

# SIX OAKS RENEWABLE ENERGY PARK

## Traffic and Access Statement

PREPARED ON BEHALF OF  
Six Oaks Renewable Energy Park Limited

OCTOBER 2022



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## TRAFFIC AND ACCESS STATEMENT

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## INTRODUCTION

- TA1 This chapter considers the impacts of the Six Oaks Renewable Energy Park on the local roads infrastructure, particularly during the construction process.
- TA2 The construction of a Renewable Energy Park requires the delivery of a variety of loads, including pre-mixed concrete, standard HGV to carry the aggregate, panel frames, solar

panels, inverters, various containers associated with the solar array, Battery Energy Storage (BESS) and substation compound and a small crane (typically 45T) to offload the transformer and other containerised units. The site transformer comprises a single exceptional load.

- TA3 The operational phase involves site traffic associated with monthly site visits and scheduled servicing, cleaning and ground maintenance.
- TA4 The decommissioning phase is a reduced reverse of the construction phase involving the removal of the solar panels and frames, the BESS containers, the substation elements and the associated infrastructure elements, as described in **Chapter 8 - Construction, Operation and Decommissioning** of the Environmental Statement (ES) accompanying the planning application.
- TA5 This assessment has been focused on the construction process. As detailed in **Chapter 8 - Construction, Operation and Decommissioning** of the ES, the operation of the development is largely undertaken through remote monitoring, with

personnel visiting site approximately once per month. It is therefore considered that traffic volumes associated with the operation of the development will be negligible and, as such, are not considered further in this assessment. The traffic levels associated with the decommissioning of the project are significantly less than those associated with the construction phase with the tracks being left in situ, if required by the landowner.

- TA6 The delivery route for the renewable energy park components is considered. Typical vehicular movements for the construction programme and an assessment of the associated impacts are provided.
- TA7 Finally, following the application of mitigation, residual impacts are identified.



## METHODOLOGY

### Vehicle Movements

- TA8 This assessment follows the Guidelines for the Assessment of Road Traffic (IEMA, 1993), published by the Institute of Environmental Management and Assessment (IEMA), to identify and address potential impacts on roads and their users.
- TA9 The Guidelines state that the scale and extent of this assessment should include highway links where traffic flows are predicted to increase by more than 30% or where the number of heavy goods vehicles is predicted to increase by more than 30%; and to include any other specifically sensitive areas where traffic flows are predicted to increase by 10% or more (such as villages or near schools or hospitals). Increases in traffic flows below 10% are generally considered to be insignificant as this is likely to be within the daily variations in traffic flow. The proposed development is assessed against these thresholds. If exceeded, potential impacts are considered to be significant.

- TA10 Much of the advice in the NPPF (MHCLG, 2021) relates to wider transport network planning, assessment of anticipated future transport requirements of a development, and sustainable solutions modes of transport. This is more applicable to other forms of development such as housing and retail, and not specifically relevant to renewable energy park development as the majority of the transport movements will occur in the construction phase rather than during the life of the project. However, the NPPF at Paragraph 113 requires:

*'All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.'*

- TA11 Further guidance on transport matters is contained in the NPPG (MHCLG, 2014), which includes what information should be contained in a transport assessment (Paragraph Reference ID: 42-015-20140306). Specifically for Renewable and Low Carbon Energy,

developers are directed at Paragraph Reference ID: 5-016-20140306 to the Highways Agency/ Department for Transport Circular 02/2013 (DfT, 2013a). Solar Farms are considered specifically at Paragraph Reference ID: 5-013-20150327 of the NPPG (2015), which is considered further for the current proposal in **Chapter 3 - Site Selection and Design** of the ES.

### Exceptional Load Delivery Vehicles

- TA12 UK Government also provides guidance for dealing with exceptional load deliveries. This guidance (HMSO, 2014) defines an exceptional load as a vehicle with any of the following:
- a weight of more than 44 000 kg (44 Tonnes);
  - an axle load of more than 10 000 kg (10 T) for a single non-driving axle and 11 500 kg (11T) for a single driving axle;
  - a width of more than 2.9m; or
  - a length of more than 18.65m.
- TA13 For such vehicles, advance warning to the Police, Highways Authority and structure owners such as Network Rail may be required.

