

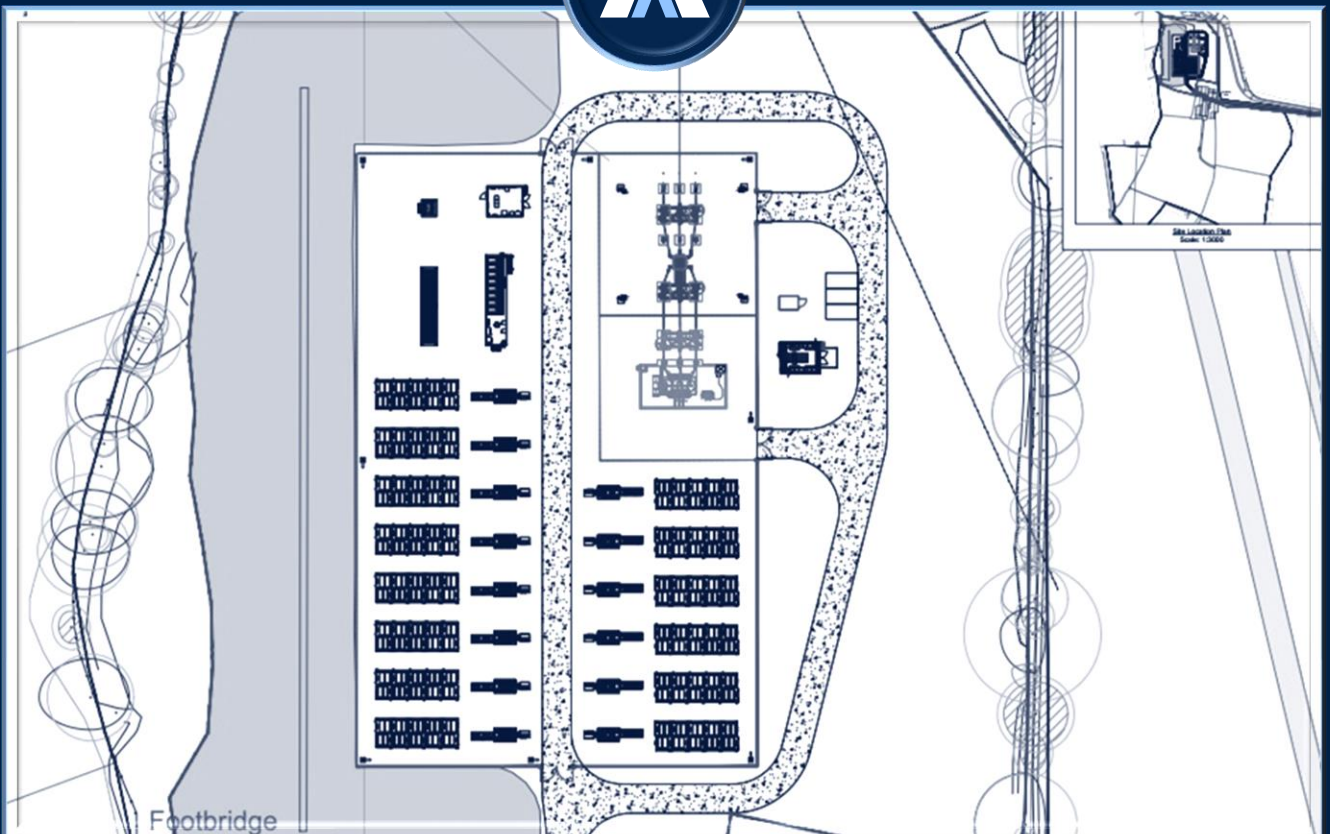
Newfields Farm BESS

Transport and Access Statement

Applicant: Newfields BESS Ltd

18 December 2023

Document Reference: C21133/TS02



This document is formatted for double sided printing.

© Apex Transport Planning Ltd.

All Rights Reserved.

Registered Office:

30 Summerfield Avenue

Cardiff

CF14 3QA

QUALITY MANAGEMENT

REPORT DETAILS

Issued by	Apex Transport Planning Ltd 11-13 Penhill Road Cardiff CF11 9PQ	Tel: 02920 619 361 info@apextp.co.uk www.apextp.co.uk	
Client	Newfields BESS Ltd		
Project Name	Newfields Farm BESS		
Report Title	Transport and Access Statement		
Report Ref.	TS02		
Project No.	C21133		
Date	18/12/2023		

ISSUE HISTORY

Issue No.	Status	Date	Produced by	Approved by	Revision Details
1	Final	06/05/2023	GP	DC	First Issue
2	Final	13/12/2023	GP	DC	Second Issue
3	Final	18/12/2023	GP	DC	Third Issue

NOTICE

This report has been prepared for Newfields BESS Ltd in accordance with the terms and conditions of appointment. Apex Transport Planning Ltd cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

The material presented in this report is confidential. This report has been prepared and is intended solely for Newfields BESS Ltd for use in relation to the Newfields Farm BESS project.

CONTENTS

1.	INTRODUCTION	1
1.1	Overview	1
1.2	Scope	1
2.	EXISTING CONDITIONS	3
2.1	Site Location and Use	3
2.2	Site Access	3
2.3	Existing Highway Network	4
2.4	Traffic Flows	5
2.5	Road Safety Analysis	6
3.	SUSTAINABLE CONNECTIVITY	8
3.1	Introduction	8
3.2	Walking and Cycling	8
3.3	Public Transport	10
3.4	Summary	11
4.	CONSTRUCTION ACCESS, DESIGN AND SITE LAYOUT	12
4.1	Access requirements	12
4.2	Proposed Construction Access Strategy	12
4.3	Site Layout	14
4.4	Security	15
4.5	Site Design and Health and Safety	15
4.6	Workforce	16
4.7	Parking	16
4.8	Construction Plant	16
5.	CONSTRUCTION PHASE	17
5.1	Overview	17
5.2	Construction Programme	17
5.3	Working Hours and Deliveries	17
5.4	Construction Vehicle Movements	18
5.5	Construction Access Route	21
5.6	Temporary Construction Traffic Impacts	22
5.7	Construction Waste	23
6.	SITE OPERATION AND DECOMMISSIONING STAGES	24
6.1	Operation	24
6.2	Decommissioning	24
7.	MITIGATION	25
7.1	Vehicle Management	25
7.2	Vehicle Emissions	25
7.3	Travel planning	25
7.4	Parking	25
7.5	Noise	25
7.6	Mud on roads	26
7.7	Air Quality and Dust Management	26

7.8	Local Environment Protection	26
7.9	Monitoring	26
8.	SUMMARY AND CONCLUSIONS	27
8.1	Summary	27
8.2	Conclusions	28

Tables

Table 2-1: DfT AADT Count Data	5
Table 3-1: Local Bus Services	10
Table 5-1: Estimated weekly construction vehicle flows	20
Table 5-2: Daily Traffic Impacts	23

Figures

Figure 2-1: Indicative Site Location and Context Plan	3
Figure 2-2: Site access points and Junction with Rownall Road	4
Figure 2-3: Location of Recorded PIA's Within Study Area	6
Figure 3-1: Public Rights of Way within vicinity of the site	9
Figure 3-2: Staffordshire County Council Cycle Network (Yellow routes are advisory)	10
Figure 4-1: Indicative Access Strategy	12
Figure 4-2: Signage Arrangements	14
Figure 5-1: Proposed Construction Access Route to the A52	21

Appendices

Appendix A	Site Location and Proposed Site Layout
Appendix B	Local Highway Authority Recommendations – Planning Application SMD/2022/0180
Appendix C	Adopted Highway Mapping
Appendix D	Site Access Drawings
Appendix E	Swept Path Analysis

1. INTRODUCTION

1.1 Overview

- 1.1.1 Apex Transport Planning Ltd (Apex) has been commissioned to provide transport support for a c.100 Megawatt (MW) Battery Energy Storage System (BESS) on land west of Rownall Road, Wetley Rocks, Stoke-on-Trent, Staffordshire. The site is known as Newfields Farm BESS (the 'site').
- 1.1.2 The proposed development will consist of an enclosed compound area containing a BESS comprising 14 blocks of battery cabinets, supported by electrical infrastructure such as inverters, transformers, control buildings and substations. The site layout shows each block contains individual battery cabinets. These will be mounted on pedestals, giving an overall height of approximately 2.9m. The site location and proposed site layout is shown in Appendix A.
- 1.1.3 A new site access is proposed into the BESS area which will connect to the existing farmyard to the east, enabling vehicles to enter the BESS area from the four site entrances provided. The existing farm track connects to a private access road at its eastern end, which does not form part of the highway maintainable at the public expense but does form part of a public right of way. This in turn connects to the adopted highway at Rownall Road further to the east. The private access road also serves Cellarhead Substation which is directly to the north of the site. Rownall Road provides a connection to the wider highway network including the A520 and A52 to the south and east. Further details on the access strategy are included in Section 4 of this report.
- 1.1.4 The battery storage containers will be set back from the site's boundary and secured within perimeter fence, with CCTV camera poles located at intervals along the fence. During the construction and decommissioning phases, temporary personnel units will be located within the site providing space for the site office and staff welfare facilities.
- 1.1.5 Once constructed it will provide a reliable source of clean renewable energy which will be supplied to domestic and commercial consumers via the National Grid network.
- 1.1.6 Due to the nature of the proposals, the impact on the highway will be temporary, attributed to vehicle movements required during the construction and decommissioning phases. During its operation, only a small number of vehicles (LGV's) will frequent the site for scheduled maintenance and servicing.
- 1.1.7 The BESS would operate for a temporary time period up to approximately 40 years. On decommissioning of the BESS, the site would continue its current use.
- 1.1.8 The proposed site layout is shown in Appendix A.

