



BSR Energy

Preston Farm Solar Park, Basingstoke

Highway Statement

663107

MAY 2021

RSK



RSK GENERAL NOTES

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Client: BSR Energy

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Date:	<u>19.05.2021</u>	Date:	<u>24.05.2021</u>

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1 INTRODUCTION

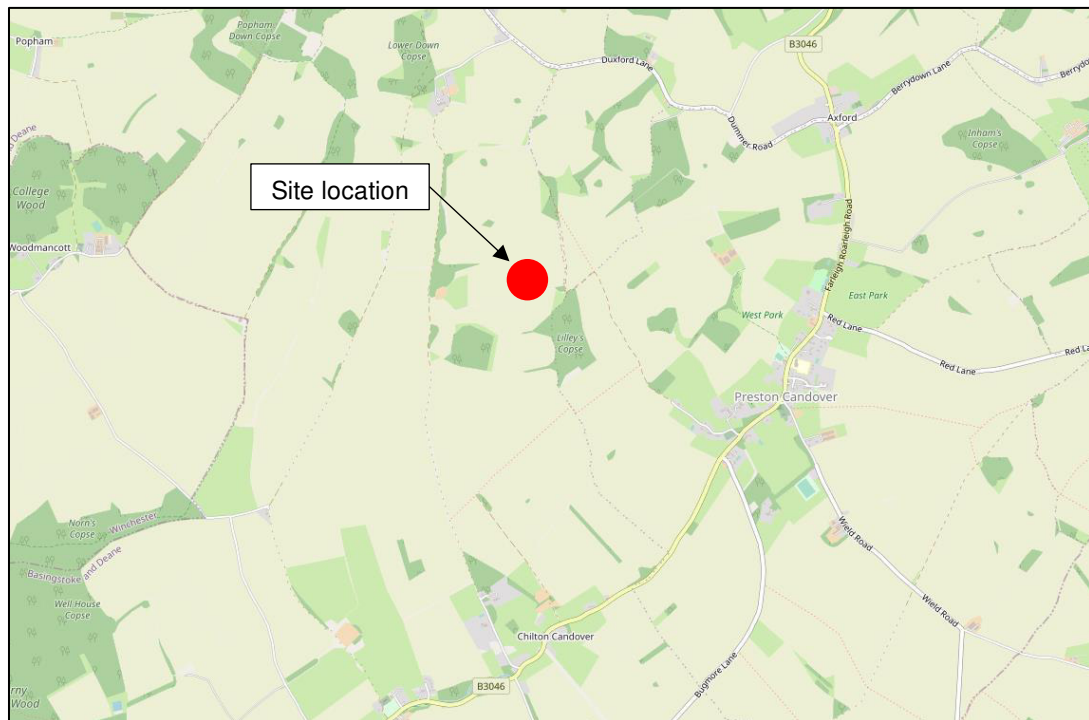
RSK has been instructed by BSR Energy to produce a Highway Statement (HS) for the proposed erection of a 28 MW Solar PV Array, located to the north of B3046, on land between the M3 and Preston Candover, Basingstoke.

1.1 Site location

The application site is agricultural land, located approximately 1.12 km northwest of the village of Preston Candover and 10 km to the southwest of the town of Basingstoke, as illustrated in Figure 1.1. A more detailed site location plan is also included in Appendix 1.

The site comprises a plot of 120 acres of arable land and is surrounded by further agricultural fields. The proposed development will be served from the access to Preston Farm, off the B3046, which serves the existing farm and extends through agricultural land.

Figure 1.1 Site location



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1.2 Purpose and structure of report

This report describes the effects that the construction phase of the solar farm is likely to have on traffic flows within the local area. The measures outlined in this HS will also be supported by a Construction Traffic Management Plan (CTMP), which is included at Appendix 3.

Once operational, the site will encounter low levels of traffic with one or two visits a week for regular maintenance and inspection purposes only. Therefore, there will be no long-term operational changes occurring as a result of the development.

The following chapters describe the work that has been undertaken as part of this study. The report is structured as follows:

- Chapter 2 describes the existing highway network and baseline traffic conditions;
- Chapter 3 details the development proposals, including the site access arrangements and the primary route for construction traffic;
- Chapter 4 discusses the possible environmental impacts of the development; and
- Chapter 5 provides our summary and conclusions.

2 BASELINE CONTEXT

2.1 Surrounding highway network

2.1.1 B3046

The B3046 is a single carriageway road running in north-south direction connecting Basingstoke to New Chariton. The road is named Farleigh Road and changes to Alresford Road as it passes the village of Preston Candover to the south.

The nature of the B3046 is mixed, with some rural sections passing through agricultural fields and also serving established settlements, including Cliddesden, Preston Candover, Brown Candover, Totford, Northington, Old Alresford, New Alresford and Cheriton.

Within the vicinity of the site, the road is predominately rural and subject to the national speed limit, which decreases to 30 mph as it approaches the village of Preston Candover. Commensurate with a rural road, there is no streetlight nor provision of footways.

2.1.2 Access to Preston Farm

Access to the site will be taken via the existing access to Preston Farm, off the B3046 Farleigh Road, located to the east of the site. The access is a private single carriageway rural road, approximately 3m wide, serving a few cottages to the south and agricultural fields to the north. Past the northmost cottage, the road splits continuing ahead, passing through agricultural land, and to the left, providing access to the site.

It is likely that traffic flows, as well as pedestrian and cycle usage will be very low due to the remote nature of the road. The road only serves a few cottages, offering limited potential for traffic flows.

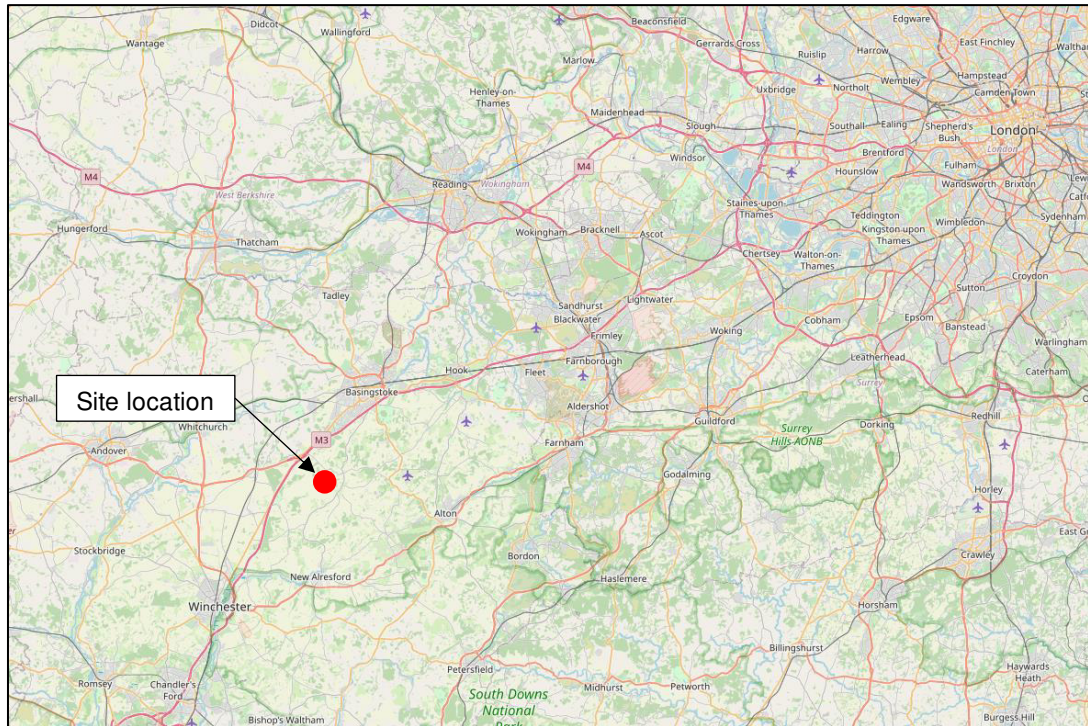
2.1.3 Regional and strategic road network

