

*Proposed Battery Storage Facility:
Whites Farm, Billerica*

Transport Statement



Transport Planning Consultants



Proposed Battery Storage Facility:
Whites Farm, Billericay

Transport Statement

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1.0 INTRODUCTION

1.1 Overview

1.2 DTA Transportation Limited has been appointed by Anglo ES White Farm Ltd to provide transport and highways advice in relation to the construction and operation of a 49.9MW battery energy storage facility at Whites Farm, located on Barleylands Road, Billericay, Essex. A plan showing the development proposals is attached as **Appendix A**.

1.3 Purpose and Structure of this Report

1.4 The purpose of this note is to consider the potential transport effects of the development proposals. Following this introduction, the TS is structured as follows:

- Chapter 2: Existing Conditions;
- Chapter 3: Development Proposals & Access;
- Chapter 4: Traffic Generation and Impact; and
- Chapter 5: Conclusions.

1.5 Overall, the report demonstrates that the proposed development will have no material adverse impact on the safety or operation of the local highway network.



2.0 EXISTING CONDITIONS

2.1 Site Description and Location

2.1.1 The site comprises a relatively flat agricultural land parcel located at land east of Whites Farm. Billericay lies circa 4.5km to the north, with the northern edge of Basildon 2km to the south.

2.1.2 The surrounding area comprises of an equestrian centre and units at Whites Farm to the immediate west, scattered farms and larger settlements nearby to the north, south and west.

2.1.3 **Figure 1** indicates the location of the site.

Figure 1 - Site Location





2.2 Local Road Network

- 2.2.1 Barleylands Road provides access to Whites Farm via a 150m access road. The single carriageway road caters for north-south movements, joining with the A129 Southend Road to the north and the A127 (via Wash Road) to the south.
- 2.2.2 Near the site access, the carriageway measures approximately 6m in width and observes a 60mph speed limit.
- 2.2.3 The A127 is located approximately 1.5km south of the site and provides access to the wider Strategic Highway Network, including the M25.

2.3 Traffic Survey

- 2.3.1 A speed survey was carried out on Barleylands Road in both directions near the proposed entrance over seven consecutive days starting 15th January 2022. The purpose of the survey was to obtain the 85th percentile speed to determine the visibility splay requirements at the access.
- 2.3.2 In order to establish traffic flow demand near the site access, a traffic flow survey was also undertaken during the same period.
- 2.3.3 **Table 1** summarises the results of the speed and traffic survey. The data is contained within **Appendix B**.

Table 1: ATC Summary- Barleylands Road

Direction	AM Peak (08:00- 09:00)	PM Peak (17:00- 18:00)	Average Speed (mph)	85 th Percentile Speed (mph)
Northbound	463	350	36.5	43.1
Southbound	246	314	35.9	42.5
Two-Way	709	664	-	-

- 2.3.4 The results of the speed survey conclude that the 85th percentile speed in both directions of the construction access is 43mph to the north and 42mph to the south; which is considerably



below the posted 60mph speed limit.

2.3.5 The traffic surveys demonstrate that peak hour flows are shown to broadly between 600 and 700 vehicles two way. This level of traffic is within the capacity of the existing road and raises no issue with respect of the existing volume of traffic on the highway network.

2.4 **Highway Safety**

2.4.1 A review of Personal Injury Collision (PIC) for the most recent five-year period (2017-2021) in proximity to the site access has been undertaken using data extracted from CrashMap.

2.4.2 The results show that no collisions were recorded within the immediate vicinity of the site access. The nearest collision occurred some 500m south on wash Road at its junction with Barleylands Road. The vehicular collision occurred in 2019 and was recorded as slight in severity.

2.4.3 Analysis of the available PIC data does not indicate that there are any inherent highway safety issues on the surrounding highway network. It is not anticipated that the development proposals would contribute to a material impact on the highway safety record in the area.

2.5 **Sustainable Travel**

2.5.1 It is acknowledged that the application premises is positioned within a rural location, where opportunities to travel by sustainable modes of transport are limited.

2.5.2 However, it benefits from a planning consent for B1 and or B8 and equestrian uses and hence has previously been considered appropriate for employment uses. The National Planning Policy Framework in Section 9 recognises that opportunities to maximize sustainable transport solutions will vary from urban to rural areas (paragraph 105) and that 'development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe' (paragraph 111).



