



Proposed Battery Storage Facility Land off Dig Gate Lane, Rochdale

Transport Statement

Prepared for



Balance Power

December 2023
3471-01-TS01



Document Control

Revision	Date	Prepared By	Reviewed / Approved By
3471-01-TS01	December 2023	DC	ARB

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1.0 INTRODUCTION

1.1 Purpose of This Report

- 1.1.1 Axis has been appointed by Balance Power Projects Limited (hereafter referred to as 'the applicant') to provide highways and transportation advice to accompany a planning application to install and operate a Battery Storage Facility (hereafter referred to as 'BSF' or 'Proposed Development'), associated infrastructure and grid connection on land off Dig Gate Lane, Rochdale, Greater Manchester (hereafter referred to as 'the Site'). The proposed Site Layout Plan is included as **Appendix A**.
- 1.1.2 The purpose of this Transport Statement (TS) is to inform the Local Planning Authority (LPA) and the Local Highway Authority (LHA) of the anticipated highways and transportation matters associated with the Proposed Development. The relevant LPA and LHA in this context is Rochdale Metropolitan Borough Council (RMBC).
- 1.1.3 The BSF is only anticipated to give rise to very occasional vehicle movements once operational, as a result of routine maintenance requirements (approximately 1 visit per month), likely to involve the use of a small van or pickup. Primary transport-related effects would therefore be associated with the construction stages of the Proposed Development, which is anticipated to occur over a relatively short period of time. On this basis, this TS includes a review of existing local highway conditions, a review of the proposed site access arrangements, and an assessment of any anticipated impact that the construction of the BSF scheme may result in.
- 1.1.4 This TS has been prepared in accordance with national and local planning policy and guidance.

1.2 Report Structure

- 1.2.1 Following this introductory section, the structure of this TS is as follows:
- i) **Chapter 2** describes the existing highway conditions on and around the site, including reference to the local highway network, and a review of the accident record;
 - ii) **Chapter 3** sets out the development proposals, including a description of the site access arrangements;



- iii) **Chapter 4** sets out the anticipated trip generating potential of the scheme on the local highway network; and
- iv) **Chapter 5** provides the summary and conclusions.



2.0 EXISTING CONDITIONS

2.1 Introduction

2.1.1 This section of the TS describes the existing conditions on and around the Site, focussing on the site location, its existing use, access arrangements and the local highway network, including the recent accident history.