1.2 Scope

- 1.2.1 The Local Planning Authority (LPA) for the proposed development is Staffordshire Moorlands District Council (SMDC) and the Local Highway Authority (LHA) is Staffordshire County Council (SCC).
- 1.2.2 This Transport and Access Statement (TAS) has been prepared to demonstrate to SCC, that the proposals can be safely accessed from the adopted highway and will not lead to a severe impact on the operation of the network or an unacceptable impact on road safety. Due to the nature of the proposals, the impact on the highway will be temporary, attributed to construction vehicle movements required during the construction and decommissioning phases.
- 1.2.3 This TAS sets out the existing situation, detailing the surrounding transport infrastructure currently serving the site. It sets out the proposals and the anticipated number and composition of vehicle

movements to and from the site during construction. It includes the general construction principles, the site layout and construction waste. It also provides details of the proposed site access and routing for vehicles.

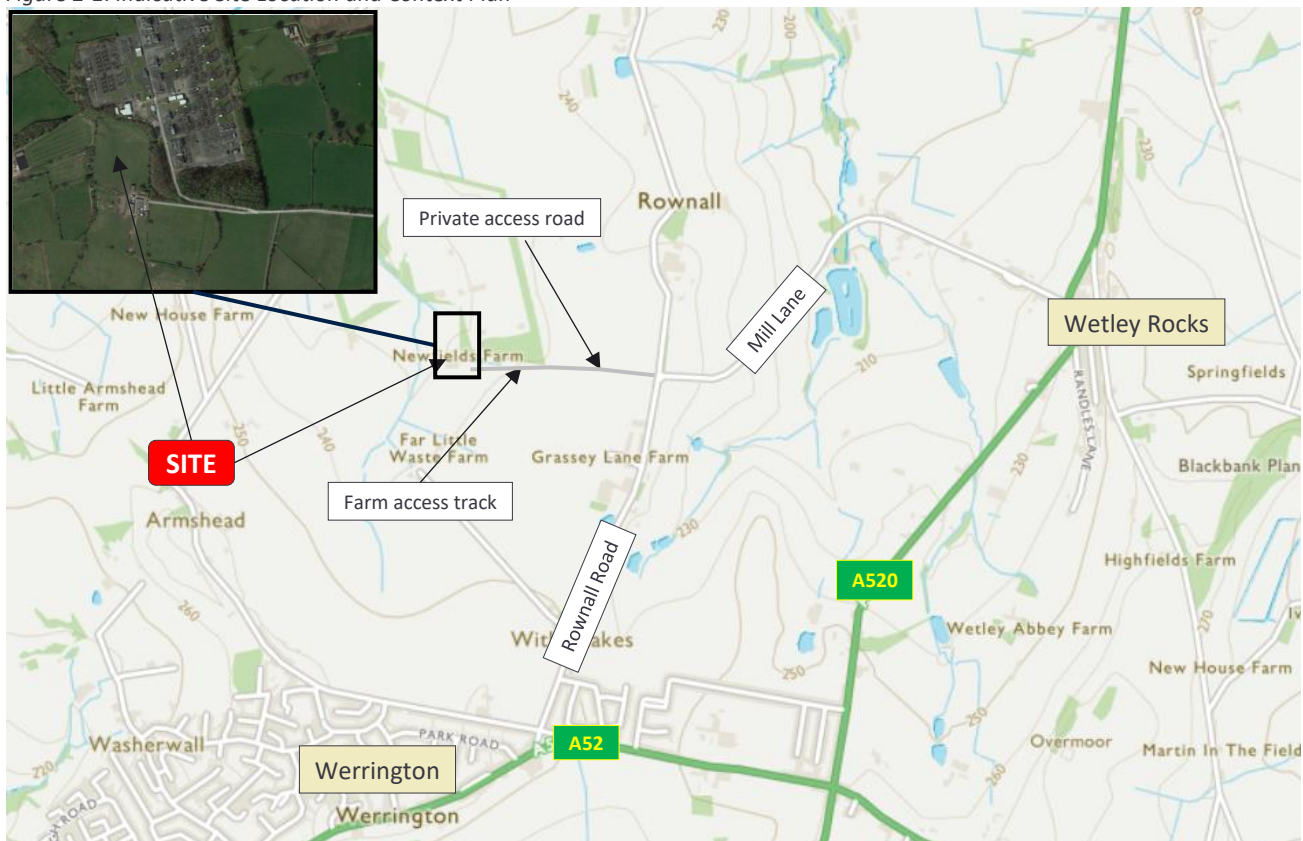
- 1.2.4 This report details proposed traffic management and mitigation measures that could be implemented in order to minimise any adverse effects of vehicular movements associated with the development on the surrounding highway network.
- 1.2.5 The TAS has been prepared in accordance with national planning policies (NPPF). It has considered Manual for Streets (MfS) as well as SCC's Guidelines for Transport Assessments and Travel Plans (January 2008).
- 1.2.6 The site was subject to a previous planning application for a similar BESS scheme, which was submitted in April 2022 (SMD/2022/0180) and supported by a TAS produced by Apex Transport Planning. This application was subsequently withdrawn by the applicant. In their capacity as the Highway Authority, SCC responded positively to this application with no objection subject to a pre-commencement condition requiring a Construction Method Statement to be provided prior to any development. There is no material change to the proposals from a transport and highways perspective, and the proposals seek to use the same access routes on the local highway network. As such, the measures included in the previously submitted TAS remain unchanged. It is considered that there are no reasons relating to transport or highways for objecting to the application. A copy of the LHA's response and suggested condition can be found at Appendix B.

2. EXISTING CONDITIONS

2.1 Site Location and Use

- 2.1.1 The Site is located approximately 1.9km north of the village of Werrington and 3.4km northeast of Stoke-on-Trent, within Staffordshire Moorlands, Staffordshire. The site location plan can be found at Appendix A, and the indicative location of the site within its wider local context is shown in Figure 2-1.
- 2.1.2 The site is currently used for agricultural purposes as part of Newfields Farm, a similar use to the majority of the surrounding land uses in this location.

Figure 2-1: Indicative Site Location and Context Plan



Source: Google Maps

2.2 Site Access

- 2.2.1 Access to the site is currently obtained from an existing farm track which serves the site from the east, which links to the private access road at its eastern end. This private access road also serves Cellarhead Substation which is directly to the north of the site. The existing farm track is a single lane road which serves Newfields Farm extending over a short distance of approximately 260m between the site and private access road. The track measures approximately 3.7 metres in width and currently accommodates large agricultural vehicles.
- 2.2.2 The private access road, which links to the existing farm track, measures between 4.5m-5.5m in width, which includes passing places to allow vehicles to pass safely. The road is surfaced and as this serves the Cellarhead Substation, is considered suitable for accessing the site.
- 2.2.3 The private access road forms a junction with Rownall Road which, separated by a grassed verge island. The main southern arm measures 5.4m in width and joins Rownall Road with a large 35m radius to the south and a small 2m radius to the north, and as such caters for movements to and from the

south. The northern arm measures 3.8m in width and joins Rownall Road with a 4m radius to the north and a 90 degree quadrant kerb to the south, which caters for movements to and from the north as well as to and from the east via the Mill Lane minor arm junction. The southern arm can accommodate larger vehicle movements, serving the main vehicular route to and from this location via the A52 to the south. The proposals would include management measures at this location to ensure construction vehicle movements can be accommodated safely, as detailed in Section 7. Figure 2-2 illustrates the site access and junction with Rownall Road.

- 2.2.4 The existing farm track and connecting private access road are also designated as a public right of way (Cheddleton 60), which continues west and routes along the site's southern boundary via the existing farm entrance, connecting to Armshead Road to the west via public right of way 'Bagnall 35'. This location is served by a number of public rights of way in all directions, details of which are included in Section 3.

Figure 2-2: Site access points and Junction with Rownall Road



Source: Google Maps

2.3 Existing Highway Network

- 2.3.1 The site lies within close proximity to key routes which connect to the strategic road network (SRN), located approximately 1.9km north of the A52 and 2.5km west of the A520. The SRN is access at the A500 via the A52 and M6 Junction 15 is located approximately 17km to the west, accessed by the A500. The A50 is also accessible to the south via the A520.
- 2.3.2 Access to and from the adopted highway is obtained via the existing farm track / private access road which connects with Rownall Road at a crossroad junction. Adopted highway mapping obtained from SCC shows the adopted highway includes Rownall Road as well as a proportion of the junction with the private access road (Appendix C). Further details on the access strategy are included in Section 4. The

site and Newfields Farm have an existing right of access from the adopted highway along the private access road.

- 2.3.3 Rownall Road is a single carriageway rural road which routes in a general north-south direction to the east of the site. To the north it connects to Knowsley Road and to the south it forms a ghost island right turn junction with the A52. It serves a number of agricultural properties as well as providing access to Wetley Rocks village to the east via Mill Lane. Rownall Road measures between 5.0m-5.5m within the vicinity of Mill Lane and to the south. As such, Rownall Road is capable of supporting two-way HGV movements. The road is subject to a 60mph speed limit (national speed restrictions for single carriageways) within the vicinity of the site, which changes to 30mph just to the north of Withystakes Road within Werrington to the south. Street lighting is provided within the residential area which runs along the back of the footway located along the east side of the carriageway. Between Withystakes Road and the private access road / Mill Lane, Rownall Road has a low level of vehicle movements due to the minimal number of properties accessed along this section.
- 2.3.4 Mill Lane is a single carriageway rural road, which routes between Rownall Road to the west and the A520 Main Road to the east. The carriageway measures between 4.8m-5.5m in width. The road is subject to the national speed limit (60mph) for 800m to the east of Rownall Road, with a 30mph speed limit in place on approach to Wetley Rocks. This section is provided with lit footways as it passes St Johns Primary School and serves a number of residential properties. On-street parking occurs along the carriageway between the school and A520 on approach to Wetley Rocks, which reduces the available carriageway space for passing vehicles and creating informal give-way arrangements.
- 2.3.5 The A52 lies to the south of the site and provides a key east-west connection between Stoke-on-Trent in the west and Derby in the east, via a number of rural settlements including Werrington and Ashbourne. The A52 forms a ghost island right turn junction with Rownall Road with storage for approximately 10 vehicles (60 metres). Within the vicinity of this junction, the A52 is subject to a 40mph speed limit and generally has lit footways on both sides of the carriageway set back behind grass verges. The A52 routes to the A500 to the west which in turn connects to the M6.
- 2.3.6 The A520 lies to the east of the site, providing a key north-south connection between Stone to the south and Leek to the north via Wetley Rocks and Cheddleton. The A520 connects to the A50 to the south which forms part of the SRN. These routes provide suitable links in all directions for accommodating HGV traffic.

