			
Access-A.2-1	Kettering Road	Improved existing field access	Construction Operation Cable Route Corridor
Green Hill B			
Access-B-1	Sywell Road	Improved existing field access	Construction Operation Cable Route Corridor
Access-B-2	Moulton Road	Existing access to farm	Operation
Green Hill C			
Access-C-1	Sywell Road	Existing access to solar farm	Construction Operation Cable Route Corridor
Green Hill D			
Access-D-1	Highfield Road	Improved existing field access	Construction (including replacement) Cable Route Corridor
Access-D-2	Highfield Road	Improved existing field access	Construction Operation
Access-D-3	Highfield Road	Improved existing field access	Construction Operation
Access-D-4	Highfield Road	Improved existing field access	Construction (including replacement)
Access-D-5	Highfield Road	Improved existing field access	Operation
Green Hill E			
Access-E-1	Highfield Road	Improved existing field access	Construction Operation Cable Route Corridor

Access Ref	Location	Description	Use
Access-E-2	Earls Barton Road	Improved existing field access	Construction Operation
Crossing E-1 (N)	Wilby Road	New access	Construction Operation
Crossing-E-1 (S)	Wilby Road	Improved existing field access	Construction Operation
Green Hill BESS			
Access-BESS-1	Station Road	Improved existing field access	Emergency
Access-BESS-2	Station Road	Improved existing field access	Construction Operation Cable Route Corridor
Access-BESS-3	Station Road	Improved existing field access	Construction Operation
Access-BESS-4	Station Road	New access	Emergency
Green Hill F			
Access-F-1	A509	Existing access to quarry	Construction Operation Cable Route Corridor
Access-F-2	Easton Lane	Improved existing farmyard access	Construction Operation Cable Route Corridor
Access-F-3	A509	Existing access	Construction Operation Cable Route Corridor
Crossing-F-1 (E) Crossing-F-1 (W)	Easton Way	Improved existing field access	Construction Operation Cable Route Corridor
Green Hill G			
Access-G-1	A428	Improved existing field access	Construction Operation
Cable Route Corridor			
CR1	Kettering Road	Improved existing field access	Cable Route Corridor
CR2	Kettering Road	Improved existing field access	Cable Route Corridor
CR3	Red House Lane	Improved existing field access	Cable Route Corridor
CR4	A43	Improved access to Northampton Shooting Ground	Cable Route Corridor Construction Compound
CR5	Sywell Road	Improved existing field access	Cable Route Corridor
CR6	Moonshine Gap	Improved existing field access	Cable Route Corridor
CR7	Sywell Road	Improved existing field access	Cable Route Corridor
CR8 & CR9	Mears Ashby Road	Improved existing field access	Cable Route Corridor
CR10	A4500	Improved existing field access	Cable Route Corridor

Access Ref	Location	Description	Use
CR11	A4500	Improved existing field access	Cable Route Corridor
CR12	Doddington Road (B573)	New access	Cable Route Corridor Construction Compound
CR13	Doddington Road (B573)	New access	Cable Route Corridor
CR14	Doddington Road (B573)	Improved existing field access	Cable Route Corridor
CR15	Station Road	Improved existing field access	Cable Route Corridor
CR16	Station Road	Improved existing access to quarry	Cable Route Corridor
CR17	Station Road	Existing access to Grendon Sub-Station	Cable Route Corridor
CR18	Station Road	Improved existing field access	Cable Route Corridor Construction Compound
CR19 & CR20	Yardley Road	Improved existing field and new access	Cable Route Corridor
CR21 & CR22	Yardley Road	Improved existing field access	Cable Route Corridor
CR23	Easton Lane	Improved existing field access	Cable Route Corridor
CR24	A509	Improved existing field access	Cable Route Corridor

4.3.2 **Table 4.2** below summarises the roads that form the construction HGV route(s) to each Site access and the permitted HGV movements at each site access.

