

SUNNY OAKS RENEWABLE ENERGY PARK

Construction Traffic Appraisal

PREPARED ON BEHALF OF



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engena

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CONSTRUCTION, TRAFFIC AND TRANSPORT

INTRODUCTION

- 1 This report presents a review of initial anticipated deliveries associated with construction of the proposed Sunny Oaks Renewable Energy Park near Wootton Common, south-west of Wootton Bridge on the Isle of Wight.
- 2 The initial proposals considered a c. 20MW solar farm and c. 60MWh Battery Energy Storage System (BESS).
- 3 The initial calculations presented were based on early layout site capacity indications and assumptions and are provided in support of public exhibitions scheduled for early May 2022, numbers were then updated with the refined application layout in advance of the planning application submission.

- 4 This assessment reviews the initial traffic movements associated with the construction of the solar farm and BESS over an anticipated 6-month construction period. Review of the access and delivery route is outside of the scope of this assessment. Assumptions have been identified where site details have yet to be ascertained.

Site Construction

- 5 Construction of a solar farm and BESS is a relatively straightforward, sequential, process using pre-assembled components with little ground disturbance.
- 6 **Plate 1 on page 2** provides an overview of the construction process as a photographic sequence for a

site of a similar size and scale to that proposed at Sunny Oaks, Wootton Common.

Construction Traffic

- 7 It is expected that there will be a six-month construction programme for a development of this scale. During construction, it is suggested that 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.
- 8 The anticipated HGV construction traffic for the solar farm, BESS and associated infrastructure deliveries is shown in **Table 1 on page 3**.
- 9 Deliveries are well spaced throughout the construction period with the construction programme starting with the primary temporary construction compound and access tracks. Thereafter, a rolling programme will complete areas of the site with the fencing, security, framing system, panels, electrical system installation and commissioning. The BESS elements are delivered as pre-assembled container/skid mounted units.

CONSTRUCTION TRAFFIC APPRAISAL

10 Deliveries will be made by standard HGVs. No delivery will be larger than the 18.65m / 44T threshold that constitutes the need for Police notifications and permissions. Light



vehicles will be used by construction personnel arriving at the site.

11 The decommissioning of the solar farm/BESS at the end of its life will be a reduced reverse version of the



construction process. Details of which are anticipated to agreed in advance with the Council and controlled by a condition on the future planning permission, should it be granted.



Plate 1 - Illustrative Construction Process

SUNNY OAKS RENEWABLE ENERGY PARK

Table 1 - Typical construction programme and total monthly HGV movements (schedule updated from pre-consultation analysis)

Activity	Total Movements	Programme Month											
		1		2		3		4		5		6	
		Week 1-4		Week 5-8		Week 9-12		Week 13-16		Week 17-20		Week 21-24	
Construction compound, including gates, welfare and temporary surfacing.	48												
Site tracks (crushed stone over geogrid base)	430												
Security fencing and gates	18												
LV and HV Cabling	4												
Cable trench sand	16												
Transformers	8												
Solar panels	114												
Mounting system	20												
String inverters	2												
Foundation concrete for transformers, spare part containers, connection compound units and fence posts.	92												
Customer container	2												
Battery Energy Storage containers	68												
Ecological works, subject to appropriate time of year.	4												
Site commissioning and testing and removal of temporary construction equipment.	58												
TOTAL MOVEMENTS and TOTAL MOVEMENTS average by month	884	137		147		146		183		180		92	
Average movements per day, assuming 24-day working month		6		8*		8*		8		8		4	
Average movements per hour on working days, assuming off-peak delivery between 9am and 3pm (6 hours)	-	1		2		2		2		2		1	

Note. Partial average movements have been rounded up to a single movement.

*Odd numbers of daily movements are rounded up to the nearest whole movement.

- 12 As per **Table 1**, the total number of HGV movements (including for deliveries to and vehicles leaving site, each representing one movement) is anticipated to be around 880 across the six month construction period, equating to an approximate maximum of eight average daily movements per day.
- 13 Construction personnel have not been included in this assessment. It is estimated that the peak number of personnel on site at any one time will be approximately 100. Construction personnel tend to travel to site in groups via minibus or at various times throughout the day.
- 14 The Department for Transport (DfT) provides National traffic count data for locations across the UK. Traffic count data gives the number of vehicles that will drive on the particular stretch of road on an average day of the year.
- 15 The closest count point to the site is on Station Road to the south-west of Wootton Bridge, approximately 0.8km north-east of the proposed site entrance (count point 809133). The count data for this point are provided in **Table 2** and are considered representative for the number of movements passing the Site entrance.

Table 2 - Annual Average Daily Flow of vehicles at Count Point 809133 (DfT, 2022)

Year	Cars and Taxis	Light Goods Vehicles	Heavy Goods Vehicles	All Motor Vehicles
2020 Manual Count	3496	787	210	4643
2019 Manual Count	5049	819	195	6210

- 16 The number of movements recorded in 2020 may have been affected by restrictions on travel and altered lifestyles associated with the SARS-CoV2. However in terms of assessment, a lower baseline count provides the worst case impacts.
- 17 Against either year of counts, projected HGV traffic is less than existing traffic and not significant when considering this count data - traffic passing the site entrance will, however, be different given the intervening junction with Park Road and Briddlesford Road.

Construction Phase Mitigation

- 18 Mitigation measures will likely be applied through a Construction Traffic Management Plan, as discussed from **Paragraph 19 on page 4**, controlled via planning condition. Measures are likely to include the

delivery route(s), timing of deliveries and mitigatory provisions.

- 19 It is suggested that 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.

- 20 Advance notification of potential delay for road and PRow users should be provided through appropriate signage and advertisement. The Developer will liaise with the Highways Authorities and Police prior to the construction phase commencing.

- 21 All construction vehicles will be required to use the access route identified in the Construction Traffic Management Plan. This requires the use of the existing HGV capable roads to the site.

22 In addition, prior to construction, precautionary mitigation measures may include:

- A drainage scheme should be devised to ensure that no water enters the highway from the site access or a suitable system is agreed; and
- Wheel wash facilities are to be provided, as appropriate, and sweeping is to be carried out to ensure the road is kept reasonably clear of any deposits from the construction works.



Plate 2 - Typical Solar Farm Cleaning Unit

ASSUMPTIONS

Operations

23 Traffic associated with the operation of the solar farm is extremely limited. During the operational phase, it is expected that the site will be visited, on average, once a month by a small van.

24 The panels will be cleaned periodically every 12 to 24 months with equipment as shown in **Plate 2**. This involves the transportation of a tractor unit, purified water bowser and cleaning team (generally 3-4 personnel) to site.

25 The initial assessment was based on layout information provided by Ridge Clean Energy (22th April, 2022) and Engena's previous experience. Panel numbers and layout amendments were incorporated in to the assessment following refinement of the layout as presented in the planning application.

