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traffic engineering and transport planning


Harmony Energy


**Proposed Energy Storage Facility
Thame Road, Ilmer, Buckinghamshire
Transport Statement**

September 2021

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Proposed Energy Storage Facility Thame Road, Ilmer, Buckinghamshire Transport Statement

September 2021

Client Commission

Client: Harmony Energy

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LTP Quality Control

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LTP PROJECT TEAM

As part of our commitment to quality the following team of transport professionals was assembled specifically for the delivery of this project. Relevant qualifications are shown and CVs are available upon request to demonstrate our experience and credentials.

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PROPOSED ENERGY STORAGE FACILITY THAME ROAD, ILMER, BUCKINGHAMSHIRE TRANSPORT STATEMENT

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I. INTRODUCTION

I.1 Background

- 1.1.1 Local Transport Projects Ltd (LTP) has been commissioned to produce a Transport Statement (TS) in support of a planning application for two energy storage facilities on land associated with Bumpers Farm, Ilmer, Buckinghamshire. A plan of the proposed site layout is attached as Appendix 1.
- 1.1.2 The local planning authority for the site is Wycombe District Council (WDC), and the local highway authority is Buckinghamshire Council (BC). It is noted that although the local planning authority is WDC, planning matters are dealt with by BC.
- 1.1.3 LTP has also been commissioned to produce a Construction Traffic Management Plan (CTMP) for the proposed development, with the CTMP outlining the approach to mitigating the impact of construction traffic at the site.

I.2 Scope

- 1.2.1 The scope of this TS is based upon pre-application feedback provided by BC planning officer (ref: Faye Mesgian). This report is written in accordance with the Government's 'National Planning Policy Framework' (MHCLG, 2021) and 'Planning Practice Guidance' (DCLG, 2014), with the scope summarised below:

- **Introduction & Description of Proposals:**
 - Description of the development site, including location and any existing access arrangements;
 - Summary of relevant planning and allocation history for the site;
 - Description of the proposed development including site layout, pedestrian/cycle facilities and proposed access arrangements.
- **Site Assessment:**
 - Site assessments to determine existing traffic conditions, such as posted speed limits, road restrictions, highway geometry, on-street parking restrictions and any other relevant features of the local area;
- **Road Casualty Appraisal:** Examination of road collision records (5-year study period) and assessment of the road safety impact of the proposed development on the local highway network.
- **Traffic Impact:**
 - Calculation of the projected construction and operational trip generation for the proposed development;
 - Assessment of the likely traffic impact of the proposed development on the operation of the local highway network.
- **Highway Access Appraisal:** Assessment of the suitability of the proposed access from the public highway, based on swept path analysis of the largest vehicle expected to visit the site.

- **Conclusions:** Conclusions summarising the outcomes of the TS, including a commentary on the suitability of the proposals in terms of traffic impact and road safety.

1.2.2 This TS report has been prepared in accordance with the above scope and reference has been made to the following documents where appropriate:

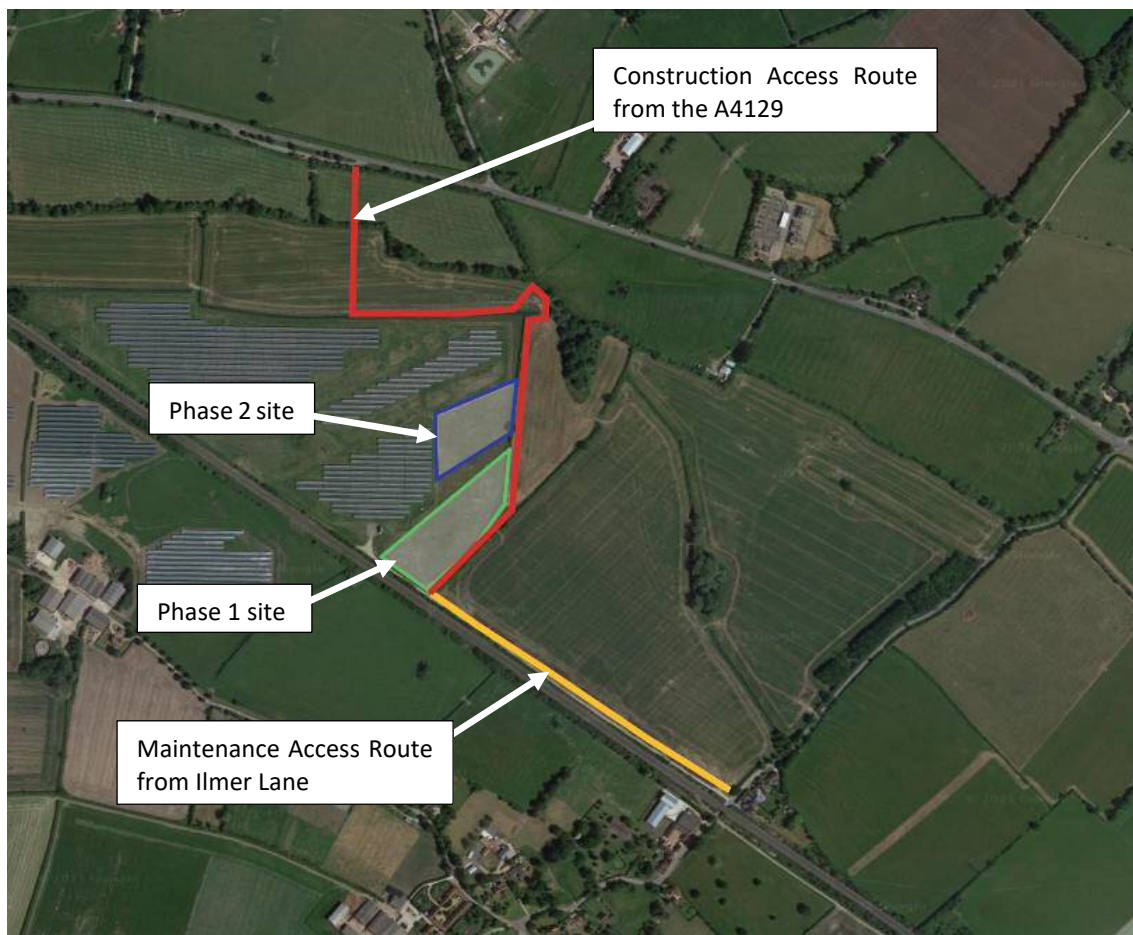
- National Planning Policy Framework (MHCLG, 2021);
- Wycombe District Local Plan (WDC, 2019);
- Buckinghamshire's Local Transport Plan 4 2016-2036 (BCC, 2016)
- Planning Practice Guidance (DCLG, 2014);
- Adopted Delivery and Site Allocations Plan (WDC, 2013)
- Manual for Streets 2: Wider Application of the Principles (CIHT, 2010);
- Guidance on Transport Assessment (DfT, 2007a); and
- Manual for Streets (DfT, 2007b);

2. SITE BACKGROUND

2.1 Site Location & Existing Use

2.1.1 The wider site is located to the north of the village of Ilmer, and approximately 4.5km to the north-west of Princes Risborough. The Phase 1 development site is bound by existing agricultural land to the north and east, the Chiltern mainline rail line to the south and an existing solar farm to the west. The Phase 2 development site is also bound by existing agricultural land to the north and east, with the existing solar farm forming the southern boundary and additional agricultural land forming the western boundary. The location of both sites in the context of the wider site and the proposed site access points are shown in Figure 1 below.