Table 4.2: Construction HGV Routes to Site Accesses

Site	Site Access	HGV Route to Site Access	Permitted HGV movements at site access
Green Hill A	Access A-1	A14, A43, Old Road, Broughton Road	Left in / right out
	Access A-2	N/A (Operational and worker access only)	
	Crossing A-1 (E)	Across Newland Road	Crossing over Newland Road only. No HGVs along Newland Road
	Crossing A-1 (W)		
Green Hill A.2	Access A2-1	A14, A43, Kettering Road	Left in / right out
Green Hill B	Access B-1	A14, A43, Sywell Road (Holcot)	Left in / right out
	Access B-2	N/A (Operational and worker access only)	
Green Hill C	Access C-1	A509, Sywell Road (Wellingborough)	Right in / left out
Green Hill D	Access D-1	A509, Sywell Road (Wellingborough), Highfield Road	Right in / left out
	Access D-2		
	Access D-3		

Site	Site Access	HGV Route to Site Access	Permitted HGV movements at site access
	Access D-4		Right in / left out and crossing between D-4 and E1.
	Access D-5	N/A (Operational and worker access only)	
Green Hill E	Access E-1	A509, Sywell Road (Wellingborough), Highfield Road	Either along Highfield Road and left in / right out or along an internal haul road within Site D and crossing Highfield Road between Access D-4 and Access E-1
	Access E-2	A45, Northampton Road, Mears Asby Road (Earls Barton), Earls Barton Road	Right in / left out
	Crossing E-1 (N)	Wilby Road (Mears Ashby)	Crossing over Wilby Road only.
	Crossing E-1 (S)		
Green Hill BESS	Access BESS-1	N/A (Emergency access only)	
	Access BESS-2	A45, Grendon Road, Station Road	Left in / right out
	Access BESS-3		Left in / right out
	Access BESS-4	N/A (Emergency access only)	
Green Hill F	Access F-1	A509	All movements permitted on A509
	Access F-2	A509, London Road (Bozeat), Easton Lane (Bozeat)	Left in / right out
	Access F-3	A509	All movements permitted on A509
	Crossing F-1(E)	Easton Way (Easton Maudit)	Crossing over Easton Way only
	Crossing F-1(W)		
Green Hill G	Access G-1	A509, A428	Left in / right out

4.3.3 **Table 4.3** below summarises the roads that form the construction HGV route(s) to the Cable Route Corridor site accesses and the permitted HGV movements at each Cable Route Corridor access. In addition, some of the Site accesses in **Table 4.2** will be used to access the Cable Route Corridor.

Table 4.3: Construction HGV Routes to Cable Route Corridor

Cable Route Corridor Access	HGV Route to Cable Route Corridor	Permitted HGV movements Cable Route Corridor access
CR1	A14, A43, Kettering Road	Left in / right out
CR2		Right in / left out

Cable Route Corridor Access	HGV Route to Cable Route Corridor	Permitted HGV movements Cable Route Corridor access
CR3	A14, A43, Red House Lane	Left in / right out
CR4	A14, A43	Left in / left out with u-turn at roundabout to the south at the junction of A43 / Sywell Road / Holcot Lane
CR5	A43, Sywell Road	Right in / left out
CR6	A509, Sywell Road	Right in / left out
CR7		Left in / right out
CR8	Either via Access E-1 (A509, Sywell Road (Wellingborough), Highfield Road) or via Access CR10 (A4500)	Crossing only over Mears Ashby Road (Wilby)
CR9		
CR10	A4500	Left in / right out
CR11		Right in / left out
CR12	A45, Doddington Road	Right in / left out
CR13		
CR14	N/A (Construction worker and inspection access during operation only)	
CR15	A45, Grendon Road	Left in / right in and left out
CR16	A45, Station Road	Right in / left out
CR17		Left in / right out
CR18		Right in / left out
CR19	A45, Grendon Road, Station Road, CR18 and along the haul route for the Cable Route Corridor.	Crossing over Yardley Road only
CR20		
CR21	A509, Access F-1, through Green Hill F, across Easton Way at Crossing F-1 to exit at CR21, to Yardley Road	Left out / right in
CR22	CR21, Yardley Road (Easton Maudit) to CR22	Right in / left out
CR23	A509, London Road (Bozeat), Easton Lane (Bozeat)	Right in / left out
CR24	A509	All movements

5 Construction Vehicle Traffic – Mitigation Measures

5.1 Introduction

5.1.1 The following measures will be implemented during the construction phase to mitigate impacts owing to HGV construction traffic. The management of AILs is considered in Section 7.

