

Transport Statement

Land North and South of National Road, Cilfynydd.

On behalf of REWE 2 Limited.

Date: February 2025 | Pegasus Ref: P22-2733-TR-R002

Author: AJ



Document Management.

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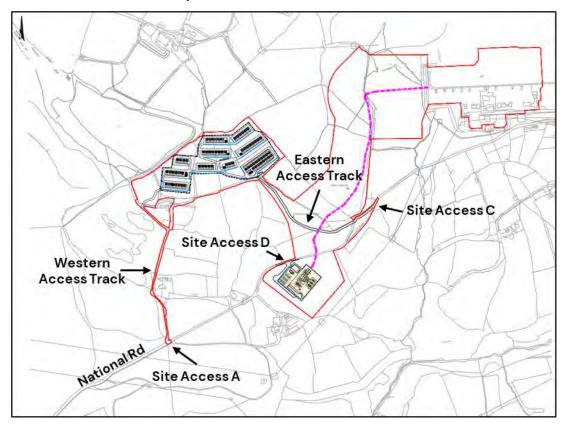
1. Introduction

- 1.1. Pegasus Group has prepared this Transport Statement (TS) on behalf of REWE 2 Limited (the applicant) to review the transport implications associated with a Proposed Battery Energy Storage System (BESS) with associated infrastructure, including a substation, earthworks, access, drainage, landscaping and an underground cable route connection.
- 1.2. The built development is arranged over parcels of land; north (referred to as the 'northern parcel') and south (referred to as the 'southern parcel') of National Road as set out on the Site Location plan provided at **Appendix A**.
- 1.3. This TS is submitted alongside a "Construction Traffic Management Plan" (CTMP) document and should be read in conjunction with that document.

Site Context

1.4. A site layout drawing is provided below as **Plate 1.1**, with the full drawing included within **Appendix A**.

Plate 1.1 – Site Layout Drawing Extract with Additional Annotations (Drawing Reference: WIN-SOL-02-DR-03-01-01)





Pre-Application Enquiry

- 1.5. A pre-application enquiry was sent to Rhondda Cynon Taff County Borough Council (RCTCBC) (with a response received 14 February 2023).
- 1.6. RCTCBC Highways stated that "the response received [from the highways officer] indicates that the pre-application enquiry is not supported by sufficient information to enable a full highway safety assessment to be undertaken. It is advised that any future planning application demonstrates that safe delivery of components can be undertaken without any risk to highway users".
- 1.7. RCTCBC Highways additionally recommended that the following information should be provided in the submission of any future planning application:
 - 1. "Transport Statement.
 - 2. Duration of construction details.
 - 3. Amount and type of vehicles required during and after construction.
 - 4. Details of abnormal load and delivery route for large components.
 - 5. Delivery route for other Heavy Goods Vehicles.
 - 6. Swept Path Analysis of haulage routes.
 - 7. Temporary mitigation measures where required and subsequent reinstatements.
 - 8. Traffic management/controls.
 - 9. Dry run prior to the commencement of development to ensure that transport of large components is achievable.
 - 10. Confirmation as to whether the proposed access would be temporary or retained for service/maintenance purposes.
 - 11. Details of the proposed access to both land parcels including swept path, vision splays in accordance with TAN 18 85%tile speeds".
- 1.8. The requirement for a "dry run prior to commencement..." is considered onerous and we are not aware of this measure being required for similar sites. It is considered that swept path analysis and appropriate traffic management mitigation measures at pinch points will suffice in ensuring safe and suitable navigation of the construction route.
- 1.9. Notwithstanding this, this TS document has been produced following the recommendation of RCTCBC and has been prepared in accordance with Planning Policy Wales (2021) and Future Wales: The National Plan 2040 (2021). This TS document will be supported by the Construction Traffic Management Plan (CTMP) document that will also be submitted along with this TS and should be read in conjunction with this document.



Policy Context

- 1.10. The proposed BESS aligns with national and local planning policies aimed at promoting renewable energy infrastructure. At the national level, Planning Policy Wales (Welsh Government, 2024) sets out the Welsh Government's commitment to sustainable development, emphasising the importance of reducing carbon emissions and supporting renewable energy projects. Additionally, Future Wales: The National Plan 2040 sets out the national development framework for Wales including the growth of sustainable and renewable energy. Locally, the Rhondda Cynon Taf Local Development Plan (2011) supports increasing the supply of renewable energy from a range of sources. Additionally, one of the key objectives of the Caerphilly Local Development Plan (2010) is promoting environmentally acceptable renewable energy to help reduce our impact on climate change.
- 1.11. This TS and CTMP are provided with a forthcoming planning application. These will set out appropriate mitigation of the transport impacts associated with the construction and operation of the site. Therefore, the development is considered to be in accordance with national and local planning policy.

Report Structure

- 1.12. The structure of the remainder of this TS is set out below:
 - Section 2 A summary of the site context including the local highway network, any existing Public Rights of Way and PIC highway safety data covering a minimum of five years. It considers the suitability of National Road, and further afield where relevant to accommodate the anticipated trips to / from the development proposals;
 - Section 3 A description of the proposed site arrangements which includes:
 - The proposed access strategy assessing the locations where construction and operation accesses will be provided;
 - A description of the proposed construction routes to and from the site and site access points with visibility splays and swept path analysis;
 - **Section 4** An assessment of the anticipated trips and potential impacts this may have on the surrounding local highway network, and an overview of the mitigation strategy.
 - Section 5 A conclusion reviewing the contents of the document.



2. Existing Conditions

Site Location

- 2.1. The development site is approximately 24 hectares, with cable routing under field parcels between the site parcels and an existing substation located to the north of National Road.
- 2.2. As illustrated in **Plate 1.1.**, the development site is located across land north and south of National Road, referred to henceforth as "the northern parcel" and the "southern parcel" respectively.
- 2.3. Two existing agricultural tracks provide access to the northern parcel, referred to henceforth as the "western" and "eastern" access tracks. The southern parcel is currently accessed off an existing access track connecting to National Road circa 270m northeast of the access to the western access track.
- 2.4. The context of the local area, including points of interest referenced in the report, is illustrated in **Plate 2.1** below as well as on the Site Location Plan, included at **Appendix A.**

500 m ABC|25|1 Mafon Road, A472 The Curly Road NELS/FP8/2 A4054 A472 and B4275 Overbridge Blaen Ffwrd NELS/FP27/1 NELS/FPIIS ABC/28/2 NELS/FP26/2 **Unnamed Road** Wational Road NELS/FP24/1 PON/1/1 Site Redline Boundary PON/7/1 Public Right of Way Footpaths County Boundary

Plate 2.1 - Site Plan

Source: OpenStreetMaps



Local Road Network

National Road (routing northeast / southwest)

- 2.5. National Road (routing northeast / southwest) extends 2.3km northeast from the A4O54 via a simple priority T junction (minor arm) where the carriageway continues as an unnamed road for a further 150m before forming the minor arm of a simple priority junction with Llanfabon Road.
- 2.6. National Road is a two-way, single lane carriageway, measuring circa 6m southwest of the access to the western access track. This access track and associated site access is shown on Plate 2.2 below and is further discussed in Section 3 Proposed Site Accesses.

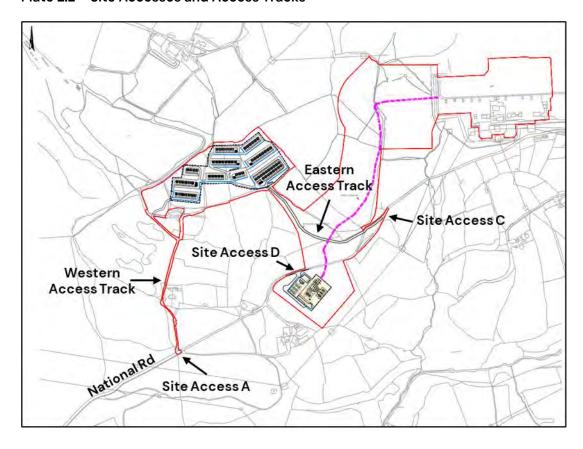


Plate 2.2 - Site Accesses and Access Tracks

- 2.7. Northeast of this access it narrows to circa 2.5m through till Llanfabon Road. National Road is subject to the 60mph national speed limit for its full extent. There are no weight or height restrictions present on National Road, nor are there any footways or street lighting provided.
- 2.8. To inform this TS, five Automatic Traffic Count (ATC) surveys were undertaken (between 14 to 20 September 2023) located on National Road on either side of the proposed site access (which are proposed to service the site (further details are set out in **Section 3**)) with one additional ATC placed to the east of the eastern access track. Flow and class summaries of the survey data is included within **Appendix B** and is summarised in **Table 2.1** below, which sets out the measured 85th percentile speeds; average seven-day 24hr daily traffic (by



number of vehicles) and the average modal percentage of HGVs out of the total vehicles utilising the road.

Table 2.1 - National Road ATC Summary

Road and distance from National Road / A4504 junction	Direction of traffic	Measured 85 th Percentile Speed (24hr / 7 day)	24hr Daily Traffic (number of vehicles) 7 day average	HGV % of total vehicles (24hr / 7 day average)
National Road (circa 450m northeast of the junction)	NE to SW	35.1	60	14.2%
	SW to NE	35.9	59	12.3%
National Road (circa 700m northeast of the junction)	NE to SW	24.8	31	15.4%
	SW to NE	25.6	35	11.8%
National Road (circa 850m northeast of the junction)	NE to SW	18.4	21	16.2%
,	SW to NE	17.3	21	6.8%
National Road (circa 1km northeast of the junction)	NE to SW	28.2	22	14.0%
	SW to NE	26.8	21	9.0%
National Road (circa 1.3km northeast of the junction)	NE to SW	25.5	19	15.9%
, , , ,	SW to NE	24.7	18	11.0%

Note: Direction of traffic abbreviated to northeast (NE) and southwest (SW)

2.9. The data extracted from the ATC, as summarised in **Table 2.1**, indicates that, relative to the national speed limit of 60mph, the measured speeds are significantly lower; that existing traffic volumes are very low; and that between 6.8% – 16.2% of existing vehicles on National Road comprise HGVs (which likely include agricultural vehicles given the rural locality). This indicates National Road is currently frequented by HGVs and as such the carriageway is anticipated to be able to accommodate construction type vehicles.

National Road (routing northwest / southeast) / Llanwechan Road / Blaen Ffrwdd Road / The Curly Road

- 2.10. National Road (routing northwest / southeast) proceeds from a junction with an unnamed road which connects National Road to an unnamed road (which provides connection to Llanfabon Road after circa 150m) and National Road (routing northeast / southwest) towards the northwest where it becomes Llanwechan Road, Blaen Ffrwdd Road and "The Curly Road", before joining the A4054 as the minor arm of a ghost island (right turn) junction.
- 2.11. National Road (routing northwest / southeast) / Llanwechan Road / Blaen Ffrwdd Road / The Curly Road are two-way, single lane carriageway roads, measuring between 2.5m four



- metres in width and are subject to the 60mph national speed limit. There are no weight or height restrictions present, nor are there any footways or street lighting provided.
- 2.12. National Road and The Curly Road (routing northwest / southeast) contains a section of road with limited road widths, tight bends, limited forward visibility and steep gradients which are unlikely to be able to support large HGVs.

Llanfabon Road

2.13. Llanfabon Road is a two-way single carriageway, measuring circa 5.5m in width and is subject to a posted 30mph speed limit within Tai'r-Heol village and the 60mph national speed limit south of Tai'r-Heol. There are no weight or height restrictions along its extents. To the north Llanfabon Road routes through Tai'r-Heol village, where it provides connection to the A472 which in turn connects with Nelson and the A470. To the south, it provides connection to an unnamed road (at a simple priority T-junction) which in turn connects to National Road after 150m and a second unnamed road towards Senghenydd town.

A472

- 2.14. The A472 is a classified A road, two-way, single carriageway road measuring circa 7.3m in width and is subject to the 60mph national speed limit.
- 2.15. The A472 provides access to the A470 via the A470 / A472 / A4059 roundabout in the west and provides access to the A469 within Ystrad Mynach to the east.

A4054

- 2.16. The A4054 is a classified A road, two-way, single carriageway road which is subject to a posted 40mph speed limit within the vicinity of the junction with the A470 and 20mph within the vicinity of Cilfynydd including the junction with National Road.
- 2.17. The A4O54 routes adjacent to the A47O for its full extent and provides connections to the A47O in various locations including via the A472 and B4275 overbridge before National Road and 'The Curly Road'. The A4O54 also provides connections to the A472 to the north via the A4O54 / A472 / Cardiff Road roundabout.

A470

2.18. The A470 is a classified A road, dual carriageway trunk road, each carriageway measuring circa 7.3m in width. To the south, the A470 connects to the M4, near Cardiff and to the north it provides access to Merthyr Tydfil. The A470 is subject to the 70mph national speed limit and comprises part of the Welsh Strategic Highway Network (SHN).

Highway Safety

- 2.19. Personal Injury Collision (PIC) data was obtained from Crashmap on 29 January 2025. The data covers the five-year period from 01 January 2019 to 30 December 2023, which represents the most recently available data available at the time of writing.
- 2.20. The study area comprises the full extent of National Road (from the junction with A4054 to the junction with Llanfabon Road); the full extents of the unnamed road between National



Road and Llanfabon Road from the junction with the unnamed road (which connects to National Road) to the junction with the A472 in Tai'r-Heol. This is illustrated in **Plate 2.3** below.

Area of Study
for PIC data

Approximate
Site Location
- Northern Parcel
- Southern Parcel

Lianfabon

Lianfabon

Plate 2.3 – Area of Study for PIC data (Crashmap)

Source: Google Maps

- 2.21. A total of six collisions were reported in the study area, all of which occurred on Llanfabon Road or the Llanfabon Road / A472 junction. One incident was reported as serious in severity, with the remaining five collisions being classified as slight. No collisions were reported on National Road during the study period and there were no traffic related fatalities within the survey area.
- 2.22. The collision locations and records are summarised at **Table 2.2.** Within the study period (2019–2023), one collision was recorded on Llanfabon Road on 14 December 2019 which was classified as slight. Additionally, four slight collisions and one serious collision occurred at the Llanfabon Road / A472 junction.