2.4 Traffic Flows

- 2.4.1 The Department for Transport (DfT) provides AADF (Annual Average Daily Flow) traffic data at a number of locations across the highway network.
- 2.4.2 Count data is available for the A52 and the A520 within the vicinity of the site. Table 2-1 provides a summary of this data.

Table 2-1: DfT AADT Count Data

Location / Link	DfT Count Point	Year	AADT Flow (two-way)		
			Total Vehicles	HGV	HGV %
A52 (east of Rownall Road)	56537	2019	10,915	332	3%
A520 (north of Heath Avenue)	17197	2019	8,845	605	7%

Source: DfT

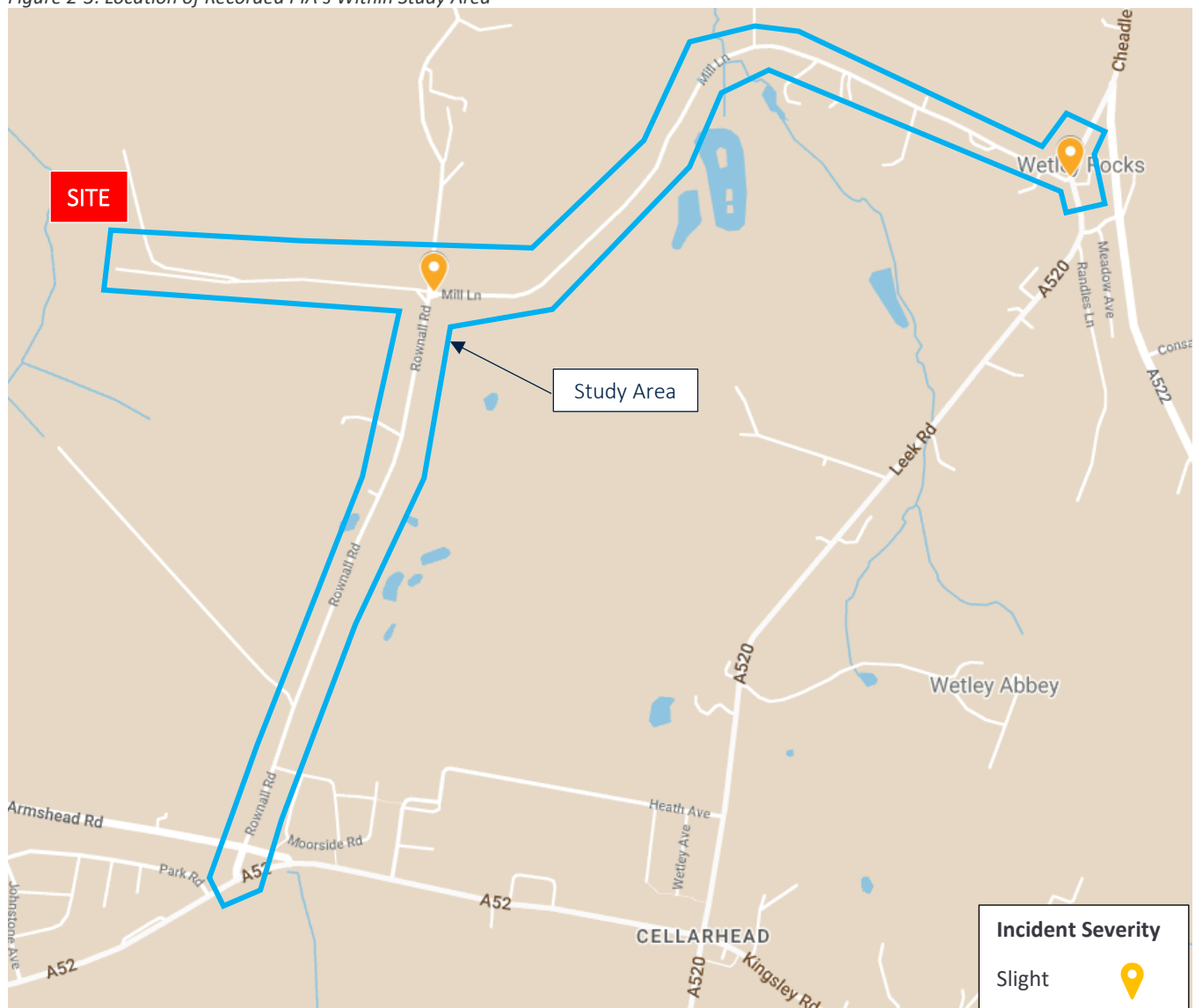
- 2.4.3 The data demonstrates that the surrounding roads already accommodate HGV traffic. The traffic data has been utilised from the estimated counts in 2019 (based on survey data from 2016 and 2018), as the most recent pre-pandemic year and as raw traffic count data is not available on these links in

2022. The estimated flows on both links in 2022 are below those estimated in 2019 and as such, the 2019 flows are considered robust for use in this assessment.

2.5 Road Safety Analysis

- 2.5.1 Personal Injury Accident (PIA) data has been obtained from road safety data published annually by the Department for Transport (DfT). The statistics provide PIA data which has been recorded using the STATS19 accident reporting form. This review covers the four-year period prior to the pandemic between 1st January 2016 and 31st December 2019, data from the two years during the pandemic between 1st January 2020 and 31st December 2021, as well as the most recent publicly available data which covers up to 31 December 2022. The most recent seven years of data has therefore been reviewed, which includes the most recent five full years of data outside of the pandemic.
- 2.5.2 The study area considered within the analysis covers the local highway network and key junctions within the vicinity of the site. The PIA's recorded within this study area are shown in Figure 2-3.

Figure 2-3: Location of Recorded PIA's Within Study Area



Source: Crashmap.com

- 2.5.3 Over the study period, two slight PIA's were recorded within the study area, which occurred at separate locations. There were no serious or fatal incidents.

- 2.5.4 One of the PIA's involved a motorcyclist, with another involving a HGV. No accidents involved pedestrians or cyclists.
- 2.5.5 There were no PIA's recorded within the vicinity of the site access or along the existing farm track or private access road.
- 2.5.6 One PIA occurred at the junction of Rownall Road and Mill Lane and involved a medium goods vehicle (under 7.5 tonnes) and a car. This was a collision between the goods vehicle turning left and a car continuing straight on Rownall Road. The accident is stated as occurring on Mill Lane so likely to relate to a vehicle turning left from Mill Lane onto Rownall Road. As such, there is no evidence of a safety issue relating to vehicles turning in and out the private access road.
- 2.5.7 There are no clusters of four or more accidents in one location to suggest a pattern of re-occurring road safety issues.
- 2.5.8 As such, although all incidents are regrettable, the PIA's that occurred do not indicate a specific pattern or issue with the geometry of the highway that would be exacerbated by the proposals, particularly when considering that the majority of the site traffic generation would occur over a short-term temporary period.

