

PWA Planning

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**Proposed Energy Storage Facility  
Tofts Lane, Hunshelf, Barnsley  
Transport Statement**

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March 2023

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## PWA Planning

# Proposed Energy Storage Facility Tofts Lane, Hunshelf, Barnsley Transport Statement

March 2023

### Client Commission

Client: PWA Planning Date Commissioned: April 2022

### LTP Quality Control

Job No: LTP/22/5084 File Ref: Tofts Lane Hunshelf TS Final Issue 1D

Issue	Revision	Description	Author	Checked	Date
1	D	Updated site plan	MR	-	27/03/2023
1	C	Updated construction timescales	MR	-	15/03/2023
1	B	Updated site plan	MR	-	09/01/2023
1	A	Updated site plans	MR	-	12/12/2022
1	-	Final issue for planning	ZB	MR/AC	07/10/2022
Authorised for Issue:					SW

### 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.

Team Member	LTP Designation	Qualifications
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Mike Raynor	Principal Transport Planner	BA(Hons) MIHE
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# PROPOSED ENERGY STORAGE FACILITY TOFTS LANE, HUNSHELF, BARNSELY 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 full planning application for a Battery Energy Storage System (BESS) on land to the south of Tofts Lane in Hunshelf, Barnsley. A plan of the proposed site layout is attached as Appendix 1.
- 1.1.2 The local planning and highway authority for the site is Barnsley Metropolitan Borough Council (BMBC).
- 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 This report is written in accordance with the Government's latest national planning policy 'National Planning Policy Framework' (MHCLG, 2021) and 'Planning Practice Guidance' (MHCLG, 2014), with the scope outlined 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, road 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:

- Draft Barnsley Transport Strategy (BMBC, 2022a);
- National Planning Policy Framework (MHCLG, 2021);
- Adopted Barnsley Local Plan (BMBC, 2019);
- South Yorkshire Local Transport Plan 2011-2026 (SYLTP, 2015);
- Planning Practice Guidance (MHCLG, 2014);
- 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 & Planning History

- 2.1.1 The proposed BESS is to be installed on land comprising existing agricultural land. The site is bound by Tofts Lane to the north, a combination of existing agricultural land and an existing substation to the south, with agricultural fields to the east and west. The approximate boundary of the development site is highlighted in blue within Figure 1 and the area of Biodiversity Net Gain (BNG) highlighted in yellow.

Figure 1: Site Location



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- 2.1.2 A full planning application (ref: 2017/0624) was submitted in May 2017 and subsequently approved in September 2017 on the application site for the *'formation of a battery energy storage facility with associated transformer cabling security fencing and CCTV Poles'*. The planning approval for the development has since expired with construction not started on-site. A Transport Briefing Document (Entrust, 2017) was submitted in support of the application.

## **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 will be seeking full planning consent to provide a BESS contained within a fenced compound, with further details of the development expected to be submitted as part of the planning application.
- 2.2.2 The delivery and construction/installation period of the proposed development is anticipated to take place over a 9-month period. The trip generation projections associated with the proposed development are presented in Section 6 of this report.
- 2.2.3 Vehicular access to the site is to be provided via a new access from Tofts Lane in the approximate location of the previously approved access (ref: 2017/0624). The access junction is to be utilised during the construction, installation and maintenance periods.
- 2.2.4 Vehicle parking for site workers during all stages of construction and operation will be accommodated on-site with no vehicles allowed to park or wait on the adjoining road network during any stage of the development.

### 3. SITE ASSESSMENT

#### 3.1 Local Highway Network

3.1.1 As previously mentioned in Section 2.2, the site is to be accessed via a new access connecting with Tofts Lane, which is a two-way single carriageway that measures approximately 4.0m in width and is not subject to any parking or waiting restrictions within the vicinity of the site. Tofts Lane is subject to a derestricted speed limit (60mph) with the entire length of the road subject to a 7.5 tonne weight restriction with an exemption for access. Approximately 570m to the west of the site, the road provides access to Underbank Lane via a simple priority T-junction with Tofts Lane continuing west. Approximately 50m to the west, the road provides access to Dyson Cote Lane and Salter Hill Lane at a simple priority T-junction. Approximately 150m to the south-east of the site, the road becomes Hunshelf Hall Lane at the simple priority T-junction with Mucky Lane.

**Photo 1: Tofts Lane**

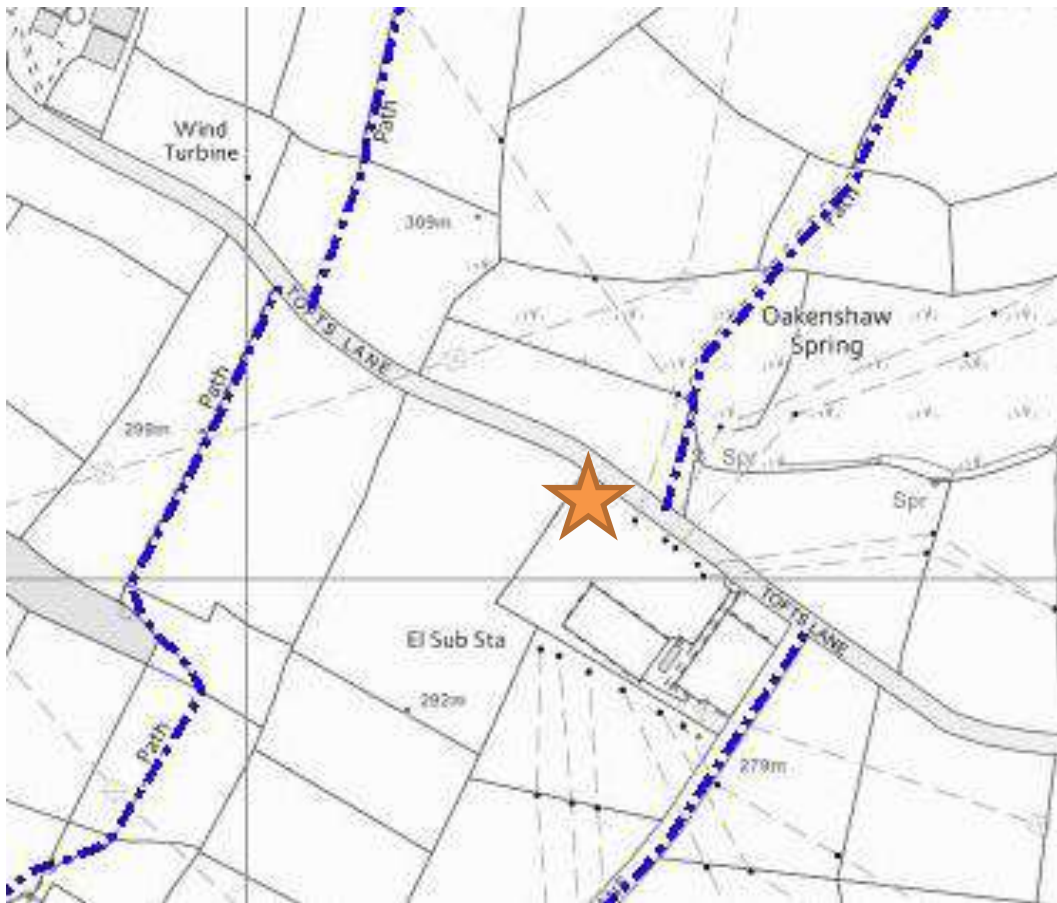


3.1.2 Underbank Lane is a two-way single carriageway that measures approximately 5.5m in width, is subject to a derestricted speed limit (60mph) and is not subject to any parking or waiting restrictions within the vicinity of the Tofts Lane junction. Approximately 1.2km to the south of the junction, Underbank Lane provides access to the B6088 via a priority T-junction, which provides access to the A616 (Stocksbridge Bypass).

