Hoover Site, Merthyr Tydfil

Transport Note: Further Information for Local Highway Authority

Client: **Walters Land Limited**

27 October 2025

Document Reference: **C24127/TN01**

QUALITY MANAGEMENT

REPORT DETAILS

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Client	Walters Land Limited
Project Name	Hoover Site, Merthyr Tydfil
Report Title	Transport Note: Further Information for Local Highway Authority
Report Ref.	TN01
Project No.	C24127
Date	27/10/2025

ISSUE HISTORY

Issue No.	Status	Date	Produced by	Approved by	Revision Details
1	Final	22/10/2025	DC	DC	First Issue
2	Final	27/10/2025	DC	DC	Second Issue

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1. INTRODUCTION

1.1.1 This Transport Note (TN) has been produced in response to a consultation response provided by Merthyr Tydfil County Borough Council (MTCBC), in its role as the local highway authority (LHA), in relation to an outline planning application on part of the Hoover Strategic Regeneration Area (HSRA), in Merthyr Tydfil (the 'site') (App Ref: P/25/0165).

1.1.2 The development description is for the:

"Demolition, ground reclamation and remediation and outline planning application with all matters reserved (except for the main access points) for the comprehensive redevelopment of the former Hoover site to create a new neighbourhood, including up to 441 new homes, 1.5 hectares of employment land (including B1 (business), B2 (general industrial), B8 (storage and distribution) and sui generis uses), community hub (including A1 (shops), A2 (financial and professional services) A3 (food and drink), B1 (business), D1 (non-residential institutions) and sui generis uses), community heat hub, metro station and transport hub (including transport interchange and parking) , a network of open spaces (including parkland, active travel routes, areas for informal recreation and SUDS attenuation features) together with associated works, including improvement/works to the highway network."

1.1.3 The application was validated on 04 June 2025. The application was supported by a Transport Assessment (TA) and a Framework Travel Plan (TP) both produced by Apex.

1.1.4 A timeline of the post-application correspondence has been summarised as follows:

- The highway authority provided an initial summary email response to the submission, which was issued by the planning officer on 15 July 2025.
- The applicant replied to this email on 26th August, providing further information and clarification in relation to the comments raised.
- A further email was then received from the highway authority on 23 September 2025.
- The applicant provided additional further information and clarification in an email response on the same date.
- A final response was then received from the highway authority on the 8th October, which removed some of their initial requests for further analysis.
- The outstanding responses were then discussed in a meeting on 9th October between the applicant and MTCBC.

1.1.5 As such, this TN has considered the outstanding comments from the 8th October correspondence from the highway authority for additional clarification and information and has been produced considering the discussions held in the meeting on the 9th October. For ease, the TN has been set out with the specific LHA comments in *navy boxes* with the Apex further information provided below.

1.1.6 Where required, relevant sections of the TA and the TP have been referred to in this note. The TA and TP have not been revised from the versions submitted with the planning application, as this note provides the specific additional information requested by the LHA.

2. TRIP GENERATION

The statement regarding not providing data in regards to the Metro is not accepted. This data has to be provided as there will be an increase in movements in and out of the proposed junctions due to vehicles accessing this element of the site. Additionally the metro will also increase movements

throughout the site. Again, this would be the same for the retail element of the site, data has to be provided as the turning movements will increase.

2.1 Overview

2.1.1 The trip generation for the new metro station, as well as for the community hub has been considered to inform the analysis within this note, as discussed and agreed with the highway authority.

2.1.2 As set out within the TA, the park and ride facility associated with the new Metro rail station would not be a trip generating use in its own right, it would be provided to intercept existing vehicle movements to utilise the rail and bus services. As such, this could reduce vehicle movements on the wider network and have a net beneficial impact at local junctions. On this basis, the trip generation has been considered and then shown into and out of the northern site access, but not considered further on the wider highway network, as these vehicle movements are likely to already exist on the network and be intercepted from travelling a longer distance to access other stations such as Pentre-Bach. Any reductions on the network have not been considered, to present a robust position.

2.1.3 As also set out in the TA, the proposals include a 1,000 sqm local community hub, although this will largely serve residents of the site and accommodate pass-by and diverted trips that are already on the network. As such, it is unlikely that this use would generate new trips on the wider network, particularly during peak hours and as such, this was not considered within the forecast trip generation for the site within the TA. However, given the request from the highway authority, this has now been considered seperately, although the movements would be mainly into and out of the southern site access, given that the majority of these vehicles would already be on the network and diverting into the site before continuing on a journey.

2.1.4 The movements generated by the employment uses and residential uses would remain as set out in Section 5 of the TA and have not been reproduced within this note.

2.2 New Metro Station

2.2.1 As part of the overall strategic plans within the Replacement Local Development Plan (RLDP), a new metro station is also proposed. It is important to note that the proposals will facilitate the delivery of this new station, although the station would not be delivered as part of this planning application. It was not possible to find any publicly available information about the forecast usage of this new station and as such data on current patronage of the close by Pentre-Bach station has been analysed to ascertain a potential level of vehicle generation for this station.

2.2.2 To estimate how many passengers would use a new rail station in this location, it was considered appropriate to consider the use of the existing Pentre-Bach station. Estimates are provided of station usage across the UK via the Office of Rail and Road[1]. The data for Pentre-Bach station showed that from 2014 to 2024 the total number of entries and exits for passengers ranged from 19,100 to 33,496, excluding the reduction during Covid. As such, the highest level of entries and exits was in 2014-2015 with 33,496 and this level of movements has also been assumed to be generated for the new Metro station, given its proximity to Pentre-Bach.

2.2.3 For ease, if it is assumed that all passengers generate one entry and one exit (two total movements), this would equate to a total of 16,748 passengers per day. This in turn equates to 322 passengers per

[1] https://dataportal.orr.gov.uk/statistics/usage/estimates-of-station-usage

week, if assumed these are distributed evenly across all weeks of the year. For robustness, assuming that all these passengers travelled on a weekday this would equate to 65 passengers per day.

2.2.4 To consider how many passengers would arrive and depart in peak hours, further Central Government statistics have been considered. Based on the Department for Transport publication *"Rail passenger numbers and crowding on weekdays in major cities in England and Wales: 2023"* Figure 19 shows the *"Percentage of Passenger Arrivals and Departures by Hour, Regional Major Cities: autumn 2019, 2020, 2021, 2022 and 2023".*

2.2.5 This shows that across 2019 – 2023 the trend was broadly comparable, in that around 10% of journeys were made in the peak morning and evening hours. Applying this to the forecast number of daily passengers for the potential Metro station, this would equate to 7 passengers arriving and 7 passengers departing in peak hours. For further robustness, within this assessment, it has been assumed that all passengers arrive by car, which is extremely unlikely given the significant number of residential dwellings which would be located close by and which can access the station via walking and cycling. To further increase the level of robustness, an additional three taxi drop-offs have been assumed to arrive and depart in each of the peak hours, so the station is forecast to have 10 passengers in the peak hours, all of which arrive in the morning and depart in the evening.

2.2.6 Based on this analysis, the resultant trip generation is as set out in Table 2-1.

Table 2-1: Potential Metro Station - Vehicle Trip Generation

Time Period	Cars			Taxi Drop-offs			Total		
	In	Out	Two-way	In	Out	Two-way	In	Out	Two-way
AM Peak (08:00-09:00)	7	0	7	3	3	6	10	3	13
PM Peak (17:00-18:00)	0	7	7	3	3	6	3	10	13

2.2.7 A key point with this generation, as set out previously, is that the significant majority of these vehicle movements would not be net new trips on the network, as they would likely already be travelling to a station and now divert to this new station as it is closer to the journey origin point. As such, the station has the potential for a benefit on the wider network, through intercepting vehicle movements, as well as potentially generating a modal shift through people walking or cycling to this station rather than driving to another station, as this is now closer to their journey origin point. On this basis, these additional trips are considered extremely robust and these movements would not increase on the wider network, indeed movements through junctions on the wider network could reduce.

2.3 Community Hub

2.3.1 To consider the trips which could be generated by a community hub, a concept sketch layout which was produced by Hammond and issued to MTCBC for information has been used. This shows a local retail shop of 374 sqm, a farm shop / café of 278 sqm and two flexible units of 139 sqm each. As such, in order to appropriately consider these potential uses, trip generation analysis has considered the retail uses as local convenience stores and the flexible units as office space. The resultant trip generation for each of these has been ascertained through an analysis of the TRICS database.

Retail Uses

2.3.2 The TRICS category '01 - RETAIL/O - CONVENIENCE STORE' has been selected to derive trip rates for two potential retail units with a total floorspace of 652 sqm. The following search criteria have therefore been applied in TRICS to obtain surveys of similar uses:

- Vehicle Surveys

- Located in England and Wales (excluding London)
- Sites with a floorspace of between 100 sqm and 600 sqm
- Surveys from Monday to Friday
- Suburban Area, Edge of Town and Neighbourhood centre locations
- From 2016 onwards
- Manual removal of surveys undertaken during the Covid pandemic
- Manual removal of non-comparable sites with high levels of parking

2.3.3 The application of these parameters resulted in a total of 9 surveys of similar sites. A summary of the forecast vehicle trip rates and trip generation associated with 652 sqm of retail use is shown in Table 2-2. The full outputs of the TRICS analysis including the sites used can be found in Appendix A.

Table 2-2: Proposed Community Hub – Potential Retail Uses - Vehicle Trip Rates and Generation

Time Period	Trip Rates (per 100 sqm)			Trip Generation (652 sqm)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
AM Peak (07:00-08:00)	4.191	3.837	8.028	27	25	52
AM Peak (08:00-09:00)	6.236	6.084	12.320	41	40	81
PM Peak (16:00-17:00)	6.463	5.882	12.345	42	38	80
PM Peak (17:00-18:00)	7.271	7.751	15.022	47	51	98
12 Hours (07:00-19:00)	72.356	70.739	143.095	472	461	933

2.3.4 A key point with this generation, as set out previously, is that the significant majority of these vehicle movements would not be net new or primary trips on the network. Although vehicles are travelling to and from the site to the community hub, a significant proportion of these vehicles will already be on the highway network and change travel behaviour to visit the site. These are not new trips on the wider network and could be double counted on the wider highway network when considering impacts in isolation. Linked / Pass-by trips would also apply to the wider development scheme which could result in a secondary trip to the community hub. As such, there is overlap in the trip generation which could result in double counting vehicle movements and the community hub has the potential for a benefit on the wider network.

2.3.5 Each type of secondary trip is summarised as follows:

- **Pass-by trips** are vehicle movements that are already on the highway network adjacent to the site which turn into the site, then continue their journey after visiting the site. This may result in new movements at the site access locations but there would be no change or impact on the wider highway network.
- **Diverted trips** are also already on the local highway network but divert to the site from elsewhere on the highway network before continuing with their journey. On this basis, they are similar to pass-by trips, but the re-distribution of turning movements occurs further from the site and at the site accesses these would be new movements. These vehicles would then return on their journey after the visit but would not have technically been passing immediately adjacent to the site.
- **Transferred trips** would change the destination of a regular trip – i.e. a user may regularly visit similar facilities elsewhere and would change their behaviour to visit the community hub. This therefore would be a new trip to the site and additional movements at the site access junction, but would not result in new trips on the wider network. Transferred trips would also provide a benefit on the network as typically these journeys are shorter in length, as users would choose to travel to a more convenient (typically closer) location. There is also the potential for a modal transfer from people currently travelling by vehicle to a site further away but can now walk or

cycle (for example from the surrounding residential areas). This would lead to a reduction in vehicle movements on the network.

- **Linked or Contained Trips** in this context would relate to those movements already generated to / from the residential uses on the site, but travel to the community use by car as part of the journey. Or they could be contained within the overall site between the two uses.

2.3.6 There is overlap between each of these factors (and linked / contained trips), however all these trips would be included within the trip generation as obtained using TRICS. These trips are already on the highway network and are therefore being double counted within Table 2-2, if considering impacts on the network. The potential benefit from transferred trips (including any modal shift) is also not considered within these tables or on the wider highway network.

2.3.7 As such, to reflect the secondary trips, all movements have been generated and shown going into and out of the southern site access (detailed in Section 3), but a deduction of 72% of the vehicle movements has been assumed for the straight on movements, which has been reflected at the junctions on the wider highway network.

2.3.8 This is based on a study of convenience store trip generation by Ghezawi et al. (1998) as summarised in TRICS Research Report 14/1, which is considered the most appropriate research in relation to the potential site uses in the Community Hub. This sets out an average percentage of pass-by trips to the stores at 72% for these uses, with a range of 61% to 85%. As such, for robustness, the average of this range has been applied, particularly given that no further reductions have been considered for linked or contained trips.

2.3.9 As such, in terms of net new primary vehicle generation, this has been set out in Table 2-3.

Table 2-3: Proposed Community Hub – Potential Retail Uses - Vehicle Trip Generation – primary trips

Time Period	Trip Generation (652 sqm)		
	Arrivals	Departures	Two-way
AM Peak (07:00-08:00)	8	7	15
AM Peak (08:00-09:00)	11	11	22
PM Peak (16:00-17:00)	12	11	23
PM Peak (17:00-18:00)	13	14	27
12 Hours (07:00-19:00)	132	129	261

2.3.10 The retail uses are also forecast to generate 1 HGV arrival and 1 HGV departure in the AM peak hour (0800-0900).

Flexible Units (Office Use)

2.3.11 The TRICS category '02 - EMPLOYMENT/A - OFFICE' has been selected to derive trip rates for two potential flexible units with a total floorspace of 278 sqm, assuming these were occupied for office uses. The following search criteria have therefore been applied in TRICS to obtain surveys of similar uses:

- Vehicle Surveys
- Located in England and Wales (excluding London)
- Sites with a floorspace of up to 400 sqm
- Surveys from Monday to Friday
- Suburban Area, Edge of Town and Neighbourhood centre locations
- From 2010 onwards (to increase number of surveys)
- Manual removal of surveys undertaken during the Covid pandemic

2.3.12 The application of these parameters resulted in a total of four surveys of similar sites. A summary of the forecast vehicle trip rates and trip generation associated with 278 sqm of office use is shown in Table 2-4. The full outputs of the TRICS analysis including the sites used can be found in Appendix B.

Table 2-4: Proposed Community Hub – Potential Office Uses - Vehicle Trip Rates and Generation

Time Period	Trip Rates (per 100 sqm)			Trip Generation (278 sqm)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
AM Peak (07:00-08:00)	1.556	0.333	1.889	4	1	5
AM Peak (08:00-09:00)	1.778	0.167	1.945	5	0	5
PM Peak (16:00-17:00)	0.444	1.389	1.833	1	4	5
PM Peak (17:00-18:00)	0.444	2.667	3.111	1	7	8
12 Hours (07:00-19:00)	9.221	9.613	18.834	26	27	53

Total Community Hub

2.3.13 The resultant total community hub trip generation for primary trips is shown in Table 2-5.

Table 2-5: Proposed Total Community Hub - Vehicle Trip Generation

Time Period	Retail Use (Primary)			Flexible Units (office)			Total		
	In	Out	Two-way	In	Out	Two-way	In	Out	Two-way
AM Peak (07:00-08:00)	8	7	15	4	1	5	12	8	20
AM Peak (08:00-09:00)	11	11	22	5	0	5	16	11	27
PM Peak (16:00-17:00)	12	11	23	1	4	5	13	15	28
PM Peak (17:00-18:00)	13	14	27	1	7	8	14	21	35
12 Hours (07:00-19:00)	132	129	261	26	27	53	158	156	314

2.4 Total Overall Scheme Trip Generation

2.4.1 The total overall trip generation for the scheme for each use and overall is shown in Table 2-6. The trip generation for the employment and residential elements is set out in the TA in Section 5. This table does not include the Metro vehicle movements, as this does not form part of the proposed development, although the site will facilitate the delivery of this.

Table 2-6: Proposed Total Development - Vehicle Trip Generation

Time Period	Residential			Employment			Community Hub			Total		
	In	Out	Two-way	In	Out	Two-way	In	Out	Two-way	In	Out	Two-way
AM Peak (07:00-08:00)	37	142	179	25	7	32	12	8	20	74	157	231
AM Peak (08:00-09:00)	63	188	251	40	22	62	16	11	27	119	221	340
PM Peak (16:00-17:00)	118	68	186	29	36	65	13	15	28	160	119	279
PM Peak (17:00-18:00)	168	75	243	19	38	57	14	21	35	201	134	335
12 Hours (07:00-19:00)	1012	1029	2041	320	319	639	158	156	314	1490	1504	2994

2.5 Net Change and Impacts

2.5.1 Based on the trip generation analysis, the forecast net change in vehicle generation resulting from the proposed redevelopment of the existing industrial site use for a residential led scheme is set out in Table 2-7.

Table 2-7: Net Change in Vehicle Generation

Time Period	Existing Industrial Use			Proposed Uses			Net Change		
	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak (07:00-08:00)	179	52	231	74	157	231	**-105**	**105**	**0**
AM Peak (08:00-09:00)	230	83	313	119	221	340	**-111**	**138**	**27**
PM Peak (16:00-17:00)	102	169	271	160	119	279	**58**	**-50**	**8**
PM Peak (17:00-18:00)	59	222	281	201	134	335	**142**	**-88**	**54**
12 Hours (07:00-19:00)	1476	1473	2949	1490	1504	2994	**14**	**31**	**45**

2.5.2 The revised TRICS analysis shows that the proposals are forecast to generate a minimal increase in vehicle movements in the peak hours. This is a slight increase over and above the change shown in the TA.

2.5.3 However, a further revision from the TA is that the employment use trips are now being generated from the site to the east of Merthyr Road, which will reduce the impact on Merthyr Road and at the junctions to the south, as well as reducing the movements into and out of the site accesses from that shown in the TA, which assumed all trips generated from the same site for robustness.

2.5.4 The revised analysis shows the scheme would have the same level of vehicle movements in the 0700-0800 peak hour. They are forecast to have a minor increase of 8 vehicles in the 1600-1700 peak hour and an increase of 27 vehicles in the 0800-0900 peak hour. They are forecast to increase movements in the 1700-1800 peak hour by 54 movements. The proposals are slightly increase vehicle movements over a 12 hour period by 45 movements.

2.5.5 The proposals would also significantly reduce the level of HGV movements that could be generated by the existing industrial use onto the surrounding network.

2.5.6 As such, the forecast minimal change in vehicle movements on the network would not have an unacceptable impact on road safety or a material impact on highway capacity on the surrounding network in comparison to the lawful planning use fallback position.

2.5.7 However, the distribution and assignment of vehicles, as well as the likely impacts have been considered in the following section.

3. TRIP DISTRIBUTION AND ASSIGNMENT AND TRAFFIC IMPACTS

The highway authority needs to see the data separately for the sites as each site will effect different arms of the roundabouts. For full transparency we need the data to be provided correctly and see how it effects the network.

3.1 Trip Distribution

3.1.1 Trip distribution analysis has been undertaken to demonstrate the number of vehicle movements on the network at the key local junctions.

3.1.2 From the main land parcel to the west of Merthyr Road, for the residential use, the majority of movements will travel south from the site along Merthyr Road towards the Pentrebach Roundabout (72%). The remaining 28% will route north along Merthyr Road to either Abercanaid (8%) or north on Plymouth Street (20%) via the Merthyr Road / A4054 roundabout. The distribution percentages are shown in the traffic flow diagrams in Appendix C.

3.1.3 For the community hub retail use, as the majority of trips pass by the site, for ease, these have assumed to be generated equally from each direction from the southern site access. The baseline flow data shows broadly even directional flows in the peak hours, therefore this is considered an

appropriate assumption. All movements have been shown turning into and out of the southern access, with a resultant decrease in straight ahead movements to reflect the diverted pass-by vehicles. At the roundabouts to the north and south, all movements have then been distributed based on the census data distribution used for the residential use.

3.1.4 The community hub office use has also been distributed assuming an even distribution of movements at the southern site access, with all movements at the roundabouts to the north and south distributed based on the census data distribution used for the residential use.

3.1.5 The Metro use has been distributed into and out of the northern site access only. These movements have all been assumed to travel to and from the north, as the Pentre-Bach station is located to the south and it is assumed that users from the south would continue to utilise the existing station.

3.1.6 The employment use is now shown accessed from the Triangle Business Park access road. All vehicles have been distributed north and south along this access road to connect to the roundabouts at each end. Given the location of the access along the Triangle Business Park access road, none of the site traffic has been assumed to use Merthyr Road, as this would be a longer route to connect to the southbound A4060 or A4054. The residential distribution has been applied to all movements on the wider network. The number of movements through the Pentrebach roundabout has been reduced from the analysis presented in the TA, as vehicles travelling north on the A4060 would not travel through that roundabout.

3.1.7 For ease of analysis, the vehicle movements for the residential uses from the land parcel to the west of Merthyr Road have been assumed to be split evenly across the two site access junctions, with the same distribution of turning movements at each junction.

3.2 Trip Assignment

3.2.1 The resultant assigned traffic associated with all elements of the proposed development have been provided in the traffic flow diagrams in Appendix C at the proposed site accesses on Merthyr Road and at the roundabouts either end.

3.2.2 The peak hours of the development have been applied to the peak background traffic hours for further robustness.

3.2.3 These flows have been used to consider the suitability of the junction arrangements for accommodating the forecast traffic flows.

3.2.4 All HGV movements in relation to the employment site have been assumed to travel to and from the south on the Triangle Business Park access road to connect to the A4060. All HGV movements for the community hub retail use have been assumed to travel to and from the south to connect to the A4060.

3.2.5 The assigned development traffic has been added to the 2035 future baseline flows and the committed development traffic (both presented in the TA). Thee resultant 2035 future year base plus committed plus development flows in the AM and PM peak hours are set out within the revised traffic flow diagrams in Appendix C.

3.2.6 As within the TA, for a robust worst case, the peak hours for the development, committed and base traffic flows have been assumed to be the same.

3.3 Traffic Impacts

3.3.1 Based on the vehicle assignment at the Pentrebach roundabout, the proposals are forecast to send 223 vehicle movements through the junction in the AM peak hour (0800-0900) and 224 vehicle movements through the junction in the PM peak hour (1700-1800).

3.3.2 The existing site is forecast to generate 313 vehicle movements in the AM peak hour and 281 vehicle movements in the PM peak hour (1700-1800). Assuming 72% of movements travel to and from the south, as per the census analysis, this would equate to 225 movements in the AM peak and 202 movements in the PM peak through the Pentrebach roundabout.

3.3.3 As such, it is forecast that the development would generate a maximum change of just 23 vehicle movements through the Pentrebach roundabout.

3.3.4 As shown in Section 2 of the TA, the Pentrebach Roundabout has a base flow of 2,803 vehicle movements through the junction in the network PM peak hour. As such, this would equate to a change of 0.8% in traffic flows through the junction. This would be imperceptible and well within daily variations of change at this location. This would not have a material impact on the operational capacity of the network and is well within the 5% threshold levels stated within TAN18.

3.3.5 Based on the vehicle assignment at the Pentrebach Road / Merthyr Road roundabout to the north of the site, the proposals are forecast to send 115 vehicle movements through the junction in the AM peak hour (0800-0900) and 102 vehicle movements through the junction in the PM peak hour (1700-1800).

3.3.6 The existing site is forecast to generate 313 vehicle movements in the AM peak hour and 281 vehicle movements in the PM peak hour (1700-1800). Deducting the traffic travelling through the Pentrebach roundabout, this would equate to 88 movements in the AM peak and 79 movements in the PM peak through the Pentrebach roundabout.

3.3.7 As such, it is forecast that the development would generate a maximum change of just 23 vehicle movements through the Pentrebach roundabout.

3.3.8 This level of increase over the existing fallback position would also be imperceptible and well within daily variations of change at this location. This would not have a material impact on the operational capacity of the network.

3.3.9 Given these junctions would have the highest level of through flow from the development, and there is a minimal change in vehicle movements compared to the existing lawful use, it is considered that the development would not have a material impact on the operation of the wider network. No junction assessments of the wider highway network are therefore considered to be required.

3.3.10 However, for robustness, an assessment of the site access junctions on Merthyr Road has been undertaken in the following section to ensure that these are suitable for accommodating the revised forecast level of traffic generation and that vehicles do not block back to the southbound through lane from the right turn lanes.