The B3046 benefits from being ideally located near the strategic road network. The B3046 links to the A339 to the north which will then connect to the main strategic road network via the M3.

The M3 offers key connections to London, Basingstoke, Winchester and Southampton.

The figure below illustrates how the surrounding highway network relates to the site.

Figure 2.1 Highway network



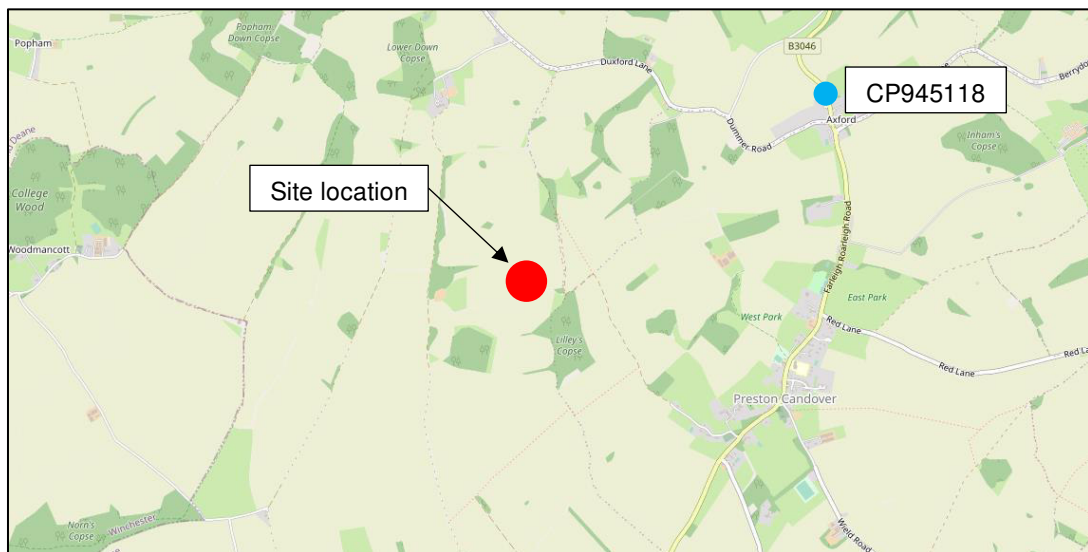
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2.2 Existing traffic

In order to establish a baseline to consider the possible effects of construction traffic on local traffic, DfT traffic data (2019) has been examined. There is a count point (CP 945118) located on the B3046 in Axford, to the east of the site.

Figure 2.2 below highlights where the count point is located.

Figure 2.2 DfT traffic count point



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It is unlikely that the traffic flows have significantly changed since 2019 as no major developments have been built in the surrounding area that could have had an impact on the volumes of traffic flows. Notwithstanding this, in order to provide a robust baseline year for this assessment, the data has been forecasted to 2021, using appropriate growth factors for the area.

Table 2.1 summarises the baseline traffic flow results.

Table 2.1 Baseline traffic flows

Location	Average Annual Daily Flows (2019)			Forecast 2021		
	HGVs	All Veh	HGV (%)	HGVs	All Veh	HGV (%)
B3046 east of the site (CP 945118)	34	1705	2.0%	35	1737	2.0%

2.2.1 Accident data

A review of accident data covering the most recent five-year period of DfT collision data has been undertaken. This covers the years 2016-2020 (available data up to June 2020) and provides the user with map-based data, including the date of the accident, the number of vehicles involved, the number of casualties and the severity of any injuries resulting from the accident.

The area reviewed encompasses a 1km radius of the priority junction where the access to Preston Farm meets the B3046. Within the area reviewed, there were only two slight accidents over the five-year period. Both accidents took place at the B3046 in daylight and with dry conditions.

The most recent accident occurred in July 2017, approximately 300m south west from the junction between the access to Preston Farm and the B3046, and involved two vehicles resulting in one casualty. The other accident was recorded in March 2017 at the junction between the B3046 and the access road to Old Church of Saint Mary the Virgin, approximately 900m south west from the site access, involving two vehicles and resulting in one casualty.

Overall, the existing accident record does not demonstrate any discernible pattern of incidents that could be affected by the development proposals.

3 PROPOSED DEVELOPMENT

The proposals comprise the construction of a solar farm with a power capacity of 28 MW on greenfield land to the north of the B3046. The scheme comprises ground mounted solar PV panels and associated infrastructure including a temporary construction compound, security fencing, and grid connection infrastructure. A substation area will be built to the south east of the site and will include a DNO switchgear, private switchgear, a welfare unit and a spares container.

Off-site cabling works are proposed which will run in a south east direction connecting the site to a 'Point of Connection' (POC) located at Wield Road, approximately 1.2km south east from the site. The cabling route will cross the B3046 and Bugmore Lane before running parallel to the north with Wield Road, until reaching the POC.

The construction process is relatively simple and repetitive with off-site pre-fabrication and assembly, allowing large volumes of modules to be installed on a daily basis. This minimises the number of deliveries to the site and maximises control over vehicles travelling to and from the site.

The proposed site plan is included in Appendix 2.

3.1 Site access

The site will be accessed from the existing access to Preston Farm, off the B3046, located to the east of the site. The access in form of surfaced track and provide adequate width suitable for HGVs associated with the proposals. The access road has already accommodated agricultural vehicles and the route has therefore been long established and does not require any further improvements to accommodate typical construction vehicles.

The access will be used to serve the construction compound, where adequate space will be available for car parking, storage of materials, welfare/offices and unloading. This will be constructed as a hardstanding area, immediately west of the solar farm site with access into the solar farm to facilitate construction.

During construction, the access will be managed to ensure that no conflicts occur between incoming and outgoing vehicles. The dominant type of material arriving at the site will be the solar panel modules, which will arrive via a single transport provider and at a rate that matches the rate of installation to avoid stockpiling on site. This will result in a 'drip feed' of HGV's to and from the site, evenly spaced and with adequate time between deliveries to avoid two-way construction traffic along the approach roads.

