

St Michael's Place Masterplan, Huyton Town Centre

Transport Assessment Addendum

A25008

1. Introduction

- 1.1. Astute Transport Planning Ltd has been commissioned by Genr8 Kajima Regeneration Ltd to advise on the proposed mixed-use development at St Michael's Place within Huyton Town Centre comprising a new Council Headquarters, hotel, public realm including active travel facilities, residential and commercial floorspace with associated works (Knowsley Council application ref: 25/00606/HYB). This Transport Assessment (TA) Addendum provides a formal highways response by Astute in relation to the above application reference and proposed development at St Michael's Place.
- 1.2. As part of the submission of the hybrid planning application, Astute prepared a supporting Transport Assessment (TA), Parking Strategy and Travel Plan (TP) Framework documentation in October 2025. Knowsley Metropolitan Borough Council (KMBC) issued a Highways Consultation Response on the hybrid planning application for the proposed development on the 20th March 2026, which was followed by a meeting held between the project team and KMBC Officers on the 25th March 2026. Subsequently, Astute prepared a Post Submission Transport Scoping Note to outline the scope of transport work proposed to be undertaken to respond to the Consultation Response received from the Local Highway Authority (LHA) on the hybrid planning application for the proposed development, which was issued on the 27th April 2026. KMBC issued a Highways Consultation Response on the Post Submission Transport Scoping Note on the 5th June 2026, which was followed by a meeting held between the project team and KMBC Officers on the 12th June 2026, and Astute attended a further meeting with Genr8 and the LHA on the 27th July 2026.
- 1.3. The following section of this TA Addendum considers the formal Highway Authority responses issued in relation to the hybrid planning application. Each point raised by the LHA is addressed in turn, with responses provided by Astute to clarify the position and / or provide additional technical information, explain the basis of the submitted proposals and, where appropriate, identify matters that can be addressed through conditions or subsequent technical approval processes.
- 1.4. The Post Submission Transport Scoping Note is included as **Appendix A**, and the LHA responses referred to above are provided in **Appendix B** of this TA Addendum.



2. Proposed Development

2.1. The detailed and outlined elements of the hybrid planning application are summarised below:

Detailed

- New Council Head Quarters (HQ) (circa 5,400sqm floor area).
- Hotel (130 bedrooms).
- A new village green including active travel routes.

Outline

- 410 residential units and no more than 1,600sqm of commercial floorspace shall be delivered (intended to comprise ground floor active uses and considered to be ancillary development).
- New decked car park at Lathom Road with provision of up to 420 spaces.

3. Astute Responses to Highway Authority Comments

3.1. The LHA commentary is provided in italics, and each Astute response is positioned beneath in standard blue font.

Study Area and Junction Scope - Feedback from the LHA identified the following additional off-site junctions that need to be included within the detailed modelling assessment:

- *B5199 Huyton Lane / ASDA Supercentre roundabout.*
- *B5199 Archway Road / A5080 Roby Road / Twickenham Drive / A5080 Tarbock Road / Blacklow Brow roundabout.*

3.2. Please refer to Section 4 later in this TA Addendum for the updated traffic impact assessment.

Baseline Surveys and Peak Hour Identification - The LHA requested additional clarification in respect of the traffic surveys and peak hours adopted for the assessment presented in the TA.

3.3. Astute included additional information in paragraphs 4.15 to 4.19 of the Post Submission Transport Scoping Note (**Appendix A**) to respond to this request. The subsequent KMBC Highways Consultation Response that was issued on the 5th June 2026 did not raise any concerns with this additional information regarding the Baseline Surveys and Peak Hour Identification.

Cumulative Development and Background Growth - The LHA noted that the assessment applies general traffic growth factors (TEMPro) but does not incorporate committed or planned developments within the surrounding area



into the junction modelling, and specifically a planning application for residential development on land formerly occupied by Huyton Cricket Club (KMBC application ref: 25/00458/FUL).