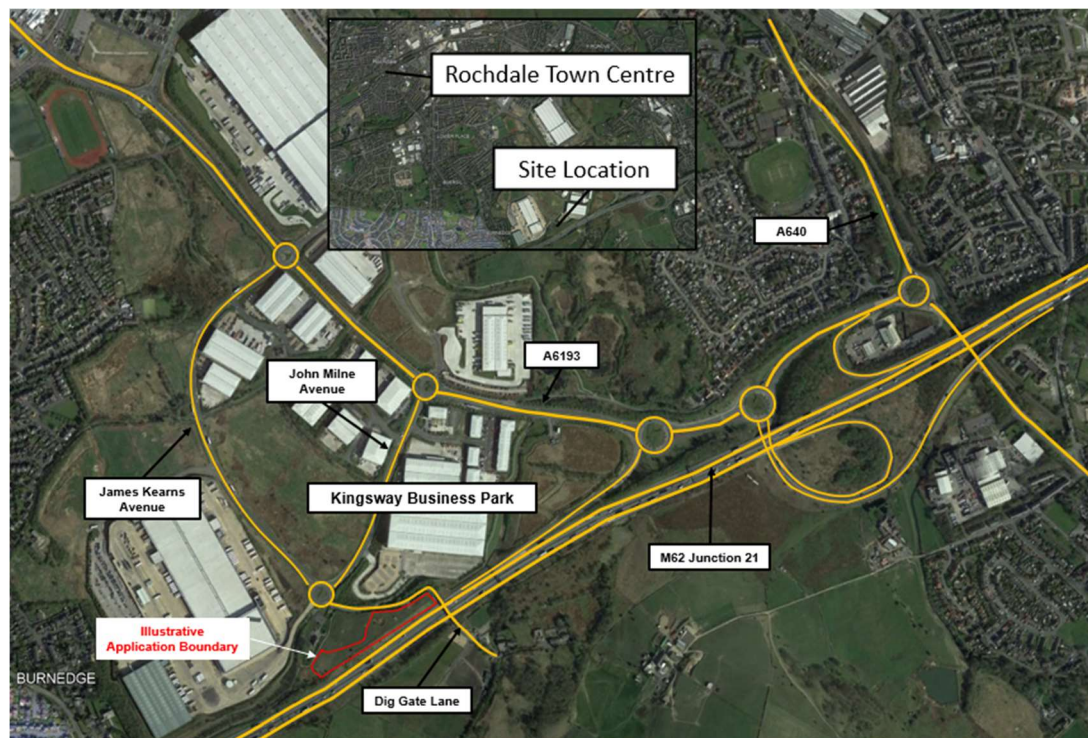
2.2 Site Location and Existing Use

2.2.1 The Site is located on land off Dig Gate Lane in Milnrow, Rochdale. The site is located at the southern edge of the Kingsway Business Park, approximately 3.0km south-east of Rochdale Town Centre.

2.2.2 The Site is approximately 0.8 hectares in area and currently comprises a horse pasture field which also includes a small pond, field shelter and electrical substation. The Site is bound to the north and east by Dig Gate Lane, to the west by industrial and commercial uses which form part of the Kingsway Business Park, and to the south by the M62 motorway.

2.2.3 The location of the Site is shown on **Image 2.1**.

Image 2.1 – Site Location



2.3 Description of Site and Local Highway Network

- 2.3.1 Vehicular access into the site is obtained from Dig Gate Lane via a gated access located at the north-eastern corner of the Site. It is proposed that this access will be utilised to provide access to the Proposed Development during both the construction and operational phases. Dig Gate Lane connects to John Milne Avenue and James Kearns Avenue via a 4-arm roundabout junction. Both of these roads provide a connection to the A6193 Sir Isaac Newton Way to the north of the Site.

2.4 Local Highway Network

A6193 Sir Isaac Newton Way

- 2.4.1 The A6193 Sir Isaac Newton Way is a two-way, primarily dual carriageway road which runs in an approximate east / west orientation. It runs between the A640 at the eastern end and the A664 at the western end, and directly connects to Junction 21 of the M62.
- 2.4.2 In the vicinity of the Site, to the east of the junction with John Milne Avenue the A6193 is a two-lane dual carriageway, with each carriageway having a width of approximately 7m. North-west of John Milne Avenue, the road reverts to a single carriageway with a width of approximately 9.5m.
- 2.4.3 A segregated shared footway and cycle path approximately 3m in width is present along both sides of the carriageway. The road is subject to a 40mph speed limit and street lighting is present.
- 2.4.4 Vehicular access to the Site during both the construction and operational phases is proposed to be taken from the A6193 via either John Milne Avenue or James Kearns Avenue. The implications of this are considered in more detail later in this TS.

John Milne Avenue / James Kearns Avenue

- 2.4.5 These roads form the internal spine road for the Kingsway Business Park, and effectively form a loop with both ends connecting to the A6193 via 4-arm priority roundabout junctions. Both are two-way, single carriageway roads with a carriageway width of approximately 7m. James Kearns Avenue runs south-west from the junction with the A6193 for approximately 190m before bending to the south-east for approximately 550m. John Milne Avenue runs south from the A6193 for



approximately 420m. The two roads meet at a 4-arm priority roundabout, at which Dig Gate Lane forms the eastern arm.