The operational stage of the project will only require occasional maintenance and monitoring visits, which will also be accommodated from the existing access.

3.2 Construction traffic

It is envisaged that the solar farm would be constructed at such a rate that would require roughly 14 HGV's a day at peak, with up to 60 workers on site, from site set up to construction (total of 6 months). It is anticipated that the main construction activities of installing the solar panel modules will stretch across a 16-week programme.

3.3 Operational traffic

Once operational, the site will encounter low levels of traffic for regular maintenance purposes only. Therefore, there will be no long-term operational changes occurring as a result of the development.

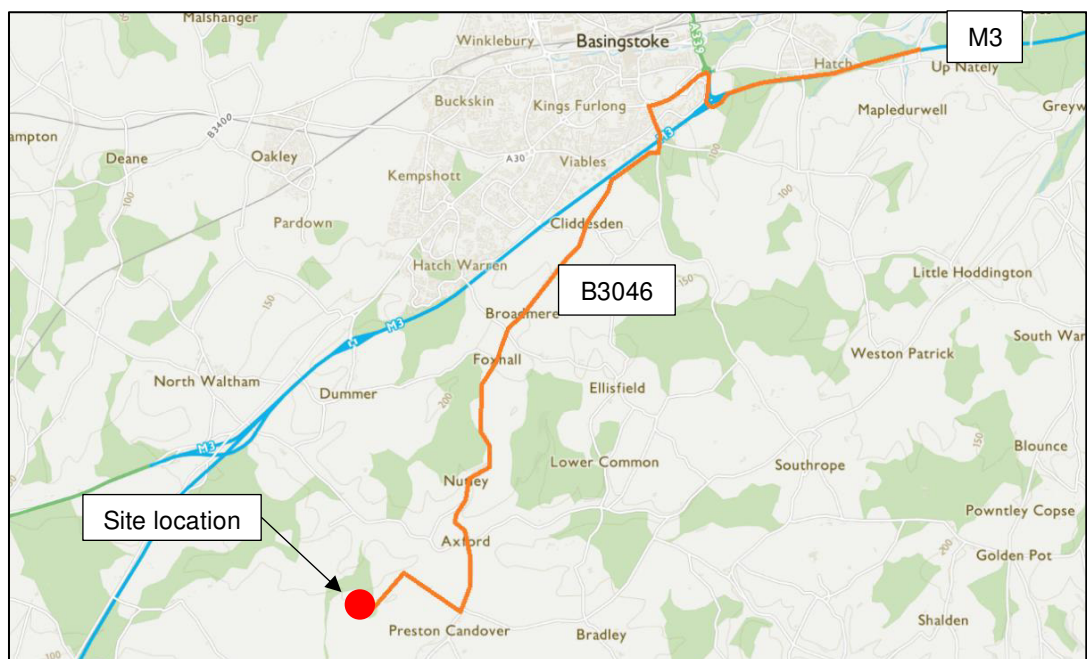
3.4 Construction traffic route

Route options have been appraised to establish the preferred route to the site for HGV construction traffic. Traffic will use the strategic and local road network, namely the M3, A30, A339 and B3046, to access the development as follows:

- Construction traffic will come from the north via the M3 and will leave the motorway to join the A339 to the north;
- Traffic will continue north along the A339 and take the first exit at the Black Dam Roundabout to join the A30 Ringway S;
- Traffic will then continue west along the A30 for approximately 1.2 km before taking the first exit at the Hackwood Rd Roundabout to join the A339 Hackwood Rd;
- Traffic will continue south along Hackwood Rd and pass under the bridge with the M3 before turning right onto the B3046 Farleigh Rd;
- Traffic will then continue south along the B3046 before turning right at the site access.

The route of construction traffic travelling to the site is shown below in Figure 3-1. The same route would apply for vehicles egressing the site and travelling in the opposite direction back to the B3046, A339, A30 and M3.

Figure 3.1 Construction traffic route



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4 ENVIRONMENTAL ASSESSMENT

4.1 Methodology

To assess the likely effect of construction traffic on the local area, the *Guidelines for the Environmental Assessment of Roads Traffic (GEART, 1993)* is considered. As described in Chapter 2, traffic count data from the DfT has been utilised as baseline data.

Information provided by the applicant indicates the predicted traffic generated for the construction phase based on workers and HGV movements. This data has been compared to the DfT data to calculate a percentage change in traffic during the anticipated 16 week construction phase where workers and HGV movements are predicted to peak.

4.2 Construction Impacts

The rural nature of the road network surrounding the site is factored into the construction traffic impacts; as such a specific HGV route has been developed. It is possible to assess the likely impact of construction traffic along this route by comparing the baseline traffic data with the construction traffic data.

These figures have been calculated to give a daily flow. The results of these calculations are as follows:

- Average number of worker movements over 6 months = 120 p/d two-way
- Average number of HGV movements for 16 weeks = 28 p/d two-way

The projected increase in traffic flow along the proposed traffic routes from the site is summarised in Table 4.1.

Table 4.1 Percentage increase in traffic flow

Location	Total HGV's	Total Vehicles	HGV Change	All Vehicles Change
B3046 east of the site (CP 945118)	35 (+28)	1737 (+148)	+80.0%	+8.5%

GEART recognises that day to day variation of traffic on a road is frequently plus or minus 10 percent. It should therefore be assumed that a projected change in traffic of less than 10 percent creates no detrimental environmental impact. A 30 percent change in traffic flow (or HGV flow) represents a reasonable threshold for assessing traffic flow impacts on road links.

As the highest increase in traffic is 80.0%, this exceeds the 30% threshold, meaning further assessment is required, as outlined below in section 4.3.

Although there is no discernible impact on the local or strategic network traffic flow as a result of the construction stage, a CTMP will be developed to ensure that HGV's only use appropriate routes to access the site. This will cover aspects such as management of movements at the junction between the access to Preston Farm and the B3046.

4.3 Potential environmental effects

The IEA guidelines examine the potential environmental effects of road traffic on the following:

- Severance;
- Driver stress and delay;
- Pedestrian delay and amenity;
- Fear and intimidation; and
- Road safety

However, only 'pedestrian amenity' and 'fear and intimidation' are considered to be affected by the HGV component. The magnitude of effect for each of these potential impacts is outlined in the tables below.

Table 4.2: Magnitude of impact - Pedestrian amenity

Magnitude	Description
Major	Change in total traffic or HGV flows over 200%
Moderate	Change in total traffic or HGV flows of 100-200%
Minor	Change in total traffic or HGV flows of 50-100%
Negligible	Change in total traffic or HGV less than 50%

Table 4.3: Magnitude of impact - Fear and intimidation

Magnitude	Description
Major	AAWT hourly flow (all vehs) >1,800 or AAWT flow (HGVs) >3,000
Moderate	AAWT hourly flow (all vehs) 1,200 to 1,800 or AAWT flow (HGVs) 2,000 to 3,000
Minor	AAWT hourly flow (all vehs) 600 to 1,200 or AAWT flow (HGVs) 1,000 to 2,000
Negligible	AAWT hourly flow (all vehs) < 600 or AAWT flow (HGVs) < 1,000

Based on the values in Tables 4.2 and 4.3, the predicted impact on pedestrian amenity is classed as moderate to major, and fear and intimidation is classed as negligible.

