



**CLEARSTONE
ENERGY**

DARTFORD ENERGY HUB TRANSPORT STATEMENT

Prepared by Clearstone Energy & Transport Planning
Associates | December 2024 | Document Reference: R014

A Planning Application by
CLEARSTONE ENERGY

In respect of
**Dartford Energy Hub,
DARTFORD**

Transport Statement

December 2024



Document Management

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Issued by:

Bristol

Cambridge
London
Welwyn Garden City

Transport Planning Associates

40 Berkeley Square
Bristol
BS8 1HP

0117 925 9400
bristol@tpa.uk.com
www.tpa.uk.com

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1 Introduction

- 1.1 This Transport Statement (TS) has been prepared by Transport Planning Associates (TPA) on behalf of Clearstone Energy (the 'Applicant') in relation to a proposed Battery Energy Storage System (BESS) facility (the 'Proposed Development') on land to the north and south of Station Road, near Northfleet.
- 1.2 The local planning authority for the main area of the Site is Dartford Borough Council. The Energy Hub will be connected to Northfleet East Grid Substation, which is within the jurisdiction of Gravesham Borough Council. Kent County Council is the local highway authority.

Site Location and Proposed Development

- 1.3 The Site is located approximately 1km to the north of Southfleet village and approximately 2km from the centre of Northfleet.
- 1.4 Planning permission is being sought for the following development:

The installation of a battery energy storage facility along with a substation area; inverter/transformer stations; site accesses; internal access tracks; security measures; access gates; underground grid connection cables and other ancillary infrastructure; together with landscaping and biodiversity enhancement measures.

- 1.5 An indicative Site Layout Plan is included in **Appendix A**.
- 1.6 BESS facilities, such as the Proposed Development, are essential to provide the necessary flexible balancing services critical to successfully integrating intermittent, renewable, low carbon energy sources (such as solar and wind) into the UK's electricity supply network. BESS facilities achieve this by capturing energy produced at one time (such as time of high radiance levels or high winds) for use at a later time.

Transport Statement

- 1.7 This Transport Statement (TS) provides an overview of the potential effects of the Proposed Development in transport terms. The report has been prepared in accordance with National Planning Practice Guidance (NPPG).
- 1.8 Once operational, the Proposed Development will generate very few traffic movements on a day-to-day basis. The transport effects of the proposals are greater during the temporary construction phase.

Therefore, this TS is supported by an Outline Construction Traffic Management Plan shown at **Appendix B**. The aim of the CTMP is to minimise the effect of the construction phase on the local highway network.

1.9 The remainder of this report is set out as follows:

- Section 2 – Describes the existing Site and the accessibility of the local area;
- Section 3 – Sets out the relevant national and local policies;
- Section 4 – Sets out the development proposals;
- Section 5 – Considers the effect of the Proposed Development in transport terms; and
- Section 6 – Provides a summary and conclusion to the report.

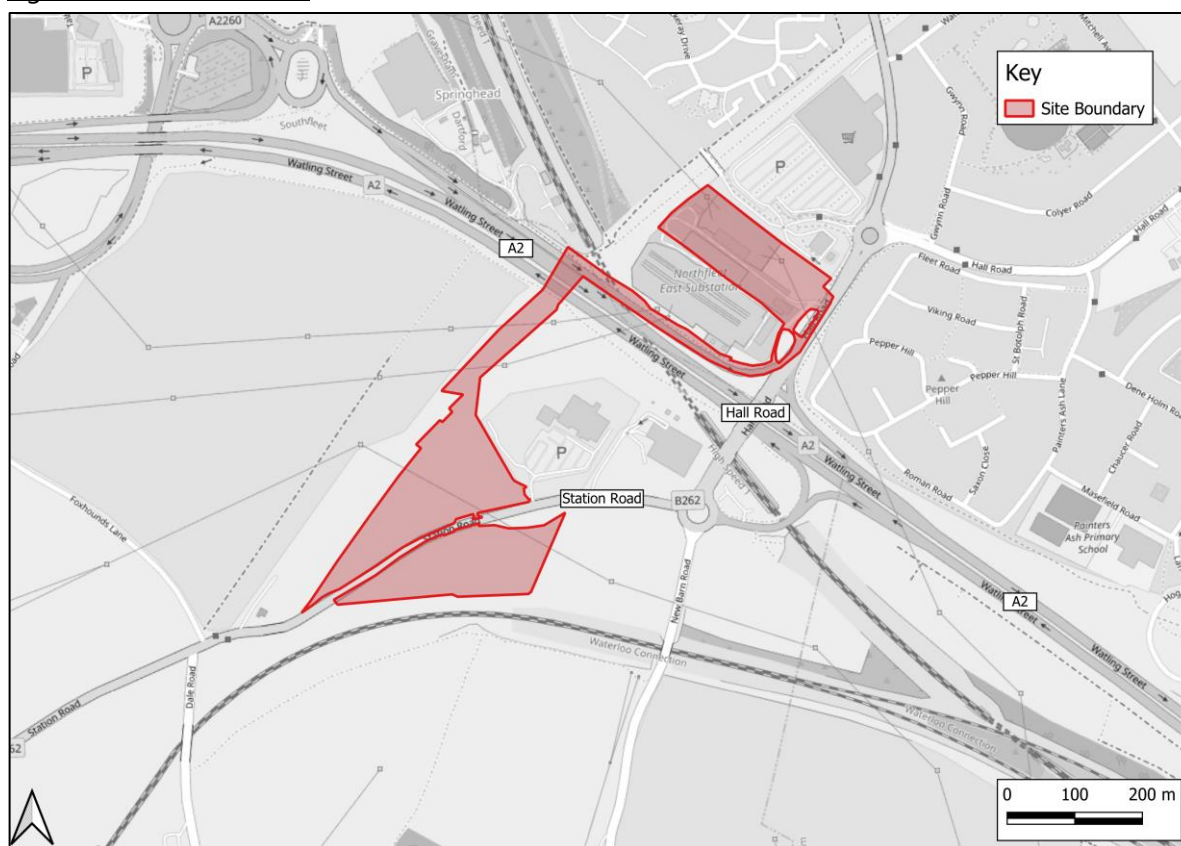
2 Existing Conditions

- 2.1 This Section summarises the existing situation surrounding the Site, including details of the Site location and its accessibility by car and non-car modes of transport.

Site Location

- 2.2 The site location is shown in **Figure 2.1**

Figure 2.1 Site Location



- 2.3 The Site is located approximately 1km to the north of Southfleet village and approximately 2km from the centre of Northfleet. The Site is comprised of two parcels of land, north and south of the B262 Station Road, with an underground cable route connecting to Northfleet East Grid Substation. The existing land is agricultural in nature. The B262 connects to the A2 to the east.

Local Highway Network

Station Road

- 2.4 Station Road is a single carriageway road with central line markings and is subject to the national speed limit. Station Road connects to the Hall Road, New Barn Road and the A2 slip road roundabout to the east. To the west, Station Road provides a connection to Dale Road and Foxhounds Lane. To the east of the Site there is a footway on the northern side of Station Road. Street lighting is also present in this location.

A2

- 2.5 The A2 is a major road in south-east England, connecting London with the English Channel port of Dover in Kent. It forms part of the strategic road network which is managed by National Highways. The A2 is a dual carriageway road with central line markings and is subject to the national speed limit.

Traffic Flows

- 2.6 Three Automatic Traffic Counts (ATC) surveys were undertaken between the 21st October and the 27th October 2024 along Station Road. These were located in the following locations:
- West of Site;
 - East of Site;
 - Middle of the Site.
- 2.7 The ATC data and their locations is shown in **Appendix C**. The recorded traffic volumes and speeds are summarised in Table 2.1.

Table 2.1 Summary of ATC Data

Location	Direction	Total Vehicles			HGV %*	Speeds (mph)**	
		24hr AAWT	08:00-09:00	17:00-18:00		Ave Speed	85% Speed
B262 Station Road (West)	EB	4,609	289	501	2.5%	31.9	36.1
	WB	4,511	410	221	2.1%	33.0	37.6
	Total	9,120	699	722	2.3%	32.5	36.9

B262 Station Road (Central)	EB	4,463	407	217	2.1%	37.1	42.0
	WB	4,588	284	499	2.6%	35.2	39.2
	Total	9,051	691	716	2.4	36.2	40.6
B262 Station Road (East)	EB	5,141	284	517	2.4%	32.3	36.9
	WB	5,042	422	220	2.0%	35.6	40.5
	Total	10,183	706	737	2.2%	34.0	38.7

*HGV is over 3.5tonnes **Recorded over five-day average

- 2.8 Table 2.1 shows that, on an average weekday, there are around 9,000 - 10,000 two-way movements on the B262 Station Road. The 85th percentile speeds were recorded as between 36.9mph to and 40.6mph. Around 2.3% of movements on Station Road are by HGV. This includes a mixture of vehicles categorised as Ordinary Goods Vehicles (OGV) 1 and the larger OGV 2.

Personal Injury Collision Data

- 2.9 The online database, Crashmap, has been queried for the recorded Personal Injury Collision (PIC) data for the most recent five-year period along Station Road within the vicinity of the Site. It demonstrates that seven collisions have been recorded within the vicinity of the Site including the Station Road and New Barn Road roundabout. Out of these seven collisions, five were deemed slight and two were deemed serious.
- 2.10 The number and type of collisions over the most recent five-year period do not indicate that there is a highway safety issue in the local area

Accessibility by Non-Car modes

Walking and Cycling

- 2.11 In the immediate vicinity of the Site there is a footway on the northern side of Station Road, within the vicinity of Millbrook Garden Centre. There are no dedicated cycle facilities

Public Transport

- 2.12 Within the vicinity of the Site there are bus stops on both sides of Station Road. This serves the 489 bus route between Redhill Wood and Barrack Road. Services operate six times per day, every two hours during the weekday daytime period.

- 2.13 The nearest railway station is Ebbsfleet International Station, which is located 2km to the north of the site

Summary

- 2.14 The Site is in a suitable location for the Proposed Development in terms of transport. Whilst there is not a significant level of public transport accessibility in the area, the operation of the Site will generate very few trips, with approximately 1-2 trips made by maintenance vehicles per week.
- 2.15 The local highway network within the vicinity of the Site is suitable for HGVs. The Site is located near to the strategic road network (A2). This helps facilitate the movement of construction vehicles to and from the Site.

3 Policy and Guidance

3.1 The proposals have been considered in the context of the following documents:

- National Planning Policy Framework (2023);
- The Dartford Plan (2024);
- Kent County Council Growth and Infrastructure framework (2018); and
- Kent County Council Local Transport Plan (2016 to 2031)

National Planning Policy

3.2 The National Planning Policy Framework (NPPF) came into force in March 2012 and was last revised in December 2023. It retains the core principle set out within the preceding national policy guidance, for development to be located in order to help reduce car dependency by making walking and cycling trips easier, and by encouraging public transport trips between housing and jobs, shops and services. In transport terms, the thrust of NPPF is a presumption in favour of sustainable development (paragraph 10).

3.3 Paragraph 109 of the NPPF states that “... *Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be considered in both plan-making and decision-making.*”

3.4 Paragraph 114 states that “*In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*

- a. appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location.*
- b. safe and suitable access to the site can be achieved for all users; and*
- c. any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.”*

3.5 Furthermore, paragraph 115 of the NPPF states that:

"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe".

The Dartford Plan (2024)

3.6 The Dartford Local Plan was adopted in April 2024. It forms the basis for decisions on planning applications for development in the Borough, and guides choices by others on public and private sector investment. The Plan takes on board the priorities of government, local authorities, infrastructure providers, residents, parish/ town councils, businesses and other local organisations.

3.7 Policy M15 and M16 are related to travel management. Policy M15 states:

"Development must be appropriately located and make suitable provision to minimise and manage transport impacts which arise. Proposals must also include appropriate vehicular access arrangements to the new development, and measures for active and sustainable travel. A Transport Assessment will be required on applicable proposals."

3.8 Policy M16 refers to access and safety and states:

"There needs to be suitable and safe access arrangements for vehicles (including where applicable, loading/ unloading), and for sustainable transport and active travel modes; and, that other essential transport requirements should be addressed within developments."

...

New accesses onto the highway network should be located and designed so that they operate safely, without unduly affecting the free flow of traffic. They should make a positive and sensitive contribution to the local street scene and be sympathetic to local amenity and the environment. New accesses must be designed to accommodate the volume of traffic and types of vehicles likely to use them".

Kent County Council Local Transport Plan (2016-2031)

3.9 The Kent County Council Local Transport Plan was implemented in 2016 and is set to run through to 2031.

3.10 The overall outcomes for Transport that the plan wishes to achieve are:

- **Economic growth and minimised congestion**, deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.
- **Affordable and accessible door-to-door journeys**, promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.
- **Safer Travel**, provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.
- **Enhanced environment**, deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.
- **Better health and wellbeing**, provide and promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.

Summary

- 3.11 The proposed development is considered to align with the objectives of the policy documents set out above. The impact of the development should be assessed in the context of Paragraphs 114 and 115 of the NPPF.
- 3.12 The production of this TS is in accordance with the requirements of the Kent County Council Local Transport Plan and the Dartford Plan.

4 Development Proposals

- 4.1 This section provides an overview of the Proposed Development.

Proposed Development

- 4.2 Planning permission is being sought for the following development:

The installation of a battery energy storage facility along with a substation area; inverter/transformer stations; site accesses; internal access tracks; security measures; access gates; underground grid connection cables and other ancillary infrastructure; together with landscaping and biodiversity enhancement measures.

Construction Phase

- 4.3 The construction period will last approximately six to twelve months.
- 4.4 This period will include the development of the main BESS site facility as well as the installation of the underground cable connecting to Northfleet East Substation to the north east of the Site.
- 4.5 The construction is anticipated to be broken down into several key components, including:
- Mobilisation and site preparation;
 - Civils;
 - Cable installation;
 - Equipment installation;
 - Landscaping; and
 - Energisation.
- 4.6 A Construction Traffic Management Plan (CTMP) will be implemented during the construction phase, to minimise the effect of construction vehicles on the local highway network. An Outline CTMP is shown at **Appendix B**.

Site Access

- 4.7 The accesses described below will be used for the construction, operational and decommissioning phases of the Proposed Development.

Northern Parcel

- 4.8 Vehicles will enter the Site via an improved existing agricultural access to access the northern parcel. The proposed access arrangement is shown in **Drawing SK01-A**.
- 4.9 **Drawing SK01-A** provides information on the visibility splays. It demonstrates that a visibility splay of 100.1m can be achieved to the east and 111.9m can be achieved to the west. These visibility splays are in accordance with the recorded 85th percentile speeds.
- 4.10 **Drawing SK01-A** also shows the swept-path analysis of a 16.5m articulated vehicle accessing and egressing the Site in a forward gear. This is the largest vehicle that will be required to deliver equipment to the Site.

Southern Parcel

- 4.11 Vehicles accessing the southern parcel of the Site will do so via a new access point from Station Road. This access will be constructed to accommodate a 16.5m articulated vehicle, which is the largest vehicle required to deliver equipment to the Site. The access arrangement is shown in **Drawing SK02-A**.
- 4.12 Drawing SK02-A provides information on the visibility splays. It demonstrates that a visibility splay of 100.1m can be achieved to the east and 111.9m can be achieved to the west. These visibility splays are in accordance with the recorded 85th percentile speeds.

Access Management

- 4.13 During the construction phase, banksmen will be deployed at the Site access whenever construction vehicles are accessing or egressing the Site. This is to ensure the safety of all road users.
- 4.14 In addition, temporary signage will be erected in the vicinity of the junction during the construction phase. Diagram 7301 'WORKS TRAFFIC' in the Traffic Signs Regulations and General Directions (TSRGD) will be used to indicate the access and will read 'WORKS TRAFFIC LARGE VEHICLE TURNING'. These signs will be white text and red background 1050 x 750 mm mounted in 'A' frames.

- 4.15 The accesses will be retained for use by maintenance vehicles. Maintenance vehicles, in the form of a transit van or similar, will visit the Site only a handful of times per month.

Emergency Vehicle Access

- 4.16 Two emergency accesses are proposed on the B262 Station Road. One to the northern parcel of land, and one to the southern parcel of land. They will only be used in the event of an emergency. The proposed emergency access arrangements for the northern and southern parcels are shown in **Drawing SK03** and **Drawing SK04**, respectively. They are provided to ensure that Proposed Development is in accordance with the latest guidance published by the National Fire Chiefs Council (NFCC).

Construction Compound and Internal Access Track

- 4.17 A construction compound(s) will be set up within the Site. The construction compound(s) will include the following facilities:
- Appropriate car parking spaces;
 - Welfare facilities, including toilets, a canteen, changing rooms and offices. These will be in the form of temporary mobile units;
 - A storage area for equipment, including storage crates;
 - A refuse and recycle store;
 - A turning area to ensure vehicles arrive and depart in a forward gear.
- 4.18 An internal access track will be constructed throughout the Site allowing for the movement of construction and maintenance vehicles.
- 4.19 The access track and construction compound(s) will be constructed using a hard-standing bound material of permeable design to ensure suitable drainage and that it can be easily sprayed (if required) to prevent mud, debris and muddy water being tracked onto the highway.
- 4.20 The Site will be secured using a perimeter fence. Heras fencing (or similar) may be required to secure the construction compound(s) and any other areas of the Site until the perimeter fence is completed.
- 4.21 The compound(s) will include a wheel wash facility. Excess water from the wheel wash facility will be appropriately disposed of. A visual inspection of vehicles will be undertaken before they depart the Site, to ensure that they are not carrying any residual debris onto the highway. Should significant mud

be carried onto the highway after the washing then a road sweeper will clean the affected area of highway.

Grid Connection

- 4.22 The BESS facility will be connected to the National Grid at Northfleet East Substation via an underground cable.
- 4.23 At this stage, it is envisaged that the cable will be installed in sections via Horizontal Directional Drilling (HDD) as part of a rolling programme to minimise disruption to road users. The installation will include the following stages:
1. Establish a launch and receive pit for each section of the cable installation rout;
 2. Directionally drill a small diameter pilot hole within the highway between the launch and receive pits, at the prescribed depth agreed with the local highway authority through the design process;
 3. Enlarge the pilot hole for installation of the pipeline;
 4. Pull the pipeline back into the enlarged hole;
 5. Insert the cables into the pipe
- 4.24 Once the drilling works are complete and connected, the launch / receive pits will be backfilled and reinstated and resurfaced to match the original surface.

Section 50 Licence

- 4.25 Prior to these works being undertaken, all appropriate licences will be obtained, including a Section 50 licence. Through this process, traffic management will be agreed with the local Highway Authority. Works within the public highway will be divided into sections of the road to minimise disruption to the local traffic.
- 4.26 The local community will have early notice of the exact works and their location a minimum of four weeks ahead of commencement, via flyers, signage and online notices.

5 Effect of the Proposed Development

- 5.1 The section sets out the effect of the Proposed Development on the local transport network

Effects during operation

- 5.2 Once operational, the Proposed Development will generate very few movements on a day-to-day basis
- 5.3 Maintenance vehicles, in the form of a transit van or similar, will visit the Site only a handful of times per month. Whilst the contractor's compound will have been removed, space will remain within the Site on the access tracks for both maintenance and emergency vehicles (including a fire engine) to turn around to ensure that reversing will not occur onto the highway.
- 5.4 Due to the low traffic movements associated with the Proposed Development once operational, there is little to no material development effect on the local transport network.

Effects during Construction

- 5.5 The construction phase for the Proposed Development includes the preparation of the Site, installing the access tracks, erection of security fencing, and construction of the BESS facility itself including the installation of the underground grid connection cables along the public highway to the point of connection. The construction period for the development is expected to be between 6-12 months in length.

Construction Vehicle Trip Generation

- 5.6 **Table 5.1** sets out a summary of the forecast HGV deliveries to be associated with the construction phase of the Proposed Development.

Table 5.1 Dartford Energy Hub: Construction HGV Movements

Activity	Type of Vehicle (Max)	Total Number of Deliveries
Battery Modules	16.5m Articulated	216 (432 two-way movements)
Invertor	16.5m Articulated	72 (144 two-way movements)
Client Control Room	16.5m Articulated	2 (4 two-way movements)
Storage Containers	16.5m Articulated	5 (10 two-way movements)
Substation	16.5m Articulated	15 (30 two-way movements)
Miscellaneous (fencing, water tanks, cable, gravel, landscaping etc.).	10m Rigid and 16.5m Articulated	190 (380 two-way movements)
Total		500 deliveries (1000 two-way movements)

- 5.7 As set out in **Table 5.1** it is anticipated that approximately 500 deliveries could be made by during the construction of the BESS facility, at an average of just over three deliveries per day, assuming a six-month construction period (26 weeks or 150 working days).
- 5.8 If a 25% buffer is added on to these deliveries, there will be 625 deliveries, at an average of just over four vehicles per day.
- 5.9 There is likely to be a small peak in deliveries early in the construction process for Site set-up, including the construction of the access track and then again when the electrical equipment (BESS units) are ready for installation. The Applicant has advised that there will be no more than 10-15 deliveries per day by HGV during this period, which will last approximately four to six weeks.

Construction Worker Trips

- 5.10 In addition to the HGV movements identified in **Table 5.1**, there will also be a number of construction movements associated with smaller vehicles for the transportation of construction workers and sub-contractors.
- 5.11 Approximately 20 construction workers are anticipated to be required on Site on an average day. This may increase slightly during peak construction. The location where staff will travel from is unknown at this stage as it will depend on the appointed contractor. However, it is envisaged that the majority of non-local workforce will stay at local accommodation and be transported to the Site by shared transport to minimise the impact on the strategic and local highway network. Based on this, it is likely that there could be up to 10 LGV arrivals per day.

- 5.12 Due to the Site operational hours (08:00-18:00), construction worker travel will occur outside of the peak hours. Therefore, there will not be a material effect on the operation of the highway network during the construction period because of construction worker travel.