- 2.4.6 Both roads are subject to a 30mph speed limit and street lighting is present. There is a footway approximately 2.0m in width along the eastern side of John Milne Avenue and the southern and western sides of James Kearns Avenue. There is also a segregated shared footway and cycle path approximately 3m in width present along the northern and eastern sides of James Kearns Avenue and the western side of John Milne Avenue.

Dig Gate Lane

- 2.4.7 Dig Gate Lane is a private access road which runs in a general west / east alignment for approximately 500m from the James Kearns Avenue / John Milne Avenue roundabout, with the eastern end of the road terminating at Dig Gate Farm. The proposed site access junction would be located approximately 160m from the western end of the road. In the vicinity of the Site, Dig Gate Lane is a two-way, single carriageway road with a carriageway width of approximately 4.0m. There is no street lighting or footways present.

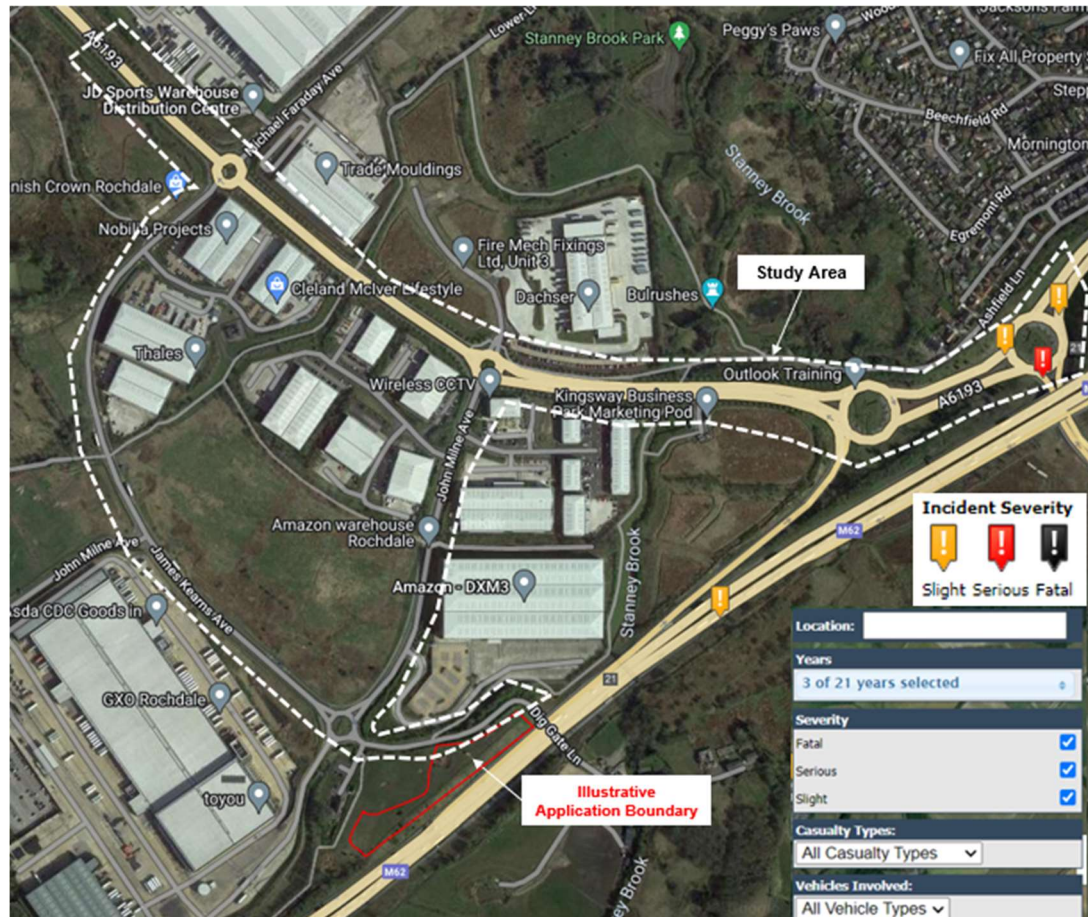
2.5 Highway Safety

- 2.5.1 Personal Injury Accident (PIA) data for the highway network in the vicinity of the Site has been obtained from the online CrashMap resource¹. Data was extracted for the most recently available five-year period which is from 2017 to 2021 inclusive. The location and severity of the accidents are shown on **Image 2.2**.
- 2.5.2 **Image 2.2** demonstrates that during this five-year period there have been no accidents along Dig Gate Lane, James Kearns Avenue, John Milne Avenue or the A6193 Sir Isaac Newton Way in the vicinity of the Site. Only three accidents during this period occurred at the A6193 / M62 Junction 21 westbound on- / off-slip road roundabout.

¹www.crashmap.co.uk

- 2.5.3 Overall, the accident record along the A6193 Sir Isaac Newton Way, James Kearns Avenue and John Milne Avenue in the vicinity of the Site is good and does not therefore represent a cause for concern in the context of the Proposed Development.

Image 2.2 – Road Safety Plan



2.6 Baseline Traffic Data

- 2.6.1 Baseline traffic flow data for the local highway network has been obtained from a permanent Department for Transport (DfT) automatic traffic count (ATC) site located on the A6193 approximately 0.9km north-west of the Site (site number 91280). This data shows a two-way average annual daily flow of approximately 11,700 vehicles in 2021. This represents an increase of approximately 40% compared to the pre-Covid19 level of flow, with approximately 8,160 two-way movements being recorded in 2019.

3.0 PROPOSED DEVELOPMENT

3.1 Development Scheme

