Construction Traffic Management Plan for the Planning Application for a Proposed Battery Energy Storage System (BESS) and Associated Infrastructure.

Land South of Barns Ness Terrace, Innerwick, East Lothian, EH42 1SE

On behalf of Braxbess Ltd

Date: January 2024 | Pegasus Ref: P23-0094-TR-R001 CTMP

Author: AJ

Document Management.

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-	November 2023	AJ	JK	First Draft
01	December 2023	AJ	JK	Planning and Client comments
02	January 2024	AJ	JK	Updated masterplan

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1. Introduction

1.1. This Construction Traffic Management Plan (CTMP) has been prepared by Pegasus Group on behalf of Braxbess Ltd (the Applicant) to accompany an application for consent under Section 36 of the Electricity Act 1989 (the Electricity Act) for the installation of a battery-based electricity storage scheme transformers, substations, and associated development on land south of Barns Ness Terrace, Innerwick, East Lothian, EH42 1SE. The site location is provided in the submitted Location Plan ref. 00-BRANXTON -101 rev. N.

1.2. The description of development is as follows:

"Proposed Battery Energy Storage System (BESS), Transformers, Substations and Associated Infrastructure."

1.3. This CTMP considers and addresses where appropriate the traffic and transportation matters associated with the construction and operation of the Battery Energy Storage System (BESS). BESS are devices that enable clean energy from renewables, like solar and wind, excess to requirements to be stored and then released when the power is needed most, rather than being lost.

1.4. The application site comprises a number of agricultural field enclosures of approximately 19.4 hectares located approximately 90m South of Barns Ness Terrace. The Local Highway Authority (LHA) is East Lothian Council (ELC). An aerial image of the site location is shown in **Plate 1.1**.

Plate 1.1 – Site Location Plan

1.5. Of the two phases, the construction phase is considered to have the greatest impact in terms of transport. Plant and bulk materials will be transported to site and has the potential to increase traffic on the construction traffic route. It should be noted however the

construction effects are short lived and will be managed to limit the potential for local disruption.

1.6. The operational and maintenance phase is restricted to infrequent maintenance operations which generate very low volumes of traffic that are not considered to be in excess of daily traffic variation levels on the surrounding highway network.

1.7. This CTMP is advised following a detailed desk study and a site visit undertaken on the 25th of October 2023, and supports the proposal for the construction and, to a lesser extent, the operation of a BESS and associated infrastructure.

1.8. Access to the BESS site during the construction phase is proposed to be taken from Barns Ness Terrace via the existing agricultural access to Innerwick Farm. Operational access is proposed to be provided from the same access. This is illustrated on drawing ref: SK01- Proposed Access and Construction Route, included in **Appendix A.**

Report Structure

1.9. This CTMP describes the arrangements that are proposed for the period of construction activities at the site and sets out the following:

I. Existing conditions in the vicinity of the site;

II. Proposed site access arrangements including routing for construction traffic;

III. Vehicle numbers, size, and frequency; and

IV. Proposed mitigation measures.

1.10. It will be the responsibility of the appointed contractor to comply with all statutory regulations and guidelines as appropriate, in relation to construction and movement activities.

1.11. The appointed contractors will be provided with a copy of this CTMP and will adhere to it as part of the consent. The CTMP will form part of the information provided as part of the construction personnel's on-site induction processes. The contact details of the contractor and those of the highway department at ELC will be exchanged before commencement of the works on the site.

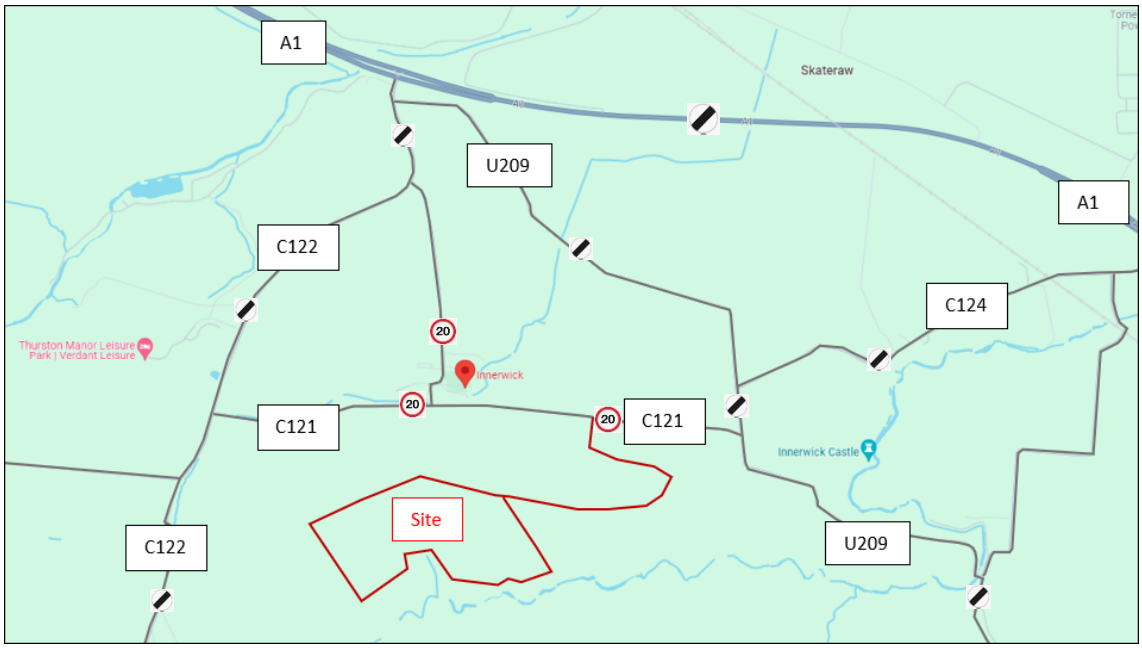
2. Site Characteristics

Location and Site Context

2.1. The application site covers approximately 19.4 hectares of existing agricultural land and is located on lands south of Innerwick, at Branxton, East Lothian. The site is bound by Innerwick Farm and Barns Ness Terrace to the north, agricultural fields to the east and west and Thurston Mains Burn to the south.

2.2. The site location in context to the local highway network is shown on **Plate 2.1** below and further on drawing ref: SK01- Proposed Access and Construction Route, included in **Appendix A.**

Plate 2.1 – Development Site, Local Highway Context



Local Highway Network

C121 - Barns Ness Terrace

2.3. The development site is accessed from road C121, Barns Ness Terrace. It is a rural two-way single carriageway approximately 4.5m wide with grass verge to either side of the carriageway at the site entrance.

2.4. At the eastern and western extent where it meets the U209 and C122 respectively it is subject to the national speed limit of 60mph. The speed limit reduces to 40mph on approach to Innerwick Farm and further reduces after 180m to 20mph east of the site access extending approximately 570m westwards, encompassing Innerwick village.

2.5. Footway is limited to the village frontages only, ceasing at the western property boundary of Innerwick Farm with street lighting extending eastwards to include Innerwick Farm frontage.

C122 - Unnamed Road 1

2.6. This unnamed road, C122, is circa five metres wide and subject to the national speed limit of 60mph. Due to its rural nature, there is no provision of footways or streetlighting.

2.7. At its northern extent, C122 links to the A1 via a simple priority junction. It extends southwards into the Lammermuir Hills forming a simple priority junctions with the U209, circa 80m south of the A1 junction.

2.8. Circa 300m south of the A1 junction, it forms a simple priority junction with a further unnamed road which leads south to Innerwick and a further 1.1km to the south, it forms a simple priority junction with the western extent of C121 Barns Ness Terrace, after which it C122 continues southbound.

U209 - Unnamed Road 2

2.9. U209, unnamed road, ranges from circa four to five metres wide and is subject to the national speed limit of 60mph. Due to its rural nature, there is no provision of footways or streetlighting.

2.10. At U209's western extent, it forms a simple priority junction with C122. To the south, it forms a simple priority junction with Barns Ness Terrace before continuing east past Innerwick Castle.

A1

2.11. The A1 is a classified A-road and forms part of the Scottish Trunk Road network. It routes from central London to the south to Edinburgh in the north and provides multiple connections to the M1, the M25 and the wider Strategic Road Network (SRN) and Scottish Trunk Road Network.

2.12. At the junction with the C122 for Innerwick and Crowhill, it is a dual carriageway formation with one lane on the left and hatching on the right northbound and two lanes on the southbound carriageway, each running lane measuring circa 3.65m wide. It is unlit and there is no pedestrian footway.

Highway Safety

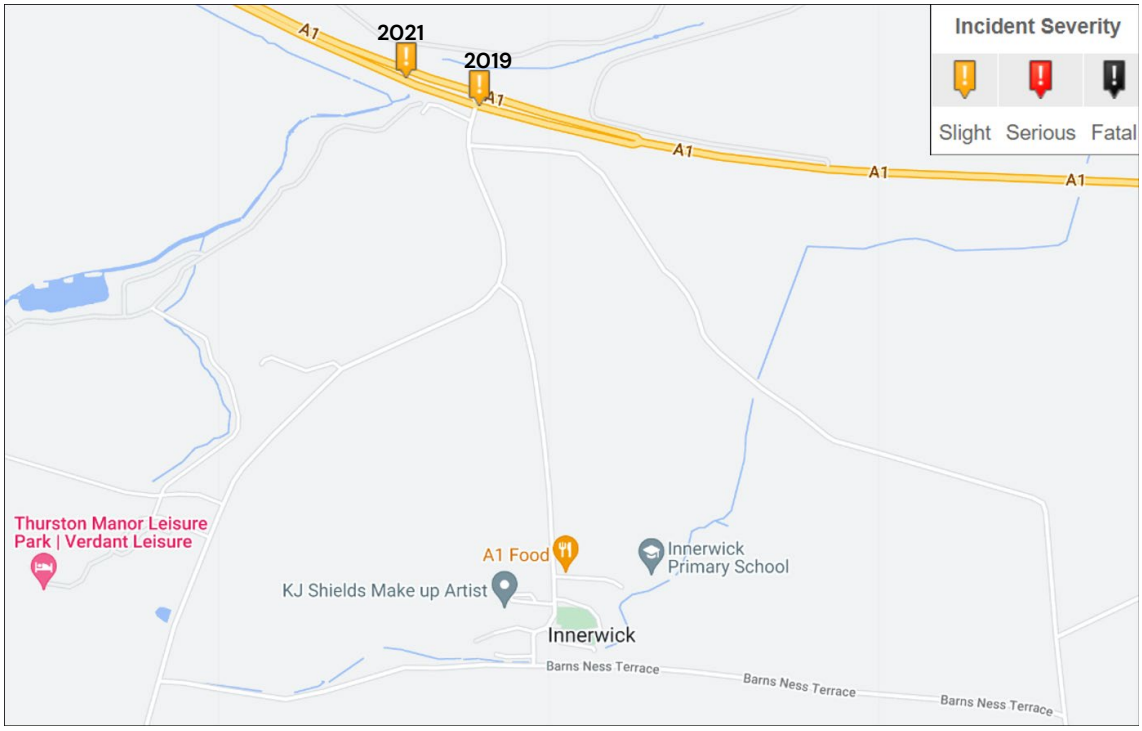
2.13. A highway safety review has been undertaken using Personal Injury Collision (PIC) data obtained from the Crashmap website which holds records of all recorded incidents from the Department for Transport (DfT). The data has been interrogated for the most recently available five-year period of 01/01/2018 – 31/12/2022.

2.14. The study area includes the A1 approach to the junction with the C122 and the rural roads leading to and surrounding Innerwick and the development site. **Plate 2.3** below shows the area considered.

Plate 2.3 – Highway Safety Study Area

2.15. Only two collisions were recorded within the study area over the entire five-year period assessed. Both incidents occurred on the A1 as shown in **Plate2.4**.

Plate 2.4 – PIC Location Plan



Source: www.crashmap.co.uk

2.16. The recorded incidents are summarised in **Table 2.1** below. The report containing the PIC data is provided in **Appendix C**.

Table 2.1 – Summary of PIC data

Date	Severity	Location	No. Veh Involved	Veh Type	No. Casualties	Casualties Involved
Jun-21	Slight	A1 (northbound) Northwest of Innerwick, Crowhill junction	2	Car	1	2 Car Driver 1 Passenger
Nov-19	Slight	A1 (northbound) junction of Innerwick, Crowhill	2	Other Vehicle Minibus	2	1 Driver 1 Passenger

2.17. The data recorded in **Table 2.1**, highlights that there were no fatal or serious injuries, with both collisions being classified as slight.

2.18. Of the two incidents, one was recorded in 2019 with the other being in 2021 highlighting the infrequency of accidents within the study area.

2.19. Neither of the two incidents involved HGV vehicles or vulnerable road users such as children, pedestrians, or cyclists.

2.20. In view of the slight and infrequent collisions, which occurred on the A-road, the available data does not indicate any inherent highway safety concerns likely to be exacerbated by the development proposals.

Public Rights of Way (PRoW) and Core Paths (CP)

2.21. Scotland does not have any definitive map for PRoW which shows where access is permitted for non-motorised modes of travel. ScotWays has catalogued and provides information on outdoor access which includes general access rights, public rights of way and core paths.

2.22. General Rights of Access means that when travelling by any non-motorised means (e.g., cycle, foot, horse, kayak) or on a motorised vehicle modified for and used by a disabled person (e.g., mobility scooter) access is permitted almost everywhere – above, below and on the surface.

2.23. ScotWays with the help of Scottish Natural Heritage (SNH) and local authorities created a national record of public rights of way, amalgamating information about rights of way, Heritage Paths[1] and Scottish Hill Tracks from a range of sources called the Catalogue of Rights of Way (CROW)[2] .