5.1.2 The following measures are proposed:

- Access Design;
- Road Condition Surveys;
- HGV Route Signage;
- Management of Deliveries;
- Wheel Washing;
- Traffic Management Measures;
- Management of Public Rights of Way;
- Noise Reduction and Air Quality;
- Site Security;
- Community Engagement;
- Procedure in the event of an incident on an HGV route; and
- Monitoring and Compliance.

5.2 Access Design

5.2.1 Existing accesses to Sites are proposed to be used where practicable. Where existing accesses are utilised, these will be widened and formalised where required. The majority of the Site Accesses will be retained for the operational phase as shown in **Table 4.1**. The Cable Route Corridor accesses will only be utilised during the construction phase. Any access that is temporarily created for the construction period only will be restored to its original condition post-construction unless agreed otherwise with the relevant highway authority.

[5.2.2 The layout of the Scheme incorporates the existing vehicular access between the mineral extraction allocation identified in the NM&WLP Policy 4 Site M2: Strixton - Bozeat and the A509. This access will be maintained for the life of the Scheme.](#)

~~5.2.2~~[5.2.3](#) Prior to commencement of construction, the design of each access will need to go through detailed design, including Road Safety Audits, and be technically approved by the relevant highway authority.

~~5.2.3~~[5.2.4](#) The use of temporary traffic management to construct, and where required, manage construction accesses will be considered on a site-by-site basis and agreed with the relevant highway authorities. Visibility splays will be maintained throughout the construction period.

5.3 Road Condition Survey

- 5.3.1 Road Condition Surveys will be carried out on minor roads proposed for construction access prior to commencement of construction. The extent of the surveys will be agreed with the local highway authorities in advance.
- 5.3.2 Once construction is complete, a further Road Condition Survey will be undertaken in order to identify any additional defects that can reasonably be attributable to construction activities associated with the Scheme. Any identified highways defects directly attributable to construction activities associated with the Scheme will be agreed with the local highway authorities and corrected to the satisfaction of the local highway authorities (or individual owner if a private road).

5.4 HGV Route Signage

- 5.4.1 Temporary road signage will be installed along the HGV routes to inform all road users of the construction works and to direct HGVs to and from the various construction accesses.
- 5.4.2 Signage will comply with Chapter 8 of the Traffic Signs Manual. The following will be considered when locating signage:
- The position of the sign in relation to the highway to ensure visibility splays are maintained;
 - Possible distraction to drivers; and
 - The proximity to junctions and roundabouts.
- 5.4.3 Details of the form and proposed locations of any signs to be placed on a public highway under the relevant Articles of the DCO Revision A [EX1EX6/GH3.1_AE] will be submitted to the highway authority for approval in advance of being placed.
- 5.4.4 All signage on the designated HGV routes will be regularly inspected, to ensure they are kept in a well-maintained condition and located in safe and appropriate locations.

5.5 Management of Deliveries

- 5.5.1 HGVs during the construction phase will avoid arriving at the accesses during the morning and evening network peak hours (i.e. 08:00-09:00 and 17:00-18:00). Where possible, deliveries will be arranged to occur after 09:30 and before 16:30.
- 5.5.2 In order to minimise instances of HGVs passing each other in opposite directions on narrow/inappropriate roads, all deliveries will be required to use an electronic delivery booking system. Drivers must not leave their depot until their allocated delivery slot is confirmed. If a delay occurs, drivers should stop in a safe layby or other suitable location and report their status.

Procedure for Arrival to Site

- Drivers will be allocated a slot for arrival and instructed which HGV route and access to use;
- All construction vehicles will access the Site in a forward gear;
- Where required, temporary traffic management / banksmen will be used to assist vehicles entering the access off the public highway;
- Parking and unloading of HGVs will not be permitted on the public highway.

Procedure for Leaving the Site

- All construction vehicles will egress the Site in a forward gear;
- When HGVs are ready to depart, if required, banksmen will guide the vehicles safely on to the public highway or other traffic management will be utilised to provide safe access onto the highway.