Figure 1: Site Location



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2.1.2 Despite the rural nature of the site, there are four existing dwellings on the south-eastern side of Ilmer Lane, opposite the proposed access point, that is to be utilised by maintenance vehicles only once the development is operational.

2.2 Development Proposals & Access Arrangements

- 2.2.1 This report is based upon the proposals shown on the site layout plan attached as Appendix 1. The development proposals consist of two parcels of land, with the parcel of land highlighted in green in Figure 1 forming Phase 1 which has extant planning approval (ref: 17/05825/FUL), and the parcel of land highlighted in purple forming Phase 2. Both parcels of land will comprise battery energy storage facilities.
- 2.2.2 The proposed battery energy storage facilities will be located adjacent to an existing solar farm, although it should be noted that they will be separately owned and operated facilities. The solar farm is accessed via an existing stone road extending from a gated access on Ilmer Lane, with maintenance vehicles associated with the storage facilities proposed to utilise this access once both sites are operational. It is understood that this stone road is in good condition, consisting of a compacted Type-1 sub-base surface over selected coarse graded material capping (e.g. Class 6F2 or similar) and a geo-textile membrane. The access is 7.0m wide at the gateway and junction with Ilmer Lane then goes on to form an approximately 3.5m wide access route that runs parallel to the railway embankment to the west and extends 650m between Ilmer Lane and the existing solar farm.
- 2.2.3 The delivery and construction/installation period of the proposed development is anticipated to take place over an approximate 16-week period. The trip generation projections associated with the proposed development are presented in Section 6 of this report.
- 2.2.4 As mentioned previously, vehicular access to the proposed development, once operational, will be gained via a priority junction with Ilmer Lane to the south-east of the site. During the construction period, vehicular access is proposed from a new access junction connecting to Risborough Road (A4129) to the north of the site.

2.3 Planning History

- 2.3.1 A full planning application for the *'creation of compound with 2.4m high boundary fence & gates housing 20 x banks of battery units, 20 x transformer units, 1 x metering room and 1 x 132/33kv transformer to provide energy balancing services to the national grid'* (ref: 17/05825/FUL) was submitted to BCC in March 2017. The planning application was approved in July 2018 and forms the parcel of land outlined in green within Figure 1. As such, the Phase 1 site considered within this TS forms a resubmission of the same development that was afforded planning approval in 2018.
- 2.3.2 It is understood that there have been no other recent pertinent planning applications relating to the development site.

3. SITE ASSESSMENT

3.1 Local Highway Network

3.1.1 Risborough Road is a two-way single carriageway that forms part of the A4129. The A4129 forms an east-west route between the towns of Princes Risborough and Thame, measuring approximately 7.3km within the vicinity of the proposed construction access. The road is subject to a derestricted (60mph) speed limit and forms Thame Road to the east, and Kingsey Road approximately 3.3km to the south-west of the proposed construction access. There are not any existing waiting/parking restrictions in place within the vicinity of the proposed construction access, although there are kerbs that demarcate the northern edge of the carriageway. It should be noted that the proposed construction access will be located within the existing layby and therefore it is likely that the layby will need to be temporarily closed during the construction period.

Figure 2: Risborough Road (A4129)



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- 3.1.2 Ilmer Lane is a two-way single lane carriageway that is subject to a derestricted speed limit (60mph) and is approximately 5m in width within the vicinity of the proposed maintenance access. The road does not have any road markings, and grass verges are located on both sides of the carriageway. In the vicinity of the proposed maintenance access, kerbs demarcate the northern side edge of the carriageway for approximately 75m. A hedgerow flanks the northern side of Ilmer Lane setback approximately 1.0m from the carriageway. The front gardens and hedges of private properties flank the southern side of the carriageway. Ilmer Lane does not have a significant gradient.
- 3.1.3 Visibility at the maintenance access is constrained to the right by the tunnel structure underneath the nearby railway bridge. The achievable visibility to the left is unobstructed providing a good level of visibility. The existing views are shown in Figure 3 and Figure 4 below.

Figure 3: View of Ilmer Lane to the West (Visibility to Right)



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Figure 4: View of Ilmer Lane to the East (Visibility to Left)

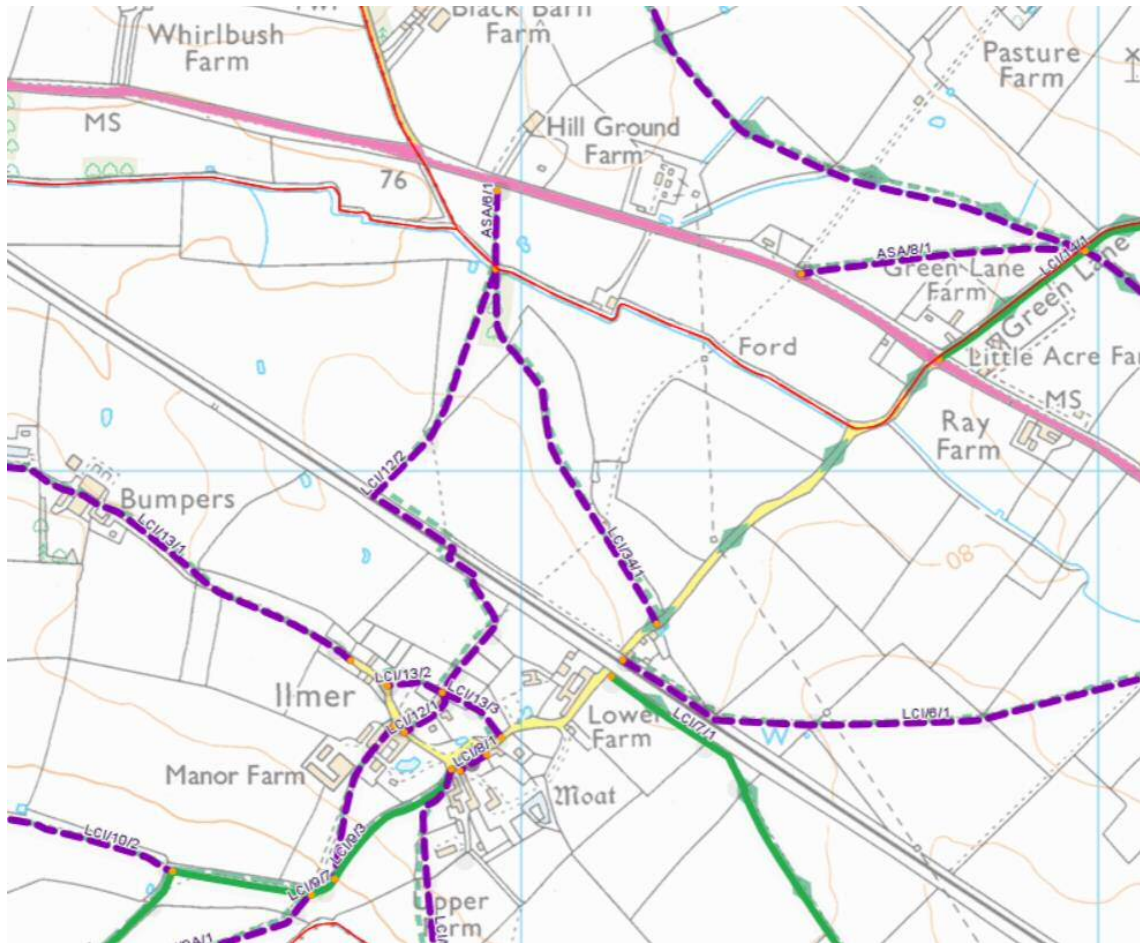


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3.2 Existing Public Rights of Way