3.1.1 A detailed description of the Proposed Development, including its construction and operation, is provided in Section 3.0 of the Planning Statement, whilst the Site Layout Plan (**drawing ref: 058-PL-OL164NR**, contained within **Appendix A**) illustrates the proposal, as summarised below:

- i) 28no. battery containers, with every 4no. containers supported by an inverter / Transformer container, situated at the south-western end of the Site;
- ii) A storage building, control room / welfare building, private substation and Distribution Network Operator (DNO) room would be located at the north-eastern end of the site, centred around a construction laydown area;
- iii) An auxiliary transformer set within a separate sub-compound secured by palisade fencing;
- iv) All of the above infrastructure would be surrounded by fencing with matching gates, and CCTV; and
- v) A new gravel access track along the south-eastern edge of the compound connecting to Dig Gate Lane.

3.1.2 The point of connection to the electricity grid would be at the Kingsway Primary Substation. The substation is located off James Watt Drive in the centre of the Kingsway Business Park, approximately 550m north of the Site. The connection would be installed below ground either by an independent connection provider / statutory undertaker under permitted development rights or by the Applicant. On the basis that the Applicant may install the grid connection (noting other approvals are required) permission is being sought as part of this planning application.

3.1.3 Planning permission for the Proposed Development is being sought on a temporary basis for 40 years (at point when development first becomes operational). Following this timeframe, and the cessation of energy operations, the infrastructure would be removed, and the Site restored to its present use and condition.

3.1.4 The Proposed Development would store power from the electricity transmission network (i.e. the grid) at times of excess supply and would feed this power back into the grid at times of high demand / reduced generation capacity. The Proposed



Development is referred to by NG as a 'balancing service', as it would assist in balancing grid frequency at times of system stress.

- 3.1.5 The Proposed Development would provide a flexible back-up power source to the grid and can respond rapidly to variations that result from a local and national energy demand, alongside increasing fluctuations in generation resulting from an ever-greater use of intermittent renewable energy sources. Accordingly, the Proposed Development would contribute towards ensuring that there is a reliable and constant supply of electricity across the grid. Full details regarding the operation and need for the Proposed Development is contained within Sections 3.0 and 4.0 of the Planning Statement.