3. SUSTAINABLE CONNECTIVITY

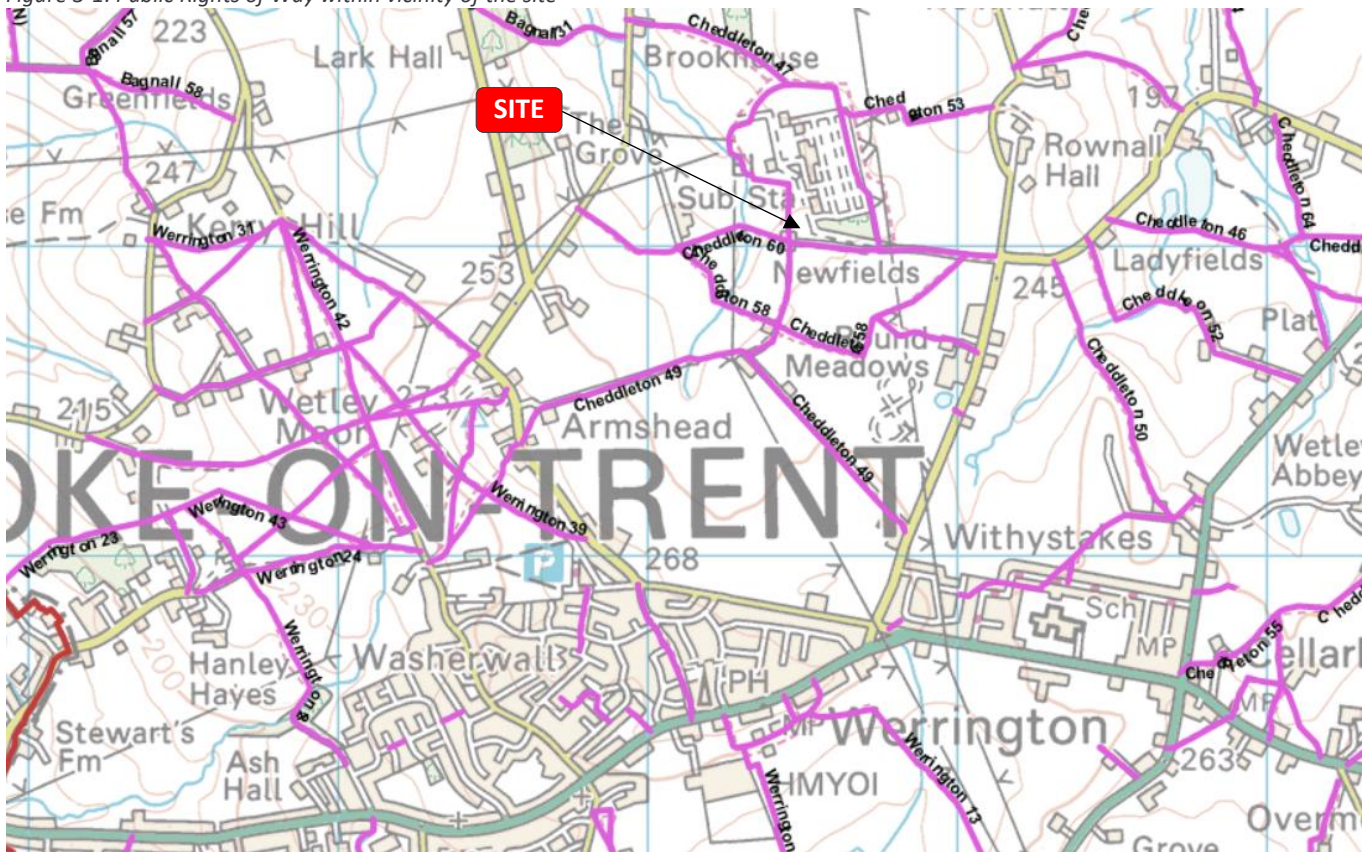
3.1 Introduction

- 3.1.1 The site is situated in a rural location with limited accessibility by sustainable modes. Due to the nature of the proposed use, the development will only result in a temporary short term peak in movements to and from the site, occurring during the construction and decommissioning phases. As such, there will not be a need to support sustainable travel from the site outside of the controlled and scheduled temporary construction and decommissioning phases. As part of the proposals, measures will be put in place to minimise vehicle movements from the construction workers, such as encouraging car sharing.
- 3.1.2 However, there are options for workers to travel to and from the site using sustainable modes of travel, and the level of provision is considered appropriate given its rural location. These options have been set out within this section.

3.2 Walking and Cycling

- 3.2.1 There are no footways linking to the site, although there is some footway infrastructure provided to the south within Werrington. However, the site is connected to an extensive public right of way network which links the site in all directions. Cheddleton 60 provides direct access via the site's southern boundary and links to Rownall Road to the east. Further routes run to the south which connect to Werrington via Cheddleton 49. The public rights of way are shown in Figure 3-1.
- 3.2.2 The private access road and Rownall Road are also lightly trafficked and relatively flat in nature. As such, these would be conducive to walking on-carriageway, with pedestrians stepping onto the verge when passed by oncoming vehicles.
- 3.2.3 The public rights of way and lightly trafficked routes could provide pedestrian access to the site for some local contractors.

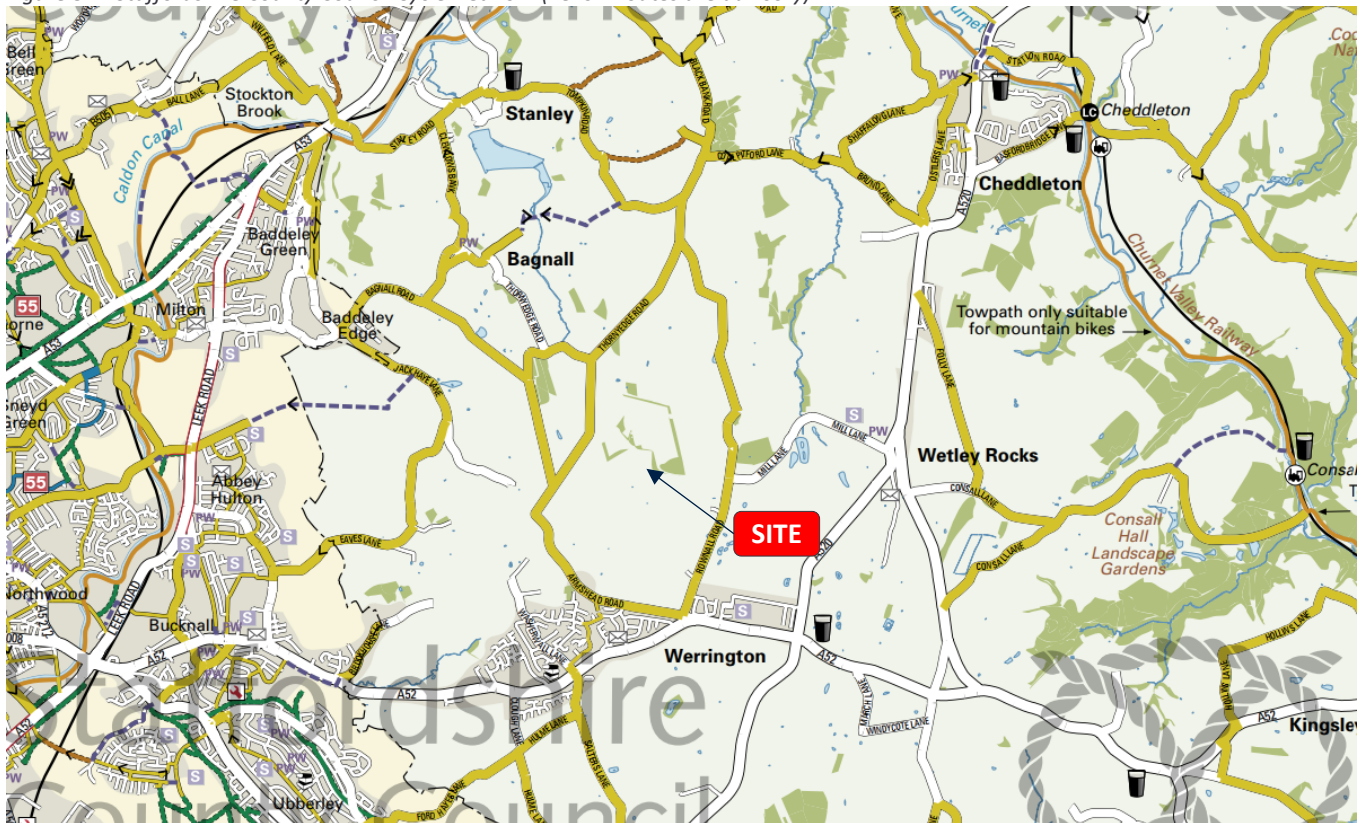
Figure 3-1: Public Rights of Way within vicinity of the site



Source: Staffordshire Public Webmap

3.2.4 The majority of the local roads surrounding the site are designated as advisory cycle routes by SCC, including Rownall Road, Armshead Road and Thorney Edge Road. The network of advisory routes provides connections in all directions from the site including Stoke-on-Trent to the west where further dedicated routes are provided. The majority of Stoke-on-Trent as well as Wetley Rocks, Werrington and Cheddleton are situated within 8km of the site, which offers potential for cycling journeys for commuting purposes. As such, there are options for local contractors to cycle to and from the site. The network of cycle routes is shown on Figure 3-2.

Figure 3-2: Staffordshire County Council Cycle Network (Yellow routes are advisory)



Source: Staffordshire County Council Cycle Maps

3.3 Public Transport

- 3.3.1 The closest public transport services are local bus services, accessible from stops on the A52 to the south, which at approximately 2km from the site, are within an acceptable walking distance of the site via Rownall Road and/or public rights of way. Stops are also located within Wetley Rocks approximately 2.4km to the east of the site on Main Road.
- 3.3.2 Bus stops on the A52 are served by a number of frequent bus routes (1 to 2 per hour in each direction), providing links to the surrounding towns and cities including Leek, Uttoxeter, Upper Tean and Stoke-On-Trent. The services are summarised in Table 3-1.

Table 3-1: Local Bus Services

Route No.	Operator and Route	Frequency				
		Mon-Fri Peaks	Mon-Fri Daytime	Mon-Fri Evening	Sat	Sun
32	D & G buses Hanley (City Centre) – Uttoxeter via Cheadle	1 every 2 hours between 07:47-18:54	1 per hour	1 per hour until 18:54	1 per hour Service between 08:20-20:15	-
32X	D & G buses Hanley-Uttoxeter via Cheadle	1 per hour between 06:54-17:46	1 per hour until 17:46	-	1 per hour between 08:00-19:00	1 per hour between 10:39-17:39
16	D & G buses Hanley (City Centre)-Werrington-Cheddleton-Leek (Buxton)	2 per hour between 06:29-18:00	2 per hour	1 per hour until 19:44	1-2 per hour between 08:15-19:40	-
32A	D & G buses Hanley (City Centre) – Uttoxeter via Cheadle and Alton	1 service 09:09	-	-	-	-

Source: Traveline.info

3.3.3 These services provide a number of options for travel to the site by bus, from a range of destinations including Stoke-on-Trent City Centre (Hanley) to the west, Cheadle, Leek and Uttoxeter, as well as other smaller settlements along the routes. The combination of services with the same destinations provides a combined frequency of approximately 2-3 services per hour.

3.3.4 A combined walk (or cycle) and bus journey to and from the site is therefore feasible for some journeys to and from the site by contractors.

3.4 Summary

3.4.1 The site is situated in a rural location and has options for access by sustainable modes. It is connected by walking via lightly trafficked routes and public rights of way, cycling on-carriageway via advisory routes and there are bus services within walking distances, which have a reasonable frequency of service.

3.4.2 As such there are options for travel to and from the site by non-car modes.

3.4.3 In addition, given the nature of the proposals, car sharing will also be encouraged and promoted to contractors working on the site to encourage more sustainable travel.