- 3.2.1 Figure 5 shows the existing Public Rights of Way (PRoW) within the vicinity of the site, with public footpaths highlighted in purple and public bridleways shown in green. There is a public footpath (ref: LCI/12/2) that runs parallel to the maintenance access road and provides access to the public footpath (ref: LCI/34/1). Public footpath (ref: LCI/34/1) then connects with footpath (ref: ASA/6/1) providing access to the A4129 to the north.
- 3.2.2 There are a number of additional public footpaths and bridleways located within the village of Ilmer to the south of the site, including public footpath (ref: LCI/13/1) which runs through Bumpers Farm.

Figure 5: Existing Public Rights of Way



Source Imagery: BCC, 2021

- 3.2.3 No physical alterations to any of the PROW within the vicinity of the site are proposed as a result of the development proposals, including public footpath (ref: LCI/12/2) that runs adjacent to the maintenance access road.

4. ROAD COLLISION APPRAISAL

4.1 Collision Record

- 4.1.1 Personal Injury Collision (PIC) data for the highway network local to the site for the most recent available five-year study period (01/01/2015 to 31/12/2019) was obtained via a search of the Department for Transport’s (DfT) road safety data (DfT, 2021).
- 4.1.2 A total of five collisions occurred within the study area, which includes Risborough Road and Thame Road, which form part of the A4129, Ilmer Lane and several local junctions. The study area extents and the locations of the collisions are indicated on the plan attached as Appendix 2.

Table 1: Collision Summary

Factor	Collision Data				
Date	April 2015 (Wednesday)	June 2015 (Thursday)	November 2015 (Saturday)	July 2016 (Tuesday)	October 2018 (Monday)
Time	08:05 (AM)	20:21 (PM)	13:03 (PM)	No time given	16:51 (PM)
Lighting	Daylight	Daylight	Daylight	Daylight	Daylight
Weather	Fine without high winds	Fine without high winds	Fine without high winds	Fine without high winds	Fine without high winds
Road Surface	Dry	Dry	Dry	Dry	Dry
Casualty	SLIGHT – Car Occupant, 2 casualties (21 - 25 years and 26 – 35 years)	SERIOUS – Car Occupant, 1 casualty (66 – 75 years)	SLIGHT – Car Occupant, 1 casualty (21 - 25 years)	SERIOUS – Car Occupant, 1 casualty (16 - 20 years)	SLIGHT – Car Occupant, 2 casualties (36 – 45 and 46 – 55 years)
Location	A4129/Risborough Road simple priority T-junction	A4129/Risborough Road simple priority T-junction	A4129/Risborough Road simple priority T-junction	A4129 (not at a junction)	A4129 (not at a junction)

4.2 Road Safety Impact

- 4.2.1 A total of five collisions, resulting in seven casualties, have occurred within the study area during the five-year study period. Analysis of the study collisions has not revealed any identifiable existing collision issues associated with the expected movements of the proposed development. It is therefore considered that there are no existing road safety issues pertinent to the development of the site.
- 4.2.2 If the proposed construction access junction on the A4129 and internal roads are designed with due consideration to road safety, with appropriate highway design features incorporated into the detailed design of any schemes affecting the highway, then the proposals should not have a detrimental road safety impact on the local highway network and should not adversely affect the safety of other road users.

4.3 2020 Update

- 4.3.1 The DfT has released provisional part-year 2020 collision data covering the period 01/01/2020 to 30/06/2020. As the data is provisional, it is subject to change and does not contain all the information to allow full analysis to be undertaken. However, no collisions occurred in the study area in the first six months of 2020, therefore the findings of the above appraisal are unchanged.