### 3.2 Existing Public Rights of Way

3.2.1 Figure 2 shows the existing Public Rights of Way (PRoW) within the vicinity of the site with public footpaths highlighted in blue and site indicated by orange star. There are two public footpaths (ref: 4 and 33) within the vicinity of the site; Public Footpath 4 commences on the northern side of Tofts Lane and provides access to Pond Common Lane to the north. Public Footpath 33 is located approximately 150m to the south-east of the site and forms Mucky Lane. The local PRoW will not be affected by the development proposals.

Figure 2: Existing Public Rights of Way



Source: BMBC, 2022b

## 4. PERSONAL INJURY COLLISION ANALYSIS

### 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 (01/01/2016 to 31/12/2020) was obtained via a search of the Department for Transport's (DfT) road safety data (DfT, 2022).
- 4.1.2 Over the five-year period, two collisions occurred within the study area which covers sections of Tofts Lane, Underbank Lane, Salter Hill Lane, Hunshelf Hall Lane and a number of local junctions. The study area extents and the locations of the collisions are indicated on the plan attached as Appendix 2, with a summary of the PICs in Table 1 below:

**Table 1: Collision Summary**

Factor	Collision Data	
Date	20 <sup>th</sup> July 2016 (Thursday)	20 <sup>th</sup> August 2017 (Saturday)
Time	13:54	10:00
Lighting	Daylight	Daylight
Weather	Fine (no high winds)	Fine (no high winds)
Road Surface	Dry	Wet or Damp
Casualty	SLIGHT – Female Car Driver (26-45 years old) SLIGHT – Female Car Passenger (26-45 years old)	SLIGHT – Female Car Driver (26-45 years old) SLIGHT – Male Cyclist (46-65 years old)
Location	Tofts Lane (between the Tofts Lane/Underbank Lane and Dyson Cote Lane/Salter Hill Lane junctions)	Tofts Lane (between the Tofts Lane/Underbank Lane and Dyson Cote Lane/Salter Hill Lane junctions)

### 4.2 Road Safety Impact

- 4.2.1 A total of two slight collisions, resulting in four casualties, have occurred within the study area during the five-year study period. Analysis of the study collisions has not revealed any identifiable existing collisions issues associated with the movements of the proposed development. Therefore, it is considered that there are not any existing road safety issues pertinent to the development of the site.
- 4.2.2 If the access junction and internal roads are designed with due consideration to road safety, with appropriate highway design features incorporated into the detailed design, 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 2021 Update

- 4.3.1 The DfT has released provisional part-year 2021 collision data covering the period 01/01/2021 to 30/06/2021. As the data is provisional, it is subject to change and does not contain all the information to allow full analysis to be undertaken. As shown in Appendix 2, no additional collisions occurred within the vicinity of the site during this period. It is therefore considered that the findings of the above appraisal are unchanged.

## 5. HIGHWAY ACCESS APPRAISAL

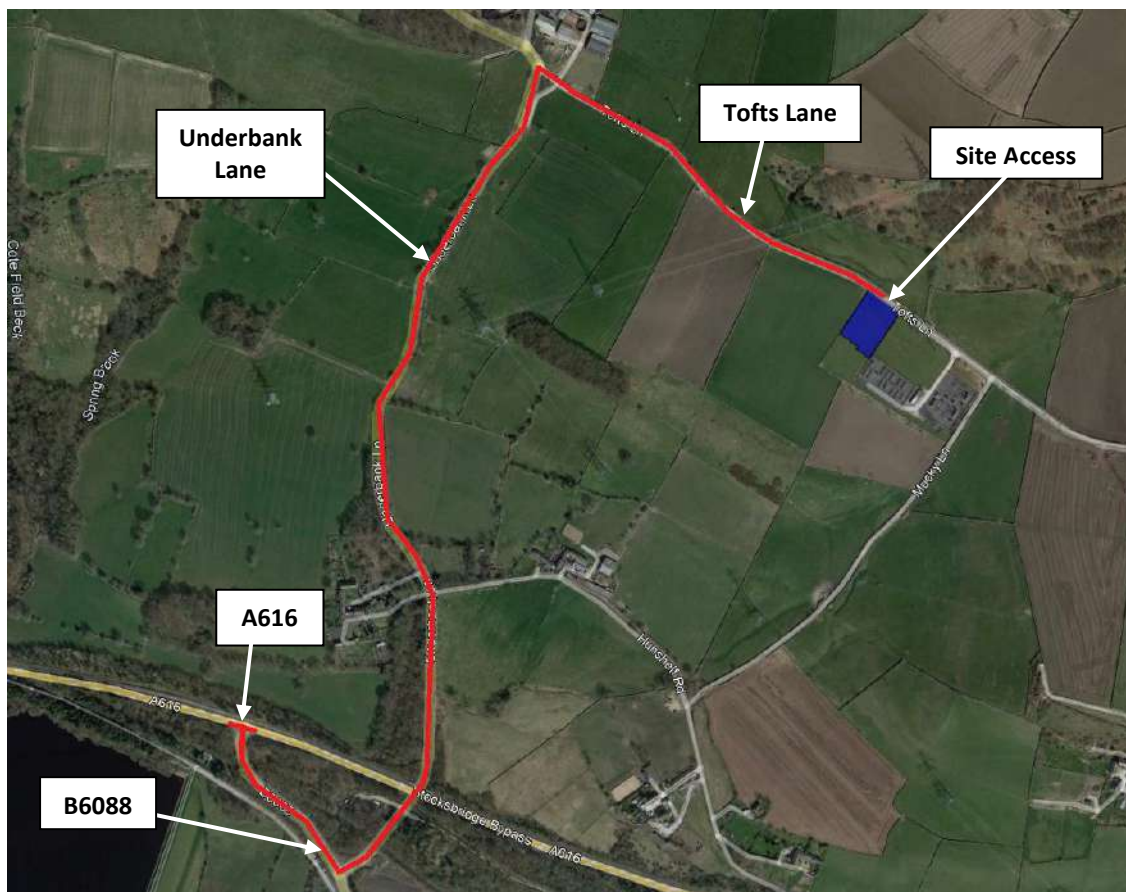
### 5.1 Proposed Routing

5.1.1 The likely constraints relating to the routing of Heavy Commercial Vehicles (HCVs) and Abnormal Indivisible Load Vehicles (AILVs) associated with the construction of the site have been considered, with the proposed routing for all delivery vehicles that access/egress the site during the construction phase outlined below.

- Vehicles arriving at the site are advised to arrive via the following route: A616 – B6088 – Underbank Lane – Tofts Lane.

5.1.2 The route back to the primary road network (described as travelling away from the site) is the above routing reversed. The proposed construction traffic route is highlighted in blue within Figure 3.