5.6 Wheel Washing

- 5.6.1 Wheel washing facilities will be provided at each access. This will be located at the egress of each Site and Cable Route Corridor access. A visual inspection of vehicles will be undertaken before they depart the Site, to ensure that they are not carrying debris onto the highway.
- 5.6.2 Notwithstanding wheel washing measures, visual inspections of the public highway in the vicinity of the site accesses will be undertaken on a daily basis. Where inspections identify visible deposits of mud, dust, or debris on the public highway, or where concerns are raised by the local highway authority, a road sweeper will be deployed promptly to remove such material.
- 5.6.3 Records of inspections and any road sweeping undertaken will be maintained within the site's environmental log and made available to the local highway authority upon request. The frequency and effectiveness of the measures will be reviewed throughout the construction phase to ensure that appropriate and proportionate mitigation remains in place to maintain highway safety and cleanliness.

5.7 Traffic Management Measures

- 5.7.1 Temporary traffic management in accordance with Chapter 8 Traffic Signs Manual – Traffic Safety Measures and Signs for Road Works and Temporary Situations (2009) will be utilised during the construction of the accesses.
- 5.7.2 If required during the construction phase of the Scheme, temporary traffic management will also be installed at site accesses to manage construction traffic accessing / egressing the site access.
- 5.7.3 Temporary traffic management would be agreed with the relevant highway authority and could include, but is not limited to:
- Warning signs on the approaches to accesses warning drivers of construction access ahead;

- Temporary reduction of speed limit in the vicinity of an access where visibility is not achievable within the design standards for the observed 85th percentile speeds;
- Temporary traffic signals and lane closures;
- Manually controlled temporary traffic signals at a site access which would be on green on the public highway at all times and only manually put on a red signal to enable construction traffic to safely egress from the site access;
- A 'Temporary Obstruction 15 (TO15)', which would enable traffic to be stopped on the public highway for up to 15 minutes to allow construction traffic to safely access / egress an access.

5.8 Management of Public Rights of Way

5.8.1 A Public Rights of Way and Permissive Paths Management Plan will be implemented during the construction phase of the Scheme. An Outline Public Rights of Way and Permissive Paths Management Plan Revision A [~~EX1~~EX6/GH7.10_BC] is included as part of the application. As part of this plan, the following measures will be implemented:

- Appropriate signage will be installed along the PRow to make PRow users aware of the construction activity. This will include information on construction times and contact details for a public liaison officer;
- Drivers will stop and give-way to any PRow user (in particular for equestrians);
- Where relevant, widened access tracks to ensure vehicles can pass PRow users safely;
- Banksmen to be positioned where relevant along a PRow impacted by construction traffic, to hold vehicles if a PRow user is present and advise PRow users of the potential for construction vehicles;
- Speeds to be limited to 10mph near PRowS;
- The PRow will be kept clear of construction vehicles and apparatus outside of permitted construction hours so far as is practicable to do so; and
- Any damage to the surface of the footpath/bridleway directly attributable to the Scheme will be repaired as soon as practicable.

5.9 Noise Reduction and Air Quality

5.9.1 When on Site and when not in use, engines will be required to be switched off. Vehicles carrying material off-Site will be sheeted / covered to prevent the spread of dust and debris. In dry conditions, areas near to the Site access will be sprayed with water to prevent the spread of dust and debris.

5.10 Site Security

5.10.1 All construction compounds will be secured via fencing. CCTV will be installed within construction compounds. All access tracks will be secured by gates, which will be set back from the public highway. Where existing access tracks are used that also provide access to residential properties, appropriate security measures will be put in place in consultation with the relevant property owner.

5.11 Community Engagement

- 5.11.1 The details of the Community Engagement Officer will be provided to the local highway authorities in advance of any work being carried out and will also be advertised on a Site information board.
- 5.11.2 Residents and businesses in the vicinity of the Sites will be provided with contact details of the Community Engagement Officer to report any identified issues.