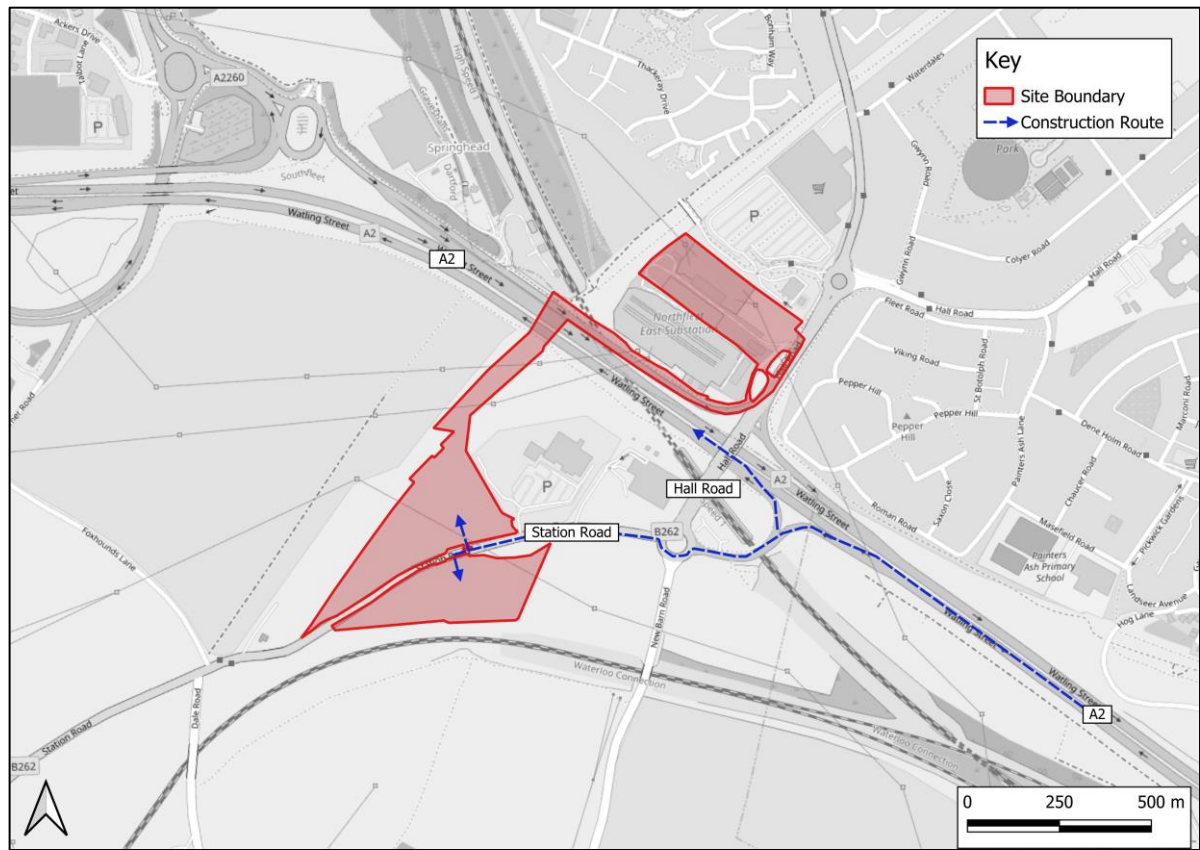
Construction Vehicle Movements Timings

- 5.13 Where possible, construction deliveries will be coordinated to avoid construction vehicle movements during the traditional AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00).
- 5.14 Due to the Site operational hours (08:00-18:00), construction worker travel will occur outside of the peak hours.
- 5.15 The Applicant will work with the operators of the Millbrook Garden Centre and the Pepperhill Recycling Centre to ensure that the construction of the proposed development does not have an adverse effect on their usual operations.

Construction Vehicle Route

- 5.16 All construction vehicles will be required to adhere to the approved construction route when accessing/departing the Site. This is shown in **Figure 5.1**. The route has been selected to minimise the effect of vehicle movements in relation to sensitive uses, such as residential properties. This route takes into account points raised at the public consultation event.

Figure 5.1 Construction Vehicle Route



5.17 The Construction Vehicle Route to the Site is:

- A2 → Station Road (B262) → Site Accesses.

5.18 All vehicles will route to the Site from the A2. Construction vehicles will exit the A2 and take the second exit at the Station Road/Hall Road/New Barn Road roundabout. Vehicles will then continue travelling westbound on Station Road until either turning left or right into the relevant Site access.

5.19 There is no posted weight or height restriction along the above-described route. Additional warning signs will be installed on the approach from both directions on Station Road to advise drivers of the potential for construction HGVs to be present.

5.20 Upon egressing the Site, vehicles will follow the reverse of the previously described route, returning to the A2.

Public Rights of Way

- 5.21 No Public Rights of Way will be affected by the construction or operation of the Proposed Development.

CTMP Measures

- 5.22 A CTMP will be implemented during the construction phase is to minimise the effect of the construction vehicle on the local highway network. The CTMP contains a package of mitigation measures to minimise the effect of construction traffic on the surrounding transport network. These include:
- Signage installed along the construction vehicle route to direct traffic to the site
 - The provision of banksmen to assist vehicle movement in and out of the Site.
 - The avoidance of travel during peak periods.
 - The provision of a booking system to manage arrivals and departures.
 - The provision of parking on-site.
 - The provision of a wheel wash facility.
 - Noise reduction and air quality measures; and a commitment to engage with the local community;
 - A commitment to engage with the local community.
- 5.23 In the event of planning permission being granted, it is anticipated that a planning condition will require the submission of a detailed CTMP and its approval prior to construction commencing.

Summary

- 5.24 This section has set out the effect of the Proposed Development on the Local Highway Network.
- 5.25 During the operational phase, there will be little to no material development effect on the local transport network due to the low trip generation of the Site (one vehicle visit every couple of weeks on average).
- 5.26 During the construction phase, there will be an average of three HGV deliveries per day and ten arrivals/departures by construction workers. During peak construction there will be no more than 10-15 deliveries per day by HGV. This level of trip generation will not have a material effect on the operation of the local highway network. Notwithstanding this, a CTMP will be implemented during

the construction phase is to minimise the effect of the construction vehicle on the local highway network

5.27 Secondary access is provided for emergency vehicle use, as per NFCC guidance.

6 Summary and Conclusion

- 6.1 This Transport Statement (TS) has provided an overview the transport elements associated with the construction and operation of a proposed Battery Energy Storage System (BESS) on existing agricultural land near Northfleet, Dartford.
- 6.2 The Site is located approximately 1km South of Springhead, and 2km south of Northfleet.
- 6.3 The Site is in a suitable location for a BESS development in terms of transport. The local highway network within the vicinity of the Site is suitable for HGVs. This helps facilitate the movement of equipment to the Site during the construction phase.
- 6.4 Vehicles will enter the northern parcel of the Site via an existing access, and the southern parcel of the Site via a new access. Secondary accesses are provided for emergency vehicle use, as per NFCC guidance.
- 6.5 During the operational phase, there will be little to no material development effect on the local transport network due to the low trip generation of the Proposed Development.
- 6.6 During the construction phase, there will be an average of three HGV deliveries per day and ten arrivals/departures by construction workers. During peak construction there will be no more than 10-15 deliveries per day by HGV. This level of trip generation will not have a material effect on the operation of the local highway network.
- 6.7 An Outline CTMP has been prepared as part of the planning application. This will be implemented during the construction phase. This will minimise the effect of construction vehicles on the local highway network.
- 6.8 In light of the information contained within this report, the Proposed Development is acceptable in transport planning terms.

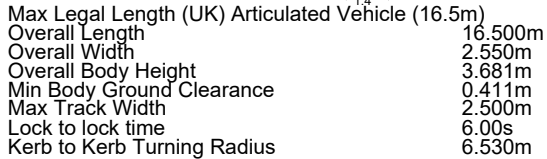
DRAWINGS

ORIGINAL
PLOT SIZE



NOTES:

1. The 85th percentile speed used to determine the length of visibility splays have been taken from ATC speed survey undertaken by ADVANCED TRANSPORT RESEARCH from MONDAY 21st OCTOBER to SUNDAY 27th OCTOBER 2024.



B	28.11.24	Removed previous layout plan. Updated project name.	KVT	AG	RR
A	01.11.24	Updated visibility splays with ATC data provided.	KVT	AG	JD
Rev	Date	Details	Drawn by	Checked by	Approved by

Bristol
Cambridge
London
Welwyn Garden City



40 Berkeley Square
Bristol
BS8 1HP
0117 925 9400

www.tpa.uk.com

CLIENT:

CLEARSTONE ENERGY LTD

PROJECT:

DARTFORD ENERGY HUB

TITLE:

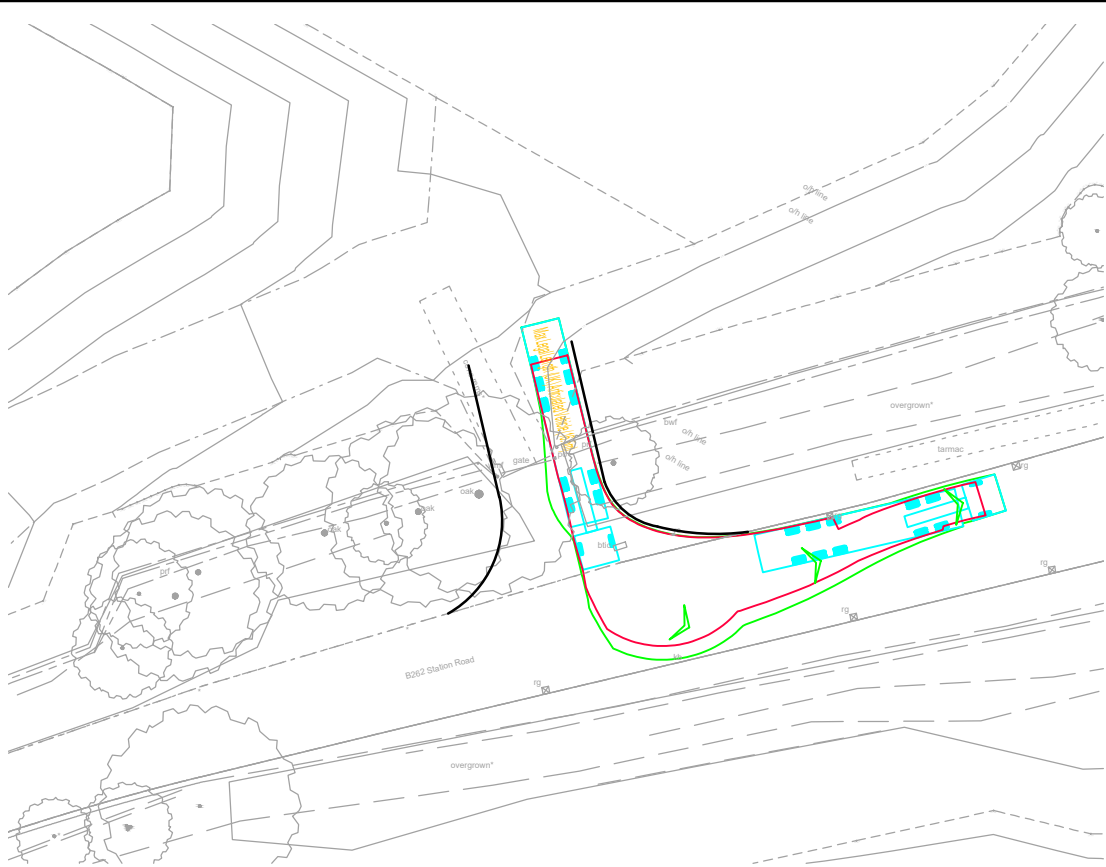
Northern Parcel Proposed Access At B262, With Visibility Splay & Swept Path Analysis Of A 16.5m Articulated HGV

STATUS:

INDICATIVE

SCALE: As Shown	DATE: 19.12.23	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2305-048		DRAWING NO: SK01		REVISION: B

Scale 1:1,000



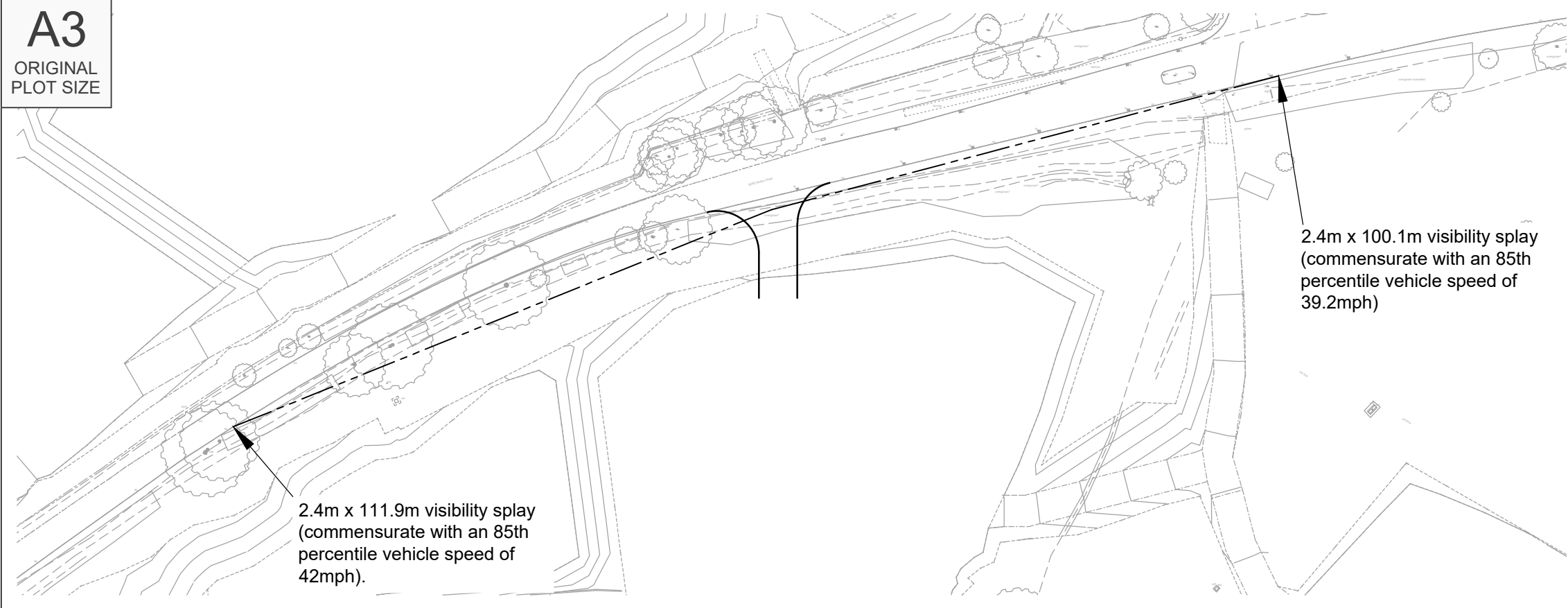
INDICATIVE

Entering Access

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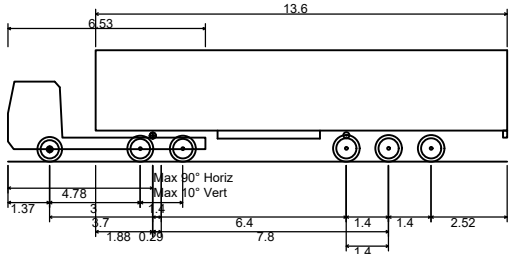
Exiting Access

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NOTES:
1. The 85th percentile speed used to determine the length of visibility splays have been taken from ATC speed survey undertaken by ADVANCED TRANSPORT RESEARCH from MONDAY 21st OCTOBER to SUNDAY 27th OCTOBER 2024.

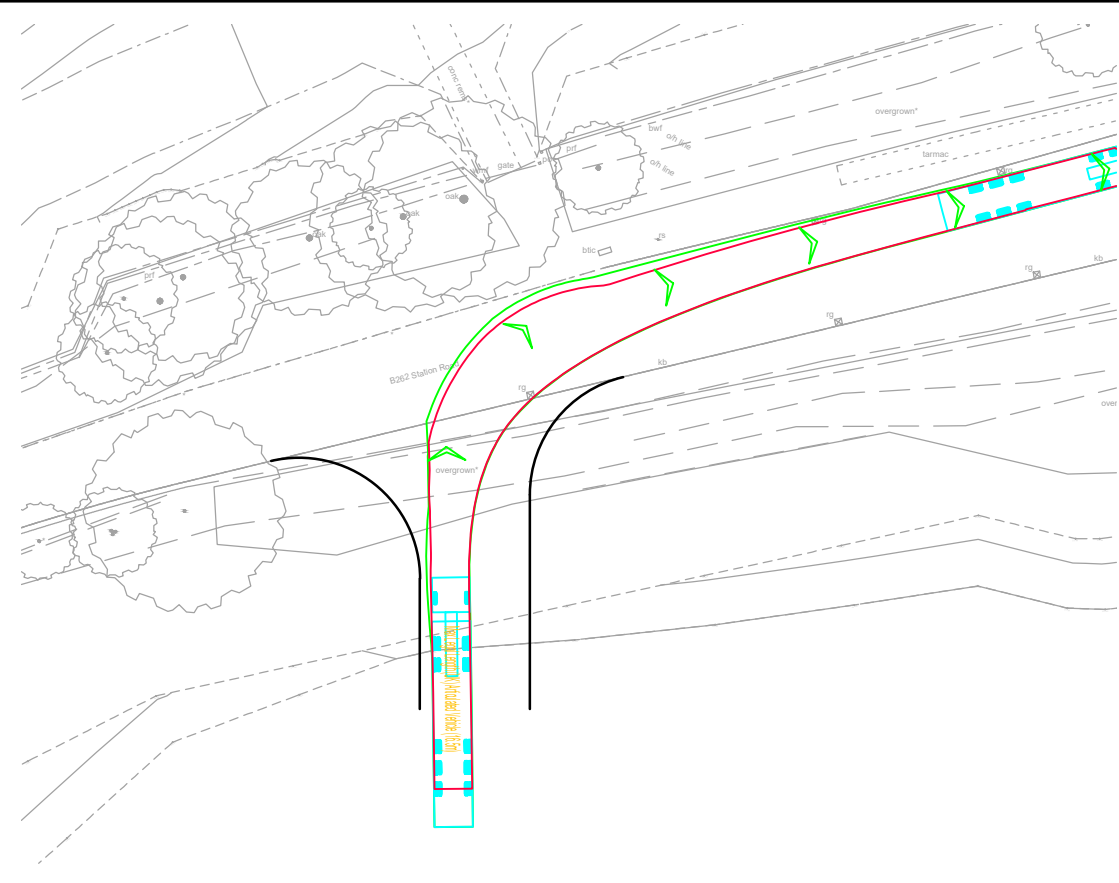
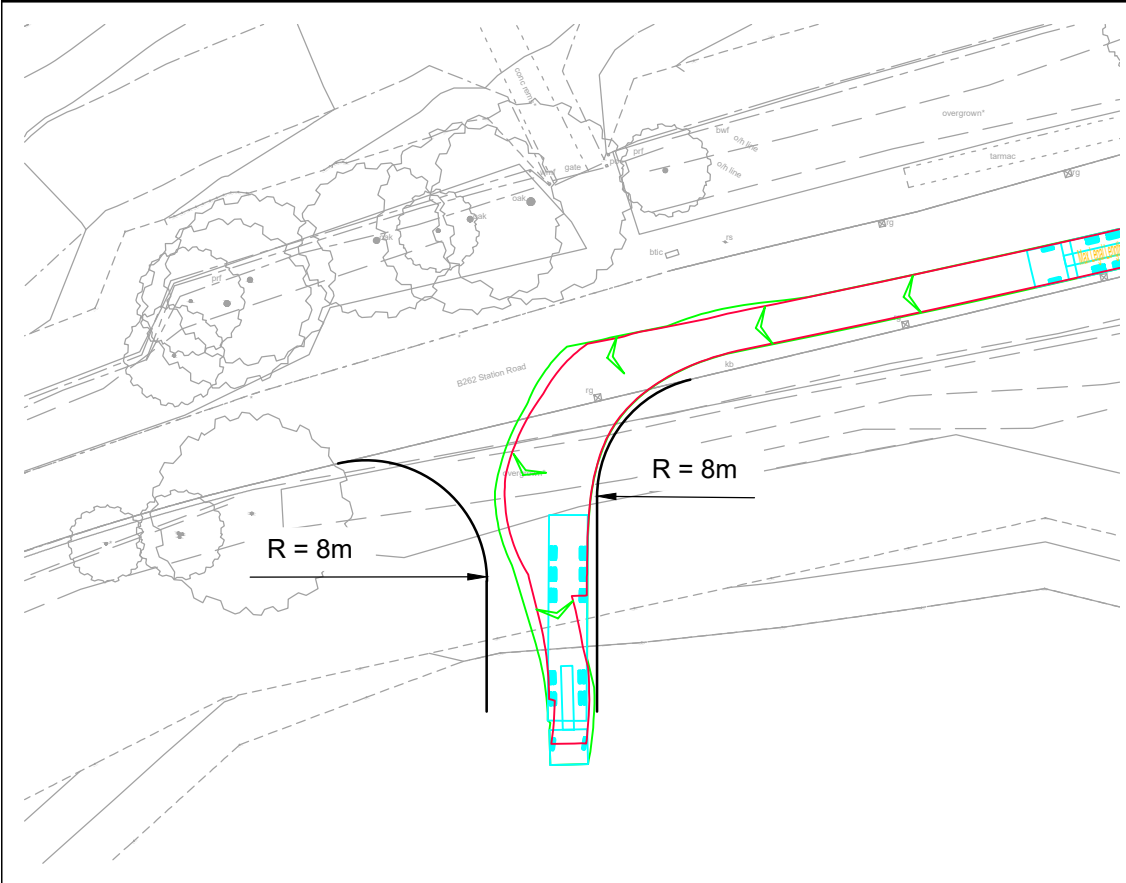


Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m

A	28.11.24	Updated visibility splay based on ATC data. Removed previous site layout. Updated project name.	PW	AG	RR
Rev	Date	Details	Drawn by	Checked by	Approved by

Visibility Splay Of Southern Parcel At B262

Scale 1:1,000



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CLIENT:
CLEARSTONE ENERGY LTD

PROJECT:
DARTFORD ENERGY HUB

TITLE:
**Southern Parcel Proposed Access At
B262, With Visibility Splay & Swept Path
Analysis Of A 16.5m Articulated HGV**

STATUS:
INDICATIVE

SCALE: As Shown	DATE: 19.12.23	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2305-048	DRAWING NO: SK01	REVISION: A		