2.24. There are no identified Heritage Paths in the vicinity of the site and Innerwick.

2.25. It has been identified that there are no East Lothian core paths crossing the development site. 'Core Path 18' is located close to the site entrance; however, the development proposals are not set to impact this path. Barns Ness Terrace and U209 form part of a

[1] Lammermuirs Heritage Paths
[2] Scotways Catalogue of Rights of Way

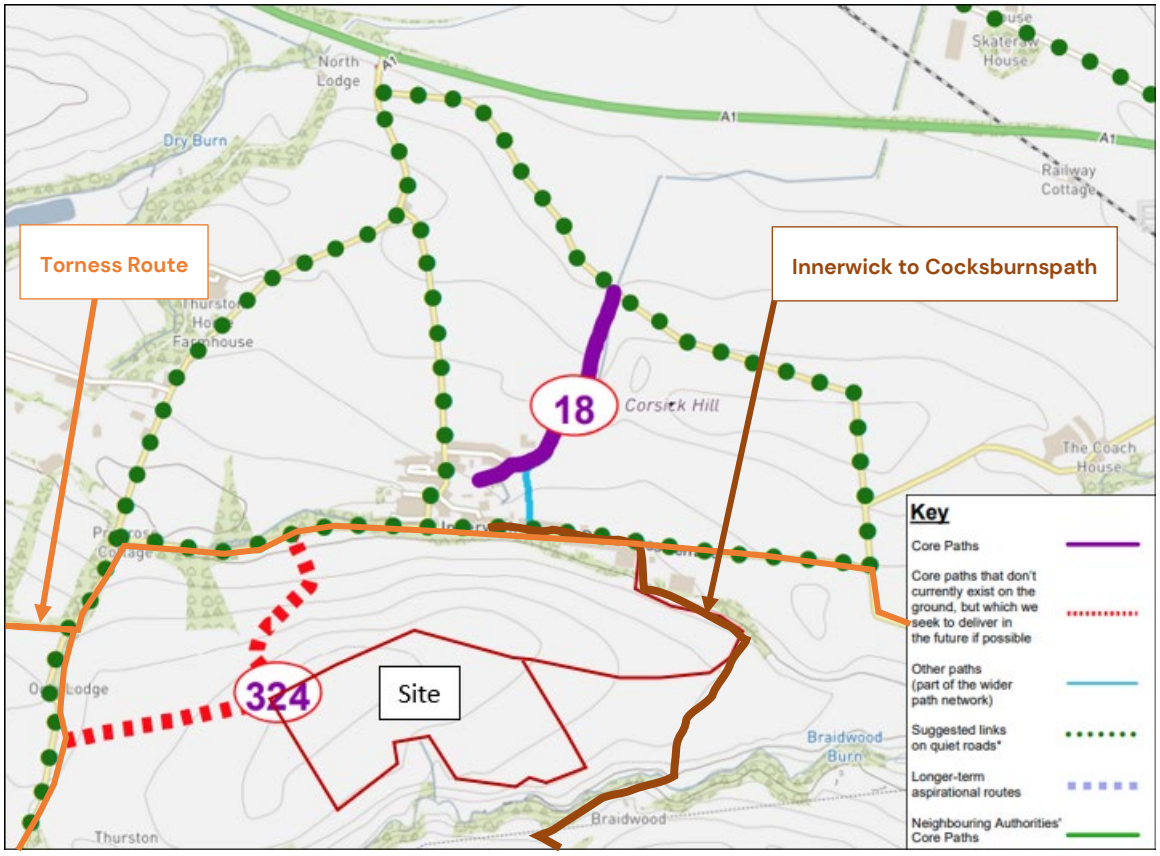
suggested link, these two roads also form part of the construction route for the development site and will see a slight increase in traffic over the 18-month construction period.

2.26. Two routes which are considered to be public rights of way, identified on the OSmaps website, those being the Innerwick to Cockburnspath Walk[3] and Torness[4] route.

2.27. The Torness walk routes along Barns Ness Terrace and will see a slight increase in traffic during the construction period. The Innerwick to Cockburnspath walking route, travels from Innerwick village centre along Barns Ness Terrace and routes into Innerwick farm and follows a track around the hill sharing a section of the development site internal access route. This route will also see an increase in traffic during the construction phase and will continue to experience infrequent maintenance traffic during the operational phase.

2.28. The aforementioned Core Paths are provided in **Appendix B** and shown together with the access routes in **Plate 2.**2 below.

Plate 2.2 – Core Paths and Rights of Way Local to the Site



Note: Base Map Source - East Lothian Core Maps – Map K

[3] OSmaps.com Innerwick-to-Cockburnspath
[4] Osmaps.com Torness Route

Summary

2.29. Based on the above desktop review and site observations, it is concluded that the local highway network is safe and suitable to accommodate the anticipated construction traffic associated with the development of the BESS. There are no existing highway safety issues identified within the vicinity of the site access or on the surrounding highway within the study area.

2.30. The roads investigated as part of the existing local highways network are considered suitable to accommodate HGV movements associated with the development. The A1 is a strategic route carrying large numbers of HGV traffic daily.

2.31. The C122 is an existing construction traffic route for several renewable energy schemes south of Innerwick. It also provides access to a number of caravan parks and as such is frequently trafficked by HGVs.

2.32. The U209 and C121 which form the latter part of the construction route into the site are frequented by HGV movements in the form of agricultural vehicles and are lightly trafficked. These routes will be appropriately managed so as not to cause a negative impact on the local highway network.

2.33. Therefore, it is considered that the construction vehicles and operational traffic associated with the development can be accommodated safely on the local highway network and the proposed access point (discussed in more detail below in Section 3 of this report).

3. Proposed Site Access Arrangements

Development Proposal

3.1. The applicant is seeking to construct and operate a battery energy storage system (BESS) of up to 650 megawatts (MW). The proposed BESS will be able to store, release or absorb energy from the electricity network. It will supply energy security to the local network during times of peak demand.

3.2. The site boundary for the application allows for all development associated with the proposed development including connection to the grid and landscaping features.

3.3. The proposed access is proposed to be taken off Barns Ness Terrace, northeast of the development site area, as illustrated on drawing ref: P23-0094-TR-SK01-Proposed Access and Construction Route Plan at **Appendix A**.

Construction Site Access

3.4. The proposed site access off Barns Ness Terrace is the existing Innerwick Farm entrance which currently accommodates large farm vehicles and machinery. It is located to the south of the carriageway, approximately 580m west of U209 and 1.2km east of the C122.

3.5. This access will be used for construction and operational purposes. Construction access will be co-ordinated between the applicant and the Local Authority. The existing internal access track will be used to route south from Innerwick Farm to the site.

3.6. Barns Ness Road is subject to a 20mph speed limit at the site access, transitioning to 40mph 12m to the east. It is therefore considered appropriate in this location to provide visibility splays in accordance with DMRB CD 109 Rev 1 Table 2.10, of 2.4m x 120m as required for potential 40mph vehicle speeds to the east, within the 40mph zone.

3.7. The existing carriageway of Barns Ness Terrace is circa 4.5m wide at the site entrance, and a farm building was found to obstruct visibility to the east. It is therefore proposed to slightly realign the carriageway at the access point to slightly increase the depth of the nearside verge and to temporarily widen the carriageway opposite the site access to circa 6.7m. This will facilitate safe access into and out of the site.

3.8. The proposed junction geometries and achievable visibility splays of this access are shown on drawing ref: P23-0094-TR-SK02 at **Appendix D**.

3.9. The site is constrained within the farmyard area and the delivery movements will be managed with priority given to incoming vehicles; any vehicles wishing to depart at the scheduled time of an arrival will be held within the site. Daily vehicle numbers are low, typically one delivery per hour or less.

3.10. Vehicle swept path analysis has been undertaken for the typical largest vehicle associated with the construction of the site, a 16.5m x 2.55m articulated HGV and is appended as drawing ref: P23-0094-TR-SK03 at **Appendix D.** The swept path analysis demonstrates that a HGVs is able to safely arrive and depart the site access within the extent of the existing public highway.

Construction Compound and Internal Routing

3.11. It is proposed for a temporary construction compound to be provided onsite**.** Based on ELC's guidance[5], the following facilities will be provided within the site compound:

- Site Car Park;
- Suitable material storage areas;
- Construction vehicle turning areas;
- Wheel washing area; and
- Temporary haul roads and pedestrian routes where required and deemed necessary.

3.12. No parking by vehicles will be permitted on any public roads within the vicinity of the site during the construction phase. Designated car parking areas will be provided within the site. Visitors will be advised of the parking arrangements in advance of travelling to the site.

3.13. Within the BESS site, the layout will include circa 4.5m wide access tracks through the site allowing for the movement of both construction vehicles for the construction phase and maintenance vehicles for the operational phase. The tracks will be completed during the initial stages of construction. The tracks will be made to withstand the loads of HGVs and reduce the propensity of debris being taken on to the adjacent access track and highway.

3.14. Parking and turning provision and storage areas will be provided at key working areas around the site including a turning head to ensure that all vehicles can be accommodated within the site and vehicles will be able to enter and exit the site in a forward gear.

Operational / Maintenance Site Access

3.15. Following construction, access to the BESS will be limited to operational and maintenance visits with operational access with the access used in the construction phase being carried forward for the operational phase.

3.16. It is anticipated that the site will operate predominately by remote access with weekly inspections only, therefore having a minimal effect on the surrounding local network.

3.17. HGVs are not anticipated to be required unless a major component replacement is needed. Trips associated with the operation will therefore be infrequent and are not anticipated to generate a material level of traffic on the local road network.

[5] ELC Construction Method Guidance

4. Construction Routing

4.1. Based on a site visit and desktop review of route suitability it is proposed that all construction traffic would route to the site from the A1 north and south as required, which is part of the Trunk Road Network. The following route will therefore be followed to access the site:

- For vehicles routing from the northwest, at the, using the right-turn filter lane to turn right onto the C122
- Alternatively, for vehicles routing from the southeast, a left turn should be made at the A1/C122 Innerwick and Crowhill junction, using the left-turn filter lane to access the C122.
- Vehicles will travel 80m south on the C122 to the C122 / U209 simple priority junction. A left turn should be made at this junction to follow U209.
- Follow the U209 for circa 1.9km to the U209 / Barns Ness Terrace junction to turn right onto the C121 Barns Ness Terrace.
- Travel 580m west along Barns Ness Terrace to arrive at Innerwick Farmand the site access where a left turn should be made.

4.2. Vehicles egressing from the site will utilise the construction route described above but in reverse.

4.3. The route is shown on drawing ref: P23-0094-TR-SK01-Proposed Access and Construction Route Plan at **Appendix A**.

4.4. The road numbered U209 and C121 Barns Ness Terrace are adopted public highway and are sufficiently wide to accommodate general traffic which does include all types of vehicles, there are no restrictions in place to limit access for HGV. However, given that the development proposal will temporarily increase the level of HGV traffic adding typically between four to eight deliveries per day over the 18-month construction period the route has been reviewed to identify pinch points and passing points added within the highway verge to ensure safe passing should HGV be required to pass.

4.5. The passing point geometry drawings and the swept path analysis drawings are provided in **Appendix E**.

4.6. The route is considered to be suitable to accommodate the traffic movements associated with the development proposals with these minor mitigation works to facilitate safe infrequent passing of HGV.

4.7. Traffic will additionally be managed throughout the construction period by banksmen as and when required and through a priority strategy for incoming delivery vehicles. Outgoing vehicles will be held within a site compound proposed holding area should a delivery be arriving on site at the time of exit.

4.8. Construction traffic will not be permitted to access the site via C121 Barns Ness Terrace west of the site to avoid unnecessarily affecting the residential areas of Innerwick village.

4.9. Heavy Goods Vehicles throughout the entire construction phase will strictly access the site via the designated construction route identified in this CTMP and described above. Drivers will be informed of the route prior to departing for the site.

Access Strategy Summary

4.10. The proposed site access off Barns Ness Terrace is the existing Innerwick Farm entrance located to the south of the carriageway, approximately 580m west of U209 and 1.2km east of the C122. Internally the existing agricultural track will be used to route between Innerwick Farm and the site. This access is to be retained for the operational phase.

4.11. The access strategy is very simple. All vehicles will route to and from the site via the A1 trunk road exiting onto local roads at the C122/A1 Innerwick and Crowhill junction.

4.12. The site access is located only 2.6km south of the A1/C122 junctions. Vehicles will enter the C122, travel 80m south to turn left onto the U209 and travel 1.9km southeast to the junction with C121 Barns Ness Terrace. At Barns Ness Terrace vehicles turn right and travel the remaining 580m west to arrive at Innerwick Farm and the site access, turning left off the highway and into the site.

4.13. The local highway network is considered to be suitable for the vehicles associated the development. The daily and total number of proposed vehicle movements are set out in **Section 5**.

4.14. Suitable mitigation will be provided, where appropriate, in order to minimise the effects of the proposed development on the local highway network including appropriate signage, site compounds and facilities.

5. Vehicle Trip Generation

Construction Phase

5.1. It is anticipated that the construction phase could span a period of 12 to 18 months, spanning from approximately June 2026 to December 2027.

5.2. As the enabling phase progresses and the site levels have been re-profiled to accommodate the infrastructure for the battery storage units and the substation the main construction phase can commence which could overlap the enabling works by up to six months, reducing the overall construction phase from 18-months down potentially to 12-months.

5.3. The maximum number of construction trips are anticipated to be circa six to eight HGV delivery trips per day, during the peak period. The peak number of deliveries is expected to occur during the delivery of all planting to site, over a period of circa 30 days.

5.4. Deliveries are anticipated to occur between the hours of 9.30am and 2.30pm from Monday to Friday. Deliveries will be scheduled to purposefully avoid the highway peak hours, when residents may be leaving or arriving from work, and those of the school drop off and pick up.

5.5. The maximum sized construction-related vehicle is anticipated to be an articulated HGV, 16.5m in length and 2.55m wide, however smaller HGVs, rigid trucks and LGVs will be used where possible. It has been demonstrated that a 16.5m articulated HGV can safely enter and egress the site in **Appendix D.**

5.6. Deliveries shall be reported to the site manager and will be made on the smallest possible vehicles for each item or volume of material. It is however 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.

5.7. During the peak construction period, around 25-30 construction operatives are anticipated to be on-site per day.

5.8. It is proposed for operatives to work on site for a five-day work week from Monday to Friday, between the hours of 8am and 4pm. Workers are generally expected to arrive and depart the site by car or van, although car sharing is typical for installation teams and will be promoted.

5.9. **Table 5.1** provides an approximate worst-case scenario breakdown of vehicle movements associated with the total 12-18-month construction period as provided by the applicant.

5.10. It is envisioned for 9-14 Metre Tipper Trucks to be used in association with importing and exporting of earthworks during the enabling works phase. The construction vehicle movements are not presently known and will be dependent on the Ground Investigation for the site. Materials will be re-used on site where possible.

Table 5.1 – Estimated Forecast Construction Traffic Movements over 12–18-month construction period.

Construction Phase Activity	Number of Components	Total Number of Deliveries
Site Compound	-	25
Battery Unit delivery (assuming 1 per HGV)	400	400
Inverter delivery (assuming 2 per HGV)	200	100
Transformer delivery (assuming 1 per HGV)	100	100
Substation building and breakers delivery	-	84
Switch Breaker delivery	-	8
Gravel/ Hard core/ Concrete delivery (assume 1 HGV per plinth for Battery, Inverter and Transformer)	700	700
Total		**1442**

5.11. As set out in **Table 5.1**, a total of circa 1,442 are anticipated to be made during the main construction phase (excluding earthworks and construction worker trips to/from the site).

5.12. Earthworks are excluded as there is a strategy to minimise earthwork import and export from the site through cut and fill, moving material across the site to create the level platforms.

5.13. The peak trip generation for the site could generate up to six to eight HGV delivery trips per day (during the peak period of circa 30 days in which all the planting of the site is delivered).

5.14. The number of trips per day will fluctuate depending on the construction phase and as such the typical daily trips is likely to be lower.

5.15. Given the temporary nature of the construction traffic and consideration that the route used is not heavily trafficked based on the site visit observations, it is considered that the traffic associated with the site will not have an undue effect on the safety and operation of the local highway network.

5.16. Outside of the circa 30-day period of planting delivery to the site, which is anticipated to represent the delivery peak period, construction traffic will have a lesser effect on the surrounding highway network than during the peak.

Abnormal Indivisible Loads

5.17. It is anticipated that up to four Abnormal Indivisible Loads (AILs) deliveries will be required throughout the construction period to deliver a crane for example. This AIL will be managed separately from standard HGV deliveries and will be kept to a minimum where possible with further measures, implemented as necessary including introducing parking restrictions during the delivery and removal of the plant.

Construction Phase Summary

5.18. The construction phase is proposed to last for an estimated 12-to-18-month period with an anticipated 30-day peak period during the delivery of all planting to site. Throughout the estimated 12-to-18-month period the site could generate 1,417 construction delivery trips. During the peak of construction, the site could generate up to six to eight HGV delivery trips per day.

Cumulative Construction Traffic

5.19. It is understood that several renewable energy schemes are under construction or proposed in the area surrounding Innerwick and locally identified and listed in **Table 5.2**.