5.12 Procedure in the event of incident on an HGV route

Flooding on HGV Route

- 5.12.1 In the event of flooding on a proposed HGV route the following procedure will apply:
- The contractor(s) will monitor local flood alerts (e.g. Environment Agency warnings, local authority updates);
 - If there is advance warning of a significant flood event that is likely to impact an HGV route, HGV bookings will be rescheduled;
 - In the event that a flood event temporarily closes an HGV route without advanced warning, the HGVs will be required to follow the diversion route provided by the emergency services/ local highway authority.

Other Incident on HGV Route

- 5.12.2 In the event of an incident on a proposed HGV route which temporarily closes the road, HGVs will be required to following the approved diversion route set by the highway authority. Diversion routes are required to be on the same class of road as the closed highway to ensure that the route is suitable for the traffic volume and composition.

5.13 Monitoring and Compliance

- 5.13.1 Any unforeseen issues that arise in relation to construction vehicle movement will be logged by the Site Manager. If necessary, the issues will be discussed with the local highway authority so that they can be resolved as appropriate.
- 5.13.2 The monitoring of HGV movements to ensure their compliance to the oCTMP will include:
- Banksman / CCTV will record the direction HGVs arrive from. Any that do not arrive from the direction adhering to the HGV routes will be recorded and any instances on non-compliance will be raised with the relevant contractor.
 - The electronic delivery management system will be used to monitor compliance with the delivery times.
 - A telephone line will be set up for members of the public to report suspected breaches of the HGV routes which will be investigated and addressed with the relevant contractor.

5.13.3 Potential corrective actions include, but are not limited to:

- Improvements to the communication strategy;
- Replace HGV drivers if there are repeat instances of individual HGV drivers diverging from the HGV routes / delivery times;
- Suspend booking delivery slots to contractors that repeatedly breach the HGV routes / delivery times until corrective action is demonstrated; and
- Provision of additional signage on the HGV routes.

6 Construction Worker Traffic – Mitigation Measures

6.1 Introduction

6.1.1 The following measures will be implemented during the construction phase to manage construction worker traffic.

6.1.2 The following measures are proposed:

- Working hours;
- Shuttle buses;
- Car sharing;
- Worker parking; and
- Construction Worker Travel Plan.

6.2 Working Hours

6.2.1 Construction activities will be carried out Monday to Friday 07:00-18:00 and between 08:00 and 13:30 on Saturdays, which constitute the core working hours (excluding any start-up and shut down works). No construction activities will take place on Public Holidays. However, some activities may be required outside of these times (such as the arrival and departures of workers, the delivery of abnormal loads, night-time working for cable construction works in public highways or HDD activities). [These activities would be limited and undertaken only where necessary or where nighttime working is to be preferred \(e.g. to reduce impacts to road users\).](#)

6.2.2 Construction worker shift patterns will be coordinated to avoid travel during the network peak hours of 08:00-09:00 and 17:00-18:00 and workers will be advised of local schools in the vicinity of access points (e.g. Grendon Primary School) and advised not to travel past these during the school drop off and pick up times (typically 08:00-09:00 and 15:00-16:00).

[6.2.3 Other specific uses such as sports facilities \(e.g. Grendon Football Club\) will be identified and appropriate measures put in place to avoid periods where such uses might be more intensively used.](#)

6.3 Shuttle buses

6.3.1 Measures are proposed to minimise the number of construction workers travelling by car or van, including the provision of shuttle buses to transport construction workers to and from each Site and nearby conurbations. This is standard practice for solar farm schemes. The shuttle bus services are required due to:

- Not all construction workers having access to a vehicle. Some workers may not own a vehicle or hold a licence to drive and therefore require an alternative means to access the workplace.
- The rural location of the Sites that comprise the Scheme is such that direct access by public transport is limited. A shuttle bus service will help address this.

- The need to minimise the effect of the development on the highway network. Each shuttle bus will transport multiple workers and therefore reduce the number of car/van trips made by workers for their journey to/from work.
- It would not be appropriate to construct vehicle parking areas within each site at a scale which would allow for all workers to travel to the Sites by private vehicles such as cars or vans.

6.4 Car sharing

6.4.1 Construction workers who drive to a Site will be encouraged to car share where possible and this tends to occur on major construction projects without intervention. An assumption of 1.5 construction workers per car / van has been made based on the national car / van occupancy average.