INDICATIVE

Entering Access Left In

Scale 1:250

Exiting Access Right Out

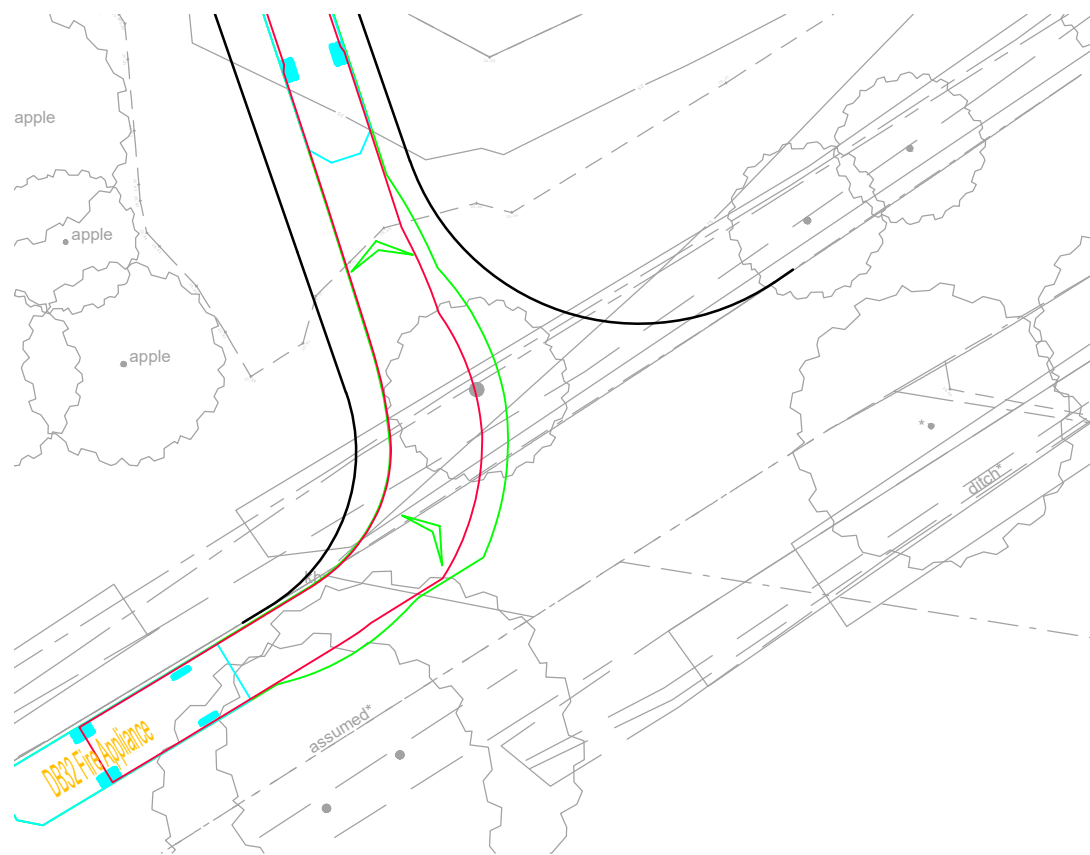
Scale 1:250

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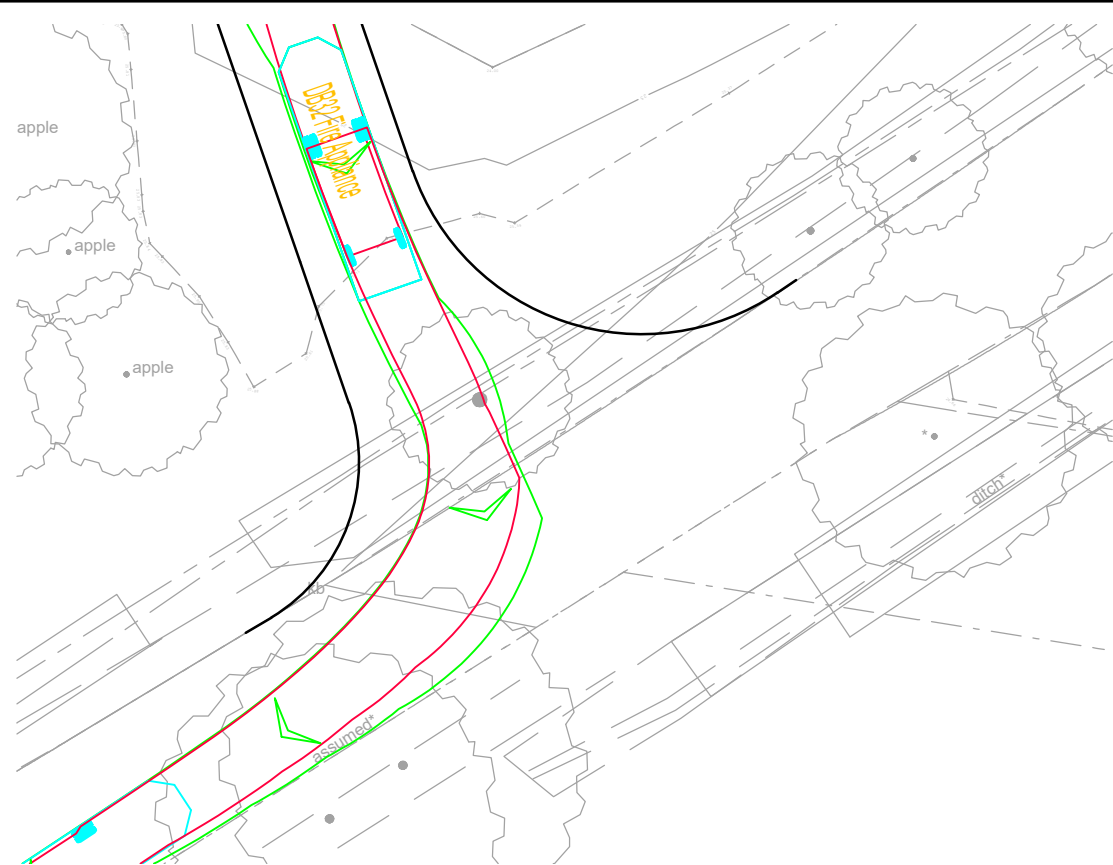
ORIGINAL
PLOT SIZE



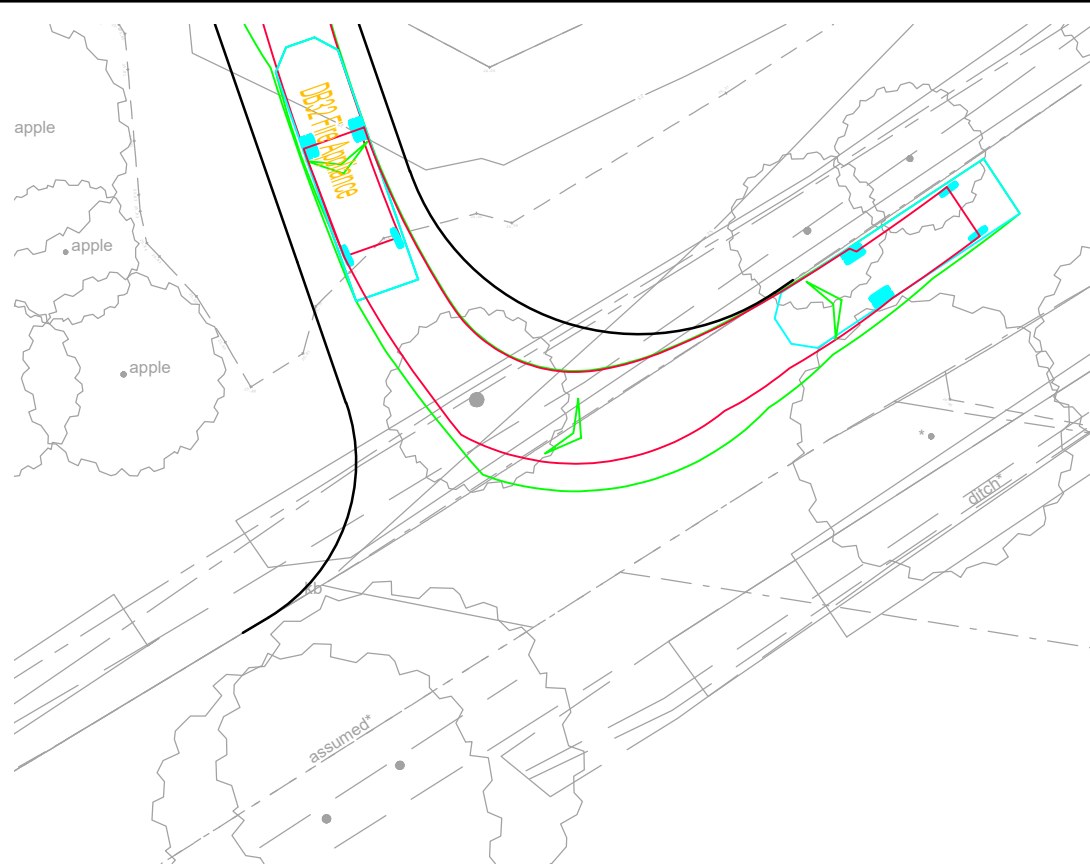
Entering Access Right In



Entering Access Left In



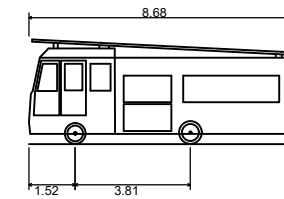
Exiting Access Right Out



Exiting Access Left Out

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NOTES:



DB32 Fire Appliance
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Max Track Width
Lock to lock time
Kerb to Kerb Turning Radius

8.680m
2.180m
3.452m
0.337m
2.121m
6.00s
7.910m

A	27.11.24	Moved emergency access location & adjusted tracking to match. Removed old OS layout. Updated project name.	KVT	AG	RR
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CLIENT:

CLEARSTONE ENERGY LTD

PROJECT:

DARTFORD ENERGY HUB

TITLE:

Northern Parcel Emergency Access, Swept Path Analysis Of A Fire Appliance

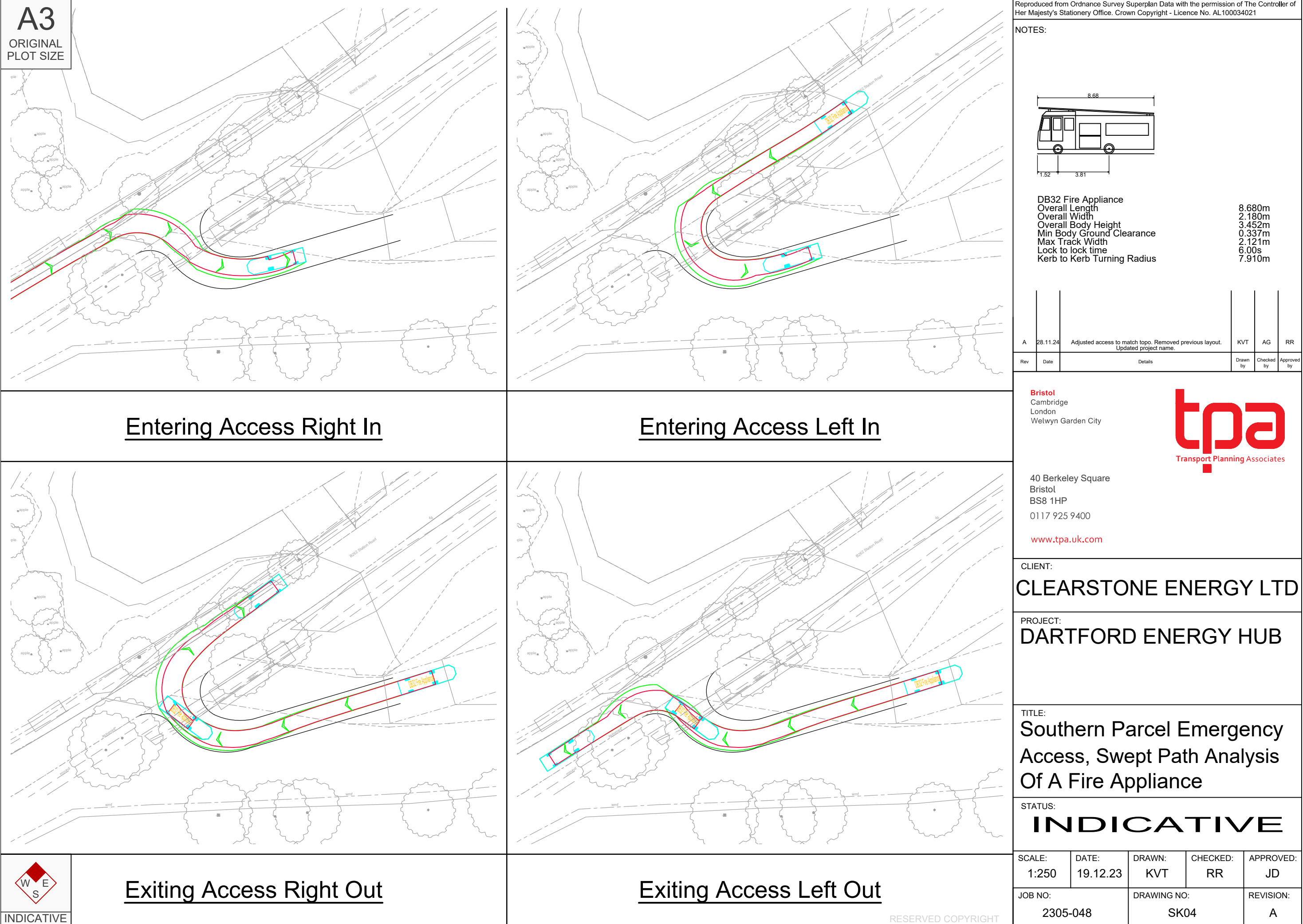
STATUS:

INDICATIVE

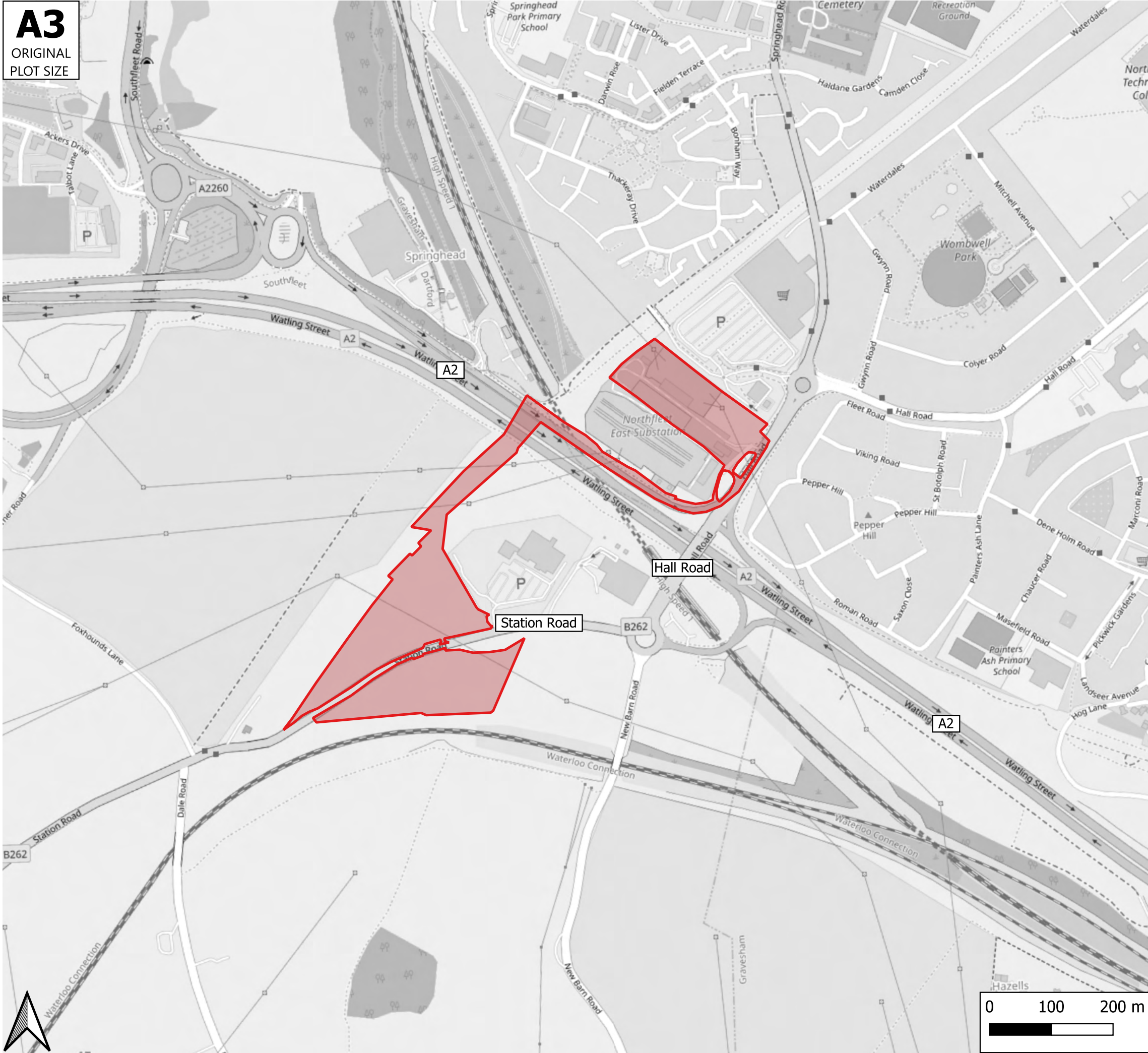
SCALE: 1:250	DATE: 19.12.23	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2305-048		DRAWING NO: SK03		REVISION: A



INDICATIVE



FIGURES



A3
ORIGINAL
PLOT SIZE

Key
[Red Box] Site Boundary

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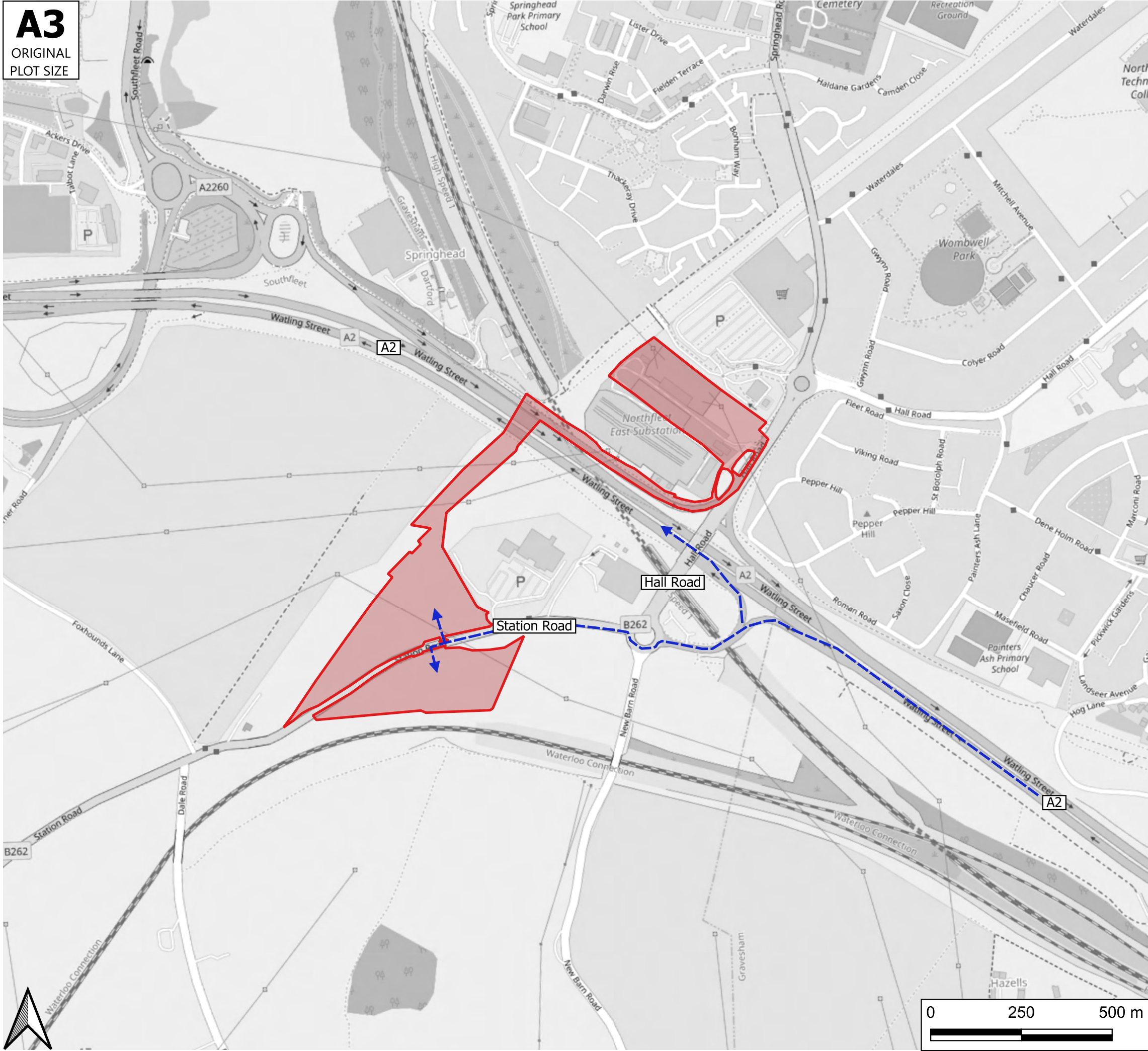
CLIENT:
Clearstone Energy Limited

PROJECT:
Dartford Energy Hub

TITLE:
Site Location Plan

STATUS:
FOR INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
NTS	17/12/24	JP	AG	RR
JOB NO:		DRAWING NO:		REVISION:
2305-048		Figure 2.1		-



A3
ORIGINAL
PLOT SIZE

Key

- Site Boundary
- Construction Route

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CLIENT:
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PROJECT:
Dartford Energy Hub

TITLE:
Construction Vehicle Route

STATUS:
FOR INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
NTS	17/12/24	JP	AG	RR
JOB NO:	DRAWING NO:		REVISION:	
2305-048	Figure 5.1		-	

APPENDIX A

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Scaled dimensions must not be taken from this drawing. All dimensions are to be confirmed on site prior to commencement of work.