- 3.4. Astute included additional information in paragraphs 4.20 to 4.24 of the Post Submission Transport Scoping Note (**Appendix A**) to respond to this request. As detailed in this TA Addendum, the planning application for residential development at the former Huyton Cricket Club is included as a committed development within the revised traffic impact assessment, and to account for the inclusion of this scheme, the Alternative Assumptions function within TEMPro has been applied to generate revised background traffic growth forecasts. The LHA raised no concerns with this approach in the subsequent KMBC Highways Consultation Response that was issued on the 5th June 2026.

Interpretation of Junction Capacity Results - The LHA did not agree with the reporting of the junction modelling outputs.

- 3.5. As set out in this TA Addendum, Astute have undertaken a revised traffic impact assessment and provided appropriate commentary around the performance of the junctions.

Modelling Assumptions, LinSig Parameters - The LHA requested confirmation of the saturation flow assumptions adopted for the traffic assessments undertaken in LinSig.

- 3.6. The adopted saturation flows for the assessment of the Archway Road / Lathom Road signalised junction have been estimated from lane geometry using the RR67 method.
- 3.7. The revised traffic impact assessment set out in this TA Addendum is for the proposed St Michael's Place development future year / operational phase, taking into account the redistribution / reassignment effects of the short stay car parking from Archway Road and Council HQ staff parking being relocated into the proposed MSCP at Lathom Road.
- 3.8. Astute are of the view that it is not appropriate for temporary car parking proposals linked to the enabling works and construction phases to be included within the detailed modelling assessment of the proposed development scheme.

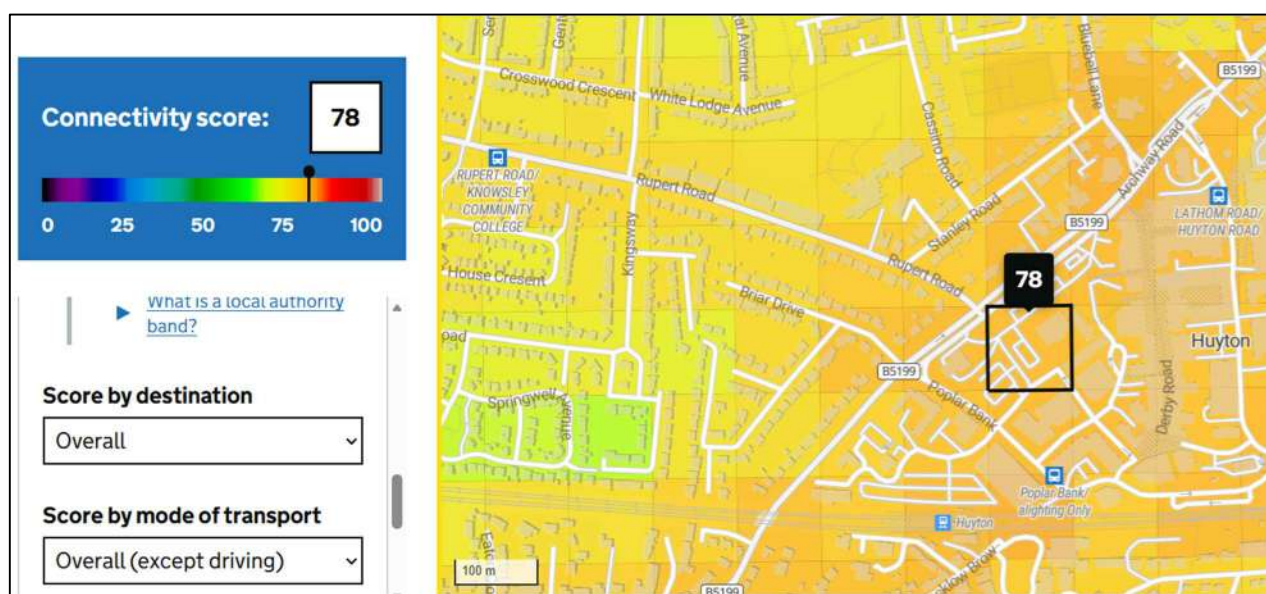
Reliance on Mode Shift - The TA implicitly assumes that a significant proportion of displaced trips will be absorbed by increased use of rail, bus, walking and cycling, reflecting the town-centre location and proximity to Huyton Station and bus services. While the Authority supports the principle of encouraging sustainable travel, the TA/TP does not sufficiently demonstrate how this mode shift will occur in practice, nor whether the existing public transport network has the capacity to absorb it.