3.4.4 As such, considering the rural location and the development proposals, appropriate opportunities for sustainable travel are available in accordance with relevant policies in NPPF.

4. CONSTRUCTION ACCESS, DESIGN AND SITE LAYOUT

4.1 Access requirements

- 4.1.1 The proposed site access strategy has been designed to accommodate a 16.5m long articulated HGV for construction, which is the largest vehicle expected at the site. However, a significant proportion of construction vehicles are likely to be 10m long rigid HGV's (or smaller), which are capable of transporting all construction materials and smaller components associated with the development.
- 4.1.2 Due to the modular nature of the site's construction and ability to partially assemble components on site such as the transformers (with a 3.1m by 3.2m footprint), no abnormal load movements are required, and these have not been considered in this assessment. However, if this changes once the contractor is in place and large components are required to be delivered fully assembled, a full assessment of the routes to and from the site would be completed and included within a Construction Traffic Management Plan, which will require sign off from SCC. All relevant consultees will be contacted, and the relevant abnormal loads order applied for, as required, prior to any abnormal load movements arriving at the site.

4.2 Proposed Construction Access Strategy

- 4.2.1 A new site access is proposed which will provide a new permeable access road from the existing farmyard to the east, enabling vehicles to enter the BESS site area from the four site entrances provided. Figure 4-1 illustrates the proposed access strategy with a full version of the access drawing included at Appendix D.

Figure 4-1: Indicative Access Strategy



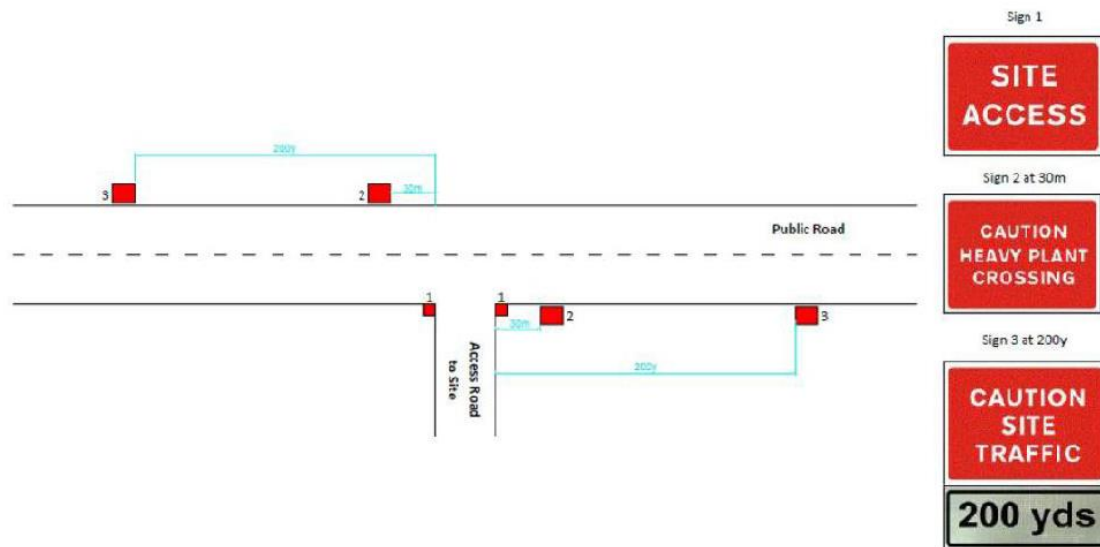
Source: Google Maps (background mapping)

- 4.2.2 The proposed access arrangement has been designed to accommodate two-way HGV movements, and the proposals include a HGV lay-by and additional width on approach to the site to enable these movements safely. The existing farmyard will be subject to minor improvements to help facilitate these movements. The new access arrangement will provide 4.5m wide internal access roads which will continue into the site. The proposed lay-by allows vehicle movements to be managed safely by allowing vehicles to access the site without delay or conflict along the route. This will be managed by a banksman.
- 4.2.3 The site will enforce a 10mph speed limit on drivers to ensure the access arrangement operates safely. The new site access roads will be surfaced appropriately to accommodate construction traffic. The materials will create a suitable permeable surface.
- 4.2.4 The existing farm access track, which routes to the farmyard from the private access road to the east, will require enabling works to accommodate the construction vehicles up to large articulated HGVs (16.5m long). The track will need to be widened to approximately 3.5m, with additional width around the proposed new access. The widening will require trimming back to existing hedgerows and vegetation, including any overhanging trees along the route from Rownall Road. The widening and enabling works will ensure sufficient clearance is provided for construction vehicles, and these are indicated on Apex Drawing C21133-ATP-DR-TP-001-02-P02 which can be found at Appendix D.
- 4.2.5 The proposed widening will improve the operation of the existing farm track / private access junction, which currently accommodates existing movements including large vehicles (i.e. agricultural vehicles). There is appropriate forward visibility and width to enable vehicles to pass between the existing farm track and Rownall Road. The private access road varies in width from 4.5m to 5.5m with additional space created within passing places to enable vehicles to pass safely, as demonstrated on Apex Drawing C21133-ATP-DR-TP-003-P02, found at Appendix E.
- 4.2.6 The proposed arrangement will form the only access and egress route for the site during the construction, operation, and decommissioning phases. There would be minimal movements during the operational phase, with the majority of movements occurring during construction and decommissioning phases.
- 4.2.7 Swept path analysis has been undertaken which demonstrates that the access route and site access can accommodate 16.5m long HGVs appropriately. This is provided at Appendix E.

Access Signage and Safety

- 4.2.8 Within the vicinity of the access and on the adjacent highway network, the contractor would position appropriate signage to inform drivers of the increased likelihood of vehicles, especially HGVs turning into or out of the development site. This would include:
- Caution signs warning of works and construction traffic ahead; and
 - Signage denoting the construction traffic access route to the site and temporary compound
- 4.2.9 Examples of the traffic signage which will be used are shown in Figure 4-2. The exact location, position and content of these signs will be agreed with SCC, prior to the commencement of construction.

Figure 4-2: Signage Arrangements



- 4.2.10 Temporary lighting of the site access could be considered as a possible mitigation measure, if required.
- 4.2.11 It is expected that any access works will be undertaken first to minimise the impact of delivery vehicles.

4.3 Site Layout

On-Site Access Routes and Temporary Construction Compound

- 4.3.1 Permeable access roads will be constructed to enable the site to be served appropriately during construction, operation, and decommissioning stages. The access roads will be constructed to approximately 4.5m in width and comprise permeable materials to a standard which is suitable for carrying construction traffic. These will serve the development area allowing vehicles to turn and circulate the site safely. This will enable components to be transported to the development areas and ensure space for maintenance.
- 4.3.2 The internal access roads and turning areas can accommodate vehicles of up to 8m in length, and these will remain on site during its operation. Vehicles larger than 8m in length will be accommodated within the temporary construction compound located near the proposed site access, which will be available during the construction and decommissioning phases. This arrangement will be managed at the site access by a qualified banksperson. Swept path analysis shows construction vehicles successfully accessing and egressing the site in forward gear using the access tracks and temporary construction compound, where appropriate (Appendix E).
- 4.3.3 The temporary construction compound will accommodate daily deliveries, including larger vehicles of up to 16.5m in length. The compound will provide separation from vehicles accessing/egressing the site and during unloading/loading of materials. Due to the relatively low number of deliveries each day, all delivery vehicles will be able to enter the site and unload within the compound area. There will be no queuing, parking, or unloading on the highway.

Site Safety

- 4.3.4 Vehicle movements within the vicinity of the site access and temporary construction compound will be controlled using a qualified banksperson. The banksperson would ensure vehicles enter and exit the site in a safe and efficient manner. In the interests of safety and to minimise disturbance from

construction traffic, all construction drivers would be requested to travel at a maximum speed limit of 10mph when travelling within the site and there would be appropriate advanced signage in place to enforce these limits.

4.3.5 All reversing movements can be overseen by a banksperson, if needed. As set out within the HSE 'A Guide to Workplace Transport Safety' guidance, the banksperson directing vehicle movements (signallers) will be trained and authorised to do so. When reversing is required (for example within the construction compound), in addition to a competent banksperson directing vehicle movements, as set out within the HSE guidance consideration will be given to:

- Aids for drivers - mirrors, CCTV cameras, reversing alarms and sensors that can help drivers can see movement all-round the vehicle
- Vehicle visibility aids – beacons, additional lights, reflectors, beacons, and horns
- Lighting - so that drivers and pedestrians on shared routes can see each other easily. Lighting may be needed after sunset or in bad weather
- Clothing - pedestrians on site should wear high-visibility clothing
- Excluding non-essential personnel from areas where vehicles are reversing

4.3.6 There would be no unloading or loading of materials on the highway network.

Staff Welfare

4.3.7 Facilities to obtain food and drink on site during the working day will be provided, where reasonably practicable, to minimise the need for personal to leave the site during the working day.

4.4 Security

4.4.1 The BESS development would be closed to the public throughout the construction, operation and decommissioning through use of security fencing and CCTV.

4.5 Site Design and Health and Safety

4.5.1 The appointed Site Manager will oversee Health and Safety on site. A Health and Safety board identifying potential hazards will be updated daily with all visitors required to sign in and adhere to on-site Health and Safety practices. All personnel working on site will be required to wear a high visibility vest or jacket, steel cap boots, and a hard hat as well as any other activity-specific safety wear.

4.5.2 It is intended that the security fence, which will surround the site for the duration of its life, will be erected prior to the construction phase of the site, thus ensuring the site is secure during this phase. However, if this is not possible, the site will have 24 hour security on patrol in order to adhere to health and safety regulations as well as prevent crime.