## Road Accident Records

- TA14 The Royal Society for the Prevention of Accidents (ROSPA) state that 'Great Britain has one of the best road safety records in Europe and the world' (2021). Human error is a factor in 95% of all road accidents and the road environment (road and junction design, and road surfaces) a factor in just 12% of accidents (ROSPA, 2017). Human error can be a result of many factors including: alcohol or drugs, inexperience, tiredness or illness, in-car distractions, impatience, stress, carelessness or negligence.
- TA15 ROSPA (2020) describe many potential sources of driver distraction, but note that in reality the information required to perform the driving task is prioritised. Many distractions occur within the vehicle, such as conversing with passengers and manipulating audio controls. An American Study found external distractions to occur in over 85% of journeys in the sample (ROSPA, 2020).
- TA16 Of the four types of distraction (visual, cognitive, biomechanical and auditory), only visual distraction is potentially relevant for solar farm

developments. The ROSPA factsheet (ROSPA, 2020) states:

*'The way that a driver observes the area around the vehicle depends on how complex it is, and in complex environments, drivers can find it more difficult to identify the main hazards.'*

*'In undemanding situations, driver's attention tends to wander towards objects or scenery that are not part of the driving task. Estimates of how much time drivers spend doing this varies from between 20% and 50%.'*

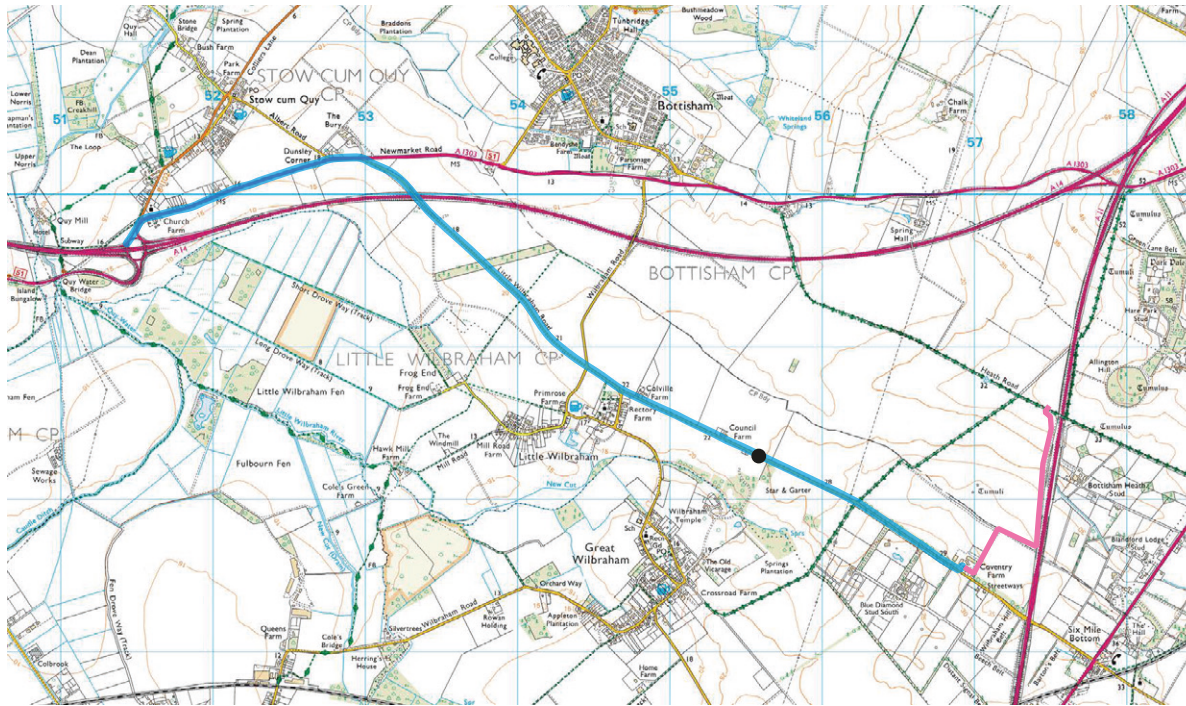
- TA17 Existing crash records in proximity to the proposed site entrance were reviewed. The number, circumstances and reasons for the crashes were analysed and where similar circumstances may arise as a result of the proposed development significant impacts may be possible. The site layout was designed in accordance with current planning policy and guidance to avoid potential impacts on users of the local highway network.