5. HIGHWAY ACCESS APPRAISAL

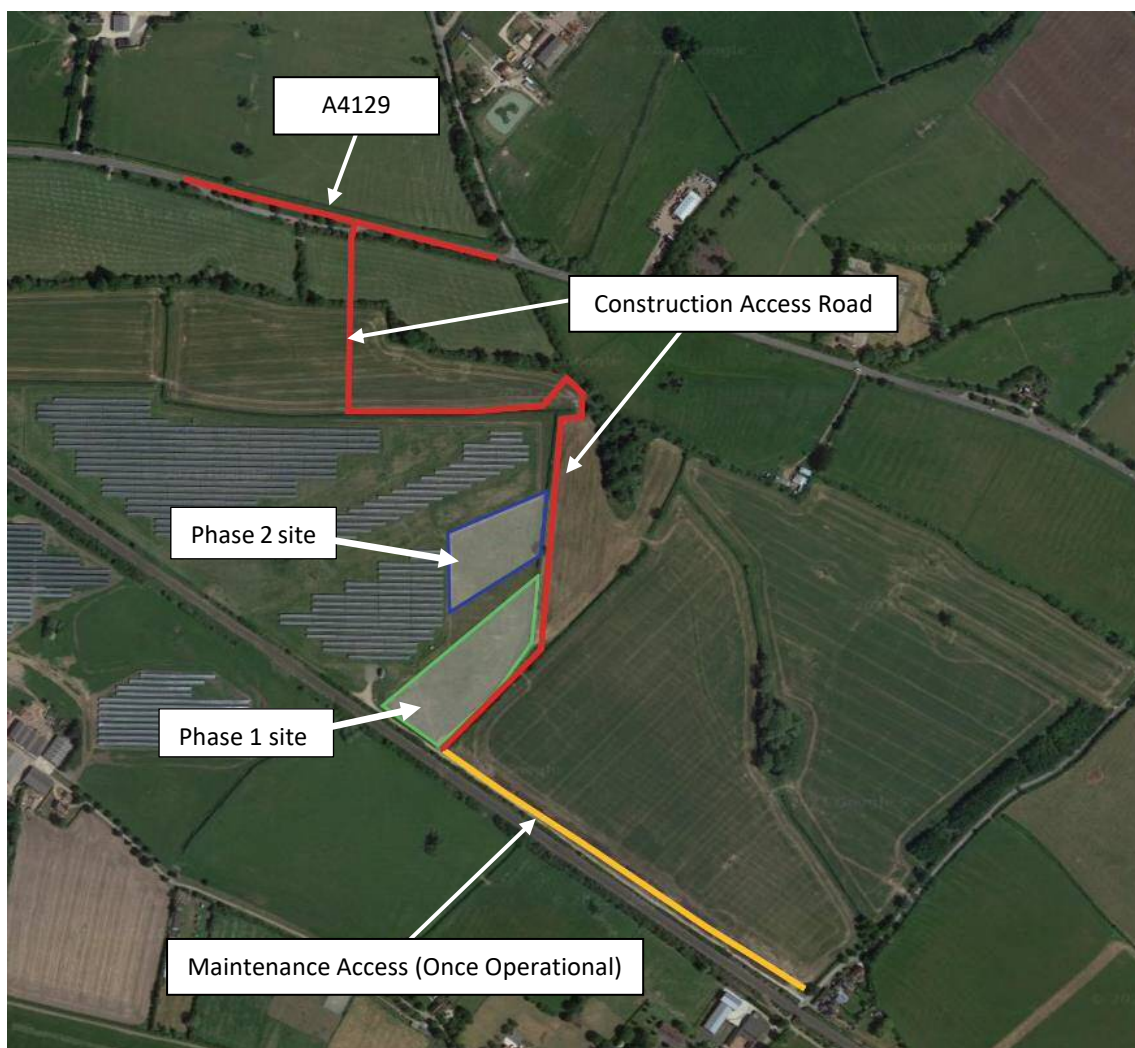
5.1 Proposed Routeing

5.1.1 The likely constraints relating to the routeing of Heavy Commercial Vehicles (HCVs) associated with the construction of the site have been considered. The route outlined below is to be utilised by all construction vehicles that access/egress the site during the construction phase:

- Vehicles arriving/departing the site are advised to arrive/depart via the A4129 with all construction vehicles then utilising the internal access road.

5.1.2 The proposed construction traffic route is highlighted in red within Figure 6 below.

Figure 6: Construction Traffic Routeing



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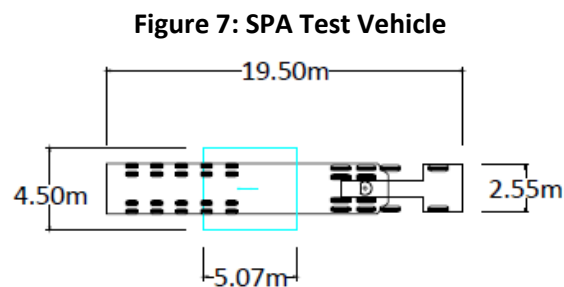
5.1.3 There do not appear to be any Traffic Regulation Orders (TROs) which restrict construction vehicle movements on the identified route. Given its 'A' road status and the A4129 offers the best connection to the wider highway network for construction vehicles. Once both sites are operational, vehicles will utilise the maintenance access road from Ilmer Lane.

5.1.4 All relevant parties involved in making deliveries of construction materials, once the construction of the site commences, will be instructed on the above routeing arrangements before arriving/departing the site. This arrangement is to be strictly enforced, and all sub-contractors and suppliers are to be monitored to ensure that they use the defined route.

5.2 Swept Path Analysis

5.2.1 Swept path analysis for the access/egress routes has been undertaken to establish whether the largest vehicle expected to access/egress the site can adequately navigate the route, with the results provided as Appendix 3.

5.2.2 Figure 7 provides the key details of the largest vehicle anticipated to access/egress the site which would be an Abnormal Indivisible Load Vehicle (AILV), a Semi Low-Loader which would carry the transformer load to the site, leaving it on-site and exit via the access/egress route unloaded. Exact details of vehicle and load type and configuration will need to be confirmed and agreed with a specialist haulage company prior to delivery.



**Semi Low-Loader (Rear Steer)
 with 66kv Transformer Load**

Tractor Width	2.55m	Lock to Lock Time	6sec
Tractor Track	2.55m	Steering Angle	24.5deg
Trailer Width	2.75m	Articulating Angle	70deg
Trailer Track	2.75m		

5.2.3 The results of the swept path analysis demonstrate that an AILV can adequately access/egress the site via the proposed access junction with the A4129 and the temporary construction access road.

5.2.4 The AILV movements will require specific traffic management (e.g. escort vehicles and banksman at the access) and any abnormal load movements on the highway would be undertaken in accordance with any applicable local highway authority guidelines, with appropriate notification and consultation with stakeholders.

5.2.5 Any traffic management or safety implications associated with any AILV movements requiring use of the full width of the carriageway will need to be considered by suitably qualified and experienced personnel when planning the transit of the abnormal loads.

5.2.6 It should be noted that the vast majority of delivery vehicle movements are expected to be carried out by standard articulated vehicles.

6. VEHICLE TRIP GENERATION

6.1 Introduction

6.1.1 This section outlines the number of vehicle trips that the proposed development is expected to generate. Due to the atypical nature of the proposals, the level of vehicle trips expected to be generated by the proposed development has been ‘built up’ from a first principles approach through input from the Applicant.

6.1.2 The traffic generation of the proposed energy storage facility is likely to consist of two main elements:

- Construction phase traffic; and
- Operational traffic.

6.1.3 The use of a first principles approach accords with previous DfT guidance which recommended that *“unless there is a clear valid comparable situation, the assessment trips should be constructed from first principles based on a detailed analysis of the daily operation of the proposed development”* (DfT, 2007a).

6.2 Construction Vehicle Trip Generation

6.2.1 The construction period for the energy storage facilities is expected to last for approximately four months (16 weeks), and will consist of the following construction phases:

- Stage 1 – Site Preparation;
- Stage 2 – Construction and Installation; and
- Stage 3 – Grid Connection, Commissioning and Testing.

6.2.2 Table 2 summarises the estimated construction traffic based on information provided by the Applicant.

Table 2: Estimated Construction Traffic Generation

Week	Number of Weekly HCV Two-Way Movements (per phase)																Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Stage 1	45	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
Stage 2	-	-	20	20	22	24	40	40	28	24	22	20	20	20	-	-	300
Stage 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4	10
Weekly Total	45	45	20	20	22	24	40	40	28	24	22	20	20	20	6	4	400

*The total may not represent the sum of its parts due to rounding.

6.2.3 As Table 2 shows, it has been estimated that a total of 400 two-way HCV movements will be generated during the 16-week construction period. During this period, it is envisaged that there will be some minor fluctuations in the actual number of HCV trips per week, for example when deliveries of ready mixed concrete are delivered to the site. However, for the purposes of this TS, the average HCV trip rates per week are considered to provide a robust basis for traffic management purposes.

- 6.2.4 It is expected that the maximum number of construction staff on-site will vary subject to the construction schedule. Staff trips will be made by cars, minibuses or vans/small Light Commercial Vehicles (LCVs). Staff vehicle movements would typically occur at the start and end of the working day and generally not coincide with the movement of large vehicles, which are expected to occur during the weekday daytime.
- 6.2.5 Car sharing amongst staff is to be promoted and will be a realistic travel mode for those staff who are employed by the same service company/sub-contractor (for example, civils contractor, electrical engineer). It is acknowledged that whilst the COVID-19 pandemic is ongoing the opportunities for car sharing may be limited.
- 6.2.6 Vehicle parking for site workers during all stages of construction will be accommodated on-site. No vehicles will park on the adjoining road network at any stage.