Table 2.2 – PIC data sourced from Crashmap

Date	Severity	Number of Vehicles Involved	Vehicle Type	Number of Casualties Involved	Location
05-Apr-19	Slight	2	Two Cars	1	Llanfabon Road / A472 junction



18-Jul-19	Slight	2	One Goods Vehicle / One Car	2	Llanfabon Road / A472 junction
18-Jul-19	Slight	2	Two vehicles	2	Llanfabon Road / A472 junction
14-Dec-19	Slight	1	One Car	1	Llanfabon Road circa 430m south of the Llanfabon Road / A472 junction
28-Apr-20	Slight	3	Three Cars	1	Llanfabon Road / A472 junction
17-Nov-23	Serious	2	One Motorcycle / One Car	1	Llanfabon Road / A472 junction

- 2.23. A review of the data in **Table 2.2** above highlights that of the six recorded incidents, five were classified as slight, one was classified as serious and there were no recorded fatal collisions throughout the study area during the study period.
- 2.24. While there is a cluster of five collisions at the Llanfabon Road / A472 junction, this junction is significantly busier than the rest of the network which typically results in a higher number of collisions.
- 2.25. It is therefore concluded from the data provided, that there are no existing highway safety issues identified at the proposed access points or construction routes to the site which could be exacerbated by the proposed development.

Public Rights of Way

- 2.26. No Public Rights of Way (PRoW) route through either parcel of the development site, according to the RCTCBC Public Rights of Way Map (accessed 28 January 2025).
- 2.27. Plate 2.4 below establishes and identifies existing PRoW pertinent to this site's construction routes. It is a zoomed in extent and for context the site is located to the south of these PRoW. These include a PRoW footpath (reference: ABC/27/4) that routes along a section of Blaen Ffrwdd Road for circa 100m. PRoW ABC/28/1, ABC/27/3 and ABC/27/5 connect to Blaen Ffrwdd Road / The Curly Road.



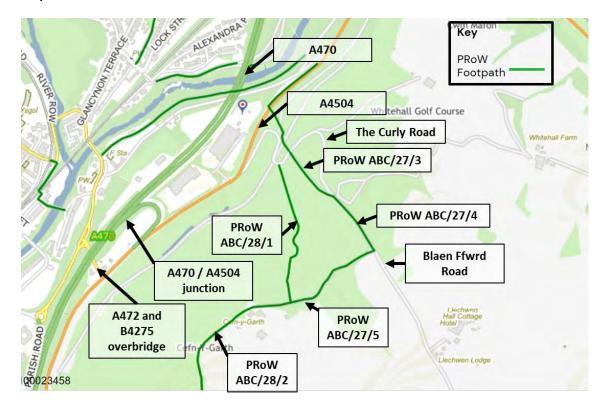


Plate 2.4 – Zoomed-in extent of Public Rights of Way Map on Blaen Ffrwdd Road / The Curly Road

Source: Excerpt from the Rhondda Cynon Taf County Borough Council PRoW Map (accessed 27/09/2023), annotated with relevant PRoW references and road names

2.28. To view a wider extent of these PRoW in relation to the proposed site please refer to **Plate**2.1

Relevant Planning Applications in the Local Area

- 2.29. We are aware of a potentially relevant planning applications in terms of transport which have been submitted/approved in the region at the time of writing, which is:
 - 23/0427/DNS Twyn Hywel Wind Farm.
- 2.30. An assessment of transport impacts of the proposed site in relation to this site will be undertaken and an appropriate consideration of cumulative transport impacts will be provided in the CTMP within four weeks prior to construction commencing on site. This is because more relevant/up-to-date information on the construction programme will be available at that time. From an initial assessment, the construction traffic associated with this wind farm is not proposed to route via National Road and therefore any cumulative impacts would occur on major A-roads which have a higher design specification and are suitable for accommodating heavy goods vehicles and construction traffic.
- 2.31. Also we are aware of the following site:
 - 23/O470/FULL Land At Grid Ref 310441 193869 Craig-evan-leyshon Common Road Llanfabon.



2.32. However, the publicly available Construction Traffic Management Plan submitted with the planning application for that states that the construction period is expected to be 18 months in total, commencing in October 2023. This means that, as far as we are aware from publicly available information, construction is anticipated to finish in March 2025 and therefore it would not overlap with the forecast construction phases for the proposed site.

Summary of Existing Conditions

- 2.33. The local highway network is considered safe and suitable for the trips associated with the proposed development, with no existing highway safety issues identified within the vicinity of the site accesses or approaching / departing the site via National Road which is proposed to form the construction route to / from site.
- 2.34. The roads to and from the site currently facilitate between 6.8% 16.2% HGV traffic and as such already accommodate construction type vehicles. Therefore, it is concluded that the development construction and operational traffic can be adequately and safely accommodated by the local highway network.



3. Development Proposals

- 3.1. The development proposals are a proposed BESS with associated infrastructure, including a substation, earthworks, access, drainage, landscaping and an underground cable route connection.
- 3.2. The Site Layout is attached at **Appendix A**, with an extract provided below for ease of reference.

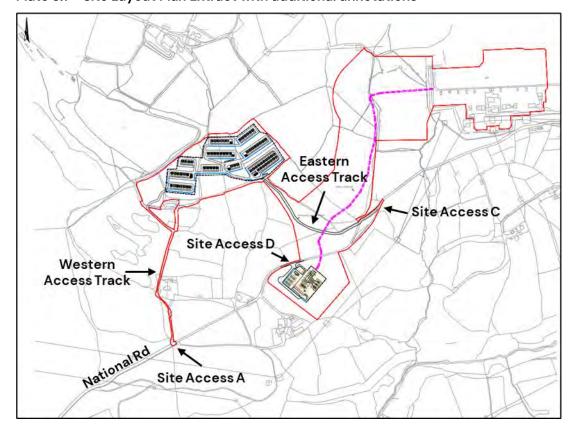


Plate 3.1 - Site Layout Plan Extract with additional annotations

(Drawing Reference: WIN-SOL-02-DR-03-01-01)

- 3.3. The client has confirmed that they have the necessary rights of access for the site and will be in a position with neighbouring landowners to implement required interventions as necessary.
- 3.4. The proposed development includes access points and access tracks to facilitate efficient and safe entry to the site, which are shown on **Plate 3.1** above. These site accesses have been determined based on whether any existing accesses and tracks can be utilised and have been assessed against visibility requirements set out within 'Technical Advice Note (TAN) 18' (2007)¹. The following sections provide a comprehensive overview of the

¹ Technical advice note (TAN) 18: Transport – Welsh Government (2007)



proposed access points and tracks, alongside the considerations and standards adhered to in their planning.

Proposed Site Accesses

- 3.5. A response to a pre-application enquiry from the LPA (RCTCBC) stated that "details of the proposed access to both land parcels including swept path, vision splays in accordance with TAN 18 85%tile speeds" should be provided to support the submission of a planning application.
- 3.6. TAN 18 provides two tables of recommended stopping sight distances. TAN 18 states that 'Table B' is designed for roads in built up areas where actual speeds are 60kph or below (not applicable to trunk roads). While the character of National Road is not that of a built up area, given that the measured 85th percentile speeds are substantively below the 60mph national speed limit (and below 60kph) and the fact that the average, seven day, 24hr daily traffic (as set out in **Table 2.1**) is very low (between 18 to 60 vehicles per day on average), it is considered that Table B is more appropriate. TAN 18 paragraph B.3, says "Figures in Table B may be interpolated from this table or calculated as in Manual for Streets".
- 3.7. Taking the above into account, recommended Stopping Sight Distances (SSD) have therefore been calculated using Manual for Streets (MfS) (based on calculations for HGV SSD for roads with >5% HGVs, for robustness). The calculated required visibility splays parameters are set out in **Table 3.1 and 3.2** for each of the site accesses discussed below.

Northern Parcel Site Access

- 3.8. Three existing access points to the northern parcel were considered initially, as set out in pre-application correspondence with RCTCBC Highways.
- 3.9. Automatic Traffic Count (ATC) surveys were undertaken on National Road (for a seven-day period beginning the 14 September 2023), which demonstrate that the measured 85th percentile vehicle speeds as set out in **Table 2.1**. The measured 85th percentile speeds are therefore substantively below the 60mph national speed limit of National Road within the vicinity of the three possible northern parcel site access locations. In accordance with TAN 18 (paragraph B.3), SSD have been calculated utilising MfS which has determined the recommended visibility splays of for each of the site access options to the northern parcel, as set out at **Table 3.1**.

Table 3.1 - Required visibility splay based on measured 85th percentile speeds and Manual for Streets (in accordance with TAN 18) - northern parcel accesses

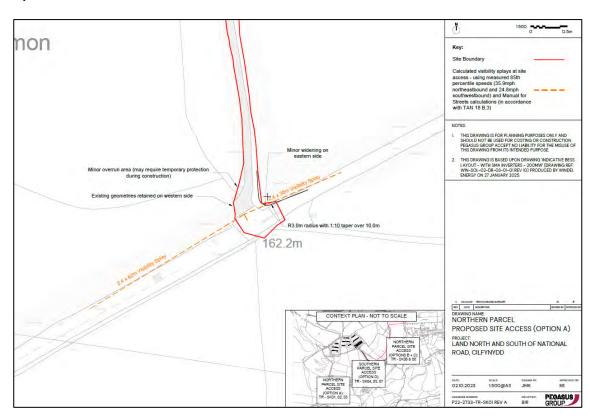
Site Access Option	Visibility Splay direction	Measured 85 th Percentile Speed (7-day average) (mph)	Calculated Recommended Visibility Splay (MfS)
Site Agence Option A	SW of the access	35.9	2.4m x 62m
Site Access Option A	NE of the access	24.8	2.4m x 36m
Site Access Option C	SW of the access	28.2	2.4m x 43m
Site Access Option C	NE of the access	24.7	2.4m x 36m



Note: Direction of traffic abbreviated to northeast (NE) and southwest (SW)

- 3.10. "Site Access Option A" is preferred option to provide access to the northern parcel via the western access track and is located 600m northeast of the National Road / A4054 junction. Site Access Option A additionally has the advantage of being located in an area which is characterised by vegetation less than 0.6 metres in height and, therefore, requires minimal to no trimming of vegetation, which may be beneficial for landscape and ecological purposes. National Road is also wider in the vicinity of Site Access Option A and reduces the need for vehicles to use the narrowest section of National Road when approaching from the west. Therefore, from a transport perspective, 'Site Access Option A' was deemed to be the most preferrable option for access to the northern parcel.
- 3.11. The two alternative accesses to the northern parcel. Site Access Options B and C, located 1.2km and 1.3km northeast of the National Road / A4054 junction, respectively, were also considered. Site Access Option A was identified as the preferred option for the main site access, with Site Access Option C selected as a secondary/emergency access. Site Access B is not proposed to be used at this stage.
- 3.12. Therefore, vehicular access to the northern parcel is proposed to be taken from Site Access Option A via the existing access from National Road (via the western access track) located 600m northeast of the National Road / A4054 junction. The access will be retained as existing with minor modifications, as shown in drawing P22-2733 TR SK01 (Appendix C). An extract of the drawing is also provided below in Plate 3.2 for ease of reference.

Plate 3.2 – Extract of Proposed Main Site Access to Northern Parcel – "Site Access Option A"





Source: Drawing Reference P22-2733-TR-SK01 REV A

- 3.13. The proposed Site Access Option A shown on Drawing SKO1 in **Appendix C** illustrates that the recommended visibility requirements (based on TAN 18 and MfS), as set out in **Table 3.1** above, are achievable for Site Access Option A.
- 3.14. The existing access geometries are to be retained on western side of the access and the grass and gravel is to be made hardstanding. Minor widening of the eastern side of the junction is proposed in order to facilitate a 16.5m x 2.55m articulated HGV, which is the most onerous vehicle proposed to access the site.
- 3.15. Drawings SKO2 and SKO3, included in **Appendix D**, sets out Swept Path Analysis for a 16.5m length HGV (the most onerous vehicle anticipated to require access to the site) and demonstrates vehicles can access the site in forward gear without blocking the public highway.
- 3.16. Drawing SKO2 also demonstrates that a 16.5m length HGV, entering the site, can suitably navigate the western access track whilst a second 16.5m length HGV, waiting to exit, remains stationary in a designated waiting area circa 80m north of the access.
- 3.17. Drawing SKO3 demonstrates that a 16.5m length HGV, exiting the site, can suitably navigate the western access track whilst a second 16.5m length HGV, waiting to enter, waits in a designated waiting area circa 80m north of the access, although it should be noted that inbound vehicle movements will be prioritised through the delivery management plan.
- 3.18. The maximum sized (non-AIL) construction-related vehicle is anticipated to be rigid mobile crane that is 14.87m x minimum length and 2.75 m in width, however smaller HGVs, rigid trucks and LGVs will be used where possible. For robustness, it has been demonstrated as above that a 16.5m length articulated HGV can safely enter and exit the proposed site.
- 3.19. A secondary/emergency site access will also be established from National Road at a location referred to as "Site Access Option C", which is illustrated in **Plate 3.3** below.



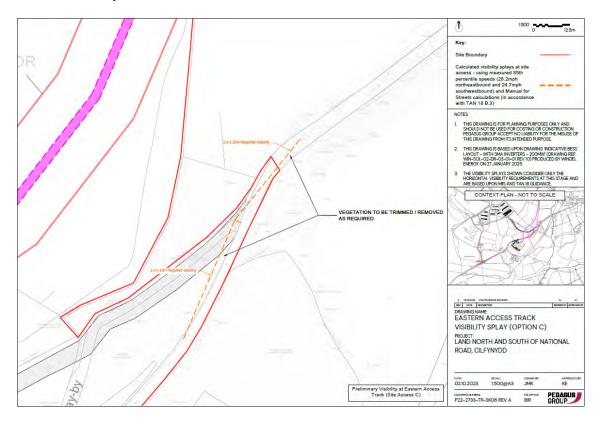


Plate 3.3 – Extract of the proposed Secondary/Emergency Access to Northern Parcel – "Site Access Option C"

Source: Drawing Reference: P22-2733-TR-SK06-REV A

- 3.20. As set out in **Table 3.2** and in accordance with TAN 18, visibility splays of 2.4x43m are illustrated southwest of the site access and 2.4mx36m northeast of the access.
- 3.21. The proposed Site Access Option C shown on Drawing SK08, provided in **Appendix C**, demonstrates the swept path analysis for a 7.7m Fire Tender vehicle. These show that vehicles can access the site in forward gear. The drawing notes that vegetation trimming will be required in an overrun area.