## Transport Route

- TA18 An access route for the delivery of the renewable energy park components (as shown on **Plate TA.1**) was

identified through an iterative desktop assessment and site visits.

- TA19 Deliveries will approach from the wider highway network on the A14, leaving at Junction 35 on to the A1303, Newmarket Road. Travelling north-east, vehicles will turn right after approximately 1.7km on to Little Wilbraham Road (which becomes Wilbraham Road), the site entrance is on the left approximately 4.8km from the A1303 turning.
- TA20 Traffic count data are considered in comparison with the anticipated vehicle numbers and transport requirements for delivery of the Six Oaks Renewable Energy Park components.
- TA21 Existing road accident records have been analysed and the site layout designed in accordance with current planning policy and guidance to avoid potential impacts on users of the local highway network.



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Plate TA.1 - Proposed Delivery Route from the A14 (shown in blue, site and access track in pink, Traffic Count 800343 location black dot)

## BASELINE CONDITIONS

### The Local Road Transport Network

TA22 As described in the ES, **Chapter 4 - Existing Conditions**, the proposed development is accessed

off Wilbraham Road north of the Wilbrahams.

TA23 Wilbraham Road is a Class C adopted highway with a speed limit of 60mph.

### Traffic Volumes

TA24 The Department for Transport (DfT) provides National traffic count data for locations across the UK. Traffic count

data provides the number of vehicles that will drive on the particular stretch of road on an average day of the year.

TA25 There is one traffic count location on Wilbraham Road on the delivery route as shown at **Plate TA.1**.

TA26 Traffic count data available for this location is from the year 2019, estimated from a manual count in 2018. The variation between the two years was negligible. The Annual Average Daily Flow (AADF) for 2019 was 3 643, of which 103 were HGVs.

### Road Accident Records

TA27 A National accident database map (Crashmap, 2021) was consulted to determine the number and nature of accidents recorded along the delivery route from the A14, junction 35.

TA28 The records relate only to personal injury accidents on public roads that are reported to the police, and subsequently recorded, using the Department for Transport 'STATS19' accident reporting form. Data for the most recent five-year period available are analysed.

TA29 In the last 5 years (2017-2021, inclusive), there were eleven incidents along the delivery segment, nine of which were 'slight' and two classified as 'serious'. None were fatal.



Table TA.1 - Non-'slight' crashes on the route segment A14 junction 35 to site entrance (2017 and 2021).

Incident date	Severity	Vehicles/ casualties	Environmental conditions	Further Description
08/11/2019	'serious'	2/1	Darkness, rain, wet or damp road conditions	Vehicle turning left hit vehicle on carriageway
12/07/2020	'serious'	2/1	Daylight, fine, dry conditions	Vehicle turning right hit cycle

## Public Rights of Way

TA30 As described in **Chapter 4 - Existing Conditions** of the ES, the site access track crosses the Heath Road byway adjoining the southern site boundary.

TA31 The public rights of way will remain open during construction, operation and decommissioning.

when compared to many other civil engineering projects.

TA33 The equipment and materials used to construct the development will fit on standard Heavy Goods Vehicles (HGV). One delivery, the site transformer, will be classed as an exceptional load.

TA34 As reported in the ES **Chapter 7 - Construction, Operation and Decommissioning**, the principal phases to the construction comprise:

- temporary construction compound is established, site access tracks are built or upgraded and site fencing is erected;
- site containers are offloaded in situ;
- panel frames are push-driven into the ground and fixed in place;

- panels are mounted to the frames and wired together;
- cable trenches are dug to install the main cables;
- BESS and substation compound is installed;
- electrical connections are made;
- the site is commissioned; and
- landscape mitigation planting takes place during the autumn.

TA35 The typical construction programme for a project of the scale of the Six Oaks Renewable Energy Park is shown in **Plate TA.2 on page 7**.