4.5.3 In terms of the site design, as far as possible, during the construction phase, pedestrians and vehicles will be separated and the HSE guidance will be adhered to. This will include scheduling collections and deliveries to avoid the start and end of shifts so that pedestrians and passenger cars do not conflict with HGV traffic. All visitors would also report to the site office before they are allowed into areas where vehicles operate.

4.5.4 The internal site design has considered the separation of pedestrians and vehicles through locating staff parking areas away from the HGV turning areas and the compound where the construction activity occurs. As far as possible, pedestrians will have access to the welfare facilities from the staff parking areas without crossing the path of construction traffic.

4.6 Workforce

- 4.6.1 It is expected that the number of staff required during the construction phase would vary depending on the activities undertaken during each week. It is estimated that there would be approximately 30 staff employed at the site on a typical day.

4.7 Parking

- 4.7.1 Vehicle parking for staff during the construction period would be accommodated on site and no vehicles associated with the construction would park on the highway network. In order to minimise the impact of personal car use, the staff parking area will be located away from work areas and HGV turning areas.

4.8 Construction Plant

- 4.8.1 In order to minimise road use as far as is possible, consideration will be given to retaining large items of plant on site for the duration of an activity, rather than the normal practice of plant coming and going from site to keep hire rates/standing time to a minimum, although this will be of a greater cost to the project. Consideration will be given to such measures where feasible.
- 4.8.2 Plant equipment would include but not be limited to the following:

Equipment	Primary Function
JCB Diggers	Trenching
Dump Trucks	Earth Removal
Vibrating Roller	Compacting access track / compound area
Piling machine (s)	Ramming piles
Telehandler (s) / Crawler (s)	Distributing materials
Crane	Lifting cabinets / housing into place and setting up welfare facilities
Fuel Bowser	Refuel plant as required

5. CONSTRUCTION PHASE

5.1 Overview

- 5.1.1 This section details the construction programme and associated vehicle movements, together with details on the routing of vehicles to the site and the potential impacts.

5.2 Construction Programme

- 5.2.1 The construction period for the proposed development is estimated to take between 6 and 9 months. The construction programme is an estimate and would be dependent upon a range of factors, such as the shipping of materials and the weather. As such, the final construction programme and vehicle flows will be provided within a Construction Traffic Management Plan produced by the Contractor, and which can be conditioned as part of any forthcoming planning consent.
- 5.2.2 The construction period would be split into a number of different phases including site mobilisation, civil engineering, BESS construction, landscaping phases and de-mobilisation. A small number of vehicular movements will also be associated and the arrival and departure of construction staff.
- 5.2.3 The delivery of construction components and materials would be mainly by HGVs, with staff trips mainly by cars or vans.

5.3 Working Hours and Deliveries

- 5.3.1 Deliveries to the site would be coordinated to avoid large numbers of vehicles arriving and departing from the site at the same time. HGV deliveries would be distributed throughout the day and would be scheduled to occur between 09:00 and 17:00 Monday to Friday and 08:00 and 12:00 on Saturdays. However, for robustness the following programme has calculated vehicle movements across a five day working week with 8 hour days.
- 5.3.2 All construction components and materials would be transported using HGVs within legal limits (i.e. up to 16.5m long articulated vehicles). Due to the modular nature of the site's construction and ability to partially assemble components such as the electrical transformers (with a 3.3m by 1.9m footprint) on site, no abnormal load movements are required, and these have not been considered in this assessment.
- 5.3.3 Where feasible, deliveries will also be scheduled to avoid peak traffic times, such as network peak hours, contractor start/finish times and school pick up/drop off times.
- 5.3.4 During busier periods, deliveries to the site will be staged with drivers given specific time windows for arrival at site. To manage this, communication will be required between the site manager and the source company. This will prevent convoying of vehicles to and from the site and reduce the impact of construction traffic on the local highway network by seeking to evenly spread vehicle movements throughout the day.
- 5.3.5 As far as possible and feasible, the shifts for construction workers will be scheduled to minimise the number of traffic movements on the local highway network between the peak periods of 0800-0900 and 1700-1800 to reduce the impact on the operation of the highway.

5.4 Construction Vehicle Movements

Construction vehicles / HGVs

- 5.4.1 The construction phase is anticipated to generate a variety of vehicle types that would travel to and from the site, which could include:
- 16.5m long articulated HGVs
 - Material transporters
 - Cement trucks
 - Water tankers
 - Flatbed trucks
 - Mobile Cranes
 - Cars, vans, minibuses, and light goods vehicles
- 5.4.2 For the purposes of a robust assessment, it has been assumed that all construction vehicles would be generated by HGVs, with vehicles up to 16.5m long (i.e. articulated HGVs). However, the significant majority of these vehicles are likely to be up to 10m long rigid HGVs, which are capable of transporting all construction materials and components associated with the BESS. Only the substation components would require transportation by larger 16.5m long articulated HGVs. This has been considered as part of the construction routing analysis.
- 5.4.3 The following provides a summary of the programme and subsequent vehicle movements which have been programmed over a robust 6 month period, which is in line with the operators experience of other similar sites, considering the scale of the proposals:
- In **Weeks 1-4** it is expected that there would be deliveries relating to site set up, cabling, site compound set up and plant machinery (i.e. mobile cranes). Containers would be delivered to serve as offices and welfare facilities for staff, such as toilets. These components would be delivered in approximately 24 HGVs (48 two-way movements). At this time, deliveries would be required to secure the development site, which would include deliveries of the site security measures, such as security fencing to be placed around the perimeter of the site. It is estimated that the security fencing would require approximately 5 HGV deliveries (10 two-way movements) for the 1km length of fencing panels.
 - During **Weeks 4-15** it is expected that c. 675 m³ of stone would be required to create the access tracks and 650 m³ sub-base materials for the substation components. The stone for the access tracks is based on the length of access road (550m) and an allowance for the compound based on the access tracks shown on the site layout plan in Appendix A. For robustness, it has been assumed the depth of the access tracks would be 0.5m. It is assumed that the stone required for the access tracks would be transported to site in HGV deliveries that can carry 20m³ of material, therefore it is estimated that the stone would be transported in some 59 HGV deliveries (118 two-way movements). The access tracks will remain on site following construction throughout the operational and decommissioning phases. The volume of material for the foundations is based on the footprint of the substation components. This material would be transported using 8 m³ concrete vehicles, therefore it is estimated that 81 deliveries are required (162 movements).
 - During **Weeks 15-23** it is expected that the BESS units and the material for their foundations would be delivered. During this period, the sub-base material (100 m³) for the BESS units will be delivered using 8 m³ concrete vehicles, therefore it is estimated that 70 deliveries are required

(140 movements). The 140 individual BESS cabinets will be transported over weeks 15-20, in 28 HGV deliveries (56 movements).

- From **Weeks 23-25**, component items such as the sub stations and partially assembled inverters, transformers and control room items would be brought in. This would generate approximately 29 HGV deliveries (58 two-way movements).
- During **Weeks 25 & 26** commissioning and testing of the work would be undertaken, together with the removal of the site compound, temporary site welfare and office and plant machinery. This would generate approximately 24 HGV collections (48 two-way movements).

5.4.4 Table 5-1 provides a breakdown of daily and weekly deliveries expected over the 8 month construction period, based on a 26 week (6 month) programme with 5.5 working days per week and deliveries that occur over an 8 hour period (four hours on a Saturday).

Table 5-1: Estimated weekly construction vehicle flows

Week	No. of Deliveries	No. of Movements	Av. Daily Deliveries	Av. Hourly Deliveries	Associated activity
1	10	20	2	0.3	Plant, cabling and containers / welfare facilities, cranes, fencing
2	10	20	2	0.3	Plant, cabling and containers / welfare facilities, cranes, fencing
3	9	18	2	0.3	Plant, cabling and containers / welfare facilities, cranes, fencing
4	13	26	2	0.3	Stone for access tracks and sub-base material for substation components
5	13	26	2	0.3	Stone for access tracks and sub-base material for substation components
6	13	26	2	0.3	Stone for access tracks and sub-base material for substation components
7	13	26	2	0.3	Stone for access tracks and sub-base material for substation components
8	13	26	2	0.3	Stone for access tracks and sub-base material for substation components
9	13	26	2	0.3	Stone for access tracks and sub-base material for substation components
10	13	26	2	0.3	Stone for access tracks and sub-base material for substation components
11	13	26	2	0.3	Stone for access tracks and sub-base material for substation components
12	13	26	2	0.3	Stone for access tracks and sub-base material for substation components
13	13	26	2	0.3	Stone for access tracks and sub-base material for substation components
14	10	20	2	0.3	Stone for access tracks and sub-base material for substation components
15	15	30	3	0.4	BESS units and the material for their foundations
16	15	30	3	0.4	BESS units and the material for their foundations
17	15	30	3	0.4	BESS units and the material for their foundations
18	15	30	3	0.4	BESS units and the material for their foundations
19	13	26	2	0.3	BESS units and the material for their foundations
20	9	18	2	0.3	BESS units and the material for their foundations
21	9	18	2	0.3	BESS units and the material for their foundations
22	7	14	1	0.1	BESS units and the material for their foundations
23	17	34	3	0.4	Substation components, invertors, transformers and control room
24	12	24	2	0.3	Substation components, invertors, transformers and control room
25	12	24	2	0.3	Removal of temporary compound and plant machinery
26	12	24	2	0.3	Removal of temporary compound and plant machinery
Total	320	640	2	0.3	

5.4.5 In summary, the construction phase of the proposed BESS development is forecast to result in approximately 320 HGV deliveries (640 two-way movements) over a 26 week period. This would be an average of 2 HGV deliveries per day (4 movements), which equates to approximately one HGV movement every two hours, on average.

5.4.6 During the peak weeks, it is estimated there would be up to 3 HGV deliveries per day (6 movements). This would equate to one HGV movement every 1-2 hours, on average, across the busiest 5 weeks of construction.