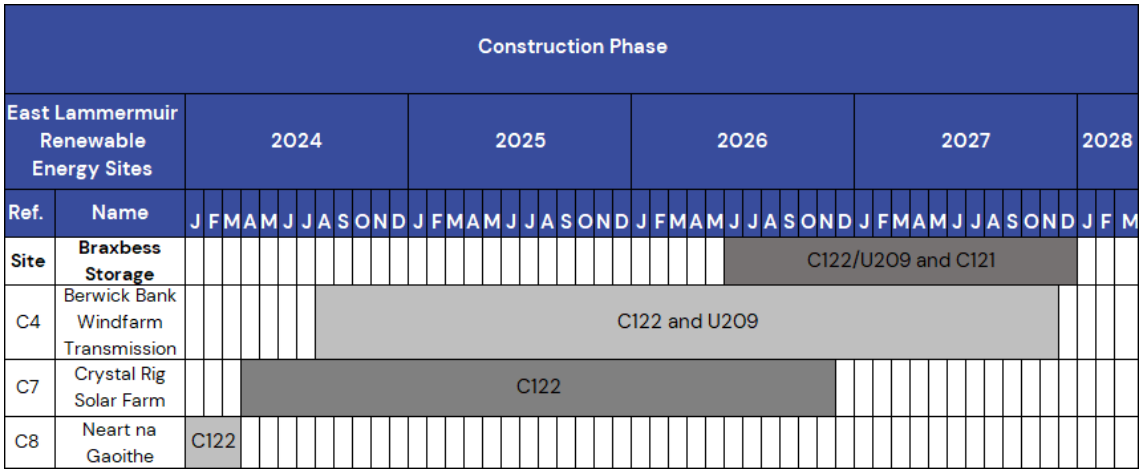
Table 5.2 – East Lammermuir Renewable Energy Schemes

East Lammermuir Renewable Energy Sites						
Ref.	Name	Planning Ref.	Company	Construction Route		
				C122	U209	C121
Site	**Braxbess Battery Storage.**	**TBC**	**Braxbess Ltd**	**Y**	**Y**	**Y**
C1	400KV Substation (Withdrawn)	21/01569/PPM		N	N	N
C2	400KV Substation (Current) (Branxton BESS)	23/00616/PPM	SPEN	N	N	N
C3	Eastern Link 400kV Overhead Line Diversion	ECU00003419	SPEN	N	N	N
C4	Berwick Bank Windfarm Transmission	23/00162/PPM	SSE	Y	Y	N
C5	Thorntonloch Converter Station (eastern link)	22/00852/PPM	SPEN	N	N	N
C6	Branxton Energy Storage Facility	ECU00004659	East Coast Grid Services	N	N	N
C7	Crystal Rig Solar Farm	Various	Fred Olsen Renewables	Y	N	N
C8	Neart na Gaoithe Substation	NK	NnG	Y	N	N
C9	Dunbar Battery Energy Storage	NK	Sirius Planning representing FRV Powertek	N	N	N
C10	Decommissioning of Torness	NK	EDF	N	N	N
C11	Oxwellmains Landfill	NK	Valencia	N	N	N
C12	Newlands Hill Wind Energy Hub (Gifford)		Belltown Power	N	N	N

5.20. **Table 5.2** shows the local renewable energy schemes known to date and highlights those which share the future proposed construction traffic route.

5.21. There are no schemes proposed which share the entire construction route of the Braxbess Storage site. Three schemes share part of the proposed construction route, and the construction phase of these schemes are shown on **Plate 5.1.**

Plate 5.1 – Construction Phase Comparison on Shared Route



5.22. **Plate 5.1** demonstrates that when construction is due to commence for Braxbess Storage the Neart na Gaoithe substation construction at Crystal Rig will have been completed.

5.23. Works at Crystal Rig Solar Farm will be nearing completion with a five-month coincidence limited to the C122 which Braxbess Storage uses for only 80m between the A1 and the U209. The additional four to eight HGV for Braxbess are unlikely to be discernible from the forecast HGV levels using the C122 at that time.

5.24. The Berwick Bank Windfarm Transmission construction period is scheduled to take place between August 2024 and November 2027. There is predicted to be a 17-month overlap between this and the Braxbess Storage scheme. The shared route extends to the C122 and the U209 and therefore there will be a co-ordinated traffic management strategy of the route. Berwick Bank have also considered the installation of temporary passing bays and have also included some widening at the junctions to facilitate access by their planned larger than average HGV.

5.25. The applicant is currently liaising with the developers of Berwick Bank most specifically and all the East Lammermuir renewable energy schemes and will enter into a Construction Management Charter to ensure that the traffic is managed, and the local residents and environment are sensitively protected minimising impacts as far as is practicably possible. This includes but is not limited to coordinated traffic management, temporary mitigations, communication, effective response to resolve issues as they arise and agreeing legacy benefits.

5.26. The applicant has been attending Stakeholder Engagement workshops arranged by East Lammermuir Community Council (ELCC) and attended by East Lothian Council, The

Scottish Government representatives, developers, and residents, and will continue to proactively engage and participate to ensuring the development impacts are satisfactorily mitigated and managed.

Operational Phase

5.27. For the operational phase, the existing access to the site is proposed to be retained from the construction phase. It is anticipated that the site will operate predominately by remote access with weekly inspections only, therefore having a minimal effect on the surrounding local network.

5.28. 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.

5.29. There will be sufficient space within the site to allow for operational vehicles and service vehicles to enter, manoeuvre, park and subsequently exit the site in forward gear.

6. Mitigation

6.1. As previously highlighted in section 5 the applicant is currently liaising with all of the East Lammermuir renewable energy schemes and will enter into a Construction Management Charter to ensure that the traffic is managed, and the local residents and environment are sensitively protected minimising impacts as far as is practicably possible.

6.2. The applicant has been attending the ELCC Stakeholder Engagement workshops and will continue to proactively engage and participate to ensure the construction activities are strictly managed and the development impacts are satisfactorily mitigated.

6.3. To ensure safe operation of the access, it is proposed for there to be widening of the verge by 0.5m at the site access, as well as on the adjacent side of the carriageway, to facilitate access and ensure the required visibility of 2.4 x 25m for the 20mph zone and 2.4m x 120m for the 40mph east of the site access is achieved.

6.4. It is proposed to mitigate the temporary increase the level of HGV traffic adding typically between four to eight deliveries per day over the 18-month construction on the U209 and C121 Barns Ness Terrace to construct temporary passing points within the highway verge.

6.5. The passing point geometry drawings and the swept path analysis drawings are provided in **Appendix E**.

6.6. Traffic will additionally be managed throughout the construction period by banksmen as and when required and through a priority strategy for incoming delivery vehicles. Outgoing vehicles will be held within a site compound proposed holding area should a delivery be arriving on site at the time of exit.

6.7. The arrival and departure of HGVs at the site will be strictly managed by the Site Manager.

6.8. In order to minimise the effects of HGV traffic on the local highway network, all HGVs will be routed from the A1 via the C122, U209 and C121, approaching from the east, avoiding the village of Innerwick.

6.9. Heavy Goods Vehicles throughout the entire construction phase will strictly access the site via the designated construction route identified in this CTMP and described above. Drivers will be informed of the route prior to departing for the site.

6.10. The contractor that is appointed to carry out the development works will introduce measures to minimise the effect on the local highway network resulting from construction activities as necessary. These will be managed by the Project Manager and the Site Manager.

6.11. The Site Manager will assume responsibility for the operation of the site. The details of the Site Manager will be provided to East Lothian Council's Highways department, as the Local Highway Authority, in advance of any works being carried out.

6.12. Further mitigation measures, where deemed necessary, will be agreed between the contractor and LHA in due course. These could typically include:

i. Construction signage will be placed at strategic locations along the routes for vehicles approaching from the east, in accordance with The Traffic Signs Manual: Chapter 8 (2020). All signs installed as part of the construction phase will be temporary and placed outside of visibility splays. Construction signage could include a combination of the follow typical examples;

- Sign Ref: 7301 – 'Works Access' at the site access on Barns Ness Terrace; and

Example signage – Temporary Construction Traffic Signage

- Sign Ref: 7305 – 'Works Traffic' directional signage along C122 and UNR2

Example signage P7305 from DfT Traffic Signs Manual Chapter 8 part 3

ii. Delivery drivers, contractors and visitors will be provided with a route plan in advance of delivering to site to ensure that vehicles follow the proposed route;

iii. A compound area for contractors set up on-site, including appropriate parking spaces. Contractors and visitors will be advised that parking facilities will be provided on-site in advance of visits and that they should not park outside of designated parking provisions;

iv. The site will be secured at all times with appropriate security fencing;

v. There will be a requirement for engines to be switched off when not in use;

vi. If ground conditions dictate, wheel washing facilities will be provided to prevent deleterious materials being carried onto the public road. All construction vehicles will therefore have to exit through the wheel wash area;

vii. A delivery schedule will be implemented in order to reduce the likelihood of two vehicles meeting at the site access. Suitable communication will also be established between the vehicles and the site manager to further manage the vehicles;

viii. Spraying of internal areas as and when conditions dictate to prevent dust accumulation; and

ix. Vehicles carrying any loads that have a risk of shedding materials in transit will be sheeted as appropriate.

Condition Survey

6.13. If considered necessary by ELC, a pre-commencement Walk-Over Highway Condition Survey will be carried out on the local highway network to assess the baseline condition of the adopted highway in the immediate vicinity of the proposed site access before construction activities commence. At this stage it is envisaged that the extents of the survey will be on Barns Ness Terrace between the U209 / Barns Ness Terrace junction and the proposed site access.

6.14. The survey will incorporate photographic/video records as appropriate. The survey will be accompanied by Highway Officers at ELC, as required, and a date for this survey will be agreed before construction activities commence.

6.15. This would be followed by a further Condition Survey with a further photographic record covering the same extents as previously assessed at the end of construction activities, in order to identify and agree any remedial works reasonably attributable to construction activities.

7. Conclusion

7.1. This Construction Traffic Management Plan (CTMP) has been prepared by Pegasus Group on behalf of Braxbess Ltd (the Applicant), in support of a full planning application for the construction and operation of Battery Energy Storage System (BESS), transformer, substation and associated infrastructure.

7.2. The site's access plan involves two phases: construction and operational. During the construction phase, HGVs are expected to use the proposed access off Barn Ness Terrace to access the site. Following construction, site access will be retained to allow for operational and maintenance vehicles to access the site. These access arrangements are deemed appropriate for the relatively low number of trips associated with both construction and operational activities on the site.

7.3. Visibility splays and swept path analysis have been provided to demonstrate that the proposed site accesses can provide safe and suitable access.

7.4. All construction vehicles will route from the A1, turning onto C122 towards Innerwick. At the C122 / U209 junction, vehicles will take a left to follow U209 until arriving at the U209 / Barns Ness Terrace Junction. Here a right turn is made, following Barns Ness Terrace until arriving at the site access. A left turn should be made into the site access where an access track will allow vehicles to arrive at the site. Construction routing will be followed by all construction traffic to avoid unnecessarily affecting the residential areas associated with the village of Innerwick.

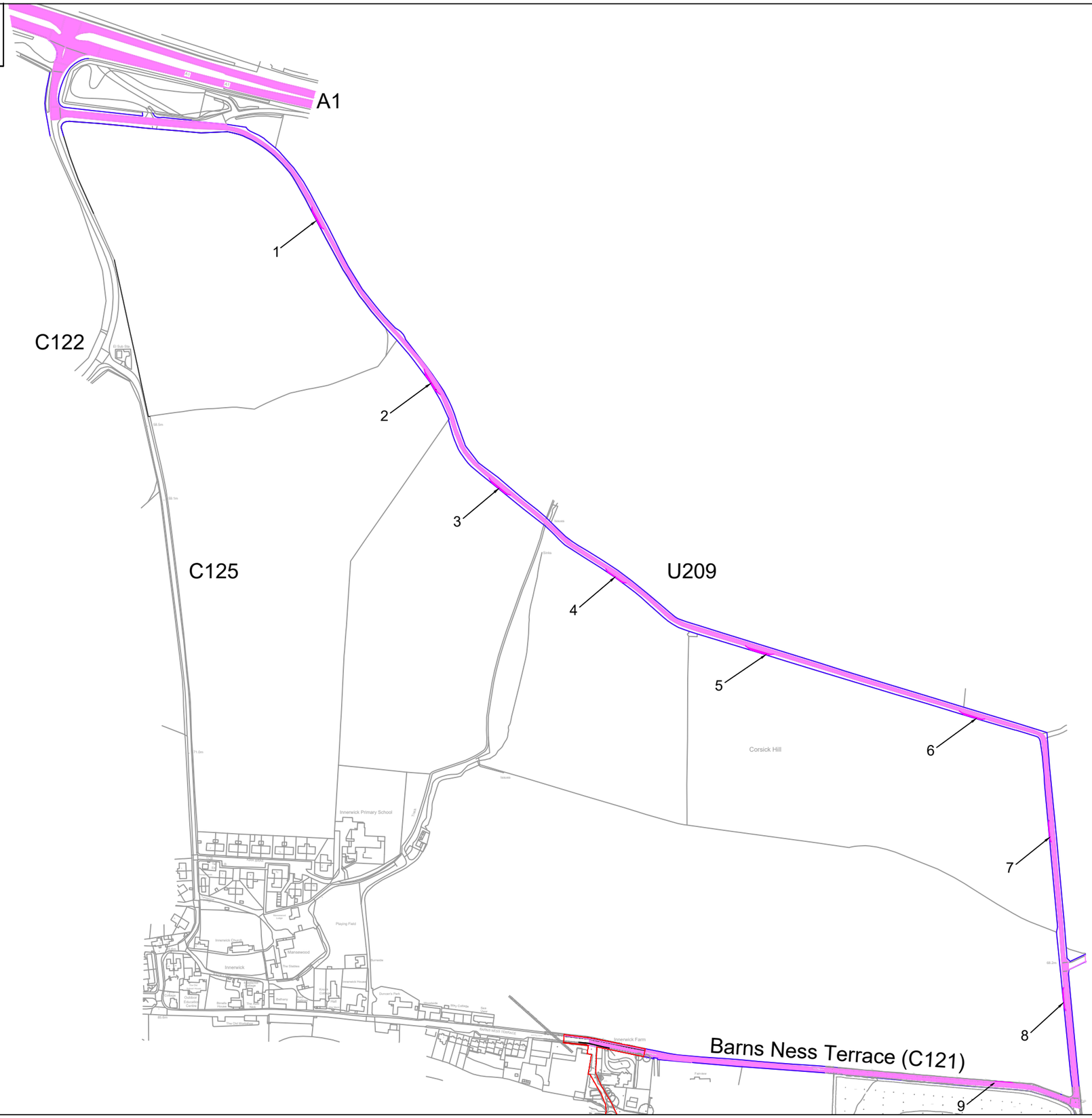
7.5. Additional traffic on the local highway network generated during the construction phase is expected to reach a maximum of circa six to eight HGV delivery trips per day, with the typical trip generation being lower. Temporary traffic increases of this level are not considered to be a material increase compared to the existing baseline conditions on the local or wider highway network.

7.6. Suitable mitigation will be provided, where necessary, in order to minimise the effects of the proposed development on the local highway network including appropriate signage, a site compound and facilities. Mitigation measures will be agreed upon and finalised between the appointed contractor and ELC Highways department.