6.5 Worker Parking

6.5.1 Contractors and visitors will be advised that parking facilities will be provided onsite in advance of visiting and that no parking will be permitted on the public highway.

6.5.2 Inspections of the roads in the vicinity of the site accesses will be undertaken on a daily basis to ensure that workers are not parking on the public highway. Where a worker's vehicle is proven to be parking on the public highway, a "just and fair" culture in managing disciplinary proceedings will be adopted. The approach will prioritise corrective action and education before punitive measures.

6.6 Construction Worker Travel Plan

6.6.1 A Construction Worker Travel Plan (CWTP) will be drafted and implemented, to encourage construction workers to travel to the Site via sustainable travel, where possible. The CWTP will form part of the detailed CTMP, which will be submitted prior to the commencement of the construction phase. to the relevant local planning authorities for approval, in consultation with the relevant highway authorities.

6.6.2 The following key aims and objectives are identified at this stage:

- To reduce single occupancy car travel by construction workers;
- To increase car sharing and shuttle bus use; and
- To increase knowledge of the public transport and/or Active Travel opportunities available to construction workers (where applicable/viable).

6.6.3 A Travel Plan Coordinator (TPC) will be appointed to oversee the implementation of the CWTP whose responsibilities will comprise, but not necessarily be limited to, the following:

- Implement measures set out in the Travel Plan;
- Raise awareness and promote the Travel Plan; and
- Provide advice to construction workers regarding sustainable travel options.

6.6.4 Suggested measures could include:

- Establish a car share scheme for construction workers;
- Arrange on-site facilities for workers, such as storage lockers for equipment;
- Provide a map with identified cycling/walking/bus routes to a Site; and
- Provide emergency cycle repair kit at the compounds.

6.6.5 Consideration will also be given to the potential for construction workers to access CC4 using access CR19, designated as a crossing point for HGVs. The CWTP will set out any additional measures that will be implemented to ensure safe access and egress for construction workers using this access. These measures may include:

- Temporary reduction of speed limits during the construction phase;
- Manually controlled temporary traffic signals;
- A Temporary Obstruction 15 (TO15) to temporarily stop traffic to allow workers to safely depart the site.

6.6.6 Uptake of Travel Plan measures will be monitored by the TPC. Additional measures will be provided if necessary/as appropriate.

7 Abnormal Indivisible Loads (AILs)

7.1 Introduction

7.1.1 There will be a number of abnormal load movements associated with the construction of the Scheme. This section summarises the proposed management of AIL deliveries.

7.2 AIL Definition and Classification

7.2.1 An AIL is defined as having one or more of the following characteristics on any part of the vehicle combination:

- a gross vehicle weight of more than 44,000kg;
- an axle load of more than 10,000kg for a single non-driving axle and 11,500kg for a single driving axle;
- a width of more than 2.9 metres;
- a rigid length of more than 18.65 metres;
- the vehicle load projects over the front or rear of the vehicle by more than 3.05m or more than 305mm over the side of the vehicle; or
- is a Part 2 vehicle combination (N3 vehicle and trailer) of greater than 25.9m total length.

7.2.2 Road based AILs fall into three principal classifications:

- Special order for the heaviest, widest or longest loads. Any AIL greater than 150 tonnes gross vehicle weight or over 6.1m wide or over 30m long is classified as a Special Order load;
- Special type General Order (STGO) for loads not in the Special Order category, but which are over the weight limit for the number of axles, wider than 4.3m or longer than 27.5 m. STGO are sub-divided into three categories (Cat 1, 2 or 3) depending on the gross weight and axle weight. A further STGO category is used for loads over 5m wide, which are referred to as VR1 loads; and
- Construction and Use (C&U) for loads that are not in the STGO category but do not qualify as an HGV movement due to their size (width, length or overhang).

7.2.3 A report has been prepared to consider the routes that AILs will take and is appended to the **Transport Assessment Parts 2 and 3 (Revision A) [GH6.3.13.2-AREP3-066]**.