Southern Parcel Site Access

- 3.22. Vehicular access to the southern parcel is proposed to be taken from National Road via a modified priority junction ("Site Access Option D"). The location for this access is circa 900 metres northeast of the A4054 / National Road junction.
- 3.23. Automatic Traffic Count (ATC) surveys were undertaken on National Road (for a seven-day period beginning on 14 September 2023), which provide the existing 85th percentile vehicle speeds. In accordance with TAN 18 (paragraph B.3), SSD has been calculated utilising MfS, which has determined the recommended visibility splays for the proposed access to the southern parcel, as set out at **Table 3.2**.



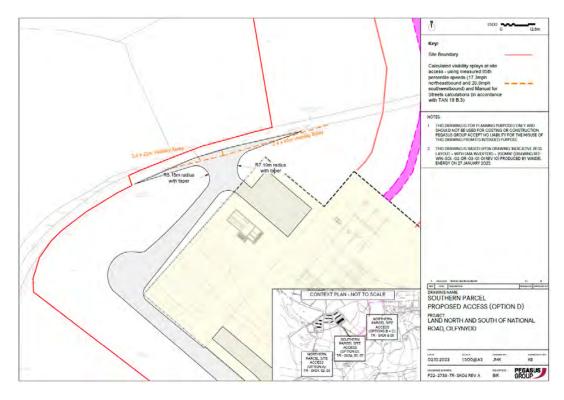
Table 3.2 – Required visibility splay length based on measured 85th percentile speeds and Manual for Streets (in accordance with TAN 18) – southern parcel access

Road and distance from National Road / A4504 junction	Visibility Splay direction	Measured 85 th Percentile Speed (seven day average) (mph)	Calculated Recommended Visibility Splay Length (MfS)
Site Access Option D	SW of the access	17.3	2.4m x 22m
Site Access Option D	NE of the access	26.8	2.4m x 40m

Note: Direction of visibility abbreviated to northeast (NE) and southwest (SW)

3.24. As set out in **Table 3.2**, and in accordance with TAN 18 (paragraph B.3), recommended visibility splays have been calculated utilising MfS which has determined that visibility splays of 2.4m x 22m are required to the southwest of the proposed northern access and 2.4 x 40m to the northeast. This is demonstrated to be achievable at drawing P22–2733 – TR – SKO4 at **Appendix C.** An extract of the drawing is provided in **Plate 3.4.** There is vegetation less than 0.6 metres in height, requiring minimal to no vegetation trimming, thus minimising landscape and ecological impacts.

Plate 3.4 - Extract of Proposed Southern Parcel Access - "Site Access Option D"



Source: Drawing Reference: P22-2733-TR-SKO4 REV A

3.25. Drawings P22-2733 – TR –SKO5 and SKO7, included in **Appendix D**, demonstrate Swept Path Analysis for a 16.5m x 2.55m articulated HGV (the most onerous vehicles anticipated to require access to the site) which shows that vehicles can access the site in forward gear and therefore the access is achievable in a safe and suitable manner for the most onerous HGVs anticipated to use the site.



3.26. It should be noted that during the construction phase, vehicles will be able to utilise a wider internal area than shown.

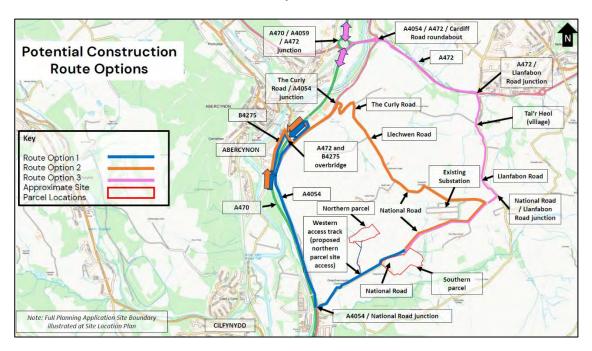
Operation Phase Access

3.27. During the operation phase, the accesses will be used for operational purposes following the completion of the site construction period. The site is proposed to generate 1 LGVs trip per month, equivalent to 12 per year, which is not anticipated to materially intensify the existing traffic on National Road, and therefore, no further work will be required post-construction.

Construction Traffic Routing

3.28. An illustration of the construction traffic routing options is set out in **Plate 3.5** below. These routes have been assessed within Section 3 of the CTMP for their suitability for the routing of construction traffic, with the conclusion being that proposed Option 1 is considered the most preferable route and proposed Option 3 is considered as possible alternative. Option 2 was deemed not suitable for the routing of 16.5m HGVs due to multiple constraints including steep gradients, limited road widths, tight bends, and limited forward visibility due to the road layout.

Plate 3.5 - Potential Construction Route Options





4. Vehicle Trip Generation

Construction Phase

Forecast Construction Traffic

- 4.1. The construction phase is anticipated to last approximately 12 months.
- 4.2. The daily average forecast one-way deliveries during the construction period is 27 vehicles. This equates to 54 daily average two-way vehicle movements.
- 4.3. Deliveries are anticipated to occur between 08:00-17:00 from Monday to Saturday.
- 4.4. The peak number of daily two-way construction trips is anticipated to be up to circa 82 two-way construction vehicle trips per day.
- 4.5. Therefore, for the purpose of robustness, the peak vehicle movements of 82 two-way construction vehicle trips are used for this TS. However, it should be acknowledged that this is temporary and the average over the whole construction period will be significantly lower.

Vehicle Mix

- 4.6. The maximum sized (non-AIL) construction-related vehicle is anticipated to be rigid mobile crane that is 14.87m x minimum length and 2.75 m in width, however smaller HGVs, rigid trucks and LGVs will be used where possible.
- 4.7. For robustness, it has been demonstrated as above that a 16.5m length articulated HGV can safely enter and exit the proposed site (drawings provided in **Appendix D**) as the most onerous vehicle proposed to access the site.
- 4.8. Deliveries shall be reported to the site manager and will be made on the smallest possible vehicles for each item or volume. However, it should be acknowledged that the use of larger vehicles will, in some instances, allow additional items and materials to be transported together, reducing the overall number of trips to the site.

Forecast Staff Trips

- 4.9. An average of 50 and a maximum of 150 construction operatives during the peak are anticipated to be on-site on a single day.
- 4.10. It is proposed to transport staff to site via minibuses. For the purposes of this report, it has been assumed that staff will be transported to and from site via car/van sharing as well as using 10-seater minibus, although the details will be confirmed at a later date. Under these assumptions, during the peak of the construction period, staff commuting trips will contribute up to an additional 15 vehicle arrivals in the morning and 15 vehicle departures in the evening, totalling 30 trips per day. At this stage, operatives are proposed to work on site for a six-day work week from Monday to Saturday.



Forecast Increase in Traffic on National Road

- 4.11. During the peak construction period, the site is forecast to generate up to 112 two-way daily vehicle trips (comprising 82 construction trips and 30 staff trips).
- 4.12. The number of trips per day will fluctuate depending on the construction phase, and as such, it should be noted that the average daily trips for the majority of the construction period will be significantly lower.
- 4.13. The traffic associated with the site is temporary in nature and will occur during the construction period only. Therefore, with appropriate mitigation set out in the CTMP accompanying this TS, it is not anticipated to have an undue effect on the safety and operation of the existing local highway network.
- 4.14. Construction traffic is proposed to route via the A470. The A470 comprises part of the SHN. Once traffic reaches the A470, trips will dissipate along the wider SHN. Background traffic and HGV volumes along the SHN are likely to be significantly higher, and therefore, the development impact will represent a lower percentage impact. The development impacts during the temporary construction phase are, therefore, not considered to have a material impact.

Operational Phase

- 4.15. The same accesses will be used during the operational phase as the construction phase. It is anticipated that the sites will operate predominately by remote access and is only visited on an occasional basis with minimal effect on the surrounding local network, it is anticipated that there could be 1 LGVs accessing the sites per month, equating to up to 12 LGV trips per year in the operational phase.
- 4.16. Operational visits will be undertaken by maintenance staff in vehicles which are unlikely to be larger than 7.5t vans. HGVs are not anticipated to be required during the operational phase, unless in the event of a replacement of a major component.
- 4.17. There will be sufficient space within the sites to allow for operational vehicles and service vehicles to enter, manoeuvre, park and subsequently exit the site in forward gear. There is also an emergency access provided, which is suitable for fire tender vehicles to ingress and egress as shown on Drawing SKO8, available at **Appendix D**.

Proposed Mitigation

4.18. A Construction Traffic Management Plan (CTMP) has been submitted alongside this Transport Statement. This details a comprehensive package of mitigation measures that will be implemented to minimise the effects of construction on the local highway network if deemed necessary. For the details of this proposed mitigation, please refer to the CTMP document for the site.



5. Summary and Conclusion

5.1. Pegasus Group has prepared this Transport Statement (TS) on behalf of REWE 2 Limited (the applicant) to review the transport implications associated with a Proposed Battery Energy Storage System (BESS) with associated infrastructure, including a substation, earthworks, access, drainage, landscaping and an underground cable route connection. It should be considered in conjunction with the Construction Traffic Management Plan (CTMP) for the site.

Existing Conditions

- 5.2. The local highway network is considered suitable to accommodate the temporary construction traffic impacts and operational traffic impacts associated with the development. Any adverse impacts will be appropriately mitigated by a CTMP which has been submitted alongside this TS.
- 5.3. All vehicles will approach the site from the A470, identified as part of the SHN. Traffic will route from both northbound and southbound directions on the A470 to the northern and southern parcels of the site via the route(s) set out in the CTMP. Once traffic reaches the A470, trips will dissipate along the wider SHN.
- 5.4. A highways safety analysis has been undertaken and the conclusion is that there are no existing highway safety issues identified at the proposed access points or construction routes to the site which could be exacerbated by the proposed development.

Proposed Site Access

- 5.5. The built development is arranged over parcels of land to the north and south of National Road. Three vehicle accesses are proposed in total, including:
 - The main vehicle access to the northern parcel is proposed via an existing access (Site Access Option A);
 - Secondary/emergency vehicle access to the northern parcel is proposed via National Road at a location 1.3km northeast of the National Road / A4054 junction;
 - Access to the southern parcel is proposed to be accessed via a new access from National Road (Site Access Option D).
- 5.6. The proposed access arrangements are considered suitable to accommodate the construction and operational related trips associated with the proposed development.
- 5.7. Visibility splays have been provided at **Appendix C** (calculated utilising Manual for Streets in accordance with Traffic Advisory Note 18) to demonstrate that the proposed site accesses onto National Road achieve sufficient visibility for construction and operational vehicles to utilise in a safe manner.
- 5.8. Swept path analysis for a 16.5m length HGV has been undertaken (shown at **Appendix D**) which shows that turning into and out of the accesses to / from National Road is achievable in a safe and suitable manner. Swept path analysis of the secondary/emergency access for a 7.7m Fire Tender vehicle has been demonstrated.



Forecast Traffic Generation

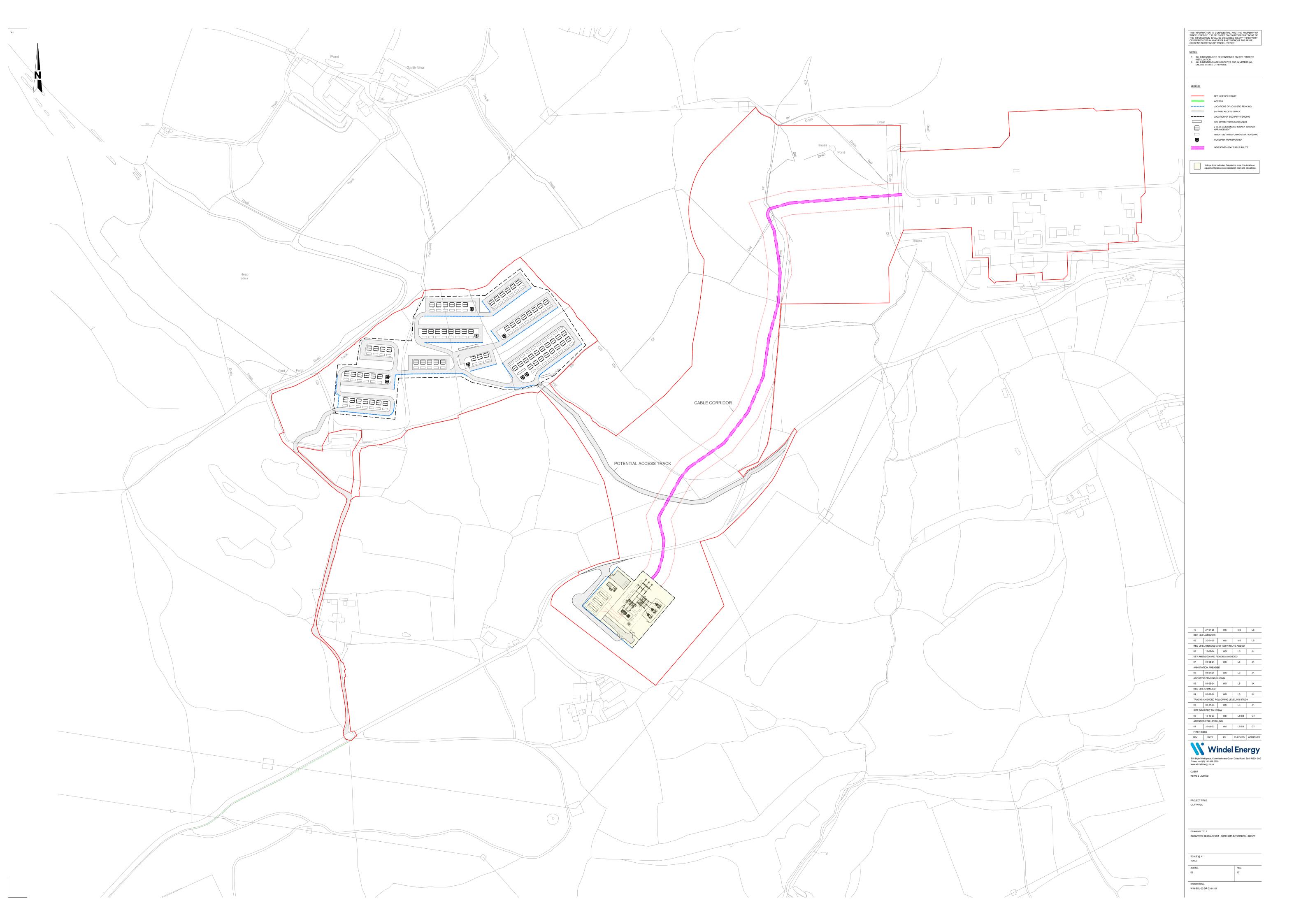
- 5.9. The construction phase of development is anticipated to span a temporary period of approximately 12 months. During the peak, there could be a temporary increase of approximately 82 two-way construction vehicle trips per day. It should be noted that this represents the peak, and trips outside of this are forecast to be lower.
- 5.10. In terms of staff trips, during the peak of the construction period, staff commuting trips are forecast as up to an additional 15 vehicle arrivals in the morning and 15 vehicle departures in the evening, totalling 30 two-way trips per day. Again, this represents the peak and outside of this peak trips are forecast to be lower.
- 5.11. The transport impacts of the construction phases will be appropriately mitigated by a CTMP, which has been submitted alongside this TS. This details a comprehensive package of mitigation measures that will be implemented to minimise the effects of construction on the local highway network.
- 5.12. Once the construction phase is concluded, the sites will operate predominately by remote access and is only visited on an occasional basis with minimal effect on the surrounding local network, it is anticipated that there could be 1 LGVs accessing the sites per month, equating to up to 12 LGV trips per year in the operational phase.