7.7. To conclude, this CTMP is considered to suitably demonstrate that safe delivery of components can be undertaken without any foreseeable risk to highway users, therefore, it is considered that there are no valid highway or transportation reasons which would prevent the proposed development of the site.

APPENDIX A – PROPOSED ACCESS AND CONSTRUCTION ROUTING PLAN

A3



N

Key:

- Red Line Boundary
- Existing Carriageway
- Highway Boundary
- Proposed Passing Bays 1 - 9

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY
-	DD.MM.YY	-	-	-

BRAXBESS STORAGE PROPOSED ACCESS AND CONSTRUCTION ROUTE

BARNS NESS TERRACE,
INNERWICK

CLIENT:
BRAXBESS LTD.

DATE:	SCALE:	DRAWN/CHECKED BY:	APPROVED BY:
29.11.23	1:5000@A3	AJ	JK

JOB NUMBER:	DRAWING NUMBER:	REVISION No:
P23-0094	TR_SK01	00

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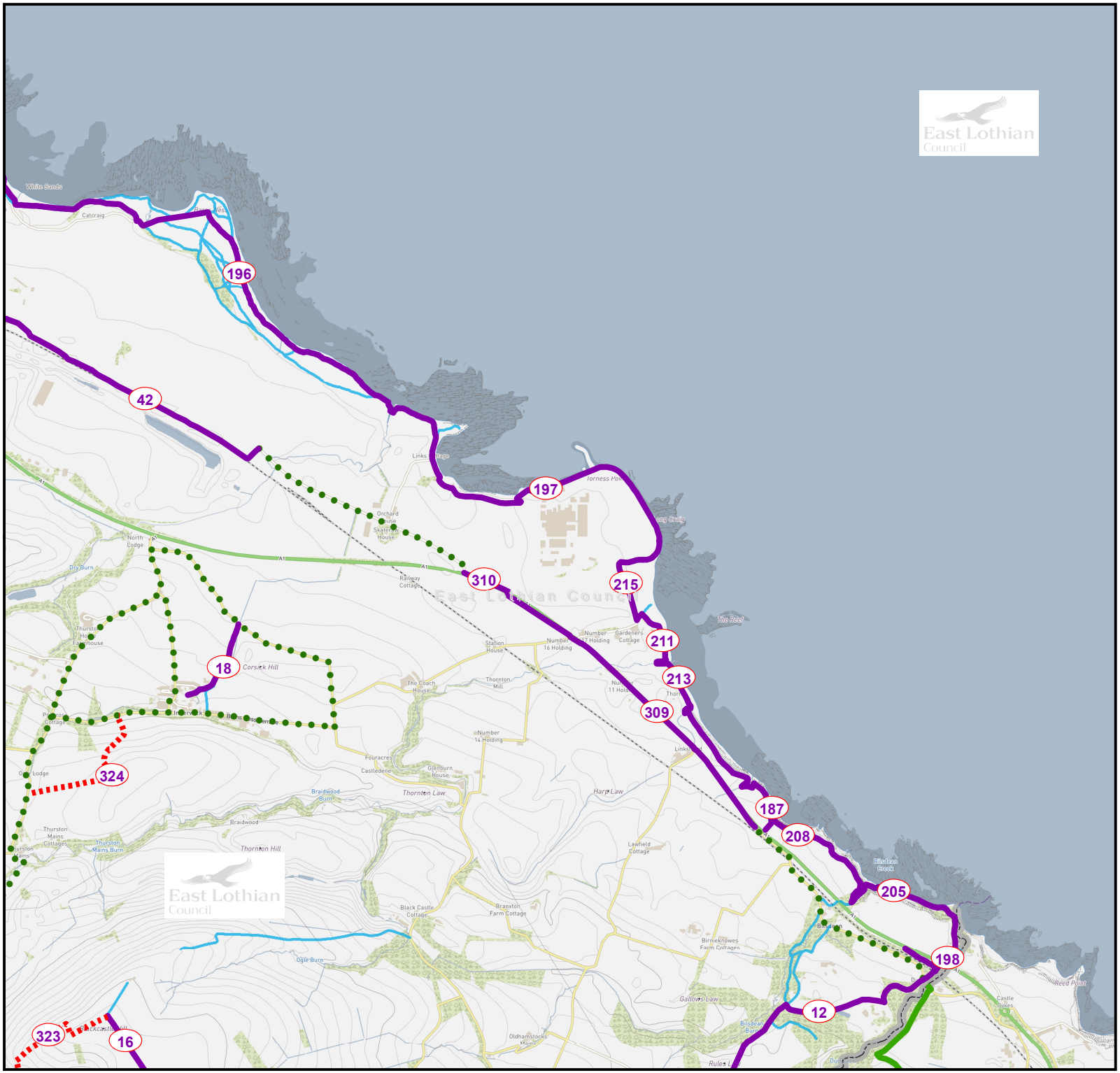
APPENDIX B – EAST LOTHIAN CORE PATH MAP K – INNERWICK AND SURROUNDING AREA



Map K

Key

Core Paths

Core paths that don't currently exist on the ground, but which we seek to deliver in the future if possible

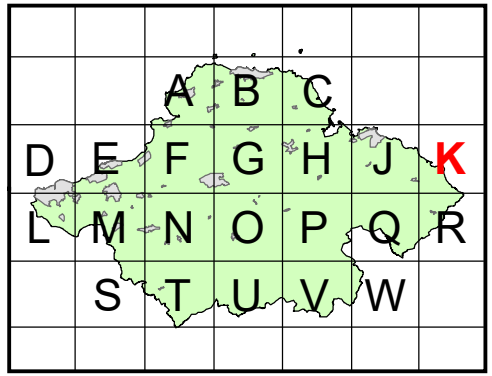
Other paths (part of the wider path network)

Suggested links on quiet roads*

Longer-term aspirational routes

Neighbouring Authorities' Core Paths

* Note: Roads may not have pavements. Safety risks should be assessed prior to non-motorised usage.



East Lothian

Scale 1:35,000

N

0 250 500 1,000 Meters

09/22

APPENDIX C – CRASHMAP SUMMARY REPORT

crashmap.co.uk

Validated Data

Crash Date:	Friday, November 08, 2019	**Time of Crash:**	4:55:00 PM	**Crash Reference:**	**2019950897018**

Highest Injury Severity:	Slight	**Road Number:**	A1	**Number of Casualties:**	2
Highway Authority:	East Lothian			**Number of Vehicles:**	2
Local Authority:	East Lothian			**OS Grid Reference:**	371868 675053
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	50				
Light Conditions:	Darkness: no street lighting				
Carriageway Hazards:	None				
Junction Detail:	T or staggered junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Give way or uncontrolled				

For more information about the data please visit: *www.crashmap.co.uk/home/Faq*
To subscribe to unlimited reports using CrashMap Pro visit *www.crashmap.co.uk/Home/Premium_Services*

powered by agilysis

Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Other vehicle, whether motorised or not	-1	Male	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Front	Journey as part of work	None	None
2	Minibus (8 - 16 passenger seats)	14	Male	46 - 55	Vehicle is waiting to proceed normally but is held up	Nearside	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Vehicle or pillion passenger	Female	16 - 20	Unknown or other	Unknown or other
2	2	Slight	Driver or rider	Male	46 - 55	Unknown or other	Unknown or other

crashmap.co.uk

Validated Data

Crash Date:	Wednesday, June 16, 2021	**Time of Crash:**	7:20:00 AM	**Crash Reference:**	**2021991056648**

Highest Injury Severity:	Slight	**Road Number:**	A1	**Number of Casualties:**	3
Highway Authority:	East Lothian			**Number of Vehicles:**	2
Local Authority:	East Lothian			**OS Grid Reference:**	371716 675114
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	70				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Not Applicable				

For more information about the data please visit: *www.crashmap.co.uk/home/Faq*
To subscribe to unlimited reports using CrashMap Pro visit *www.crashmap.co.uk/Home/Premium_Services*

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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	10	Male	36 - 45	Vehicle is passing another moving vehicle on its offside	Front	Commuting to/from work	None	Central crash barrier
2	Car (excluding private hire)	14	Female	36 - 45	Vehicle is passing another moving vehicle on its offside	Back	Journey as part of work	None	Central crash barrier

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	36 - 45	Unknown or other	Unknown or other
1	2	Slight	Vehicle or pillion passenger	Male	46 - 55	Unknown or other	Unknown or other
2	3	Slight	Driver or rider	Female	36 - 45	Unknown or other	Unknown or other

APPENDIX D – PROPOSED DEVELOPMENT ACCESS

A3

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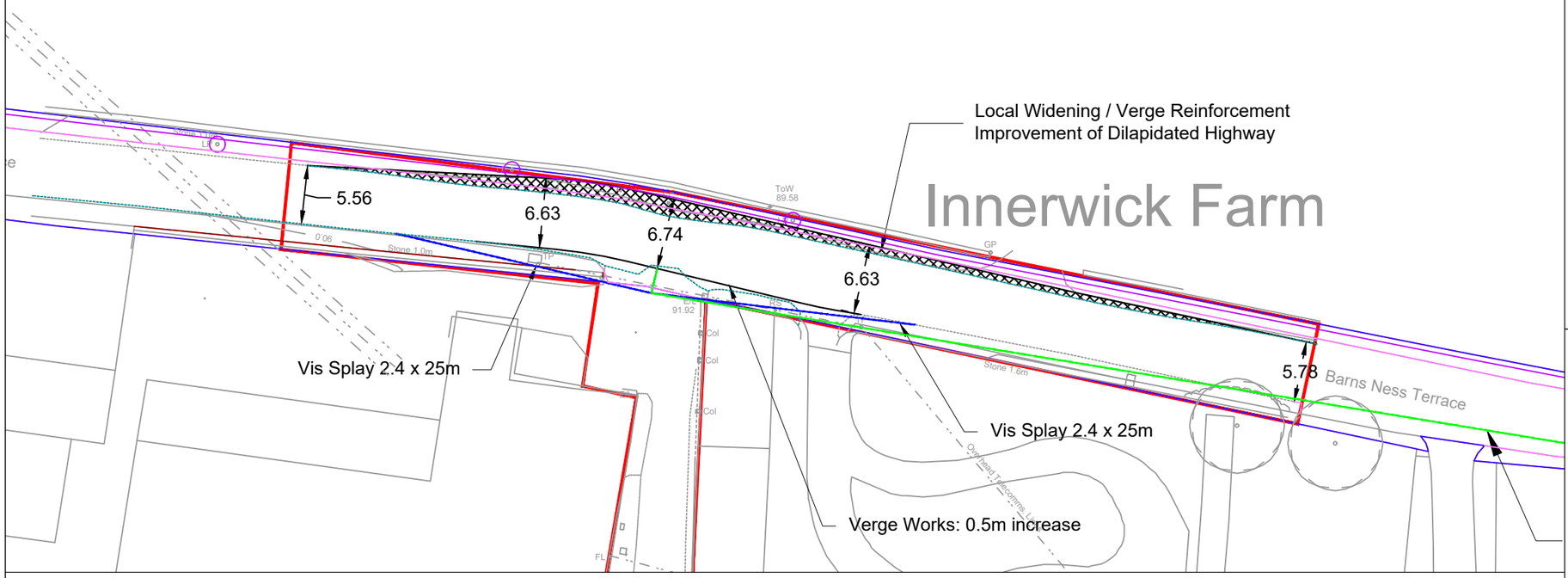

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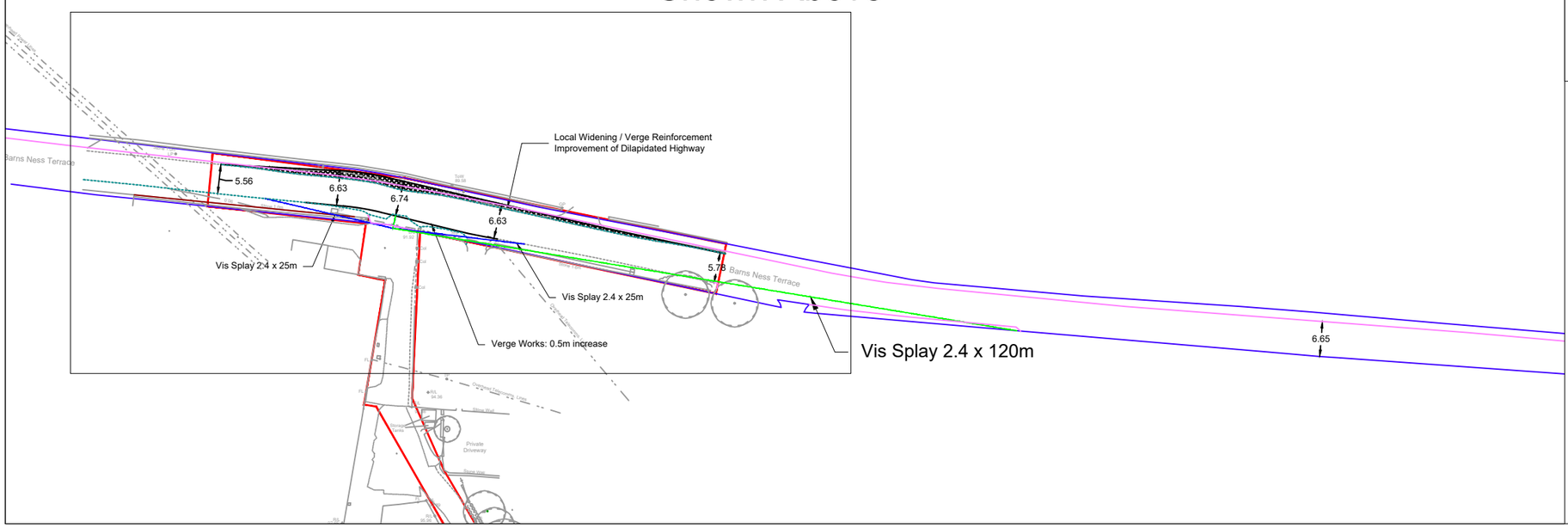
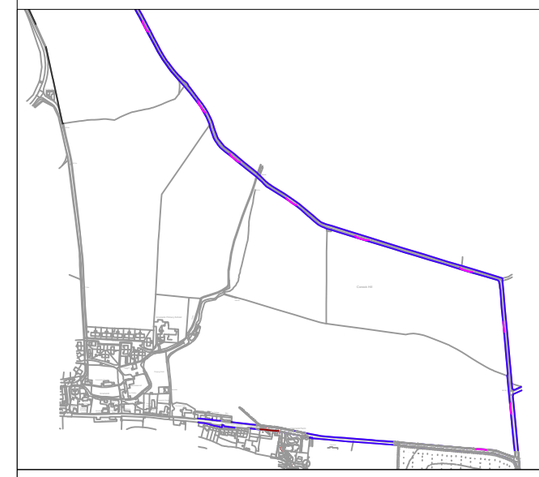
Shown Above





1:500
0 12.5m

Key:

- Visibility splays at site access - using Manual for Streets Guidance for a 20mph road
- Visibility splay at site access - using DMRB Guidance for a 40mph road (east only)
- Red Line Boundary
- Highway Boundary
- Local Widening / Verge Reinforcement Improvement of Dilapidated Highway

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY
-	DD.MM.YY	-	-	-

DRAWING TITLE:
BRAXBESS STORAGE SITE ACCESS PROPOSED GEOMETRY AND VISIBILITY

SITE ADDRESS:
BARNS NESS TERRACE, INNERWICK

CLIENT:
BRAXBESS LTD.