- 3.9. The new Council HQ will be served by up to 211 spaces. Therefore, circa 130 vehicle trips by staff are predicted to be displaced from the permit spaces that will be available for Council staff in the early construction phases, and these displaced vehicle trips will be absorbed by a combination of greater use of flexible / hybrid working practices and increased use of public transport and active travel modes, given that the site benefits from excellent access to transport infrastructure, in particular pedestrian routes, bus and rail services.



- 3.10. In terms of considering whether the existing public transport network has the capacity to absorb the displaced trips in more detail, Astute have reviewed the Department of Transport's (DfT) Connectivity Tool, which provides information on a site's level of accessibility by all modes of transport for all journey purposes. This assessment compares the site's connectivity with all other areas within Knowsley and the Liverpool City. The output of this assessment (overall except driving) is provided in **Figure 1**.

Figure 1 - DfT Connectivity Tool Assessment



- 3.11. The above assessment scores the site around 78 and it is within Band A, which is the highest band for connectivity across KMBC. It can be concluded therefore that the site location is well suited for supporting travel to / from Huyton Town Centre using public transport and active travel modes.
- 3.12. In addition, Astute have liaised with Merseytravel / Liverpool City Region Combined Authority (LCRCA) with regard to the existing public transport facilities and capacities within Huyton Town Centre in the context of the development proposals at St Michael's Place (KMBC application ref: 25/00606/HYB), and they are of the view that there is currently good provision to support the town centre as an excellent location for district centre, economic, commercial, social and leisure uses.
- 3.13. Following investments made in extending and refurbishing facilities over the past decade, it should be noted that significant levels of capacity remain for service expansion, should this be required to support regeneration proposals and aspirations in the future. The major upgrade of Huyton Rail Station undertaken in 2010, which restored the facility to a four-platform station, gave a significantly enhanced capability for the station to handle more varied train patterns, an infrastructure upgrade which was capitalised on with the electrification of most rail services through the station in 2015. In combination, these improvements mean that there would be capacity to increase train services, in the event of passenger demand justifying such a move.
- 3.14. It should also be noted that refurbishment work has been undertaken at the nearby Huyton Bus Station to keep this facility in optimum operational condition as a busy public transport hub. The bus station includes a Travel Centre and



is fully staffed throughout the day. Although the bus station is a very well used facility, the fact that it was constructed with seven bus arrival / departure stands and seven layover spaces means that there remains capacity to accommodate more departures and passenger throughput via increased use on a number of stands. In addition to the bus station, Huyton Town Centre also has bus stops on Poplar Bank (one stop) , Archway Road (four stops adjacent to the Council HQ site) and Lathom Road (three northbound stops), which could accommodate additional departures and passengers. There are circa 20 bus services that serve Huyton Bus Station and the other aforementioned bus stops in the town centre, providing regular bus services to and from a range of destinations across Merseyside and further afield, which is further confirmation of the excellent bus accessibility afforded to the proposed St Michael's Place development.

- 3.15. On this basis, Huyton Town Centre's bus and rail networks should be able to accommodate reasonable levels of increased public transport use and associated passenger traffic to / from the town centre resulting from the development proposals at St Michael's Place, including having the capacity to absorb the future mode shift associated with the new Council HQ and its reduced car parking provision in the operational phase.