Conclusion

5.13. In conclusion, the temporary construction traffic impacts and operational traffic impacts associated with the development can be accommodated by the local highway network. The development site is in accordance with national and local policy. Any adverse impacts will be appropriately mitigated by a CTMP submitted alongside this TS. The development will generate a limited number of vehicle movements during the construction phase, which will be managed through a construction traffic management plan. Once operational, the facility will require only occasional maintenance visits. Overall, the scheme aligns with sustainable principles and supports the transition to renewable energy, contributing positively to the environment. Therefore, there is no transport reason for refusal.



Appendix A – Site Layout



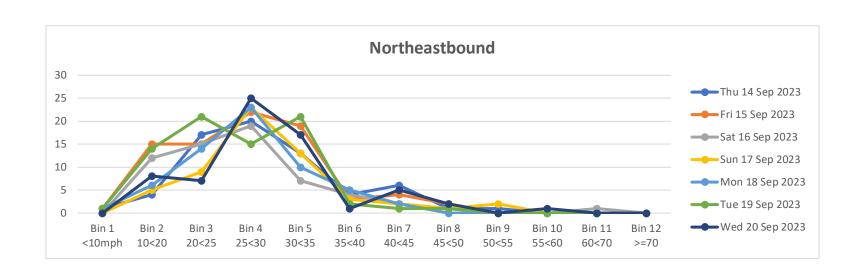


Appendix B – Automated Traffic Count (ATC) Data

Trefechan ATC 1, National Road (Western Site)

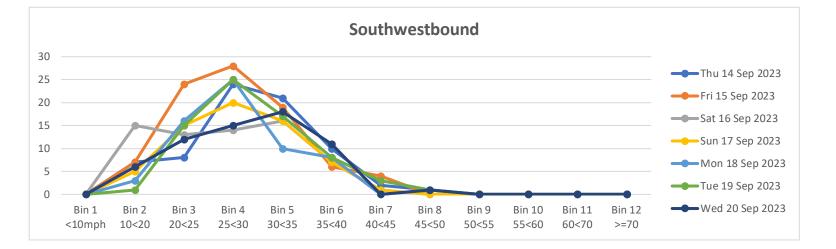
Direction: Northeastbound

	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Thu 14 Sep 2023	67	37.3	28.8	8.2	1	4	17	20	13	4	6	1	1	0	0	0
Fri 15 Sep 2023	81	35.4	26.8	8.3	1	15	15	22	19	3	4	2	0	0	0	0
Sat 16 Sep 2023	61	36.0	26.5	9.1	0	12	15	19	7	4	2	1	0	0	1	0
Sun 17 Sep 2023	58	37.2	29.0	7.9	0	5	9	23	13	3	2	1	2	0	0	0
Mon 18 Sep 2023	61	34.1	26.9	6.9	1	6	14	23	10	5	2	0	0	0	0	0
Tue 19 Sep 2023	76	33.4	25.7	7.5	1	14	21	15	21	2	1	1	0	0	0	0
Wed 20 Sep 2023	66	37.8	29.1	8.4	0	8	7	25	17	1	5	2	0	1	0	0
5 Day Ave.	70	35.6	27.5	7.9	1	9	15	21	16	3	4	1	0	0	0	0
7 Day Ave.	67	35.9	27.5	8.1	1	9	14	21	14	3	3	1	0	0	0	0
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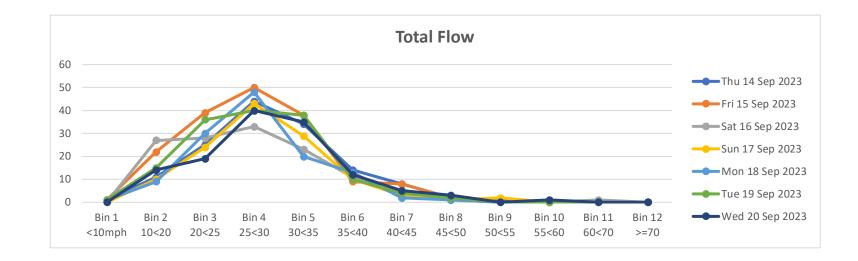
Direction: Southwestbound

	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Thu 14 Sep 2023	73	36.4	29.2	6.9	0	7	8	24	21	10	2	1	0	0	0	0
Fri 15 Sep 2023	88	34.3	27.6	6.5	0	7	24	28	19	6	4	0	0	0	0	0
Sat 16 Sep 2023	66	34.2	26.2	7.7	0	15	13	14	16	7	1	0	0	0	0	0
Sun 17 Sep 2023	64	34.4	27.9	6.3	0	5	15	20	16	7	1	0	0	0	0	0
Mon 18 Sep 2023	63	34.3	28.0	6.1	0	3	16	25	10	8	0	1	0	0	0	0
Tue 19 Sep 2023	70	35.8	29.5	6.1	0	1	15	25	17	8	3	1	0	0	0	0
Wed 20 Sep 2023	63	36.1	28.8	7.0	0	6	12	15	18	11	0	1	0	0	0	0
5 Day Ave.	71	35.4	28.6	6.5	0	5	15	23	17	9	2	1	0	0	0	0
7 Day Ave.	70	35.1	28.2	6.7	0	6	15	22	17	8	2	1	0	0	0	0



Direction: Total Flow

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <10mph	Bin 2 10<20	Bin 3 20<25	Bin 4 25<30	Bin 5 30<35	Bin 6 35<40	Bin 7 40<45	Bin 8 45<50	Bin 9 50<55	Bin 10 55<60	Bin 11 60<70	Bin 12 >=70
Thu 14 Sep 2023	140	36.8	29.0	7.5	1	11	25	44	34	14	8	2	1	0	0	0
Fri 15 Sep 2023	169	34.9	27.2	7.4	1	22	39	50	38	9	8	2	0	0	0	0
Sat 16 Sep 2023	127	35.0	26.3	8.4	0	27	28	33	23	11	3	1	0	0	1	0
Sun 17 Sep 2023	122	35.8	28.4	7.1	0	10	24	43	29	10	3	1	2	0	0	0
Mon 18 Sep 2023	124	34.2	27.5	6.5	1	9	30	48	20	13	2	1	0	0	0	0
Tue 19 Sep 2023	146	34.9	27.5	7.1	1	15	36	40	38	10	4	2	0	0	0	0
Wed 20 Sep 2023	129	37.0	29.0	7.7	0	14	19	40	35	12	5	3	0	1	0	0
5 Day Ave.	142	35.6	28.0	7.3	1	14	30	44	33	12	5	2	0	0	0	0
7 Day Ave.	137	35.5	27.9	7.4	1	15	29	43	31	11	5	2	0	0	0	0
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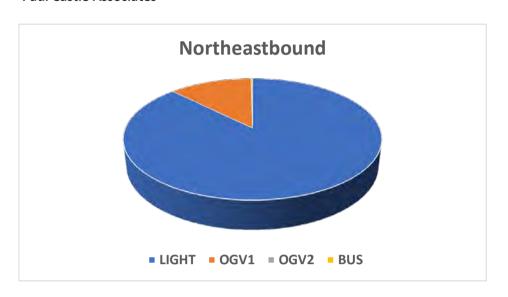
Trefechan ATC 1, National Road (Western Site)

Direction: Northeastbound

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	67	60	7	0	0
Fri 15 Sep 2023	81	69	12	0	0
Sat 16 Sep 2023	61	55	6	0	0
Sun 17 Sep 2023	58	52	6	0	0
Mon 18 Sep 2023	61	51	10	0	0
Tue 19 Sep 2023	76	65	11	0	0
Wed 20 Sep 2023	66	59	6	0	1
5 Day Ave.	70	61	9	0	0
7 Day Ave.	67	59	8	0	0

	Total				
	Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	89.6%	10.4%	0.0%	0.0%
Fri 15 Sep 2023	100.0%	85.2%	14.8%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	90.2%	9.8%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	89.7%	10.3%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	83.6%	16.4%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	85.5%	14.5%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	89.4%	9.1%	0.0%	1.5%
5 Day Ave.	100.0%	86.6%	13.1%	0.0%	0.3%
7 Day Ave.	100.0%	87.4%	12.3%	0.0%	0.2%

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Direction: Southwestbound

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	73	63	10	0	0
Fri 15 Sep 2023	88	77	11	0	0
Sat 16 Sep 2023	66	59	7	0	0
Sun 17 Sep 2023	64	59	5	0	0
Mon 18 Sep 2023	63	50	13	0	0
Tue 19 Sep 2023	70	57	13	0	0
Wed 20 Sep 2023	63	52	10	0	1
5 Day Ave.	71	60	11	0	0
7 Day Ave.	70	60	10	0	0

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	86.3%	13.7%	0.0%	0.0%
Fri 15 Sep 2023	100.0%	87.5%	12.5%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	89.4%	10.6%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	92.2%	7.8%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	79.4%	20.6%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	81.4%	18.6%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	82.5%	15.9%	0.0%	1.6%
5 Day Ave.	100.0%	83.8%	16.0%	0.0%	0.3%
7 Day Ave.	100.0%	85.6%	14.2%	0.0%	0.2%

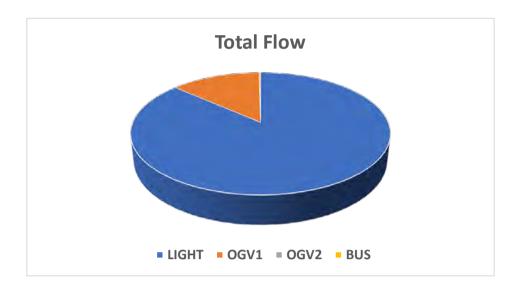
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Direction: Total Flow Total

	Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	140	123	17	0	0
Fri 15 Sep 2023	169	146	23	0	0
Sat 16 Sep 2023	127	114	13	0	0
Sun 17 Sep 2023	122	111	11	0	0
Mon 18 Sep 2023	124	101	23	0	0
Tue 19 Sep 2023	146	122	24	0	0
Wed 20 Sep 2023	129	111	16	0	2
5 Day Ave.	142	121	21	0	0
7 Day Ave.	137	118	18	0	0

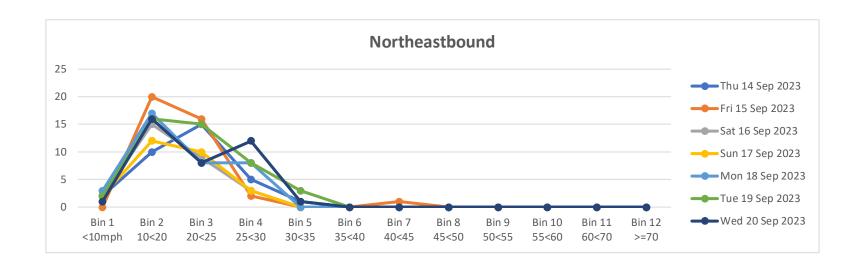
	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	87.9%	12.1%	0.0%	0.0%
Fri 15 Sep 2023	100.0%	86.4%	13.6%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	89.8%	10.2%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	91.0%	9.0%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	81.5%	18.5%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	83.6%	16.4%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	86.0%	12.4%	0.0%	1.6%
5 Day Ave.	100.0%	85.2%	14.5%	0.0%	0.3%
7 Day Ave.	100.0%	86.5%	13.3%	0.0%	0.2%



Trefechan ATC 2, National Road (Middle Western Site)