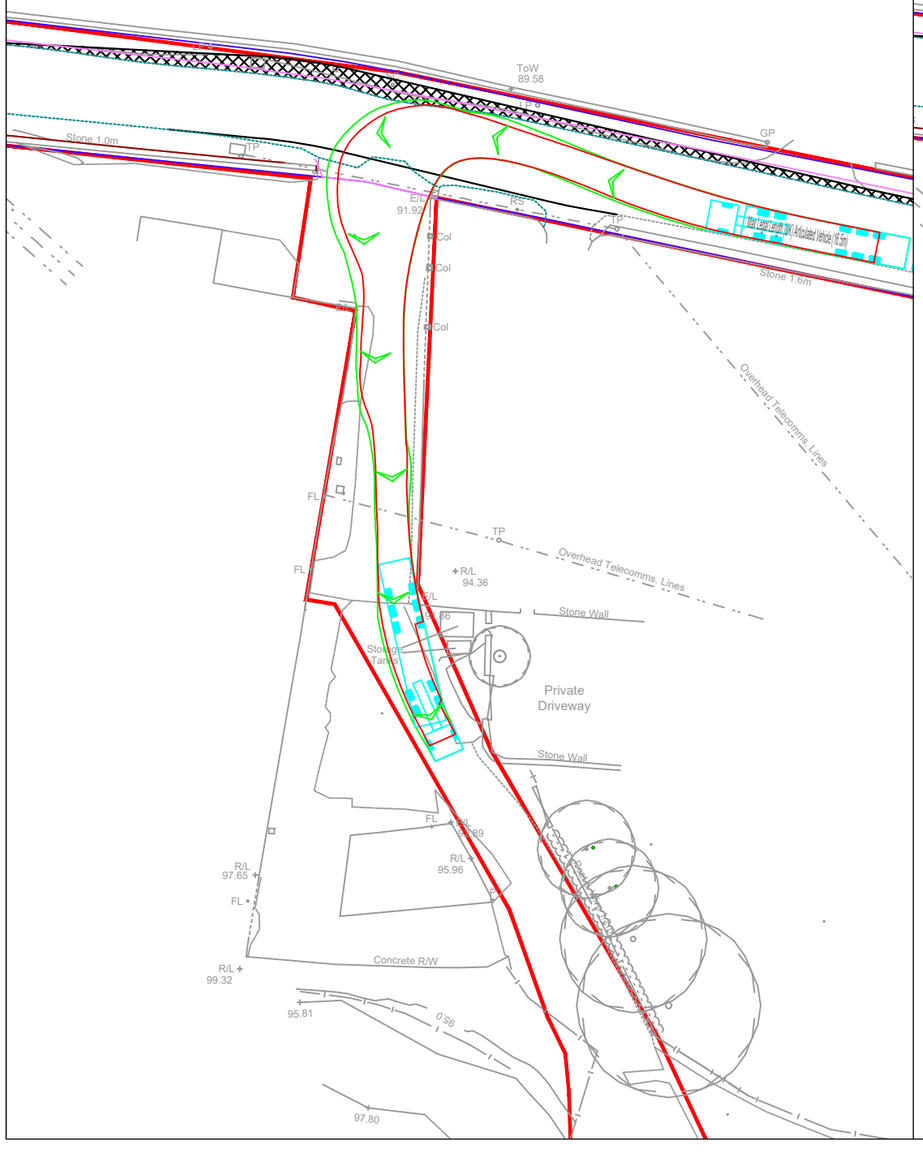
DATE:	SCALE:	DRAWN/CHECKED BY:	APPROVED BY:
29.11.23	VARIES	AJ	JK

JOB NUMBER:	DRAWING NUMBER:	REVISION No:
P23-0094	TR_SK02	00

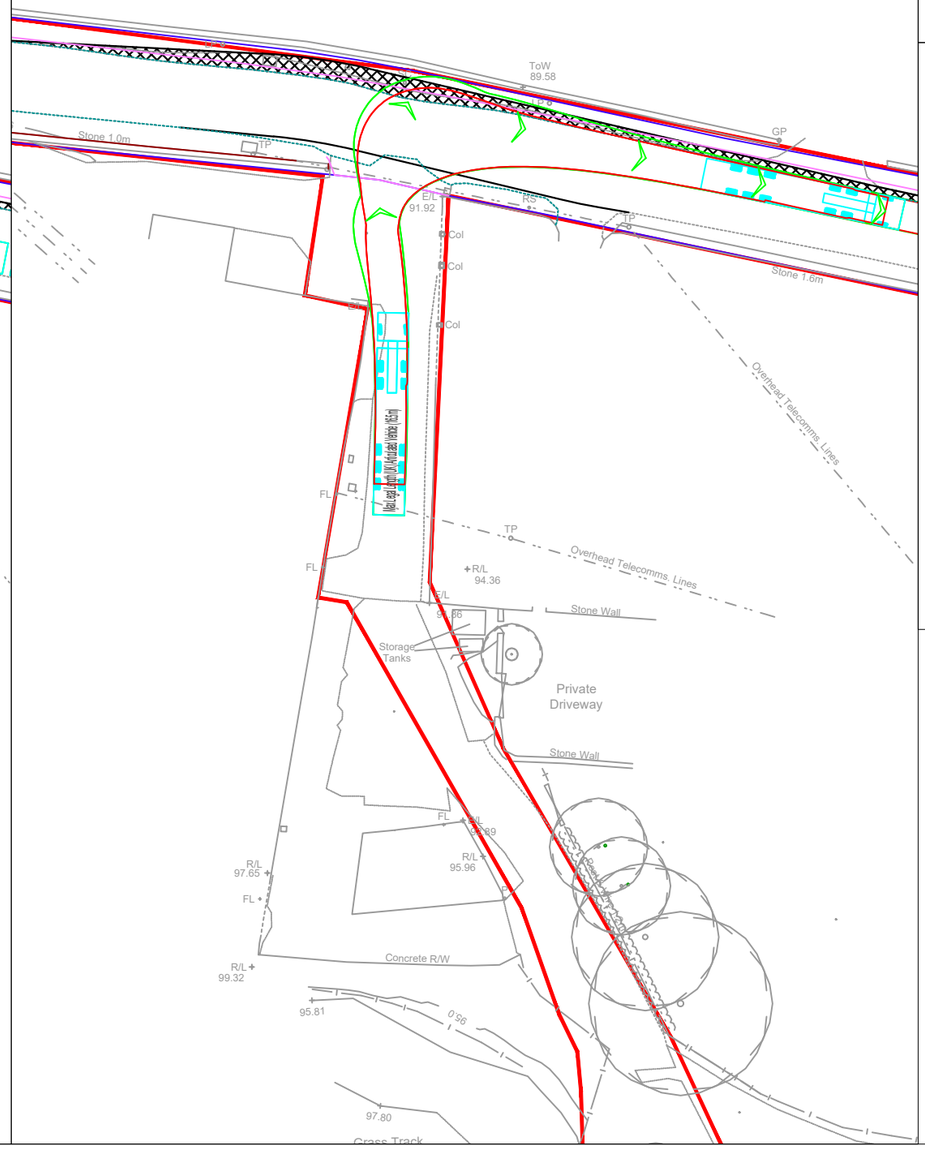
PEGASUS GROUP

A3

IN



OUT



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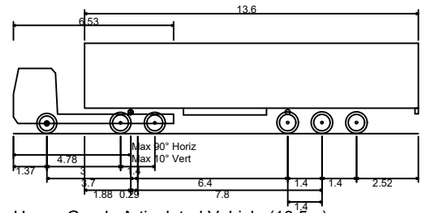

Heavy Goods Articulated Vehicle (16.5m)

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

Key:

- Red Line Boundary
- Highway Boundary
- Local Widening / Verge Reinforcement
  Improvement of Dilapidated Highway

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY
-	DD.MM.YY	-	-	-

DRAWING TITLE:

BRAXBESS STORAGE SITE ACCESS SWEPT PATH ANALYSIS

SITE ADDRESS:

BARNS NESS TERRACE,
INNERWICK

CLIENT:

BRAXBESS LTD.

DATE:	SCALE:	DRAWN/CHECKED BY:	APPROVED BY:
29.11.23	1:500@A3	AJ	JK

JOB NUMBER:	DRAWING NUMBER:	REVISION No:
P23-0094	TR_SK03	00

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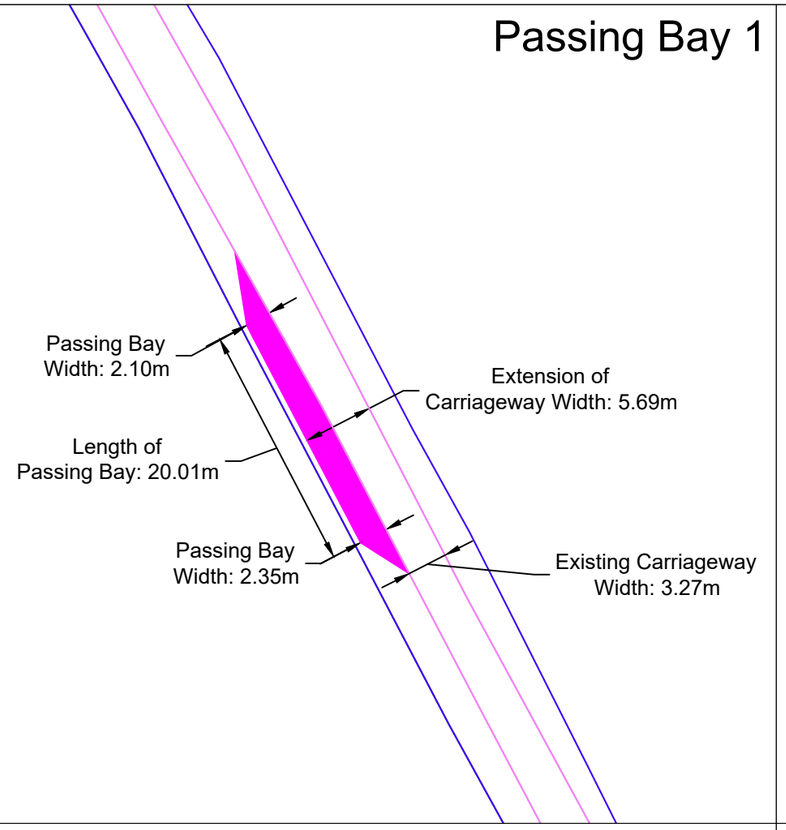
APPENDIX E – CONSTRUCTION ROUTE MITIGATION

A3

Passing Bay 1



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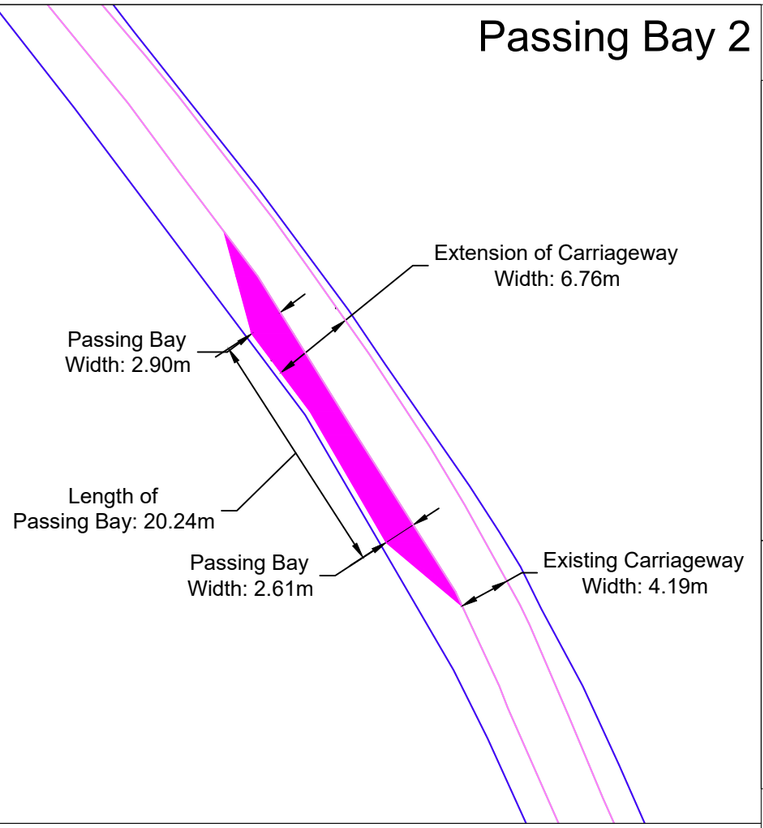
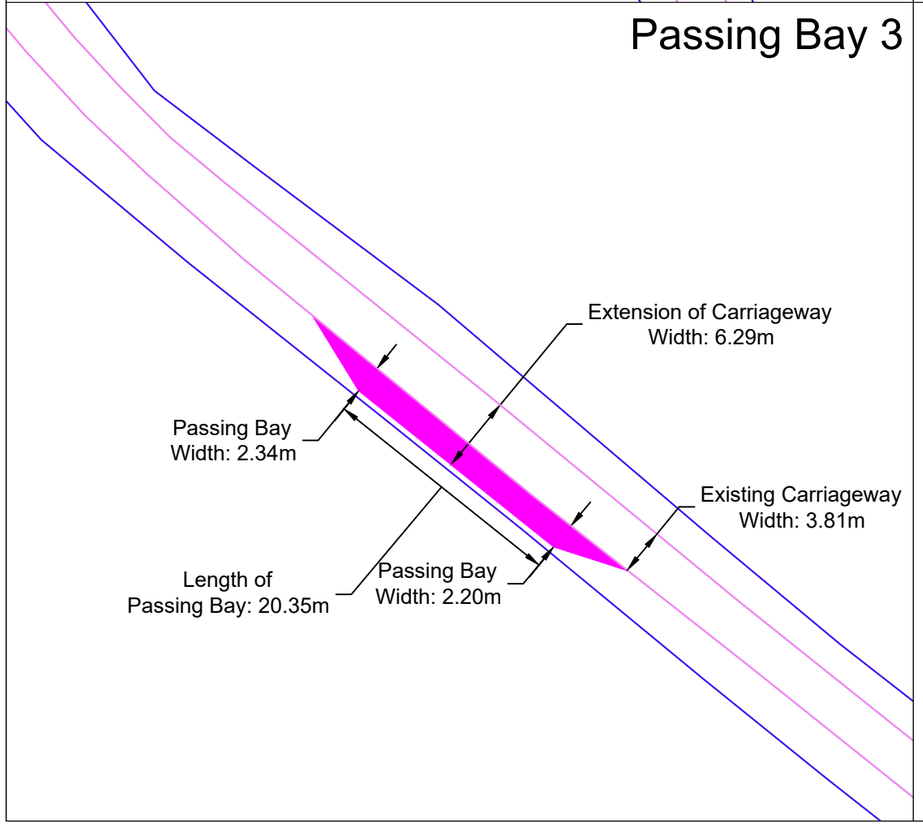