3.2 Site Access Arrangements

- 3.2.1 During both the construction and operational phases, the Site would be accessed from the A6193 Sir Isaac Newton Way, with vehicles accessing Dig Gate Lane via either James Kearns Avenue or John Milne Avenue. The A6193 provides a direct route to the wider highway network at the M62 Junction 21, approximately 700m north-east of the Site.
- 3.2.2 Access to the BSF would be via a new priority junction from Dig Gate Lane, as shown in the Site Layout Plan in **Appendix A**. The extent of visibility available from this access is illustrated on **Drawing 3471-01-D01** in **Appendix B**. This demonstrates that a 2.4m x 45m visibility splay is available in both direction at this junction, in accordance with the stopping sight distances set out in Manual for Streets (MfS).
- 3.2.3 There is sufficient space within the Site to allow construction vehicles to turn round in order to exit the site in forward gear. **Drawings 3425-01-ATR01** and **3425-01-ATR02** in **Appendix C** illustrate swept path assessments of the Site access connection during the construction and operational phases, respectively.
- 3.2.4 This demonstrates that during the construction phase large vehicles such as rigid or articulated HGVs are able to access the Site from the A6193 Sir Isaac Newton Way, via either James Kearns Avenue or John Milne Avenue. It is proposed that a construction compound / HGV turning area will be provided within the Site boundary, which will allow vehicles to unload, turn round and exit back towards Dig Gate Lane.

3.2.5 It is proposed that temporary vehicle parking would take place on the land between the existing substation and the boundary with the M62 Motorway. However, further details of the proposed Site access, and / or any requirements for construction traffic management, would be outlined in greater detail within any Construction Environmental Management Plan (CEMP) associated with the Proposed Development, of which a Construction Traffic Management Plan (CTMP) would form a part.

3.2.6 The swept path assessment demonstrates that during the operational phase, the proposed internal access track is suitable to allow a 3.5t panel van to access all areas of the Site, turn around, and egress the Site in forward gear without issue.

3.3 Construction and Operation

Construction Phase

3.3.1 Construction of the Proposed Development is anticipated to be straightforward, and would comprise:

- i) Construction of Site access track;
- ii) Stripping of topsoils and laying a permeable geotechnical membrane, such as Terram, upon which gravel would be placed to form the Site compound;
- iii) Constructing the shallow foundations for the infrastructure and installing the boundary fencing and associated gates;
- iv) Installation of battery storage containers and ancillary items (i.e. Transformers, sub-station and communications room, etc.), which would all arrive as pre-fabricated units; and
- v) Completion of all electrical engineering connections.

3.3.2 Given that many of the elements would arrive at the Site pre-fabricated, the construction phase is anticipated to be fairly limited in terms of timescales, and could be complete in approximately 6-7 months.

Operational Phase

3.3.3 During the operational phase, the Proposed Development would be operated remotely and the system of communication between the grid and the facility is fully automated. As operations are fully automated, it would only be necessary for an operative to undertake a Site visit on a monthly basis. This would be undertaken by



an operative who would gain access as described previously, using a small van, pickup or equivalent vehicle.

4.0 TRAFFIC GENERATION

4.1 Introduction

4.1.1 As noted above, operation of the facility is only likely to require one visit per month by maintenance operatives, arriving at the Site in a pickup vehicle or similar. Operational phase traffic generation would therefore be minimal.

4.1.2 Peak trip generation would therefore be associated with the construction of the Proposed Development, albeit any such period of trip generation would clearly be temporary for only a relatively short length of time.

4.1.3 The anticipated trip generation associated with the construction of the Proposed Development has been estimated from first principles, based on experience of having promoted other BSF sites nationally and from information supplied by the Applicant.

4.2 Trip Generation during the Construction Period

4.2.1 In total, the construction schedule of the development proposals is expected to last for 30 weeks. Construction activities would take place for 5.5 days per week. This period would include for Site and access preparation, construction / installation of the BSF, and any final Site remediation.