Revisions:

Revision	Date	Revision Notes	Drawn	Inspector
01	07.11.23	First Issue	JM	DW
02	18.12.23	Revised	JM	DW
03	19.01.24	Revised	JM	DW
04	08.07.24	Amendments to Site Technology and Layout	JM	ST
05	30.08.24	Amendments to Layout, Substation relocated	JM	ST
06	10.09.24	Technology and Duration revised	JM	ST
07	28.10.24	Overhead HV Lines Added	GM	ST
08	26.11.24	Amended as per Comments	OB	ST
09	29.11.24	Amended as per Comments	OB	ST
10	06.12.24	Amended as per Comments	OB	ST

LEGEND:

-
- PLANNING APPLICATION BOUNDARY**
- SITE ACCESS**
- INTERNAL SITE ROADS**
- EMERGENCY/FIRE ACCESS**
- DNO ACCESS**
- BESS SECURITY FENCE**
- EXISTING UNDERGROUND POWER LINES**
- EXISTING OVERHEAD POWER LINES**
- EXISTING THOROUGHFARE**
- FOOT ACCESS**
- EXISTING VEGETATION**

SITE INFRASTRUCTURE

- | | | | |
|---|--------------------------------|---|-----------------------|
|  | SECURITY GATE |  | BATTERY UNIT |
|  | PEDESTRIAN GATE |  | PCSK INVERTER |
|  | CUSTOMER SUBSTATION |  | MV SKID |
|  | FIRE HYDRANT |  | ACC/DCC PANEL |
|  | 120,000L WATER TANK |  | FIRST RESPONDER PANEL |
|  | FIRST RESPONDER REPEATER PANEL |  | CCTV COLUMN |

Project:

Dartford Energy Hub

Developer:



CLEARSTONE ENERGY Limited
8 Devonshire Square, London
United Kingdom, EC2M 4PL
www.clearstoneenergy.com/

www.clearstoneenergy.co

Drawn by:



CADmando Design & Draughting Solutions Ltd
The Long Barn, The Courtyard, Severn Drive, Tewkesbury
Business Park, GL20 8GD

Tel: +44 (0) 1684 850019
Mob: +44 (0) 7814436910

Status:

FOR PLANNING

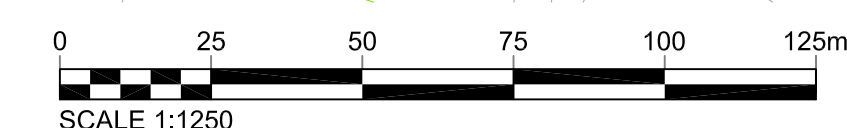
Drawing Title:

Dartford Energy Hub
Proposed Site Layout Plan

Drawn: JM	Checked: DW	First Issued: 07.11.2023
Project Code: CST010-		Drawing Number: DF4.0
Sheet Size: A1	Scale: 1:1250	Revision: 10

DARTFORD ENERGY HUB PROPOSED SITE LAYOUT PLAN

Scale: 1:1250@A1



APPENDIX B

A Planning Application by
CLEARSTONE ENERGY

In respect of
**Dartford Energy Hub,
DARTFORD**

Construction Traffic Management Plan

December 2024



Document Management

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Document Review

	Status	Author	Checker	Approver	Date
01	Draft	AG	JD	RR	28 11 24
02	Issue	AG	RR	RR	17 12 24

Issued by:

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Transport Planning Associates

40 Berkeley Square
Clifton
Bristol
BS8 1HP

0117 925 9400
bristol@tpa.uk.com
www.tpa.uk.com

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2 Summary of Construction Methodology and Development	3
3 Existing Traffic Flows and Speeds	6
4 Construction Vehicle Trip Generation	7
5 Site Access Arrangements	10
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Figure 5.1	Access Locations
Figure 6.1	Construction Vehicle Route

List of Appendices

A	Indicative Site Layout Plan
B	ATC Survey Data
C	Construction Vehicle Access Arrangement Drawings

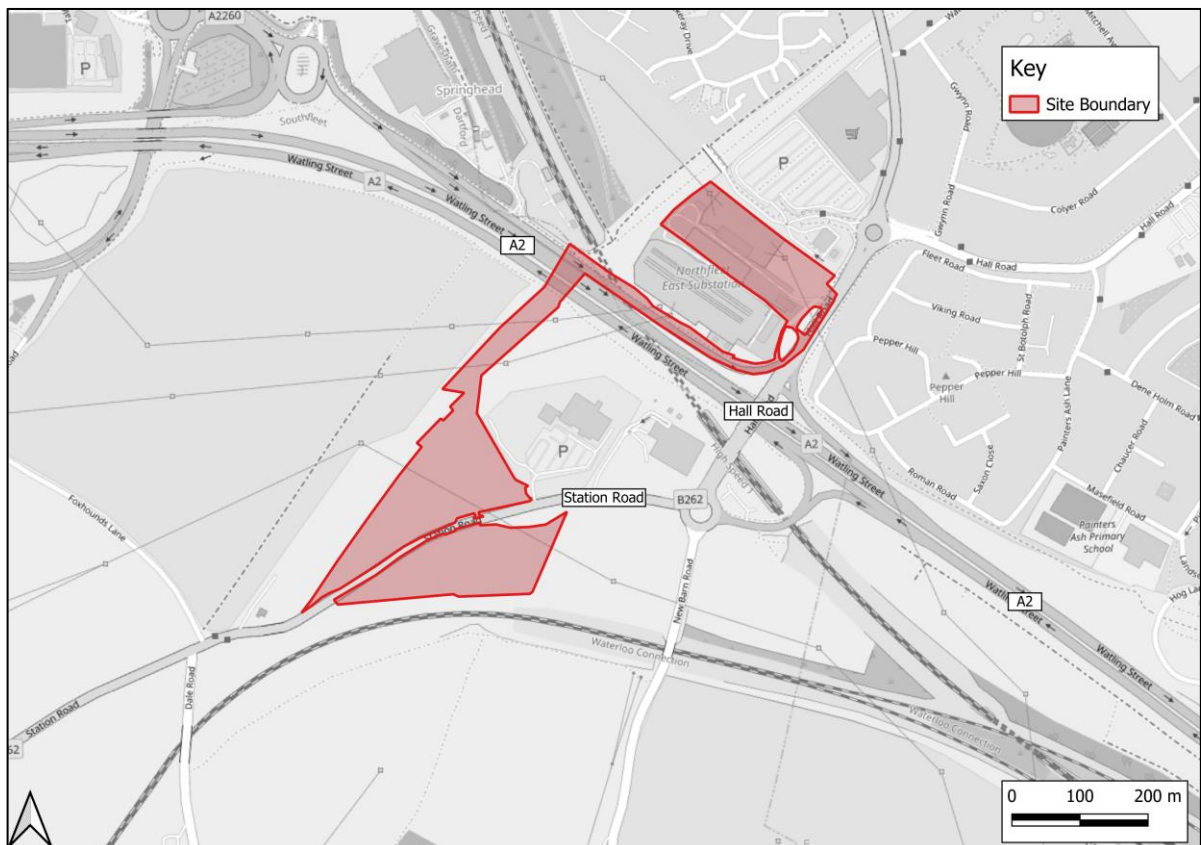
1 Introduction

- 1.1 This Outline Construction Traffic Management Plan (CTMP) has been prepared by Transport Planning Associates (TPA) on behalf of Clearstone Energy (the 'Applicant') in relation to a proposed Battery Energy Storage System (BESS) facility (the 'Proposed Development') on land to the north and south of Station Road, near Northfleet.
- 1.2 The local planning authority for the main area of the Site is Dartford Borough Council. The Energy Hub will be connected to Northfleet East Grid Substation, which is within the jurisdiction of Gravesham Borough Council. Kent County Council is the local highway authority.

Site Location and Proposed Development

- 1.3 The Site location is shown in **Figure 1.1**.

Figure 1.1 Site Location



- 1.4 The Site is located approximately 1km to the north of Southfleet village and approximately 2km from the centre of Northfleet. The Site comprises two parcels of land, north and south of the B262 Station Road, with an underground cable route connecting to Northfleet East Grid Substation. The existing

land is agricultural. The B262 connects to the A2 to the east. The A2 forms part of the strategic road network which is managed by National Highways.

- 1.5 Planning permission is being sought for a Battery Energy Storage System (BESS) and associated infrastructure. The Proposed Development will include a substation area, inverter/transformer stations, underground grid connection cables and other ancillary infrastructure together with landscaping and biodiversity enhancement measures.
- 1.6 An indicative Site Layout Plan is shown in **Appendix A**.

Construction Traffic Management Plan (CTMP)

- 1.7 This Outline CTMP provides a framework for the management of construction vehicle movements to and from the Site, to ensure that the effect of the construction phase on the local highway network is minimised.
- 1.8 The construction period for the development is expected to last between six to twelve months.
- 1.9 This Outline CTMP sets out the strategy for the following;
- Site access;
 - Construction vehicle routing;
 - Site compound and internal routing;
 - Construction vehicle trip generation; and
 - Proposed mitigation measures.
- 1.10 It will be the responsibility of the appointed contractor to comply with all statutory regulations and guidelines in relation to construction and movement activities.
- 1.11 A Final CTMP, based on the principles set out in this Outline CTMP, will be agreed with the LPAs in consultation with Kent County Council prior to construction commencing in the event planning permission is granted. The appointed contractor's details will be provided as part of the Final CTMP.

2 Summary of Construction Methodology and Development

2.1 This section provides an overview of the Development and the construction programme.

Battery Energy Storage System

2.2 The Proposed Development is for a Battery Energy Storage System ('BESS') Facility. The BESS Facility is designed to provide peak generation and grid balancing services to the electricity grid by allowing excess electricity imported from the electricity grid to be stored in batteries and dispatched when required.

Construction Programme

2.3 The construction period will last approximately six to twelve months.

2.4 This period will include the development of the main BESS site facility as well as the installation of the underground cable connecting to Northfleet East Substation to the north east of the Site.

2.5 The construction is anticipated to be broken down into several key components, including:

- Mobilisation and site preparation;
- Civils;
- Cable installation;
- Equipment installation;
- Landscaping; and
- Energisation.

2.6 A detailed programme will be produced as part of the Final CTMP.

Construction Compound and Internal Access Track

2.7 A construction compound(s) will be set up within the Site. The construction compound(s) will include the following facilities:

- Appropriate car parking spaces;

- Welfare facilities, including toilets, a canteen, changing rooms and offices. These will be in the form of temporary mobile units;
 - A storage area for equipment, including storage crates;
 - A refuse and recycle store;
 - A turning area to ensure vehicles arrive and depart in a forward gear.
- 2.8 An internal access track will be constructed throughout the Site allowing for the movement of construction and maintenance vehicles.
- 2.9 The access track and construction compound(s) will be constructed using a hard-standing bound material of permeable design to ensure suitable drainage and that it can be easily sprayed (if required) to prevent mud, debris and muddy water being tracked onto the highway.
- 2.10 The Site will be secured using a perimeter fence. Heras fencing (or similar) may be required to secure the construction compound(s) and any other areas of the Site until the perimeter fence is completed.
- 2.11 The compound(s) will include a wheel wash facility. Excess water from the wheel wash facility will be appropriately disposed of. A visual inspection of vehicles will be undertaken before they depart the Site, to ensure that they are not carrying any residual debris onto the highway. Should significant mud be carried onto the highway after the washing then a road sweeper will clean the affected area of highway.

Grid Connection

- 2.12 The BESS facility will be connected to the National Grid at Northfleet East Substation via an underground cable.
- 2.13 At this stage, it is envisaged that the cable will be installed in sections via Horizontal Directional Drilling (HDD) as part of a rolling programme to minimise disruption to road users. The installation will include the following stages:
1. Establish a launch and receive pit for each section of the cable installation route;
 2. Directionally drill a small diameter pilot hole within the highway between the launch and receive pits, at the prescribed depth agreed with the local highway authority through the design process;
 3. Enlarge the pilot hole for installation of the pipeline;
 4. Pull the pipeline back into the enlarged hole;

5. Insert the cables into the pipe

- 2.14 Once the drilling works are complete and connected, the launch / receive pits will be backfilled and reinstated and resurfaced to match the original surface.

Section 50 Licence

- 2.15 Prior to these works being undertaken, all appropriate licences will be obtained, including a Section 50 licence. Through this process, traffic management will be agreed with the local Highway Authority. Works within the public highway will be divided into sections of the road to minimise disruption to the local traffic.
- 2.16 The local community will have early notice of the exact works and their location a minimum of four weeks ahead of commencement, via flyers, signage and online notices.

3 Existing Traffic Flows and Speeds

- 3.1 This Section provides details of the existing traffic flows and speeds on the Station Road, within the vicinity of the Site.
- 3.2 Three Automatic Traffic Counts (ATC) surveys were undertaken between the 21st October and the 27th October 2024 along Station Road. These were located in the following locations:
- West of Site;
 - East of Site;
 - Middle of the Site.
- 3.3 The ATC data and their locations is shown in **Appendix B**. The recorded traffic volumes and speeds are summarised in **Table 3.1**.

Table 3.1 Summary of ATC Data

Location	Direction	Total Vehicles			HGV %*	Speeds (mph)**	
		24hr AAWT	08:00-09:00	17:00-18:00		Ave Speed	85% Speed
B262 Station Road (West)	EB	4,609	289	501	2.5%	31.9	36.1
	WB	4,511	410	221	2.1%	33.0	37.6
	Total	9,120	699	722	2.3%	32.5	36.9
B262 Station Road (Central)	EB	4,463	407	217	2.1%	37.1	42.0
	WB	4,588	284	499	2.6%	35.2	39.2
	Total	9,051	691	716	2.4	36.2	40.6
B262 Station Road (East)	EB	5,141	284	517	2.4%	32.3	36.9
	WB	5,042	422	220	2.0%	35.6	40.5
	Total	10,183	706	737	2.2%	34.0	38.7

*HGV is over 3.5tonnes **Recorded over five-day average

- 3.4 Table 3.1 shows that, on an average weekday, there are around 9,000 - 10,000 two-way movements on the B262 Station Road. The 85th percentile speeds were recorded as between 36.9mph to and 40.6mph. Around 2.3% of movements on Station Road are by HGV. This includes a mixture of vehicles categorised as Ordinary Goods Vehicles (OGV) 1 and the larger OGV 2.

4 Construction Vehicle Trip Generation

- 4.1 The section sets out the trip generation associated with the construction phase of the proposed development.
- 4.2 It is anticipated that the construction phase will last for approximately six to twelve months.
- 4.3 Construction activities and deliveries will be carried out Monday to Friday 08:00-18:00 and between 08:00 and 13:30 on Saturdays. No construction activities or deliveries will occur on Sunday or Public Holidays. Where possible, construction deliveries and HGV activity will be coordinated to avoid construction vehicle movements during the traditional AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00).
- 4.4 The Applicant will work with the operators of the Millbrook Garden Centre and the Pepperhill Recycling Centre to ensure that the construction of the proposed development does not have an adverse effect on their usual operations.
- 4.5 The construction period will include the use of HGVs to bring the equipment onto the Site and this will be strictly managed to ensure that vehicle movement is controlled and kept to a minimum. The vast majority of deliveries by HGV will be by 16.5m articulated vehicles or 8-10m rigid vehicles.
- 4.6 Deliveries to the Site will be reported to the Site Manager and will be made by the smallest possible vehicle for that particular item of plant or material, whilst ensuring efficiency of vehicle movements is maintained.

HGV Movements

- 4.7 **Table 4.1** sets out a summary of the HGV movements that will be associated with the construction phase of the Scheme.

Table 4.1 Dartford Energy Hub HGV Movements

Activity	Type of Vehicle (Max)	Total Number of Deliveries
Battery Modules	16.5m Articulated	216 (432 two-way movements)
Invertor	16.5m Articulated	72 (144 two-way movements)
Client Control Room	16.5m Articulated	2 (4 two-way movements)
Storage Containers	16.5m Articulated	5 (10 two-way movements)
Substation	16.5m Articulated	15 (30 two-way movements)
Miscellaneous (fencing, water tanks, cable, gravel, landscaping etc.).	10m Rigid and 16.5m Articulated	190 (380 two-way movements)
Total		500 deliveries (1000 two-way movements)

- 4.8 As set out in **Table 3.1** it is anticipated that approximately 500 deliveries could be made by during the construction of the BESS facility, at an average of over under three deliveries per day, assuming a six-month construction period (26 weeks or 150 working days).
- 4.9 If a 25% buffer is added on to these deliveries, there will be 625 deliveries, at an average of just over four vehicles per day.
- 4.10 There is likely to be a small peak in deliveries early in the construction process for Site set-up, including the construction of the access track and then again when the electrical equipment (BESS units) are ready for installation. The Applicant has advised that there will be no more than 10-15 deliveries per day by HGV during this period, which will last approximately four to six weeks.

Construction Worker Trips

- 4.11 In addition to the HGV movements identified in **Table 4.1**, there will also be a number of construction movements associated with smaller vehicles for the transportation of construction workers and sub-contractors.
- 4.12 Approximately 20 construction workers are anticipated to be required on Site on an average day. This may increase slightly during peak construction. The location where staff will travel from is unknown at this stage as it will depend on the appointed contractor. However, it is envisaged that the majority of non-local workforce will stay at local accommodation and be transported to the Site by shared transport to minimise the impact on the strategic and local highway network. Based on this, it is likely that there could be up to 10 LGV arrivals per day.

Construction Vehicle Movements Timings

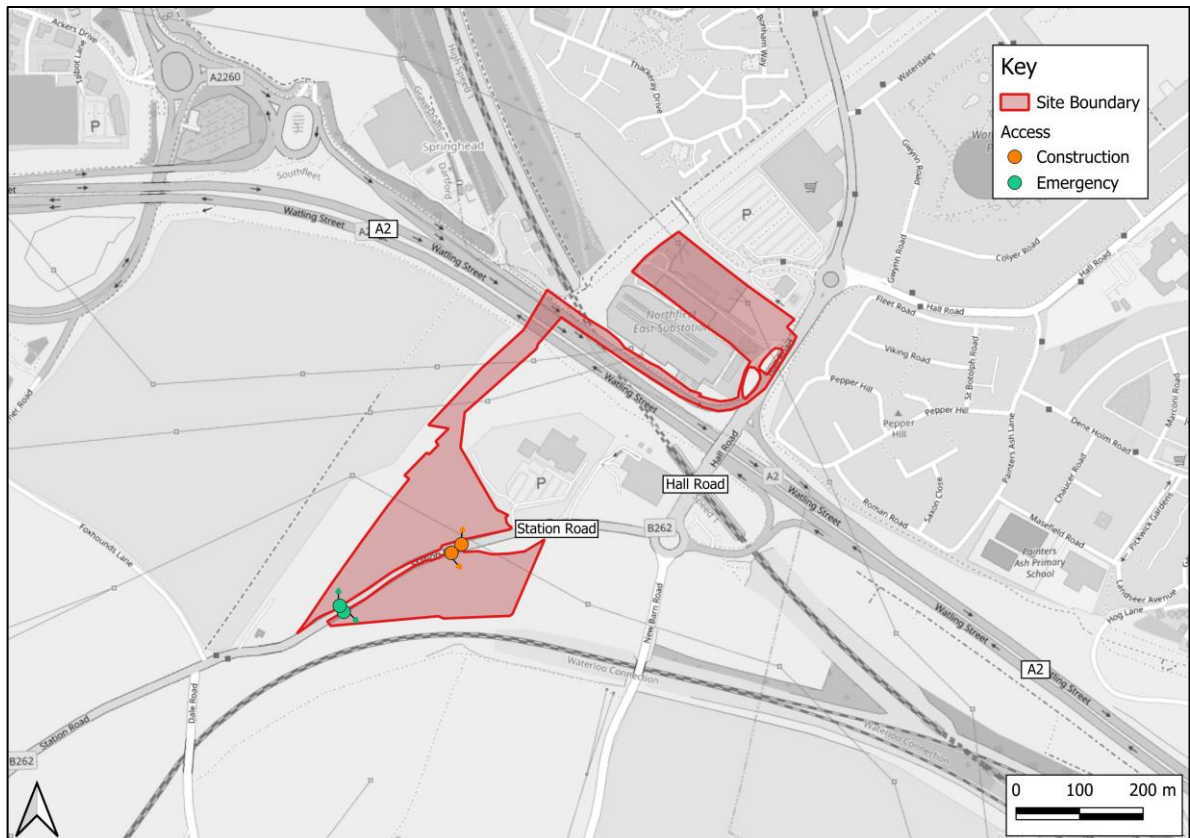
- 4.13 Where possible, construction deliveries will be coordinated to avoid construction vehicle movements during the traditional AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00).
- 4.14 Due to the Site operational hours (08:00-18:00), construction worker travel will occur outside of the peak hours.

5 Site Access Arrangements

5.1 This section sets out the details of the construction and operational phase access arrangements.

5.2 The location of the accesses are shown in **Figure 5.1**.

Figure 5.1 Dartford Energy Hub: Site Access Arrangements



Construction Access Arrangements

5.3 Construction vehicle access arrangement drawings are shown in **Appendix C**

Northern Parcel

5.4 Vehicles will enter the Site via an improved existing agricultural access to access the northern parcel. The proposed access arrangement is shown in **Drawing SK01-A**

5.5 **Drawing SK01-A** provides information on the visibility splays. It demonstrates that a visibility splay of 100.1m can be achieved to the east and 111.9m can be achieved to the west. These visibility splays are in accordance with the recorded 85th percentile speeds.

- 5.6 **Drawing SK01-A** also shows the swept-path analysis of a 16.5m articulated vehicle accessing and egressing the Site in a forward gear. This is the largest vehicle that will be required to deliver equipment to the Site.

Southern Parcel

- 5.7 Vehicles accessing the southern parcel of the Site will do so via a new access point from Station Road. This access will be constructed to accommodate a 16.5m articulated vehicle, which is the largest vehicle required to deliver equipment to the Site. The access arrangement is shown in **Drawing SK02-A**
- 5.8 **Drawing SK02-A** provides information on the visibility splays. It demonstrates that a visibility splay of 100.1m can be achieved to the east and 111.9m can be achieved to the west. These visibility splays are in accordance with the recorded 85th percentile speeds.

Access Management

- 5.9 During the construction phase, banksmen will be deployed at the Site access whenever construction vehicles are accessing or egressing the Site. This is to ensure the safety of all road users.
- 5.10 In addition, temporary signage will be erected in the vicinity of the junction during the construction phase. Diagram 7301 'WORKS TRAFFIC' in the Traffic Signs Regulations and General Directions (TSRGD) will be used to indicate the access and will read 'WORKS TRAFFIC LARGE VEHICLE TURNING'. These signs will be white text and red background 1050 x 750 mm mounted in 'A' frames.
- 5.11 The accesses will be retained for use by maintenance vehicles. Maintenance vehicles, in the form of a transit van or similar, will visit the Site only a handful of times per month.

Emergency Vehicle Access

- 5.12 Two emergency accesses are proposed on the B262 Station Road. One to the northern parcel of land, and one to the southern parcel of land. They will only be used in the event of an emergency. The proposed emergency access arrangements for the northern and southern parcels are shown in **Drawing SK03** and **Drawing SK04**, respectively. They are provided to ensure that Proposed Development is in accordance with the latest guidance published by the National Fire Chiefs Council (NFCC).