6.3 Operational Vehicle Trip Generation

- 6.3.1 Post-construction, i.e. once the site is operational, it is anticipated that there will be approximately 12 trips to the site per year to support site operations and general maintenance activities at both storage facilities. These will typically be made by light vehicles (cars or vans). While the temporary construction compound will be removed following construction completion, space will be retained on site for vehicles to turn around, ensuring vehicles can enter and exit in forward gear.

6.4 Traffic Impact

- 6.4.1 DfT guidance states that the assessment of transport impacts could be based on a threshold of “30 two-way peak hour vehicle trips” or “100 or more two-way vehicle movements per day”. This guidance acknowledged that this threshold was not to be applied rigidly, but rather that it provided a “useful point of reference from which to commence discussions”.
- 6.4.2 This national DfT guidance has now been superseded and replaced with the ‘National Planning Policy Framework’ (NPPF) (MHCLG, 2021) and its accompanying ‘Planning Practice Guidance’ (PPG) (DCLG, 2014). NPPF and PPG require that transport assessment is undertaken for “developments that generate significant amounts of movement”, although this is not defined. It is therefore acknowledged that there is no set threshold for assessment within the current national planning policy, so the proposals have been tested with reference to the previous and current guidance.

- 6.4.3 It is considered that the projected operational vehicle trip generation associated with the energy storage facility does not represent a significant amount of movement, with approximately 12 vehicle trips per annum generated by both storage facilities associated with site operations and maintenance activities, and a low number of daily/peak hour movements associated with construction. The proposed development should therefore only have a negligible impact on the operation of the local highway network. Therefore, as the impact of the proposals is not expected to be severe, the proposals are considered to be in accordance with the NPPF, which states 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”* (MHCLG, 2021).

7. CONCLUSIONS

- 7.1.1 Local Transport Projects Ltd (LTP) has been commissioned to produce a Transport Statement (TS) in support of a planning application for two energy storage facilities on land associated with Bumpers Farm, Ilmer, Buckinghamshire.
- 7.1.2 The delivery and construction/installation period of the proposed energy storage facility is anticipated to take place over a 16-week period.
- 7.1.3 Vehicular access to the proposed development site for maintenance vehicles (i.e. once the site is operational) will be gained via a priority junction with Ilmer Lane to the south of the site. For construction vehicles, access is proposed to be via a new access junction connecting to Risborough Road (A4129) to the north of the site.
- 7.1.4 A road casualty study has identified that five Personal Injury Collisions (PICs) occurred within the study area during the five-year study period. Analysis of the study collisions has not revealed any identifiable existing collision issues associated with the expected movements of the proposed development. Therefore, it is considered that there are no existing road safety issues pertinent to the development of the site. If the proposed site access junction and internal roads are designed with due consideration to road safety, with appropriate highway design features incorporated into the detailed design of any schemes affecting the highway, then the proposals should not have a detrimental road safety impact on the local highway network and should not adversely affect the safety of other road users.
- 7.1.5 Swept Path Analysis has been undertaken to establish whether the largest vehicle expected to access/egress the site can adequately navigate the route. The largest vehicle expected to access/egress the site would be an Abnormal Indivisible Load Vehicle (AILV) which will require specific traffic management (e.g. escort vehicles and banksman at the access). The results of the swept path analysis demonstrate that an AILV can adequately access/egress the site via the proposed access junction with the A4129 and the temporary construction access road.
- 7.1.6 The delivery and installation period of the proposed energy storage facilities will take place over a 16-week period. During this period, there would be trips associated with the arrival and departure of construction staff and the delivery of parts and construction materials. The energy storage facilities would operate, generally, on an unmanned basis, however it is understood that the facilities will generate approximately 12 vehicle trips per annum to support site operations and maintenance activities. These trips will be made by car and/or light vans and expected to visit both sites.

- 7.1.7 It is considered that the projected operational vehicle trip generation associated with the proposed development does not represent a significant amount of movement, with approximately 12 vehicle trips per annum generated by the development associated with site operations and maintenance activities, and a low number of daily/peak hour movements associated with construction. The proposed development should therefore only have a negligible impact on the operation of the local highway network. Therefore, as the impact of the proposals is not expected to be severe, the proposals are considered to be in accordance with the NPPF, which states 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”* (MHCLG, 2021).
- 7.1.8 It is concluded from the assessments of this TS that the proposed development would not be expected to have a detrimental impact in terms of road safety and traffic impact.

8. REFERENCES

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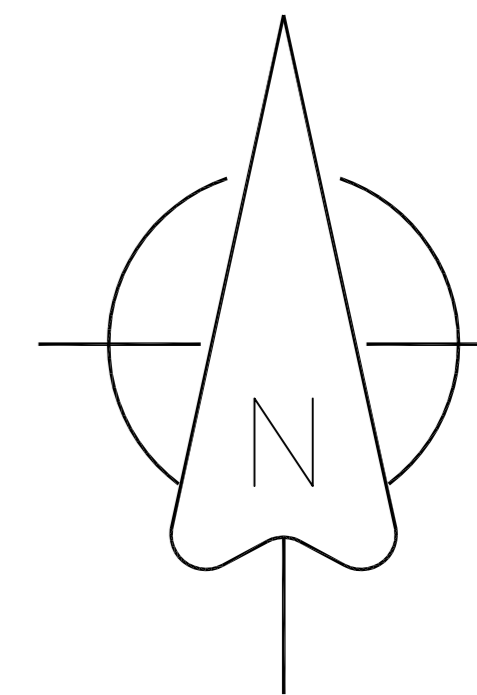
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WDC (Wycombe District Council), 2019. Wycombe District Local Plan.

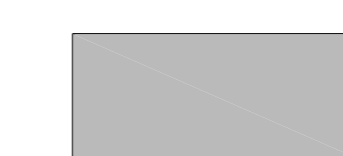
WDC, 2013. Adopted Delivery and Site Allocations Plan.