Passing Bay 3



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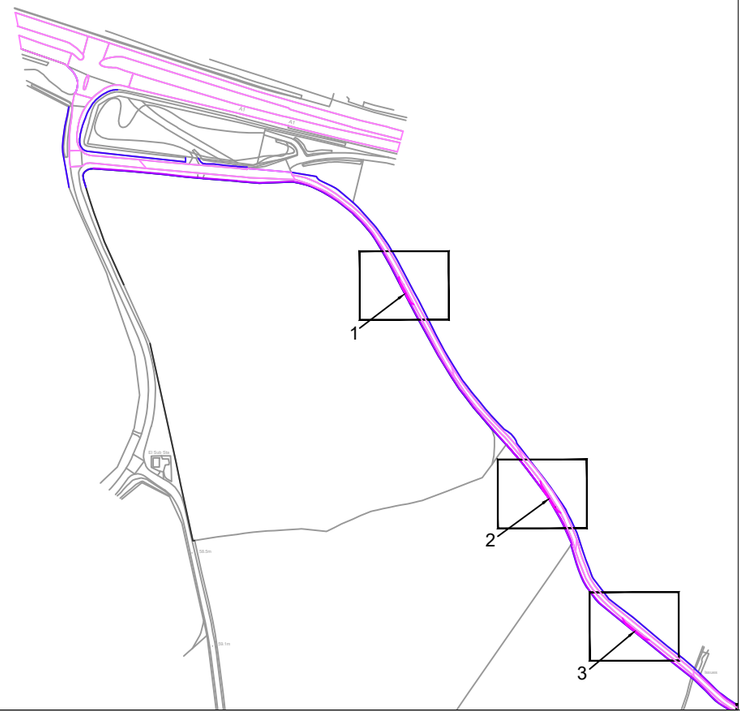
Not to Scale



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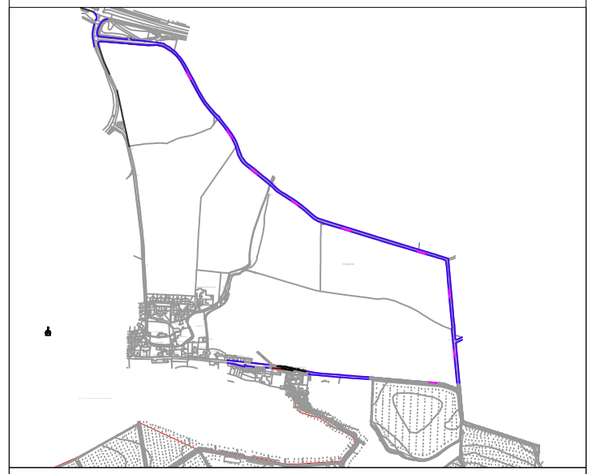
12.5m



Key:

- Proposed Passing Bay
- Highway Boundary
- Existing Carriageway Extent

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY
-	DD.MM.YY	-	-	-

DRAWING TITLE:
BRAXBESS STORAGE PROPOSED GEOMETRY OF PASSING BAYS 1-3

SITE ADDRESS:
BARNS NESS TERRACE,
INNERWICK

CLIENT:
BRAXBESS LTD.

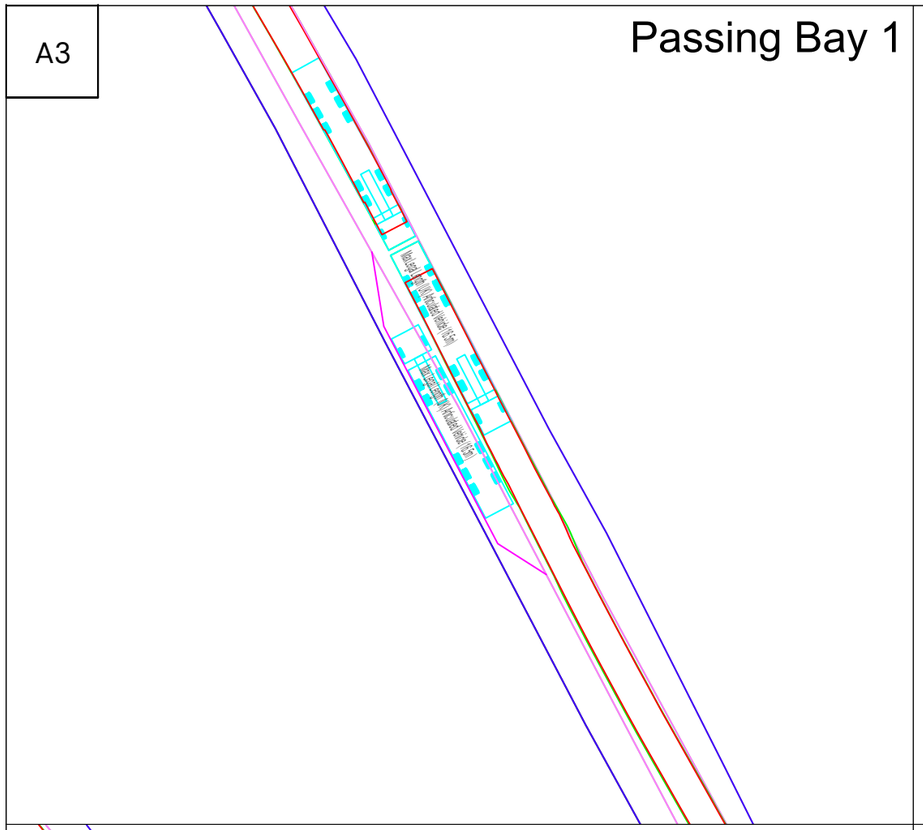
DATE:	SCALE:	DRAWN/CHECKED BY:	APPROVED BY:
29.11.23	1:500@A3	AJ	JK

JOB NUMBER:	DRAWING NUMBER:	REVISION No:
P23-0094	TR_SK04	00

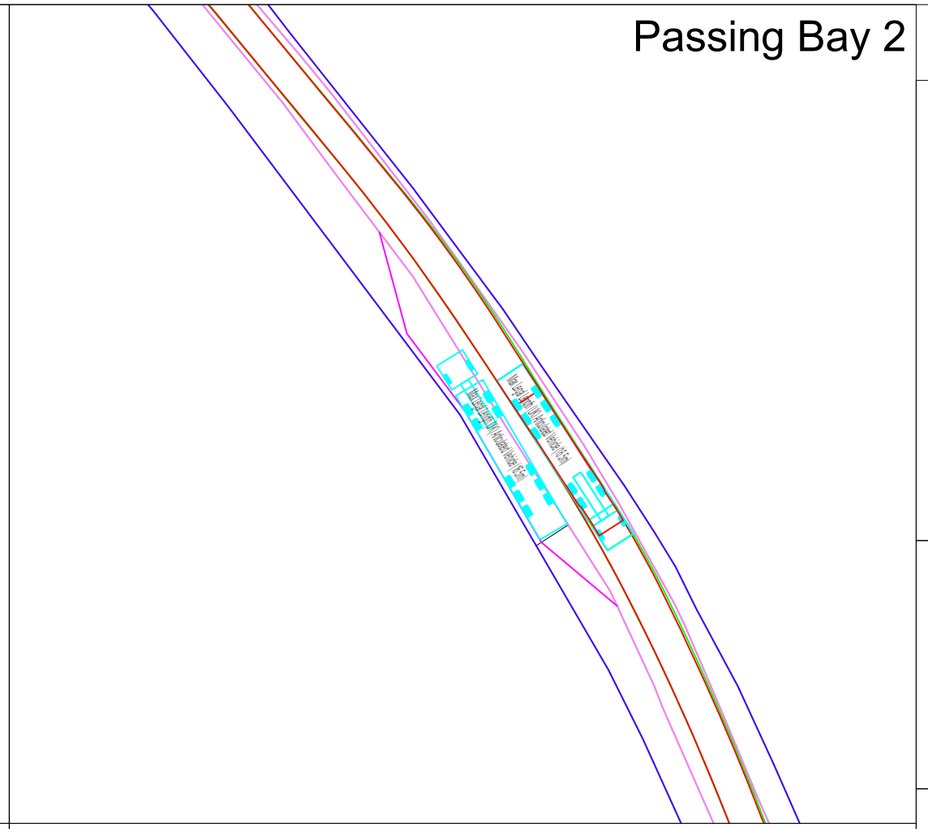
PEGASUS GROUP

A3

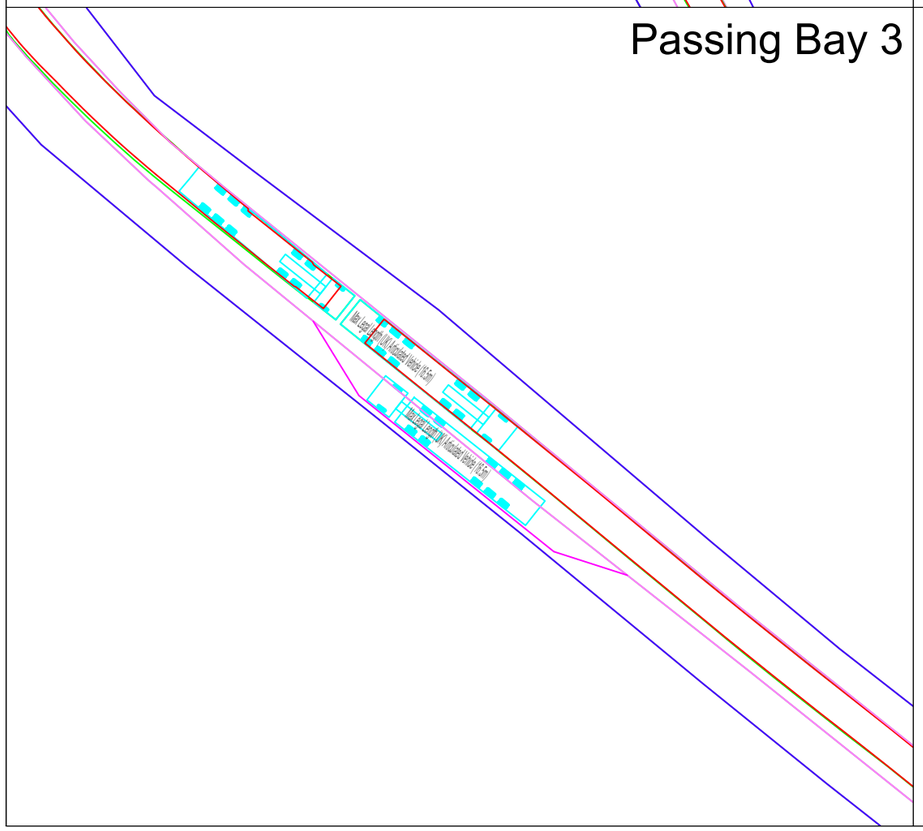
Passing Bay 1



Passing Bay 2



Passing Bay 3



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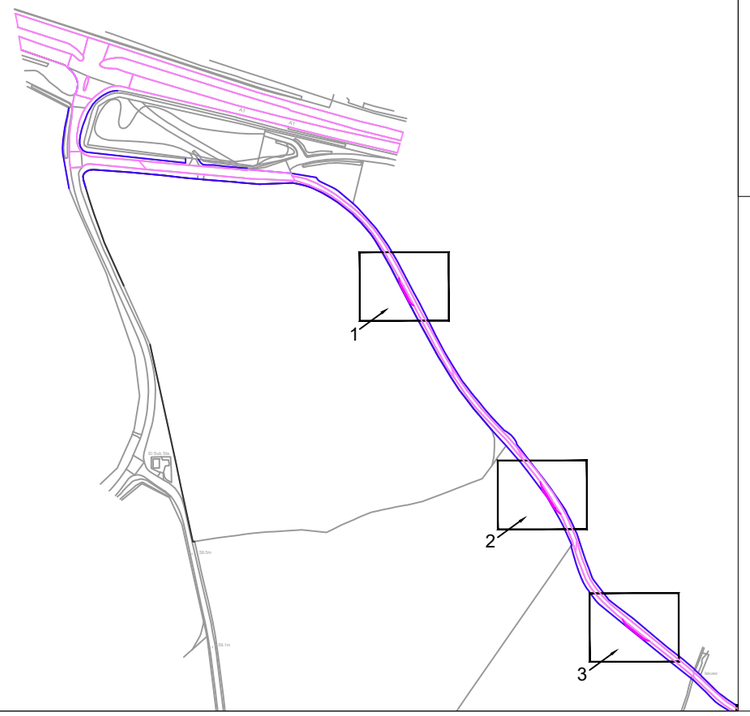

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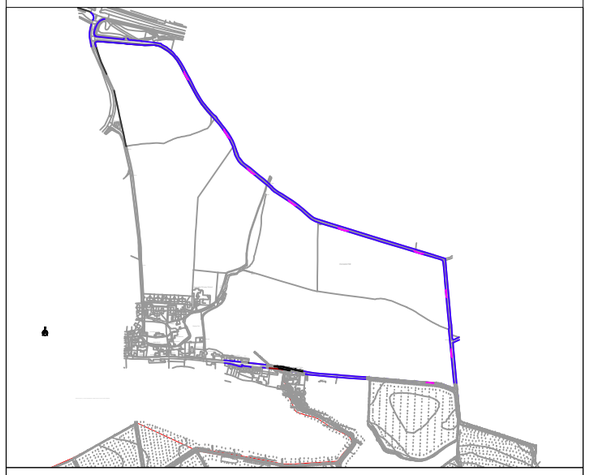
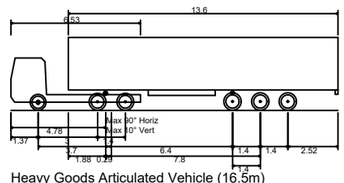
12.5m



Key:

- Proposed Passing Bay
- Highway Boundary
- Existing Carriageway



Heavy Goods 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

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY
-	DD.MM.YY	-	-	-

DRAWING TITLE:

BRAXBESS STORAGE PASSING BAYS 1-3 SWEPT PATH ANALYSIS

SITE ADDRESS:

BARNS NESS TERRACE,
INNERWICK

CLIENT:

BRAXBESS LTD.