Public Rights of Way

5.13 There are no Public Rights of Way (PRoW) within the Site Boundary.

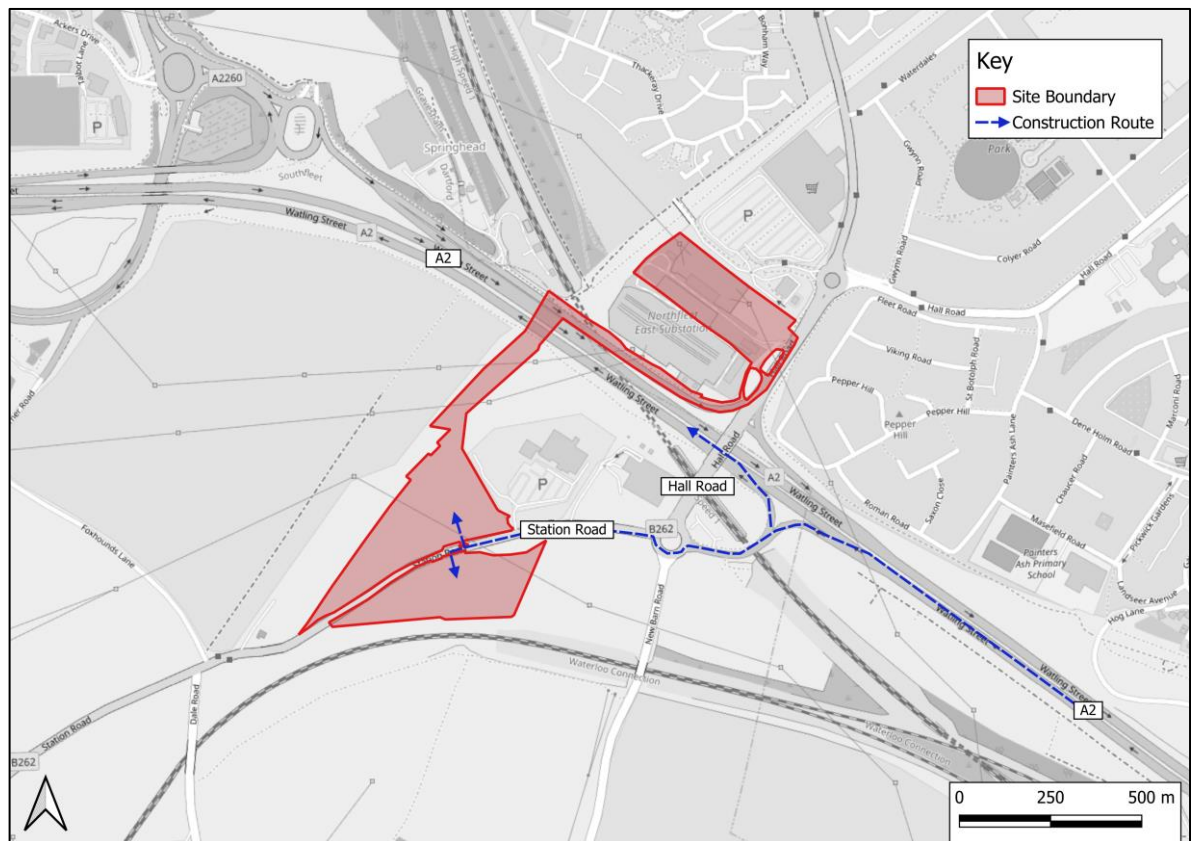
6 Construction Vehicle Routing

- 6.1 The details of the construction vehicle route are set out below. Drivers will be made aware of the route in advance of driving to the Site. The selected route is considered the most appropriate route to the Site.

Route Overview

- 6.2 The designated route for all construction HGVs associated with the construction period is illustrated in **Figure 6.1**.
- 6.3 The route has been selected to minimise the effect of vehicle movements in relation to sensitive uses, such as residential properties. This route takes into account points raised at the public consultation event.

Figure 6.1 Construction Vehicle Route



- 6.4 The construction vehicle route to the Site is:
- A2 → Station Road (B262) → Site Accesses.

- 6.5 All vehicles will route to the Site from the A2. Construction vehicles will exit the A2 and take the second exit at the Station Road/Hall Road/New Barn Road roundabout. Vehicles will then continue travelling westbound on Station Road until either turning left or right into the relevant Site access.
- 6.6 There is no posted weight or height restriction along the above-described route. Additional warning signs will be installed on the approach from both directions on Station Road to advise drivers of the potential for construction HGVs to be present.
- 6.7 Upon egressing the Site, vehicles will follow the reverse of the previously described route, returning to the A2.

Route Signage

- 6.8 Temporary road signage will be implemented along the designated route to inform background traffic of the ongoing construction works and to direct construction traffic to and from the Site. The signs will be located at key points on the route, such as at junctions.
- 6.9 All signage will be compliant with Chapter 8 of the Traffic Signs Manual where applicable. The following points will be considered when locating signage:
- The position of the sign in relation to the highway;
 - Possible distraction to drivers; and
 - The proximity to junctions.
- 6.10 The signage strategy will be agreed with the local highway authority.

Management of Deliveries

- 6.11 All deliveries will be scheduled in advance using a booking system. Drivers will be instructed to stop in an appropriate layby or service station and make contact if they are likely to miss their allotted slot to allow the schedule to be adapted in as much as possible.
- 6.12 The following procedure will be initiated when deliveries are made to the Site:
- 6.13 Procedure for Arrival to Site
- Drivers to be notified of scheduled arrival time ahead of delivery to the Site;
 - When the delivery vehicle is due, operators will be mobilised and will go to position at the Site access;

- All operatives will communicate with each other, as necessary; and
- Banksmen will assist HGVs to manoeuvre into the Site access.

6.14 The following procedure will be initiated when HGVs are leaving the Site:

6.15 Procedure for Leaving the Site

- Before drivers depart, the Site Manager will be notified. They will then mobilise the banksmen at the Site access;
- Drivers will be advised when the banksmen are in place; and
- Banksmen will guide the drivers out of the Site access.

Summary

6.16 The proposed construction vehicle route provides the most appropriate route between the strategic highway network and the Site. There is no posted weight of height restrictions along the route.

6.17 The route has been selected to mitigate the impact of vehicle movements in relation to sensitive uses, such as residential properties.

6.18 The use of any roads other than the designated and signposted route shall not be permitted and this shall be enforced through the agreement of the CTMP.

6.19 Appropriate management measures will be provided throughout the construction phase in order to manage the arrival and departure of HGVs at the Site. This is set out further in **Chapter 6**.

7 Management Measures

- 7.1 The contractor will introduce measures to minimise the impact resulting from construction activities. It will be the responsibility of the Project Manager and Site Manager to oversee the implementation of the management measures.
- 7.2 The management measures are set out below.

Signage

- (i) Signs to direct construction vehicles associated with the development will be installed along the construction traffic route. Delivery drivers, contractors and visitors will be provided with a route plan in advance of delivering to Site to ensure that vehicles follow the identified route;
- (ii) All signage on the designated route will be inspected daily by the Site Manager, to ensure they are kept in a well-maintained condition and located in safe and appropriate locations;

Vehicle Movement

- (iii) Where possible, construction deliveries by will be coordinated to avoid the network peak hours of 08:00-09:00 and 17:00-18:00;
- (iv) Banksman will be provided at the Site access to indicate to construction traffic when it is safe for them to enter and exit the Site;

Booking System

- (v) A booking system will be set up to manage arrivals and departures to the Site. A log will be kept as part of the booking system;

Parking

- (vi) Advisory signs informing contractors and visitors that parking is not permitted on-street in the vicinity of the Site. Contractors and visitors will be advised that parking facilities will be provided on-Site in advance of visiting the Site and that they should not park on-street;

Wheel Wash Facility

- (vii) A wheel washing facility will be provided. This will be located on the access track near to the Site access.
- (viii) A visual inspection of vehicles will be undertaken before they depart the Site, to ensure that they are not carrying any residual debris onto the highway;

Noise Reduction and Air Quality

- (ix) When on Site and when not in use, vehicle engines will be switched off;
- (x) Vehicles carrying material off-Site will be sheeted to prevent the spread of dust;
- (xi) In dry conditions, areas near to the Site access will be sprayed with water supplied to prevent the spread of dust;

Site Security

- (xii) The Site will be secured at all times via a perimeter fence or temporary fencing. CCTV will be operational within the construction compound;

Construction Site Management

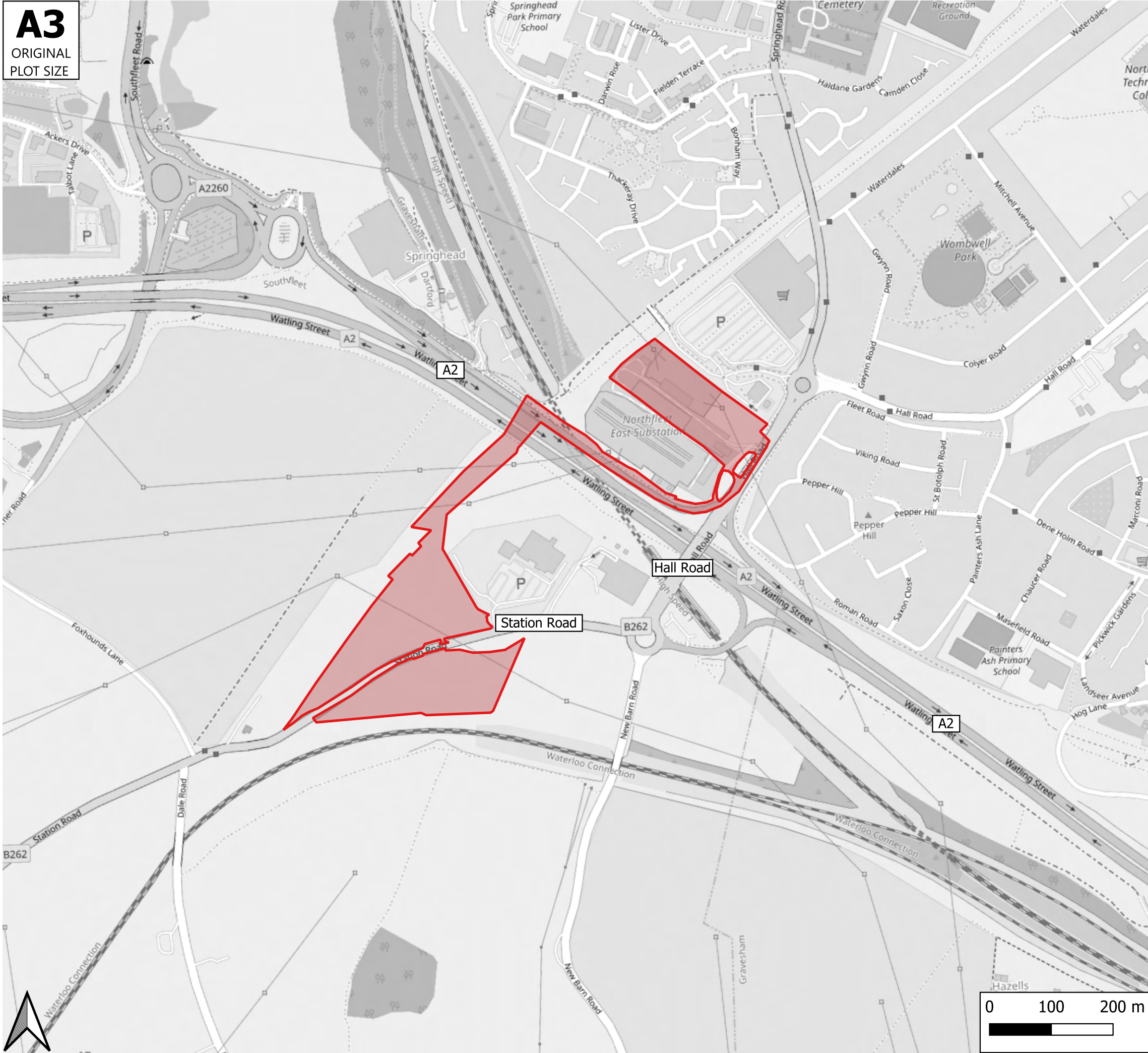
- (xiii) The Construction Site Manager (CSM) will be responsible for undertaking co-ordination for the Site. Their main duties will include:

- a. Managing the implementation of the CTMP;*
- b. Scheduling deliveries to the Site;*
- c. Checking for road works scheduled that may affect the construction route as well as for refuse collection to avoid conflict with construction vehicles;*
- d. Handling complaints received, if any;*
- e. To act as the point of contact between the employees and contractors;*
- f. Update the CTMP prior to commencement;*
- g. Community Engagement.*

Community Engagement

- (xiv) The details of the Construction Site Manager will be provided to the local highway authority in advance of any work being carried out.
- (xv) The Construction Site Manager's details will also be provided on a Site-board at the Site access. If anyone in the local community has any issues during the construction phase, the Site Manager will be available to discuss.

FIGURES



A3
ORIGINAL
PLOT SIZE

Key
 Site Boundary

Rev	Date	Details			Drawn by
					Checked by
					Approved by

Bristol
Cambridge
London
Welwyn Garden City



40 Berkeley Square
Clifton
Bristol
BS8 1HP

0117 925 9400
www.tpa.uk.com

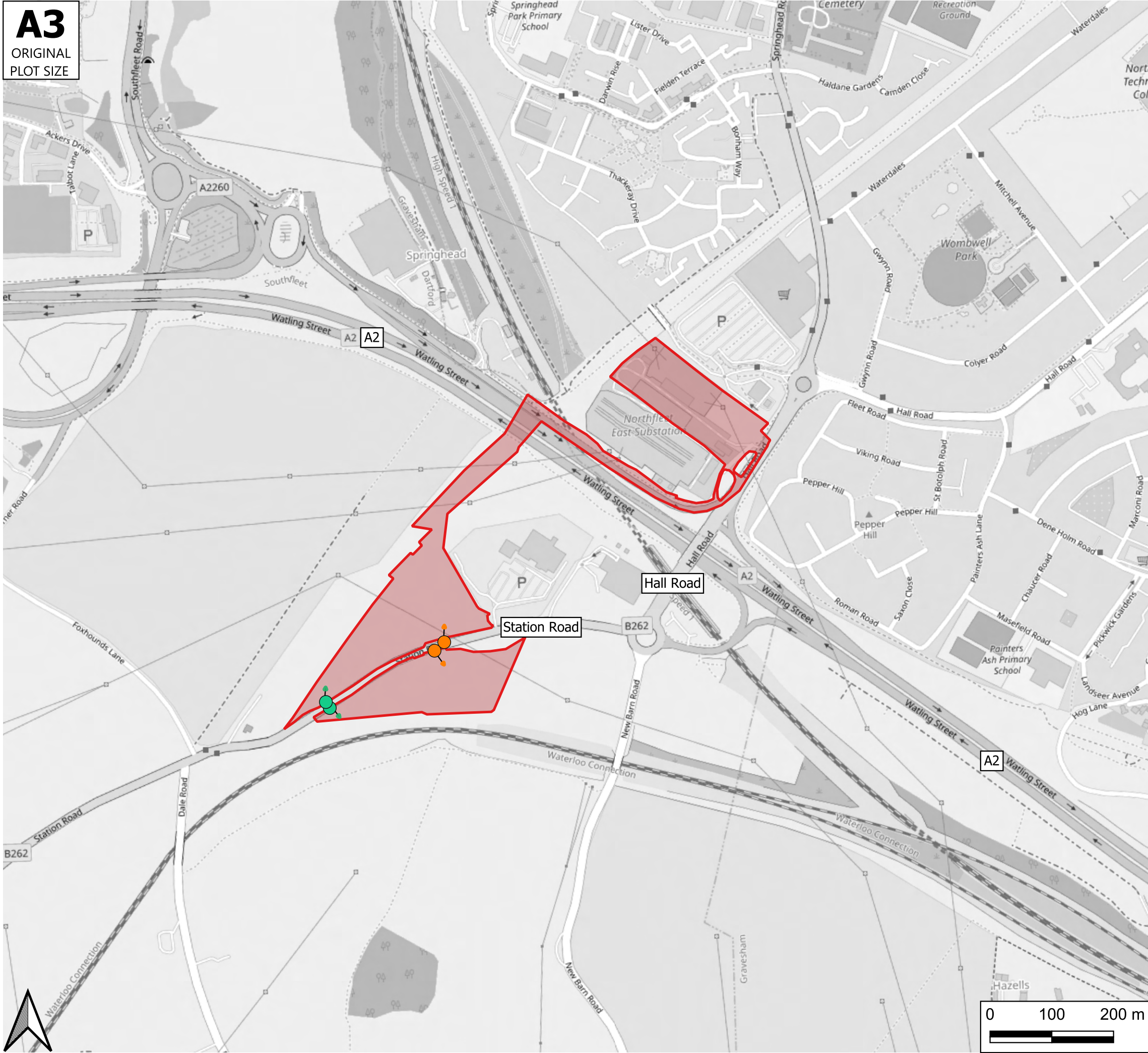
CLIENT:
Clearstone Energy Limited

PROJECT:
Dartford Energy Hub

TITLE:
Site Location Plan

STATUS:
FOR INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
NTS	17/12/24	JP	AG	RR
JOB NO:		DRAWING NO:		REVISION:
2305-048		Figure 1.1		-



A3
ORIGINAL
PLOT SIZE

Key

- Site Boundary
- Construction
- Emergency

Rev	Date	Details	Drawn by	Checked by	Approved by

Bristol
Cambridge
London
Welwyn Garden City

tpa
Transport Planning Associates

40 Berkeley Square
Clifton
Bristol
BS8 1HP

0117 925 9400
www.tpa.uk.com

CLIENT:

Clearstone Energy Limited

PROJECT:

Dartford Energy Hub

TITLE:

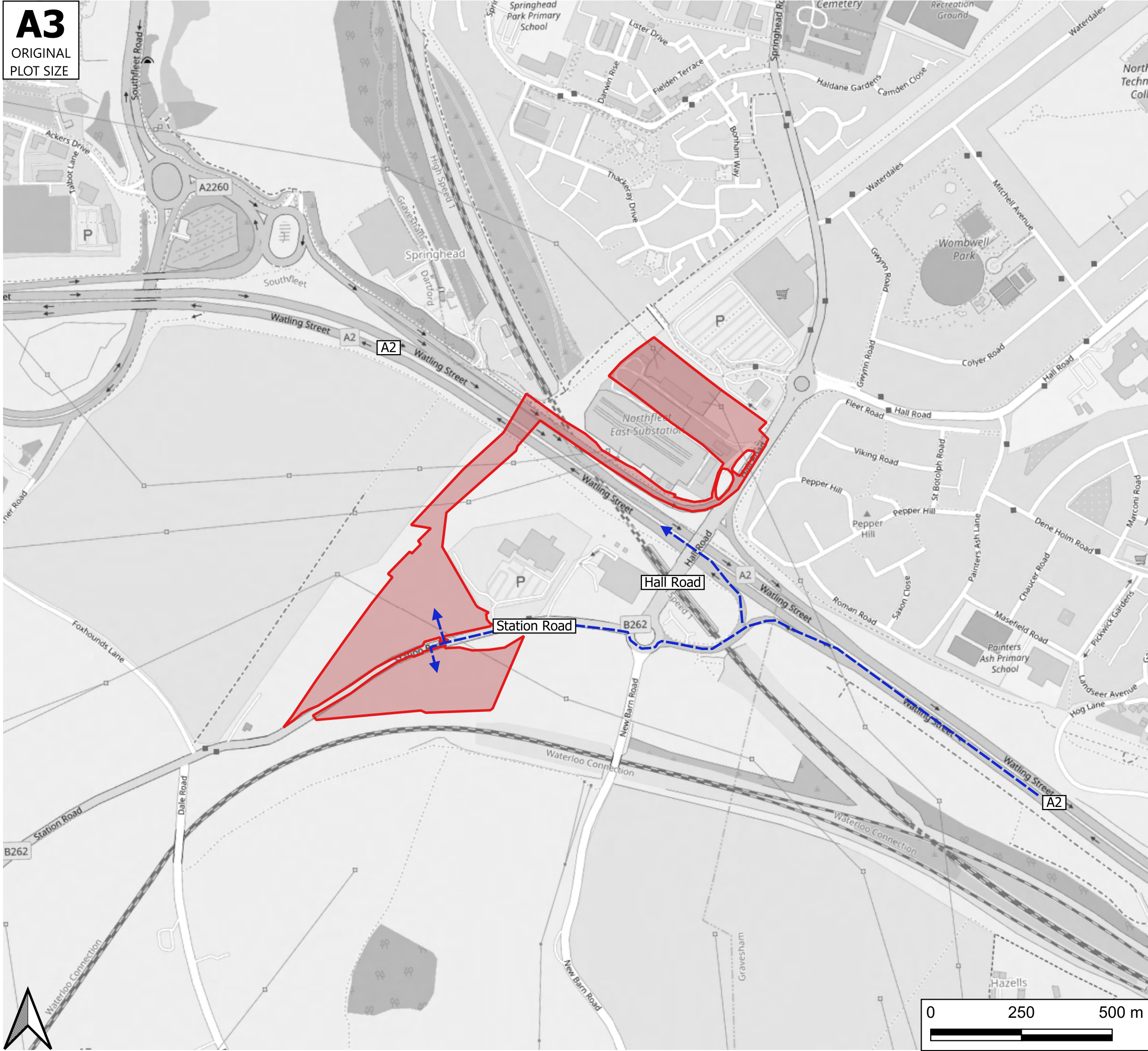
Access Plan

STATUS:

FOR INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
NTS	17/12/24	JP	AG	RR