4. JUNCTION MODELLING

4.1 Overview

4.1.1 Junction assessments have been undertaken at the site access junctions, using the models presented in the TA. The full details of the modelling inputs and parameters are set out in the TA in Section 7 and

this all remains valid. The only change to the models relates to the traffic matrices, which have been taken from the turning movements shown in the traffic flow diagrams. The peak hours shown are the observed peak hours from the base traffic surveys, as presented in the TA.

4.2 Northern site access

4.2.1 The results of the northern site access / Merthyr Road junction modelling are summarised in Table 4-1. The full outputs are included in Appendix D.

Table 4-1: 2035 Base + Com + Dev Junctions 10 Summary – Northern Site Access Junction

Arm	AM Peak (08:00 – 09:00)				PM Peak (16:00 – 17:00)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm B – Site Access	0.3	11.21	0.25	B	0.1	8.98	0.12	A
Arm C – Merthyr Road Right Turn	0.0	5.94	0.03	A	0.0	6.03	0.05	A

4.2.2 Table 4-1 demonstrates that the northern site access junction is forecast to operate well within its maximum theoretical capacity (RFC of 0.9) with a maximum RFC of 0.25 reported in the AM peak on the Site Access arm. There is minimal queueing or delay shown in the model, and no queuing shown in the right turn lane.

4.3 Southern site access

4.3.1 The results of the southern site access / Merthyr Road junction modelling are summarised in Table 4-2. The full outputs are included in Appendix E.

Table 4-2: 2035 Base + Com + Dev Junctions 10 Summary – Southern Site Access Junction

Arm	AM Peak (08:00 – 09:00)				PM Peak (16:00 – 17:00)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm B – Site Access	0.5	12.49	0.34	B	0.3	10.37	0.23	B
Arm C – Merthyr Road Right Turn	0.1	6.18	0.06	A	0.1	6.34	0.08	A

4.3.2 Table 4-2 demonstrates that the southern site access junction is forecast to operate well within its maximum theoretical capacity (RFC of 0.9) with a maximum RFC of 0.34 reported in the AM peak on the Site Access arm. There is minimal queueing or delay shown in the model, and no queuing shown in the right turn lane.

4.3.3 Sensitivity analysis

4.3.4 The results of the sensitivity analysis, based on the northern access junction parameters are summarised in Table 4-2. This sensitivity analysis assumes that all traffic turns to and from a single junction into the site for additional robustness. The full outputs are included in Appendix F.

Table 4-3: 2035 Base + Com + Dev Junctions 10 Summary – Sensitivity Analysis

Arm	AM Peak (08:00 – 09:00)				PM Peak (16:00 – 17:00)			
	Queue (veh)	Max Delay (s)	RFC	LOS	Queue (veh)	Max Delay (s)	RFC	LOS
Arm B – Site Access	1.5	21.30	0.60	C	0.6	13.32	0.37	B
Arm C – Merthyr Road Right Turn	0.1	6.40	0.09	A	0.2	6.90	0.14	A

4.3.5 Table 4-3 demonstrates that the site access junction is forecast to operate well within its maximum theoretical capacity (RFC of 0.9), even if it is assumed all vehicle movements travelled to and from a single junction. A maximum RFC of 0.6 is reported in the AM peak on the Site Access arm. There is minimal queueing shown in the model, and no queuing shown on the right turn lane. As such, the site access arrangements would operate within capacity, with the right turn lane appropriately

accommodating all movements without blocking back or impacting through vehicle movements, even if all movements travelled into and out of the site via a single access.

4.3.6 The results of the junction modelling show that the site accesses are appropriate for accommodating the proposed development traffic, with minimal queuing and delay for development traffic turning in and out of the site. There would be no impact on through movements on Merthyr Road from right turning traffic.

4.3.7 The addition of the traffic generated by the other supplementary uses on the site would therefore not change the conclusions set out in the TA.

4.3.8 The development would not have an unacceptable impact on road safety, or a material impact on the operation of the highway.

5. MITIGATION

As set out in table 3-1 of the TA items 1,2,4,5,6 & 9 shall be carried out under a s278 agreement. Item 3 cannot be carried out as works will be carried out on 3rd party land. Also, the works be carried out on the underpass cannot be carried out. Item 5 – to reiterate footways along Merthyr Road need to be a minimum of 2.0m and 3.0m for cycle routes. Item 7 would then be carried out via a s106 agreement. Additionally, the work to the bus stops/shelters will also be carried out under the s278 agreement.

5.1.1 As discussed in the meeting with the highway authority, Table 3-1 of the TA does not set out the details of the proposed mitigation. The proposed mitigation is set out in Section 8.6 of the TA. This was discussed at the meeting with the highway authority, but for ease, the list of proposed mitigation is set out as follows, which has been amended from the TA based on these discussions.

- Significant active travel route improvements. This includes widening the existing footway on Merthyr Road to a 3m wide shared footway / cycleway. A further active travel route will run down the western boundary of the site, as well as connect to the main site accesses in turn linking to the route on Merthyr Road.
- New toucan crossing adjacent to the bridge on the unnamed road to the north of the site.
- Two upgraded / relocated signal controlled crossings on Merthyr Road. These would be upgraded to toucan crossings.
- New dropped kerb crossing on the Triangle Business Park Road.
- New bus shelter and infrastructure for relocated northbound bus stop and seating for the southern southbound shelter.

5.1.2 As requested by the highway authority, all of the improvements can be delivered via a S278 agreement.

5.1.3 In addition, the applicant will deliver a formal active travel route connecting Merthyr Road to the Pentrebach Retail Park, as an upgrade to the existing informal route. This is outside of the adopted highway and the land ownership of the applicant but within land owned by MTCBC. The relevant mechanism to deliver this is being discussed with MTCBC. It is envisaged this would be a short section of footway around the Pentrebach Retail Park turning head to connect to the existing footway (less than 30m in length). This provides significant placemaking benefits connecting the site with the existing retail and employment areas.

5.1.4 The full details of the location and layout of any new or improved crossings will be discussed and included as part of a S278 technical approval process.

5.1.5 The potential underpass contribution set out within the TA has been removed from the list of mitigation, as it is not possible to deliver this improvement on third party land.

5.1.6 The above list of mitigation was discussed and agreed in the meeting with the highway authority and is appropriate for the scheme, given this is a brownfield site requiring remediation. As such, we trust this remains acceptable.

6. SUMMARY AND CONCLUSION

6.1.1 This Transport Note has considered the consultation response from the local highway authority in full and provides the further information as requested. In particular, this relates to trip generation and traffic impacts, as well as clarifications around mitigation.

6.1.2 The note demonstrates that the traffic flows generated by the site can be suitably accommodated at the site accesses without queuing or delay, as well as at the key junctions near to the site without a material impact on their operation.

6.1.3 As such, based on the further information provided we trust that the highway authority is able to provide a positive recommendation on the application.

Appendix A TRICS Outputs – Retail Use

Filtering Summary:

Land Use: 01/O RETAIL/CONVENIENCE STORE

Selected Trip Rate Calculation Parameter Range: 100 - 600 sqm GFA

Actual Trip Rate Calculation Parameter Range: 50 - 1056 sqm GFA

Date Range: Minimum: 01/01/2016 Maximum: 28/06/2024

Parking Spaces Range: All Surveys Selected

Population Within 500m Range: 2236 6529

Days of the week selected:

Monday	2
Thursday	2
Tuesday	1
Wednesday	2

Main Location Types selected:

Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	4
Suburban Area (PPS6 Out of Centre)	2

Inclusion of Servicing Vehicles Counts:

Servicing Vehicle Excluded	3
Servicing Vehicles Included	4

Population <1 Mile ranges selected:

10,001 to 15,000	2
15,001 to 20,000	1
20,001 to 25,000	1
25,001 to 50,000	3

Population <5 Mile ranges selected:

125,001 to 250,000	3
25,001 to 50,000	1
250,001 to 500,000	2
5,001 to 25,000	1

Car Ownership <5 Mile ranges selected:

0.6 to 1.0	4
1.1 to 1.5	3

PTAL Rating:

No PTAL Present	7

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 01 - RETAIL

Category: O - CONVENIENCE STORE

Selected Vehicle Type: Total Vehicles

Selected regions and areas:

02	**SOUTH EAST**		
	ES	EAST SUSSEX	1 day
	WS	WEST SUSSEX	2 days
03	**SOUTH WEST**		
	BC	BOURNEMOUTH CHRISTCHURCH & POOLE	1 day
06	**WEST MIDLANDS**		
	ST	STAFFORDSHIRE	1 day
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	LS	LEEDS	1 day
	NY	NORTH YORKSHIRE	1 day
09	**NORTH**		
	TW	TYNE & WEAR	1 day
10	**WALES**		
	CF	CARDIFF	1 day

This section displays the number of survey days per TRICS® sub-region in the selected set.

Primary Filtering Selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter:	GFA
Actual Range:	50 to 1056 (units:sqm)
Range Selected by User:	100 to 600 (units:sqm)
Parking Spaces Range:	0 - 127

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	01/01/16 to 28/06/24

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Friday	2 days
Monday	2 days
Thursday	2 days
Tuesday	1 days
Wednesday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	9
Direction ATC Count	0

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines

Selected Locations:

Edge of Town	1 days
Neighbourhood Centre (PPS6 Local Centre)	5 days
Suburban Area (PPS6 Out of Centre)	3 days

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

High Street	3 days
Residential Zone	6 days

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicle Counts:

Servicing vehicles Excluded	4 days
Servicing vehicles Included	5 days

Secondary Filtering Selection:

Use Class:

E(a)	9 surveys

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

1000 - 10409

Population within 1 mile:

10,001 to 15,000	2 surveys
15,001 to 20,000	1 surveys
20,001 to 25,000	1 surveys
25,001 to 50,000	4 surveys
5,001 to 10,000	1 surveys

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

125,001 to 250,000	4 surveys
25,001 to 50,000	1 surveys
250,001 to 500,000	3 surveys
5,001 to 25,000	1 surveys

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	6 surveys
1.1 to 1.5	3 surveys

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Petrol filling station:

Unknown	9 surveys

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No	9 surveys

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	9 surveys

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

COVID-19 Restrictions:

No

1	**BC-01-O-01**	**SAINSBURY'S LOCAL**	**BOURNEMOUTH CHRISTCHURCH & POOLE**

WIMBORNE ROAD
BOURNEMOUTH
WINTON
Neighbourhood Centre (PPS6 Local Centre)
High Street
Gross floor area: 550 sqm
Survey date: Thursday 29/09/2022 Survey Type: Manual

2	**CF-01-O-02**	**CO-OPERATIVE**	**CARDIFF**

HEOL-Y-DERI
CARDIFF
RHIWBINA
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Gross floor area: 350 sqm
Survey date: Friday 07/10/2016 Survey Type: Manual

3	**ES-01-O-02**	**SAINSBURY'S LOCAL**	**EAST SUSSEX**

VICTORIA DRIVE
EASTBOURNE
Edge of Town
Residential Zone
Gross floor area: 574 sqm
Survey date: Tuesday 19/03/2024 Survey Type: Manual

4	**LS-01-O-01**	**CO-OPERATIVE**	**LEEDS**

AINSTY ROAD
WETHERBY
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Gross floor area: 539 sqm
Survey date: Monday 26/09/2016 Survey Type: Manual

5	**NY-01-O-03**	**CO-OPERATIVE**	**NORTH YORKSHIRE**

FOREST ROAD
NORTHALLERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Gross floor area: 305 sqm
Survey date: Monday 19/09/2016 Survey Type: Manual

6	**ST-01-O-01**	**TESCO EXPRESS**	**STAFFORDSHIRE**

STAFFORD ROAD
CANNOCK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Gross floor area: 404 sqm
Survey date: Wednesday 14/06/2023 Survey Type: Manual

7	**TW-01-O-02**	**CO-OPERATIVE**	**TYNE & WEAR**

ETHEL TERRACE
SUNDERLAND
CASTLETOWN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Gross floor area: 330 sqm
Survey date: Friday 07/04/2017 Survey Type: Manual

8	**WS-01-O-01**	**CO-OP**	**WEST SUSSEX**

GORING ROAD
WORTHING

GORING-BY-SEA
Neighbourhood Centre (PPS6 Local Centre)
High Street
Gross floor area: 500 sqm
Survey date: Thursday 12/05/2022 Survey Type: Manual

9 **WS-01-O-02** **SAINSBURY'S LOCAL** **WEST SUSSEX**
GORING ROAD
WORTHING
GORING-BY-SEA
Neighbourhood Centre (PPS6 Local Centre)
High Street
Gross floor area: 409 sqm
Survey date: Wednesday 11/05/2022 Survey Type: Manual

DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
SD-01-O-01	23-09-2016	Not comparable parking

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

Total Vehicles

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00	**1**	**500**	**1.200**	**0.800**	**2.000**
06:00-07:00	**8**	**454**	**1.625**	**1.460**	**3.085**
07:00-08:00	**9**	**440**	**4.191**	**3.837**	**8.028**
08:00-09:00	**9**	**440**	**6.236**	**6.084**	**12.320**
09:00-10:00	**9**	**440**	**5.377**	**5.024**	**10.401**
10:00-11:00	**9**	**440**	**5.453**	**5.352**	**10.805**
11:00-12:00	**9**	**440**	**5.428**	**5.453**	**10.881**
12:00-13:00	**9**	**440**	**6.564**	**6.514**	**13.078**
13:00-14:00	**9**	**440**	**6.059**	**5.579**	**11.638**
14:00-15:00	**9**	**440**	**6.312**	**6.413**	**12.725**
15:00-16:00	**9**	**440**	**6.211**	**6.084**	**12.295**
16:00-17:00	**9**	**440**	**6.463**	**5.882**	**12.345**
17:00-18:00	**9**	**440**	**7.271**	**7.751**	**15.022**
18:00-19:00	**9**	**440**	**6.791**	**6.766**	**13.557**
19:00-20:00	**9**	**440**	**5.201**	**5.201**	**10.402**
20:00-21:00	**9**	**440**	**3.812**	**4.494**	**8.306**
21:00-22:00	**9**	**440**	**2.626**	**3.030**	**5.656**
22:00-23:00	**5**	**487**	**0.780**	**0.944**	**1.724**
23:00-00:00	**3**	**438**	**0.000**	**0.228**	**0.228**
Total Rates:			**87.600**	**86.896**	**174.496**

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	100 - 600 (units: sqm)
Survey date date range:	19/09/2016 - 19/03/2024
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	9
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

Cyclists

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00	**1**	**500**	**0.000**	**0.000**	**0.000**
06:00-07:00	**8**	**454**	**0.083**	**0.083**	**0.166**
07:00-08:00	**9**	**440**	**0.202**	**0.202**	**0.404**
08:00-09:00	**9**	**440**	**0.227**	**0.177**	**0.404**
09:00-10:00	**9**	**440**	**0.227**	**0.177**	**0.404**
10:00-11:00	**9**	**440**	**0.151**	**0.126**	**0.277**
11:00-12:00	**9**	**440**	**0.353**	**0.379**	**0.732**
12:00-13:00	**9**	**440**	**0.328**	**0.328**	**0.656**
13:00-14:00	**9**	**440**	**0.278**	**0.278**	**0.556**
14:00-15:00	**9**	**440**	**0.379**	**0.404**	**0.783**
15:00-16:00	**9**	**440**	**0.353**	**0.328**	**0.681**
16:00-17:00	**9**	**440**	**0.555**	**0.555**	**1.110**
17:00-18:00	**9**	**440**	**0.252**	**0.303**	**0.555**
18:00-19:00	**9**	**440**	**0.404**	**0.404**	**0.808**
19:00-20:00	**9**	**440**	**0.227**	**0.177**	**0.404**
20:00-21:00	**9**	**440**	**0.151**	**0.252**	**0.403**
21:00-22:00	**9**	**440**	**0.076**	**0.101**	**0.177**
22:00-23:00	**5**	**487**	**0.123**	**0.123**	**0.246**
23:00-00:00	**3**	**438**	**0.000**	**0.000**	**0.000**
Total Rates:			**4.369**	**4.397**	**8.766**

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	100 - 600 (units: sqm)
Survey date date range:	19/09/2016 - 19/03/2024
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	9
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

PSVs

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00	**1**	**500**	**0.000**	**0.000**	**0.000**
06:00-07:00	**8**	**454**	**0.000**	**0.000**	**0.000**
07:00-08:00	**9**	**440**	**0.000**	**0.000**	**0.000**
08:00-09:00	**9**	**440**	**0.000**	**0.000**	**0.000**
09:00-10:00	**9**	**440**	**0.000**	**0.000**	**0.000**
10:00-11:00	**9**	**440**	**0.000**	**0.000**	**0.000**
11:00-12:00	**9**	**440**	**0.000**	**0.000**	**0.000**
12:00-13:00	**9**	**440**	**0.000**	**0.000**	**0.000**
13:00-14:00	**9**	**440**	**0.000**	**0.000**	**0.000**
14:00-15:00	**9**	**440**	**0.000**	**0.000**	**0.000**
15:00-16:00	**9**	**440**	**0.000**	**0.000**	**0.000**
16:00-17:00	**9**	**440**	**0.000**	**0.000**	**0.000**
17:00-18:00	**9**	**440**	**0.000**	**0.000**	**0.000**
18:00-19:00	**9**	**440**	**0.000**	**0.000**	**0.000**
19:00-20:00	**9**	**440**	**0.000**	**0.000**	**0.000**
20:00-21:00	**9**	**440**	**0.000**	**0.000**	**0.000**
21:00-22:00	**9**	**440**	**0.000**	**0.000**	**0.000**
22:00-23:00	**5**	**487**	**0.000**	**0.000**	**0.000**
23:00-00:00	**3**	**438**	**0.000**	**0.000**	**0.000**
Total Rates:			**0.000**	**0.000**	**0.000**

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	100 - 600 (units: sqm)
Survey date date range:	N/A - N/A
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	9
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

OGVs

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00	**1**	**500**	**0.000**	**0.000**	**0.000**
06:00-07:00	**8**	**454**	**0.083**	**0.028**	**0.111**
07:00-08:00	**9**	**440**	**0.101**	**0.126**	**0.227**
08:00-09:00	**9**	**440**	**0.151**	**0.101**	**0.252**
09:00-10:00	**9**	**440**	**0.076**	**0.151**	**0.227**
10:00-11:00	**9**	**440**	**0.050**	**0.050**	**0.100**
11:00-12:00	**9**	**440**	**0.050**	**0.025**	**0.075**
12:00-13:00	**9**	**440**	**0.000**	**0.025**	**0.025**
13:00-14:00	**9**	**440**	**0.000**	**0.000**	**0.000**
14:00-15:00	**9**	**440**	**0.000**	**0.000**	**0.000**
15:00-16:00	**9**	**440**	**0.025**	**0.025**	**0.050**
16:00-17:00	**9**	**440**	**0.000**	**0.000**	**0.000**
17:00-18:00	**9**	**440**	**0.000**	**0.000**	**0.000**
18:00-19:00	**9**	**440**	**0.000**	**0.000**	**0.000**
19:00-20:00	**9**	**440**	**0.000**	**0.000**	**0.000**
20:00-21:00	**9**	**440**	**0.000**	**0.000**	**0.000**
21:00-22:00	**9**	**440**	**0.000**	**0.000**	**0.000**
22:00-23:00	**5**	**487**	**0.000**	**0.000**	**0.000**
23:00-00:00	**3**	**438**	**0.000**	**0.000**	**0.000**
Total Rates:			**0.536**	**0.531**	**1.067**

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	100 - 600 (units: sqm)
Survey date date range:	19/09/2016 - 19/03/2024
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	9
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

Taxis

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00	**1**	**500**	**0.000**	**0.000**	**0.000**
06:00-07:00	**8**	**454**	**0.000**	**0.000**	**0.000**
07:00-08:00	**9**	**440**	**0.050**	**0.050**	**0.100**
08:00-09:00	**9**	**440**	**0.025**	**0.025**	**0.050**
09:00-10:00	**9**	**440**	**0.076**	**0.076**	**0.152**
10:00-11:00	**9**	**440**	**0.101**	**0.101**	**0.202**
11:00-12:00	**9**	**440**	**0.126**	**0.126**	**0.252**
12:00-13:00	**9**	**440**	**0.101**	**0.101**	**0.202**
13:00-14:00	**9**	**440**	**0.076**	**0.076**	**0.152**
14:00-15:00	**9**	**440**	**0.025**	**0.025**	**0.050**
15:00-16:00	**9**	**440**	**0.076**	**0.076**	**0.152**
16:00-17:00	**9**	**440**	**0.025**	**0.025**	**0.050**
17:00-18:00	**9**	**440**	**0.025**	**0.025**	**0.050**
18:00-19:00	**9**	**440**	**0.101**	**0.101**	**0.202**
19:00-20:00	**9**	**440**	**0.076**	**0.076**	**0.152**
20:00-21:00	**9**	**440**	**0.076**	**0.076**	**0.152**
21:00-22:00	**9**	**440**	**0.000**	**0.000**	**0.000**
22:00-23:00	**5**	**487**	**0.000**	**0.000**	**0.000**
23:00-00:00	**3**	**438**	**0.000**	**0.000**	**0.000**
Total Rates:			**0.959**	**0.959**	**1.918**

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	100 - 600 (units: sqm)
Survey date date range:	19/09/2016 - 19/03/2024
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	9
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

Cars

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00	**1**	**500**	**0.600**	**0.200**	**0.800**
06:00-07:00	**8**	**454**	**1.294**	**1.184**	**2.478**
07:00-08:00	**9**	**440**	**3.282**	**2.954**	**6.236**
08:00-09:00	**9**	**440**	**5.352**	**5.175**	**10.527**
09:00-10:00	**9**	**440**	**4.696**	**4.368**	**9.064**
10:00-11:00	**9**	**440**	**4.645**	**4.544**	**9.189**
11:00-12:00	**9**	**440**	**4.519**	**4.620**	**9.139**
12:00-13:00	**9**	**440**	**5.327**	**5.100**	**10.427**
13:00-14:00	**9**	**440**	**5.100**	**4.822**	**9.922**
14:00-15:00	**9**	**440**	**5.453**	**5.403**	**10.856**
15:00-16:00	**9**	**440**	**5.630**	**5.453**	**11.083**
16:00-17:00	**9**	**440**	**5.731**	**5.302**	**11.033**
17:00-18:00	**9**	**440**	**6.589**	**7.018**	**13.607**
18:00-19:00	**9**	**440**	**6.135**	**6.084**	**12.219**
19:00-20:00	**9**	**440**	**4.645**	**4.671**	**9.316**
20:00-21:00	**9**	**440**	**3.459**	**4.039**	**7.498**
21:00-22:00	**9**	**440**	**2.323**	**2.701**	**5.024**
22:00-23:00	**5**	**487**	**0.780**	**0.944**	**1.724**
23:00-00:00	**3**	**438**	**0.000**	**0.152**	**0.152**
Total Rates:			**75.560**	**74.734**	**150.294**

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	100 - 600 (units: sqm)
Survey date date range:	19/09/2016 - 19/03/2024
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	9
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

LGVs

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00	**1**	**500**	**0.600**	**0.600**	**1.200**
06:00-07:00	**8**	**454**	**0.248**	**0.248**	**0.496**
07:00-08:00	**9**	**440**	**0.757**	**0.707**	**1.464**
08:00-09:00	**9**	**440**	**0.631**	**0.707**	**1.338**
09:00-10:00	**9**	**440**	**0.303**	**0.252**	**0.555**
10:00-11:00	**9**	**440**	**0.379**	**0.379**	**0.758**
11:00-12:00	**9**	**440**	**0.353**	**0.328**	**0.681**
12:00-13:00	**9**	**440**	**0.732**	**0.808**	**1.540**
13:00-14:00	**9**	**440**	**0.480**	**0.429**	**0.909**
14:00-15:00	**9**	**440**	**0.656**	**0.682**	**1.338**
15:00-16:00	**9**	**440**	**0.303**	**0.404**	**0.707**
16:00-17:00	**9**	**440**	**0.454**	**0.328**	**0.782**
17:00-18:00	**9**	**440**	**0.404**	**0.480**	**0.884**
18:00-19:00	**9**	**440**	**0.278**	**0.303**	**0.581**
19:00-20:00	**9**	**440**	**0.227**	**0.227**	**0.454**
20:00-21:00	**9**	**440**	**0.151**	**0.151**	**0.302**
21:00-22:00	**9**	**440**	**0.202**	**0.227**	**0.429**
22:00-23:00	**5**	**487**	**0.000**	**0.000**	**0.000**
23:00-00:00	**3**	**438**	**0.000**	**0.000**	**0.000**
Total Rates:			**7.158**	**7.260**	**14.418**