Figure 3: Construction Traffic Routing



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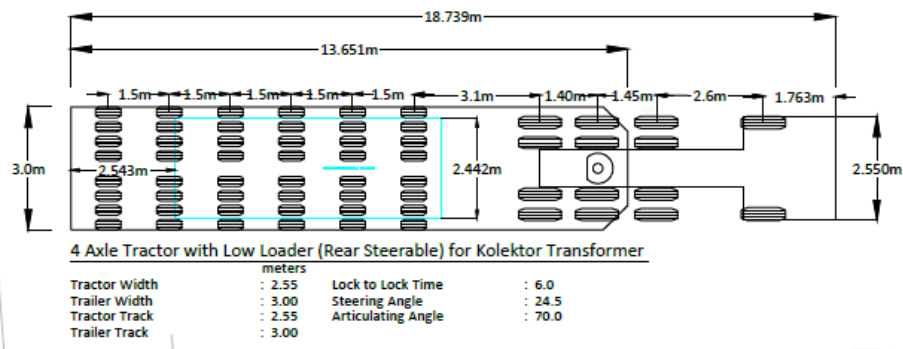
5.1.3 Construction staff trips made by car and/or Light Commercial Vehicles (LCVs) would also be expected to utilise the route outlined above to access/egress the site. Although there is not expected to be any constraints relating to cars/vans utilising the Hunshelf Hall Lane to the east or Salter Hill Lane to the west.

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 preferred routing 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 has been undertaken to establish whether the largest vehicle expected to access/egress the site can adequately navigate Tofts Lane and the route outlined in Section 5.1, with the results provided as Appendix 3. Information supplied by the Client outlines that the largest vehicle to access the site would be an AILV, a Semi Low-Loader, shown in Figure 4.

Figure 4: Swept Path Analysis Test Vehicle



- 5.2.2 The results of the swept path analysis demonstrates that an AILV can adequately access/egress the site via the proposed route, with some minor vehicle overrun/overhang on the grassed verge at the Tofts Lane/Underbank Lane simple priority T-junction.
- 5.2.3 BMBC Highways may request that pre-construction and post-construction road condition surveys are undertaken to establish whether any verge overrun has occurred during the construction period and therefore whether any remedial works would be required.
- 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 and National Highways (NH) 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 majority of delivery vehicle movements are expected to be made by vehicles of a smaller size than that tested within this report. It is considered that if an AILV is able to traverse the access route without issue, then other smaller vehicles (e.g. HCVs/LCVs) would also be able to adequately access and egress the site.

## 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 BESS 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 BESS is expected to last for approximately 9 months. Construction traffic generation over this period will total approximately 552 two-way HCV/AILV movements (arrivals and departures). Table 2 summarises the estimated HCV/AILV construction traffic based on information provided by the Applicant.

**Table 2: Estimated HCV/AILV Construction Traffic Generation**

Construction Phase*	Total HCVs	Two-Way HCV Movements	Average site staff per day
Phase 1 - Site Preparation	45	90	3
Phase 2 - Site Civils	70	140	4
Phase 3 - BESS equipment deliveries	25	50	4
Phase 4 - Mechanical installation	50	100	6
Phase 5 - Electrical installation	56	112	4
Miscellaneous	30	60	4
<b>TOTAL</b>	<b>276</b>	<b>552</b>	

\*Information provided by the Applicant.

- 6.2.2 It is expected that the maximum number of construction staff on-site will vary subject to the construction schedule but is expected to remain relatively low. Staff trips will be made by cars, minibuses or vans/small 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.
- 6.2.3 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).

- 6.2.4 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 Generally, the BESS would operate on an unmanned basis. It is understood that the BESS would generate approximately between 10 and 20 vehicle trips per annum to support site operations and general maintenance activities at the facility. These trips will be typically made by cars or LCVs (e.g. vans). Whilst the temporary construction compound will be removed following construction completion, space will be retained on-site for LCVs to turn around, ensuring vehicles can enter and exit in a 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) (MHCLG, 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 development does not represent a significant amount of movement, with between 10 and 20 vehicle trips per annum (less than 2 per month) generated by the BESS 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).