However, based on the DfT data point, current HGV flows are very low, making the relative rise in HGV flows seem overly high. Furthermore, it is likely that there will be low pedestrian user numbers, making the environmental effect of construction traffic on existing highway users insignificant, especially coupled with the temporary nature of the construction flows.

5 SUMMARY AND CONCLUSIONS

RSK has been instructed by BSR Energy to produce a Transport Statement for the proposed construction of a 28 MW solar farm in Preston Farm, Basingstoke.

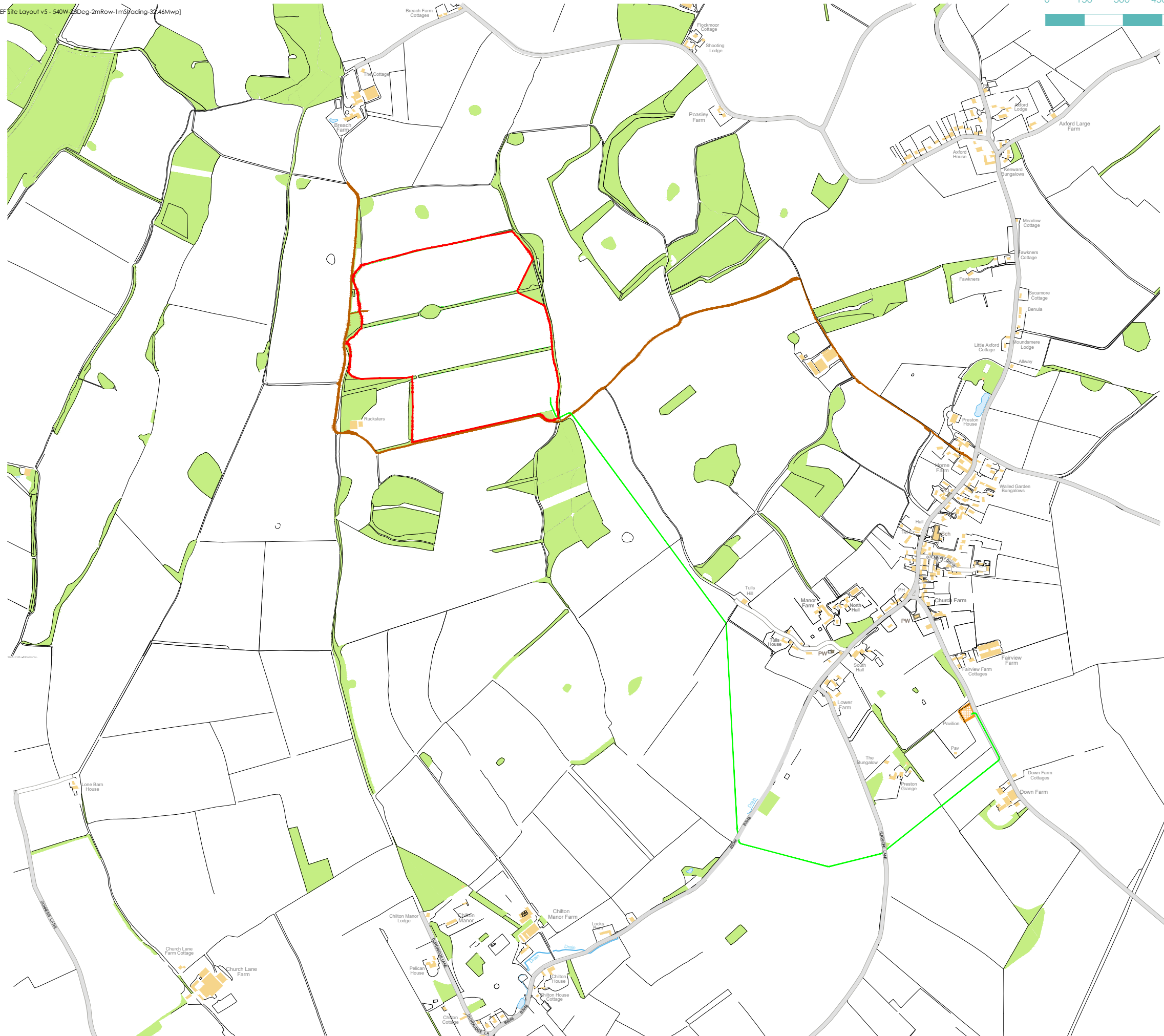
The assessment provides a summary of the likely increase in traffic flows during the construction and operational periods of the solar farm. Utilising existing traffic data and construction traffic data, it is considered this development will have this development will have a negligible effect on the local road network.

The existing strategic road network has sufficient capacity to overcome any concerns raised over temporary minimal increases in HGV and non-HGV construction traffic movements generated during the construction period. A CTMP will be produced to manage construction traffic, including hours of deliveries and routing.

On the above basis, the proposed development is acceptable from a transport perspective.



APPENDIX 1 SITE LOCATION PLAN



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- Key:**
- Site Boundary
 - Existing Access Track
 - Cable Route
 - POC

Rev:	Revision History:	Date:	By:
01	Initial Issue	22/04/21	JA

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 Somerset,BA4 5QE
 United Kingdom

Project:
Preston Solar Farm

Location:
Preston Farm
Preston Candover
Bassingstoke, Hampshire
RG25 2DS

Title:
Site Location Plan

Scale: 1:15000 @A3

Issue Notes:
Initial Issue



Drawn By: JA
Issue Date: 22/04/21

Checked By: MB
Checked Date: 22/04/21

Approved By: RM
Approved Date: 12/05/21

Drawing Number:
1662-0200-05

Drawing Status: Issued For Approval
Issue: 01



APPENDIX 2 PROPOSED SITE PLAN



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- Key:**
- Site Boundary
 - - - Fence
 - Solar Arrays
 - Construction Compound
 - Substation Area
 - Transformer Stations
 - String Inverters
 - Existing Access Track
 - Transformer Access Track
 - DNO Access Track
 - POC Cable Route
 - CCTV
 - Private Switch
 - DNO

Site Information:

Modules:	Longi 540W
System Size	32.46Mwp
Nos of Module	60,116
Orientation	2 in Portrait
Tilt Angle	23°
Transformer:	29

Rev:	Revision History:	Date:	By:
02	Layout revised for string inverter	14/05/21	JA

35 and 35a The Mallings E:info@brillshrenewables.com
 Lower Charlton Trading Estate, 1:01458 224900
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 United Kingdom

Project:
Preston Solar Farm

Location:
Preston Farm
Preston Candover
Bassinstoke, Hampshire
RG25 2DS

Title:
Solar Park Layout

Scale: 1:5000 @A3

Issue Notes:
Layout revised for string inverters



Drawn By:	Issue Date:
JA	23/04/21
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MB	23/04/21
Approved By:	Approved Date:
RM	17/05/21

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Drawing Status:
Issued For Approval

Issue:
02





APPENDIX 3 CONSTRUCTION TRAFFIC MANAGEMENT PLAN



BSR Energy

Preston Farm Solar Farm, Basingstoke

Construction Traffic Management Plan

663107

MAY 2021

RSK



RSK GENERAL NOTES

Project No.: 663107-CTMP (0.0)

Title: Preston Farm Solar Farm, Basingstoke, Construction Traffic Management Plan

Client: BSR Energy

Date: 19 May 2021

Office: Manchester

Status: Draft

Author	<u>M. Quental</u>	Reviewer	<u>I. Wickett</u>
Signature	<u></u>	Signature	<u></u>
Date:	<u>19.05.2021</u>	Date:	<u>24.05.2021</u>

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1 INTRODUCTION

RSK has been instructed by BSR Energy to prepare a Construction Traffic Management Plan (CTMP), to support the proposals for the construction of a 28 MW solar farm at land at Preston Farm, located north of the B3046, Basingstoke.