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	100 - 600 (units: sqm)
Survey date date range:	19/09/2016 - 19/03/2024
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	9
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

Motorcycles

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00	**1**	**500**	**0.000**	**0.000**	**0.000**
06:00-07:00	**8**	**454**	**0.000**	**0.000**	**0.000**
07:00-08:00	**9**	**440**	**0.000**	**0.000**	**0.000**
08:00-09:00	**9**	**440**	**0.076**	**0.076**	**0.152**
09:00-10:00	**9**	**440**	**0.227**	**0.177**	**0.404**
10:00-11:00	**9**	**440**	**0.278**	**0.278**	**0.556**
11:00-12:00	**9**	**440**	**0.379**	**0.353**	**0.732**
12:00-13:00	**9**	**440**	**0.404**	**0.480**	**0.884**
13:00-14:00	**9**	**440**	**0.404**	**0.252**	**0.656**
14:00-15:00	**9**	**440**	**0.177**	**0.303**	**0.480**
15:00-16:00	**9**	**440**	**0.177**	**0.126**	**0.303**
16:00-17:00	**9**	**440**	**0.252**	**0.227**	**0.479**
17:00-18:00	**9**	**440**	**0.252**	**0.227**	**0.479**
18:00-19:00	**9**	**440**	**0.278**	**0.278**	**0.556**
19:00-20:00	**9**	**440**	**0.252**	**0.252**	**0.504**
20:00-21:00	**9**	**440**	**0.126**	**0.227**	**0.353**
21:00-22:00	**9**	**440**	**0.101**	**0.101**	**0.202**
22:00-23:00	**5**	**487**	**0.000**	**0.000**	**0.000**
23:00-00:00	**3**	**438**	**0.000**	**0.076**	**0.076**
Total Rates:			**3.383**	**3.433**	**6.816**

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	100 - 600 (units: sqm)
Survey date date range:	19/09/2016 - 19/03/2024
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	9
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix B TRICS Outputs – Office Use

Filtering Summary:

Land Use: 02/A EMPLOYMENT/OFFICE

Selected Trip Rate Calculation Parameter Range: 118 - 500 sqm GFA

Actual Trip Rate Calculation Parameter Range: 118 - 175000 sqm GFA

Date Range: Minimum: 01/01/2010 Maximum: 27/06/2024

Parking Spaces Range: All Surveys Selected

Population Within 500m Range: All Surveys Selected

Days of the week selected:

Monday	1
Thursday	1
Wednesday	1

Main Location Types selected:

Edge of Town	1
Suburban Area (PPS6 Out of Centre)	2

Inclusion of Servicing Vehicles Counts:

Servicing Vehicle Excluded	1
Servicing Vehicles Included	2

Population <1 Mile ranges selected:

15,001 to 20,000	2
25,001 to 50,000	1

Population <5 Mile ranges selected:

125,001 to 250,000	1
250,001 to 500,000	1
75,001 to 100,000	1

Car Ownership <5 Mile ranges selected:

0.6 to 1.0	3

PTAL Rating:

No PTAL Present	3

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 02 - EMPLOYMENT

Category: A - OFFICE

Selected Vehicle Type: Total Vehicles

Selected regions and areas:

04	**EAST ANGLIA**		
	NF	NORFOLK	1 day
08	**NORTH WEST**		
	GM	GREATER MANCHESTER	1 day
09	**NORTH**		
	TW	TYNE & WEAR	1 day
10	**WALES**		
	BG	BRIDGEND	1 day

This section displays the number of survey days per TRICS® sub-region in the selected set.

Primary Filtering Selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter:	GFA
Actual Range:	118 to 175000 (units:sqm)
Range Selected by User:	118 to 500 (units:sqm)
Parking Spaces Range:	0 - 2923

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	01/01/10 to 27/06/24

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Friday	1 days
Monday	1 days
Thursday	1 days
Wednesday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	4
Direction ATC Count	0

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines

Selected Locations:

Edge of Town	1 days
Neighbourhood Centre (PPS6 Local Centre)	1 days
Suburban Area (PPS6 Out of Centre)	2 days

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Commercial Zone	1 days
Industrial Zone	1 days
Residential Zone	2 days

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicle Counts:

Servicing vehicles Excluded	1 days
Servicing vehicles Included	3 days

Secondary Filtering Selection:

Use Class:

Not Known	4 surveys

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

0 - 0

Population within 1 mile:

15,001 to 20,000	2 surveys
25,001 to 50,000	2 surveys

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

125,001 to 250,000	1 surveys
250,001 to 500,000	1 surveys
500,001 or More	1 surveys
75,001 to 100,000	1 surveys

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 surveys
1.1 to 1.5	1 surveys

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Petrol filling station:

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No	4 surveys

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	4 surveys

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

COVID-19 Restrictions:

Yes - At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

1 **BG-02-A-01** **HAULAGE COMPANY** **BRIDGEND**
KENT ROAD
BRIDGEND
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Gross floor area: 300 sqm
Survey date: Thursday 06/05/2021 Survey Type: Unknown

2 **GM-02-A-10** **ACCOUNTANTS** **GREATER MANCHESTER**
CHORLEY NEW ROAD
BOLTON
HEATON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Gross floor area: 500 sqm
Survey date: Monday 19/04/2021 Survey Type: Unknown

3 **NF-02-A-04** **BUILDING CONSULTANT** **NORFOLK**
WHITING ROAD
NORWICH
Edge of Town
Commercial Zone
Gross floor area: 500 sqm
Survey date: Wednesday 13/11/2019 Survey Type: Unknown

4 **TW-02-A-09** **OFFICE** **TYNE & WEAR**
FERNWOOD ROAD
NEWCASTLE UPON TYNE
JESMOND
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Gross floor area: 500 sqm
Survey date: Friday 28/06/2024 Survey Type: Unknown

DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
AN-02-A-05	11-10-2016	ireland
ES-02-A-11	17-11-2015	covid

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

Total Vehicles

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	**4**	**450**	**1.556**	**0.333**	**1.889**
08:00-09:00	**4**	**450**	**1.778**	**0.167**	**1.945**
09:00-10:00	**4**	**450**	**1.444**	**0.278**	**1.722**
10:00-11:00	**4**	**450**	**0.556**	**0.389**	**0.945**
11:00-12:00	**4**	**450**	**0.500**	**0.500**	**1.000**
12:00-13:00	**4**	**450**	**1.000**	**1.111**	**2.111**
13:00-14:00	**4**	**450**	**0.611**	**0.556**	**1.167**
14:00-15:00	**4**	**450**	**0.333**	**0.667**	**1.000**
15:00-16:00	**4**	**450**	**0.111**	**0.556**	**0.667**
16:00-17:00	**4**	**450**	**0.444**	**1.389**	**1.833**
17:00-18:00	**4**	**450**	**0.444**	**2.667**	**3.111**
18:00-19:00	**4**	**450**	**0.444**	**1.000**	**1.444**
19:00-20:00					
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			**9.221**	**9.613**	**18.834**

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	118 - 500 (units: sqm)
Survey date date range:	13/11/2019 - 28/06/2024
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

Cyclists

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	4	450	0.111	0.000	0.111
08:00-09:00	4	450	0.056	0.000	0.056
09:00-10:00	4	450	0.056	0.000	0.056
10:00-11:00	4	450	0.056	0.056	0.112
11:00-12:00	4	450	0.056	0.056	0.112
12:00-13:00	4	450	0.000	0.056	0.056
13:00-14:00	4	450	0.222	0.167	0.389
14:00-15:00	4	450	0.167	0.167	0.334
15:00-16:00	4	450	0.056	0.111	0.167
16:00-17:00	4	450	0.000	0.056	0.056
17:00-18:00	4	450	0.000	0.056	0.056
18:00-19:00	4	450	0.000	0.056	0.056
19:00-20:00					
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.780	0.781	1.561

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	118 - 500 (units: sqm)
Survey date date range:	13/11/2019 - 28/06/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

PSVs

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	4	450	0.000	0.000	0.000
08:00-09:00	4	450	0.000	0.000	0.000
09:00-10:00	4	450	0.000	0.000	0.000
10:00-11:00	4	450	0.000	0.000	0.000
11:00-12:00	4	450	0.000	0.000	0.000
12:00-13:00	4	450	0.000	0.000	0.000
13:00-14:00	4	450	0.000	0.000	0.000
14:00-15:00	4	450	0.000	0.000	0.000
15:00-16:00	4	450	0.000	0.000	0.000
16:00-17:00	4	450	0.000	0.000	0.000
17:00-18:00	4	450	0.000	0.000	0.000
18:00-19:00	4	450	0.000	0.000	0.000
19:00-20:00					
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.000	0.000	0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	118 - 500 (units: sqm)
Survey date date range:	N/A - N/A
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

OGVs

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	4	450	0.056	0.056	0.112
08:00-09:00	4	450	0.000	0.000	0.000
09:00-10:00	4	450	0.000	0.000	0.000
10:00-11:00	4	450	0.000	0.000	0.000
11:00-12:00	4	450	0.056	0.056	0.112
12:00-13:00	4	450	0.056	0.056	0.112
13:00-14:00	4	450	0.000	0.000	0.000
14:00-15:00	4	450	0.056	0.056	0.112
15:00-16:00	4	450	0.000	0.000	0.000
16:00-17:00	4	450	0.000	0.000	0.000
17:00-18:00	4	450	0.000	0.000	0.000
18:00-19:00	4	450	0.000	0.000	0.000
19:00-20:00					
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.224	0.224	0.448

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	118 - 500 (units: sqm)
Survey date date range:	13/11/2019 - 28/06/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

Taxis

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	4	450	0.000	0.000	0.000
08:00-09:00	4	450	0.000	0.000	0.000
09:00-10:00	4	450	0.000	0.000	0.000
10:00-11:00	4	450	0.000	0.000	0.000
11:00-12:00	4	450	0.000	0.000	0.000
12:00-13:00	4	450	0.056	0.056	0.112
13:00-14:00	4	450	0.000	0.000	0.000
14:00-15:00	4	450	0.000	0.000	0.000
15:00-16:00	4	450	0.000	0.000	0.000
16:00-17:00	4	450	0.000	0.000	0.000
17:00-18:00	4	450	0.000	0.000	0.000
18:00-19:00	4	450	0.000	0.000	0.000
19:00-20:00					
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.056	0.056	0.112

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Parameter Summary:

Trip rate parameter range selected:	118 - 500 (units: sqm)
Survey date date range:	19/04/2021 - 19/04/2021
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

Cars

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	4	450	1.444	0.222	1.666
08:00-09:00	4	450	1.722	0.167	1.889
09:00-10:00	4	450	1.333	0.167	1.500
10:00-11:00	4	450	0.333	0.167	0.500
11:00-12:00	4	450	0.278	0.333	0.611
12:00-13:00	4	450	0.722	0.833	1.555
13:00-14:00	4	450	0.556	0.444	1.000
14:00-15:00	4	450	0.167	0.500	0.667
15:00-16:00	4	450	0.111	0.556	0.667
16:00-17:00	4	450	0.389	1.333	1.722
17:00-18:00	4	450	0.389	2.556	2.945
18:00-19:00	4	450	0.444	1.000	1.444
19:00-20:00					
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			7.888	8.278	16.166

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	118 - 500 (units: sqm)
Survey date date range:	13/11/2019 - 28/06/2024
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

LGVs

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	4	450	0.056	0.056	0.112
08:00-09:00	4	450	0.000	0.000	0.000
09:00-10:00	4	450	0.111	0.111	0.222
10:00-11:00	4	450	0.222	0.222	0.444
11:00-12:00	4	450	0.167	0.111	0.278
12:00-13:00	4	450	0.167	0.167	0.334
13:00-14:00	4	450	0.056	0.111	0.167
14:00-15:00	4	450	0.111	0.111	0.222
15:00-16:00	4	450	0.000	0.000	0.000
16:00-17:00	4	450	0.056	0.056	0.112
17:00-18:00	4	450	0.056	0.056	0.112
18:00-19:00	4	450	0.000	0.000	0.000
19:00-20:00					
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			1.002	1.001	2.003

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

Trip rate parameter range selected:	118 - 500 (units: sqm)
Survey date date range:	13/11/2019 - 28/06/2024
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

Motorcycles

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	4	450	0.000	0.000	0.000
08:00-09:00	4	450	0.056	0.000	0.056
09:00-10:00	4	450	0.000	0.000	0.000
10:00-11:00	4	450	0.000	0.000	0.000
11:00-12:00	4	450	0.000	0.000	0.000
12:00-13:00	4	450	0.000	0.000	0.000
13:00-14:00	4	450	0.000	0.000	0.000
14:00-15:00	4	450	0.000	0.000	0.000
15:00-16:00	4	450	0.000	0.000	0.000
16:00-17:00	4	450	0.000	0.000	0.000
17:00-18:00	4	450	0.000	0.056	0.056
18:00-19:00	4	450	0.000	0.000	0.000
19:00-20:00					
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.056	0.056	0.112

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter Summary:

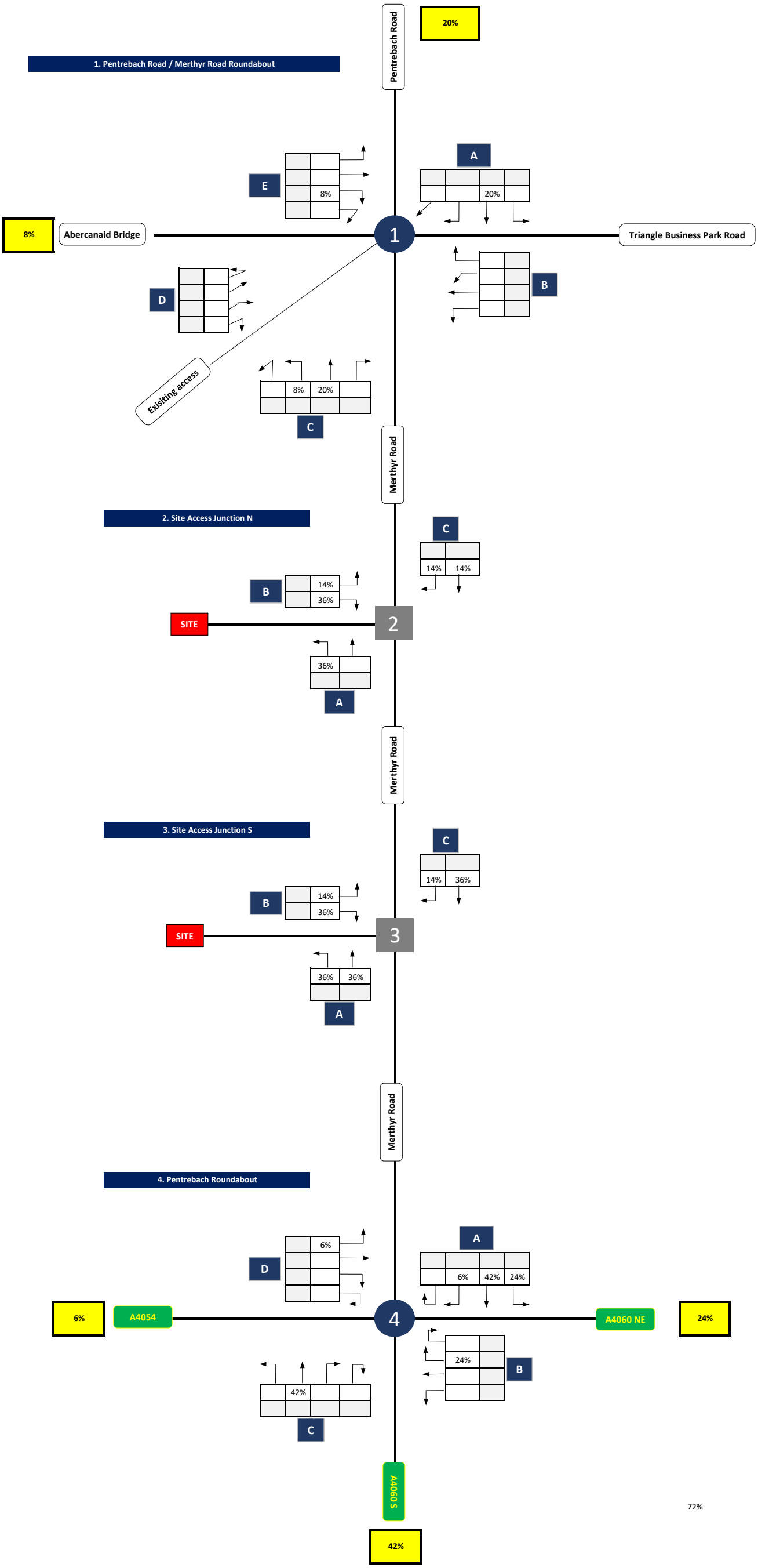
Trip rate parameter range selected:	118 - 500 (units: sqm)
Survey date date range:	19/04/2021 - 19/04/2021
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix C Revised Traffic Flow Diagrams

KEY

12	Total Vehicles
12	HGVs



Apex TRANSPORT PLANNING

NOTES:

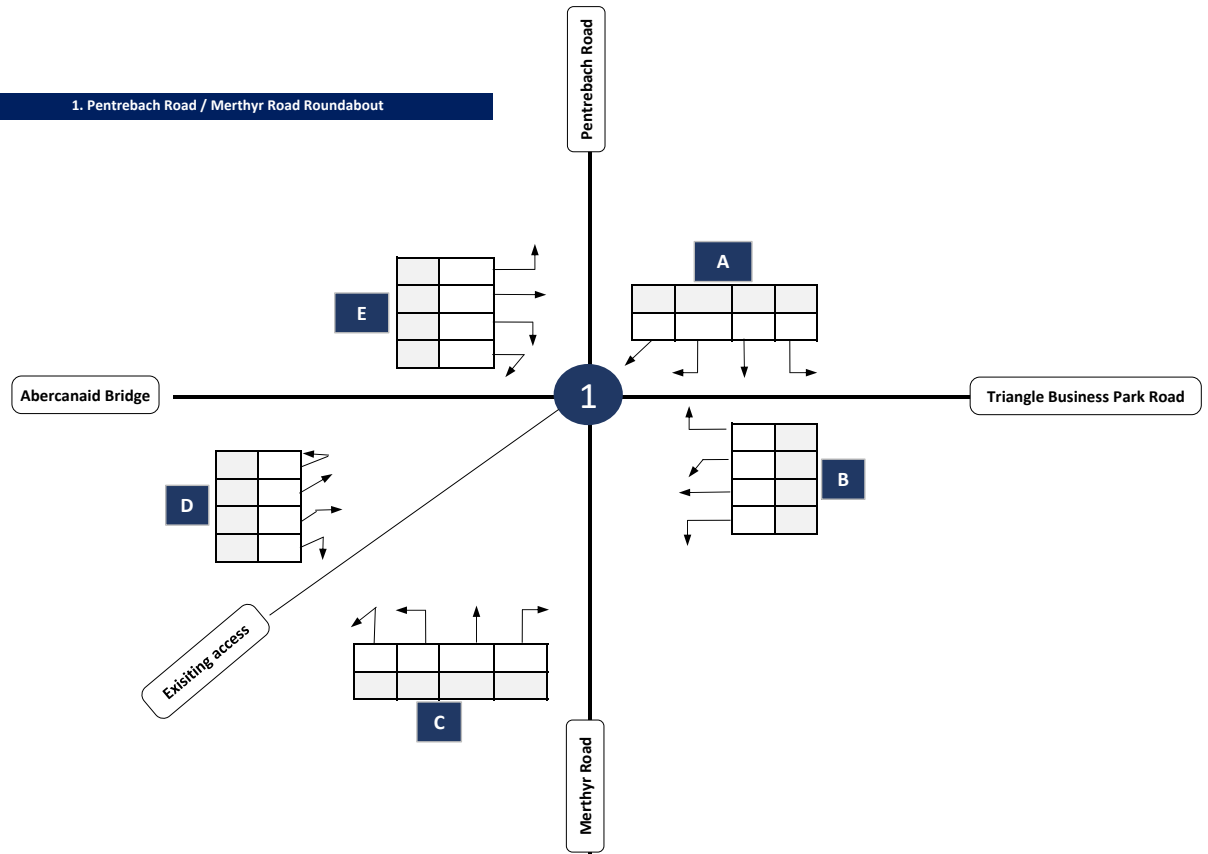
1	Merthyr Road and Abercanaid	8%
2	Plymouth Street North (Via Merthyr)	20%
3	A470 North (Via A4060 South)	18%
4	A470 South (Via A4060 South)	24%
5	A4054 (South)	6%
6	A4060 North (Via Merthyr Road South)	24%

PROJECT: Hoover Site, Merthyr Tydfil		**PLAN TITLE:** Traffic Figure Diagrams	
TIME PERIOD: All Time Periods		Trip Distribution	
DATE: October 2025	**JOB NUMBER:** C24 - 127	**DRAWN BY:** SD	**FIGURE:** 001

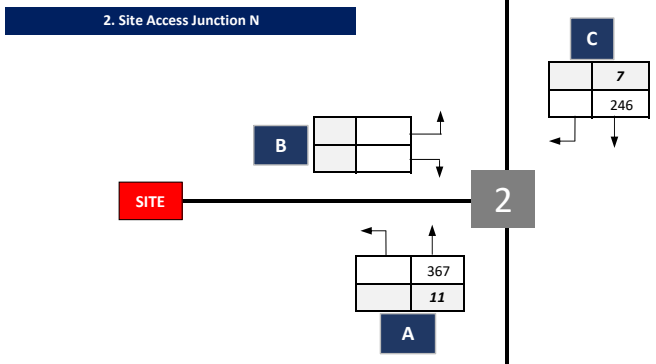
KEY

12	Total Vehicles
12	HGVs

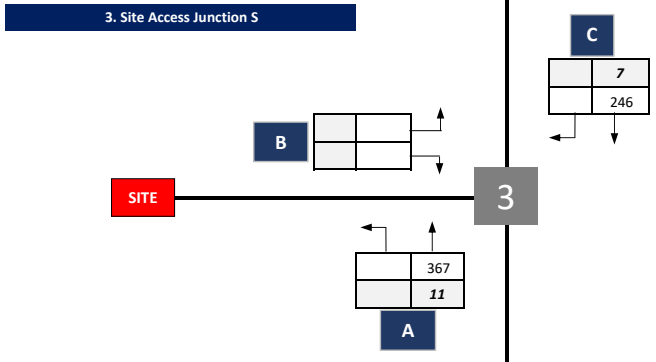
1. Pentrebach Road / Merthyr Road Roundabout