JOB NO:	DRAWING NO:	REVISION:
2305-048	Figure 5.1	-



A3
ORIGINAL
PLOT SIZE

Key
 Site Boundary
- - - - - Construction Route

Rev	Date	Details			Drawn by
					Checked by
					Approved by

Bristol
Cambridge
London
Welwyn Garden City



40 Berkeley Square
Clifton
Bristol
BS8 1HP

0117 925 9400
www.tpa.uk.com

CLIENT:
Clearstone Energy Limited

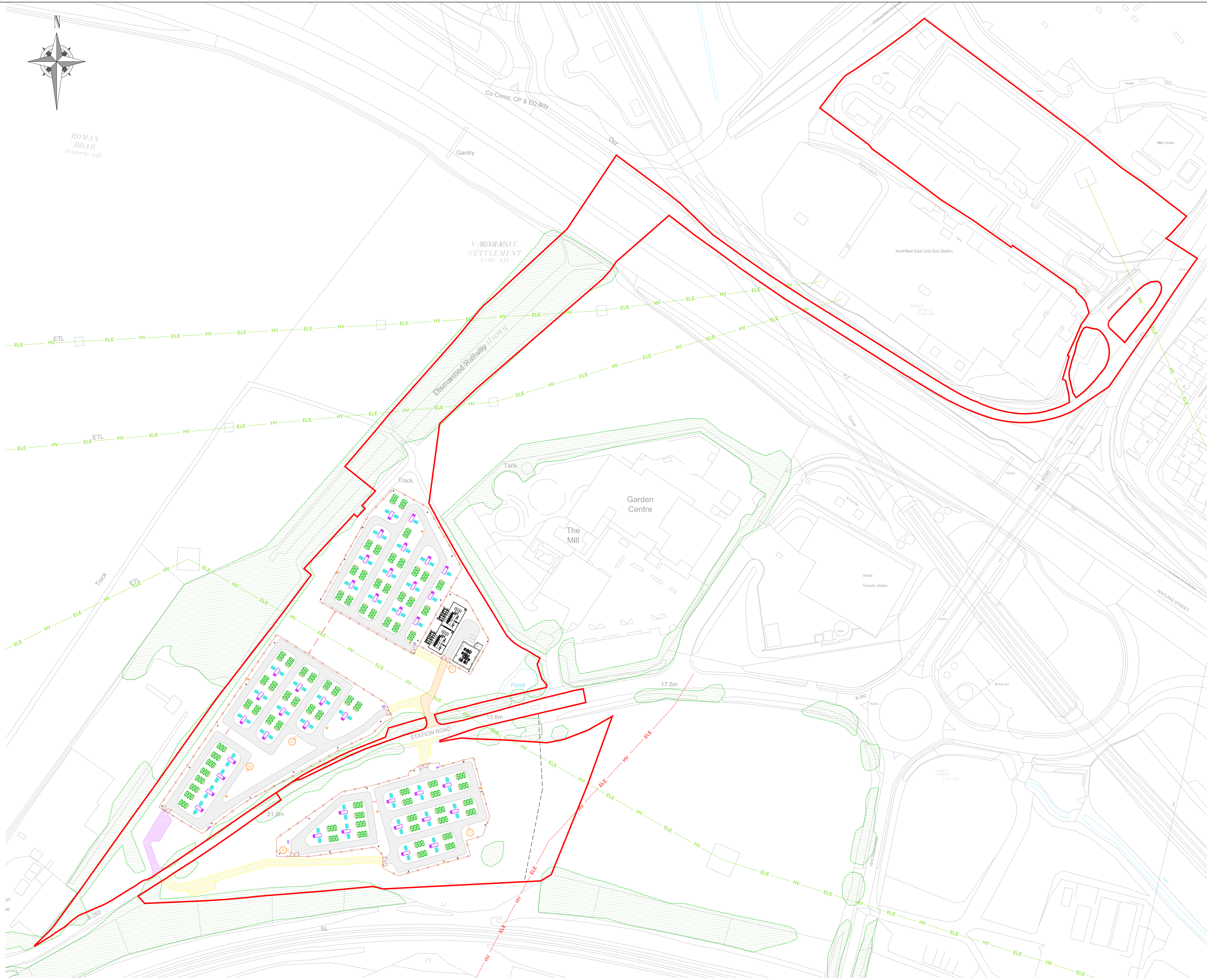
PROJECT:
Dartford Energy Hub

TITLE:
Construction Vehicle Route

STATUS:
FOR INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
NTS	17/12/24	JP	AG	RR
JOB NO:		DRAWING NO:		REVISION:
2305-048		Figure 6.1		-

APPENDIX A



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Scaled dimensions must not be taken from this drawing. All dimensions are to be confirmed on site prior to commencement of work.

Revisions:

Revision	Date	Revision Notes	Drawn	Inspected
01	07.11.23	First Issue	JM	DW
02	18.12.23	Revised	JM	DW
03	19.01.24	Revised	JM	DW
04	06.07.24	Amendments to Site Technology and Layout	JM	ST
05	30.08.24	Amendments to Layout, Substation relocated	JM	ST
06	10.09.24	Technology and Duration revised	JM	ST
07	28.10.24	Overhead HV Lines Added	GM	ST
08	26.11.24	Amended as per Comments	OB	ST
09	29.11.24	Amended as per Comments	OB	ST
10	06.12.24	Amended as per Comments	OB	ST

LEGEND:

- PLANNING APPLICATION BOUNDARY
- SITE ACCESS
- INTERNAL SITE ROADS
- EMERGENCY/FIRE ACCESS
- DNO ACCESS
- BESS SECURITY FENCE
- EXISTING UNDERGROUND POWER LINES
- EXISTING OVERHEAD POWER LINES
- EXISTING THOROUGHFARE
- FOOT ACCESS
- EXISTING VEGETATION

SITE INFRASTRUCTURE

- SECURITY GATE
- PEDESTRIAN GATE
- CUSTOMER SUBSTATION
- FIRE HYDRANT
- 120,000L WATER TANK
- FIRST RESPONDER REPEATER PANEL
- BATTERY UNIT
- PCSK INVERTER
- MV SKID
- ACC/DCC PANEL
- FIRST RESPONDER PANEL
- CCTV COLUMN

Project:

Dartford Energy Hub

Developer:



CLEARSTONE ENERGY Limited
8 Devonshire Square, London
United Kingdom, EC2M 4PL
www.clearstoneenergy.com/

Drawn by:



Status:

FOR PLANNING

Drawing Title:

Dartford Energy Hub
Proposed Site Layout Plan

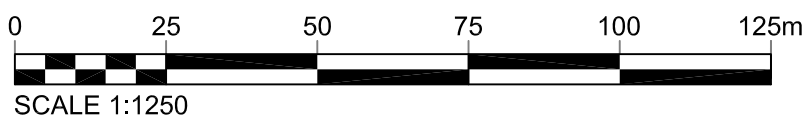
Drawn: JM	Checked: DW	First Issued: 07.11.2023
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Project Code: CST010- DF4.0	Drawing Number:
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Sheet Size: A1	Scale: 1:1250	Revision: 10
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DARTFORD ENERGY HUB PROPOSED SITE LAYOUT PLAN

Scale: 1:1250@A1



APPENDIX B

PROJECT 41251 Station Rd, Dartford
SITE CODE 41251-001
LOCATION Station Rd (E)

START DATE Mon 21 Oct, 2024
END DATE Sun 27 Oct, 2024 (inc.)
SPEED LIMIT 60mph
SURVEY TYPE 7-day ATC, 15min periods, 6 veh. classes



ATC SUMMARY REPORT

7-DAY AUTOMATIC TRAFFIC COUNT

SUMMARY

COMBINED EAST & WESTBOUND

Total recorded volume	62,773
Total recorded HGVs	1,385
% of vehicles that are HGVs	2.2%
Avg daily volume (based on 7 days)	8,967.6
Average daily speed (7 days)	31.7mph
Average daily 85%ile (7 days)	38.7mph
AA DT (annual average daily traffic)	9,389.2
AA WT (annual average weekday traffic)	10,183.2
Avg weekday volume (Mon-Fri, 24hrs)	9,713.8
Avg weekday speed (Mon-Fri, 24hrs)	31.6mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	8,020.4
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	30.9mph

EASTBOUND

Total recorded volume	31,945
Total recorded HGVs	782
% of vehicles that are HGVs	2.4%
Avg daily volume (based on 7 days)	4,563.6
Average daily speed (7 days)	29.8mph
Average daily 85%ile (7 days)	37.3mph
% of vehicles exceeding 60mph	0.0%
AA DT (annual average daily traffic)	4,779.2
AA WT (annual average weekday traffic)	5,141.0

Avg weekday volume (Mon-Fri, 24hrs)	4,891.2
Avg weekday speed (Mon-Fri, 24hrs)	29.4mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	4,124.0
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	28.8mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	36.5mph
AM avg peak vol period (Mon-Fri)	12:00 to 12:15
PM avg peak vol period (Mon-Fri)	17:00 to 17:15

A 7-day automatic traffic count on Station Rd (E), commencing Mon 21 Oct 2024, recorded a total of 62,773 vehicles. The posted speed limit of 60mph was exceeded by 0.1% of vehicles, and the seasonally adjusted, combined AADT value is 9,389 (see 'Equipment & methodology' below).

The combined summary on the left shows the total volumes, average speeds, AADT and 85%iles recorded in both directions from all the recorded data, plus the Mon-Fri peak periods. Speeding vehicles are defined as those travelling 61mph and above.

The summaries below provide directionalised details including speeding percentages and weekday daytime details.

WESTBOUND

Total recorded volume	30,828
Total recorded HGVs	603
% of vehicles that are HGVs	2.0%
Avg daily volume (based on 7 days)	4,404.0
Average daily speed (7 days)	33.7mph
Average daily 85%ile (7 days)	40.2mph
% of vehicles exceeding 60mph	0.1%
AA DT (annual average daily traffic)	4,610.0
AA WT (annual average weekday traffic)	5,042.2

Avg weekday volume (Mon-Fri, 24hrs)	4,822.6
Avg weekday speed (Mon-Fri, 24hrs)	33.7mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	3,896.4
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	33.0mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	39.5mph
AM avg peak vol period (Mon-Fri)	07:15 to 07:30
PM avg peak vol period (Mon-Fri)	12:45 to 13:00

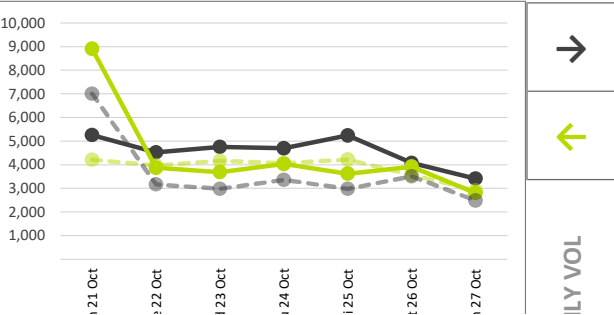
SITE LOCATION



LOCATION	Station Rd (E)
DATES	Mon 21 Oct to Sun 27 Oct inc.
LAT / LNG	51°25'31.48"N 0°19'36.56"E
PSL	60mph
DIRECTION 1	→ Eastbound
DIRECTION 2	← Westbound

DAILY VOLUMES

EAST- & WESTBOUND



Total 24hr eastbound (solid, dark grey) and westbound (solid, dark green) traffic volumes, with light dashed grey and green representing 12hr volumes (0700-1900), over 7 consecutive days from all available data.

As can be expected, the lowest 24hr volumes were recorded on the Sunday, whilst the highest was on the Monday.

PROJECT 41251 Station Rd, Dartford
SITE CODE 41251-002
LOCATION Station Rd (Midd)

START DATE Mon 21 Oct, 2024
END DATE Sun 27 Oct, 2024 (inc.)
SPEED LIMIT 60mph
SURVEY TYPE 7-day ATC, 15min periods, 6 veh. classes



ATC SUMMARY REPORT

7-DAY AUTOMATIC TRAFFIC COUNT

SUMMARY

COMBINED EAST & WESTBOUND

Total recorded volume	54,931
Total recorded HGVs	1,293
% of vehicles that are HGVs	2.4%
Avg daily volume (based on 7 days)	7,847.3
Average daily speed (7 days)	34.9mph
Average daily 85%ile (7 days)	40.8mph
AADT (annual average daily traffic)	8,166.8
AAWT (annual average weekday traffic)	9,051.1
Avg weekday volume (Mon-Fri, 24hrs)	8,675.4
Avg weekday speed (Mon-Fri, 24hrs)	34.2mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	6,997.4
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	33.8mph

EASTBOUND

Total recorded volume	26,858
Total recorded HGVs	570
% of vehicles that are HGVs	2.1%
Avg daily volume (based on 7 days)	3,836.9
Average daily speed (7 days)	36.2mph
Average daily 85%ile (7 days)	42.0mph
% of vehicles exceeding 60mph	0.1%
AADT (annual average daily traffic)	3,991.2
AAWT (annual average weekday traffic)	4,462.8

Avg weekday volume (Mon-Fri, 24hrs)	4,290.8
Avg weekday speed (Mon-Fri, 24hrs)	35.7mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	3,367.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	35.4mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	41.4mph
AM avg peak vol period (Mon-Fri)	07:15 to 07:30
PM avg peak vol period (Mon-Fri)	14:30 to 14:45

SITE LOCATION



A 7-day automatic traffic count on Station Rd (Midd), commencing Mon 21 Oct 2024, recorded a total of 54,931 vehicles. The posted speed limit of 60mph was exceeded by 0.1% of vehicles, and the seasonally adjusted, combined AADT value is 8,167 (see 'Equipment & methodology' below).

The combined summary on the left shows the total volumes, average speeds, AADT and 85%iles recorded in both directions from all the recorded data, plus the Mon-Fri peak periods. Speeding vehicles are defined as those travelling 61mph and above.

The summaries below provide directionalised details including speeding percentages and weekday daytime details.

WESTBOUND

Total recorded volume	28,073
Total recorded HGVs	723
% of vehicles that are HGVs	2.6%
Avg daily volume (based on 7 days)	4,010.4
Average daily speed (7 days)	33.6mph
Average daily 85%ile (7 days)	39.6mph
% of vehicles exceeding 60mph	0.1%
AADT (annual average daily traffic)	4,175.6
AAWT (annual average weekday traffic)	4,588.3

Avg weekday volume (Mon-Fri, 24hrs)	4,384.6
Avg weekday speed (Mon-Fri, 24hrs)	32.7mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	3,630.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	32.3mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	38.6mph
AM avg peak vol period (Mon-Fri)	08:00 to 08:15
PM avg peak vol period (Mon-Fri)	17:15 to 17:30

LOCATION

Station Rd (Midd)

DATES

Mon 21 Oct to Sun 27 Oct inc.

LAT / LNG

51°25'30.59"N 0°19'29.50"E

PSL

60mph

DIRECTION 1

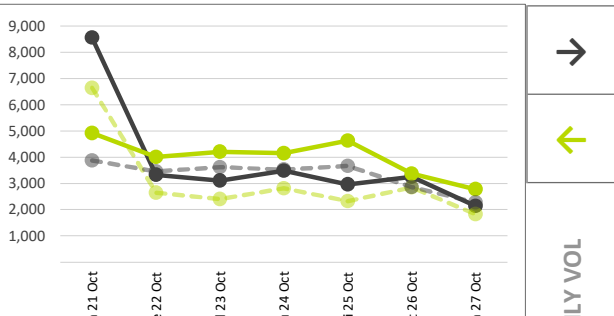
→ Eastbound

DIRECTION 2

← Westbound

DAILY VOLUMES

EAST- & WESTBOUND



Total 24hr eastbound (solid, dark grey) and westbound (solid, dark green) traffic volumes, with light dashed grey and green representing 12hr volumes (0700-1900), over 7 consecutive days from all available data.

As can be expected, the lowest 24hr volumes were recorded on the Sunday, whilst the highest was on the Monday.

PROJECT 41251 Station Rd, Dartford
SITE CODE 41251-003
LOCATION Station Rd (W)

START DATE Mon 21 Oct, 2024
END DATE Sun 27 Oct, 2024 (inc.)
SPEED LIMIT 60mph
SURVEY TYPE 7-day ATC, 15min periods, 6 veh. classes



ATC SUMMARY REPORT

7-DAY AUTOMATIC TRAFFIC COUNT

SUMMARY

COMBINED EAST & WESTBOUND

Total recorded volume	55,226
Total recorded HGVs	1,292
% of vehicles that are HGVs	2.3%
Avg daily volume (based on 7 days)	7,889.4
Average daily speed (7 days)	31.2mph
Average daily 85%ile (7 days)	37.2mph
AADT (annual average daily traffic)	8,212.7
AAWT (annual average weekday traffic)	9,120.4
Avg weekday volume (Mon-Fri, 24hrs)	8,738.4
Avg weekday speed (Mon-Fri, 24hrs)	30.4mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	7,061.4
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	30.0mph

EASTBOUND

Total recorded volume	28,161
Total recorded HGVs	717
% of vehicles that are HGVs	2.5%
Avg daily volume (based on 7 days)	4,023.0
Average daily speed (7 days)	30.5mph
Average daily 85%ile (7 days)	36.4mph
% of vehicles exceeding 60mph	0.0%
AADT (annual average daily traffic)	4,188.9
AAWT (annual average weekday traffic)	4,609.5

Avg weekday volume (Mon-Fri, 24hrs)	4,404.0
Avg weekday speed (Mon-Fri, 24hrs)	29.5mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	3,648.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	29.2mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	35.5mph
AM avg peak vol period (Mon-Fri)	08:00 to 08:15
PM avg peak vol period (Mon-Fri)	17:15 to 17:30

A 7-day automatic traffic count on Station Rd (W), commencing Mon 21 Oct 2024, recorded a total of 55,226 vehicles. The posted speed limit of 60mph was exceeded by 0.1% of vehicles, and the seasonally adjusted, combined AADT value is 8,213 (see 'Equipment & methodology' below).

The combined summary on the left shows the total volumes, average speeds, AADT and 85%iles recorded in both directions from all the recorded data, plus the Mon-Fri peak periods. Speeding vehicles are defined as those travelling 61mph and above.

The summaries below provide directionalised details including speeding percentages and weekday daytime details.

WESTBOUND

Total recorded volume	27,065
Total recorded HGVs	575
% of vehicles that are HGVs	2.1%
Avg daily volume (based on 7 days)	3,866.4
Average daily speed (7 days)	31.9mph
Average daily 85%ile (7 days)	37.9mph
% of vehicles exceeding 60mph	0.1%
AADT (annual average daily traffic)	4,023.8
AAWT (annual average weekday traffic)	4,510.9

Avg weekday volume (Mon-Fri, 24hrs)	4,334.4
Avg weekday speed (Mon-Fri, 24hrs)	31.3mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	3,413.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	30.8mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	36.7mph
AM avg peak vol period (Mon-Fri)	07:15 to 07:30
PM avg peak vol period (Mon-Fri)	14:30 to 14:45

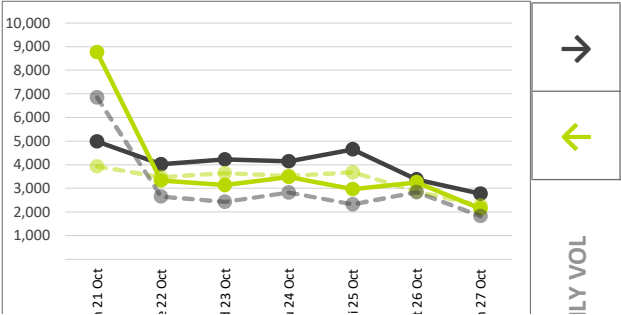
SITE LOCATION



LOCATION	Station Rd (W)
DATES	Mon 21 Oct to Sun 27 Oct inc.
LAT / LNG	51°25'27.77"N 0°19'19.98"E
PSL	60mph
DIRECTION 1	→ Eastbound
DIRECTION 2	← Westbound

DAILY VOLUMES

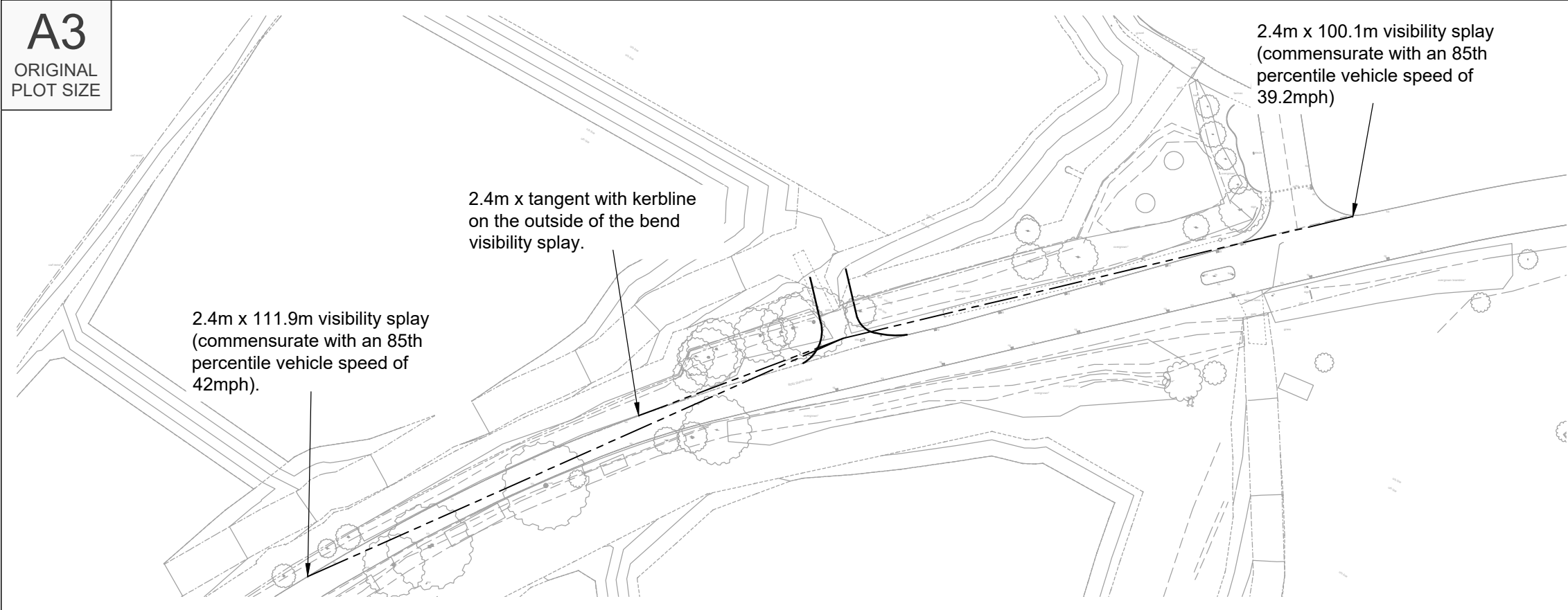
EAST- & WESTBOUND



Total 24hr eastbound (solid, dark grey) and westbound (solid, dark green) traffic volumes, with light dashed grey and green representing 12hr volumes (0700-1900), over 7 consecutive days from all available data.