1.1 Purpose of the Construction Traffic Management Plan

The construction process of the solar farm will require the movement of large equipment and materials to the site as well as staff movements. This CTMP outlines the management of these movements and the interaction with the surrounding road network during the stages of the process.

1.2 Objectives

The main key objectives of this CTMP are to:

- Reduce traffic congestion, where possible by reducing the number of trips made during peak periods; and
- Enhance highway safety through imposed vehicle and road user safety.

These sub-objectives support the main objectives listed above:

- Establish responsibility for the management of construction vehicles and deliveries throughout the project duration;
- Always ensure safe vehicular and pedestrian access and egress;
- Prevent pedestrian and construction traffic interaction from development;
- Optimise the operation on site to avoid trips during the school drop-off and pick-up hours;
- Minimise the impact of construction traffic by identifying clear controls on routes for large goods vehicles, vehicle types, vehicle quantities and hours of site operations and delivery times;
- Identify any Traffic Management measures that will be necessary to accommodate construction traffic;
- Minimise the number of private car trips to and from the site, which are likely to be made by site workers by encouraging car sharing;
- Regularly monitor and review the CTMP as part of an established management process at each stage of the project; and
- Inform and update the supply chain and the local community to raise awareness and present the Principal Contractors' commitment to using safe and efficient construction vehicle practices.

1.3 Site context

The application site is located on agricultural land located approximately 1.12 km northwest of the village of Preston Candover and 10 km to the southwest of the town of Basingstoke.

The proposed development comprises the erection of a solar photovoltaic (PV) array with a total installed capacity of 28 MW. Access to the site is proposed from the existing access to Preston Farm, off the B3048.

It is anticipated that the main impacts will occur during the construction phase of the project as there will be negligible traffic during operation.

The location of the development can be seen in Figure 1.1 below and a more detailed site location plan is included at Appendix 1.

Figure 1.1 Development location



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1.4 Structure of the CTMP

The CTMP contains the following chapters:

- 1) Introduction
- 2) Context, considerations and challenges
- 3) Construction programme and methodology
- 4) Vehicle routing and access
- 5) Strategies to reduce impacts
- 6) Estimated vehicle movements
- 7) Implementing, monitoring and updating
- 8) Review

2 TRANSPORT CONDITIONS

2.1.1 Existing highway network

The existing access to Preston Farm is a private single carriageway rural road, off the B3046, that runs to the east of the site and is currently only used for access to a few cottages and agricultural fields. The road is approximately 3m and will be used for access to the development. The road includes passing bays that assist with two-way vehicle movements.

The B3046 is a two-way single carriageway road that runs around the south/southeast of the site. From the junction with the access to Preston Farm, the B3046 runs north heading to Basingstoke while to the south it then heads to New Chariton.

2.1.2 Walking

Commensurate with rural roads, the B3046 and the access to Preston Farm do not include footways and therefore there are limited opportunities for walking within the vicinity of the site.

2.2 Considerations and challenges

The notable areas that have been identified in the vicinity of the site include:

- Preston Candover Primary School, located on the B3046 approximately 1.5km southeast from the site. The Contractor's community liaison officer will communicate with the school to ensure there is effective collaboration throughout the construction period.
- The village of Cliddesden is also located 7.7km northeast of the site. It is anticipated that some disruption by construction activities will be inevitable, particularly due to the existing on-street parking along the village centre. However wherever appropriate, acceptable and practical, deliveries will be programmed to arrive outside of the morning and evening peak commuting periods.

Site audits have been undertaken of the proposed construction route and access to the site and the following issues and constraints on the highway network have been considered:

- Road classification: The routes to the site have been assessed on the principle that the construction vehicles use the strategic and major highway network for as long as possible before joining the smaller road network to access the site.
- Road layout: The routes to the site have been assessed on the principle that the construction vehicles avoid any particularly sensitive junctions in the local area and areas where road layout may be an issue.

2.2.1 Public Relations

A Community Liaison Officer will be appointed to mitigate and resolve any issues and difficulties in the local community.

A key aspect of the successful management of this project will be establishing and maintaining a good relationship with nearby settlements. This CTMP has prepared a strategy for preventing potential issues, however any difficulties encountered during construction will be reported/recorded in a full log and resolved using a 24 hour-manned telephone line. A newsletter and community gathering will deal with issues such as site boundaries and hoardings, construction vehicle congestion and general community disruption. There will be site noticeboard with contact details.

2.3 Health and Safety

The CTMP will provide for the management and control strategy of pedestrians and vehicular movements, both on and off site, to ensure the safety of all members of the general public and workforce at all times throughout the construction work period in accordance with all requisite Acts and Regulations. These include, but are not limited to:

- Health and Safety at Work Act 1974
- Management of Health and Safety at Work Regulations 1999
- Construction (Design and Management) Regulations 2015
- Supply of Machinery (Safety) Regulations 1992
- Provision and Use of Work Equipment Regulations 1998

3 CONSTRUCTION PROGRAMME AND METHODOLOGY

3.1 Construction programme

The programme of construction works for the development will be provided closer to the start of the construction works. The construction of the solar park will take approximately six months from site setup to the start of the commercial operation.

3.2 Construction stages and form of development

3.2.1 Site setup and demolition

There are no existing buildings requiring demolition on the proposed development site.

The compound area will be fully hoarded to enable clear segregation of all construction activities from members of the public. Hoardings will comprise 1.92 m galvanised steel wire fencing. Furthermore, there is enough space on site for a large construction vehicle to turn on site. Therefore, all vehicles can deliver and remove materials to and from the site in forward gear.

Health and safety signs and relevant construction information including the Principal Contractors information will be displayed on the hoardings at various points around the perimeter of the site.

The site compound, welfare facilities and site parking will be located wholly within the site and will not require use of the highway or other public areas to load or store materials.

3.3 Size of construction and delivery vehicles

In consideration of the type and volume of expected materials to be delivered, delivery vehicles will not be restricted, aside from the legal limits of size and weight. The vehicles to be used will include small and medium size vans, self-tipping, off-loading, HIAB and grab vehicles, articulated vehicles and concrete mixers.