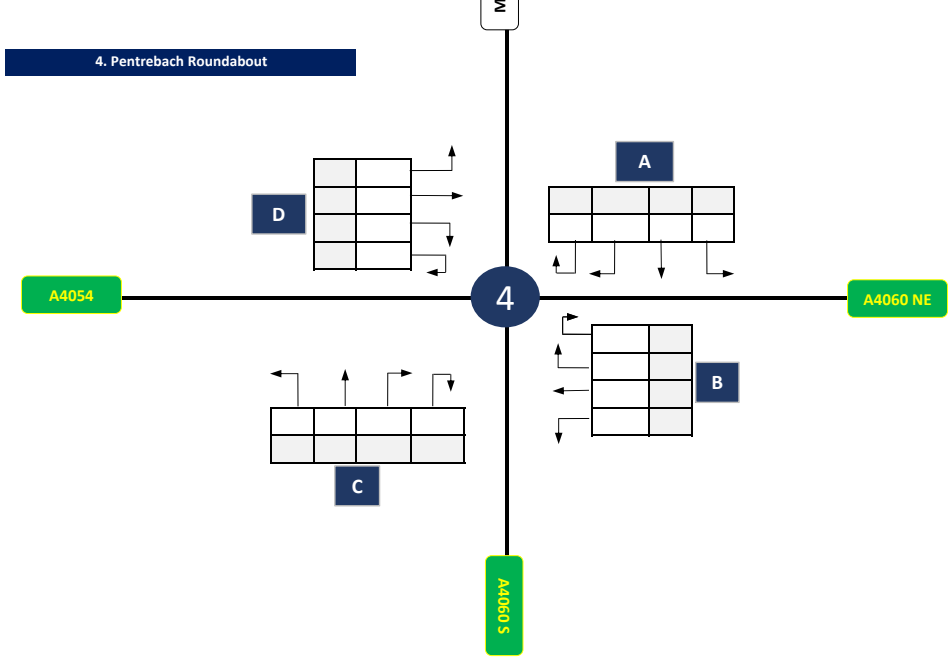
2. Site Access Junction N



3. Site Access Junction S



4. Pentrebach Roundabout



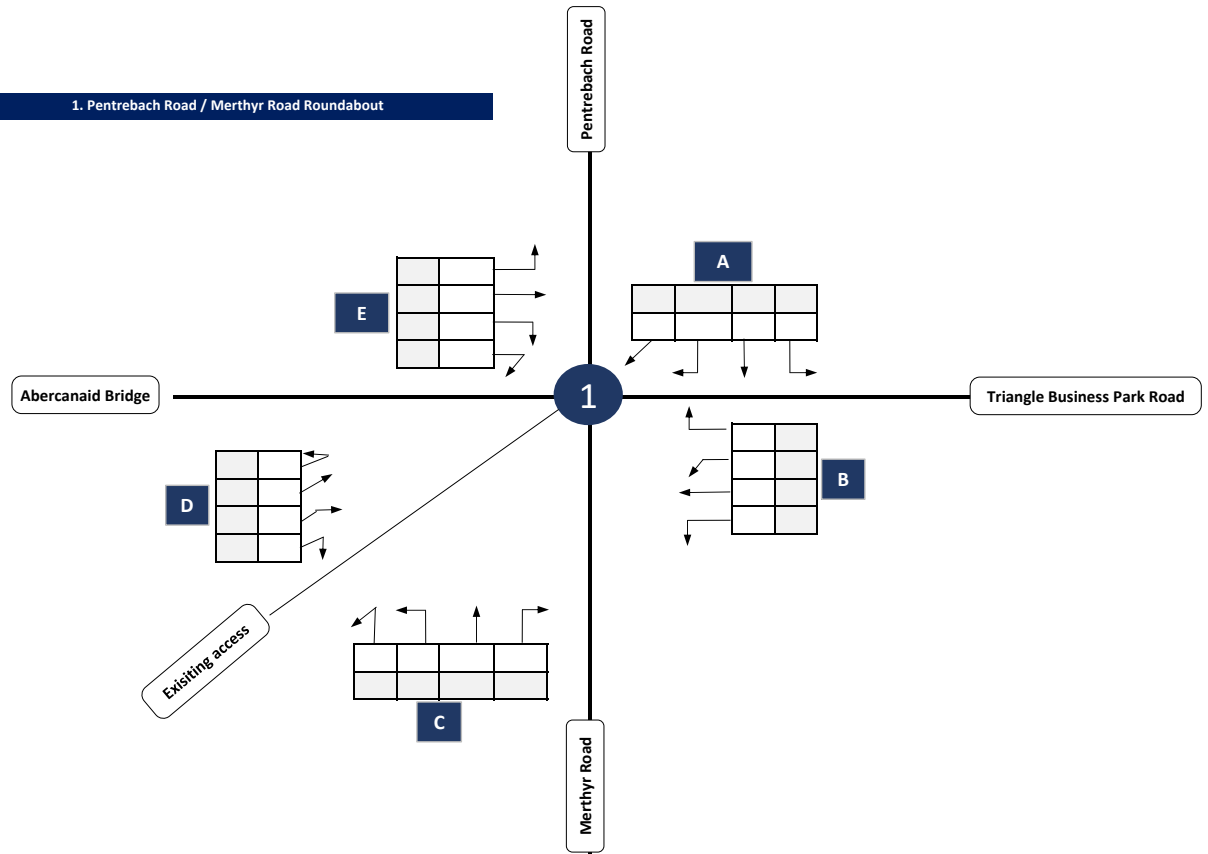
Apex TRANSPORT PLANNING

NOTES:	**PROJECT:** Hoover Site, Merthyr Tydfil	**PLAN TITLE:** Traffic Figure Diagrams	
	TIME PERIOD: AM Peak (08:00 - 09:00)	2025 Baseline Flows	
	DATE: October 2025	**JOB NUMBER:** C24 - 127	**DRAWN BY:** SD / **FIGURE:** 002

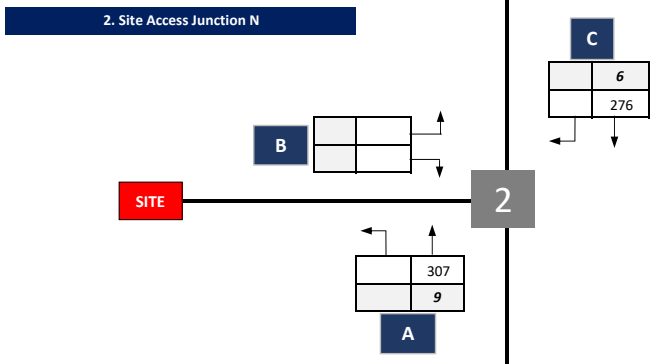
KEY

12	Total Vehicles
12	HGVs

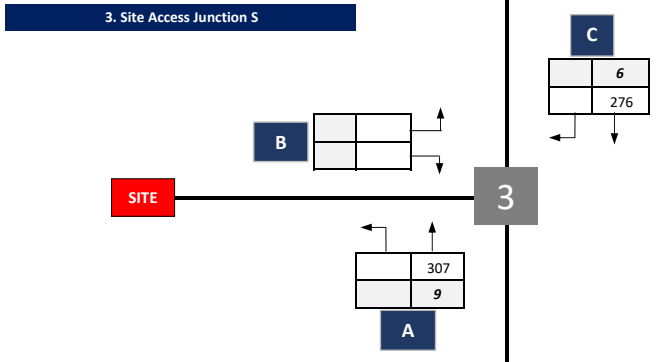
1. Pentrebach Road / Merthyr Road Roundabout



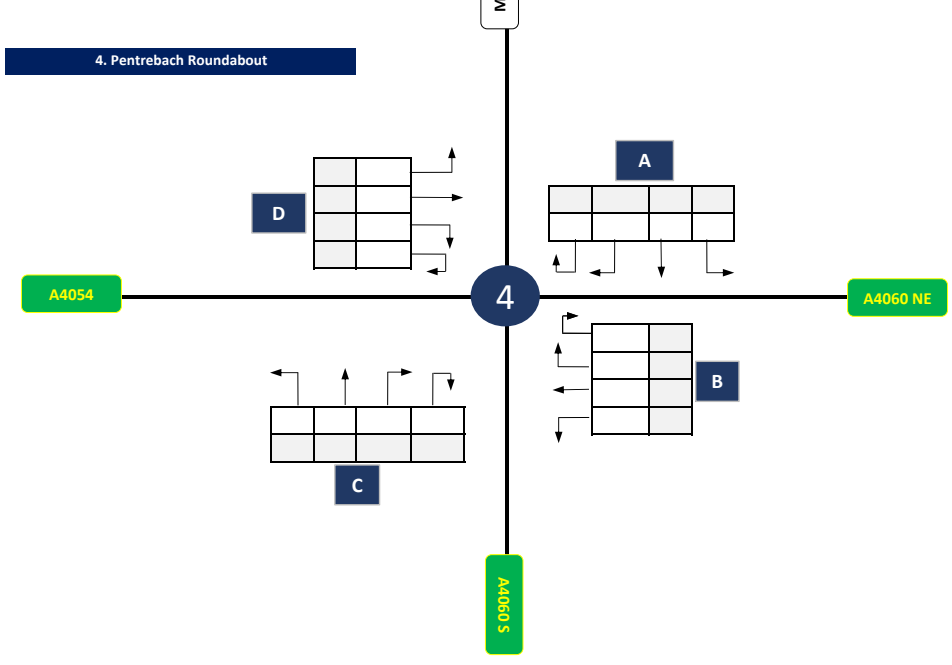
2. Site Access Junction N



3. Site Access Junction S



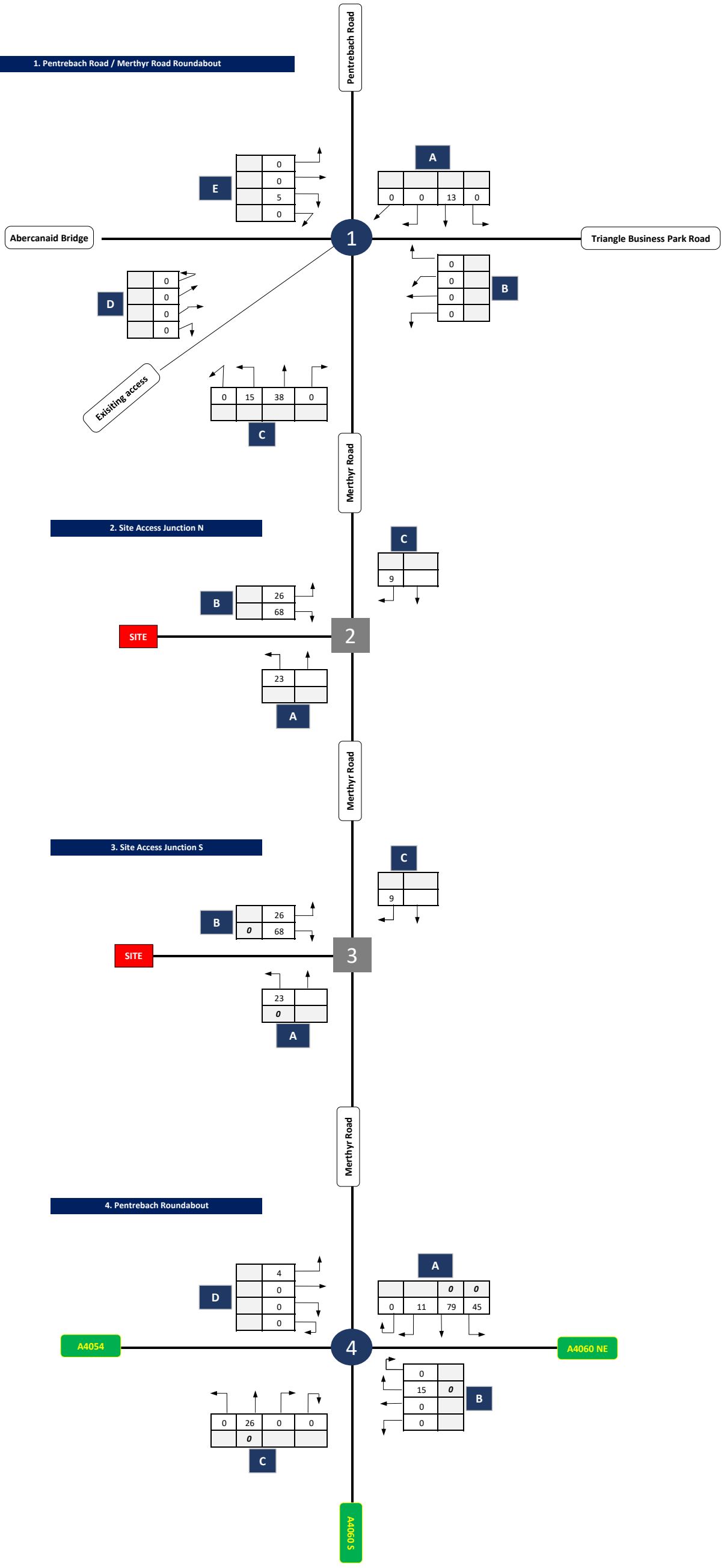
4. Pentrebach Roundabout



TRANSPORT PLANNING	NOTES:	PROJECT: Hoover Site, Merthyr Tydfil	PLAN TITLE: Traffic Figure Diagrams
		TIME PERIOD: PM Peak (16:00 - 17:00)	2025 Baseline Flows
		DATE: October 2025 / JOB NUMBER: C24 - 127	DRAWN BY: SD / FIGURE: 003

KEY

12	Total Vehicles
12	HGVs



departures	188
arrivals	64

NOTES:

	Arrivals	Departures
Total	63	188
HGVs		

PROJECT: Hoover Site, Merthyr Tydfil

PLAN TITLE: Traffic Figure Diagrams

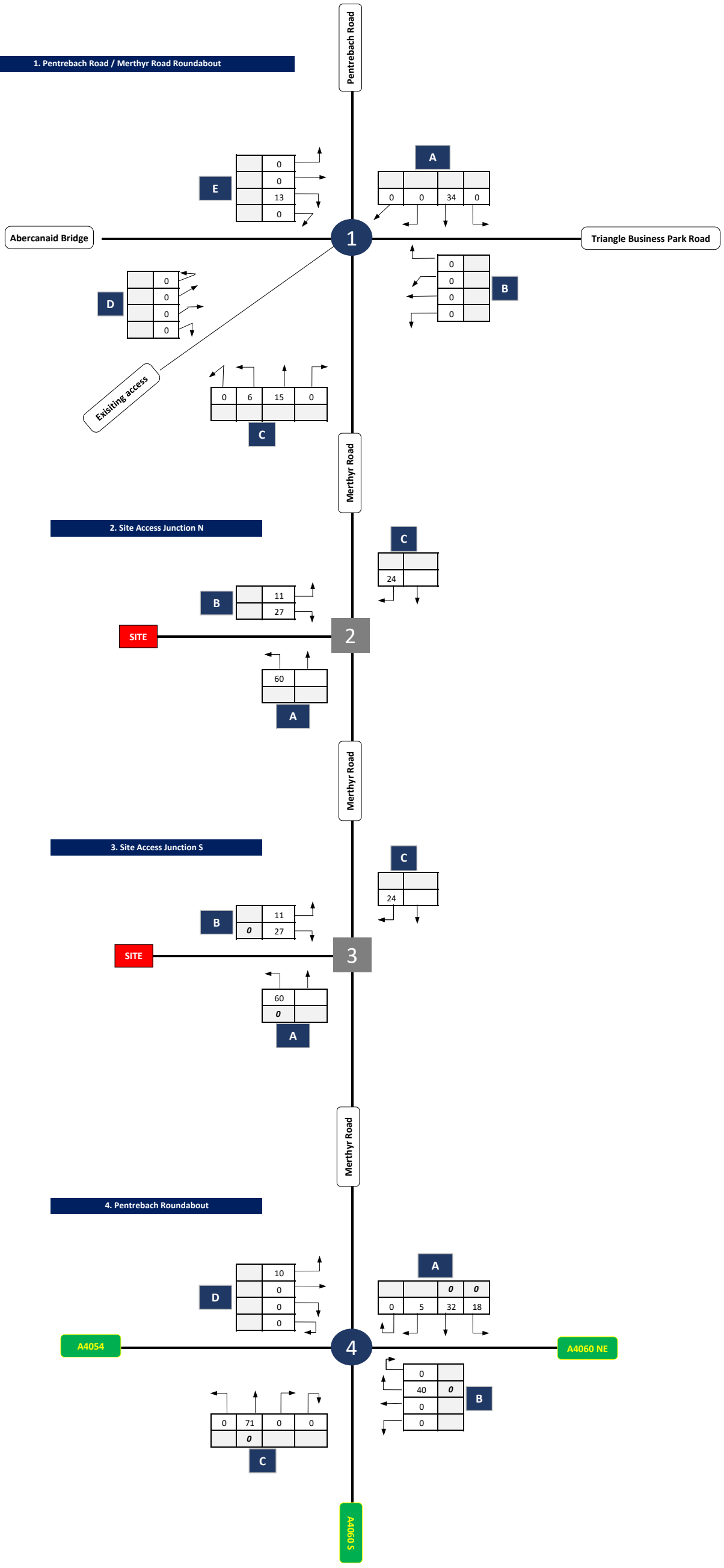
TIME PERIOD: AM Peak (08:00 - 09:00)

Development Flows - Residential

DATE:	JOB NUMBER:	DRAWN BY:	FIGURE:
October 2025	C24 - 127	SD	004

KEY

12	Total Vehicles
12	HGVs



departures 76
arrivals 168

	Arrivals	Departures
AM Peak	168	75
HGVs		

NOTES:

PROJECT: Hoover Site, Merthyr Tydfil

TIME PERIOD: PM Peak (17:00 - 18:00)

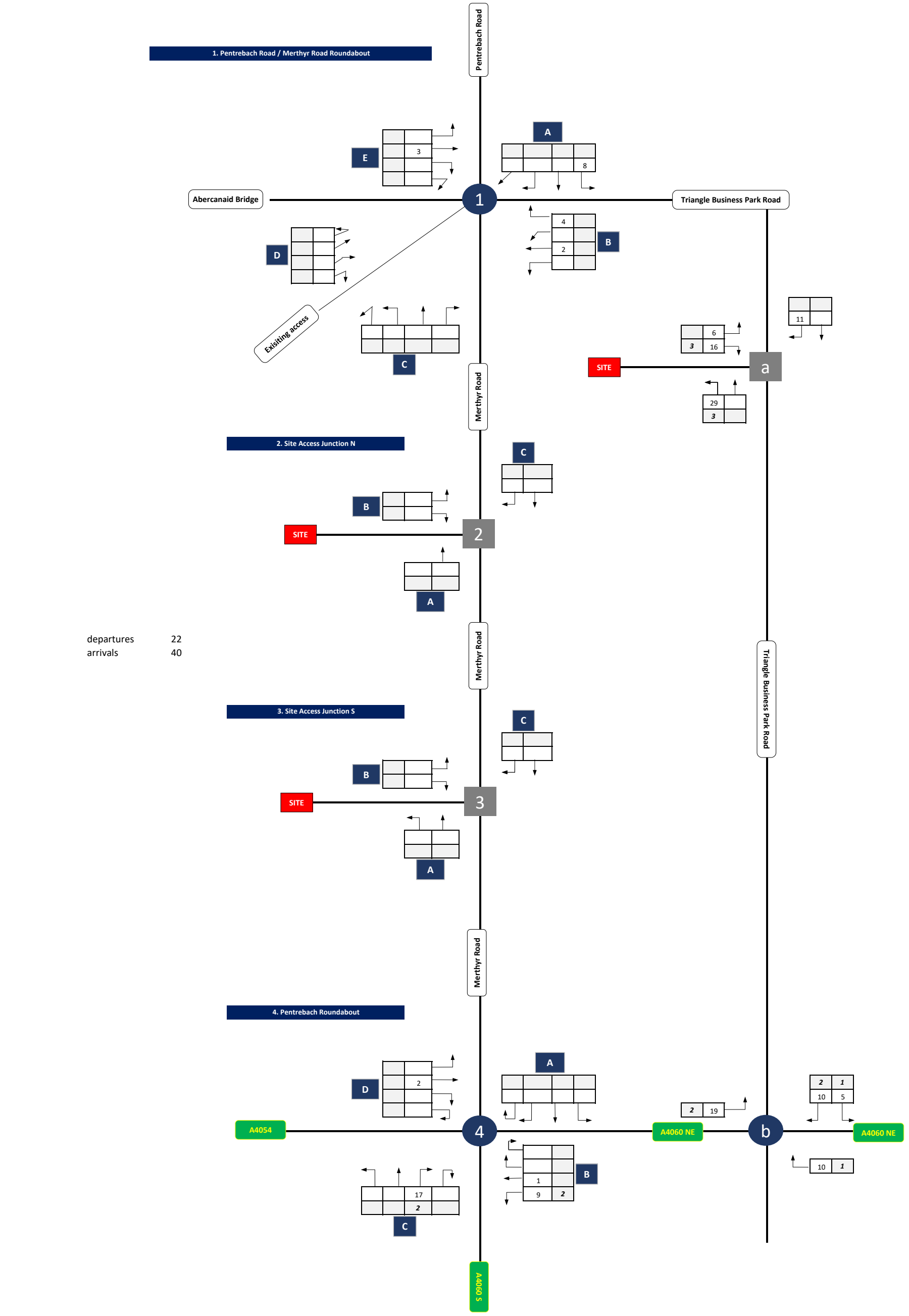
PLAN TITLE: Traffic Figure Diagrams — Development Flows - Residential

DATE:	JOB NUMBER:	DRAWN BY:	FIGURE:
October 2025	C24 - 127	SD	005

Apex TRANSPORT PLANNING

KEY

12	Total Vehicles
12	HGVs



departures	22
arrivals	40

	Arrivals	Departures
Total	40	22
HGVs	3	3

Apex TRANSPORT PLANNING

NOTES:

PROJECT: Hoover Site, Merthyr Tydfil

PLAN TITLE: Traffic Figure Diagrams

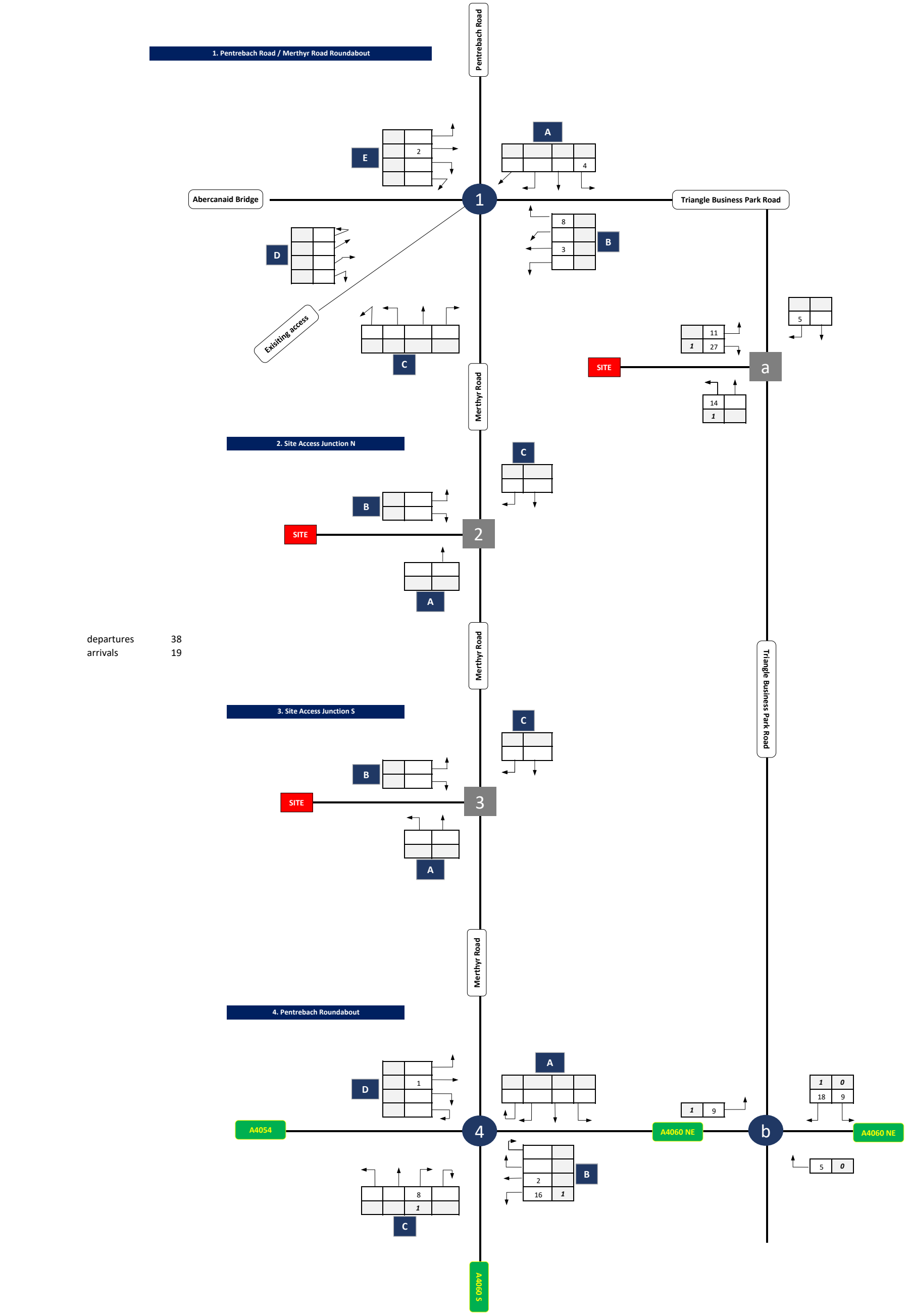
TIME PERIOD: AM Peak (08:00 - 09:00)