TA36 As described in ES **Chapter 8** it is envisaged that the Six Oaks Renewable Energy Park proposal will take approximately nine months to construct. Most of the construction

## PREDICTED IMPACTS

### Construction Phase

#### *Vehicular Movements*

TA32 The construction of a renewable energy park is straight forward and involves moderate levels of site traffic

activity is involved in the construction of the site tracks and BESS and substation compound.

- TA37 The approximate number of vehicular movements have been determined in accordance with the estimated construction quantities as proposed in ES **Chapter 7 - Development Proposal**. These movements were then correlated with the typical construction programme to provide an indication of traffic movements by month. This is illustrated in **Plate TA.2 on page 7**. For clarity, 'movement' denotes a single trip to or from site.
- TA38 This construction assessment has focussed on HGV movements. Personnel have not been included in this - it is estimated that the peak number of personnel on site at any one time will be approximately 165. Construction personnel tend to travel to site in groups via minibus or shared light vehicles.
- TA39 Deliveries are spaced throughout the construction period although fewer movements are associated with the end of the construction period. The construction programme starts with a temporary construction compound. Thereafter, a rolling

programme will complete areas of the site with the fencing, framing system, panels, containers, electrical system installation and commissioning.

- TA40 The decommissioning of the renewable energy park at the end of its life will be a reduced reverse version of the construction process.

### *Impact on Roads and Users*

- TA41 As stated from **Paragraph TA8 on page 2**, this assessment considers the approach outlined in the Guidelines for the Assessment of Road Traffic (IEMA, 1993). The Guidelines state that the scale and extent of this assessment should include highways links where traffic flows are predicted to increase by more than 30% or where the number of heavy goods vehicles is predicted to increase by more than 30%; and to include any other specifically sensitive areas where traffic flows are predicted to increase by 10% or more. Increases in traffic flows below 10% are generally considered to be insignificant as this is likely to be within the daily variations in traffic flow. Based on DFT traffic count data for Wilbraham Road, (**paragraph TA26 on page 4**), 16

additional HGVs movements per day represents a percentage increase in HGV traffic volumes on this road of 15.5% (to 3 S.F.) as a result of the Six Oaks Renewable Energy Park. This is considered within the guidelines as not significant.

- TA42 For existing road users, impacts may arise through traffic delays caused by construction vehicles, or to their visual amenity (which is considered further in ES **Chapter 10 - LVIA**).
- TA43 The road width and junctions in the approach to site are considered to be adequate for the intended use for conventional HGV traffic. Therefore there is low potential for damage to highway verges.
- TA44 A Construction Traffic Management Plan (CTMP) to be agreed with the Local Planning Authority prior to construction commencing will include details of all traffic management proposals and other mitigation proposals such as wheel washing.

# TRAFFIC AND ACCESS STATEMENT

Plate TA.2 - Typical construction programme with total and mathematical average monthly vehicular movements

Activity	Total Movements	Programme Month								
		1	2	3	4	5	6	7	8	9
Construction compound, including gates, welfare and temporary surfacing.	12	12								
Security fencing and gates	16	2.7	2.7	2.7	2.7	2.7	2.7			
Site tracks & BESS compound (crushed stone over geogrid base)	1722	246	246	246	246	246	246	246		
Foundation concrete for transformer units, customer cabin, substation and CCTV posts	16	2.3	2.3	2.3	2.3	2.3	2.3	2.3		
Inverters	6	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
Cabling	12	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Cable trench sand	36	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Solar panels	456		65.1	65.1	65.1	65.1	65.1	65.1	65.1	
Mounting system	76		10.9	10.9	10.9	10.9	10.9	10.9	10.9	
Transformers	18				3.6	3.6	3.6	3.6	3.6	
BESS, Substation and Client containers	132				26.4	26.4	26.4	26.4	26.4	
Ecological works (seed, new hedge and trees), subject to appropriate time of year.	6									6
Site commissioning and site clearing	12									12
<b>TOTAL MOVEMENTS</b>	<b>2520</b>	<b>270</b>	<b>334</b>	<b>334</b>	<b>364</b>	<b>364</b>	<b>364</b>	<b>361</b>	<b>112</b>	<b>18</b>
<b>Average movements per day, assuming 24-day working month</b>	<b>-</b>	<b>12</b>	<b>14</b>	<b>14</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>6*</b>	<b>1</b>
<b>Average movements per hour on working days, assuming off-peak weekday delivery (9am and 3pm) and Saturday mornings</b>	<b>-</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>

Note. Total movements are distributed across the construction months and rounded to the nearest whole movement. \* Movements rounded up to be even within one day.