Direction: Northeastbound

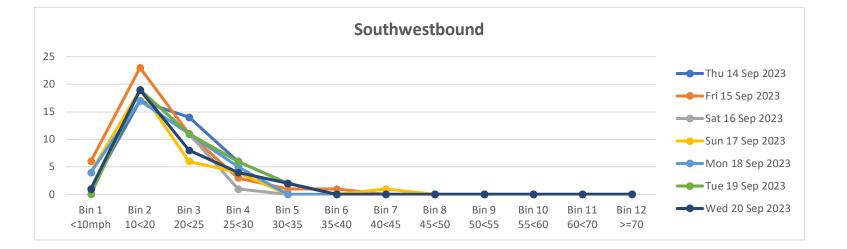
	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <10mph	Bin 2 10<20	Bin 3 20<25	Bin 4 25<30	Bin 5 30<35	Bin 6 35<40	Bin 7 40<45	Bin 8 45<50	Bin 9 50<55	Bin 10 55<60	Bin 11 60<70	Bin 12 >=70
Thu 14 Sep 2023	33	26.4	20.4	5.8	2	10	15	5	1	0	0	0	0	0	0	0
Fri 15 Sep 2023	39	25.3	19.4	5.6	0	20	16	2	0	0	1	0	0	0	0	0
Sat 16 Sep 2023	29	23.6	18.1	5.3	2	15	9	3	0	0	0	0	0	0	0	0
Sun 17 Sep 2023	27	24.3	18.6	5.4	2	12	10	3	0	0	0	0	0	0	0	0
Mon 18 Sep 2023	36	25.2	18.9	6.1	3	17	8	8	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	44	27.2	20.7	6.2	2	16	15	8	3	0	0	0	0	0	0	0
Wed 20 Sep 2023	38	27.2	20.8	6.2	1	16	8	12	1	0	0	0	0	0	0	0
5 Day Ave.	38	26.2	20.0	6.0	2	16	12	7	1	0	0	0	0	0	0	0
7 Day Ave.	35	25.6	19.6	5.8	2	15	12	6	1	0	0	0	0	0	0	0



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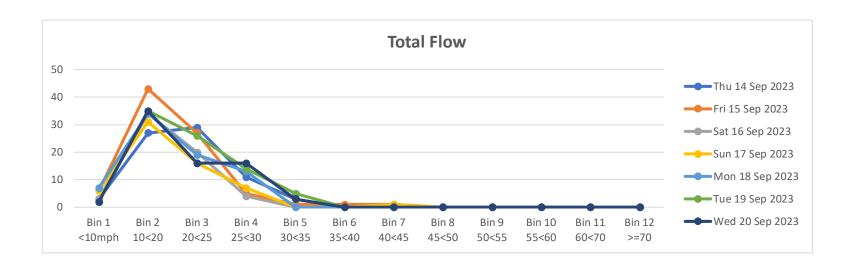
Direction: Southwestbound

	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Thu 14 Sep 2023	40	26.2	20.2	5.8	1	17	14	6	2	0	0	0	0	0	0	0
Fri 15 Sep 2023	45	24.4	17.6	6.5	6	23	11	3	1	1	0	0	0	0	0	0
Sat 16 Sep 2023	32	22.2	17.8	4.3	1	19	11	1	0	0	0	0	0	0	0	0
Sun 17 Sep 2023	34	25.1	17.8	7.1	4	19	6	4	0	0	1	0	0	0	0	0
Mon 18 Sep 2023	37	24.2	18.2	5.8	4	17	11	5	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	38	26.0	20.1	5.7	0	19	11	6	2	0	0	0	0	0	0	0
Wed 20 Sep 2023	34	25.2	19.1	6.0	1	19	8	4	2	0	0	0	0	0	0	0
5 Day Ave.	39	25.2	19.0	6.0	2	19	11	5	1	0	0	0	0	0	0	0
7 Day Ave.	37	24.8	18.7	5.9	2	19	10	4	1	0	0	0	0	0	0	0



Direction: Total Flow

	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Thu 14 Sep 2023	73	26.2	20.3	5.7	3	27	29	11	3	0	0	0	0	0	0	0
Fri 15 Sep 2023	84	24.9	18.5	6.2	6	43	27	5	1	1	1	0	0	0	0	0
Sat 16 Sep 2023	61	22.9	17.9	4.8	3	34	20	4	0	0	0	0	0	0	0	0
Sun 17 Sep 2023	61	24.8	18.2	6.4	6	31	16	7	0	0	1	0	0	0	0	0
Mon 18 Sep 2023	73	24.7	18.5	5.9	7	34	19	13	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	82	26.6	20.4	6.0	2	35	26	14	5	0	0	0	0	0	0	0
Wed 20 Sep 2023	72	26.3	20.0	6.1	2	35	16	16	3	0	0	0	0	0	0	0
5 Day Ave.	77	25.7	19.5	6.0	4	35	23	12	2	0	0	0	0	0	0	0
7 Day Ave.	72	25.2	19.1	5.9	4	34	22	10	2	0	0	0	0	0	0	0
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Trefechan ATC 2, National Road (Middle Western Site)

Direction: Northeastbound LIGHT OGV1 OGV2 Volume BUS Thu 14 Sep 2023 Fri 15 Sep 2023 Sat 16 Sep 2023 Sun 17 Sep 2023 Mon 18 Sep 2023

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	87.9%	9.1%	0.0%	3.0%
Fri 15 Sep 2023	100.0%	79.5%	17.9%	0.0%	2.6%
Sat 16 Sep 2023	100.0%	93.1%	6.9%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	88.9%	11.1%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	83.3%	13.9%	0.0%	2.8%
Tue 19 Sep 2023	100.0%	84.1%	15.9%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	92.1%	5.3%	0.0%	2.6%
5 Day Ave.	100.0%	85.3%	12.6%	0.0%	2.1%
7 Day Ave.	100.0%	86.6%	11.8%	0.0%	1.6%

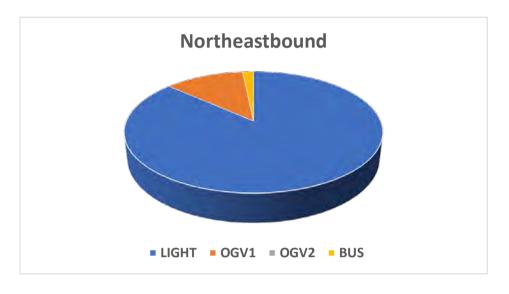
Paul Castle Associates

Tue 19 Sep 2023

Wed 20 Sep 2023

5 Day Ave.

7 Day Ave.

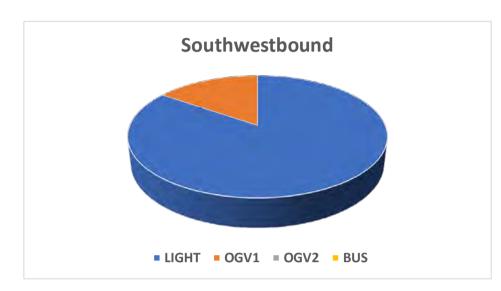


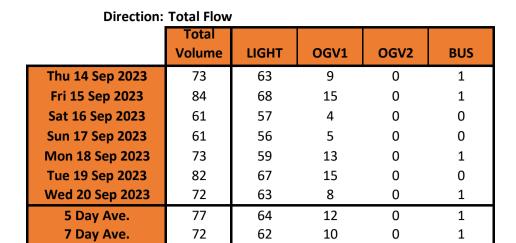
Direction: Southwestbound Volume LIGHT OGV1 OGV2 BUS Thu 14 Sep 2023 Fri 15 Sep 2023 Sat 16 Sep 2023 Sun 17 Sep 2023 Mon 18 Sep 2023 Tue 19 Sep 2023 Wed 20 Sep 2023 5 Day Ave.

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	85.0%	15.0%	0.0%	0.0%
Fri 15 Sep 2023	100.0%	82.2%	17.8%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	93.8%	6.3%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	94.1%	5.9%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	78.4%	21.6%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	78.9%	21.1%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	82.4%	17.6%	0.0%	0.0%
5 Day Ave.	100.0%	81.4%	18.6%	0.0%	0.0%
7 Day Ave.	100.0%	84.6%	15.4%	0.0%	0.0%

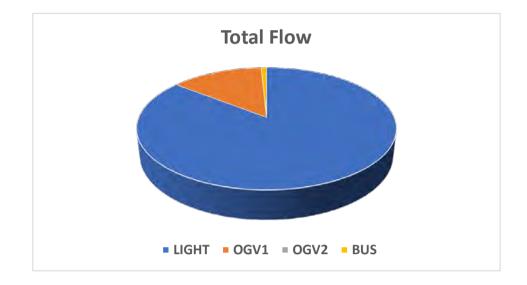
Paul Castle Associates

7 Day Ave.





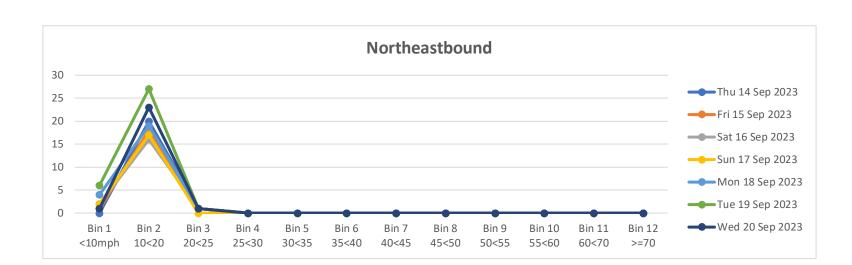
	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	86.3%	12.3%	0.0%	1.4%
Fri 15 Sep 2023	100.0%	81.0%	17.9%	0.0%	1.2%
Sat 16 Sep 2023	100.0%	93.4%	6.6%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	91.8%	8.2%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	80.8%	17.8%	0.0%	1.4%
Tue 19 Sep 2023	100.0%	81.7%	18.3%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	87.5%	11.1%	0.0%	1.4%
5 Day Ave.	100.0%	83.3%	15.6%	0.0%	1.0%
7 Day Ave.	100.0%	85.6%	13.6%	0.0%	0.8%



Trefechan ATC 3, National Road (Middle SIte)

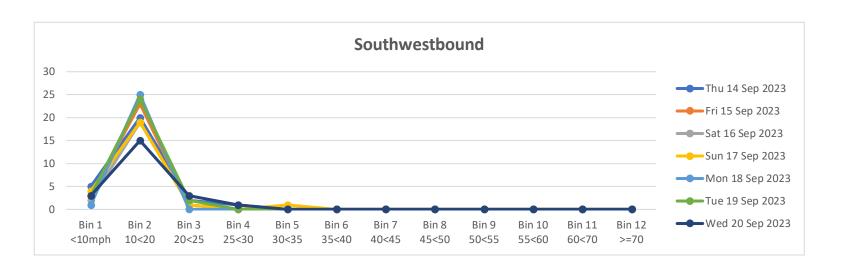
Direction: Northeastbound

	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Thu 14 Sep 2023	21	17.1	15.4	1.6	0	20	1	0	0	0	0	0	0	0	0	0
Fri 15 Sep 2023	20	17.5	15.0	2.4	1	18	1	0	0	0	0	0	0	0	0	0
Sat 16 Sep 2023	19	17.7	14.7	2.9	2	16	1	0	0	0	0	0	0	0	0	0
Sun 17 Sep 2023	19	16.6	14.3	2.2	2	17	0	0	0	0	0	0	0	0	0	0
Mon 18 Sep 2023	24	17.5	14.1	3.2	4	19	1	0	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	34	17.2	14.0	3.1	6	27	1	0	0	0	0	0	0	0	0	0
Wed 20 Sep 2023	25	17.2	15.0	2.1	1	23	1	0	0	0	0	0	0	0	0	0
5 Day Ave.	25	17.3	14.7	2.5	2	21	1	0	0	0	0	0	0	0	0	0
7 Day Ave.	23	17.2	14.6	2.5	2	20	1	0	0	0	0	0	0	0	0	0



Direction: Southwestbound

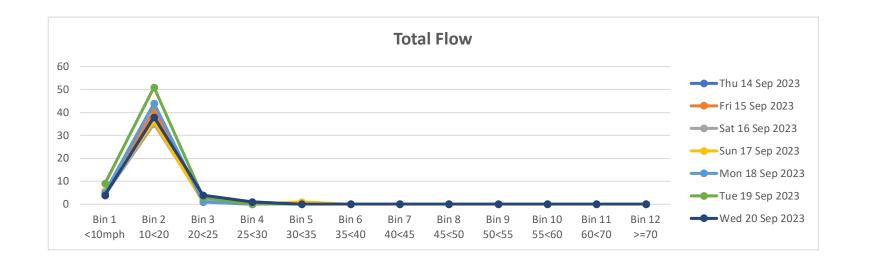
	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Thu 14 Sep 2023	28	19.2	14.7	4.4	5	20	2	1	0	0	0	0	0	0	0	0
Fri 15 Sep 2023	27	17.3	14.5	2.7	3	23	1	0	0	0	0	0	0	0	0	0
Sat 16 Sep 2023	22	17.5	14.7	2.7	2	19	1	0	0	0	0	0	0	0	0	0
Sun 17 Sep 2023	25	19.9	14.9	4.8	4	19	1	0	1	0	0	0	0	0	0	0
Mon 18 Sep 2023	26	16.2	14.7	1.4	1	25	0	0	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	29	17.9	14.8	3.0	3	24	2	0	0	0	0	0	0	0	0	0
Wed 20 Sep 2023	22	20.5	15.6	4.7	3	15	3	1	0	0	0	0	0	0	0	0
5 Day Ave.	26	18.2	14.9	3.2	3	21	2	0	0	0	0	0	0	0	0	0
7 Day Ave.	26	18.4	14.9	3.4	3	21	1	0	0	0	0	0	0	0	0	0



Paul Castle Associates

Direction: Total Flow

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <10mph	Bin 2 10<20	Bin 3 20<25	Bin 4 25<30	Bin 5 30<35	Bin 6 35<40	Bin 7 40<45	Bin 8 45<50	Bin 9 50<55	Bin 10 55<60	Bin 11 60<70	Bin 12 >=70
					\10111b11		20123	23 30	30133			+3\30				
Thu 14 Sep 2023	49	18.6	15.0	3.4	5	40	3	1	0	0	0	0	0	0	0	0
Fri 15 Sep 2023	47	17.4	14.7	2.6	4	41	2	0	0	0	0	0	0	0	0	0
Sat 16 Sep 2023	41	17.5	14.7	2.8	4	35	2	0	0	0	0	0	0	0	0	0
Sun 17 Sep 2023	44	18.6	14.6	3.9	6	36	1	0	1	0	0	0	0	0	0	0
Mon 18 Sep 2023	50	17.0	14.5	2.4	5	44	1	0	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	63	17.5	14.4	3.1	9	51	3	0	0	0	0	0	0	0	0	0
Wed 20 Sep 2023	47	19.0	15.3	3.5	4	38	4	1	0	0	0	0	0	0	0	0
5 Day Ave.	51	17.9	14.8	3.0	5	43	3	0	0	0	0	0	0	0	0	0
7 Day Ave.	49	17.9	14.7	3.1	5	41	2	0	0	0	0	0	0	0	0	0
Paul Castle Associates																