Appendix I – Proposed Site Layout Plan

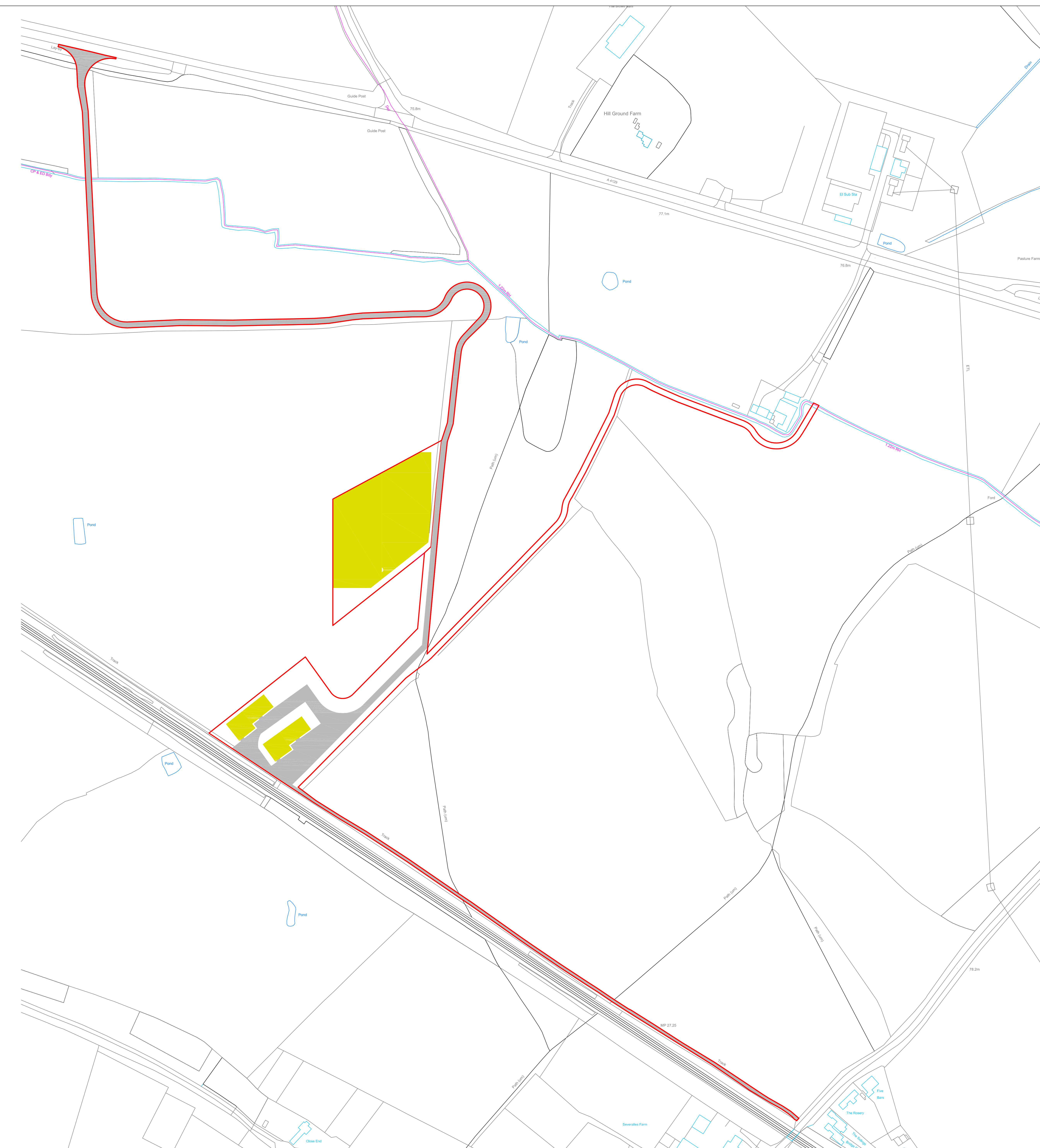
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KEY



Access Route



BLOCK PLAN

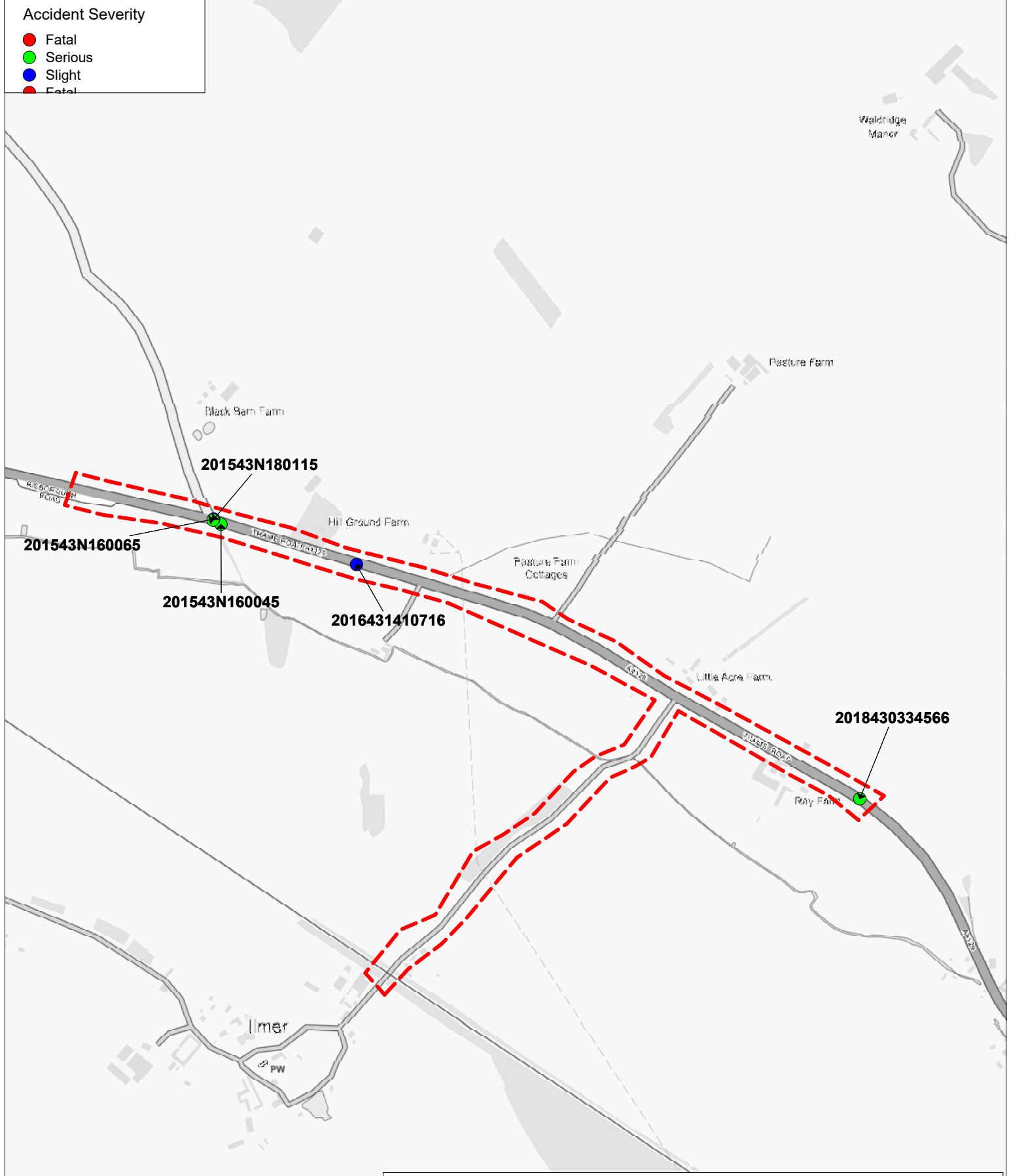
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Appendix 2 – Collision Plot

Accident Severity

- Fatal
- Serious
- Slight
- Fatal



Proposed Battery Energy Storage Facility, Thame Road, Ilmer

Collision Plot 2015-2020Q2, Produced by Local Transport Projects Ltd (EO 28/06/2021)

Collision data supplied by the Department for Transport under the Open Government licence. Contains Ordnance Survey Data (c) Crown Copyright & Database Rights 2021

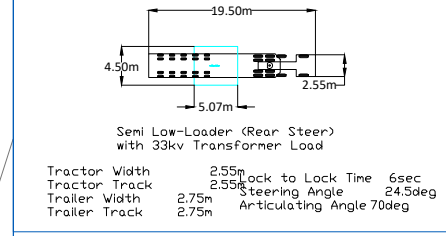
Appendix 3 – Swept Path Analysis



Key:-

	Outer Wheel Track
	Vehicle Swept Path
	Vehicle Centreline and Direction
	Load Swept Path on Trailer

- Notes:-**
1. Simulated speed - not more than 5 mph
 2. Actual vehicle dimensions and track may vary.