## PEAK AND AVERAGE CONSTRUCTION VOLUMES

TA45 The peak average daily construction traffic flows are likely to occur in months four to seven with 16 average daily movements (assuming a 24 day working month). This equates to an average of approximately three HGV movements an hour (assuming deliveries occur off peak during weekdays (9am to 3pm) and Saturday mornings).

### *Impacts on Public Rights of Way*

TA46 As described from **Paragraph TA30 on page 5** there is one public right of way (byway open to all traffic (BOAT)) adjacent to the site boundary along Heath Road. This will be crossed by the access track.

TA47 During the construction phase of the proposed renewable energy park the BOAT will remain fully open for use. There may be some minor disruption for users when construction traffic may cross. Banksmen will be engaged to minimise disruption to users of the BOAT.

TA48 There is no alteration to the accessibility of any of the PROW in the wider area around the site.

TA49 No significant impacts on Public Rights of Way are anticipated as a result of the access to the proposed Six Oaks Renewable Energy Park during construction, operation or decommissioning.

TA50 Visual amenity impacts for users of the Public Rights of Way are described further in ES **Chapter 10 - LVIA**.

### *Driver Distraction*

TA51 Hedgerow planting is proposed to reinforce existing screening of the proposal from the A14. The A11 is already well screened from the site with existing planting.

TA52 The potential visibility of the solar farm is considered in the Landscape and ES Visual Assessment (**Chapter 10**).

TA53 Potential Glint and Glare impacts of the proposed development on motorists are considered in the Glint and Glare report accompanying the application.

## Decommissioning Phase

TA54 The equipment used to de-construct the renewable energy park will be no larger than standard HGVs. The solar farm, BESS and substation equipment will be removed from site and sorted for recycling at waste management centres rather than on site.

TA55 The decommissioning process will be a shorter period than the construction phase, and it will typically involve:

- isolating electrical connections and removing from site all electrical equipment (including inverters, transformers, BESS and the substation) and cables;
- removing from site all solar panels;
- removing from site the panel frames;
- removing foundation pads; and
- removal of access tracks, where not retained by the landowner.

TA56 Significantly fewer vehicle movements will be required than during the construction phase, principally as aggregate removal will be limited to those tracks not retained by the landowner.



TA57 Following the Guidelines for the Environmental Assessment of Road Traffic (IEMA, 1993), the vehicle movements associated with the construction phase are identified as not significant.

## AVOIDANCE AND MITIGATION

TA58 During construction and decommissioning, deliveries will be restricted, wherever possible, to off-peak weekdays and Saturday mornings to reduce impacts on local road users. Weekday off-peak is considered to be between 09:00 and 15:00.

TA59 Advance notification of potential delay for road and BOAT users will be provided through appropriate signage and advertisement. The Applicant will liaise with the Highways Authorities and Police prior to the construction phase commencing.

TA60 As well as advance notification and appropriate signage, banksmen will be used at the crossing of Heath Road BOAT to ensure safety and minimise disruption to users during the construction phase.

TA61 In addition, prior to construction, precautionary mitigation measures are suggested to include wheel wash facilities, as appropriate to ensure the road is kept reasonably clear of any deposits from the construction works and the local drains are kept clear.

TA62 Decommissioning mitigation measures would be agreed at that time with East Cambridgeshire District Council, but would be likely to include the same access route, delivery timing, notices, BOAT, wheel washing and road condition controls outlined above.

## POST-MITIGATION IMPACTS

TA63 The predicted peak HGV movements are less than 30% of daily movements along Wilbraham Road and as such, no significant impacts are predicted on the wider highway network.

TA64 Measures are proposed for the construction period (and similarly for decommissioning) to mitigate potential impacts and disruption to local traffic as far as possible.

TA65 Following mitigation, minimal non-significant impacts are predicted for users of Heath Road BOAT with temporary delays as vehicles cross under the control of banksmen.

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