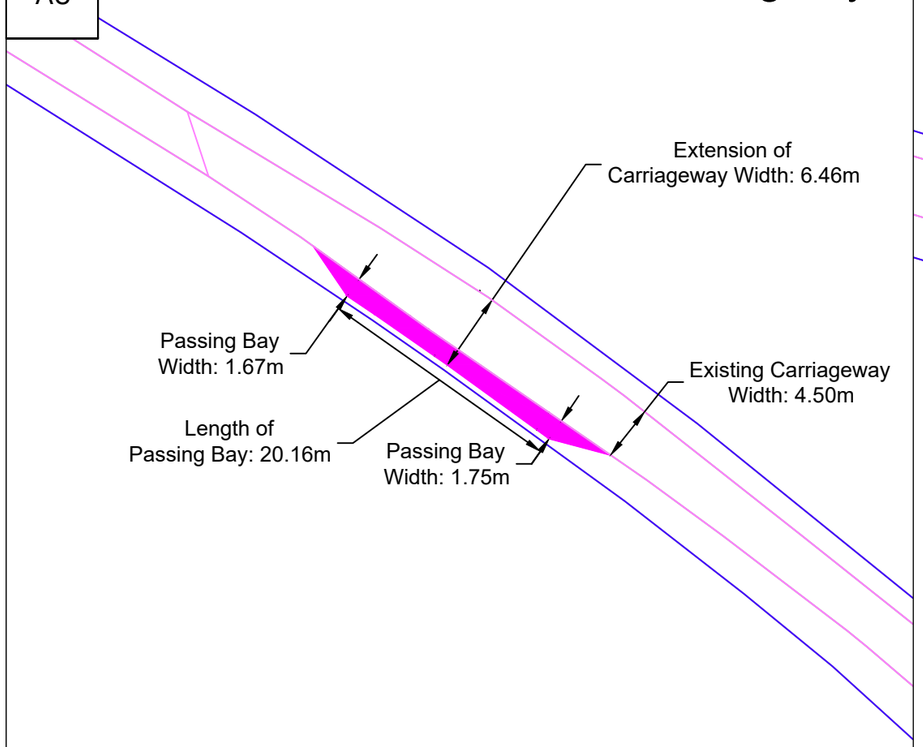
DATE:	SCALE:	DRAWN/CHECKED BY:	APPROVED BY:
29.11.23	1:500@A3	AJ	JK

JOB NUMBER:	DRAWING NUMBER:	REVISION No:
P23-0094	TR_SK05	00

PEGASUS GROUP

A3

Passing Bay 4



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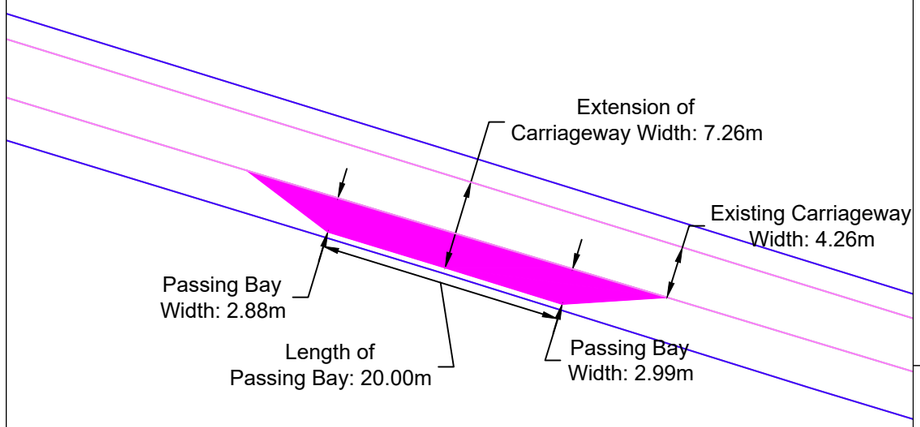
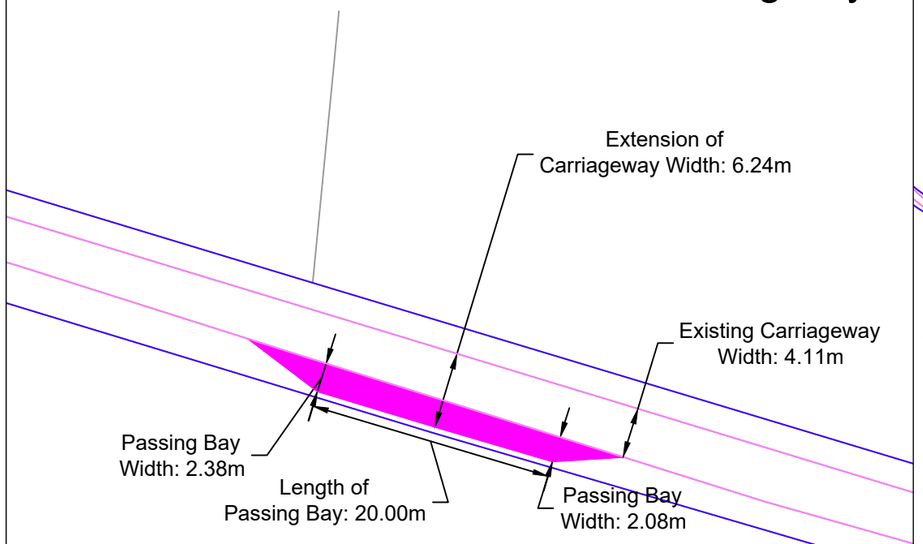


Passing Bay 6



Passing Bay Context
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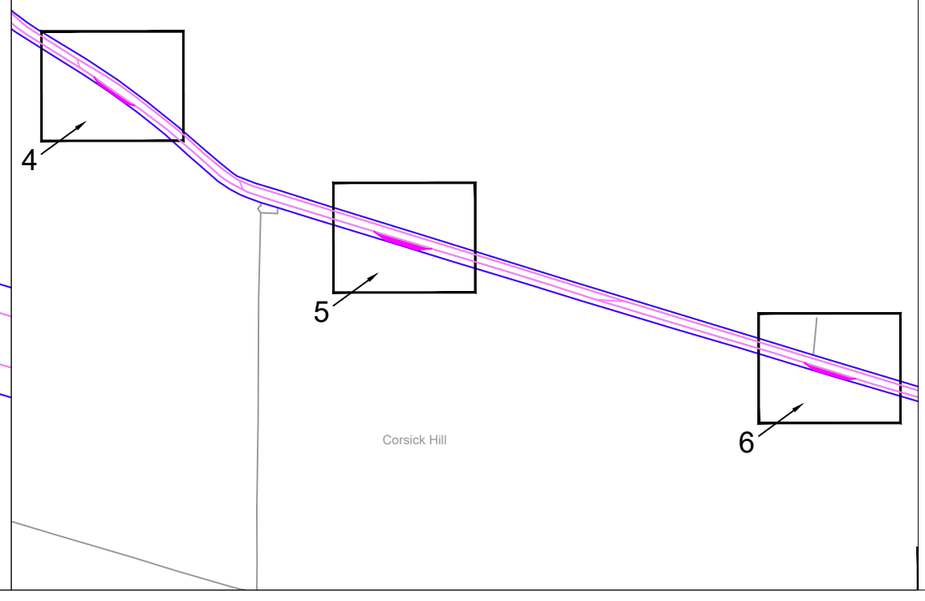

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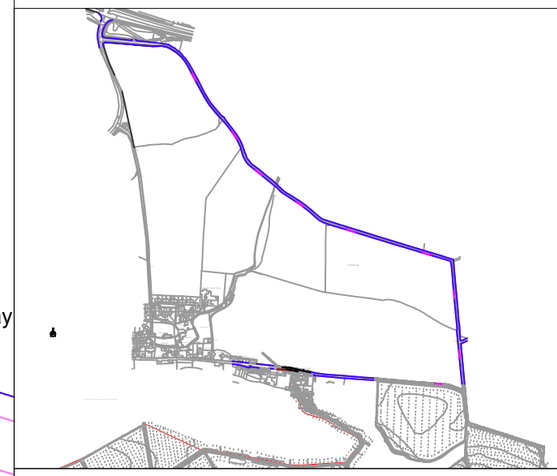


Key:

- Proposed Passing Bay
- Highway Boundary
- Existing Carriageway Extent

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY
-	DD.MM.YY	-	-	-

DRAWING TITLE:
BRAXBESS STORAGE PROPOSED GEOMETRY OF PASSING BAY 4-6

SITE ADDRESS:
BARN NESS TERRACE
INNERWICK

CLIENT:
BRAXBESS LTD.

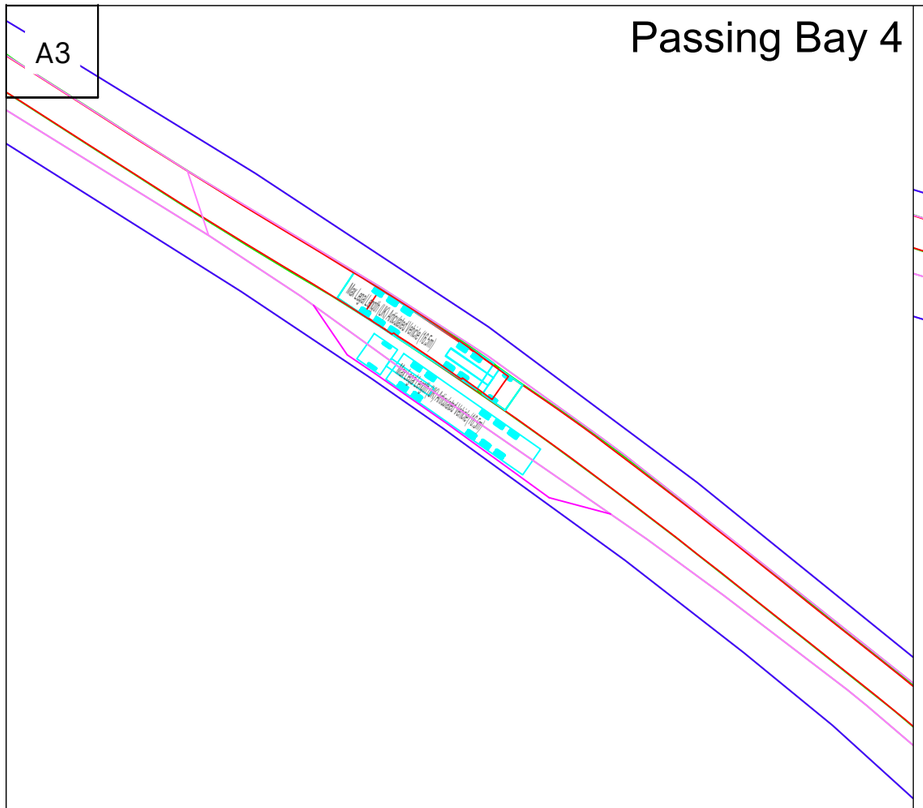
DATE:	SCALE:	DRAWN/CHECKED BY:	APPROVED BY:
29.11.23	1:500@A3	AJ	JK

JOB NUMBER:	DRAWING NUMBER:	REVISION No:
P23-0094	TR_SK06	00

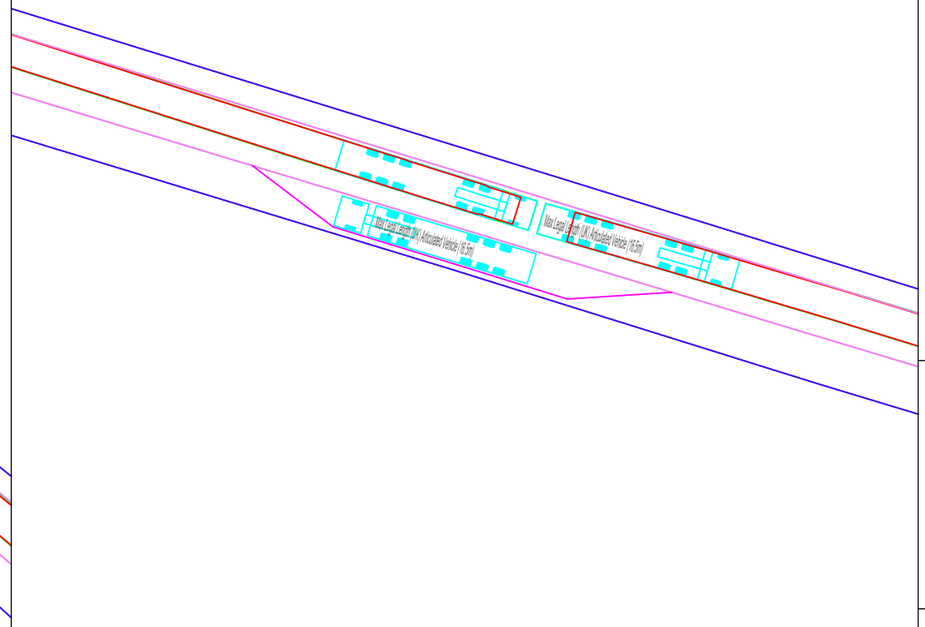
PEGASUS GROUP

A3

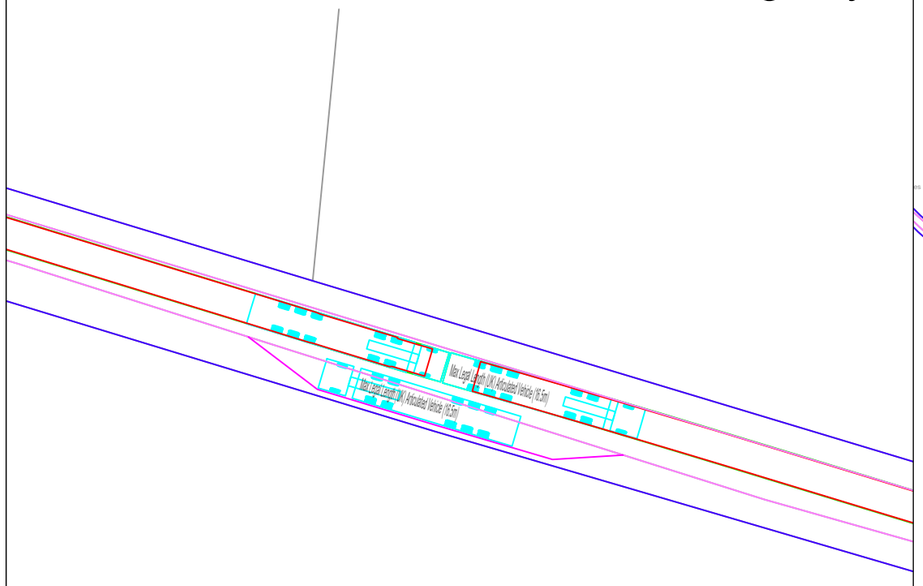
Passing Bay 4



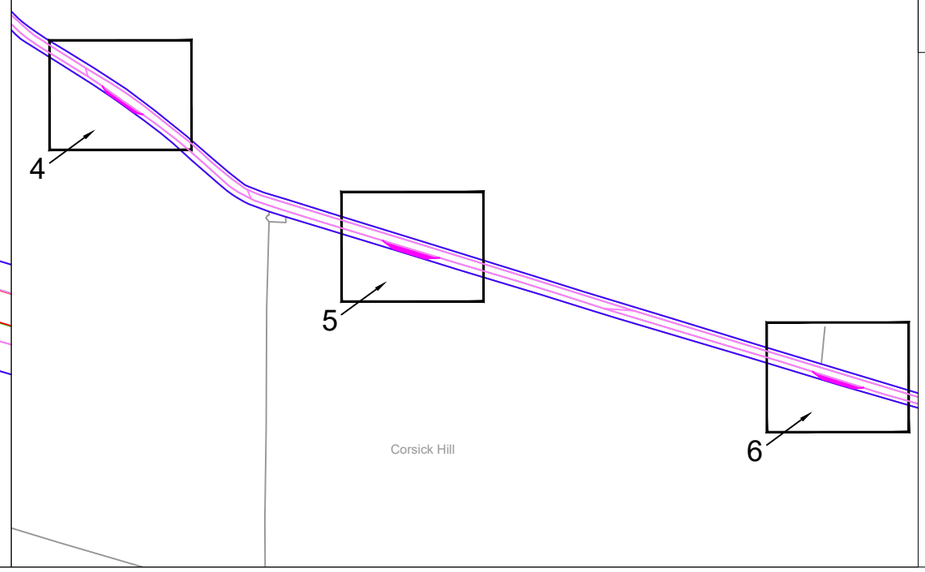
Passing Bay 5



Passing Bay 6

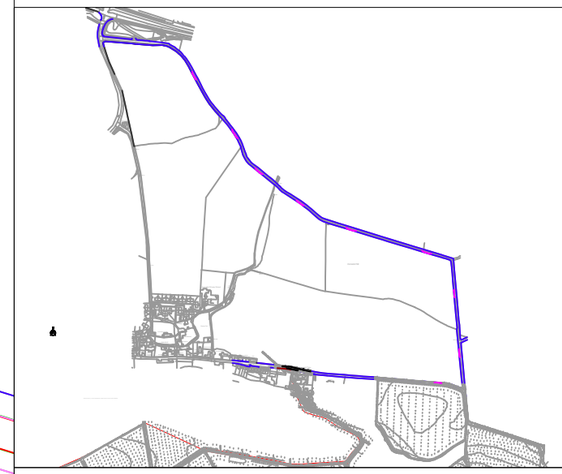


Passing Bay Context Not to Scale



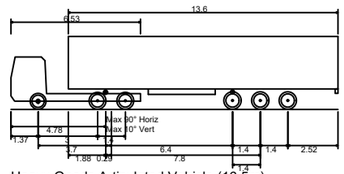
N

1:500
0 12.5m



Key:

- Proposed Passing Bay
- Highway Boundary
- Existing Carriageway



Heavy Goods 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

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY
-	DD.MM.YY	-	-	-

DRAWING TITLE:

BRAXBESS STORAGE PASSING BAYS 4-6 SWEPT PATH ANALYSIS

SITE ADDRESS:

BARN NESS TERRACE
INNERWICK

CLIENT:

BRAXBESS LTD.