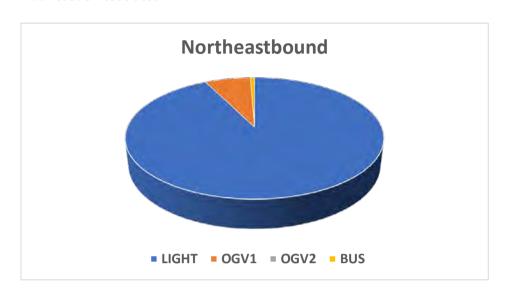
Trefechan ATC 3, National Road (Middle SIte)

Direction: Northeastbound

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	21	19	1	0	1
Fri 15 Sep 2023	20	18	2	0	0
Sat 16 Sep 2023	19	19	0	0	0
Sun 17 Sep 2023	19	18	1	0	0
Mon 18 Sep 2023	24	22	2	0	0
Tue 19 Sep 2023	34	30	4	0	0
Wed 20 Sep 2023	25	24	1	0	0
5 Day Ave.	25	23	2	0	0
7 Day Ave.	23	21	2	0	0

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	90.5%	4.8%	0.0%	4.8%
Fri 15 Sep 2023	100.0%	90.0%	10.0%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	100.0%	0.0%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	94.7%	5.3%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	91.7%	8.3%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	88.2%	11.8%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	96.0%	4.0%	0.0%	0.0%
5 Day Ave.	100.0%	91.1%	8.1%	0.0%	0.8%
7 Day Ave.	100.0%	92.6%	6.8%	0.0%	0.6%

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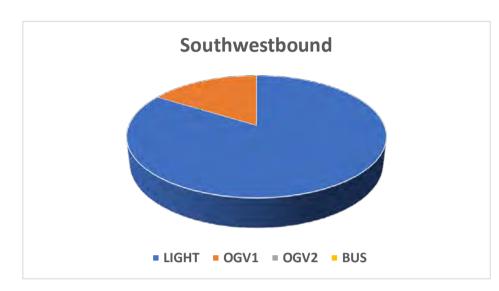


Direction: Southwestbound

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	28	23	5	0	0
Fri 15 Sep 2023	27	24	3	0	0
Sat 16 Sep 2023	22	19	3	0	0
Sun 17 Sep 2023	25	24	1	0	0
Mon 18 Sep 2023	26	19	7	0	0
Tue 19 Sep 2023	29	22	7	0	0
Wed 20 Sep 2023	22	19	3	0	0
5 Day Ave.	26	21	5	0	0
7 Day Ave.	26	21	4	0	0

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	82.1%	17.9%	0.0%	0.0%
Fri 15 Sep 2023	100.0%	88.9%	11.1%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	86.4%	13.6%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	96.0%	4.0%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	73.1%	26.9%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	75.9%	24.1%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	86.4%	13.6%	0.0%	0.0%
5 Day Ave.	100.0%	81.1%	18.9%	0.0%	0.0%
7 Day Ave.	100.0%	83.8%	16.2%	0.0%	0.0%

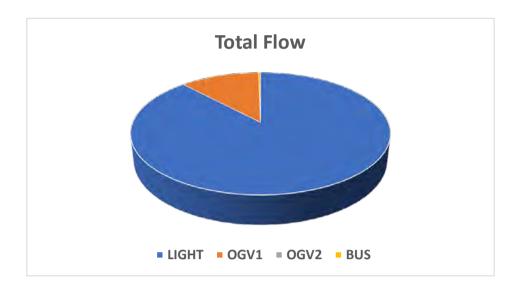
Paul Castle Associates



Direction: Total Flow

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	49	42	6	0	1
Fri 15 Sep 2023	47	42	5	0	0
Sat 16 Sep 2023	41	38	3	0	0
Sun 17 Sep 2023	44	42	2	0	0
Mon 18 Sep 2023	50	41	9	0	0
Tue 19 Sep 2023	63	52	11	0	0
Wed 20 Sep 2023	47	43	4	0	0
5 Day Ave.	51	44	7	0	0
7 Day Ave.	49	43	6	0	0

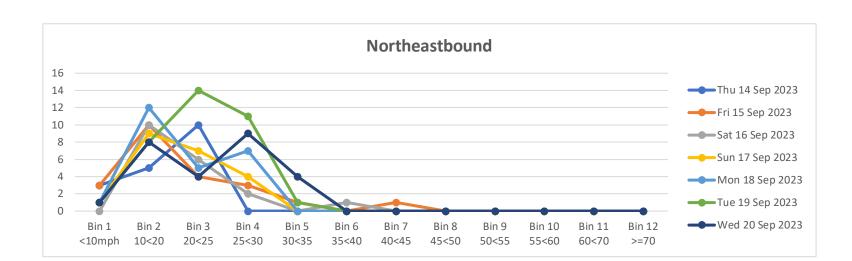
	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	85.7%	12.2%	0.0%	2.0%
Fri 15 Sep 2023	100.0%	89.4%	10.6%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	92.7%	7.3%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	95.5%	4.5%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	82.0%	18.0%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	82.5%	17.5%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	91.5%	8.5%	0.0%	0.0%
5 Day Ave.	100.0%	85.9%	13.7%	0.0%	0.4%
7 Day Ave.	100.0%	88.0%	11.7%	0.0%	0.3%



Trefechan ATC 4, National Road (Middle Eastern Site)

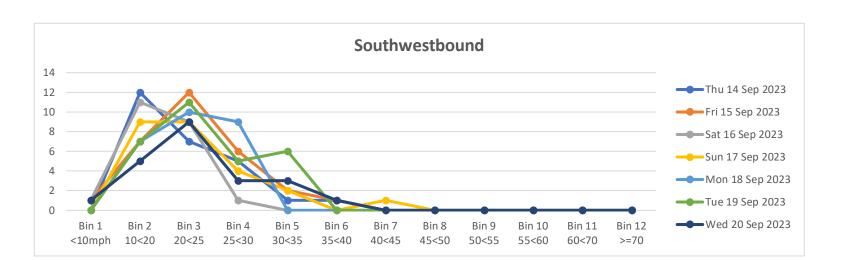
Direction: Northeastbound

	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Thu 14 Sep 2023	18	23.9	18.0	5.7	3	5	10	0	0	0	0	0	0	0	0	0
Fri 15 Sep 2023	22	28.0	19.2	8.5	3	10	4	3	1	0	1	0	0	0	0	0
Sat 16 Sep 2023	19	26.4	19.9	6.3	0	10	6	2	0	1	0	0	0	0	0	0
Sun 17 Sep 2023	21	25.4	19.5	5.6	1	9	7	4	0	0	0	0	0	0	0	0
Mon 18 Sep 2023	25	25.9	19.7	6.0	1	12	5	7	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	35	27.9	22.2	5.5	1	8	14	11	1	0	0	0	0	0	0	0
Wed 20 Sep 2023	26	30.3	22.9	7.2	1	8	4	9	4	0	0	0	0	0	0	0
5 Day Ave.	25	27.2	20.4	6.6	2	9	7	6	1	0	0	0	0	0	0	0
7 Day Ave.	24	26.8	20.2	6.4	1	9	7	5	1	0	0	0	0	0	0	0
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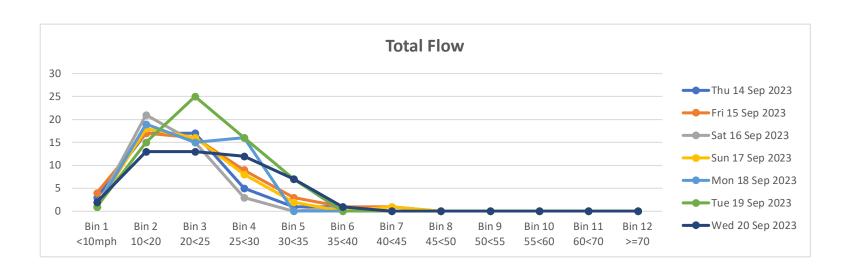
Direction: Southwestbound

	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Thu 14 Sep 2023	26	27.7	21.0	6.5	0	12	7	5	1	1	0	0	0	0	0	0
Fri 15 Sep 2023	29	29.2	22.4	6.5	1	7	12	6	2	1	0	0	0	0	0	0
Sat 16 Sep 2023	22	23.2	18.3	4.7	1	11	9	1	0	0	0	0	0	0	0	0
Sun 17 Sep 2023	25	29.5	22.2	7.1	0	9	9	4	2	0	1	0	0	0	0	0
Mon 18 Sep 2023	26	27.4	22.2	5.0	0	7	10	9	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	29	30.1	23.6	6.2	0	7	11	5	6	0	0	0	0	0	0	0
Wed 20 Sep 2023	22	30.3	22.9	7.2	1	5	9	3	3	1	0	0	0	0	0	0
5 Day Ave.	26	28.9	22.4	6.3	0	8	10	6	2	1	0	0	0	0	0	0
7 Day Ave.	26	28.2	21.8	6.2	0	8	10	5	2	0	0	0	0	0	0	0



Direction: Total Flow

	Total	85th	Mean	Standard	Bin 1	Bin 2	Bin 3	Bin 4	Bin 5	Bin 6	Bin 7	Bin 8	Bin 9	Bin 10	Bin 11	Bin 12
	Volume	Percentile	Average	Deviation	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Thu 14 Sep 2023	44	26.3	19.8	6.3	3	17	17	5	1	1	0	0	0	0	0	0
Fri 15 Sep 2023	51	28.8	21.0	7.5	4	17	16	9	3	1	1	0	0	0	0	0
Sat 16 Sep 2023	41	24.7	19.0	5.5	1	21	15	3	0	1	0	0	0	0	0	0
Sun 17 Sep 2023	46	27.8	21.0	6.5	1	18	16	8	2	0	1	0	0	0	0	0
Mon 18 Sep 2023	51	26.8	21.0	5.6	1	19	15	16	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	64	28.9	22.9	5.8	1	15	25	16	7	0	0	0	0	0	0	0
Wed 20 Sep 2023	48	30.2	22.9	7.1	2	13	13	12	7	1	0	0	0	0	0	0
5 Day Ave.	52	28.2	21.5	6.5	2	16	17	12	4	1	0	0	0	0	0	0
7 Day Ave.	49	27.6	21.1	6.3	2	17	17	10	3	1	0	0	0	0	0	0
Paul Castle Associates																

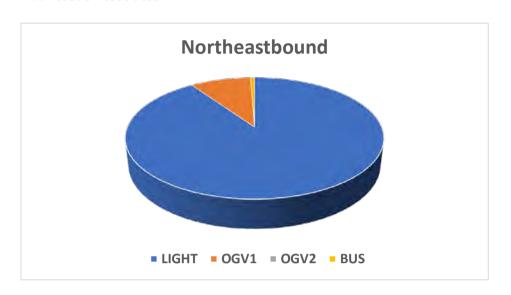


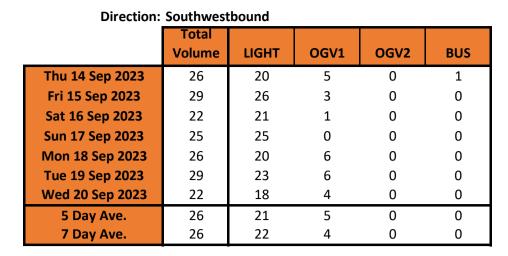
Trefechan ATC 4, National Road (Middle Eastern Site)

Direction:	Northeast	bound			
	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	18	16	1	0	1
Fri 15 Sep 2023	22	19	3	0	0
Sat 16 Sep 2023	19	19	0	0	0
Sun 17 Sep 2023	21	20	1	0	0
Mon 18 Sep 2023	25	22	3	0	0
Tue 19 Sep 2023	35	30	5	0	0
Wed 20 Sep 2023	26	24	2	0	0
5 Day Ave.	25	22	3	0	0
7 Day Ave.	24	21	2	0	0

	_				
	Total				
	Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	88.9%	5.6%	0.0%	5.6%
Fri 15 Sep 2023	100.0%	86.4%	13.6%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	100.0%	0.0%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	95.2%	4.8%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	88.0%	12.0%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	85.7%	14.3%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	92.3%	7.7%	0.0%	0.0%
5 Day Ave.	100.0%	88.1%	11.1%	0.0%	0.8%
7 Day Ave.	100.0%	90.4%	9.0%	0.0%	0.6%

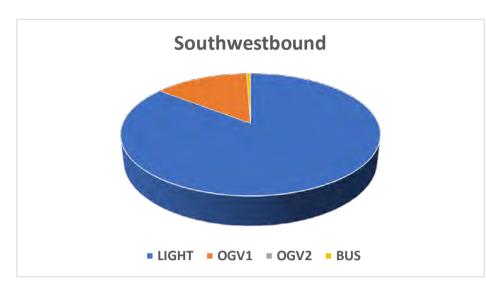
Paul Castle Associates

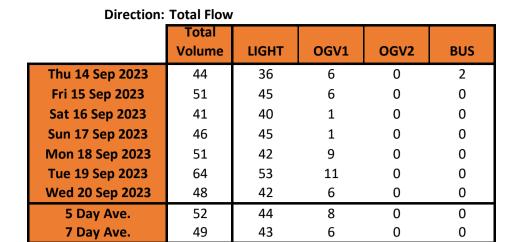




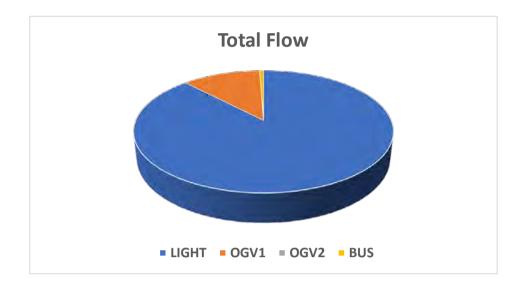
	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	76.9%	19.2%	0.0%	3.8%
Fri 15 Sep 2023	100.0%	89.7%	10.3%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	95.5%	4.5%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	100.0%	0.0%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	76.9%	23.1%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	79.3%	20.7%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	81.8%	18.2%	0.0%	0.0%
5 Day Ave.	100.0%	81.1%	18.2%	0.0%	0.8%
7 Day Ave.	100.0%	85.5%	14.0%	0.0%	0.6%