Development Flows - Industrial Site

DATE:	JOB NUMBER:	DRAWN BY:	FIGURE:
October 2025	C24 - 127	SD	006

KEY

12	Total Vehicles
12	HGVs



	Arrivals	Departures
Total	19	38
HGVs	1	1

NOTES:

PROJECT: Hoover Site, Merthyr Tydfil

PLAN TITLE: Traffic Figure Diagrams

TIME PERIOD: PM Peak (17:00 - 18:00)

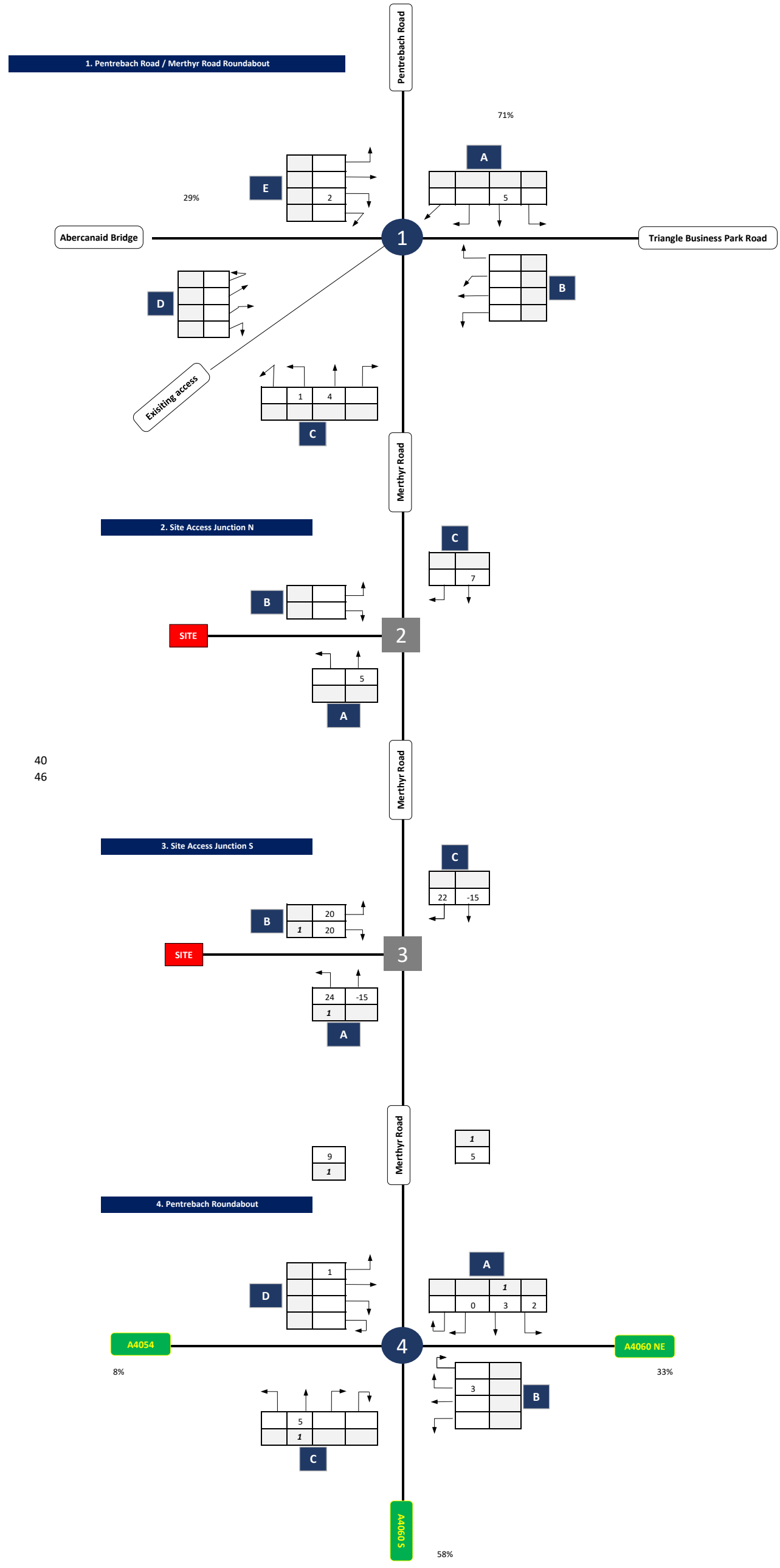
Development Flows - Industrial Site

DATE:	JOB NUMBER:	DRAWN BY:	FIGURE:
October 2025	C24 - 127	SD	007

Apex TRANSPORT PLANNING

KEY

12	Total Vehicles
12	HGVs



departures 40
arrivals 46

Retail	Arrivals	Departures
Total	41	40
HGVs	1	1
Office	5	0
	0	0

Apex TRANSPORT PLANNING

NOTES:

PROJECT: Hoover Site, Merthyr Tydfil

PLAN TITLE: Traffic Figure Diagrams

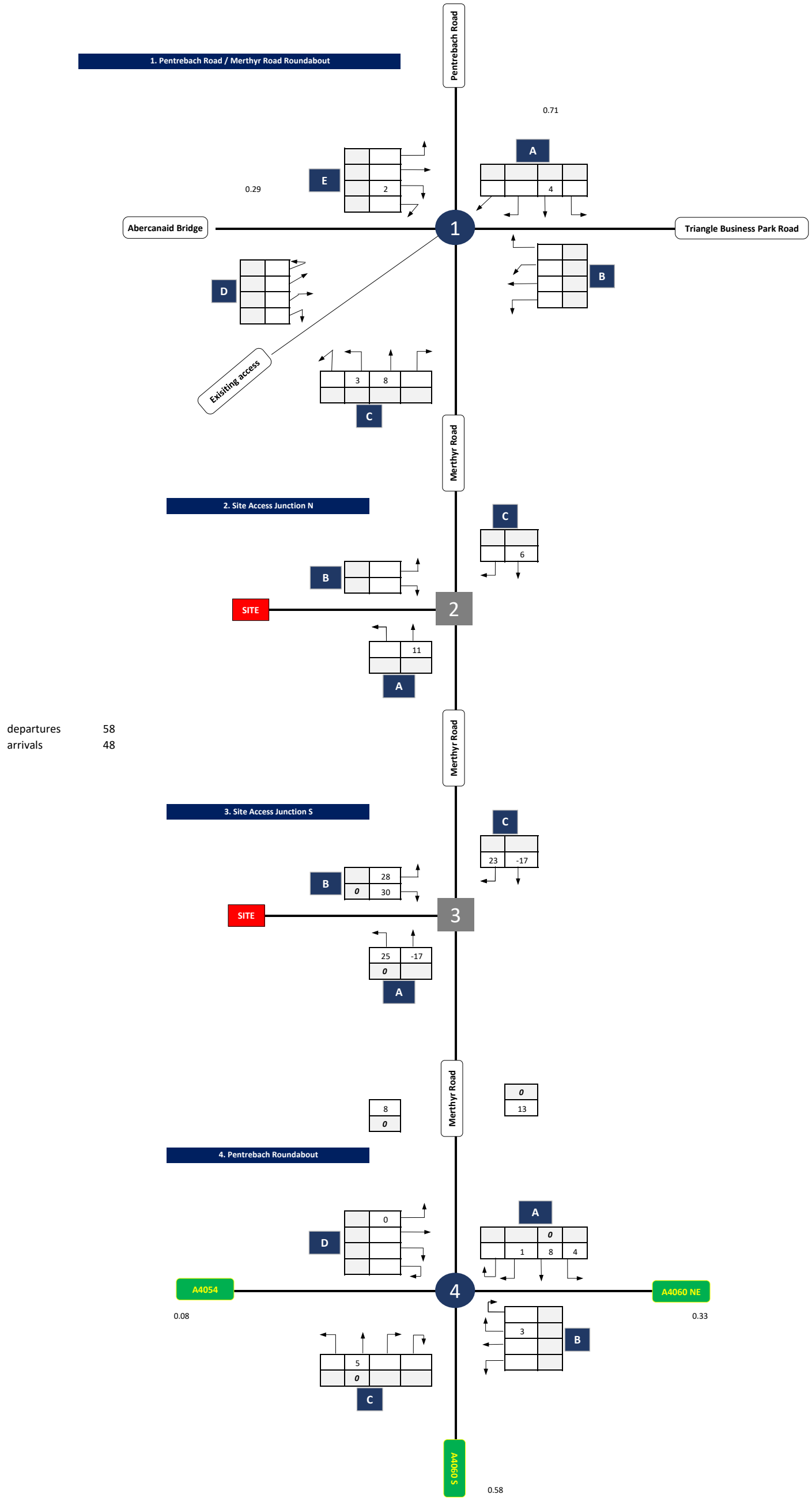
TIME PERIOD: AM Peak (08:00 - 09:00)

Development Flows - Community Hub

DATE:	JOB NUMBER:	DRAWN BY:	FIGURE:
October 2025	C24 - 127	SD	008

KEY

12	Total Vehicles
12	HGVs



departures	58
arrivals	48

NOTES:

Retail	Arrivals	Departures
Total	47	51
HGVs	0	0
Office	1	7
	0	0

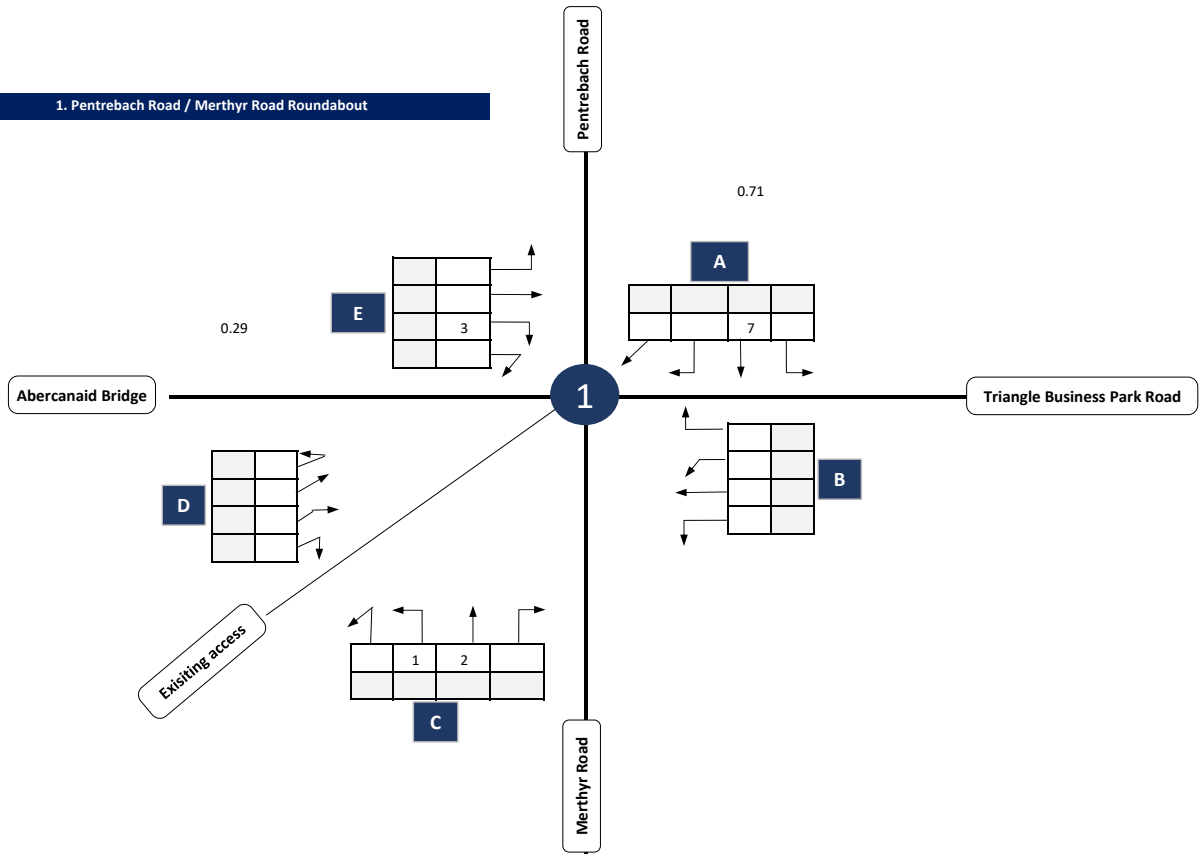
Apex TRANSPORT PLANNING

PROJECT: Hoover Site, Merthyr Tydfil		**PLAN TITLE:** Traffic Figure Diagrams	
TIME PERIOD: PM Peak (17:00 - 18:00)		Development Flows - Community Hub	
DATE: October 2025	**JOB NUMBER:** C24 - 127	**DRAWN BY:** SD	**FIGURE:** 009

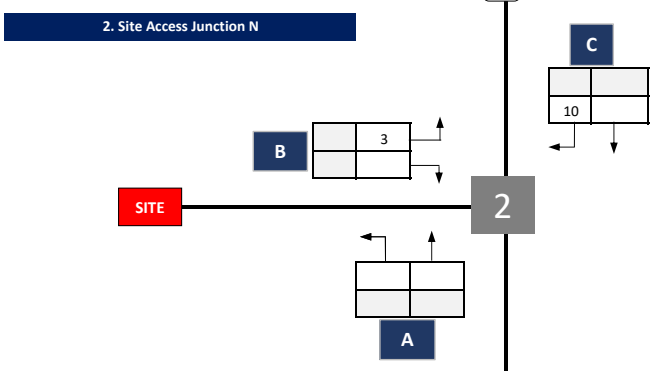
KEY

12	Total Vehicles
12	HGVs

1. Pentrebach Road / Merthyr Road Roundabout

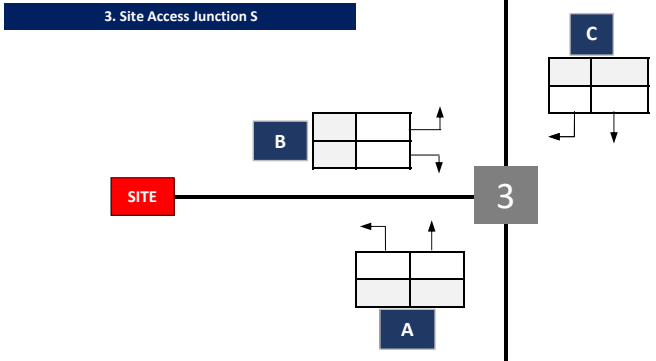


2. Site Access Junction N

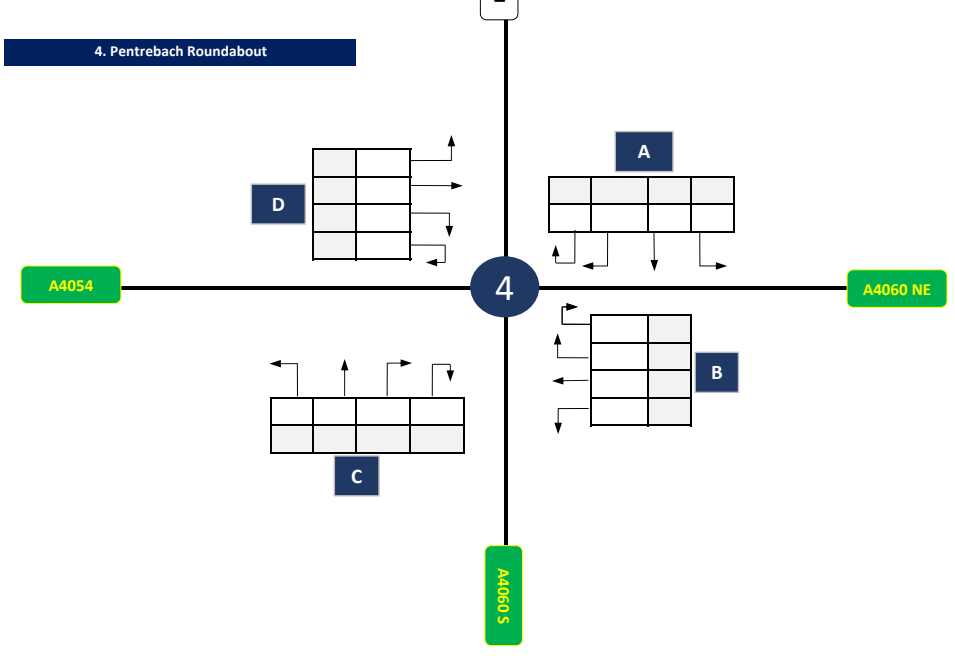


departures	3
arrivals	10

3. Site Access Junction S



4. Pentrebach Roundabout



Apex TRANSPORT PLANNING

NOTES:

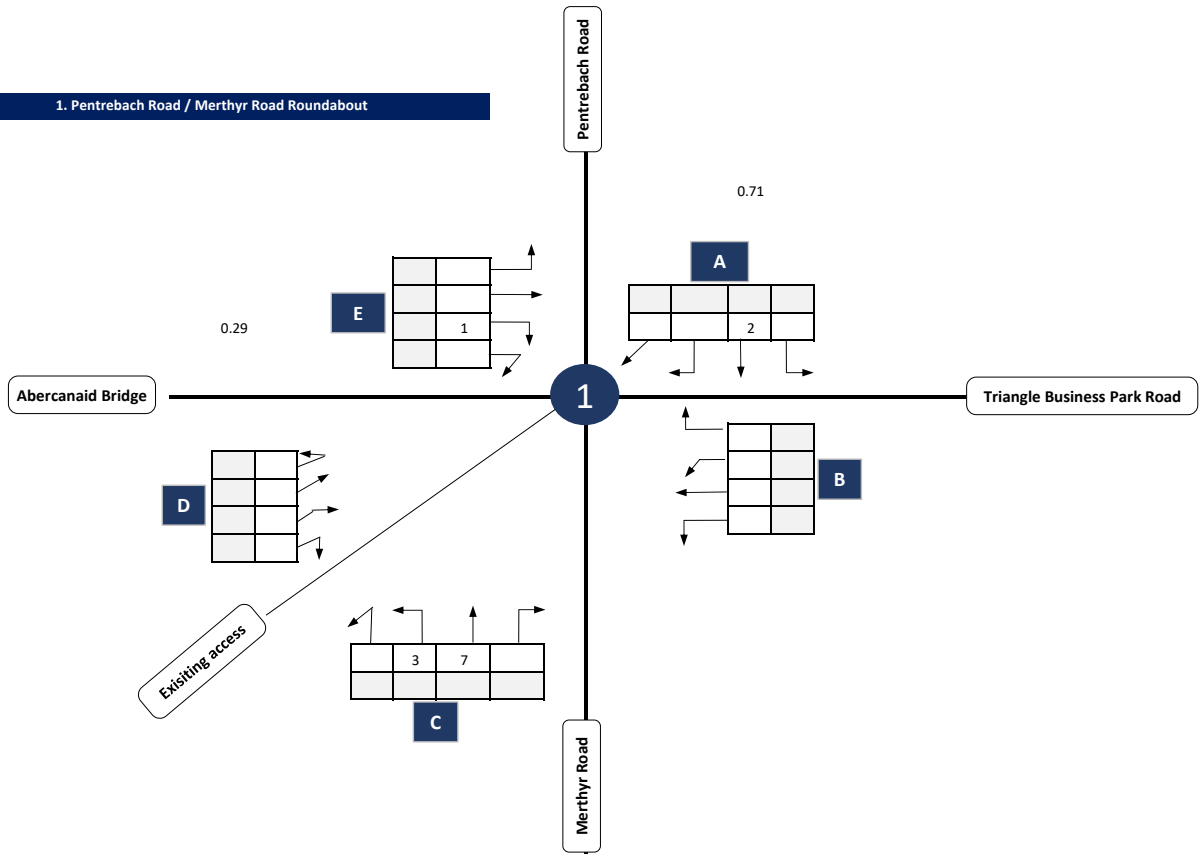
	Arrivals	Departures
Retail		
Total	10	3
HGVs		

PROJECT: Hoover Site, Merthyr Tydfil		**PLAN TITLE:** Traffic Figure Diagrams	
TIME PERIOD: AM Peak (08:00 - 09:00)		Development Flows - New Metro	
DATE: October 2025	**JOB NUMBER:** C24 - 127	**DRAWN BY:** SD	**FIGURE:** 010