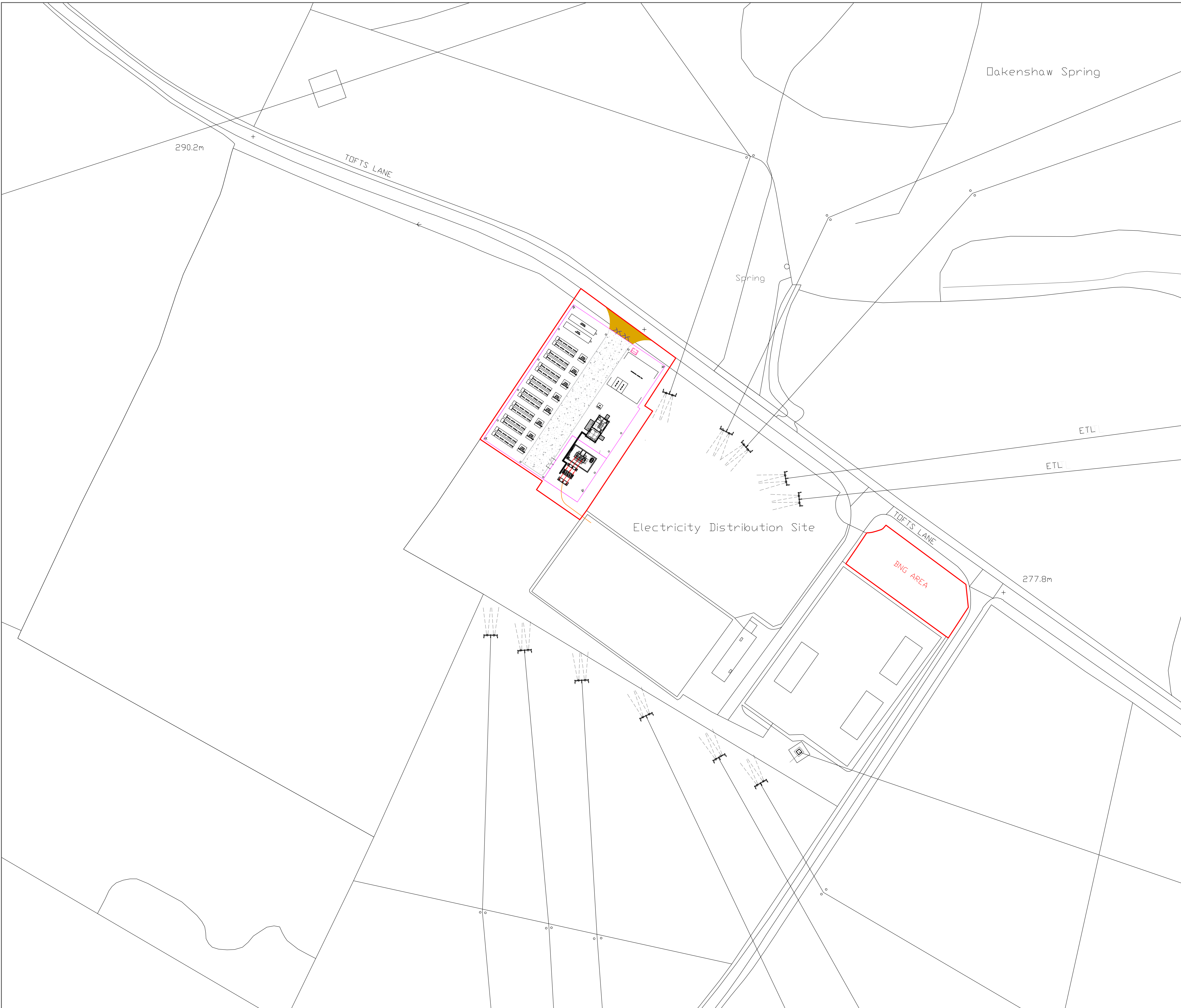
## 7. CONCLUSIONS

- 7.1.1 Local Transport Projects Ltd (LTP) has been commissioned to produce a Transport Statement (TS) in support of a full planning application for a Battery Energy Storage System (BESS) on land to the south of Tofts Lane in Hunshelf, Barnsley.
- 7.1.2 Vehicular access to the site is to be provided via a new access connecting with Tofts Lane in the approximate location of the previously approved access (ref: 2017/0624). The access junction is to be utilised during the construction, installation and maintenance periods.
- 7.1.3 A road casualty study has identified that two Personal Injury Collisions (PICs) occurred within the study area during the five-year and six-month study period. Due to the low number of collisions, it is considered that there are no existing road safety issues pertinent to the proposed development and that the proposals should not adversely affect the safety of other road users.
- 7.1.4 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 to access the site would be an Abnormal Indivisible Load Vehicle (AILV), with the results demonstrating that an AILV can adequately access/egress the site via the proposed access route, subject to some minor vehicle overrun/overhang at the Tofts Lane/Underbank Lane simple priority T-junction. It should be noted that the vast majority of large vehicle movements are expected to be made by HCVs, with only a small number of trips by AILVs. It is considered that if an AILV is able to traverse the access route then other smaller vehicles (e.g. HCVs/LCVs) would also be able to adequately access and egress the site.
- 7.1.5 The delivery and installation period of the proposed BESS will take place over a 9-month 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 facility would operate, generally, on an unmanned basis, however it is understood that the BESS will generate between 10 and 20 vehicle trips per annum to support site operations and maintenance activities. These trips will be made by car and/or light vans.
- 7.1.6 It is considered that the projected operational vehicle trip generation associated with the BESS does not represent a significant amount of movement, with between 10 and 20 vehicle trips per annum generated by the BESS 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).
- 7.1.7 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

- BMBC (Barnsley Metropolitan Borough Council), 2022a. Draft Barnsley Transport Strategy 2023-2033.
- BMBC, 2022b. BMBC Public Rights of Way Map [online: [www.barnsley.gov.uk/barnsley-maps/public-rights-of-way](http://www.barnsley.gov.uk/barnsley-maps/public-rights-of-way)].
- BMBC, 2019a. Barnsley Local Plan.
- BMBC, 2019b. Barnsley Local Plan Allocations Map.
- CIHT (Chartered Institute of Highways and Transportation), 2010. Manual for Streets 2: Wider Application of the Principles.
- DfT (Department for Transport), 2022. Road Safety Data [online: <http://data.gov.uk/dataset/road-accidents-safety-data>].
- DfT, 2007a. Guidance on Transport Assessment.
- DfT, 2007b. Manual for Streets.
- Entrust, 2017. Energy Storage – Transport Briefing Document.
- LTP (Local Transport Projects Ltd), 2023. Proposed Energy Storage Facility, Tofts Lane, Hunshelf, Barnsley. Construction Traffic Management Plan.
- MHCLG (Ministry of Housing, Communities & Local Government), 2021. National Planning Policy Framework.
- MHCLG, 2014. Planning Practice Guidance – Travel Plans, Transport Assessments and Statements in Decision-Taking (ID: 42-06/03/2014) [online: <http://planningguidance.planningportal.gov.uk>].
- SYLTP (South Yorkshire Local Transport Plan Partnership), 2015. South Yorkshire Local Transport Plan 2011-2026.

## **Appendix I – Proposed Site Layout Plan**

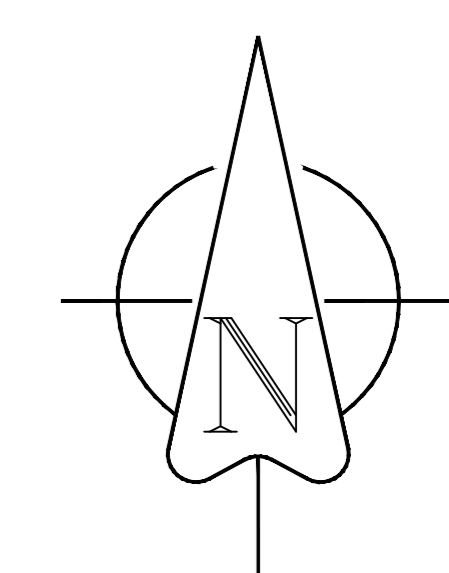


Notes:

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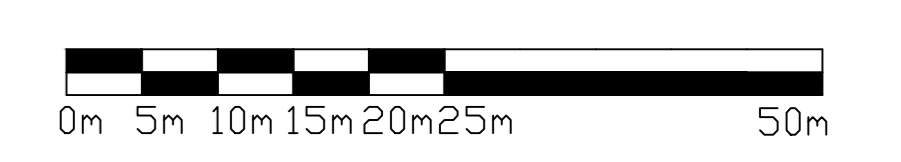
- Planning Application Boundary (0.48hectares)
- 2.4m High Palisade Fence
- Proposed new Access
- BESS Site internal Road
- Indicative Cable Route
- Metering Annexe