Impact on Established Town Centre Travel Patterns - *The LHA is particularly concerned that the TA does not adequately assess the impact of altering long-established town centre access patterns. Existing travel behaviour is shaped not only by proximity, but by habit, convenience and perceived accessibility. The removal of parking accessed via Archway Road and Poplar Bank represents a structural change to how the town centre is used, particularly for short-stay trips and servicing.*

- 3.16. The revised traffic impact assessment set out in this TA Addendum is for the proposed St Michael's Place development future year / operational phase, taking into account the redistribution / reassignment effects of the short stay car parking from Archway Road and Council HQ staff parking (accessed via Archway Road and Poplar Bank) being relocated into the proposed MSCP at Lathom Road.

Residential Unit Mix - *In the Highways Consultation Response issued on the 20th March 2026, KMBC provides commentary on the residential unit mix stating that "The submission does not define the residential unit mix by bedroom number, nor does it provide sensitivity testing to demonstrate that the highway network and parking strategy would remain acceptable under alternative scenarios." Accordingly, Astute undertook a review of the proposed residential trip rates and selected sites in light of these comments, to demonstrate that a range of residential units are being presented and a representative scenario is accounted for, and the updated trip rate information was issued to the LHA on the 5th May 2026. In the Highways Consultation Response issued on the 5th June 2026, the LHA acknowledges the additional analysis and the attempt to broaden the dataset, and at the meeting with KMBC Officers on the 12th June 2026 it was agreed to generate the residential trip rates based on a worst-case scenario for the residential units in terms of bedroom numbers.*

- 3.17. Genr8 have provided details of the proposed residential unit sizes for the phase 1 residential development, as well as the findings of the KMBC Housing Needs Assessment for Huyton Town Centre. The phase 1 residential development comprises of:



- 19% one-bed units.
- 81% two-bed units.

3.18. The KMBC Housing Needs Assessment informed the typology for the future residential phases, and the approximate blend of residential unit sizes is:

- 45% one-bed units.
- 55% two-bed units.

3.19. The phase 1 residential development is assumed to be the robust scenario for the overall residential development proposals (circa 410 dwellings), and this mix of unit sizes has been applied to the per bedroom trip rates for a worst-case assessment. Per bedroom trip rates have been identified using representative town centre sites, and the TRICS output is included in **Appendix C**. These per bedroom trip rates has been compared to the per unit trip rates that were issued to the LHA on the 5th May 2026 (also included in **Appendix C**), and this is summarised in **Table 1** below.

Table 1: Proposed Development Trip Forecasts

		AM Peak			PM Peak		
		Arr	Dep	Total	Arr	Dep	Total
Residential	Trip Rate (per unit)	0.051	0.168	0.219	0.162	0.095	0.257
	Trip Generation	21	69	90	66	39	105
	Trip Rate (per bedroom)	0.027	0.075	0.102	0.075	0.043	0.118
	Trip Generation	20	56	76	56	32	88

3.20. This analysis clearly demonstrates that the per unit TRICS outputs generated by Astute and issued to the LHA on the 5th May 2026 are robust when compared to the per bedroom trip rate approach. Therefore, the latest per unit residential trip rates as set out above are considered appropriate, and they have been used in the revised traffic impact assessment and junction modelling work as set out in this TA Addendum.

3.21. In addition, the town centre location of the development proposals and the available car parking supply (95 dedicated spaces for 410 residential units in the new MSCP - 0.23 spaces per unit parking ratio) will directly suppress car ownership amongst future residents, therefore the above residential trip rates are considered to be robust.

3.22. To give the Highway Authority further comfort regarding the uncertainty associated with residential mix and car ownership for the outline residential plots, Astute are of the view that this can be managed via a planning condition that requires the reassessment of the trip generation and traffic impacts of each residential scheme as part of the future reserved matters applications, when details of unit size and tenure are known.



Package of Traffic Regulation Orders / Parking Control Measures - The LHA considers that a package of parking control measures will be required.