4.2.2 The following assumptions have been made for each stage of the project's construction:

Enabling Works

- i) Would include Site clearance, stripping of soils / creation of bunds (using the excavated material), construction of Site access / internal access track, surfacing of Site area and setup of Site compound;
- ii) Anticipated to last a total of approximately 6 weeks; and
- iii) Up to 150 HGV trips expected (300 two-way movements – calculation detailed further below).

Main Construction Phase

- i) Would include for all civils work such as pouring of foundations, cutting of any trenches and laying of ducting, installation of battery storage containers and equipment, and installation of cabling and UKPN grid connection;
- ii) Anticipated to last up to 20 weeks; and
- iii) Based on the dimensions of each individual battery container, a standard 16.5m articulated HGV could accommodate a payload of 1 unit. Assuming a single HGV trip for each of the Transformer units and ancillary equipment, up to 100 HGV delivery trips are expected (200 two-way movements) during this phase of construction.

Post-Construction

- i) Would include for installation of fencing and CCTV equipment, removal of welfare facilities, and any remedial landscaping works;
- ii) Anticipated to last a total of approximately 4 weeks; and
- iii) Up to 40 HGV delivery / collection trips expected (80 two-way movements).

4.2.3 Review of the above information identifies that construction and implementation of the Proposed Development is anticipated to take a total of approximately 30 weeks and could give rise to 290 HGV trips (580 two-way movements) over the whole period.

4.2.4 Peak HGV trip generation would likely occur during the enabling works stage. Over this enabling works stage up to 150 HGV trips (300 two-way movements) are expected over a 6-week period. Assuming construction takes place over 5.5 days per week, there would therefore be a total of 33 working days during the enabling works stage. Accordingly, HGV trips could stand at a maximum of 5 per day (10 two-way movements). Calculation of the peak HGV construction requirements is outlined in further detail in **Table 4.1** below.

Table 4.1 – First Principles Trip Generation

	Track	Rest of Site to be surfaced
Site Area to be surfaced:	1,510m ²	2,900m ²
Construction depth:	450mm	300mm
Total volume of hardcore:	680m ³	870m ³

At a density of 1.8t per m3, total hardcore tonnage:	1,224t	1,566t
HGVs (20t – 8-wheel tippers)	61	79
Accordingly, there could be a total of:	140 HGV trips	
Therefore, accounting for deliveries of geotextile and other ancillary materials up to 150 HGV trips could therefore be expected during the enabling phase works.		

- 4.2.5 In addition to the anticipated maximum of 5 daily (10 two-way) HGV trips to the construction site, there would also be a small number of staff trips and deliveries / collections made by cars / LGVs. It is expected that these trips would average 10 per day (20 two-way movements). During the peak period for HGV movements (the enabling phase) there could therefore be up to 15 vehicle trips per day, equating to 30 two-way movements (15 in and 15 out).

4.3 Development Traffic Distribution

- 4.3.1 During the construction phase it is expected that all traffic would travel to the site via the A6193 from Junction 21 of the M62, accessing the site from the A6193 using John Milne Avenue and Dig Gate Lane, and depart in the same direction. During the operational phase the maximum vehicle size that would require access to the Site would be a large van, so the access route for maintenance requirements could be from either direction along the A6193. However, since Dig Gate Lane not a through road, and terminates at Dig Gate Farm to the east of the Site, all vehicles would turn right in and left out of the proposed access onto Dig Gate Lane.

4.4 Trip Generation Summary

- 4.4.1 Given the limited number of daily movements (i.e. a maximum of 13 arrivals and 13 departures per day over the initial 6-week period of enabling works, and much less for the remaining 24-week construction period, it is considered that with the implementation of a CTMP, the Proposed Development would not result in any issue in relation to highway capacity or safety.