Staff Movements

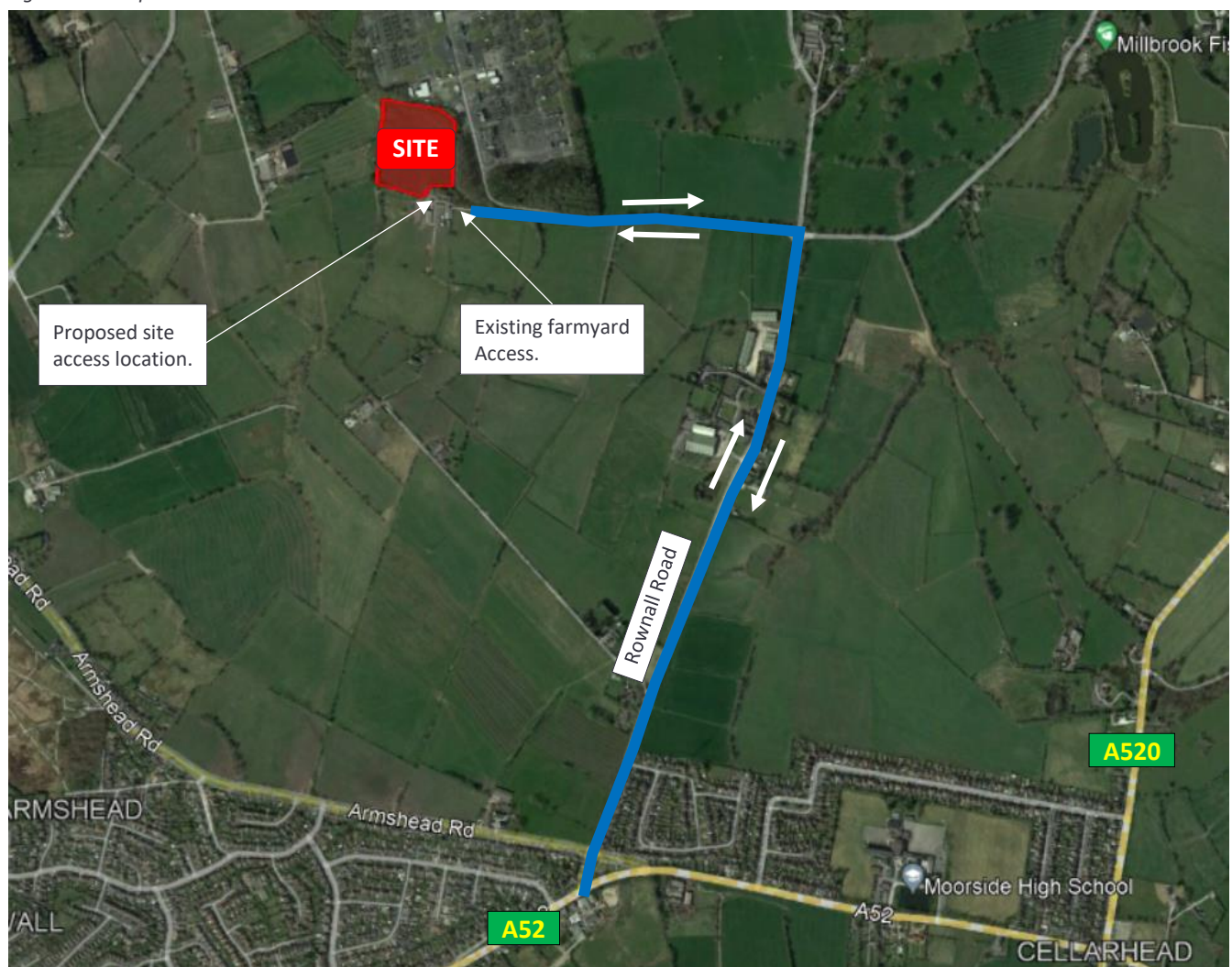
- 5.4.7 A maximum of 30 staff has been assumed during the construction phase. This equates to a maximum of 60 two-way movements on a typical day, if it is assumed all workers arrive in single occupancy vehicles and generate one trip to and from the site. It has been assumed that this level of trips occurs on each day of the construction phase for the purposes of this assessment. This is a robust assessment as car sharing would be encouraged.

5.5 Construction Access Route

Overview

- 5.5.1 All construction traffic will access and egress the site using the new site access route via the existing farm track (subject to widening as outlined in Section 2), connecting to the private access road and then Rownall Road. All vehicle movements would route to and from Rownall Road from the south via the A52.
- 5.5.2 The proposed route to the A52 from the site is shown on Figure 5-1.

Figure 5-1: Proposed Construction Access Route to the A52



Source: Google Maps

- 5.5.3 It is assumed that the majority of movements would then route to and from the west connecting to the SRN at the A500 and M6, although some movements may also travel east and then south via the A520 to the SRN at the A50. This would accommodate movements east towards Derby and the M1.
- 5.5.4 The prescribed access route to and from the A52 will be a condition of all supply orders and sub-contractors, and no other local roads within the vicinity of the site will therefore be impacted. If required, a log of regular drivers will be maintained, including records of agreements with organisations and the drivers to demonstrate their understanding of the prescribed access route. In the event of non-compliance, the subcontractor or supplier will be in breach of contract, potentially allowing disciplinary action against individual drivers.

Routing Details

- 5.5.5 Construction traffic will access Rownall Road via its ghost island right turn junction with the A52 to the south of the site. Vehicles routing from the east will use the right turn lane to join Rownall Road. This junction is appropriate to accommodate the low levels of traffic expected during the construction period.
- 5.5.6 Construction traffic will route along Rownall Road for approximately 1.3km to reach the southern arm junction of the private access road that serves the site. As outlined in Section 2, this arm is designed to accommodate movements to and from the south and its large 35m entry radius caters for larger vehicle movements such as those expected during the construction period.
- 5.5.7 Rownall Road is suitable to accommodate the construction traffic and is wide enough for vehicles to pass along its length on this section.
- 5.5.8 Given the low vehicle movements forecast during the construction period (equating to one vehicle per hour in the worst case weeks), there is not anticipated to be any delay or material safety implications to either site delivery or background traffic resulting from site traffic. Background traffic flows on the private access road would be minimal and Rownall Road would also have low traffic flows and is suitable for accommodating passing movements on the preferred route.
- 5.5.9 The construction access route will be used for both inbound and outbound movements from the site.
- 5.5.10 Swept path analysis has been undertaken along the route from the site access to Rownall Road to demonstrate that movements can be accommodated appropriately, and this is provided in Appendix E. The route to and from the site is therefore considered appropriate to accommodate construction vehicle movements associated with the proposals and would not lead to reversing or queuing on the highway.

5.6 Temporary Construction Traffic Impacts

- 5.6.1 During the busiest peak weeks of vehicle generation, there would be 6 two-way daily movements of HGVs and 60 two-way construction staff movements. The impact of these movements on the A52 and A520, assuming for robustness that all vehicles travel past each count point (which would not be the case as employees and HGV movements would travel from different directions), are set out in Table 5-2. The calculation of the base daily total and HGV movements on each link is set out in more detail in Section 2. For a worst case analysis of the impacts, no traffic growth has been applied to the base flows (which are from 2019).

Table 5-2: Daily Traffic Impacts

Link	Base Traffic Flow	Peak Dev Total Movements	% Increase	Base HGV Flow	Peak Dev HGV Movements	% Increase
A52 (east of Rownall Road)	10,915	66	0.6%	332	6	1.8%
A520 (north of Heath Avenue)	8,845	66	0.7%	605	6	1.0%

Source: Base data from DfT

5.6.2 Table 5-2 shows that during the worst case peak demand for construction traffic, which is forecast to occur over approximately 5 weeks, the impact on total traffic movements and HGV movements would be minimal. An increase of up to 0.7% in total traffic and 1.8% on HGV flows on the A52 or A520 would be imperceptible and well within daily variations of background traffic flows.

5.6.3 The level of trip generation generated during the temporary construction phase would have a negligible impact on traffic flows and congestion on the local highway network and would not have an unacceptable impact on highway safety on the key routes.

5.7 Construction Waste

5.7.1 The specialist contractor hired to construct the site will ensure all waste is disposed of responsibly from the site. The removal of waste products from site will be minimised by recycling of excess materials wherever possible. The guidelines contained in the statutory guidance, Waste duty of care; Code of Practice, 2018 will be adhered to.

5.7.2 The potential waste generated during the construction process will primarily be related to packaging and potential measures to minimise the impact of construction waste are set out as follows:

- **The pallets that the components are transported on.** These will be either wood crates, or cardboard boxes. These will be removed from the site on a regular basis. If they arrive on wooden pallets – then these will be returned to the manufacturers. If they arrive packaged in cardboard boxes, then these will be removed from site on a regular basis through a hired skip/s.
- **Packing materials for various components**, such as screws, cabling, and fixings. Any non-recyclable waste will be stored in a skip for regular removal to an appropriate landfill.
- **Food waste from workers.** Personal rubbish will be collected along with non-recyclable packaging materials, for appropriate disposal.
- **Portable toilets** will be hired for the duration of the construction period.
- The site involves some **ground works** for access tracks, cable trenching, cabinet platforms. Excavated soil will be used for backfilling activities. Excess subsoil will be removed from the site and disposed of appropriately or sold to a landowner needing additional soil.
- All spoil or waste that needs to be transferred out of the site for reuse, recycling or disposal purposes will be collected and transferred by vehicles from registered licensed contractors.

5.7.3 A more detailed Construction Waste Management Plan can be conditioned and produced by the contractor, potentially as part of a combined Construction Traffic Management Plan (CTMP) or a Construction Environmental Management Plan (CEMP).