- 3.23. In the KMBC Highways Consultation Responses, the LHA considers that a package of Traffic Regulation Orders (TROs) / parking control measures will be required. Astute are of the view that any such requirements can be subject to an appropriately worded condition(s) to enable the agreement of a suitable study area for monitoring parking impacts from the development and / or implementation of a TRO to provide parking control measures as part of the S278 highway works, and this can be linked to the Section 106 Agreement to secure the Council's standard fee of £6,500 for associated administration works.
- 3.24. It is noted that the LHA considers that additional Civil Enforcement Officer (CEO) resource will be required in respect of the proposed changes to car parking in Huyton Town Centre linked to the St Michael's Place development proposals.
- 3.25. The LHA considers it reasonable and necessary that the applicant makes financial contributions towards:
- Legal and administrative costs associated with promoting and implementing TROs.
 - Physical installation of associated signing and lining.
 - Time-limited uplift in CEO enforcement capacity.
 - Physical engineering means such as barriers or Automatic Number Plate Recognition (ANPR) camera control.
- 3.26. With respect to the above parking control measures, it is recommended that an appropriate S106 contribution by the applicant is agreed with KMBC.
- 3.27. Astute understand that the new MSCP will be managed by KMBC.

Robustness and Longevity of the Assessment - The LHA notes that the traffic impact assessment must be sufficiently robust to account for:

- Long-term behavioural patterns.
 - Cumulative network pressure.
 - The limited opportunity to retrospectively address deficiencies once the scheme is implemented.
- 3.28. The revised traffic impact assessment set out in this TA Addendum is for the proposed St Michael's Place development future year / operational phase, taking into account the redistribution / reassignment effects of the short stay car parking from Archway Road and Council HQ staff parking (accessed via Archway Road and Poplar Bank) being relocated into the proposed MSCP at Lathom Road, as well as incorporating relevant committed developments



including proposed residential development on land formerly occupied by Huyton Cricket Club (KMBC application ref: 25/00458/FUL).

Travel Plan: Summary and Assessment of Mitigation - The LHA consider that the TP does not quantify the level of modal shift required to offset the permanent loss of town-centre parking, nor does it clearly demonstrate:

- *How many existing vehicular trips (including staff, commuter and visitor trips) are assumed to transfer to sustainable modes.*
- *Whether realistic alternatives exist for those users, considering origin–destination patterns, service availability, health and mobility constraints and shift patterns.*
- *How success or failure will be measured against defined targets.*

- 3.29. A TP Framework has been provided as part of the TA. In their response, KMBC "*acknowledges that the TP sets out a broad framework of measures intended to encourage sustainable travel choices, including promotion of public transport use, walking and cycling, provision of cycle facilities, travel information for occupiers and staff engagement initiatives.*" The KMBC response further "*accepts that, in principle, the measures identified within the TP are appropriate for a town-centre development and align with the objective of reducing single-occupancy car use.*"
- 3.30. KMBC has requested additional information to support this proposed strategy. As noted within the Astute TA, the TP Framework is intended to provide a structure to inform the development of detailed, site-specific TPs in the future. As is also stated, it is anticipated that separate TPs will be developed for the different uses across the site, but with broadly consistent themes. This future requirement could be controlled by an appropriately worded planning condition.
- 3.31. As set out earlier in this report, the new Council HQ will be served by up to 211 spaces, and circa 130 vehicle trips by staff are predicted to be displaced from the permit spaces that will be available for Council staff in the early construction phases in line with the updated parking strategy. This equates to a future mode shift requirement of around a 37% reduction in single occupancy car trips. These vehicle trips will be absorbed by a combination of greater use of flexible / hybrid working practices, increases in trips by active travel modes for shorter journeys (up to 2km and 5km for walking and cycling trips respectively), increased use of public transport given that the site benefits from excellent access to bus and rail services and networks with appropriate spare capacity to accommodate the above levels of increased public transport use, and other sustainable modes such as car sharing. In addition, due to the 10-year lease on the Club 3000 Bingo ending in around 2033, this provides an appropriate level of flexibility and additional temporary car parking for an extended period if required, to support the transition of the Council HQ to lower future operational car parking provision and for the Travel Plan measures and initiatives to deliver the required change in staff travel behaviour.
- 3.32. Remedial measures will be incorporated into the Detailed / Implementation TP where future staff mode share targets are missed, a recurring issue is identified through monitoring such as the cycle parking usage being at capacity and



parking impacts from the development, or a transport related safety concern is recorded. Additional intervention measures and / or changes to the linked parking management strategy for the proposed St Michael's Place development would be reviewed and put forward to the LHA for agreement / implementation.