5.0 SUMMARY AND CONCLUSIONS

5.1 Summary

- 5.1.1 This TS has been prepared by Axis in support of a planning application made by Balance Power for the development of a Battery Storage Facility, along with associated infrastructure, located on land off Dig Gate Lane in Milnrow, Rochdale.
- 5.1.2 The application Site is located on land adjacent to the M62 motorway, at the southern edge of the Kingsway Business Park, approximately 3.0km south-east of Rochdale Town Centre. The point of connection to the grid would be at the Kingsway Primary Substation located 550m north of the Site. The Site currently comprises a horse pasture field which also includes a small pond, field shelter and electrical substation.
- 5.1.3 Analysis of accident data indicates that within the most recently available 5-year period no accidents have been recorded along Dig Gate Lane, James Kearns Avenue, John Milne Avenue or the A6193 Sir Isaac Newton Way in the vicinity of the Site. Only three accidents during this period occurred at the A6193 / M62 Junction 21 westbound on- / off-slip road roundabout. Therefore, the existing accident record does not represent a cause for concern in the context of the Proposed Development.
- 5.1.4 Access to the BSF during both the construction and operational phases would be from the A6193 Sir Isaac Newton Way, with vehicles accessing Dig Gate Lane via either James Kearns Avenue or John Milne Avenue. Access to the BSF would be via a new priority junction from Dig Gate Lane, which would connect to the north-eastern corner of the Site. There is sufficient space within the Site to allow construction vehicles to turn round in order to exit the site in forward gear.
- 5.1.5 During the construction phase it is expected that all traffic would travel to the site via the A6193 from Junction 21 of the M62, accessing the site from the A6193 using John Milne Avenue and Dig Gate Lane, and depart in the same direction. During the operational phase, the Proposed Development would be operated remotely, and it would only be necessary for an operative to undertake a Site visit on a monthly basis. This would be undertaken using a small van, pickup or equivalent vehicle. However, since Dig Gate Lane is not a through road, and terminates at Dig Gate Farm to the east of the Site, all vehicles would turn right in and left out of the proposed access onto Dig Gate Lane.



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- 5.1.6 This TS assesses the traffic generation of the construction phase only, which would take place over 6-7 months. Once operational, trips to the Site would be limited to the occasional LGV accessing the Site for maintenance purposes.
- 5.1.7 The anticipated trip generation associated with the construction of the BSF development has been estimated from first principles, based on experience of having promoted other BSF sites nationally and from information supplied by the Applicant.
- 5.1.8 The full period of construction is anticipated to take 30 weeks, with 5.5 construction days per week. Peak construction activity (in terms of vehicle numbers) would occur during the enabling phase, when daily traffic levels are estimated to be a maximum of 15 vehicles per day, including 5 HGV trips. This equates to 30 daily two-way movements, which will include a maximum of 10 two-way HGV movements per day. Such traffic levels are unlikely to give rise to any material issues on the local highway network. Moreover, such levels of HGV traffic would not be maintained over any lengthy period of time.

5.2 Conclusion

- 5.2.1 Having regard to the above, it is therefore concluded with regard to the proposed development of a Battery Storage Facility on land off Dig Gate Lane, Milnrow, Rochdale, there can be no highway or transport reasons to withhold planning permission for the scheme.



Appendix A – Proposed Site Layout Plan



Appendix B – Drawing No. 3471-01-D01 (Visibility Splays)



Appendix C – Drawing No. 3471-01-ATR01 and ATR02 (Swept Path Analysis)



Appendix B – Drawing No. 3471-01-D01 (Visibility Splays)