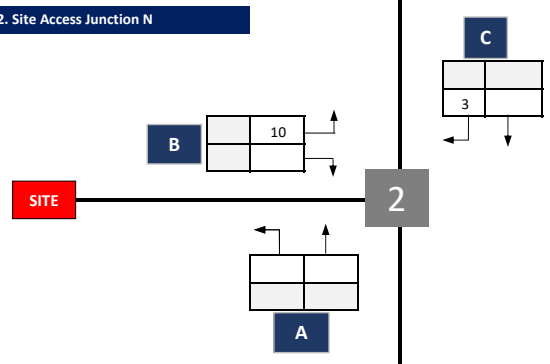
KEY

12	Total Vehicles
12	HGVs

1. Pentrebach Road / Merthyr Road Roundabout



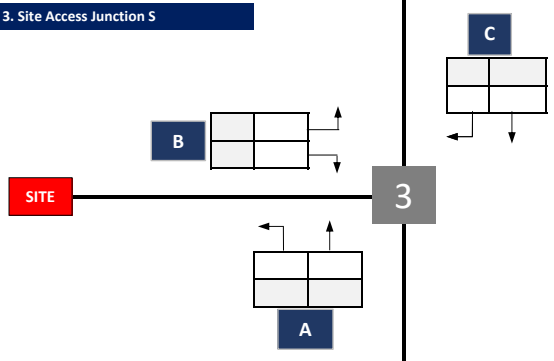
2. Site Access Junction N



departures	10
arrivals	3

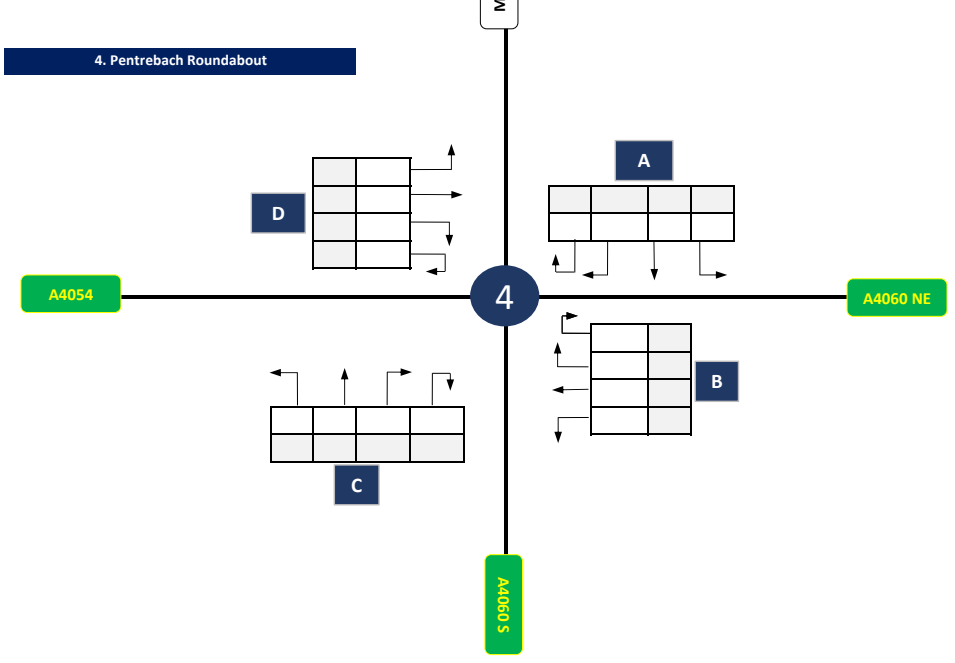
Merthyr Road

3. Site Access Junction S



Merthyr Road

4. Pentrebach Roundabout



Apex TRANSPORT PLANNING

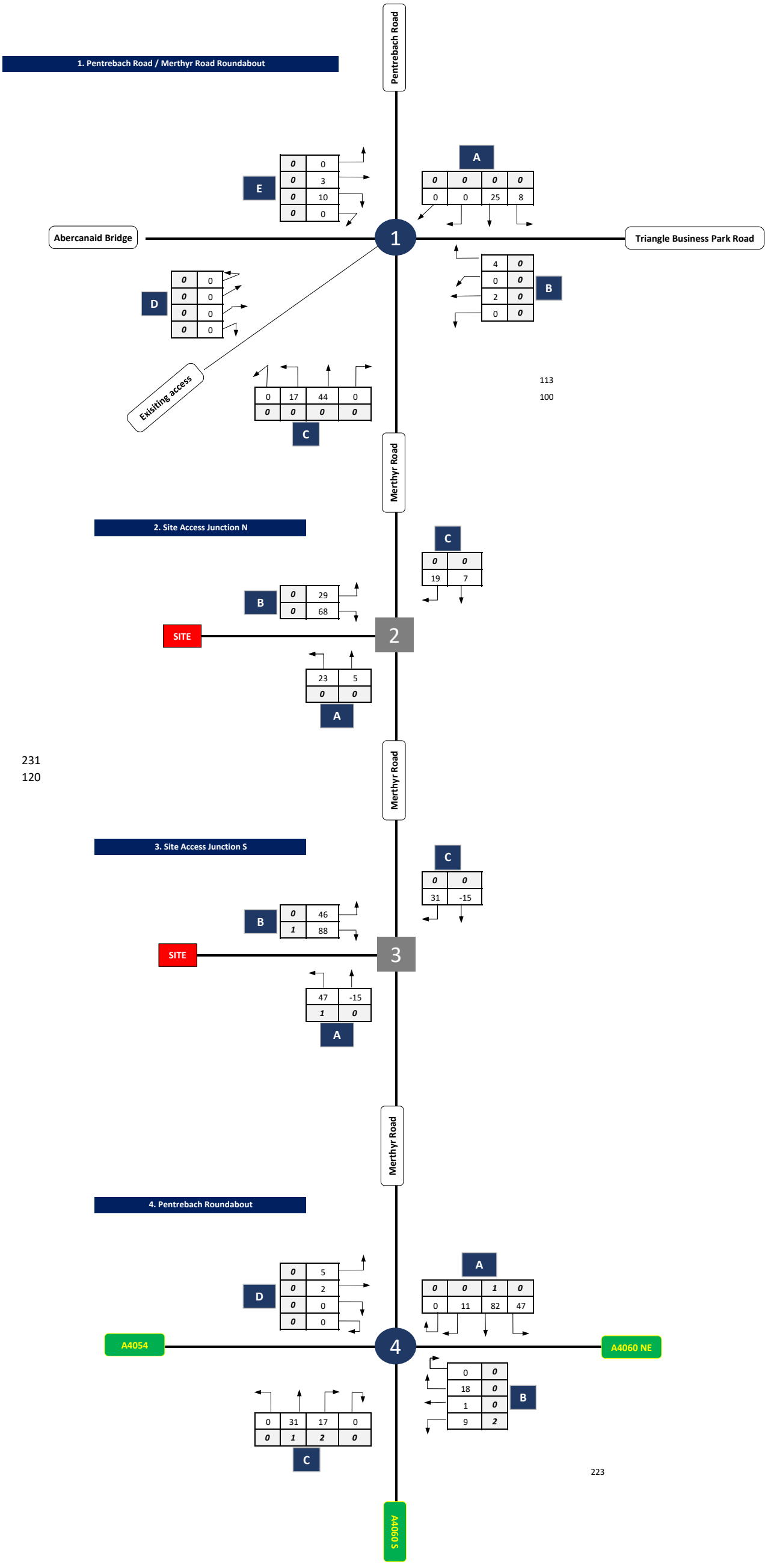
NOTES:

Retail	Arrivals	Departures
Total	3	10
HGVs		

PROJECT: Hoover Site, Merthyr Tydfil		**PLAN TITLE:** Traffic Figure Diagrams	
TIME PERIOD: PM Peak (17:00 - 18:00)		Development Flows - New Metro	
DATE: October 2025	**JOB NUMBER:** C24 - 127	**DRAWN BY:** SD	**FIGURE:** 011

KEY

12	Total Vehicles
12	HGVs



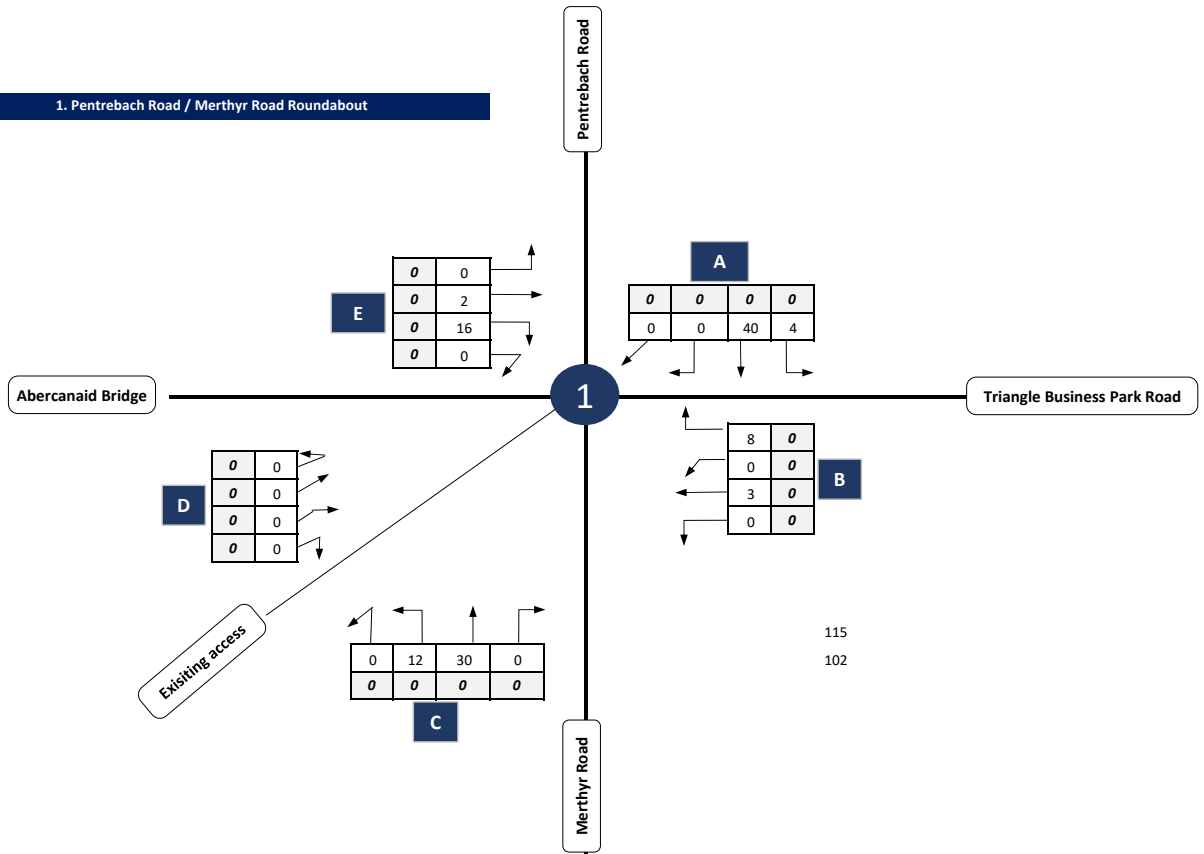
NOTES:	**PROJECT:** Hoover Site, Merthyr Tydfil		**PLAN TITLE:** Traffic Figure Diagrams
	TIME PERIOD: AM Peak (08:00 - 09:00)		Development Flows - Total
	DATE: October 2025	**JOB NUMBER:** C24 - 127	**DRAWN BY:** SD / **FIGURE:** 012

Apex TRANSPORT PLANNING

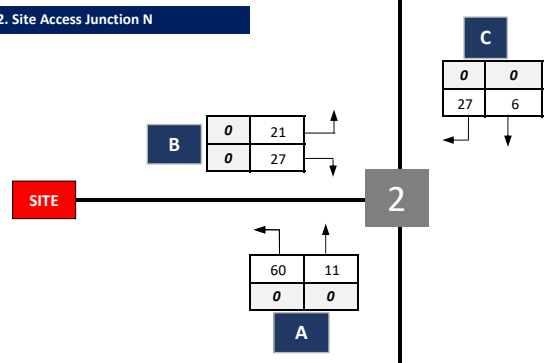
KEY

12	Total Vehicles
12	HGVs

1. Pentrebach Road / Merthyr Road Roundabout

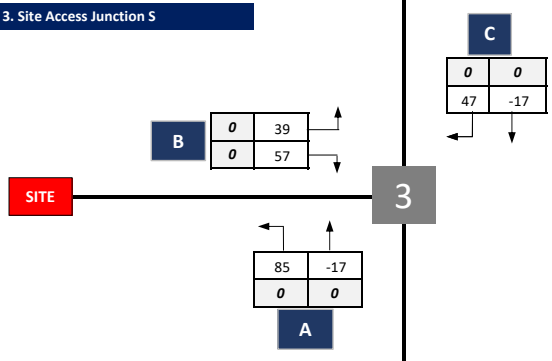


2. Site Access Junction N

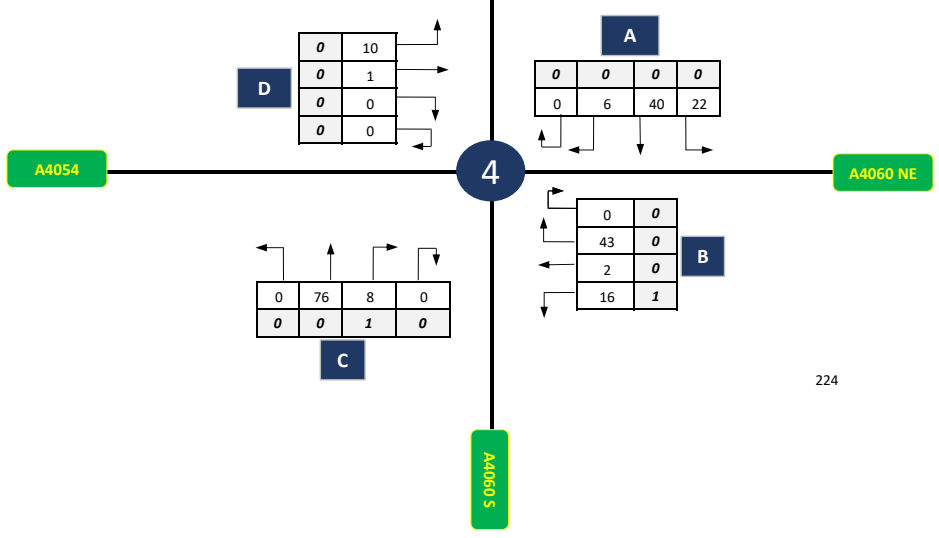


departures	144
arrivals	219

3. Site Access Junction S



4. Pentrebach Roundabout



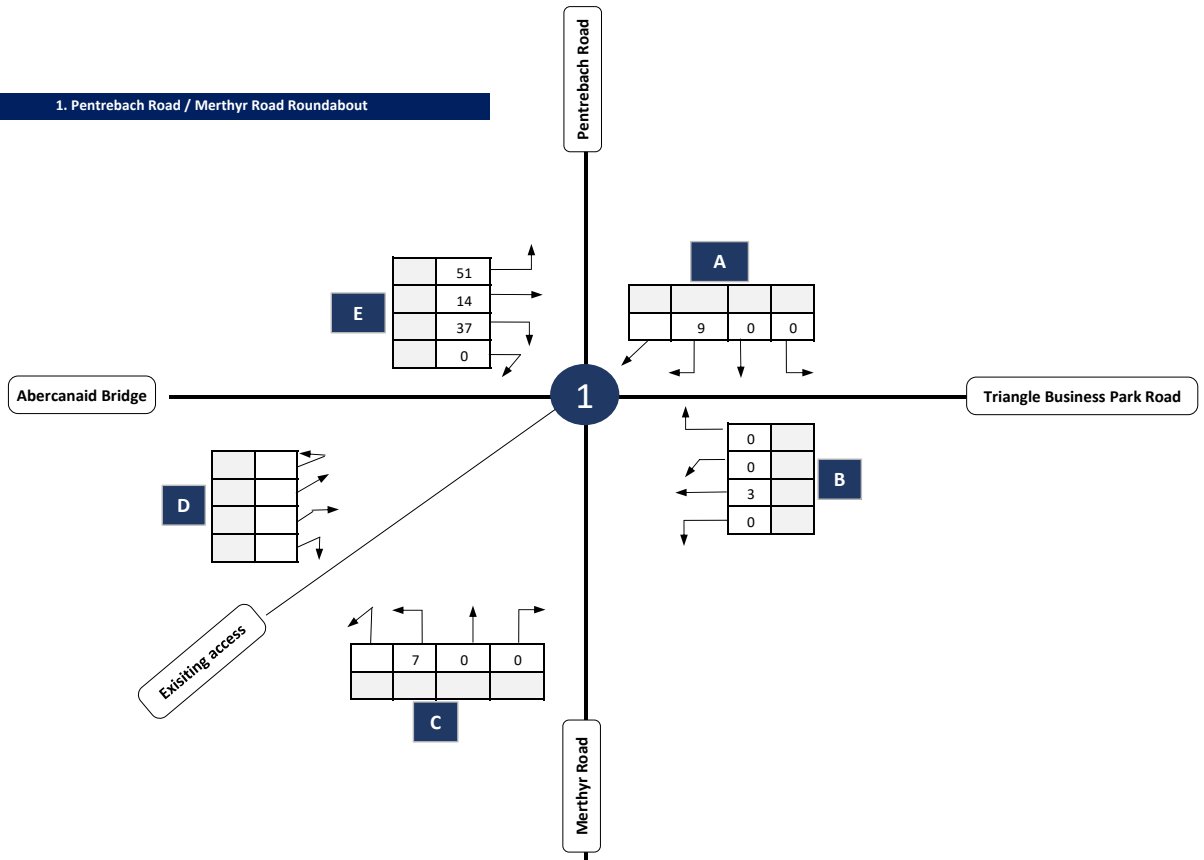
NOTES:	**PROJECT:** Hoover Site, Merthyr Tydfil	**PLAN TITLE:** Traffic Figure Diagrams	
	TIME PERIOD: PM Peak (17:00 - 18:00)	Development Flows - Total	
	DATE: October 2025	**JOB NUMBER:** C24 - 127	**DRAWN BY:** SD / **FIGURE:** 013

Apex TRANSPORT PLANNING

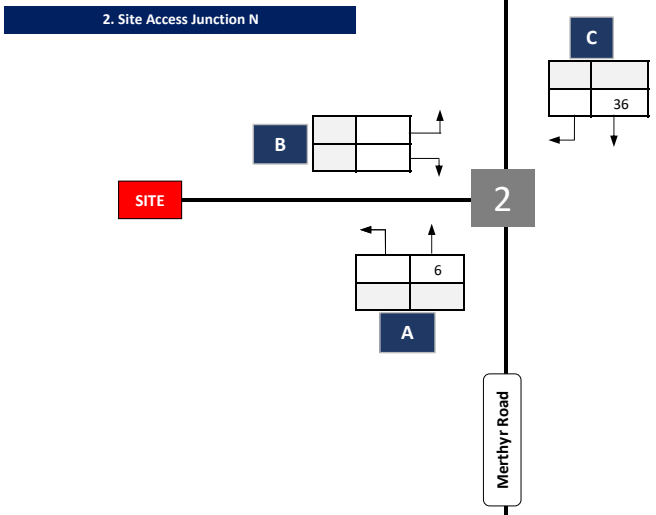
KEY

12	Total Vehicles
12	HGVs

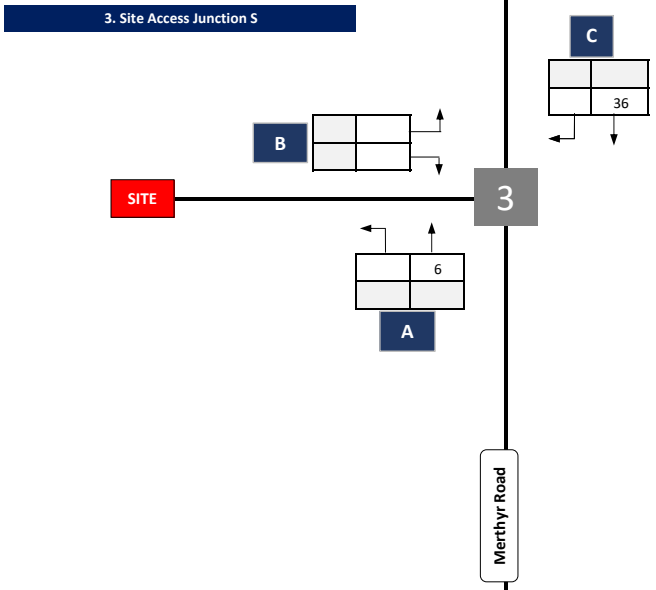
1. Pentrebach Road / Merthyr Road Roundabout



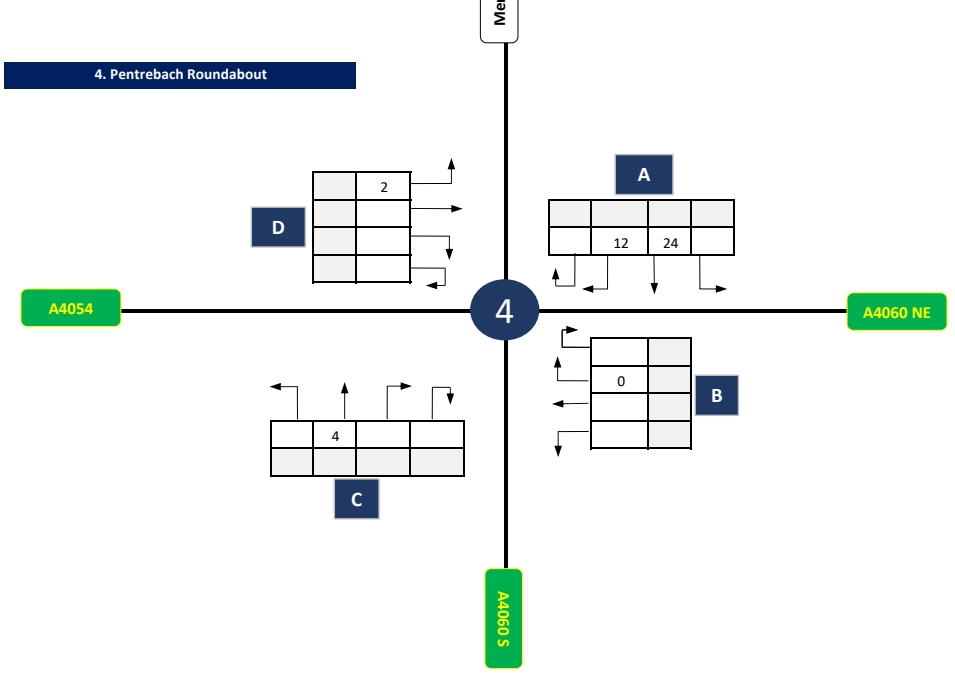
2. Site Access Junction N



3. Site Access Junction S



4. Pentrebach Roundabout



TRANSPORT PLANNING

NOTES:

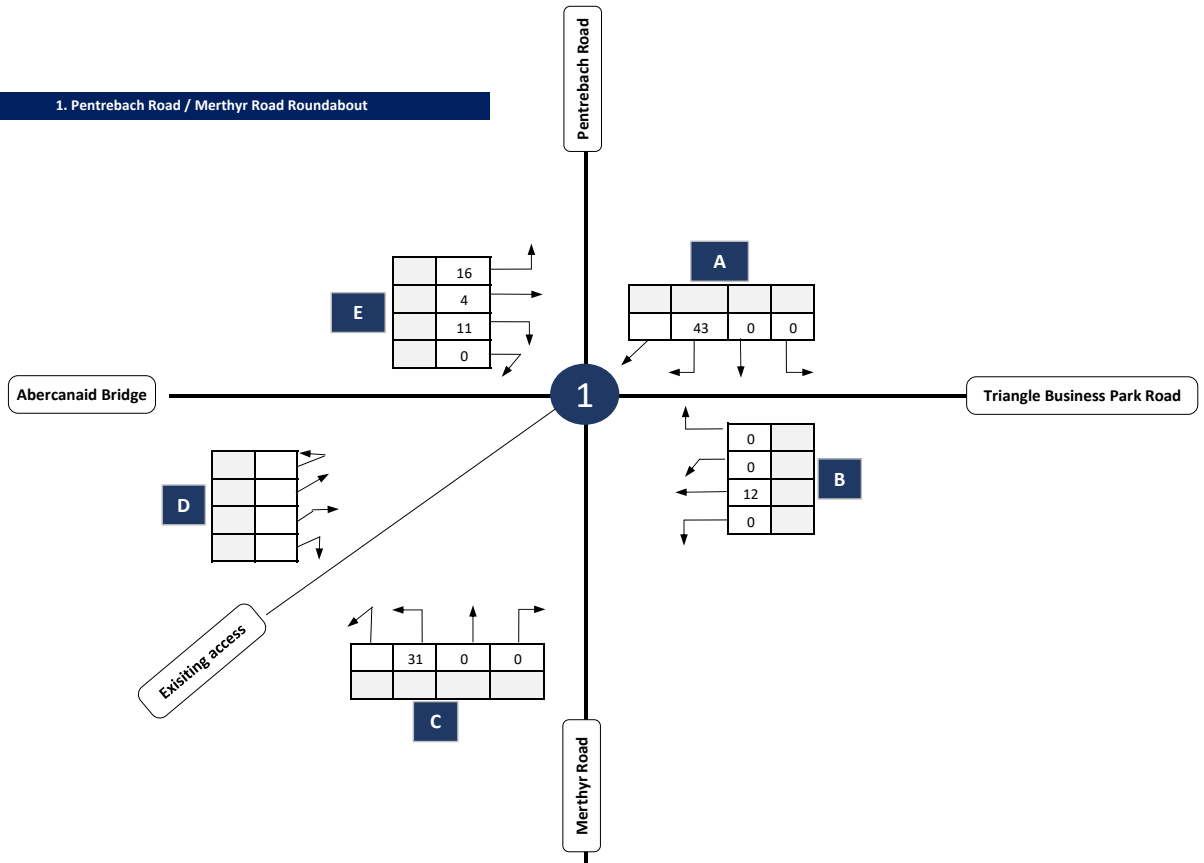
Flows obtained from Lime Transport TA - Appendix D

PROJECT: Hoover Site, Merthyr Tydfil		**PLAN TITLE:** Traffic Figure Diagrams	
TIME PERIOD: AM Peak (08:00 - 09:00)		Committed Development - Dragon Parc	
DATE: October 2025	**JOB NUMBER:** C24 - 127	**DRAWN BY:** SD	**FIGURE:** 014