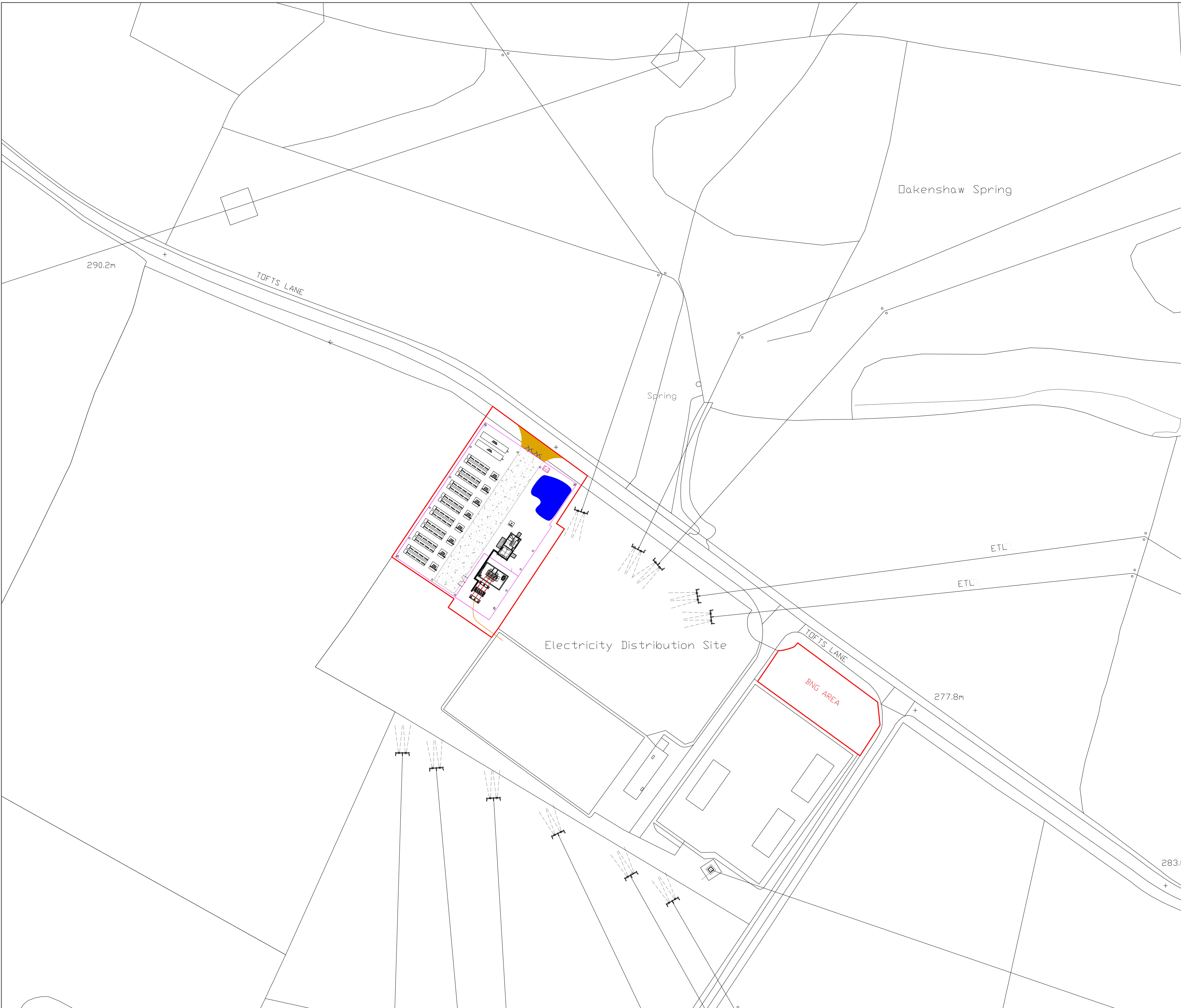
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STATUS:

**HARMONY ENERGY**  
 Conyngham Hall  
 Knaresborough  
 HG5 9AY



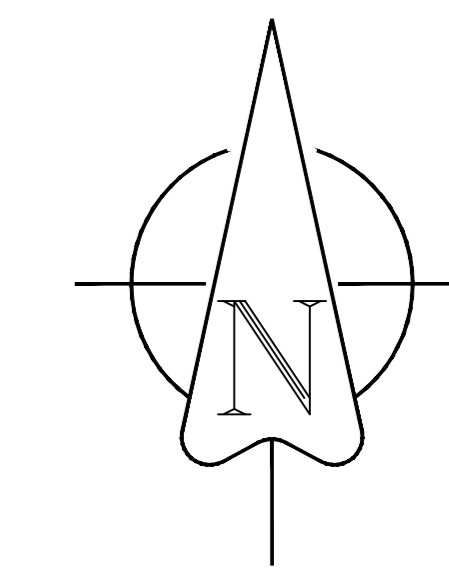
PROJECT: <b>HUNSHELF</b>			
TITLE: <b>PROPOSED SITE PLAN (CONSTRUCTION)</b>			
SCALE: A0 @ 1:500	DATE: 24/03/2023	DRAWN: EL	CHECKED: FN
DRAWING NO: HS_PSP_RevM			REVISION: M



Notes:

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- KEY:
- Planning Application Boundary (0.48hectares)
  - 2.4m High Palisade Fence
  - Proposed new Access
  - BESS Site internal Road
  - Indicative Cable Route
  - SUDS Drainage Pond
  - Metering Annexe

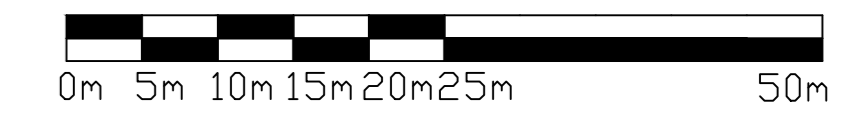


REV:	DESCRIPTION:	BY:	DATE:
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STATUS:

**HARMONY ENERGY**

Conyngham Hall  
Knaresborough  
HG5 9AY



PROJECT:  
**HUNSHELF**

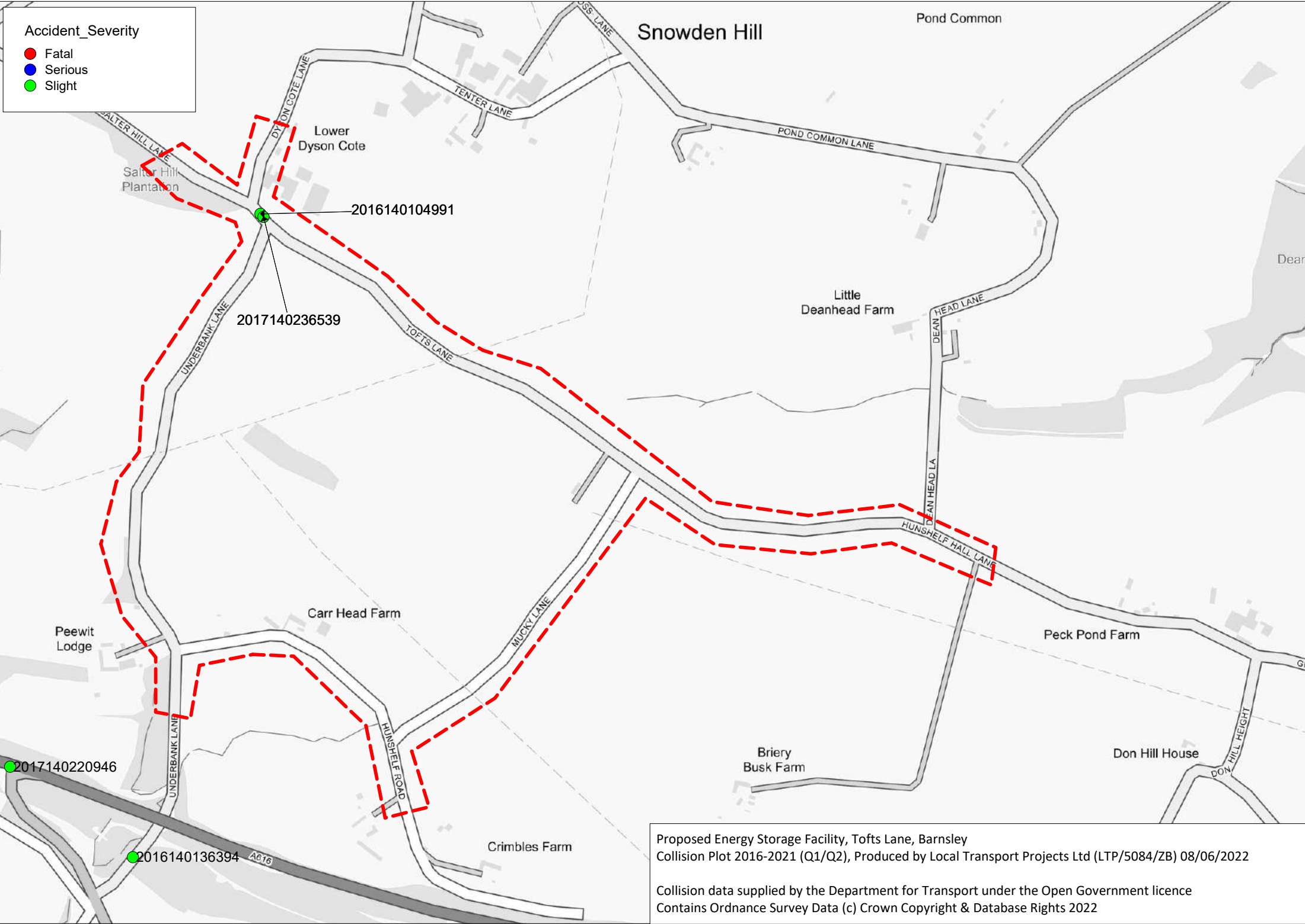
TITLE:  
**PROPOSED SITE PLAN (OPERATIONAL)**