3.4 Temporary measures on public highway

All trees, vegetation and 'sensitive' areas will be protected from damage by vehicles accessing the site by temporary measures to the satisfaction of the appropriate approving officer of Hampshire County Council.

3.5 Construction compound and parking

The temporary site compound will be constructed to provide site facilities for the workforce and allow construction materials to be stored safely and securely near the works.

The compound will be used for the whole duration of the construction period and will provide a base from which the construction activities will be managed. The site compound will include:

- Car parking for construction workers;
- Parking and unloading areas for HGVs;
- Waste storage facilities; and
- Welfare facilities.

Sufficient parking on-site will be provided by the Principal Contractor for associated personnel. Parking facilities will be restricted to the temporary compound. Parking on the B3046 road verges or on the access to Preston Farm will be strictly prohibited. The Principal Contractor will be required to monitor and take necessary action to prevent site vehicles parking outside of the agreed parking positions.

4 VEHICLE ROUTING AND SITE ACCESS

4.1 Existing highway network

Construction vehicle routing to the proposed development site will adhere to the hierarchical structure of the public highway and will travel between their point of origin to the site of the proposed development along the prescribed routes as far as possible.

4.2 Vehicle routing and access

4.2.1 Preferred routing

It is considered that the preferred vehicular access route for all materials and construction plant deliveries to the site will be via the strategic and local road network, namely the M3, A30, A339 and B3046, in order to minimise the impact on the local highway during the construction of the development. It is proposed that all construction vehicles take the following routes to and from the site as shown in Figure 4.1.

Construction vehicles approaching the site will take the following route:

- Construction traffic will come from the north via the M3 and will leave the motorway to join the A339 to the north;
- Traffic will continue north along the A339 and take the first exit at the Black Dam Roundabout to join the A30 Ringway S;
- Traffic will then continue west along the A30 for approximately 1.2 km before taking the first exit at the Hackwood Rd Roundabout to join the A339 Hackwood Rd;
- Traffic will continue south along Hackwood Rd and pass under the bridge with the M3 before turning right onto the B3046 Farleigh Rd;
- Traffic will then continue south along the B3046 before turning right at the site access.

The same route would apply for vehicles egressing the site and travelling in the opposite direction back to the B3046, A339, A30 and M3.

A plan of the construction traffic route can be seen in Figure 4.1 below.

Figure 4.1 Construction traffic route



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The preferred routing for construction vehicles to and from the site has been assessed and there is no significant narrowing of carriageway, height restrictions or weight restrictions in proximity to the site which would require further traffic management consideration.

4.3 Construction vehicles – restricted delivery times

Construction vehicles will only be permitted to enter the site at fixed times. All work and ancillary operations which are audible at the site boundary shall be carried out between the following hours set out below.

Additionally, there will be different delivery times during school term time and school holidays. This limitation will reduce the impact of the construction related activities of the development on road users travelling to and from the schools just to the south of the B3046 junction with the access to Preston Farm.

- 09:00 – 14:45 and 15:45-19:00 weekdays during term time;
- 08:00 – 13:00 Saturdays at any time; and
- 07:00 – 19:00 weekdays during school holidays.

There will be no construction vehicle access on Sundays, or on Bank Holidays.

4.4 HV cable routing

Works for the HV cable route will be located between the solar farm and the Preston Candover's Grid Substation located approximately 2 km southeast of the development at Wield Road. A trench will be dug crossing the B3046 and Bugmore Lane, to the south of the site, and then along the Wield Road in a north-south direction.

During the off-site cabling works, appropriate signage will be in place warning traffic for lane closures, speed reduction and temporary construction works. Traffic Marshals may be present to minimise the risk of conflict between opposing vehicle movements.

4.5 Site access

The junction between the B3046 and the access to Preston Farm with the B3046 is an established access which has been already been accommodating agricultural vehicles without incidents. The route has therefore been long established and does not require any further improvements to accommodate typical construction vehicles.

The access to Preston Farm benefits from a number of passing bays and good forward visibility along its length which comfortably accommodate the current vehicle movements along the road. The construction traffic will only result in a small increase in the overall traffic movements using this road and therefore no further improvements to the access to Preston Farm are expected to be required. During busier periods of construction traffic, Traffic Marshals may be used to minimise the risk of conflict between opposing vehicle movements.

The access to Preston Farm will provide access to the development site. A new 4.0m wide track and a hardstanding construction compound will be laid down in order to accommodate construction vehicles. This will be suitably surfaced to withstand heavy goods vehicles.

Before any construction work commences, a highway photographic survey will take place and be provided to Hampshire County Council. This photographic survey will assess the condition of the local highway in the vicinity of the access to Preston Farm junction with the B3046. Should any of the highway, including vehicle crossover and grass verges, be damaged at the end of the construction works the developer will repair the damages or fund the damages to be repaired.

The on-site internal road layout will be around 4.0 metres wide, adequate for two-way traffic, and it will be able to provide safe egress and ingress for construction vehicles.

5 STRATEGIES TO REDUCE IMPACTS

5.1 Encouraging car sharing

As the development is located in a rural area north of Preston Candover, it is recognised that there will be limited opportunities for sustainable travel via public transport and/or active travel. Therefore, all site workers will be encouraged to car share, as this represents a realistic and effective way to encourage sustainable travel across the workforce.

5.1.1 Principal Contractor

BSR Energy will appoint the Principal Contractor who will be responsible for the CTMP. The Principal Contractor will manage all construction traffic and will ensure that the preferred routing for construction vehicles as identified under section 4.2, is always used unless it is otherwise agreed with Hampshire County Council as the Highway Authority to use an alternative road network.

The roles of the Principal Contractor will include:

- Overall management of construction traffic;
- Ensuring that the preferred routes for construction vehicles, which have no height restrictions are always used by construction traffic unless otherwise agreed with Hampshire County Council as the Highway Authority;
- Ensuring that all vehicles accessing the site meet their legal obligations for safe operation and obey any traffic banksman, signs, road markings, traffic signals and traffic marshals;
- The provision of safe and adequate vehicle loading/unloading areas;
- No parking on the highway during site operating hours;
- Encouraging all suppliers and hauliers to seek the (Fleet Operator Recognition Scheme (FORS) accreditation. Silver FORS accreditation will be the minimum requirement for all construction vehicles including subcontractors. Freight Operators who are already Silver FORS accredited would be considered favourably; and
- Ensuring that any deliveries that may need to be made by Abnormal Indivisible Loads will be delivered to the site during periods of lower background traffic.

The site operating hours are 07:00 to 19:00 Monday – Friday during school holidays and 08:00 to 13:00 on Saturdays with no works allowed on Sundays and Bank Holidays.

5.2 Scheduling site deliveries

All delivery drivers attending the site will attend with the correct PPE such as hard hat, high visibility vest, protective footwear, eye protection, gloves and full-length trousers. Drivers not conforming to these requirements will be turned away and notice issued to the company concerned.