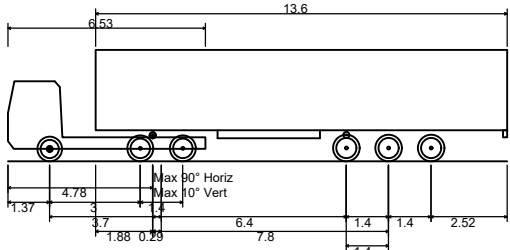
As can be expected, the lowest 24hr volumes were recorded on the Sunday, whilst the highest was on the Monday.

APPENDIX C



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NOTES:
1. The 85th percentile speed used to determine the length of visibility splays have been taken from ATC speed survey undertaken by ADVANCED TRANSPORT RESEARCH from MONDAY 21st OCTOBER to SUNDAY 27th OCTOBER 2024.



Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m

B	28.11.24	Removed previous layout plan. Updated project name.	KVT	AG	RR
A	01.11.24	Updated visibility splays with ATC data provided.	KVT	AG	JD
Rev	Date	Details	Drawn by	Checked by	Approved by

Visibility Splay Of Northern Parcel At B262

Scale 1:1,000

Bristol
Cambridge
London
Welwyn Garden City



40 Berkeley Square
Bristol
BS8 1HP
0117 925 9400
www.tpa.uk.com

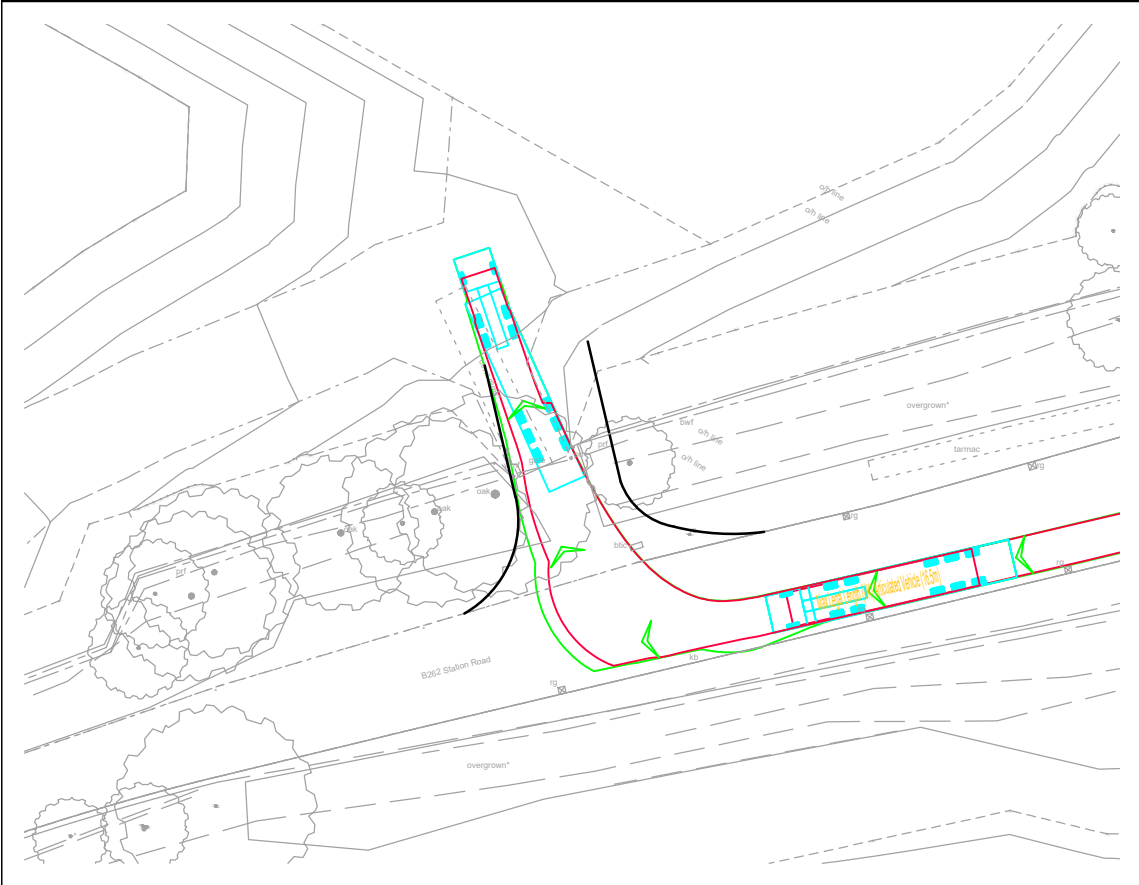
CLIENT:
CLEARSTONE ENERGY LTD

PROJECT:
DARTFORD ENERGY HUB

TITLE:
Northern Parcel Proposed Access At
B262, With Visibility Splay & Swept Path
Analysis Of A 16.5m Articulated HGV

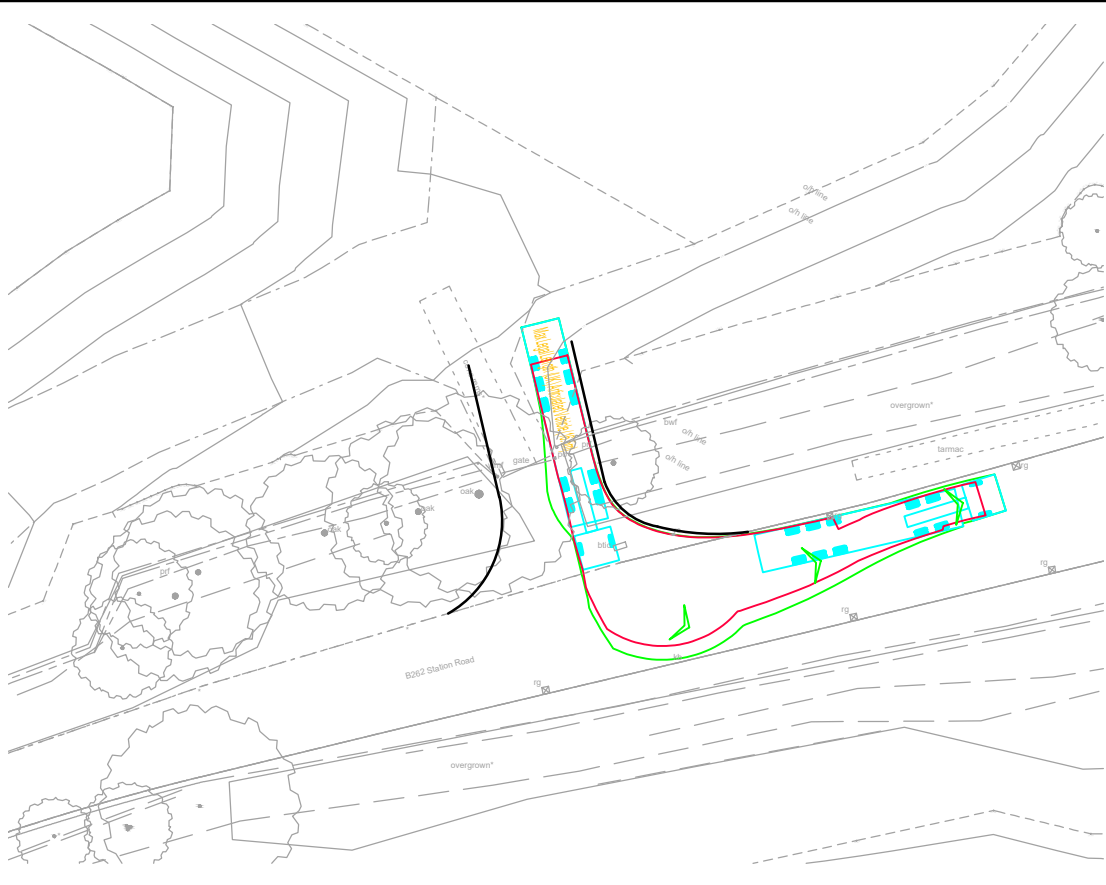
STATUS:
INDICATIVE

SCALE: As Shown	DATE: 19.12.23	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2305-048	DRAWING NO: SK01	REVISION: B		



Entering Access

Scale 1:500



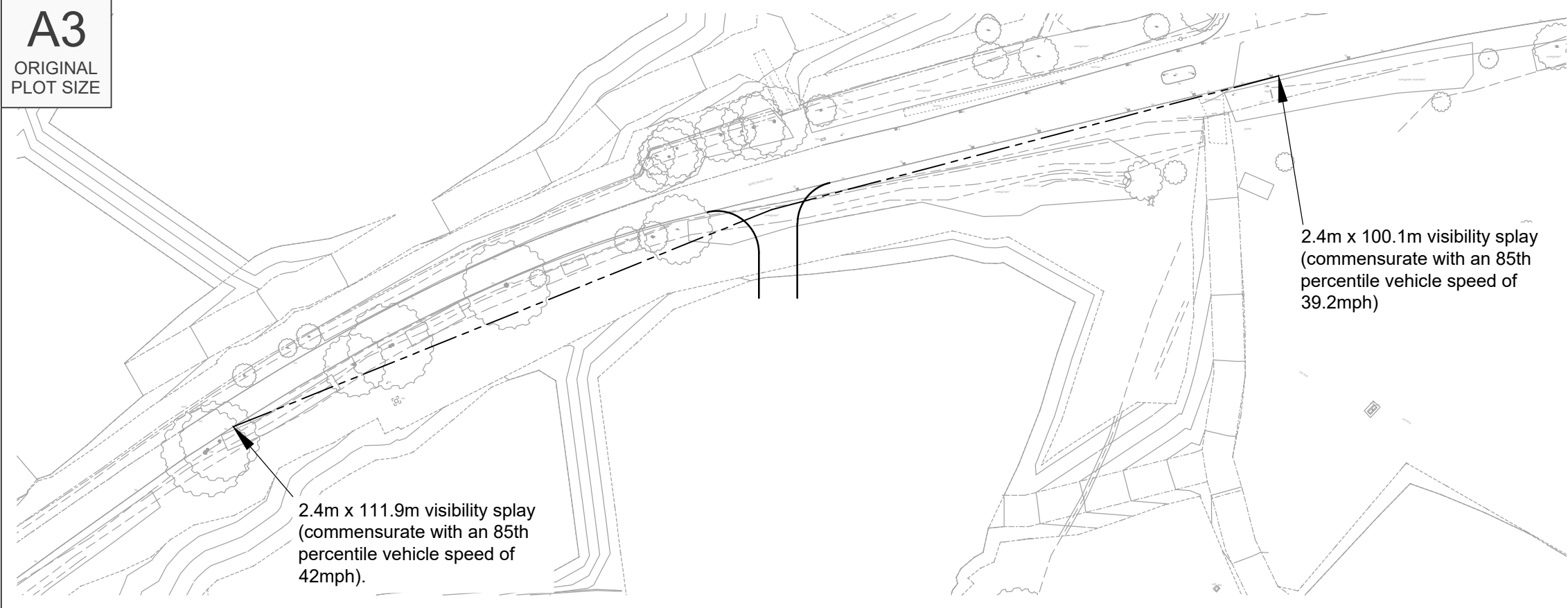
Exiting Access

Scale 1:500



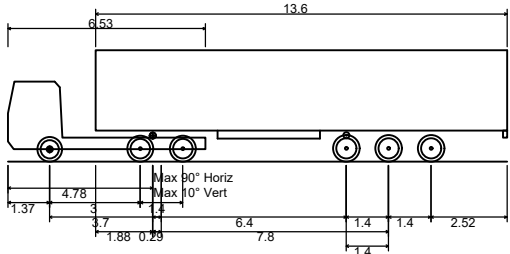
INDICATIVE

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NOTES:
1. The 85th percentile speed used to determine the length of visibility splays have been taken from ATC speed survey undertaken by ADVANCED TRANSPORT RESEARCH from MONDAY 21st OCTOBER to SUNDAY 27th OCTOBER 2024.

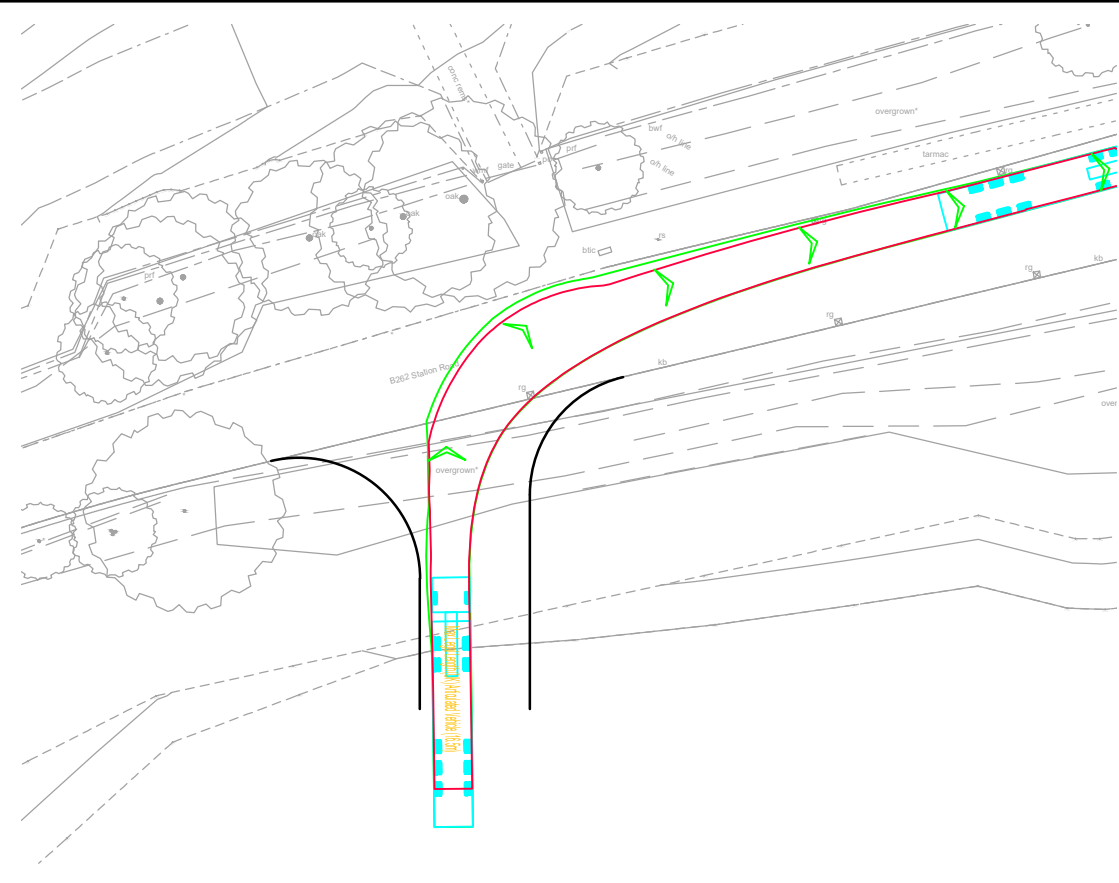
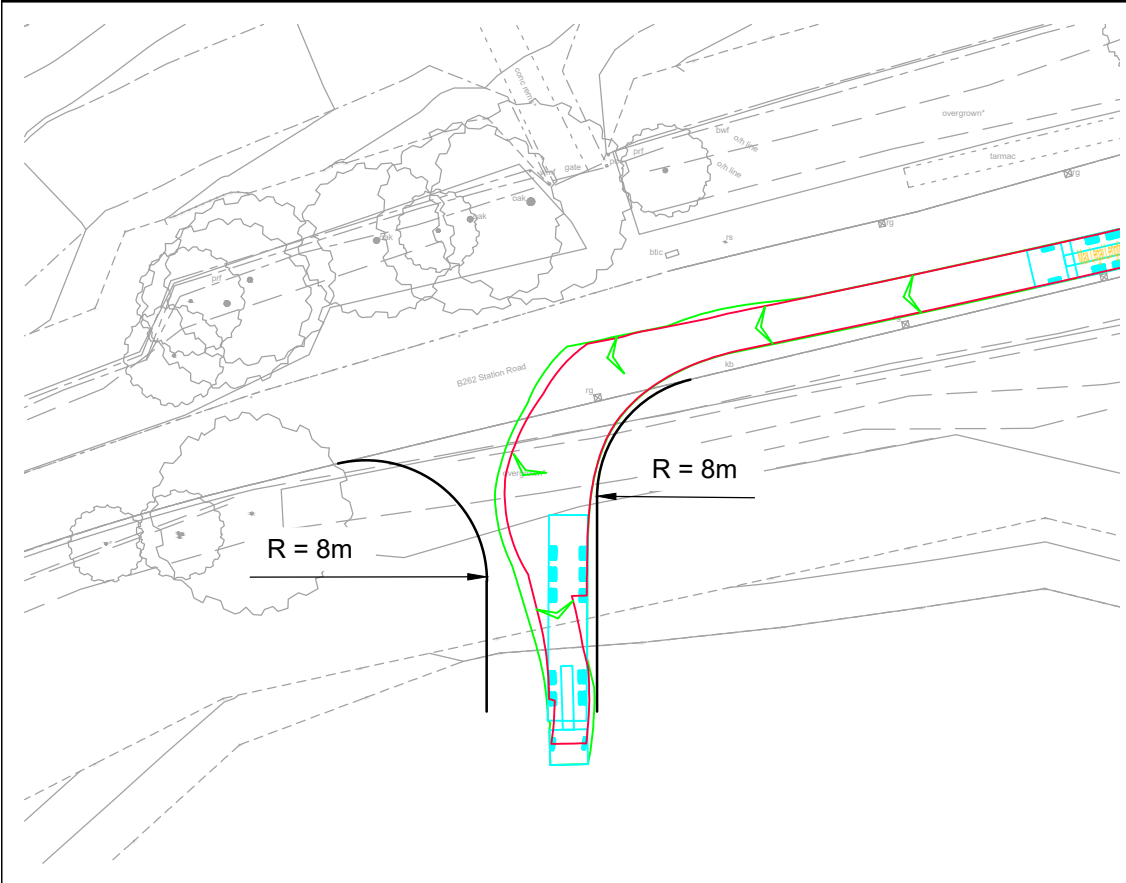


Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m

A	28.11.24	Updated visibility splay based on ATC data. Removed previous site layout. Updated project name.	PW	AG	RR
Rev	Date	Details	Drawn by	Checked by	Approved by

Visibility Splay Of Southern Parcel At B262

Scale 1:1,000



Bristol
Cambridge
London
Welwyn Garden City



40 Berkeley Square
Bristol
BS8 1HP
0117 925 9400
www.tpa.uk.com

CLIENT:
CLEARSTONE ENERGY LTD

PROJECT:
DARTFORD ENERGY HUB

TITLE:
**Southern Parcel Proposed Access At
B262, With Visibility Splay & Swept Path
Analysis Of A 16.5m Articulated HGV**

STATUS:
INDICATIVE

SCALE: As Shown	DATE: 19.12.23	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2305-048	DRAWING NO: SK01	REVISION: A		