SCALE: A0 @ 1:500	DATE: 24/03/2023	DRAWN: EL	CHECKED: FN
DRAWING NO: HS_PSP_RevM			REVISION: M

## **Appendix 2 – Collision Plot**

Accident\_Severity

- Fatal
- Serious
- Slight



Proposed Energy Storage Facility, Tofts Lane, Barnsley  
Collision Plot 2016-2021 (Q1/Q2), Produced by Local Transport Projects Ltd (LTP/5084/ZB) 08/06/2022  
Collision data supplied by the Department for Transport under the Open Government licence  
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## **Appendix 3 – Swept Path Analysis**



**Key:-**

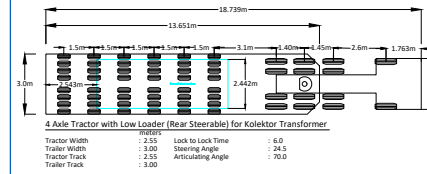
- OS Mapping
- Existing roadmarkings
- Proposed Site Layout

**SPA 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.



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A	27/03/23	JC	MR	Updated to new site plan hunshelf pwa provided by client. 27.03.23
Rev.	Date	By	Chk	Description

Client  
**PWA Planning**

Project  
**Proposed Energy Storage Facility  
Tofts Lane Barnsley**

Title  
**Semi Low Loader  
with Rear Steering  
Swept Path Analysis  
Overview Sheet**

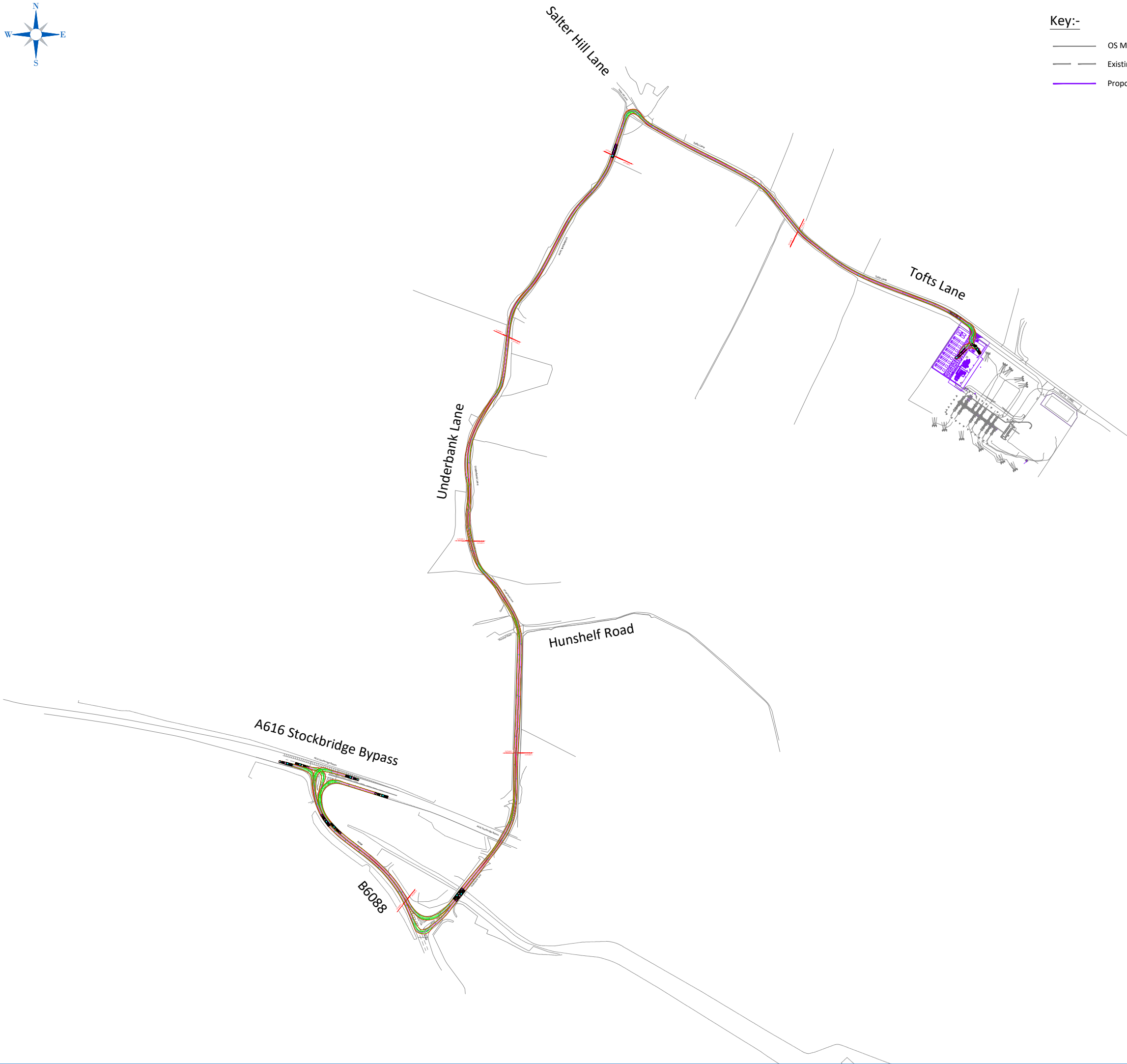


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Scale	1 : 5000	Checked	MR
		Approved	MR

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**SITE TESTING**

Drawing number				
Project	Job	Drawing	Sheet	Revision
LTP/5084/	T2/	00	00	A

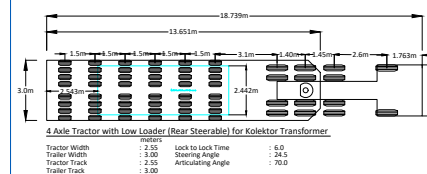


SPA Key:-

	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.