2.5.3 Chapter 4 of this report demonstrates that the traffic arising from the development is not considered severe.



3.0 DEVELOPMENT PROPOSALS

3.1 Description of Development

3.1.1 The development proposal is for a battery energy storage facility. Once constructed, the proposed battery storage facility would be a largely automated system, although there would be occasional servicing undertaken. A plan showing the development proposals is attached as **Appendix A**.

3.2 Vehicle Access

3.2.1 The site will be accessed via an extension of the existing access from Barleylands Road, as shown on the Site Layout Plan, contained within **Appendix A**.

3.2.2 The junction will provide visibility splays of 2.4m x 81m to the southwest and 2.4m x 103m to the north within land under the applicant's ownership, as shown on **Drawing 23489-01a**.

3.2.3 During construction, HGV's will be required to access Whites Farm at the junction with Barleylands Court and travel down a newly laid track along the northern perimeter of the farm to unload, with smaller vehicles used to transfer materials to where they were needed.

3.2.4 Therefore, tracking has been undertaken at the site access for a maximum legal articulated vehicle. As shown on the site layout plan, the HGV is able to enter the site in forward gear. Whilst the likelihood of two HGVs meeting at the access is low given the forecast level of movements (see **Section 4**), the arrival and departure of HGVs would be carefully managed during construction to ensure that any potential for conflicts is minimised. This will include the appointment of a banksman on the access road. Further details will be set out in a Construction Traffic Management Plan (see **Section 4.2**).

3.2.5 The access route has been designed to accommodate construction and operational HGV traffic to access the site and safely turn around within the site.



3.2.6 Once operational, the storage facility will be a largely automated system with occasional servicing undertaken using light goods vehicles.

4.0 TRAFFIC GENERATION AND IMPACT

4.1 Introduction

4.1.1 This Chapter reviews the potential traffic generation and potential highways impact associated with the development proposals.

4.2 Construction Traffic

4.2.1 The applicant has experience of delivering battery storage facility sites across the county and expects the construction duration and associated traffic movements to be similar to those already constructed.

4.2.2 It is anticipated that there will be approximately 173 HGV vehicles (346 two-way movements) accessing the site over a 3-5-month construction period. A breakdown of these movements is provided in **Table 2**.



Table 2: Cumulative Forecast Construction Traffic Movements over 3-5 Months

Description	Estimated Deliveries	Vehicle Type
Containers of Batteries	56	16.5m articulated HGV
Battery Containers for Install on Site	15	16.5m articulated HGV
Inverter Deliveries	18	16.5m articulated HGV
Switchgear	3	16.5m articulated HGV
Transformers	7	16.5m articulated HGV
Ready mix concrete/pre-cast concrete	20	16.5m articulated HGV/concrete mixer
Consumables for Site	9	16.5m articulated HGV
Temporary Welfare Facilities	4	7.5t rigid HGV
Generators	4	16.5m articulated HGV
Cranes for Installation of Battery Containers	2	16.5m articulated HGV
Site Road and Compound Construction Material	20	20t tipper HGV
Materials for Private Wire	6	16.5m articulated HGV
Miscellaneous Plant	9	16.5m articulated HGV

4.2.3 The following plant will also be required on site during the construction programme:

- 1 x JCB;
- 1 x dumper truck;
- 1 x telehandler;
- 1 x crane;
- 1 x roller; and
- 1 x 14t excavators.

4.2.4 On average, assuming a five-day working work for construction, the overall trip generation equates to an average of circa 4 two-way vehicle trips per day; which is not significant.

4.2.5 In the event that planning permission is granted, a Construction Traffic Management Plan (CTMP) would be prepared and agreed with the local highway authority prior to any works commencing on site. It is proposed that this would be appropriately conditioned.



4.3 **Operational Traffic**

4.3.1 The proposed battery storage facility would be a largely automated system. It is envisaged that at most, two visits a week would be undertaken by staff in light goods vehicles to maintain and service the facility including the replacement of battery components—equivalent to four two-way vehicle trips per week. Operational traffic might also include occasional HGV access to replace battery components. Consequently, the impact of the facility on the operation and safety of the local highway network would be negligible.