- 3.33. Notwithstanding the above, it is proposed that further detail will be required and secured by condition as part of the development of Detailed TPs as elements of the proposed development are brought forward, and a greater level of certainty in respect of configuration and operations is established. It is considered that this approach is appropriate and represents established practice with regard to the development of TP strategies.

Design and Access Statement - Highways and Movement Assessment / Existing Highway Layout - In the Highways Consultation Response issued on the 5th June 2026, the LHA states that, "As currently presented, the scheme appears to be working around existing infrastructure constraints rather than addressing the underlying causes of poor performance and pursuing opportunities for improvement. This is a missed opportunity for a development of this scale, which presents a clear opportunity to fundamentally reconsider how movement within the town centre is organised, including the role and location of strategic parking provision. Retaining and re-providing core elements of the existing layout, while citing constraints such as utilities, risks perpetuating known deficiencies in connectivity, legibility, and accessibility, as well as reinforcing indirect routes and potential conflict between pedestrian and vehicular movements."

- 3.34. Astute are of the view that retaining the existing adopted highway as the basis of the proposed St Michael's Place masterplan transport network will deliver a town centre street and active travel connections design that is in line with the relevant guidance and best practice - please refer to the detailed justifications set out in Astute's Post Submission Transport Scoping Note (**Appendix A**) in paragraph 4.48.

- 3.35. In addition, Astute have commissioned an independent accessibility review with regard to the St Michael's Place development proposals and provision for active travel modes, with greater focus on the detailed elements of the hybrid planning application. The purpose of the accessibility review was to study the main active travel routes for those walking, cycling or scooting to / from the proposed scheme and where relevant, provide comment on any issues that could potentially compromise road safety or accessibility. A copy of the Six:TEN Highways & Traffic Ltd Accessibility Review report is included in **Appendix D**, and the key findings are summarised below:

- Active travel links throughout the town centre and to / from the proposed development are considered to be adequate, and no existing road safety issues have been identified for active travel users throughout the study area. The following potential recommendations are made to help improve accessibility for active travel users throughout the study area.
- The existing uncontrolled pedestrian crossing provision is inconsistent in kerb height, tactile paving type and tactile paving provision, therefore, it is recommended that the existing uncontrolled pedestrian crossing facilities throughout the study area are all renewed with dropped kerbs between 0mm-6mm and buff



coloured tactile paving provided. Astute response - it is considered that this recommendation should be addressed as part of the LHA maintenance regime for the public highway.