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Client  
**PWA Planning**

Project  
**Proposed Energy Storage Facility  
Tofts Lane Barnsley**

Title  
**Semi Low-Loader with Rear  
Steering Entering Site  
Swept Path Analysis  
Sheet 1 of 2**



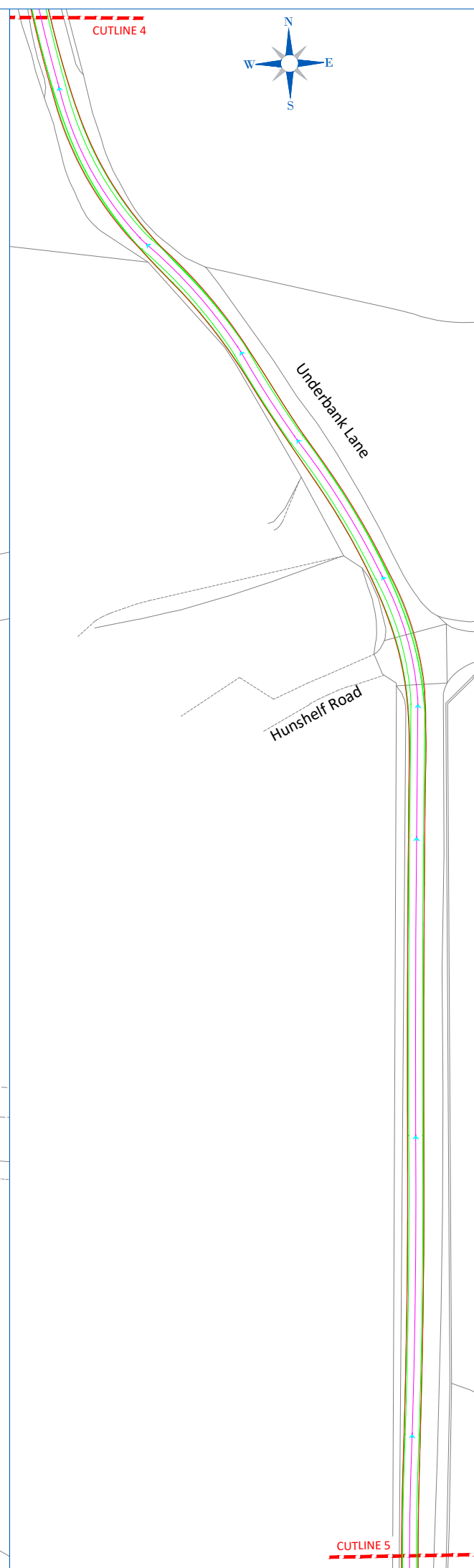
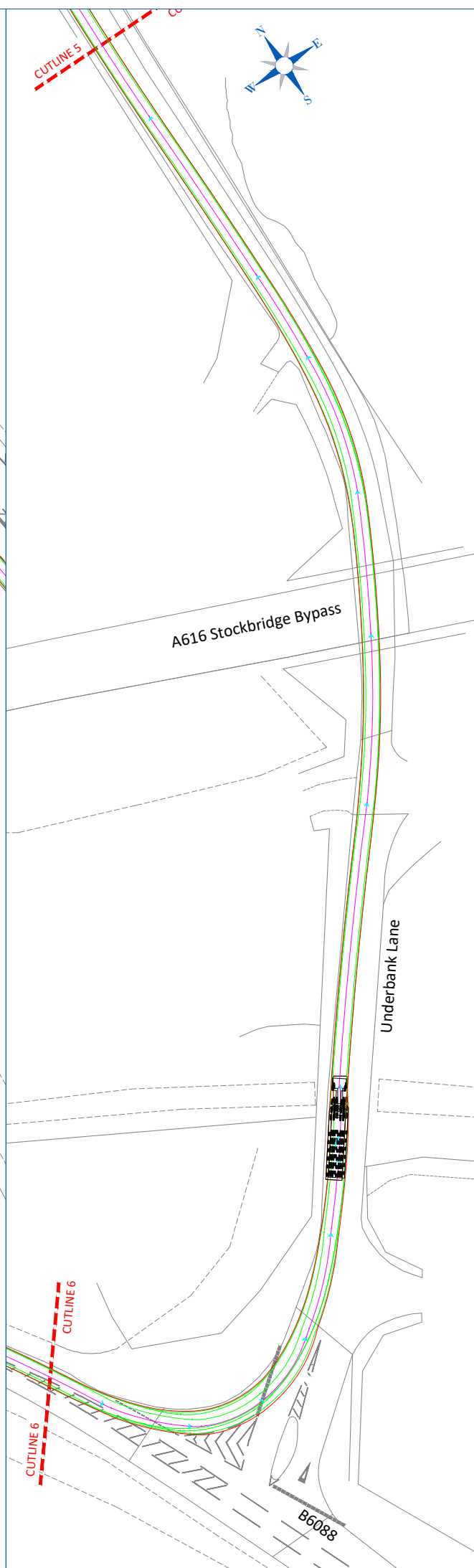
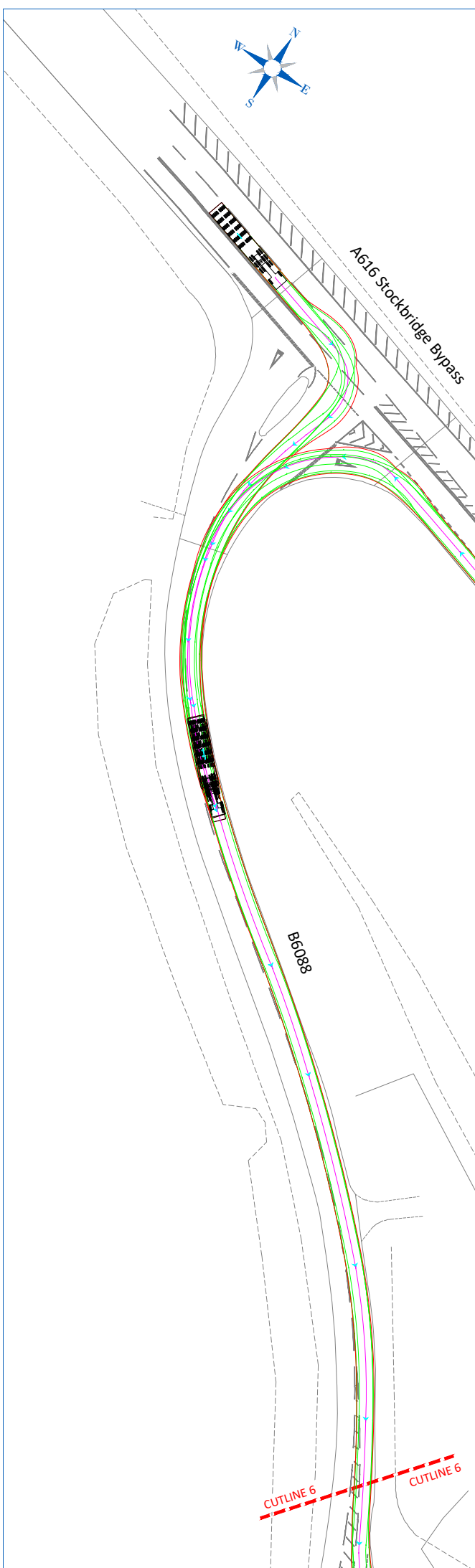
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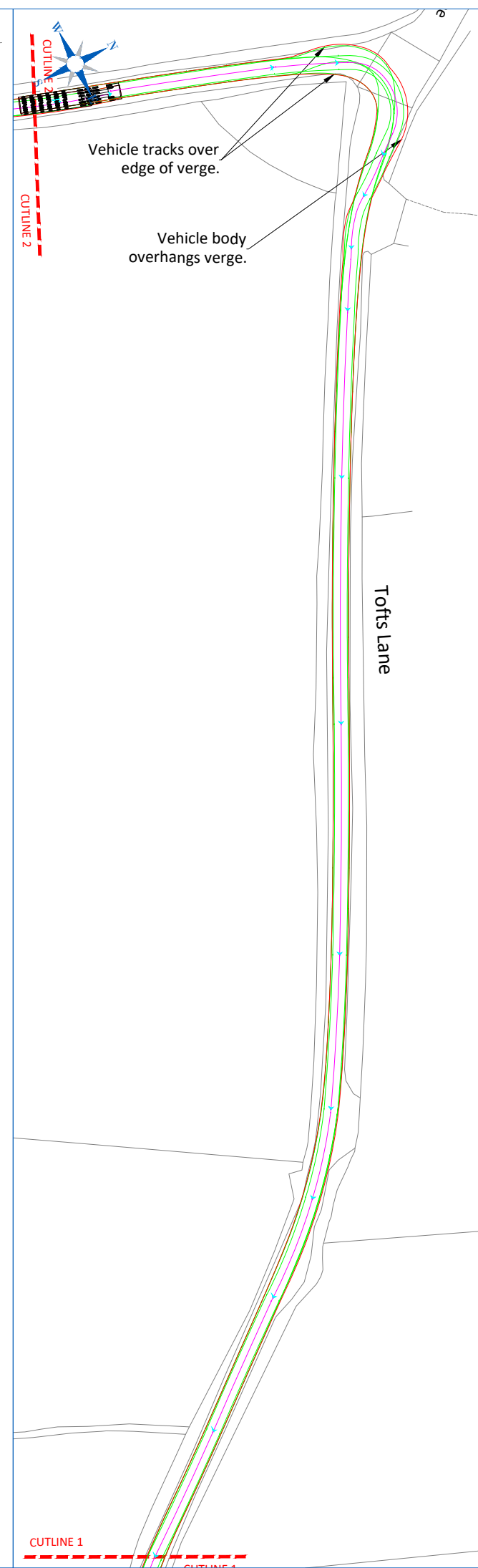
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**SITE TESTING**