Entering Access Left In

Scale 1:250

Exiting Access Right Out

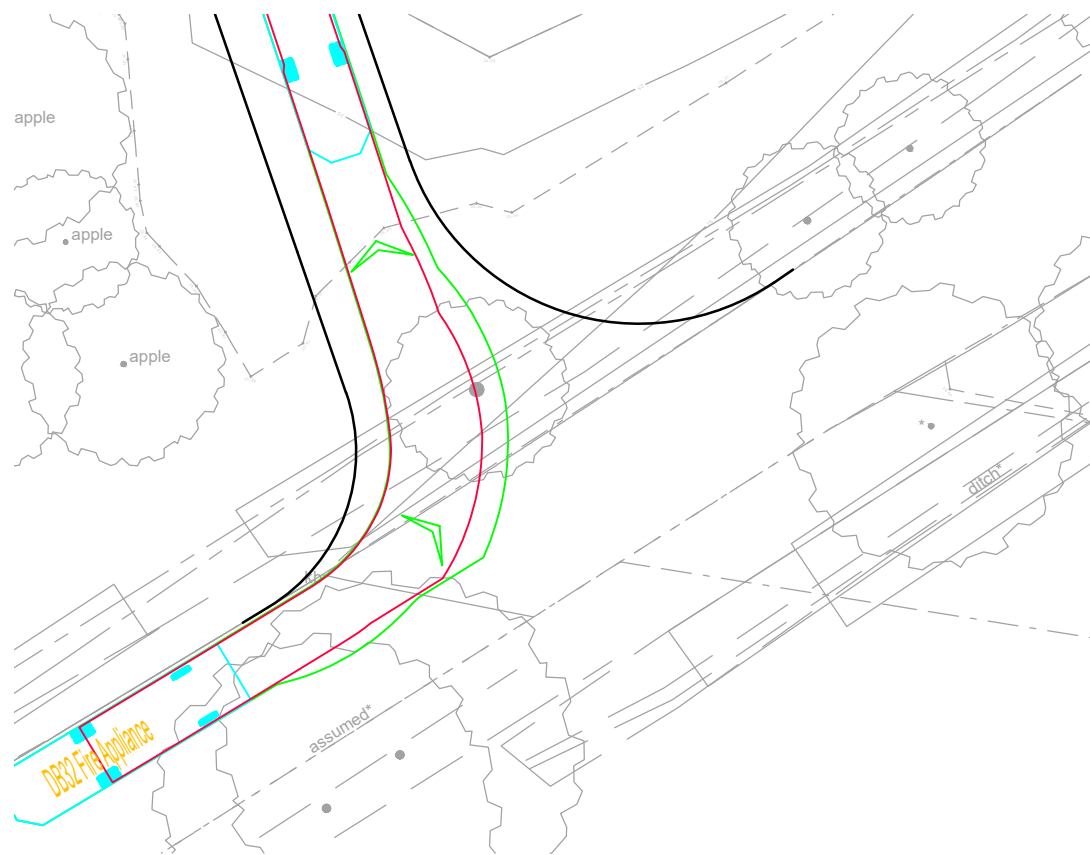
Scale 1:250

RESERVED COPYRIGHT

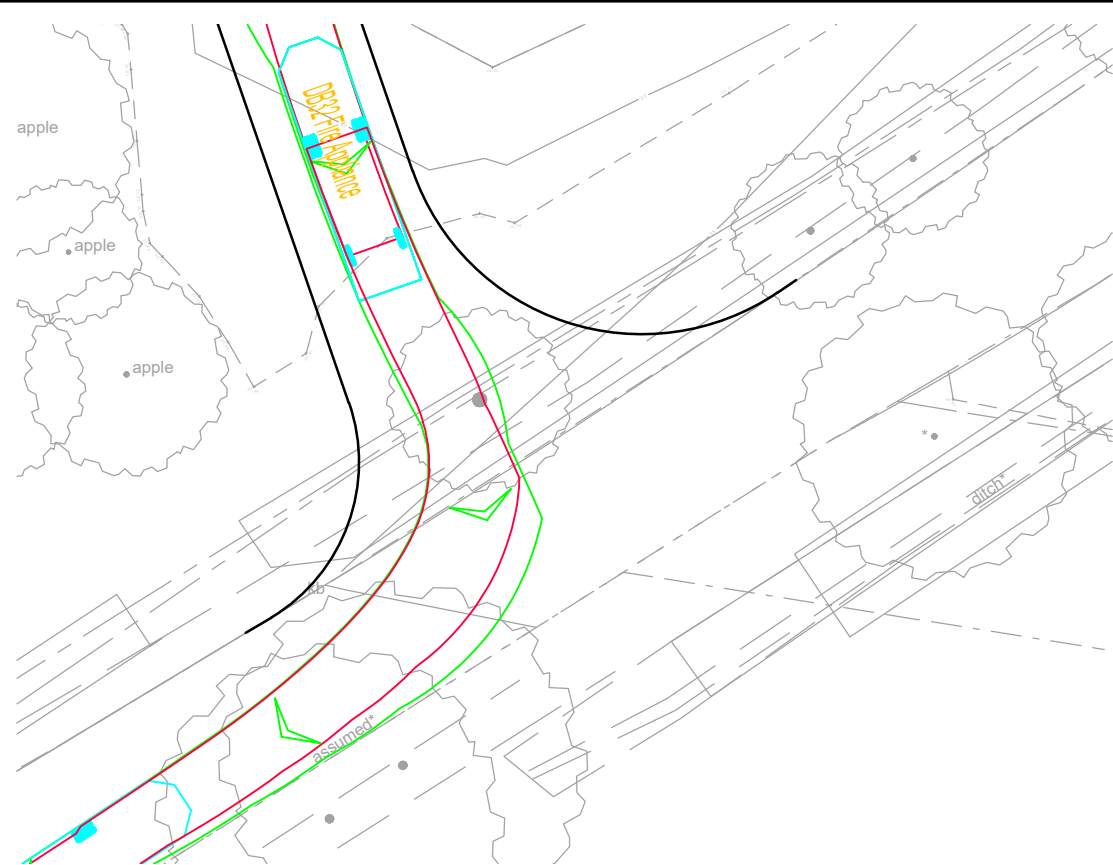
ORIGINAL
PLOT SIZE



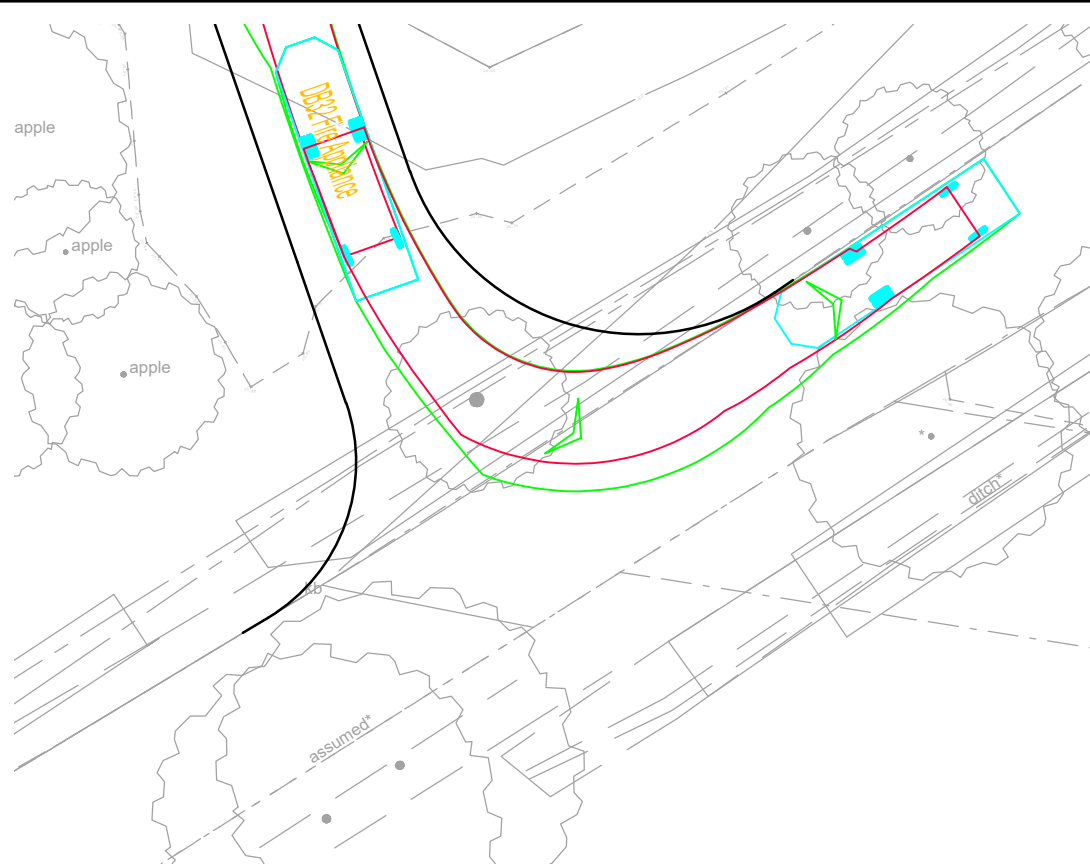
Entering Access Right In



Entering Access Left In



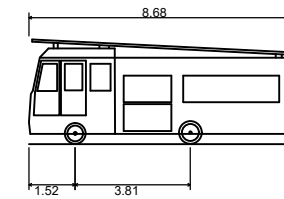
Exiting Access Right Out



Exiting Access Left Out

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NOTES:



DB32 Fire Appliance
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Max Track Width
Lock to lock time
Kerb to Kerb Turning Radius

8.680m
2.180m
3.452m
0.337m
2.121m
6.00s
7.910m

A	27.11.24	Moved emergency access location & adjusted tracking to match. Removed old OS layout. Updated project name.	KVT	AG	RR
Rev	Date	Details	Drawn by	Checked by	Approved by

Bristol
Cambridge
London
Welwyn Garden City



40 Berkeley Square
Bristol
BS8 1HP
0117 925 9400

www.tpa.uk.com

CLIENT:

CLEARSTONE ENERGY LTD

PROJECT:

DARTFORD ENERGY HUB

TITLE:

Northern Parcel Emergency Access, Swept Path Analysis Of A Fire Appliance

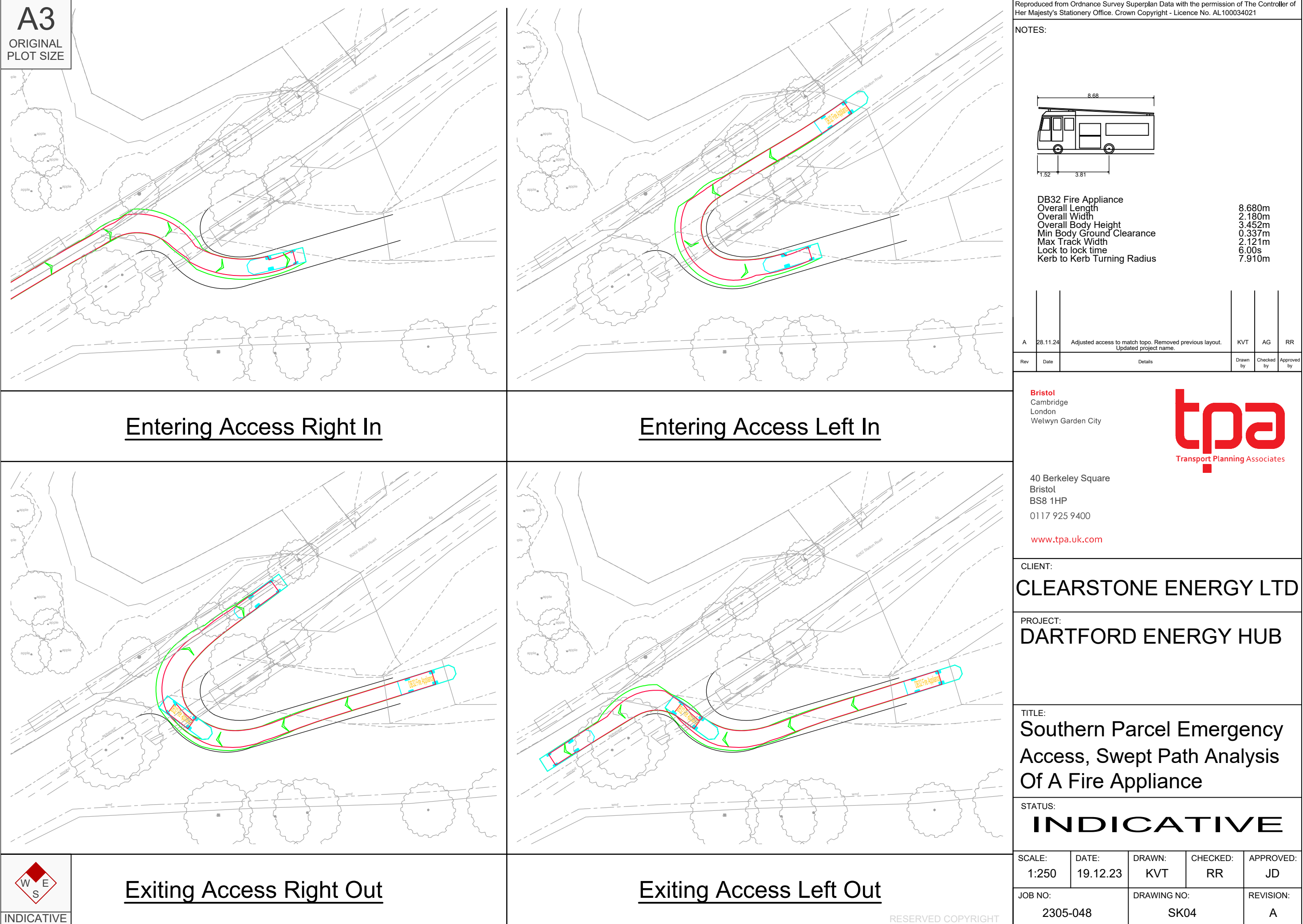
STATUS:

INDICATIVE

SCALE: 1:250	DATE: 19.12.23	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2305-048		DRAWING NO: SK03		REVISION: A



INDICATIVE



APPENDIX C

PROJECT

SITE CODE

LOCATION

41251 Station Rd, Dartford
41251-001
Station Rd (E)

START DATE

END DATE

SPEED LIMIT

SURVEY TYPE

Mon 21 Oct, 2024
Sun 27 Oct, 2024 (inc.)
60mph
7-day ATC, 15min periods, 6 veh. classes

SUMMARY

COMBINED EAST & WESTBOUND

Total recorded volume	62,773
Total recorded HGVs	1,385
% of vehicles that are HGVs	2.2%
Avg daily volume (based on 7 days)	8,967.6
Average daily speed (7 days)	31.7mph
Average daily 85%ile (7 days)	38.7mph
AA DT (annual average daily traffic)	9,389.2
AA WT (annual average weekday traffic)	10,183.2
Avg weekday volume (Mon-Fri, 24hrs)	9,713.8
Avg weekday speed (Mon-Fri, 24hrs)	31.6mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	8,020.4
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	30.9mph

EASTBOUND

Total recorded volume	31,945
Total recorded HGVs	782
% of vehicles that are HGVs	2.4%
Avg daily volume (based on 7 days)	4,563.6
Average daily speed (7 days)	29.8mph
Average daily 85%ile (7 days)	37.3mph
% of vehicles exceeding 60mph	0.0%
AA DT (annual average daily traffic)	4,779.2
AA WT (annual average weekday traffic)	5,141.0

Avg weekday volume (Mon-Fri, 24hrs)	4,891.2
Avg weekday speed (Mon-Fri, 24hrs)	29.4mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	4,124.0
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	28.8mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	36.5mph
AM avg peak vol period (Mon-Fri)	12:00 to 12:15
PM avg peak vol period (Mon-Fri)	17:00 to 17:15

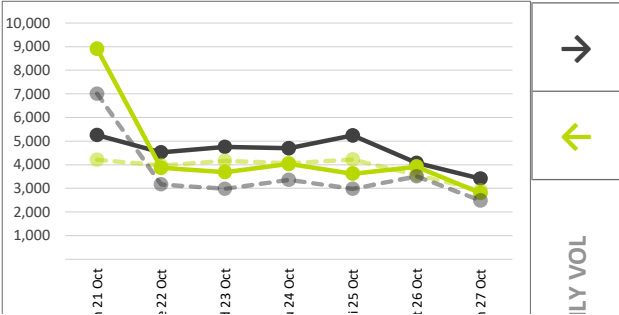
SITE LOCATION



LOCATION	Station Rd (E)
DATES	Mon 21 Oct to Sun 27 Oct inc.
LAT / LNG	51°25'31.48"N 0°19'36.56"E
PSL	60mph
DIRECTION 1	→ Eastbound
DIRECTION 2	← Westbound

DAILY VOLUMES

EAST- & WESTBOUND



Total 24hr eastbound (solid, dark grey) and westbound (solid, dark green) traffic volumes, with light dashed grey and green representing 12hr volumes (0700-1900), over 7 consecutive days from all available data.

As can be expected, the lowest 24hr volumes were recorded on the Sunday, whilst the highest was on the Monday.

PROJECT 41251 Station Rd, Dartford
SITE CODE 41251-002
LOCATION Station Rd (Midd)

START DATE Mon 21 Oct, 2024
END DATE Sun 27 Oct, 2024 (inc.)
SPEED LIMIT 60mph
SURVEY TYPE 7-day ATC, 15min periods, 6 veh. classes



ATC SUMMARY REPORT

7-DAY AUTOMATIC TRAFFIC COUNT

SUMMARY

COMBINED EAST & WESTBOUND

Total recorded volume	54,931
Total recorded HGVs	1,293
% of vehicles that are HGVs	2.4%
Avg daily volume (based on 7 days)	7,847.3
Average daily speed (7 days)	34.9mph
Average daily 85%ile (7 days)	40.8mph
AADT (annual average daily traffic)	8,166.8
AAWT (annual average weekday traffic)	9,051.1
Avg weekday volume (Mon-Fri, 24hrs)	8,675.4
Avg weekday speed (Mon-Fri, 24hrs)	34.2mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	6,997.4
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	33.8mph

A 7-day automatic traffic count on Station Rd (Midd), commencing Mon 21 Oct 2024, recorded a total of 54,931 vehicles. The posted speed limit of 60mph was exceeded by 0.1% of vehicles, and the seasonally adjusted, combined AADT value is 8,167 (see 'Equipment & methodology' below).

The combined summary on the left shows the total volumes, average speeds, AADT and 85%iles recorded in both directions from all the recorded data, plus the Mon-Fri peak periods. Speeding vehicles are defined as those travelling 61mph and above.

The summaries below provide directionalised details including speeding percentages and weekday daytime details.

EASTBOUND

Total recorded volume	26,858
Total recorded HGVs	570
% of vehicles that are HGVs	2.1%
Avg daily volume (based on 7 days)	3,836.9
Average daily speed (7 days)	36.2mph
Average daily 85%ile (7 days)	42.0mph
% of vehicles exceeding 60mph	0.1%
AADT (annual average daily traffic)	3,991.2
AAWT (annual average weekday traffic)	4,462.8

Avg weekday volume (Mon-Fri, 24hrs)	4,290.8
Avg weekday speed (Mon-Fri, 24hrs)	35.7mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	3,367.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	35.4mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	41.4mph
AM avg peak vol period (Mon-Fri)	07:15 to 07:30
PM avg peak vol period (Mon-Fri)	14:30 to 14:45

WESTBOUND

Total recorded volume	28,073
Total recorded HGVs	723
% of vehicles that are HGVs	2.6%
Avg daily volume (based on 7 days)	4,010.4
Average daily speed (7 days)	33.6mph
Average daily 85%ile (7 days)	39.6mph
% of vehicles exceeding 60mph	0.1%
AADT (annual average daily traffic)	4,175.6
AAWT (annual average weekday traffic)	4,588.3

Avg weekday volume (Mon-Fri, 24hrs)	4,384.6
Avg weekday speed (Mon-Fri, 24hrs)	32.7mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	3,630.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	32.3mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	38.6mph
AM avg peak vol period (Mon-Fri)	08:00 to 08:15
PM avg peak vol period (Mon-Fri)	17:15 to 17:30

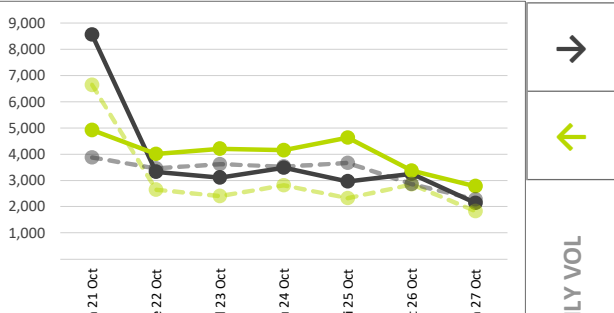
SITE LOCATION



LOCATION	Station Rd (Midd)
DATES	Mon 21 Oct to Sun 27 Oct inc.
LAT / LNG	51°25'30.59"N 0°19'29.50"E
PSL	60mph
DIRECTION 1	→ Eastbound
DIRECTION 2	← Westbound

DAILY VOLUMES

EAST- & WESTBOUND



Total 24hr eastbound (solid, dark grey) and westbound (solid, dark green) traffic volumes, with light dashed grey and green representing 12hr volumes (0700-1900), over 7 consecutive days from all available data.

As can be expected, the lowest 24hr volumes were recorded on the Sunday, whilst the highest was on the Monday.

PROJECT 41251 Station Rd, Dartford
SITE CODE 41251-003
LOCATION Station Rd (W)

START DATE Mon 21 Oct, 2024
END DATE Sun 27 Oct, 2024 (inc.)
SPEED LIMIT 60mph
SURVEY TYPE 7-day ATC, 15min periods, 6 veh. classes



ATC SUMMARY REPORT

7-DAY AUTOMATIC TRAFFIC COUNT

SUMMARY

COMBINED EAST & WESTBOUND

Total recorded volume	55,226
Total recorded HGVs	1,292
% of vehicles that are HGVs	2.3%
Avg daily volume (based on 7 days)	7,889.4
Average daily speed (7 days)	31.2mph
Average daily 85%ile (7 days)	37.2mph
AADT (annual average daily traffic)	8,212.7
AAWT (annual average weekday traffic)	9,120.4
Avg weekday volume (Mon-Fri, 24hrs)	8,738.4
Avg weekday speed (Mon-Fri, 24hrs)	30.4mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	7,061.4
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	30.0mph

EASTBOUND

Total recorded volume	28,161
Total recorded HGVs	717
% of vehicles that are HGVs	2.5%
Avg daily volume (based on 7 days)	4,023.0
Average daily speed (7 days)	30.5mph
Average daily 85%ile (7 days)	36.4mph
% of vehicles exceeding 60mph	0.0%
AADT (annual average daily traffic)	4,188.9
AAWT (annual average weekday traffic)	4,609.5

Avg weekday volume (Mon-Fri, 24hrs)	4,404.0
Avg weekday speed (Mon-Fri, 24hrs)	29.5mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	3,648.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	29.2mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	35.5mph
AM avg peak vol period (Mon-Fri)	08:00 to 08:15
PM avg peak vol period (Mon-Fri)	17:15 to 17:30

A 7-day automatic traffic count on Station Rd (W), commencing Mon 21 Oct 2024, recorded a total of 55,226 vehicles. The posted speed limit of 60mph was exceeded by 0.1% of vehicles, and the seasonally adjusted, combined AADT value is 8,213 (see 'Equipment & methodology' below).

The combined summary on the left shows the total volumes, average speeds, AADT and 85%iles recorded in both directions from all the recorded data, plus the Mon-Fri peak periods. Speeding vehicles are defined as those travelling 61mph and above.

The summaries below provide directionalised details including speeding percentages and weekday daytime details.

WESTBOUND

Total recorded volume	27,065
Total recorded HGVs	575
% of vehicles that are HGVs	2.1%
Avg daily volume (based on 7 days)	3,866.4
Average daily speed (7 days)	31.9mph
Average daily 85%ile (7 days)	37.9mph
% of vehicles exceeding 60mph	0.1%
AADT (annual average daily traffic)	4,023.8
AAWT (annual average weekday traffic)	4,510.9

Avg weekday volume (Mon-Fri, 24hrs)	4,334.4
Avg weekday speed (Mon-Fri, 24hrs)	31.3mph
Avg 12hr weekday volume (Mon-Fri, 0700-1900)	3,413.2
Avg 12hr weekday speed (Mon-Fri, 0700-1900)	30.8mph
Avg 12hr weekday 85%ile (Mon-Fri, 0700-1900)	36.7mph
AM avg peak vol period (Mon-Fri)	07:15 to 07:30
PM avg peak vol period (Mon-Fri)	14:30 to 14:45

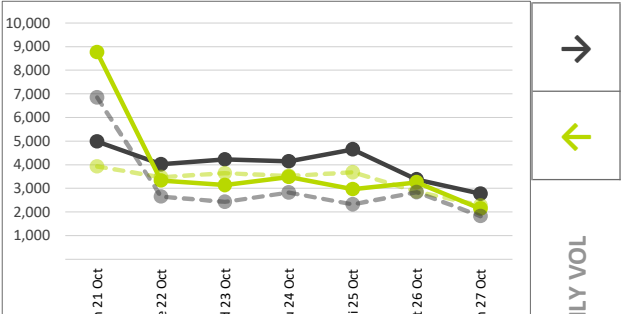
SITE LOCATION



LOCATION	Station Rd (W)
DATES	Mon 21 Oct to Sun 27 Oct inc.
LAT / LNG	51°25'27.77"N 0°19'19.98"E
PSL	60mph
DIRECTION 1	→ Eastbound
DIRECTION 2	← Westbound

DAILY VOLUMES

EAST- & WESTBOUND



Total 24hr eastbound (solid, dark grey) and westbound (solid, dark green) traffic volumes, with light dashed grey and green representing 12hr volumes (0700-1900), over 7 consecutive days from all available data.

As can be expected, the lowest 24hr volumes were recorded on the Sunday, whilst the highest was on the Monday.