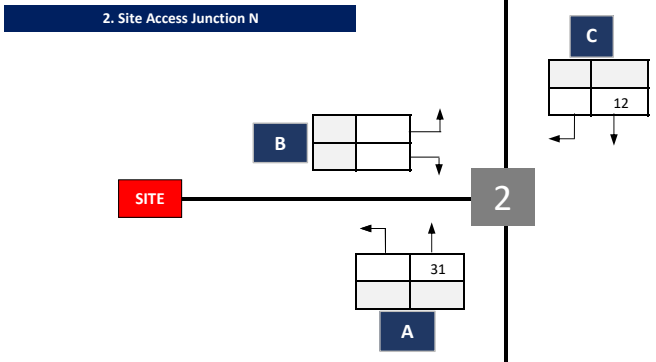
KEY

12	Total Vehicles
12	HGVs

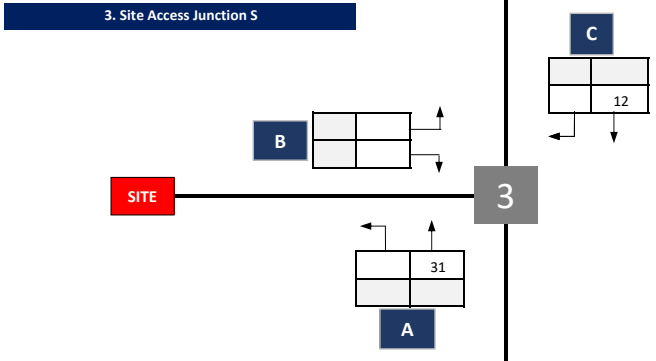
1. Pentrebach Road / Merthyr Road Roundabout



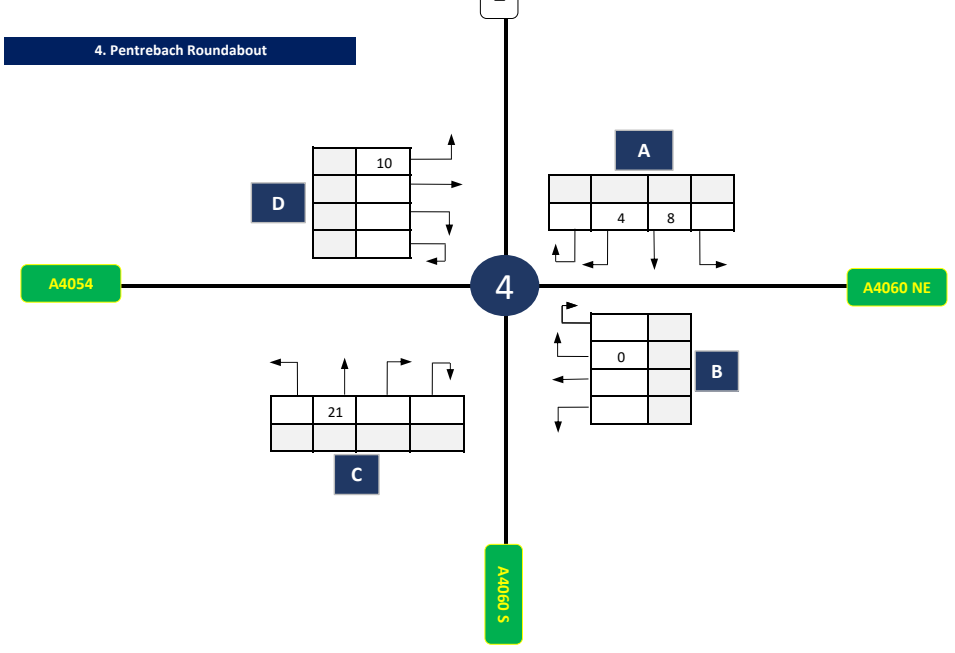
2. Site Access Junction N



3. Site Access Junction S



4. Pentrebach Roundabout



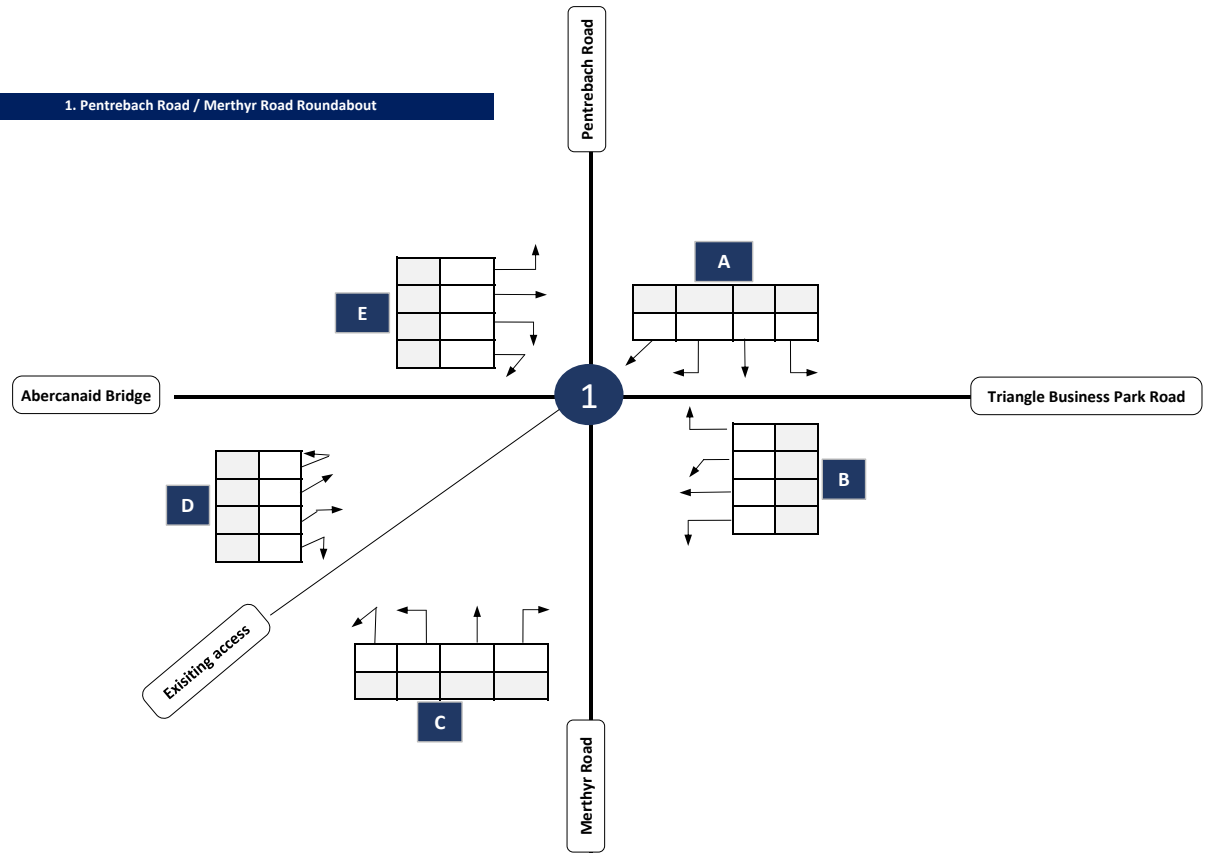
NOTES: Flows obtained from Lime Transport TA - Appendix D	**PROJECT:** Hoover Site, Merthyr Tydfil		**PLAN TITLE:** Traffic Figure Diagrams
	TIME PERIOD: PM Peak (16:00 - 17:00)		Committed Development - Dragon Parc
	DATE: October 2025	**JOB NUMBER:** C24 - 127	**DRAWN BY:** SD / **FIGURE:** 015

Apex TRANSPORT PLANNING

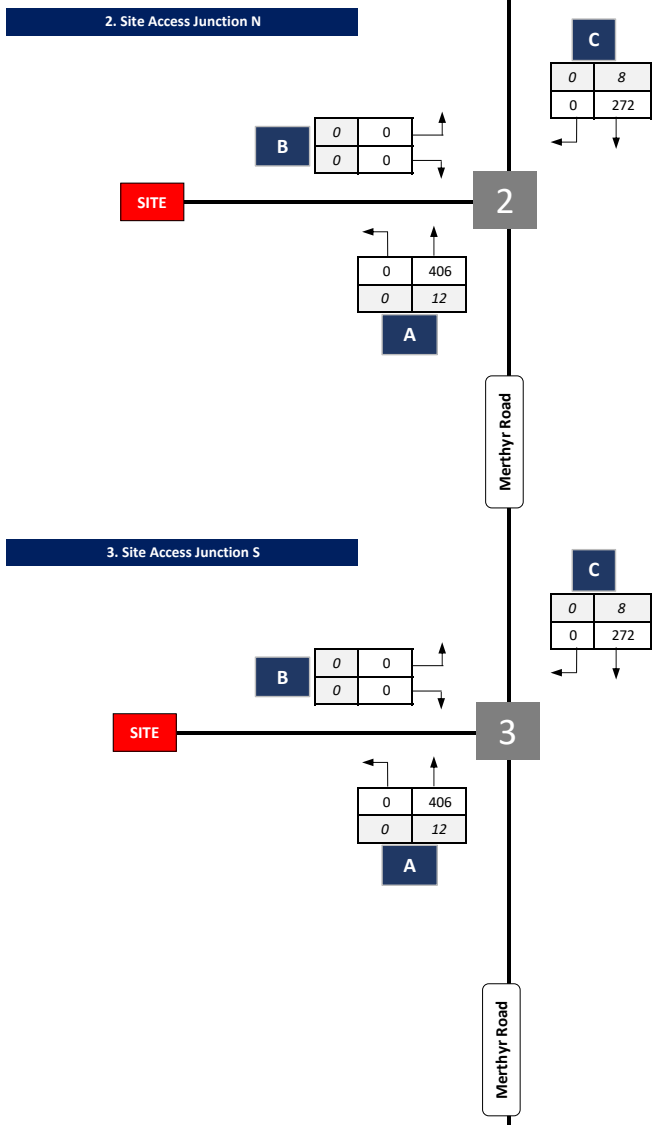
KEY

12	Total Vehicles
12	HGVs

1. Pentrebach Road / Merthyr Road Roundabout

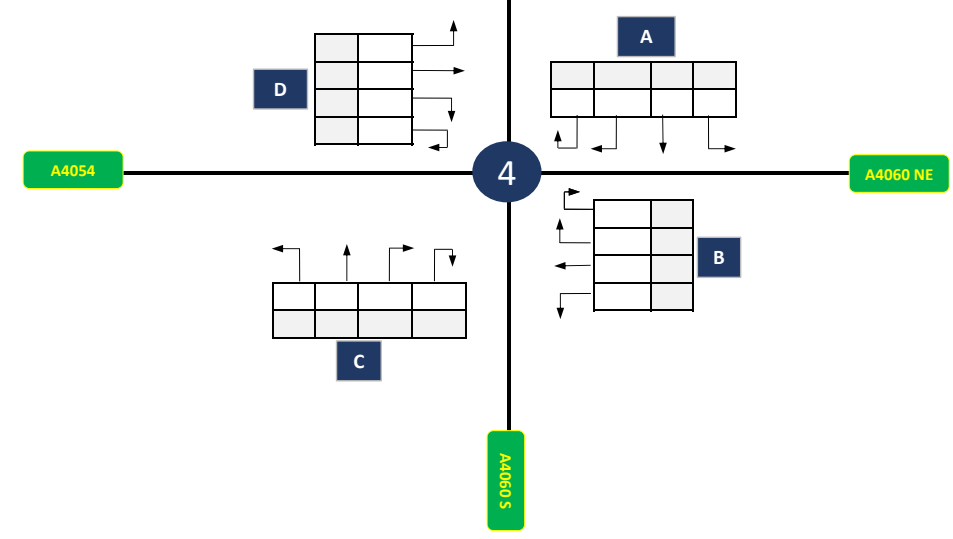


2. Site Access Junction N



3. Site Access Junction S

4. Pentrebach Roundabout



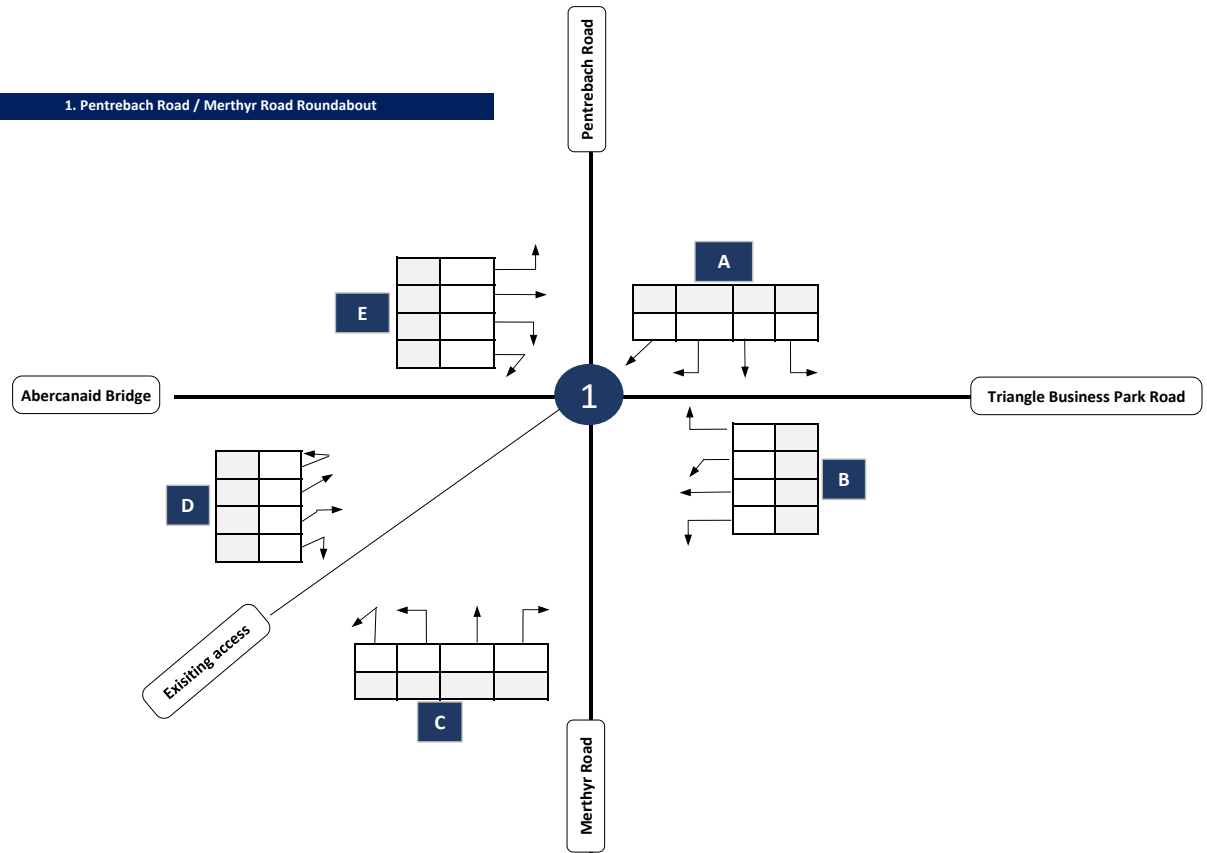
NOTES: Growth Rate 1.10705	**PROJECT:** Hoover Site, Merthyr Tydfil		**PLAN TITLE:** Traffic Figure Diagrams
	TIME PERIOD: AM Peak (08:00 - 09:00)		2035 Baseline Flows
	DATE: October 2025	**JOB NUMBER:** C24 - 127	**DRAWN BY:** SD / **FIGURE:** 016

Apex TRANSPORT PLANNING

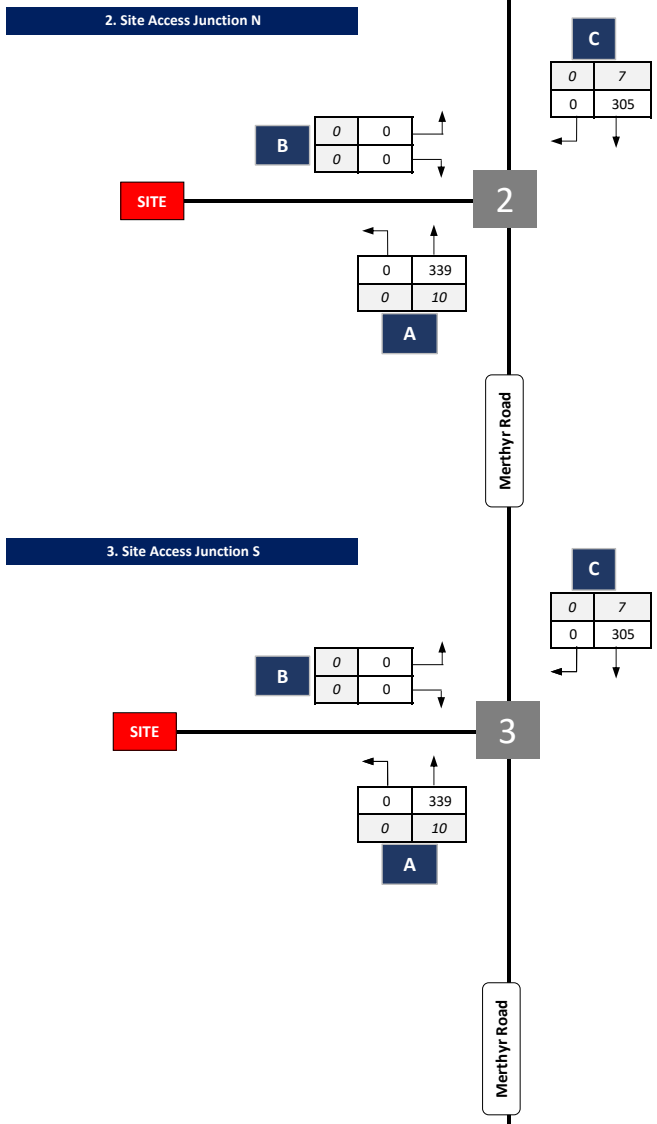
KEY

12	Total Vehicles
12	HGVs

1. Pentrebach Road / Merthyr Road Roundabout

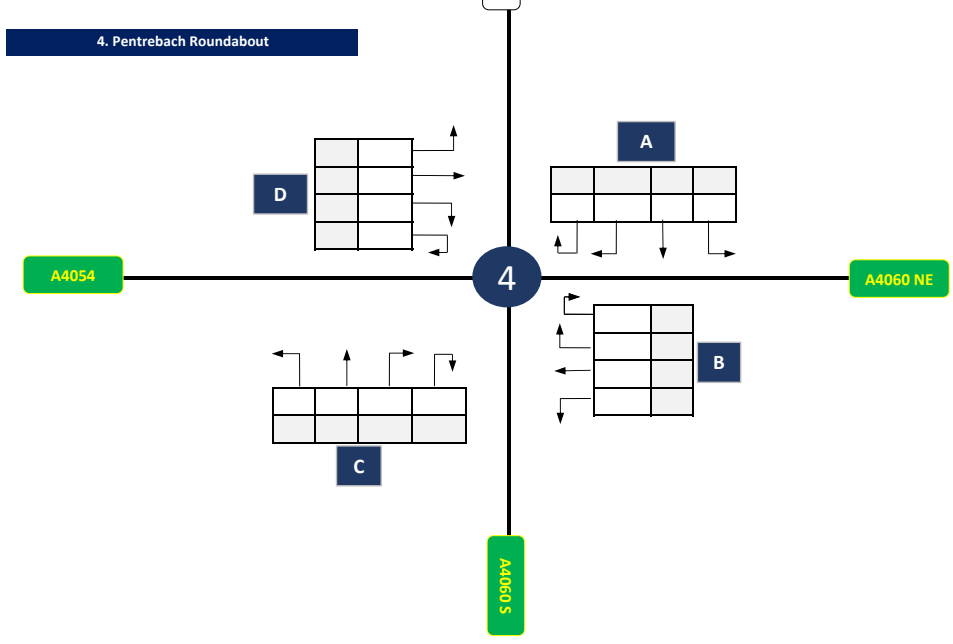


2. Site Access Junction N



3. Site Access Junction S

4. Pentrebach Roundabout



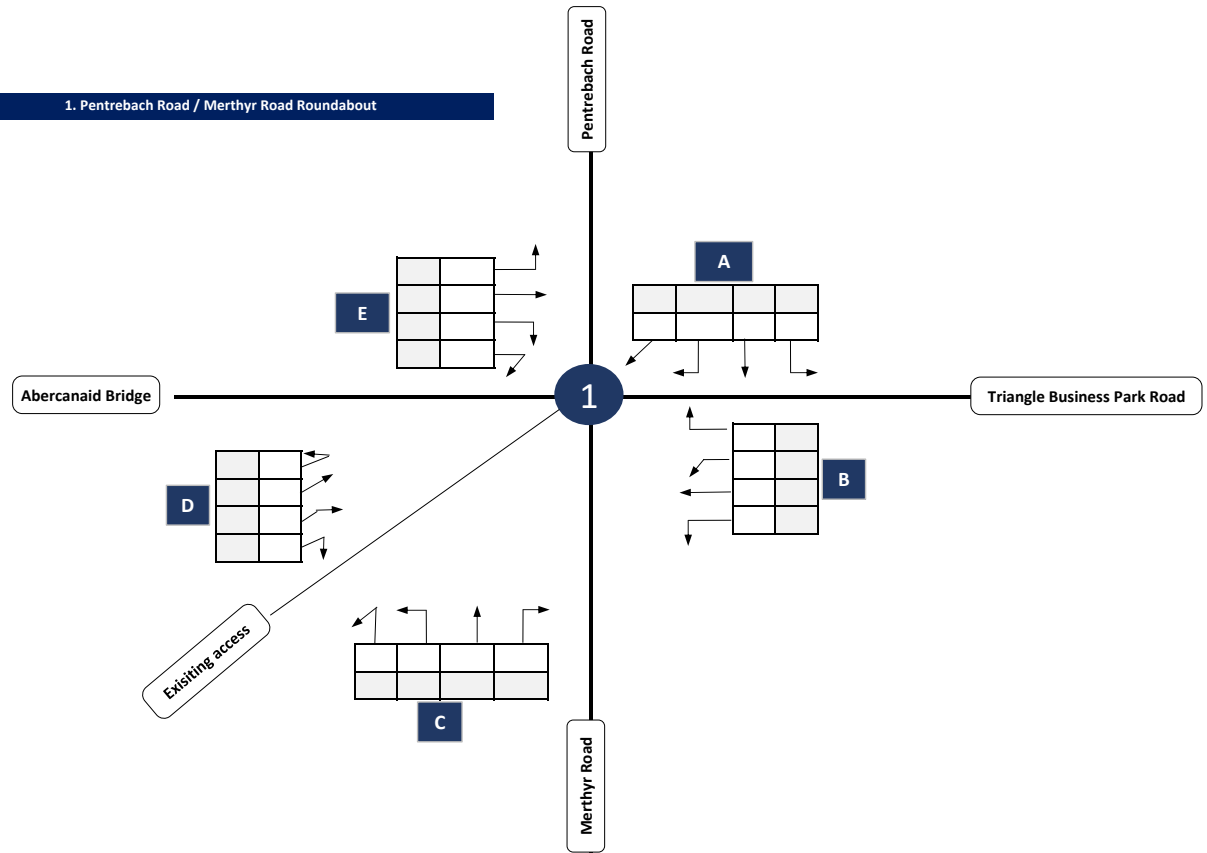
NOTES: Growth Rate 1.10451	**PROJECT:** Hoover Site, Merthyr Tydfil	**PLAN TITLE:** Traffic Figure Diagrams	
	TIME PERIOD: PM Peak (16:00 - 17:00)	2035 Baseline Flows	
	DATE: October 2025	**JOB NUMBER:** C24 - 127	**DRAWN BY:** SD / **FIGURE:** 017