Drawing number				
Project	Job	Drawing	Sheet	Revision
LTP/5084/	T2/	01	01	A



Key:-

- OS Mapping
- Existing Road Markings



Key:-

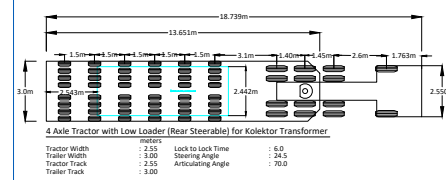
- OS Mapping
- Proposed Site Layout

SPA 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.



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Client  
**PWA Planning**

Project  
**Proposed Energy Storage Facility  
Tofts Lane Barnsley**

Title  
**Semi Low-Loader with Rear  
Steering Entering Site  
Swept Path Analysis  
Sheet 2 of 2**

**local transport projects**  
traffic engineering and transport planning

**PROFESSIONAL DEVELOPMENT PARTNER 2021**

**25 000**

**ITS**

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		Approved	MR

Status  
**SITE TESTING**

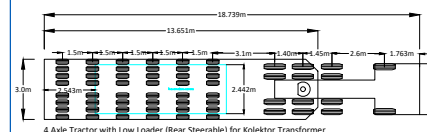
Drawing number				
Project	Job	Drawing	Sheet	Revision
LTP/5084/	T2/	01	02	A

**SPA 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.



4 Axis Tractor with Low Loader (Rear Steerable) for Kolektor Transformer			
Tractor Width	2.55	Lock to Lock Time	6.0
Tractor Track	2.50	Steering Angle	28.3
Trailer Track	1.00	Articulating Angle	70.0

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Client  
**PWA Planning**

Project  
**Proposed Energy Storage Facility  
Tofts Lane Barnsley**

Title  
**Semi Low-Loader with Rear  
Steering Exiting Site  
Swept Path Analysis  
Sheet 1 of 2**

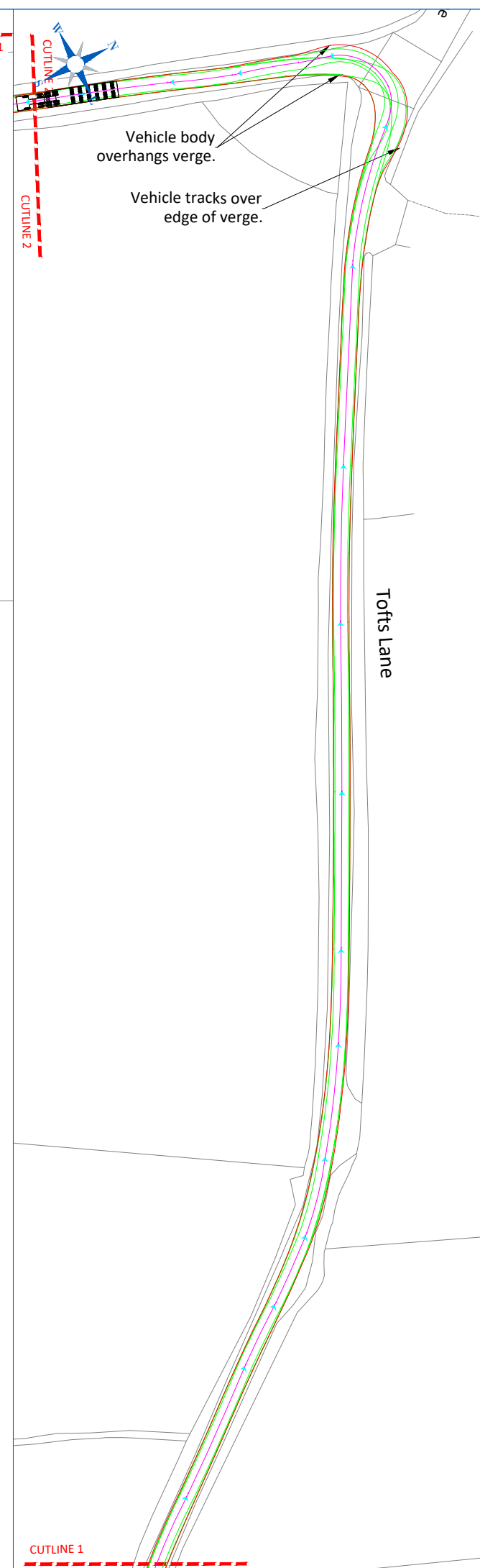


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Project	Job	Drawing	Sheet	Revision
LTP/5084/	T2/	02	01	A

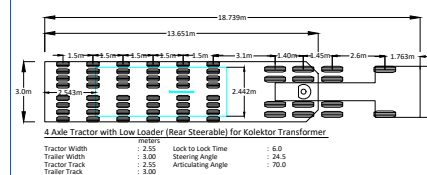


SPA Key:-

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	Vehicle Swept Path
	Vehicle Centreline and Direction

Notes:-

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LTP/5084/	T2/	02	02	A

Key:-

- OS Mapping
- Existing Road Markings