6. SITE OPERATION AND DECOMMISSIONING STAGES

6.1 Operation

- 6.1.1 The traffic generated by the site during its operation would be negligible, as there would be no staff based at the site and movements would be limited to periodic routine maintenance activities, such as to undertake maintenance of vegetation and scheduled maintenance checks. The visits would typically be made by Light Goods Vehicles (LGVs), and it is expected that approximately 12 trips per year would be required. Due to the low number of vehicular movements expected to and from the site during the operational period, the site would have a negligible impact on the local highway network.
- 6.1.2 The operational site layout will be designed to ensure that maintenance vehicles can turn appropriately.

6.2 Decommissioning

- 6.2.1 The battery storage units, along with associated infrastructure, equipment, and fencing, would be removed and the land returned to agricultural use after 40 years. The decommissioning of the site is expected to follow the principles of the construction as set out in this document, however given the expected life of the battery storage units, these would be reviewed prior to decommissioning. The number of HGVs required for decommissioning would be at similar levels as the construction phase and as such the impacts would remain as set out for construction.
- 6.2.2 During decommissioning, vehicles would use the same routes used during construction, although this would be discussed and agreed with SCC prior to Decommissioning.

7. MITIGATION

7.1 Vehicle Management

- 7.1.1 The impact to the surrounding area will be minimised by routing traffic movements as outlined within the previous sections. Fuel consumption will be minimised by encouraging the use of local materials and sub-contractors, where feasible. It is recognised that there are specialist materials and equipment used in the construction and as such there may be less potential for using local materials.
- 7.1.2 The deliveries to the site would be co-ordinated to avoid large numbers of vehicles arriving and departing from the site at the same time. If required, a vehicle booking system can be implemented so that vehicles do not pass within the site or between the site access road and the A52, as far as possible, although there is sufficient space for this to occur and entry and exit to the site will be controlled by banksmen.
- 7.1.3 Due to the low levels of traffic predicted during the construction period, the tidal staff movements from the site and low background traffic along the existing farm track and private access road, vehicle movements can be managed effectively to avoid vehicles having to pass each other along the existing farm track between the site access and the private access road. Therefore, the existing farm track is considered suitable for the proposals and will not require mitigation, only minor upgrades to ensure it is suitable to carry construction vehicles.
- 7.1.4 The proposals include a HGV lay-by and additional width on approach to the BESS site access, which enables construction vehicles to be accommodated safely.

7.2 Vehicle Emissions

- 7.2.1 All construction vehicles are required to comply with relevant standards. Suppliers and drivers will be required to:
- Switch off their vehicle's engine when stationary to prevent exhaust emissions
 - Maintain vehicles including engines in tune and catalysts working efficiently
 - All vehicles used by contractors must comply with MOT emission standards at all times

7.3 Travel planning

- 7.3.1 In order to minimise the number of vehicles travelling to and from the site on a daily basis, staff would be encouraged to vehicle share, where feasible. They will also be encouraged to travel by sustainable modes of travel, if this is feasible.

7.4 Parking

- 7.4.1 Vehicle parking for staff during the construction period would be accommodated on site and no vehicles associated with the construction will park on the highway network or on the private access road.

7.5 Noise

- 7.5.1 There will always be some noise associated with a building project, however this will be temporary and can be controlled by limiting the hours of noise generating activities to limit disruption for neighbouring properties.
- 7.5.2 In order to limit potential noise impacts, noise generating construction and decommissioning works shall only be undertaken between:

- 08:00 and 18:00 Monday to Friday
- 08:00 to 12:00 on Saturdays.

7.5.3 No noise generating works will be undertaken outside of those hours.

7.5.4 Contractors will be required to conform to the construction noise code of practice.

7.5.5 HGV movements will be restricted to between 09:00 and 17:00 to ensure noise impacts from large vehicles is kept to a minimum.

7.6 Mud on roads

7.6.1 During construction most delivery vehicles will be constrained to the permeable site access tracks and construction compound area (exceptions may include the piling rig and small vehicles for on-site transport). As and when necessary, vehicle wheels will be manually cleaned prior to release onto the highway / private access road. The site construction manager will monitor the highway conditions and will assess if further measures are required to maintain road cleanliness, such as road sweeping. Road sweeping would involve the use of an approved mechanical road sweeper to clean the site of any mud or debris deposited by site vehicles within the vicinity of the site.

7.6.2 By segregating the on-site traffic from the delivery vehicles, the potential for mud can be reduced. Adequate sheeting of vehicles carrying waste materials will also be adopted to reduce the impact from mud.

7.7 Air Quality and Dust Management

7.7.1 Given the ground condition of the site, it is not anticipated that any significant dust issues would arise during construction or decommissioning. If conditions on site are very dry, then water misting/spraying will be employed to dampen ground to avoid any dust nuisance.

7.7.2 Specific measures will be adopted on the site relating to vehicles entering and leaving the site to reduce any impact of dust on the local highway network and these will include:

- Easily cleaned hardstanding areas for vehicles
- Maintain haul roads and hardstanding by regular brushing and water spraying
- All vehicles carrying soil and other dusty materials to be fully sheeted
- Enforcing site speed limit of 10mph

7.8 Local Environment Protection

7.8.1 The contractor would undertake mitigation measures to protect the local environment during construction, such as:

- All marshalling areas and site offices would be included within the site boundary
- Provision of adequate storage space within the site, to ensure the site entrance does not become blocked at any time
- All loads to be properly stowed and secured

7.9 Monitoring

7.9.1 The contractor would be responsible for monitoring the operation of the site during construction, the construction routes, delivery timings and access arrangements, as well as to ensure the mitigation measures are implemented effectively. Monitoring would be undertaken continuously, in order to ensure efficient operation and to minimise the impacts on the local environment.

8. SUMMARY AND CONCLUSIONS

8.1 Summary

- 8.1.1 This Transport and Access Statement has been provided in support of a planning application for a c.100 Megawatt (MW) Battery Energy Storage System (BESS) on land west of Rownall Road, Wetley Rocks, Stoke-on-Trent, Staffordshire. The site is known as Newfields Farm BESS.
- 8.1.2 The proposed development will consist of an enclosed compound area containing a BESS comprising 14 blocks of battery cabinets, supported by electrical infrastructure such as inverters, transformers, control buildings and substations. The site layout shows each block contains individual battery cabinets. These will be mounted on pedestals, giving an overall height of approximately 2.9m.
- 8.1.3 The battery storage units, along with associated infrastructure, equipment, and fencing, would be removed and the land returned to its current use after 40 years.
- 8.1.4 Due to the nature of the proposals, the impact on the highway will be temporary, attributed to construction vehicle movements required during the construction and decommissioning phases. During its operation, only a small number of vehicles (LGV's) will frequent the site for scheduled maintenance and servicing.
- 8.1.5 A new site access is proposed which will provide a new permeable access road connecting to the existing farmyard to the east, enabling vehicles to enter the BESS site area from the four site entrances provided. The existing farm track connects to a private access road at its eastern end, which does not form part of the highway maintainable at the public expense but does form part of a public right of way. This in turn connects to the adopted highway at Rownall Road further to the east. The private access road also serves Cellarhead Substation which is directly to the north of the site. Rownall Road provides a connection to the wider highway network including the A520 and A52 to the south and east.
- 8.1.6 The proposed site access arrangements have been designed to accommodate up to 16.5m long articulated HGVs during construction, which are considered appropriate to transport components and materials to the site. The new site access will provide suitable visibility and geometry to accommodate a 16.5m long articulated HGV. The proposed widening to the existing access tracks and vegetation clearance will ensure the construction vehicles can access the site safely. The new site access and access tracks will be surfaced appropriately to accommodate construction traffic, as agreed with SCC. The materials will create a suitable permeable surface. The proposals include a HGV lay-by and additional width on approach to the BESS site access, which enables construction vehicles to be accommodated safely.
- 8.1.7 All construction traffic will access and egress the site using the new site access from the existing farm track / private access road and then Rownall Road. All construction vehicle movements would route to and from this location via the A52 to the south. This offers the most appropriate connection to key routes and the strategic road network and minimises the impact on residential areas.
- 8.1.8 Road safety data has been analysed and there is no evidence of a highway safety issue within the vicinity of the site and along the construction access route, which would be exacerbated by the proposals. The proposals would not have an unacceptable impact on highway safety.
- 8.1.9 There are opportunities for travelling to and from the site by walking, cycling and public transport. Considering the proposed use and the rural location, there are suitable options available for

sustainable travel to the site. In addition, vehicle movements will be minimised through car sharing which will be encouraged and promoted.

- 8.1.10 The construction phase of the development is programmed to take 6 months (26 weeks).
- 8.1.11 During the peak construction weeks it is estimated there would be up to 3 HGV deliveries per day (6 two-way movements), on average (one movement on the network every 1-2 hours). It is also anticipated during the peak weeks that there would be a maximum of 30 vehicle arrivals associated with staff per day. This level of trip generation would have a negligible impact on the operation of the local highway network and well within daily variations of traffic.
- 8.1.12 Appropriate mitigation measures will be put in place to ensure that vehicle movements can be accommodated at the site access, on the highway and safely within the site itself. These measures will also minimise any impact from development traffic on noise, highway capacity, mud and dirt and air quality.
- 8.1.13 Appropriate signage would be positioned by the contractor to inform other road users of the presence of construction traffic, especially HGVs turning into or out of the site and private access road.

8.2 Conclusions

- 8.2.1 The proposals offer some choice of travel options, considering the type and rural location of the development, as well as promoting car sharing, and as such is in line with the requirements of the NPPF.
- 8.2.2 The development will not have a severe impact on the operation of the surrounding highway network, or an unacceptable impact on highway safety, in accordance with the NPPF.
- 8.2.3 It is therefore considered that there are no reasons relating to transport or highways for objecting to the application.