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 - vi. Based on site plan (Bumpers Planning Drawing (Transport 2021.07.09) provided by client.

Rev.	Date	By	Chk	Description
A	21/09/21	JC	MR	Updated to new site layout: Bumpers Planning Drawing (For PWA 2021.09.15) provided by client.

Client
Harmony Energy

Project
Proposed Energy Storage Facility
Thame Road, Ilmer,
Buckinghamshire

Title
Semi Low-Loader
Swept Path Analysis
Overview Sheet

local transport projects
traffic engineering and transport planning

INSTITUTE OF HIGHWAY ENGINEERS **25 000** **ITS**

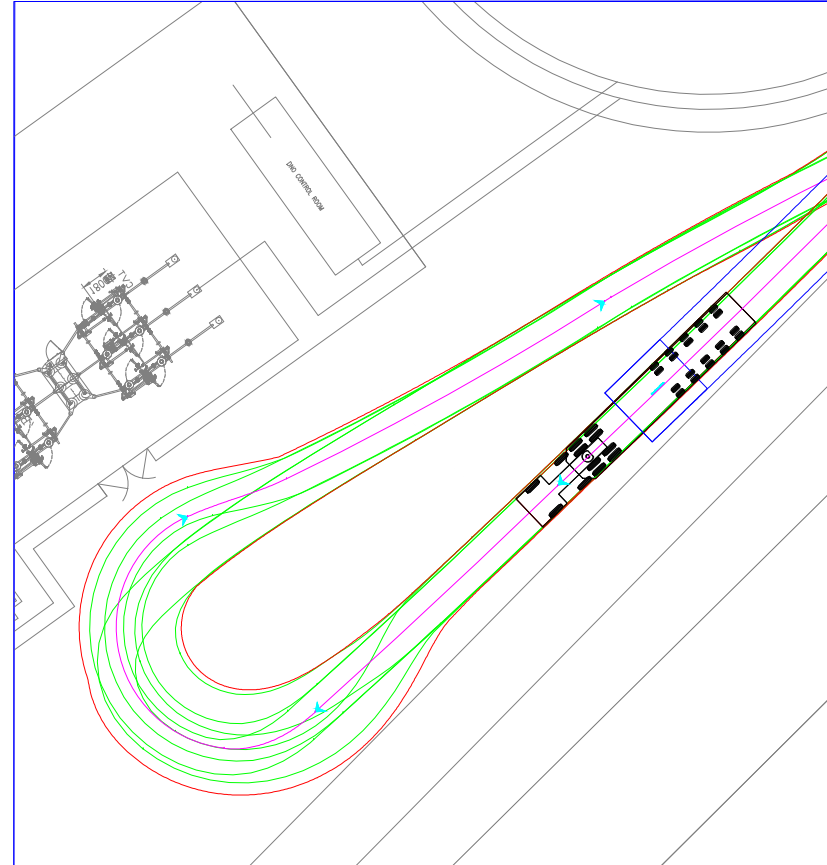
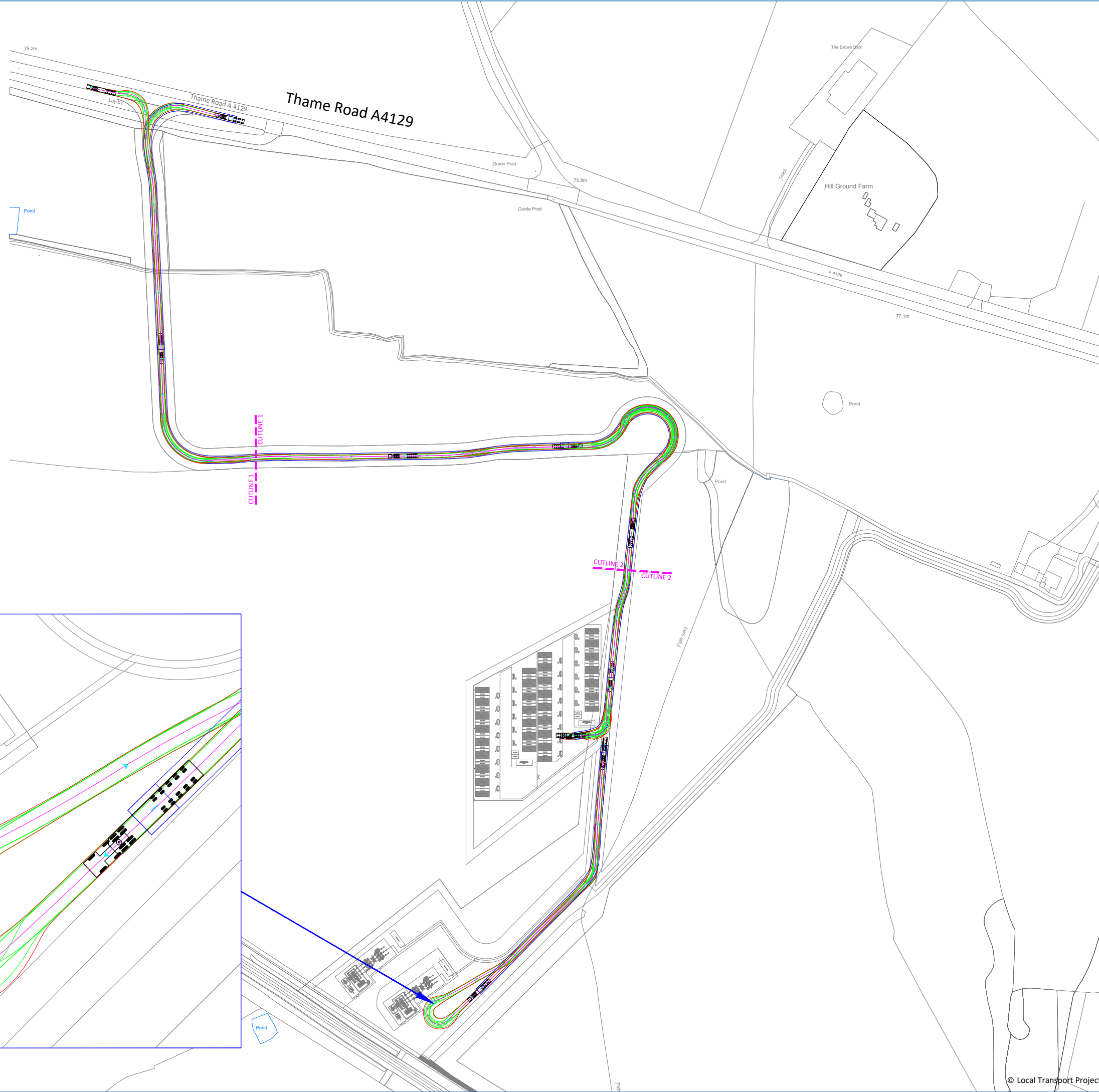
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The Flemingate Centre,
Beverley,
East Riding of Yorkshire.
HU17 0NW.