7.3 Forecast AIL Movements

Green Hill Sites

7.3.1 Substations will be required within Sites across the Scheme. The substations will consist of electrical infrastructure such as the transformers, switchgear and metering equipment required to facilitate the export of electricity from each respective area.

7.3.2 The AIL deliveries associated with the substations and the Sites they relate to are summarised in **Table 7.1**.

Table 7.1 - Summary of AIL deliveries for Green Hill Sites

Green Hill Site	Substation voltage	Transformer sizes	Number	Access
Green Hill A	132kV	120/140MVA 132/33 kV – L: 7.6m, W: 2.7m, H: 4.5m – Weight: 95 tonnes	2	Broughton Road
Green Hill B	132kV	60/90MVA 132/33kV L:7m, W:2.6m, H:4m – Weight: 65 tonnes	1	Sywell Road
Green Hill C	400kV	150MVA 400/33 kV – L: 8m, W: 4m, H: 4.9m – Weight: 155 tonnes	4	Sywell Road
		240MVA 400/132kV – L: 10m, W: 3.8m, H: 4.7m – Weight: 183 tonnes	1	
Green Hill E	132kV	120/140MVA 132/33 kV – L: 7.6m, W: 2.7m, H: 4.5m – Weight: 95 tonnes	2	Highfield Road
Green Hill F	132kV	120/140MVA 132/33 kV – L: 7.6m, W: 2.7m, H: 4.5m – Weight: 95 tonnes	2	Easton Lane
Green Hill G	132kV	120/140MVA 132/33 kV – L: 7.6m, W: 2.7m, H: 4.5m – Weight: 95 tonnes	2	A428
Green Hill BESS	400kV	4 x 150MVA 400/33 kV – L: 8m, W: 4m, H: 4.9m – Weight: 155 tonnes	4	Station Road
		1 x 240MVA 400/33kV - L: 10m, W: 3.8m, H:4.7m Weight: 183 tonnes	1	

7.3.3 The information presented in **Table 7.1** suggests that across the nine Green Hill Sites and at varying times across the two-year construction programme, a total of 19 AIL deliveries will be necessary.

Cable Route Corridor

7.3.4 30 tonne cable drums will be required to deliver the connection between the Sites to Grendon National Grid Substation. The drums will be delivered on a Cable Reel Trailer and this vehicle, together with its material is classified as an abnormal load. The vehicle is smaller than those required to deliver the transformers at around 26m in length. The forecast peak cable drum deliveries on a single day will total 12 deliveries (24 two-way cable drum movements) spread across the Cable Route Corridor.

7.3.5 The Cable Reel Trailer and vehicle will enter the corridor or compound. Once fully off the public highway, the cable drum can be unloaded and towed along the haulage road to the appropriate location for installation.

7.4 AIL Management

- 7.4.1 Application for notification of AIL deliveries must be made by transport (haulage) operators, preferably through the Electronic Service Delivery for Abnormal Loads (ESDAL2) system. If the ESDAL2 system is not used, the application for each AIL movement must be submitted in adequate time to allow consultation, planning and further notification.
- 7.4.2 The ESDAL system will notify the police, highway authorities and bridge authorities of the proposed AIL movement. Authorities will respond with objections, conditions, or consent through the portal.
- 7.4.3 A police escort is normally only required where road safety, traffic management or public safety cannot be maintained without a police escort. The police will be notified through the ESDAL notification system and will review the route and assess risk. They will confirm in their response whether a police escort is required or not.
- 7.4.4 Where an AIL cannot pass safely along a route due to street furniture, the haulier must plan for the temporary removal of the affected street furniture in co-ordination with the relevant highway authority. The process undertaken for this is typically as follows:
- During a detailed route survey, street furniture requiring temporary removal is identified (e.g. signs, bollards, lighting columns, guardrails etc);
 - The highway authority is notified well in advance of the AIL movement, providing details of the location and type of street furniture to be removed, estimated duration of removal, and the traffic management required during the temporary removal and reinstatement of the street furniture;
 - The highway authority will review the safety implications and, if acceptable, approve the proposed temporary street furniture removal;
 - All street furniture is required to be reinstated after the AIL movement and all costs of the AIL movement and associated works are borne by the undertaker.