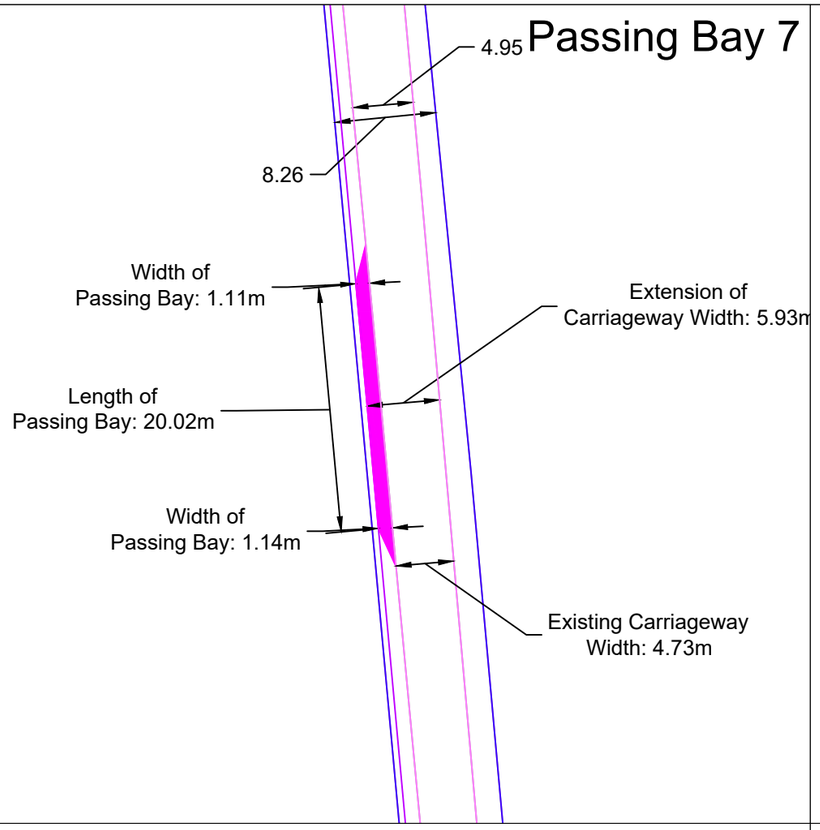
DATE:	SCALE:	DRAWN/CHECKED BY:	APPROVED BY:
29.11.23	1:500@A3	AJ	JK

JOB NUMBER:	DRAWING NUMBER:	REVISION No:
P23-0094	TR_SK07	00

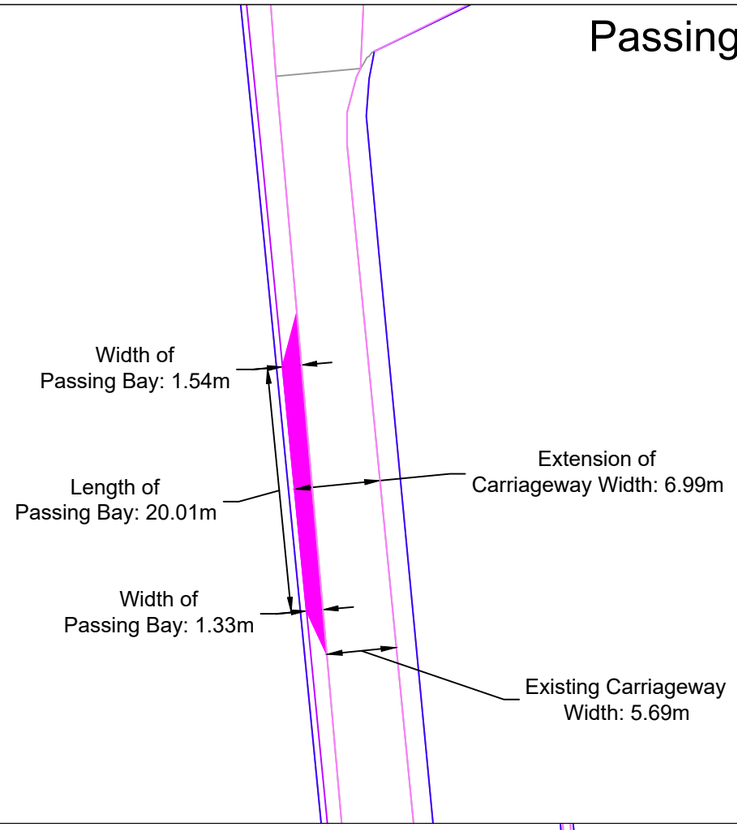
PEGASUS GROUP

A3

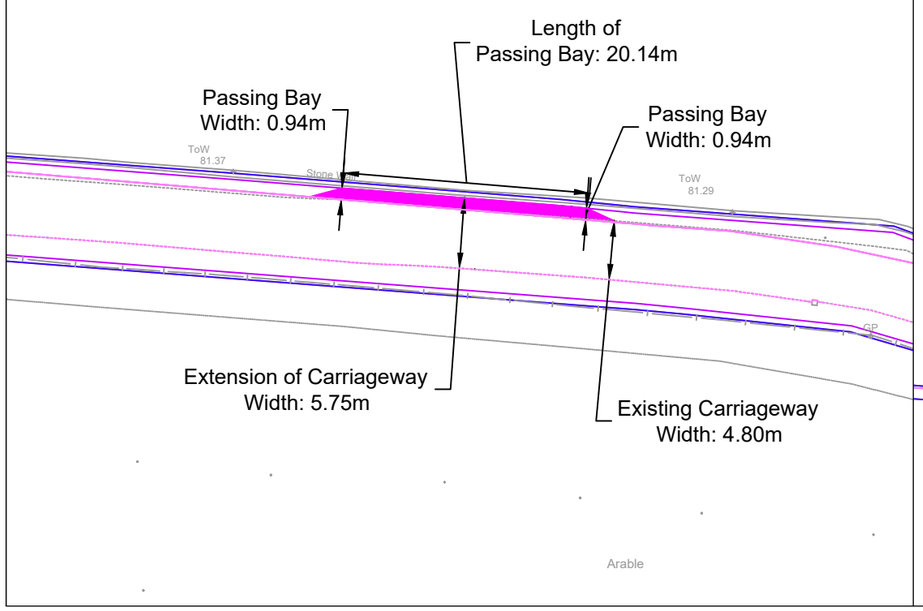
Passing Bay 7



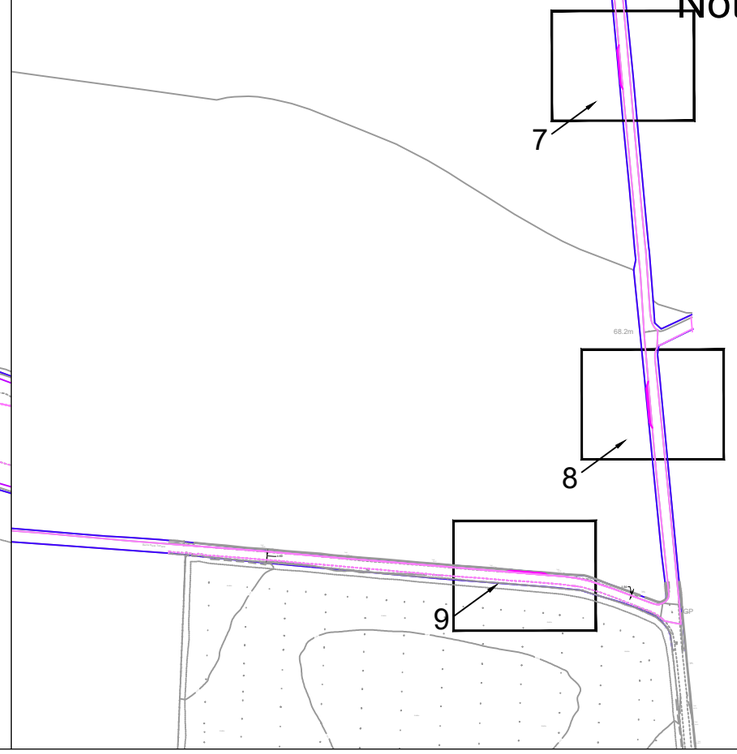
Passing Bay 8

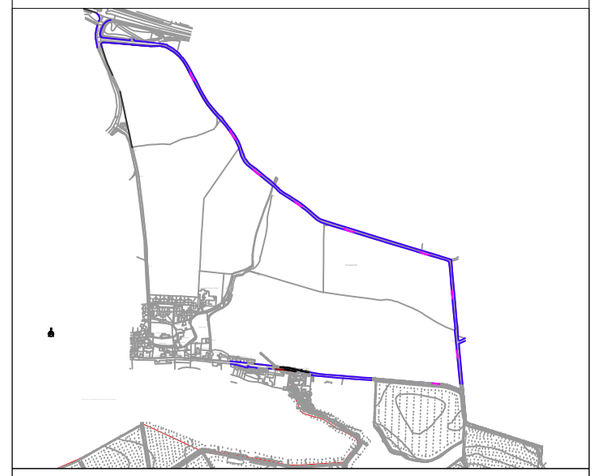


Passing Bay 9



Passing Bay Context
Not to Scale





Key:

- Proposed Passing Bay
- Highway Boundary
- Existing Carriageway Extent

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY
-	DD.MM.YY	-	-	-

DRAWING TITLE:
BRAXBESS STORAGE PROPOSED GEOMETRY OF PASSING BAYS 7-9

SITE ADDRESS:
BARNS NESS TERRACE,
INNERWICK

CLIENT:
BRAXBESS STORAGE LTD.

DATE:	SCALE:	DRAWN/CHECKED BY:	APPROVED BY:
29.11.23	1:500@A3	AJ	JK

JOB NUMBER:	DRAWING NUMBER:	REVISION No:
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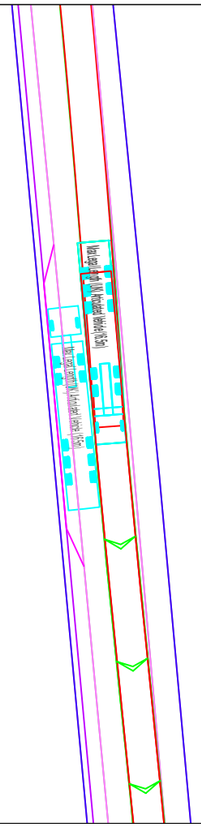
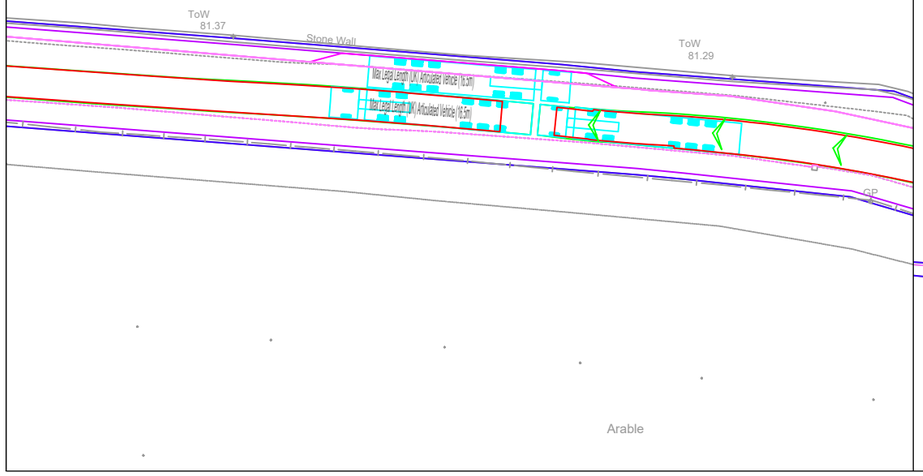
Passing Bay 7

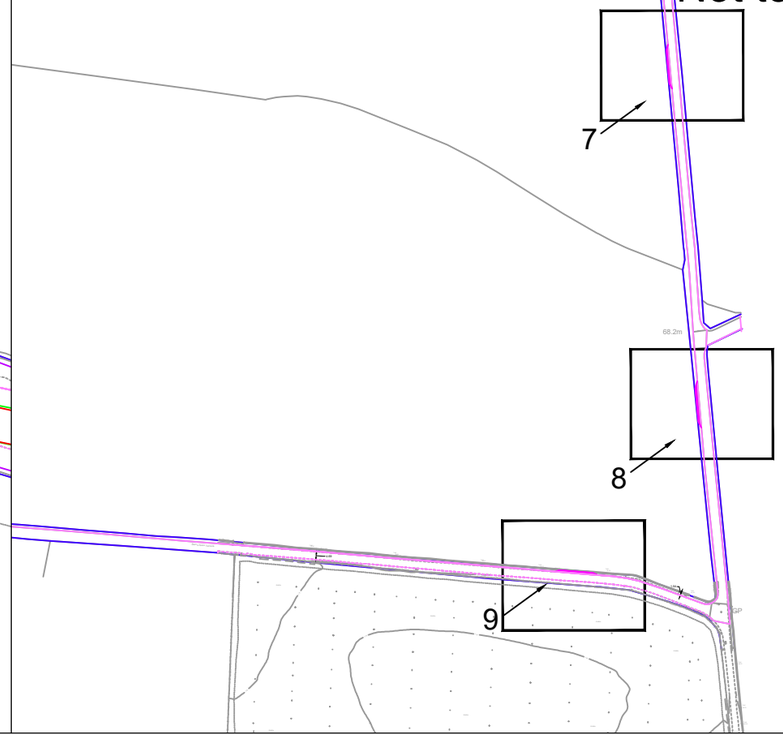


Passing Bay 8

Passing Bay 9

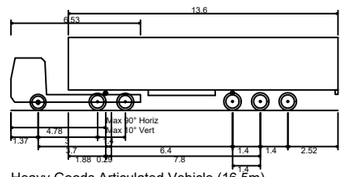


Passing Bay Context
Not to Scale



Key:

- Proposed Passing Bay
- Highway Boundary
- Existing Carriageway



Heavy Goods Articulated Vehicle (16.5m)

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Kerb to Kerb Turning Radius	6.530m

\- DD.MM.YY - - -

REV	DATE	DESCRIPTION	REVISED BY	APPROVED BY

DRAWING TITLE:

BRAXBESS STORAGE PASSING BAYS 7-9 SWEPT PATH ANALYSIS

SITE ADDRESS:

BARNS NESS TERRACE,
INNERWICK

CLIENT:

BRAXBESS STORAGE LTD.

DATE:	SCALE:	DRAWN/CHECKED BY:	APPROVED BY:
29.11.23	1:500@A3	AJ	JK

JOB NUMBER:	DRAWING NUMBER:	REVISION No:
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