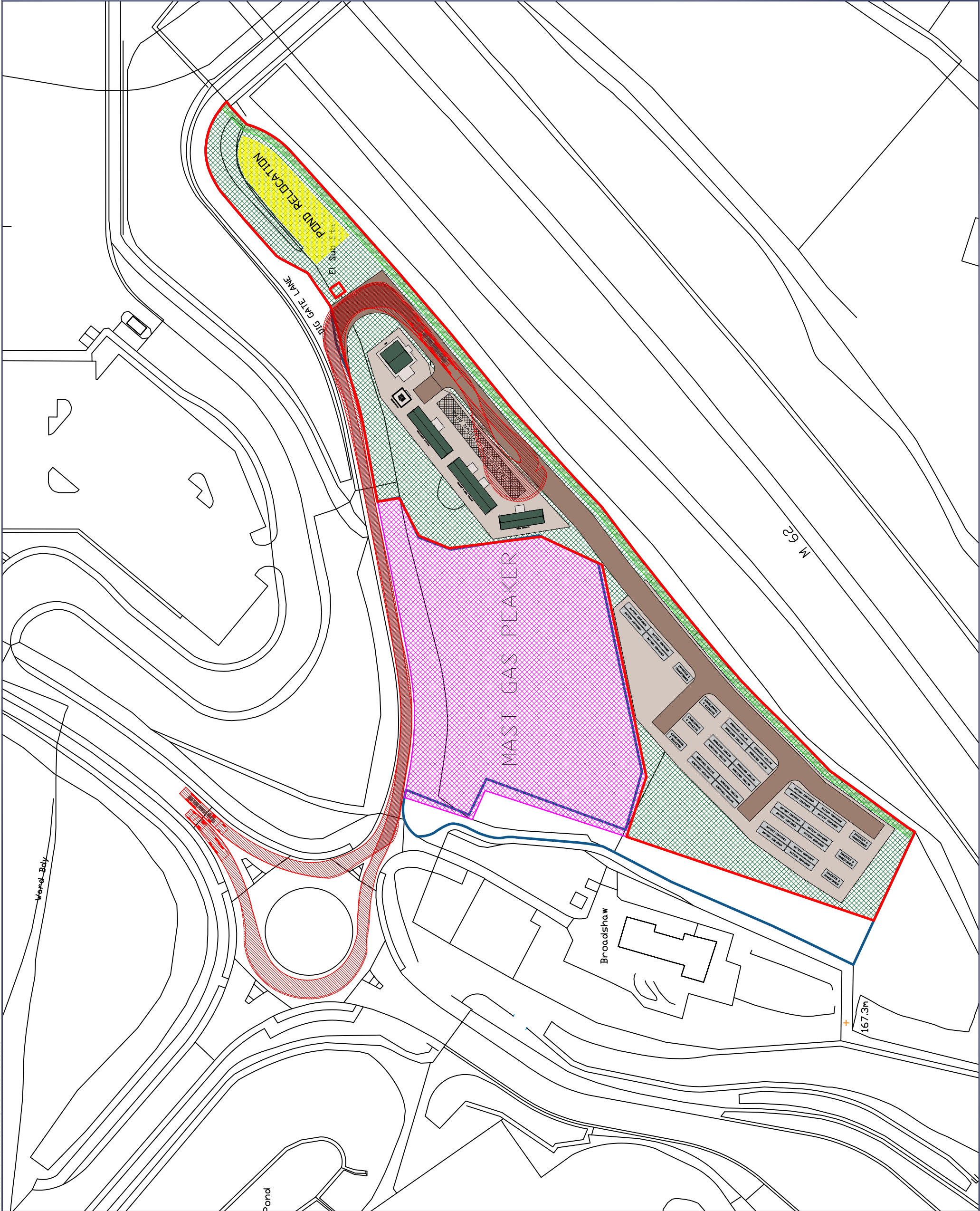
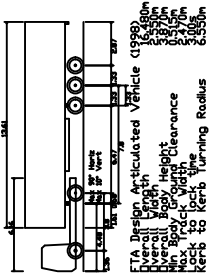


Appendix C – Drawing No. 3471-01-ATR01 and ATR02 (Swept Path Analysis)



03471-350003471-01 Roadside BESS Drawing CAD/Revit/3471-01-001.dwg

VEHICLE USED IN TRACKING:



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Client

Balance Power

Project

Rochdale BESS

Drawing Title

Swept Path Assessment -
Construction Phase

Scale

1:1000 @A3

Date

September 2023

Drawn

DC

Checked

DC

Dwg no

3471-01-ATR01

date:

revision:

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