5.3 Storage space restrictions

There will be sufficient space for the storage and manoeuvring of construction vehicles and material on site. Apart from using the public highway to transport the delivery of materials and removal of spoil, all construction vehicle related activities will be carried out on-site.

The use of a delivery scheduling procedure will ensure that the number of delivery vehicles attending the site at any one time does not exceed the space available on site for the standing and unloading of delivery vehicles.

5.4 Procedures for the control of unauthorised entry of vehicles and personnel

A Traffic Marshal will control all traffic relating to the site activities.

6 ESTIMATED VEHICLE MOVEMENTS

6.1 Construction traffic

During the construction phase, the solar farm will require delivery of materials, comprising panels, frames and concrete footings, resulting in around 470 deliveries over a 16-week period. However, it is anticipated that 60-70 deliveries per week over a 4-week period will represent the peak of such deliveries. This averages out at approximately 14 deliveries a day, equating to 28 two-way movements. However, in most weeks, this figure is expected to be considerably less, with the majority of the deliveries likely to be made by HGVs.

Construction hours would be 07:00 to 19:00 Monday – Friday and 08:00 to 13:00 on Saturdays with no works allowed on Sundays and Bank Holidays. Delivery hours will differ to these hours, as set out in Section 4.3. Traffic associated with HGVs will be distributed equally across these delivery time periods.

Traffic associated with workers will typically arrive during the first hour of the operating period and leave within the last few hours of the working day. On rare occasions some works will be completed outside of the normal working hours, which means that some workers may leave later in the evenings. However, this would involve a small workforce and only occur for short periods.

6.2 Operational traffic

The operational stage of the project will only require occasional maintenance visits and therefore not lead to any significant increase in traffic compared to existing levels, and it is not necessary to monitor the impact.

6.3 Management of construction vehicles

All site roads where possible will be wide enough to enable vehicles to pass and manoeuvre within the site boundary.

Overall management of construction traffic:

- Ensuring that the preferred route for construction vehicles is used at all times by construction traffic unless otherwise agreed with the appropriate Highway Authority;
- Ensuring that all vehicles accessing the site meet their legal obligations for safe operation and obey any traffic signs, road markings, traffic signals and traffic marshals; and
- Ensuring that all contractors and subcontractors avoid deliveries during peak periods of traffic flow and periods of congestion and, where possible, smoothing the flow of delivery vehicles over the working day.

7 IMPLEMENTING, MONITORING AND UPDATING

7.1 Management of the Construction Traffic Management Plan

7.1.1 Principal Contractor

The Principal Contractor will be responsible for implementing the CTMP throughout the duration of the works. The Principal Contractor will manage all construction traffic and will ensure that the preferred route for construction traffic as identified under section 4 is used at all times unless alternative routes are agreed with Hampshire County Council as the Highway Authority.

The various roles of the Principal Contractor are briefly described below.

7.1.2 Management within the public realm

The Principal Contractor will be responsible for the promotion and management of measures to minimise the impact of the construction works on the public highways and public rights of way in the vicinity of the site. These measures will apply to all contractors and subcontractors throughout the development.

The Principal Contractor will be responsible for the management, notification and authorisation, implementation and control by all contractors and subcontractors for the general provisions and measures within the public realm as presented, but not limited to, within the following:

- All temporary measures will be provided, installed and maintained in good condition throughout the extent of the construction activity for which they have been provided;
- No works that will affect the public highway or rights of way will be commenced until all traffic safety measures required by the construction activity are fully operational to the satisfaction of Hampshire County Council as the Highway Authority;
- Provision of measures to minimise the effects of nuisance from construction traffic noise, vibration, dust and air quality;
- The correct loading of vehicles and sheeting of loads where necessary to avoid spillage during deliveries;
- Any part of the highway or public right of way that is damaged or disturbed by any activities associated with the implementation of the project will be made good by Hampshire County Council as the Highway Authority at the contractor's/developer's cost;
- The operation of plant and equipment will only take place during the agreed construction hours which are 07:00 to 19:00 Monday – Friday and 08:00 to 13:00 Saturdays, with no works allowed on Sundays and Bank Holidays; and
- Management of on-site access and movement.

The Principal Contractor will ensure that the management and the interface control between the public highway and construction site is managed by traffic marshals. Vehicles on site shall be managed and controlled to ensure that the site is always safe through planned interventions and segregation. The management and control strategy will include, but not be limited to, the following:

- The provision of relevant information from the construction plan to enable the establishment of safe systems of work and method statements;
- The planning, managing and monitoring of transport movements within the site and the establishment of site rules and regulations that will be used to enforce these movements;
- The systems and monitoring regime to be implemented will ensure that subcontractors make adequate and appropriate provision within their methodology and method statements to maintain compliance with the construction plan; and
- The consolidation of deliveries and smart procurement through the reduction of the number of suppliers and consequently trips to the site. The opportunity to procure several items and materials from one supplier will be investigated and pursued if viable. Where possible suppliers will be asked to collect materials on their return journeys for recycling.

7.1.3 Management and control of construction logistics

The Principal Contractor will ensure that all contractors and subcontractors undertake the works in accordance with the approved routings, plans and measures presented in this CTMP. Where necessary, they will identify and address any requirements to achieve this; this will include, but is not limited to, the following;

- Identification of approved routes to all contractor and subcontractor construction vehicles and implement a monitoring regime to ensure compliance;
- The phasing and timing of deliveries to ensure that previously identified working hours and restrictions on delivery times are maintained to avoid unnecessary congestion;
- The timing and notice periods for abnormal load deliveries, where applicable;
- Will ensure that road opening notice procedures and periods for approval are provided;
- Implement restrictions on both on and off-site parking space within the construction site and within the vicinity of the site on the public highway and public parking areas and implement a monitoring regime to ensure compliance;
- Provision of a timely efficient delivery system to avoid the stockpile of waste materials on site and the restriction of burning of waste materials on site; and
- Ensuring the sealing of all hazardous materials including chemicals, cleaning agents, solvents and solvent containing products in containers at the end of the working day before storage in suitably protected and bundled areas. Finally, ensuring the waste materials are disposed of in strict accordance with the relevant regulations.

7.1.4 Procedure for the cleaning of vehicles / plant on site

The traffic marshal will inspect all vehicles before they are released from the site onto the public highway. Wheel wash provisions will be provided on site prior to the site exit. Any cleaning will be carried out within the site in the wheel cleaning area to prevent detritus and deposits being transferred from the site onto the public highway.

7.1.5 Pre / post construction condition surveys

Pre-construction and post-construction condition surveys of minor roads used on the approach to the construction site will be carried out under a section 59 agreement with Hampshire County Council. This will include a provision of any ongoing maintenance and repair to the highway required as a result of the increased usage during construction.

Section 59 Agreements will be in place before the commencement of construction works. Remediation required on these roads as a direct result of HGV traffic associated with this site will be underwritten by the client and its contractors once construction works are complete. The extent of the survey will cover the immediate vicinity of the access to Preston Farm junction with the B3046.

7.1.6 Signage

All temporary traffic signs will be provided in accordance with the Traffic Signs Regulations and General Directions 2016 in locations agreed with and by the relevant authority.