- Any overhanging / overgrown vegetation that encroaches onto the adjacent footway or obscures pedestrian / driver intervisibility splays should be cut back. Astute response - it is considered that this recommendation should be addressed as part of the LHA maintenance regime for the public highway.
- The potential for north / south and east / west cycle links and appropriate cycle crossing facilities throughout the town centre and across Archway Road linking into the proposed development should be investigated. Astute response - the St Michael's Place development proposals consist of new active travel routes through the Village Green area connecting to the north (Archway Road), east (Derby Road), south and west (Civic Way). The proposed new active travel routes will deliver enhanced permeability in Huyton Town Centre and access to key amenities and transport nodes (Huyton Bus and Rail Stations), providing a welcoming environment for active travel users. There are no dedicated cycle facilities (on and off-carriageway cycle lanes) along and to the north of Archway Road in the vicinity of the site, therefore providing a cycle crossing facility on Archway Road is not considered to be appropriate. As agreed at the meeting with the LHA on the 27th July 2026, the provision of a north-south cycle link across Archway Road adjacent to the proposed development site is not currently feasible due to existing highway conditions and land constraints on Archway Road, but the LHA will continue to review the opportunity to deliver this wider active travel infrastructure improvement in the future. A proposal to reconfigure an existing staggered controlled crossing facility on Archway Road to a straight pedestrian crossing, for example at Cavendish Walk, could be investigated. It is considered that funding to review the design feasibility of a proposed straight controlled crossing could be secured by a S106 contribution from the applicant, subject to agreement with KMBC.
- There is currently no appropriate pedestrian link and pedestrian crossing facilities from the proposed development / town centre into the Asda petrol station which includes a small convenience store, therefore, it is recommended that this is investigated, as the provision of a hotel may increase the likelihood of pedestrians wishing to access the convenience store. Astute response - potential improvements to pedestrian facilities at this location will be considered further and proposed as part of the layout design of the adjacent Plot 5 (part of the outline element) and the associated future reserved matters application, however it is important to note that there is a third-party land issue in this location that would likely impact on the scope / feasibility of such a proposal.

3.36. Stopping Up requirements under Section 247 of the Town and Country Planning Act will likely be required to facilitate the proposed reconfiguration of the Archway Road / Lyndhurst Way priority junction and the public realm proposals in the area between the new Council HQ and Cavendish House, and this will be confirmed / progressed by the applicant following the hybrid planning application.



Completed Development Parking - The latest comments from the LHA are provided in the Highways Consultation Response issued on the 5th June 2026.

- 3.37. The existing car parking in Huyton Town Centre is detailed in Section 3 of the Astute TA, and this can be summarised as follows in relation to the proposed St Michael's Place development / planning application boundary:
- Existing Short Stay parking occupancy - 106 spaces.
 - Existing Long Stay parking occupancy - 424 spaces (excluding the Huyton Hey car park (97 spaces) that is outside of the planning application boundary) of which 30 spaces are in the existing Lathom Road MSCP and the remaining 394 spaces are around the Huyton Civic Campus. The 394 spaces are mainly used by Council staff, although it is understood that some of these spaces are used by Park and Ride visitors for Huyton Train and Bus Stations.
- 3.38. The updated parking strategy and parking implementation note have been issued to KMBC Planning and Highways Officers on the 26th June 2026 for review and agreement. As agreed at the meeting with the LHA on the 27th July 2026, the KMBC Regeneration Team are providing additional information to the LHA in respect of the approved parking mitigation plan for the construction phases prior to the completion of the new MSCP.
- 3.39. The car parking proposals for the operational phase of the St Michael's Place development scheme are outlined below.
- Parking supply - up to circa 420 spaces in the new MSCP at Lathom Road (completed by around autumn 2028) and 25 spaces to the rear of Cavendish House.
 - Total Long and Short Stay parking - circa 445 spaces.
- 3.40. Additional publicly available parking is located in the town centre including at Huyton Hey car park, and the ASDA car park provides a total of around 827 spaces (inclusive of the upper parking deck).
- 3.41. The proposed Short and Long Stay parking allocations are as follows:
- Short Stay parking - 106 spaces in the new MSCP.
 - Long Stay parking - circa 314 spaces in the new MSCP and 25 to the rear of Cavendish House.
- 3.42. The baseline Long Stay parking provision allocations for proposed development uses are summarised below:
- Council HQ - 211 spaces with 186 in the new MSCP and 25 in the area to the rear of Cavendish House. The spaces to the rear of Cavendish House will be designated parking for Council Members and visitors. The revised proposals for the new Council HQ building consist of approximately 5,400sqm Gross Internal Area (GIA), which is around a 35% reduction compared to the earlier proposed scheme of 8,461sqm GIA. KMBC's