Paul Castle Associates





	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	81.8%	13.6%	0.0%	4.5%
Fri 15 Sep 2023	100.0%	88.2%	11.8%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	97.6%	2.4%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	97.8%	2.2%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	82.4%	17.6%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	82.8%	17.2%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	87.5%	12.5%	0.0%	0.0%
5 Day Ave.	100.0%	84.5%	14.7%	0.0%	0.8%
7 Day Ave.	100.0%	87.8%	11.6%	0.0%	0.6%



Trefechan ATC 5, National Road (Eastern Site)

Direction: Northeastbound

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	14	12	1	0	1
Fri 15 Sep 2023	17	13	4	0	0
Sat 16 Sep 2023	16	16	0	0	0
Sun 17 Sep 2023	18	17	1	0	0
Mon 18 Sep 2023	23	20	3	0	0
Tue 19 Sep 2023	34	29	5	0	0
Wed 20 Sep 2023	24	22	2	0	0
5 Day Ave.	22	19	3	0	0
7 Day Ave.	21	18	2	0	0

Direction:	Southwest	tbound			
	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	22	16	5	0	1
Fri 15 Sep 2023	24	20	4	0	0
Sat 16 Sep 2023	19	18	1	0	0
Sun 17 Sep 2023	20	20	0	0	0
Mon 18 Sep 2023	24	18	6	0	0
Tue 19 Sep 2023	28	22	6	0	0
Wed 20 Sep 2023	20	17	3	0	0
5 Day Ave.	24	19	5	0	0
7 Day Ave.	22	19	4	0	0

Direction:	Total Flow	,			
	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	36	28	6	0	2
Fri 15 Sep 2023	41	33	8	0	0
Sat 16 Sep 2023	35	34	1	0	0
Sun 17 Sep 2023	38	37	1	0	0
Mon 18 Sep 2023	47	38	9	0	0
Tue 19 Sep 2023	62	51	11	0	0
Wed 20 Sep 2023	44	39	5	0	0
5 Day Ave.	46	38	8	0	0
7 Day Ave.	43	37	6	0	0

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	85.7%	7.1%	0.0%	7.1%
Fri 15 Sep 2023	100.0%	76.5%	23.5%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	100.0%	0.0%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	94.4%	5.6%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	87.0%	13.0%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	85.3%	14.7%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	91.7%	8.3%	0.0%	0.0%
5 Day Ave.	100.0%	85.7%	13.4%	0.0%	0.9%
7 Day Ave.	100.0%	88.4%	11.0%	0.0%	0.7%

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	72.7%	22.7%	0.0%	4.5%
Fri 15 Sep 2023	100.0%	83.3%	16.7%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	94.7%	5.3%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	100.0%	0.0%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	75.0%	25.0%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	78.6%	21.4%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	85.0%	15.0%	0.0%	0.0%
5 Day Ave.	100.0%	78.8%	20.3%	0.0%	0.8%
7 Day Ave.	100.0%	83.4%	15.9%	0.0%	0.6%
Paul Castle Associates					

	Total Volume	LIGHT	OGV1	OGV2	BUS
Thu 14 Sep 2023	100.0%	77.8%	16.7%	0.0%	5.6%
Fri 15 Sep 2023	100.0%	80.5%	19.5%	0.0%	0.0%
Sat 16 Sep 2023	100.0%	97.1%	2.9%	0.0%	0.0%
Sun 17 Sep 2023	100.0%	97.4%	2.6%	0.0%	0.0%
Mon 18 Sep 2023	100.0%	80.9%	19.1%	0.0%	0.0%
Tue 19 Sep 2023	100.0%	82.3%	17.7%	0.0%	0.0%
Wed 20 Sep 2023	100.0%	88.6%	11.4%	0.0%	0.0%
5 Day Ave.	100.0%	82.2%	17.0%	0.0%	0.9%
7 Day Ave.	100.0%	85.8%	13.5%	0.0%	0.7%
Paul Castle Associates					

Northeastbound
* LIGHT * OGV1 * OGV2 * BUS

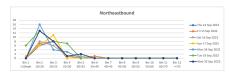


Total Flow	
• LIGHT • OGV1 = OGV2 • BUS	

Trefechan ATC 5, National Road (Eastern Site)

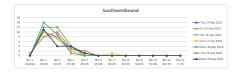
Direction: Northearthous

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <10mph	Bin 2 10<20	Bin 3 20<25	Bin 4 25<30	Bin 5 30<35	Bin 6 35<40	Bin 7 40<45	Bin 8 45<50	Bin 9 50<55	Bin 10 55<60	Bin 11 60<70	Bin 12 >=70
Thu 14 Sep 2023	14	23.3	19.3	3.9	0	6	8	0	0	0	0	0	0	0	0	0
Fri 15 Sep 2023	17	26.8	20.6	6.0	0	7	8	1	0	1	0	0	0	0	0	0
Sat 16 Sep 2023	16	25.4	19.7	5.5	0	8	6	1	1	0	0	0	0	0	0	0
Sun 17 Sep 2023	18	23.9	19.2	4.5	1	6	11	0	0	0	0	0	0	0	0	0
Mon 18 Sep 2023	23	22.9	17.9	4.7	0	16	4	3	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	34	25.1	18.1	6.8	6	13	8	7	0	0	0	0	0	0	0	0
Wed 20 Sep 2023	24	25.3	19.5	5.7	0	13	8	1	2	0	0	0	0	0	0	0
5 Day Ave.	22	24.7	19.1	5.4	1	11	7	2	0	0	0	0	0	0	0	0
7 Day Ave.	21	24.7	19.2	5.3	1	10	8	2	0	0	0	0	0	0	0	0
Paul Castle Associate	5															



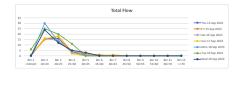
Direction: Southwestbox

	Total Volume	85th Percentile	Mean Average	Standard Deviation	Bin 1 <10mph	Bin 2 10<20	Bin 3 20<25	Bin 4 25<30	Bin 5 30<35	Bin 6 35<40	Bin 7 40<45	Bin 8 45<50	Bin 9 50<55	Bin 10 55<60	Bin 11 60<70	8in 12 >=70
Thu 14 Sep 2023	22	25.9	20.2	5.5	0	10	8	3	1	0	0	0	0	0	0	0
Fri 15 Sep 2023	24	27.2	20.9	6.2	1	8	10	3	2	0	0	0	0	0	0	0
Sat 16 Sep 2023	19	24.5	19.1	5.2	1	8	8	2	0	0	0	0	0	0	0	0
Sun 17 Sep 2023	20	27.4	20.3	6.9	0	10	7	2	0	0	1	0	0	0	0	0
Mon 18 Sep 2023	24	22.6	18.3	4.1	0	14	9	1	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	28	24.9	20.0	4.7	0	12	12	4	0	0	0	0	0	0	0	0
Wed 20 Sep 2023	20	26.1	19.9	6.0	0	11	4	4	1	0	0	0	0	0	0	0
5 Day Ave.	24	25.3	19.9	5.3	0	11	9	3	1	0	0	0	0	0	0	0
7 Day Ave.	22	25.5	19.8	5.5	0	10	8	3	1	0	0	0	0	0	0	0
Paul Castle Associates																