4.4 **Traffic Impact**

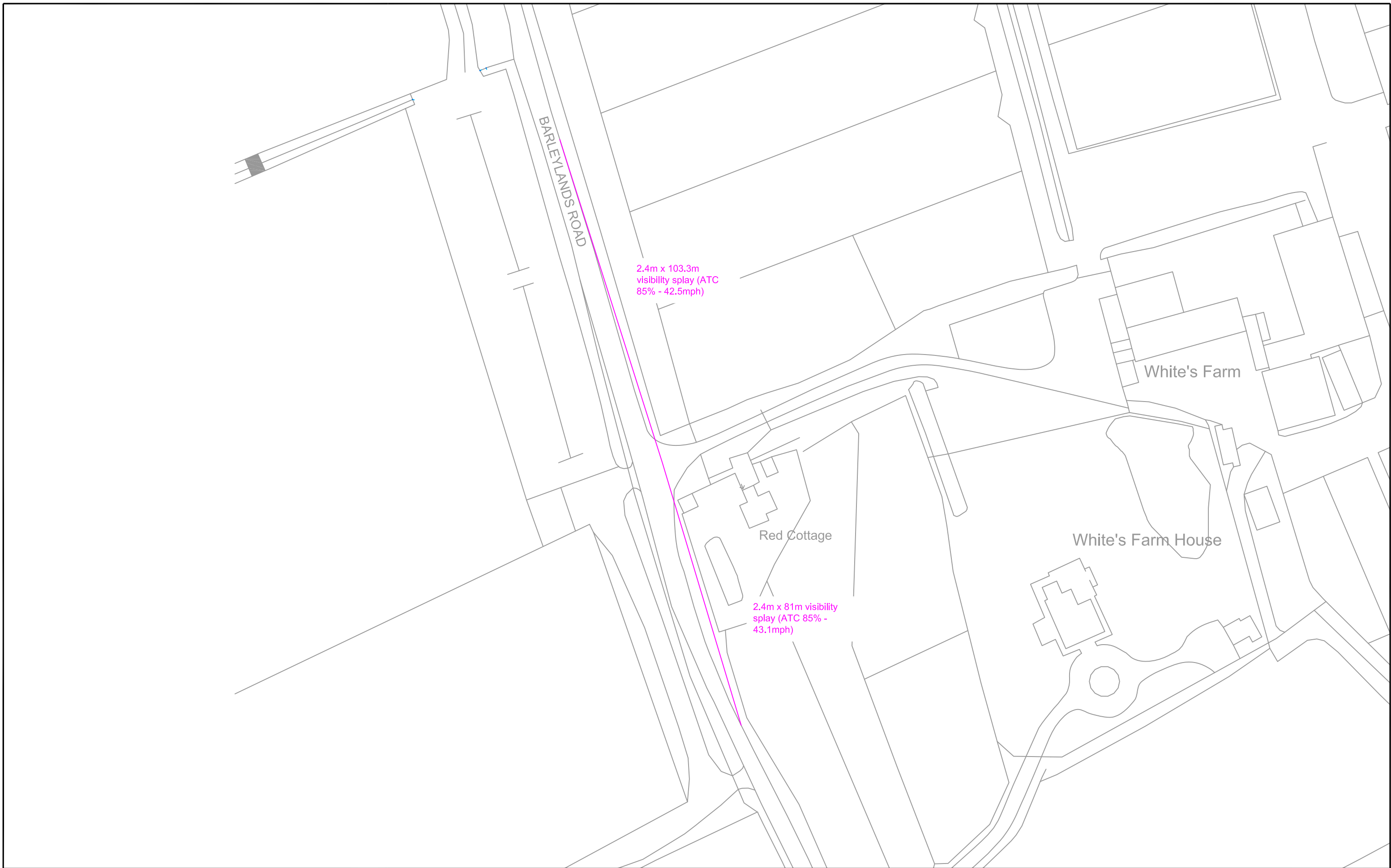
4.4.1 Overall, it is evident that the impact from the construction of the development on the operation of the local highway network would not be significant.