7.2 Compliance

7.2.1 Implementation of measures

The site manager will implement and enforce the CTMP. The client and Health & Safety Advisor will monitor, implement and check the vehicle delivery log on their site visits.

7.2.2 Procedure to ensure all drivers, subcontractors, suppliers and visitors sign a copy of the site-specific traffic rules

The CTMP will be sent out with all subcontractors and material purchase orders. It will also be introduced to the driver and signed at the induction during a visiting driver's first visit on site.

7.2.3 Person(s) responsible for enforcement and control

The Principal Contractor's site manager will be the initial contract, with subsequent personnel being a Traffic Marshal.

8 MONITORING AND REVIEW OF THIS PLAN

8.1 Introduction

As a live document, the CTMP will be reviewed and updated on approval by the Principal Contractor on a regular basis.

8.2 Transport liaison

The Community Liaison Officer will initially set up and manage public relations with local residents and businesses that may be affected by noise or other amenity aspects caused by construction activities on the development site. The Site Manager (SM) will be appointed from within the Principal Contractor's staff.

The SM will be responsible for the day-to-day management of the CTMP and will be the first point of contact for site issues. Their name will be given to the appropriate authorities when appointed. The Principal Contractor will inform all relevant bodies if and when the SM is replaced.

The SM will act as the liaison officer with organisations that have or express an interest in the site and how the development is progressing. These bodies, groups and individuals may include the planning and highways authorities, local residents, businesses and community groups. The SM will respond to any queries about the development and instigate such responses and, if deemed necessary, such mitigation measures as may be necessary to resolve traffic issues connected with the construction work.

Interested parties will be kept informed and advised of current and planned activities by displaying information on a notice board which will be posted outside the site's main entrance, and regular newsletter drops and dialogue. Management contact details will be displayed on a notice board and contained in the newsletters in order that any public concerns can be raised effectively, and appropriate action taken to address them.

The SM will monitor and review the effectiveness of the CTMP and prepare regular updates to the planning authority and the Highway authority if requested.

The SM will be responsible for informing and updating the supply chain and local community, residents and businesses to raise awareness and present the Principal Contractor's commitment to using safe and efficient construction vehicle practices. This commitment will be communicated to all parts of the supply chain involved in the development and to all third parties who may be affected by the transport provisions for the site construction works.

8.3 Monitoring and review

An important part of this CTMP will be the continual monitoring and review of its effectiveness. Regular monitoring and review by the Principal Contractor will help to gauge progress towards the objectives, and, if necessary, enable the CTMP to be refined and adapted in order to improve its progression and enhance the effectiveness of subsequent CTMPs.

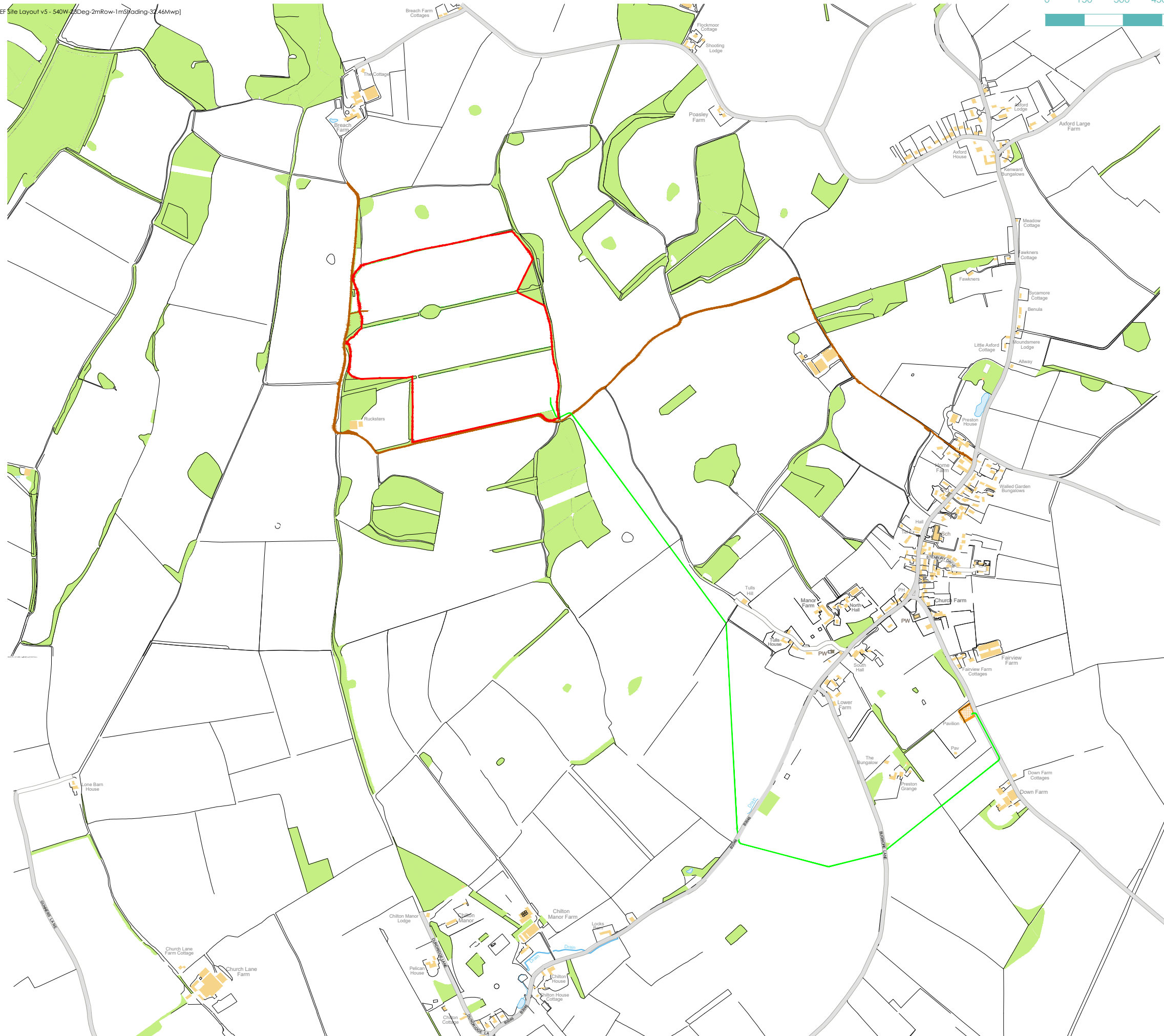


The CTMP will be reviewed and, if necessary, updated as the construction works progress.

The Principal Contractor will include a provision for monitoring and review which will cover workforce, construction deliveries and waste to ensure that as much waste as possible will be recycled.



APPENDIX 1 SITE LOCATION PLAN



Notes: Unless otherwise stated, this drawing is for information only. Do not scale. Use figured dimensions only. Check all dimensions on site and advise of any discrepancies before commencing work on site.

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- Key:**
- Site Boundary
 - Existing Access Track
 - Cable Route
 - POC

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