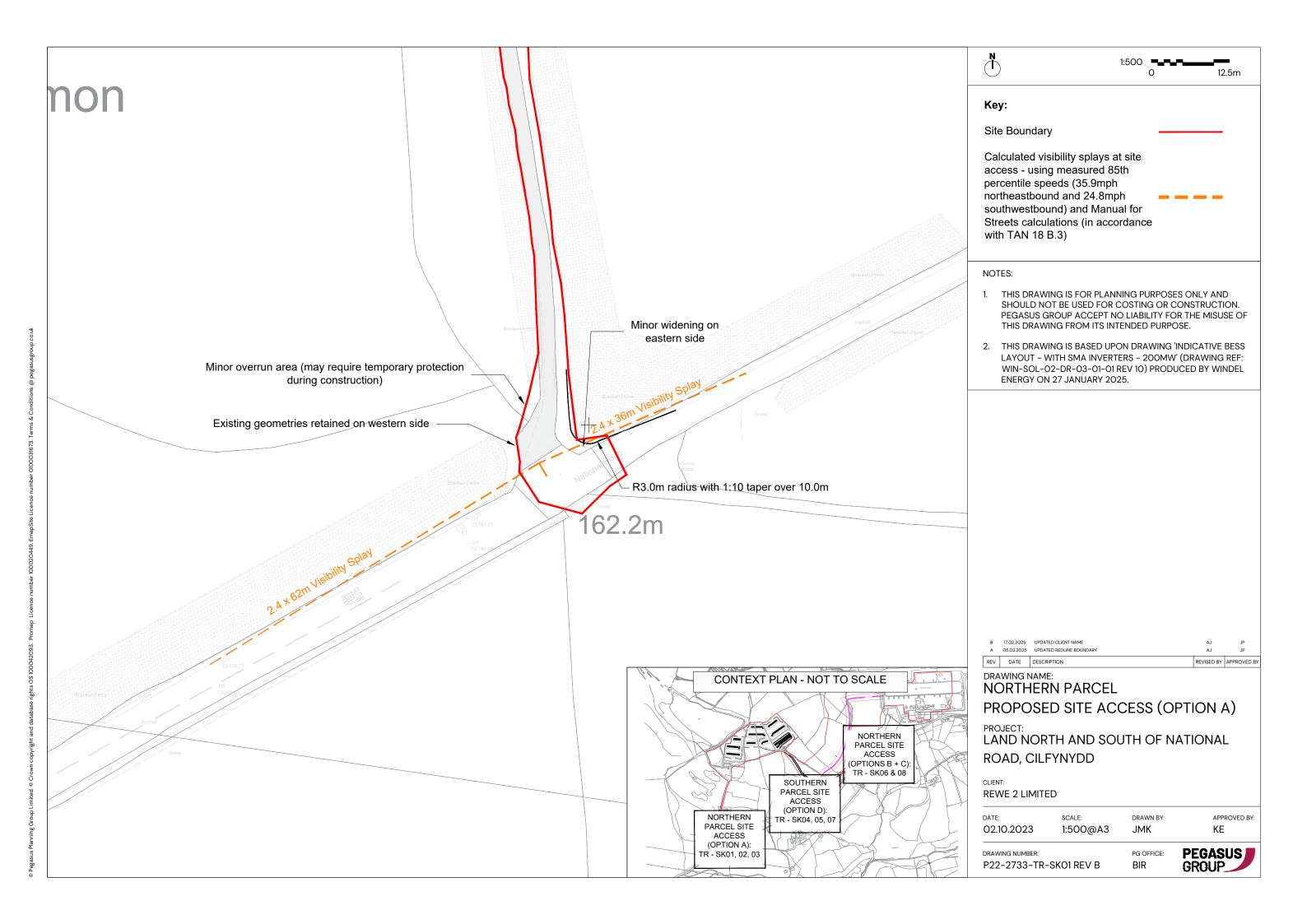
Direction: Total Flow

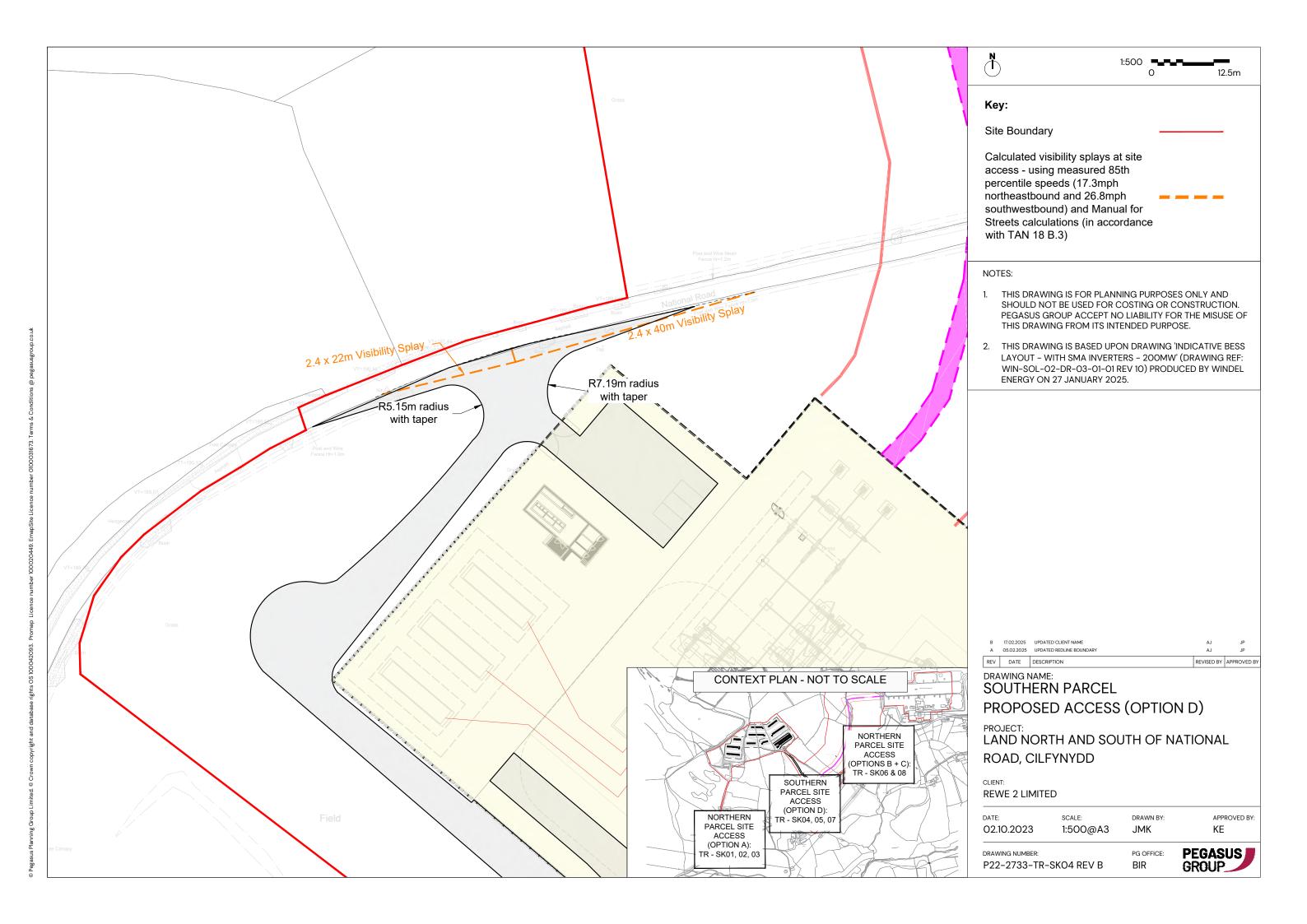
	Volume	Percentile	Average	Deviation 1	<10mph	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<70	>=70
Thu 14 Sep 2023	36	24.9	19.9	4.9	0	16	16	3	1	0	0	0	0	0	0	0
Fri 15 Sep 2023	41	27.0	20.7	6.0	1	15	18	4	2	1	0	0	0	0	0	0
Sat 16 Sep 2023	35	24.8	19.4	5.3	1	16	14	3	1	0	0	0	0	0	0	0
Sun 17 Sep 2023	38	25.8	19.8	5.9	1	16	18	2	0	0	1	0	0	0	0	0
Mon 18 Sep 2023	47	22.7	18.1	4.4	0	30	13	4	0	0	0	0	0	0	0	0
Tue 19 Sep 2023	62	25.1	19.0	6.0	6	25	20	11	0	0	0	0	0	0	0	0
Wed 20 Sep 2023	44	25.6	19.7	5.7	0	24	12	5	3	0	0	0	0	0	0	0
5 Day Ave.	46	25.1	19.5	5.4	1	22	16	5	1	0	0	0	0	0	0	0
7 Day Ave.	43	25.1	19.5	5.4	1	20	16	5	1	0	0	0	0	0	0	0





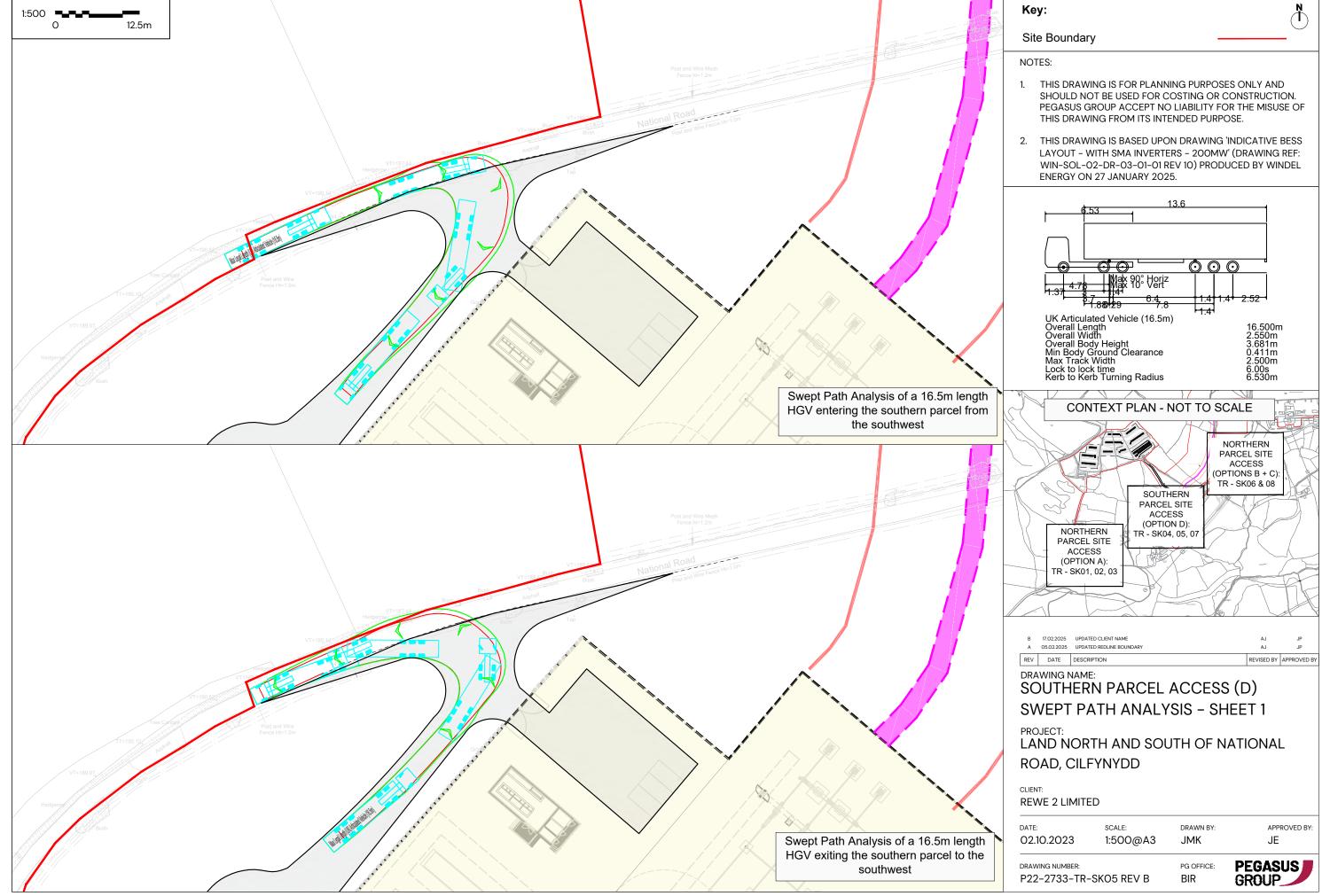
Appendix C – Drawings P22-2733 – TR – SK01 / SK04 / SK06 – Site Access Geometric Parameters and Visibility Splays

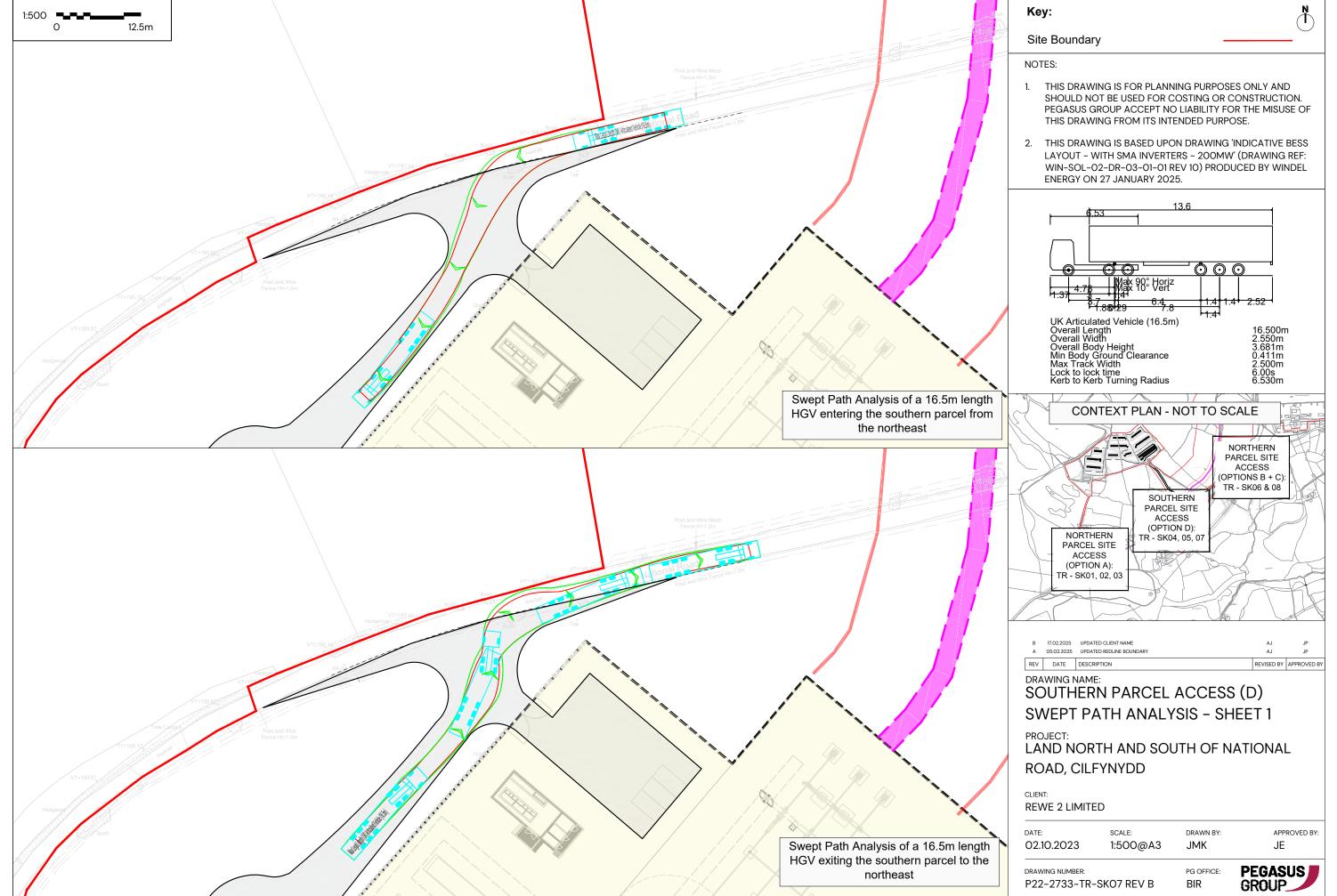


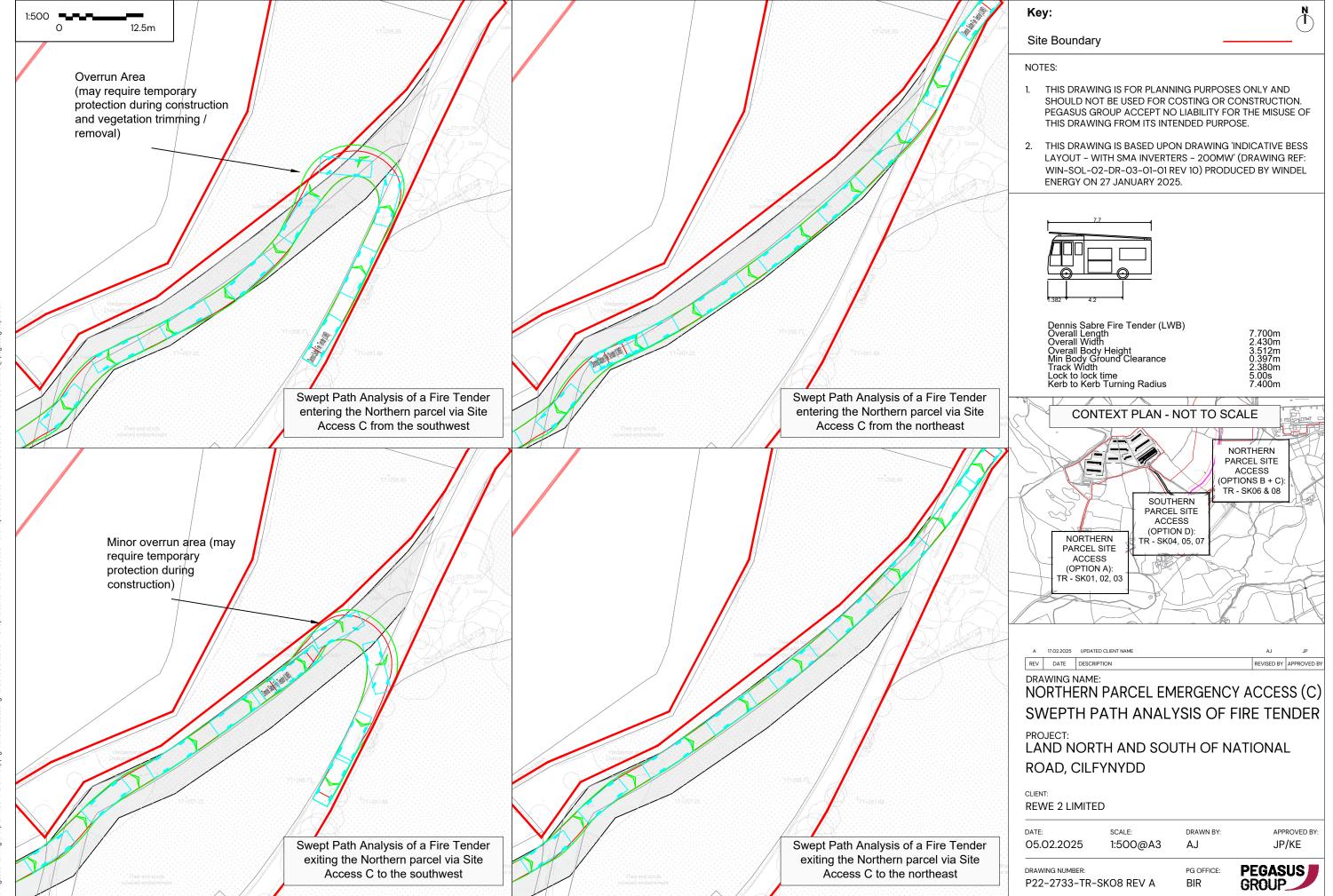




Appendix D - Drawings P22-2733 - TR - SKO2 / SKO3 / SKO5 / SKO7 / SKO8 - Site Access SPA









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