5.0 CONCLUSIONS

- 5.1 DTA Transportation Limited was commissioned on behalf of Anglo Renewables to review the transport implications of a proposed battery storage facility on Whites Farm, Billericay.
- 5.2 The application site is located some 4.5km north of Billericay and immediately east employment units at Whites Farm, Barleylands Road.
- 5.3 A review of the most recent personal injury collision data for the local highway network does not indicate any issues that would require mitigation as part of the scheme.
- 5.4 Vehicle access is to be taken via an extension of the existing access off Barleylands Road. Swept-path analysis of the site access has been undertaken and demonstrates that it provides a suitable access during construction and once the site is operational.
- 5.5 A review of the likely traffic generation resulting from the development proposals during construction of the site and once the facility is operational, confirms that this will not be significant and consequently there would be no material impact on the operation or capacity of the local highway network.
- 5.6 Overall, the report demonstrates that the proposed development would not have a material adverse impact on the safety or operation of the adjacent highway network.

Drawings



Based upon the ORDNANCE SURVEY MAPS with the permission of THE CONTROLLER OF HER MAJESTY'S STATIONERY OFFICE
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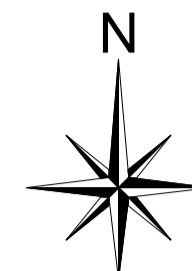
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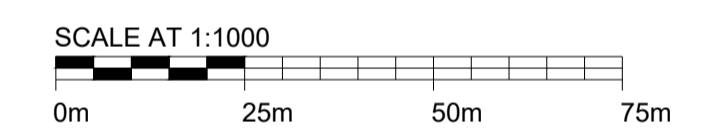
JOB TITLE Whites Farm, Basildon		CLIENT Anglo Renewables	
DRAWING TITLE Existing Site Access Visibility Splays			
SCALE 1/1000@A3	DRAWN BY BP	DATE July 22	DRAWING No 23489-01
REVISION A			

Appendix A
Proposed Site Layout



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1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS AND SPECIALISTS DRAWINGS & SPECIFICATIONS.
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5. ALL DIMENSIONS TO BE ±3mm UNLESS SPECIFIED OTHERWISE.



03	SITE ACCESS ROAD & BESS FENCELINE UPDATED TO COMMENTS			
	TG	JW	JA	15.07.22
02	SITE ACCESS ROAD AMENDED TO SUIT TRANSPORT			
	TG	JW	JA	12.07.22
01	FIRST ISSUE			
	JW	JA	JA	26.04.22
REV	DESCRIPTION			
	DESIGNED	CHECKED	APPROVED	DATE

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Project: **ANGLO RENEWABLES WHITES FARM 50mw/100MWh BESS**

Title: **OVERALL SITE LAYOUT**

Drawing Status: **PRELIMINARY**


Grid Ref (6 fig): TQ700914
 Site address: WHITES FARM
 WASH ROAD
 NOAK BRIDGE
 BASILDON
 ESSEX
 SS15 4AZ

DWG No:	SCALE (A1):	REV:
EPC-0485-PL-E-LA-OA	1:1000	03

Appendix B
ATC Survey

11032 BARLEYLANDS										
JANUARY 2022										
Site	Location	Direction	Start Date	End Date	Posted Speed Limit (PSL)	Total Vehicles	5 Day Ave.	7 Day Ave.	Average 85%ile Speed	Average Mean Speed
Site No: 11032001	Barleylands Rd, Barleylands, Essex 51.595438, 0.447491	Channel: Northbound	Sat 15-Jan-22	Fri 21-Jan-22	NSL	29274	4409	4182	43.1	36.5
		Channel: Southbound	Sat 15-Jan-22	Fri 21-Jan-22		24548	3532	3507	42.5	35.9

Direction	Recorded 85%ile speed		survey weather conditions	Wet weather design speed (with adjustment where appropriate)			Criteria	reaction time	deceleration rate	gradient	stopping sight distance	bonnet adjusted SSD
	mph	kph		mph	kph	m/s		s	m/s ²	%	m	m
Channel: Northbound	43.1	69.4	dry	40.6	65.4	18.2	MfS	1.5	4.4	0.0	64.6	67.0
Channel: Southbound	42.5	68.4	dry	40.0	64.4	17.9	MfS	1.5	4.4	0.0	63.0	65.4



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