Apex TRANSPORT PLANNING

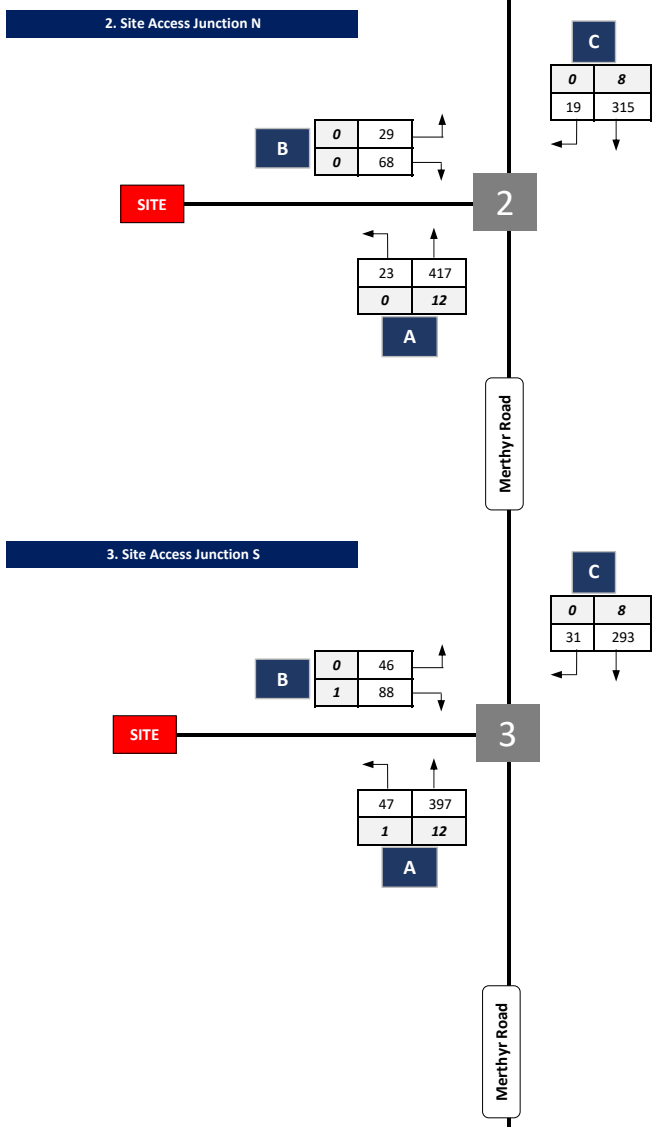
KEY

12	Total Vehicles
12	HGVs

1. Pentrebach Road / Merthyr Road Roundabout

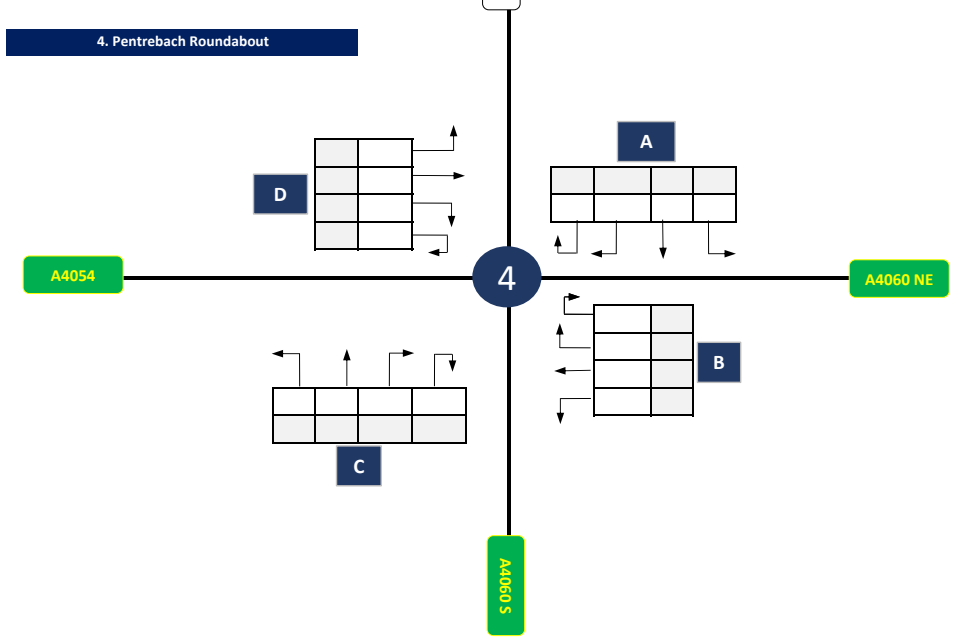


2. Site Access Junction N



3. Site Access Junction S

4. Pentrebach Roundabout

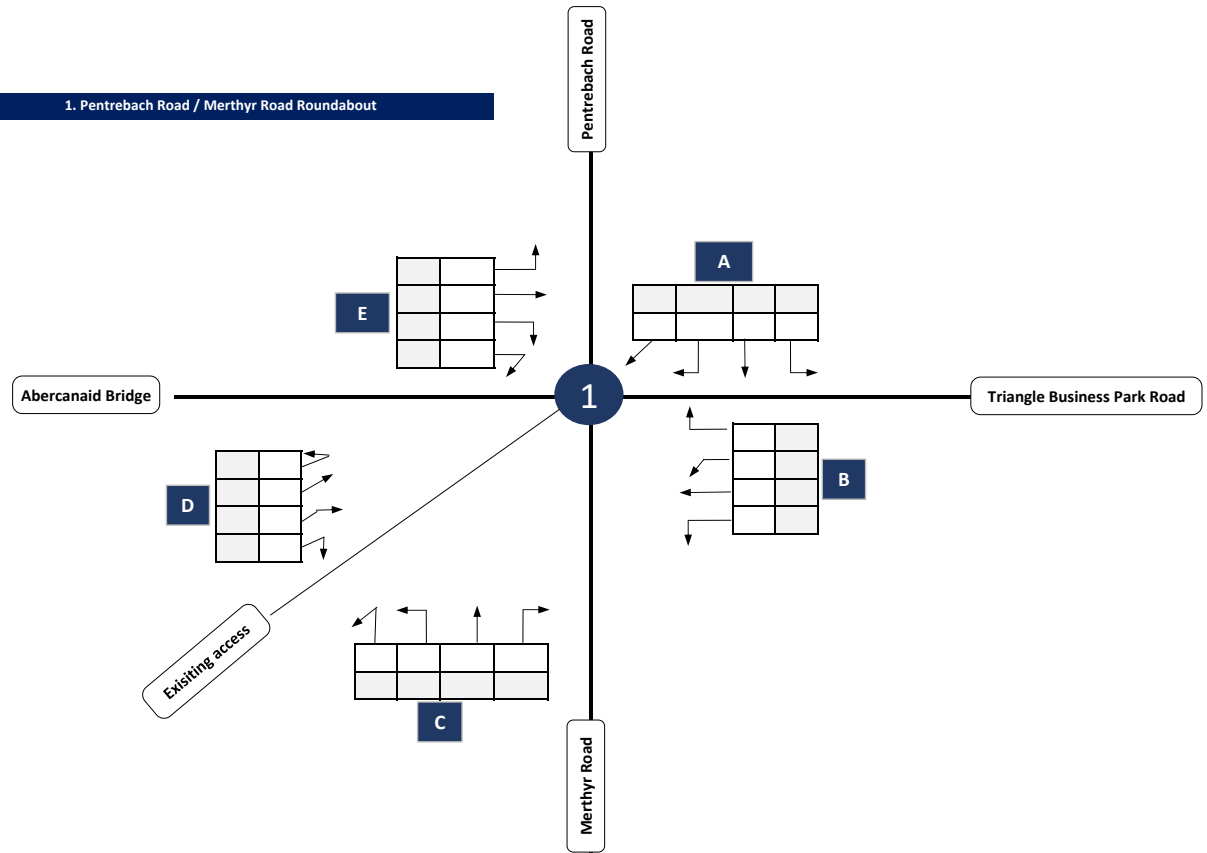


Apex TRANSPORT PLANNING	NOTES:	PROJECT: Hoover Site, Merthyr Tydfil	PLAN TITLE: Traffic Figure Diagrams
		TIME PERIOD: AM Peak (08:00 - 09:00)	2035 Baseline + Committed + Development Flows
		DATE: October 2025 / JOB NUMBER: C24 - 127	DRAWN BY: SD / FIGURE: 010

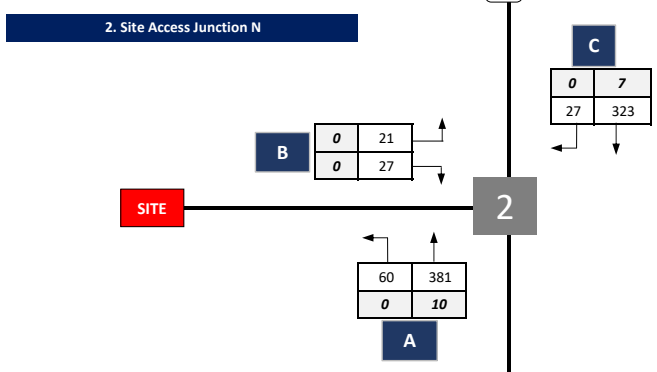
KEY

12	Total Vehicles
12	HGVs

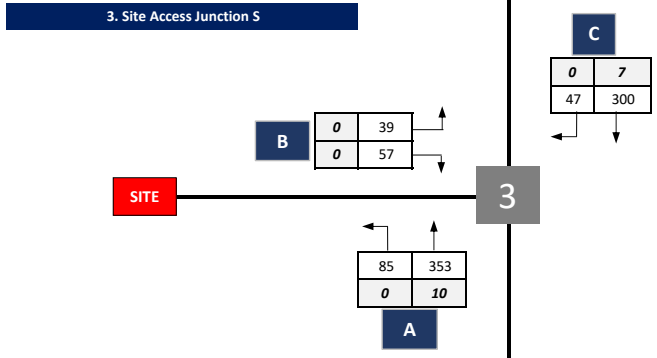
1. Pentrebach Road / Merthyr Road Roundabout



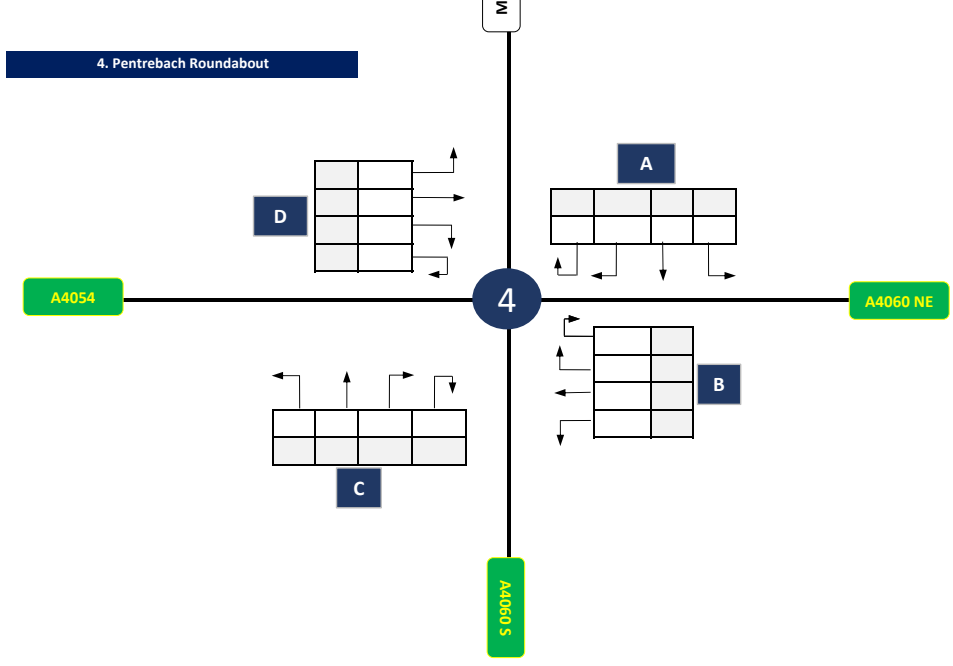
2. Site Access Junction N



3. Site Access Junction S



4. Pentrebach Roundabout



Apex TRANSPORT PLANNING	**NOTES:**	**PROJECT:** Hoover Site, Merthyr Tydfil **TIME PERIOD:** PM Peak (16:00 - 17:00)	**PLAN TITLE:** Traffic Figure Diagrams 2035 Baseline + Committed + Development Flows
		DATE: October 2025 / **JOB NUMBER:** C24 - 127	**DRAWN BY:** SD / **FIGURE:** 011

Appendix D Junctions 10 Outputs – Northern Site Access

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: Site Access Junction North V2.j10
Path: C:\Users\Modelling\Apex Transport Planning Ltd\Apex Transport Planning Ltd - Documents\1.Projects\C24-\C24-127 - Hoover Site, Merthyr Tydfil\4.Modelling\1. SIte Access Jct N
Report generation date: 22/10/2025 22:39:23

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2035 + Com + Dev									
Stream B-AC	D1	0.3	11.21	0.25	B	D2	0.1	8.98	0.12	A
Stream C-AB		0.0	5.94	0.03	A		0.0	6.03	0.05	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Site Access N / Merthyr Road
Location	Merthyr Tydfil
Site number	
Date	25/03/2025
Version	
Status	(new file)
Identifier	
Client	Walters
Jobnumber	C24127
Enumerator	AzureAD\Modelling
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2035 + Com + Dev	AM	ONE HOUR	07:45	09:15	15
D2	2035 + Com + Dev	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2035 + Com + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access N / Merthyr Road	T-Junction	Two-way	Two-way	Two-way		1.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.35	A

Arms

Arms

Arm	Name	Description	Arm type
A	Merthyr Road S		Major
B	Site Access		Minor
C	Merthyr Road N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.50		✓	3.30	200.0	✓	7.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	120	120

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	578	0.103	0.260	0.164	0.372
B-C	699	0.105	0.265	-	-
C-B	772	0.293	0.293	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2035 + Com + Dev	AM	ONE HOUR	07:45	09:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	440	100.000
B		✓	97	100.000
C		✓	334	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	23	417
	B	68	0	29
	C	315	19	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.25	11.21	0.3	B
C-AB	0.03	5.94	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	73	486	0.150	72	0.2	8.682	A
C-AB	14	673	0.021	14	0.0	5.466	A
C-A	243			243			
A-B	17			17			
A-C	323			323			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	87	462	0.189	87	0.2	9.596	A
C-AB	17	653	0.026	17	0.0	5.656	A
C-A	290			290			
A-B	21			21			
A-C	386			386			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	107	428	0.250	106	0.3	11.185	B
C-AB	21	627	0.033	21	0.0	5.942	A
C-A	356			356			
A-B	25			25			
A-C	472			472			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	107	428	0.250	107	0.3	11.211	B
C-AB	21	627	0.033	21	0.0	5.942	A
C-A	356			356			
A-B	25			25			
A-C	472			472			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	87	462	0.189	88	0.2	9.630	A
C-AB	17	653	0.026	17	0.0	5.657	A
C-A	290			290			
A-B	21			21			
A-C	386			386			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	73	486	0.150	73	0.2	8.723	A
C-AB	14	673	0.021	14	0.0	5.467	A
C-A	243			243			
A-B	17			17			
A-C	323			323			

2035 + Com + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access N / Merthyr Road	T-Junction	Two-way	Two-way	Two-way		0.69	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.69	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2035 + Com + Dev	PM	ONE HOUR	15:45	17:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	441	100.000
B		✓	48	100.000
C		✓	350	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	60	381
	B	27	0	21
	C	323	27	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.12	8.98	0.1	A
C-AB	0.05	6.03	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	509	0.071	36	0.1	7.598	A
C-AB	20	673	0.030	20	0.0	5.515	A
C-A	248			248			
A-B	45			45			
A-C	294			294			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	486	0.089	43	0.1	8.125	A
C-AB	24	654	0.037	24	0.0	5.719	A
C-A	297			297			
A-B	54			54			
A-C	352			352			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	454	0.116	53	0.1	8.974	A
C-AB	30	627	0.047	30	0.0	6.026	A
C-A	363			363			
A-B	66			66			
A-C	430			430			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	454	0.116	53	0.1	8.980	A
C-AB	30	627	0.047	30	0.0	6.026	A
C-A	363			363			
A-B	66			66			
A-C	430			430			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	486	0.089	43	0.1	8.133	A
C-AB	24	654	0.037	24	0.0	5.719	A
C-A	297			297			
A-B	54			54			
A-C	352			352			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	509	0.071	36	0.1	7.610	A
C-AB	20	673	0.030	20	0.0	5.515	A
C-A	248			248			
A-B	45			45			
A-C	294			294			

Appendix E Junctions 10 Outputs – Southern Site Access

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: Site Access Junction South V2.j10
Path: C:\Users\Modelling\Apex Transport Planning Ltd\Apex Transport Planning Ltd - Documents\1.Projects\C24-\C24-127 - Hoover Site, Merthyr Tydfil\4.Modelling\2. SIte Access Jct S
Report generation date: 22/10/2025 22:42:57

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2035 + Com + Dev									
Stream B-AC	D1	0.5	12.49	0.34	B	D2	0.3	10.37	0.23	B
Stream C-AB		0.1	6.18	0.06	A		0.1	6.34	0.08	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Site Access S / Merthyr Road
Location	Merthyr Tydfil
Site number	
Date	25/03/2025
Version	
Status	(new file)
Identifier	
Client	Walters
Jobnumber	C24127
Enumerator	AzureAD\Modelling
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2035 + Com + Dev	AM	ONE HOUR	07:45	09:15	15
D2	2035 + Com + Dev	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2035 + Com + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access S / Merthyr Road	T-Junction	Two-way	Two-way	Two-way		2.03	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.03	A

Arms

Arms

Arm	Name	Description	Arm type
A	Merthyr Road S		Major
B	Site Access S		Minor
C	Merthyr Road N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.80		✓	3.30	180.0	✓	7.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	120	120

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	578	0.102	0.257	0.162	0.367
B-C	699	0.103	0.262	-	-
C-B	759	0.284	0.284	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2035 + Com + Dev	AM	ONE HOUR	07:45	09:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	444	100.000
B		✓	134	100.000
C		✓	324	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	47	397
	B	88	0	46
	C	293	31	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	0	2	3
	B	1	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.34	12.49	0.5	B
C-AB	0.06	6.18	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	102	495	0.205	101	0.3	9.162	A
C-AB	23	662	0.035	23	0.0	5.636	A
C-A	227			227			
A-B	36			36			
A-C	308			308			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	121	472	0.257	121	0.3	10.327	B
C-AB	28	643	0.043	28	0.0	5.854	A
C-A	271			271			
A-B	43			43			
A-C	368			368			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	149	439	0.339	148	0.5	12.433	B
C-AB	34	617	0.055	34	0.1	6.180	A
C-A	331			331			
A-B	53			53			
A-C	450			450			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	149	439	0.339	149	0.5	12.487	B
C-AB	34	617	0.055	34	0.1	6.180	A
C-A	331			331			
A-B	53			53			
A-C	450			450			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	121	472	0.257	122	0.4	10.387	B
C-AB	28	643	0.043	28	0.0	5.855	A
C-A	271			271			
A-B	43			43			
A-C	368			368			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	102	495	0.205	102	0.3	9.227	A
C-AB	23	662	0.035	23	0.0	5.639	A
C-A	227			227			
A-B	36			36			
A-C	308			308			

2035 + Com + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access S / Merthyr Road	T-Junction	Two-way	Two-way	Two-way		1.44	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.44	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2035 + Com + Dev	PM	ONE HOUR	15:45	17:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	438	100.000
B		✓	96	100.000
C		✓	347	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	85	353
	B	57	0	39
	C	300	47	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.23	10.37	0.3	B
C-AB	0.08	6.34	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	508	0.142	72	0.2	8.245	A
C-AB	35	664	0.053	35	0.1	5.727	A
C-A	231			231			
A-B	64			64			
A-C	273			273			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	86	485	0.178	86	0.2	9.025	A
C-AB	42	645	0.066	42	0.1	5.971	A
C-A	276			276			
A-B	76			76			
A-C	326			326			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	106	453	0.233	105	0.3	10.348	B
C-AB	52	619	0.084	52	0.1	6.342	A
C-A	338			338			
A-B	94			94			
A-C	400			400			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	106	453	0.233	106	0.3	10.369	B
C-AB	52	619	0.084	52	0.1	6.342	A
C-A	338			338			
A-B	94			94			
A-C	400			400			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	86	485	0.178	87	0.2	9.050	A
C-AB	42	645	0.066	42	0.1	5.975	A
C-A	276			276			
A-B	76			76			
A-C	326			326			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	507	0.142	72	0.2	8.279	A
C-AB	35	664	0.053	35	0.1	5.733	A
C-A	231			231			
A-B	64			64			
A-C	273			273			

Appendix F Junctions 10 Outputs – Sensitivity

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Site Access Junction North - Sensitivity V2.j10
Path: C:\Users\Modelling\Apex Transport Planning Ltd\Apex Transport Planning Ltd - Documents\1.Projects\C24-\C24-127 - Hoover Site, Merthyr Tydfil\4.Modelling\1. SIte Access Jct N
Report generation date: 22/10/2025 22:51:18

»2035 + Com + Dev, AM
»2035 + Com + Dev, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2035 + Com + Dev									
Stream B-AC	D1	1.5	21.30	0.60	C	D2	0.6	13.32	0.37	B
Stream C-AB		0.1	6.40	0.09	A		0.2	6.90	0.14	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Site Access (sensitivity) / Merthyr Road
Location	Merthyr Tydfil
Site number	
Date	25/03/2025
Version	
Status	(new file)
Identifier	
Client	Walters
Jobnumber	C24127
Enumerator	AzureAD\Modelling
Description	Sensitivity Assuming all traffic via one junction

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2035 + Com + Dev	AM	ONE HOUR	07:45	09:15	15
D2	2035 + Com + Dev	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2035 + Com + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Merthyr Road	T-Junction	Two-way	Two-way	Two-way		4.95	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.95	A

Arms

Arms

Arm	Name	Description	Arm type
A	Merthyr Road S		Major
B	Site Access		Minor
C	Merthyr Road N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.50		✓	3.30	200.0	✓	7.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	120	120

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	578	0.103	0.260	0.164	0.372
B-C	699	0.105	0.265	-	-
C-B	772	0.293	0.293	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2035 + Com + Dev	AM	ONE HOUR	07:45	09:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	467	100.000
B		✓	231	100.000
C		✓	343	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	70	397
	B	156	0	75
	C	293	50	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	0	1	3
	B	1	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.60	21.30	1.5	C
C-AB	0.09	6.40	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	175	485	0.360	172	0.6	11.483	B
C-AB	38	667	0.056	37	0.1	5.720	A
C-A	226			226			
A-B	53			53			
A-C	308			308			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	209	460	0.454	208	0.8	14.267	B
C-AB	45	646	0.070	45	0.1	5.987	A
C-A	270			270			
A-B	64			64			
A-C	367			367			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	255	425	0.602	253	1.4	20.751	C
C-AB	55	618	0.089	55	0.1	6.397	A
C-A	331			331			
A-B	78			78			
A-C	450			450			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	255	425	0.602	255	1.5	21.304	C
C-AB	55	618	0.089	55	0.1	6.397	A
C-A	331			331			
A-B	78			78			
A-C	450			450			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	209	460	0.454	211	0.9	14.673	B
C-AB	45	646	0.070	45	0.1	5.991	A
C-A	270			270			
A-B	64			64			
A-C	367			367			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	175	485	0.360	176	0.6	11.731	B
C-AB	38	667	0.056	38	0.1	5.723	A
C-A	226			226			
A-B	53			53			
A-C	308			308			

2035 + Com + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Site Access / Merthyr Road	T-Junction	Two-way	Two-way	Two-way		2.28	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.28	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2035 + Com + Dev	PM	ONE HOUR	15:45	17:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	515	100.000
B		✓	144	100.000
C		✓	391	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	145	370
	B	84	0	60
	C	317	74	0

Vehicle Mix

Heavy Vehicle %

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.37	13.32	0.6	B
C-AB	0.14	6.90	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	108	492	0.220	107	0.3	9.327	A
C-AB	56	657	0.085	55	0.1	5.982	A
C-A	244			244			
A-B	109			109			
A-C	286			286			

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	129	466	0.278	129	0.4	10.678	B
C-AB	67	634	0.105	66	0.1	6.340	A
C-A	291			291			
A-B	130			130			
A-C	342			342			

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	159	429	0.370	158	0.6	13.244	B
C-AB	81	603	0.135	81	0.2	6.897	A
C-A	357			357			
A-B	160			160			
A-C	418			418			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	159	429	0.370	159	0.6	13.319	B
C-AB	81	603	0.135	81	0.2	6.900	A
C-A	357			357			
A-B	160			160			
A-C	418			418			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	129	466	0.278	130	0.4	10.754	B
C-AB	67	634	0.105	67	0.1	6.346	A
C-A	291			291			
A-B	130			130			
A-C	342			342			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	108	492	0.220	109	0.3	9.404	A
C-AB	56	657	0.085	56	0.1	5.994	A
C-A	244			244			
A-B	109			109			
A-C	286			286			