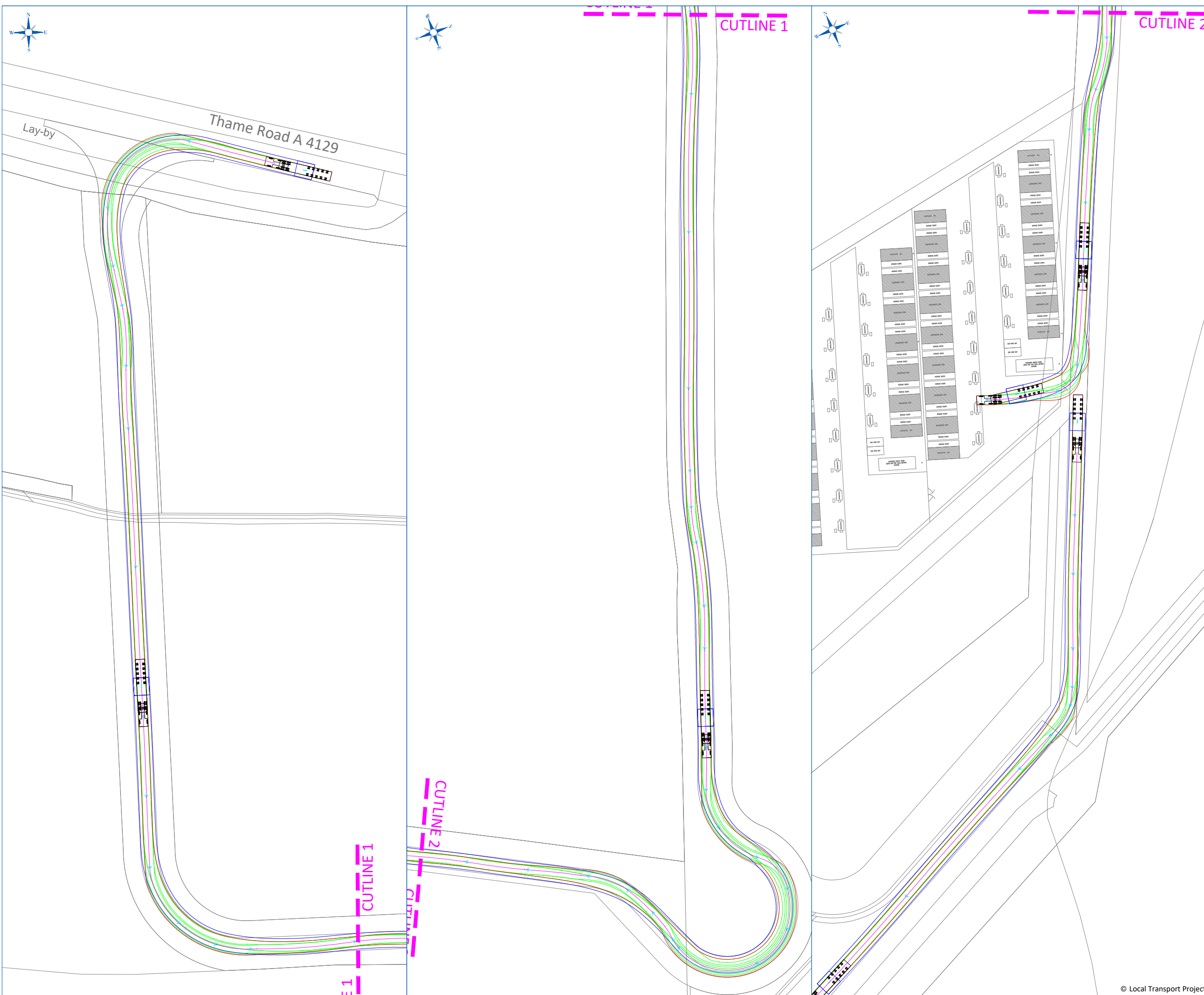
01482 679 911
info@local-transport-projects.co.uk
www.local-transport-projects.co.uk
Registered No. 5295328

Drawn	JC	Date	14 07 21
Scale	1 : 2500 / 1:500	Checked	EO
Status		Approved	MR

DRAFT

Drawing number				
Project	Job	Drawing	Sheet	Revision
LTP/2918/	T1/	00	01	A

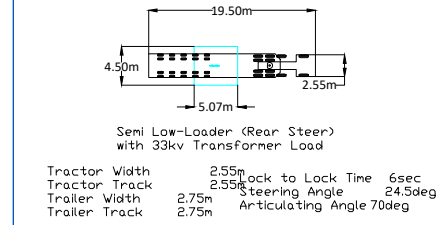




Key:-

	Outer Wheel Track
	Vehicle Swept Path
	Vehicle Centreline and Direction
	Load Swept Path on Trailer

- Notes:-**
1. Simulated speed - not more than 5 mph
 2. Actual vehicle dimensions and track may vary.



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Rev.	Date	By	Chk	Description
A	21/09/21	JC	MR	Updated to new site layout: Bumpers Planning Drawing (For PWA 2021.09.15) provided by client.

Client
Harmony Energy

Project
Proposed Energy Storage Facility
Thame Road, Ilmer,
Buckinghamshire

Title
Semi Low-Loader Entering Site
Swept Path Analysis

local transport projects
traffic engineering and transport planning

Armstrong House,
The Flemingate Centre,
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Drawn	JC	Date	14 07 21
Scale	1 : 1000	Checked	EO
Status	Approved MR		

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Drawing number

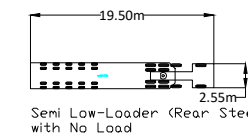
Project	Job	Drawing	Sheet	Revision
LTP/2918/	T1/	01	01	A

Key:-

	Outer Wheel Track
	Vehicle Swept Path
	Vehicle Centreline and Direction

Notes:-

1. Simulated speed - not more than 5 mph
2. Actual vehicle dimensions and track may vary.



Tractor Width	2.55m	Lock to Lock Time	6sec
Tractor Track	2.55m	Steering Angle	24.5deg
Trailer Width	2.75m	Articulating Angle	70deg
Trailer Track	2.75m		

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Rev.	Date	By	Chk	Description
A	21/09/21	JC	MR	Updated to new site layout: Bumpers Planning Drawing (For PWA 2021.09.15) provided by client.

Client
Harmony Energy

Project
**Proposed Energy Storage Facility
Thame Road, Ilmer,
Buckinghamshire**

Title
**Semi Low-Loader Exiting Site
Swept Path Analysis**

local transport projects
traffic engineering and transport planning

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Drawn	JC	Date	14 07 21
Scale	1 : 1000	Checked	EO
		Approved	MR

Status
DRAFT

Drawing number				
Project	Job	Drawing	Sheet	Revision
LTP/2918/	T1/	02	01	A