adopted parking standards allow for a maximum provision of 1 space per 40sqm for B1 office use (town centre maximum), which equates to up to 135 car parking spaces. Therefore, a provision of circa 211 spaces exceeds KMBC's maximum policy standards. It is important to note that the reduction in floor area is largely associated with the loss of informal breakout areas rather than the number of workstations that will be available to KMBC staff. Therefore, the proposed smaller Council HQ building will have a similar capacity to the previously proposed larger office building, which is an operational requirement and justification for the car parking provision to serve the proposed scheme to remain unchanged. The Council HQ scheme is not a 'new' development in the sense that it is replacing a long-established office use on the site with existing travel patterns, albeit the transport strategy for the proposed St Michael's Place development is seeking to rebalance current single occupancy car use by KMBC staff in line with the car parking strategy for the operational phase. It is important to note that visitor numbers to Huyton Town Centre associated with the Council HQ have decreased since the COVID-19 pandemic - in 2019 circa 1,200 staff were office based five days per week (equates to a ratio of approximately 1 space per 3 staff based on 394 Council staff spaces), and in 2026 the average is 417 staff (equates to a ratio of approximately 1 space per 2 staff based on a future provision of 211 Council staff spaces), which is a reduction of approximately 65%. The existing car parking provision in the town centre could support the parking demand associated with KMBC staff when the Council HQ was operating at 2019 capacity levels, and this should be a material consideration in relation to assessing the appropriateness of the proposed future car parking allocation to serve the Council HQ, which is a reduction of around 45% of car parking spaces compared to the existing situation.

- Hotel - **33** dedicated spaces in the new MSCP in line with the brand requirements (1 space per 4 bedrooms). The proposed car parking provision of 33 spaces for the hotel is within the KMBC maximum policy standard. This is considered appropriate given that the site is in a highly accessible location with immediate access to Huyton Bus and Rail Stations for public transport services, there is good accessibility by active travel modes plus a good range of amenities in close proximity, and also noting that there is additional long stay car parking provision available in the town centre.
- Residential - **95** dedicated spaces for 410 residential units in the new MSCP (parking ratio of 0.23 spaces per unit).

3.43. The proposed MSCP at Lathom Road is part of the outline element of the hybrid planning application. As agreed at the meeting with the LHA on the 27th July 2026, an appropriately worded planning condition is required to ensure that the following elements are addressed in detail at the reserved matters stage (prior to commencement of works) in relation to the new MSCP:

- Detailed layout and design.
- Transport assessment and associated traffic impacts.
- Pedestrian management and assessment taking account of disabilities.



- Wider town centre signage and active travel connections.
- Security and lighting.
- Provision of adjacent taxi pick-up / drop-off zone.
- Cycle / active travel hub.
- Detail on how the car park will be managed in operation with permits / allocations.

3.44. 'Knowsley Council Ensuring A Choice of Travel Supplementary Planning Document (SPD) (2010)' contains the Council's parking standards to be applied to new development. The SPD provides an important framework in relation to the consideration of the acceptability of the above car parking proposals, and Policy T6 of the SPD states that proposals for new development should provide, "*car parking facilities which do not exceed the Council's maximum standards*". There is no policy stipulation that parking should meet the maximum standards, indeed the SPD goes on to state in paragraph 4.5 that the standards define 'upper limits' for new developments and that:

"In all areas there may be instances where provision should be less than the maximum specified for example where a site is particularly accessible by modes of transport other than the private car".

3.45. The future parking requirements for the outline residential plots will be assessed on an individual basis when reserved matters applications come forward including the need for individual plot-specific parking management strategies, and it is recommended that this can be controlled by condition.

3.46. There is also the opportunity to implement a management / operational system at the new MSCP that enables the potential sharing of parking spaces between the Council HQ and the residential use and the Council HQ and the hotel use, given that there will be minimal overlap between the peak periods of demand associated with these proposed developments. The provision of details pertaining to the implementation of the proposed parking allocations, along with the associated management, operation and enforcement regimes that will need to be in place at the new MSCP can be controlled by condition.

3.47. The new Council HQ building parking provision will also include:

- Seven accessible bays in the area to the rear of Cavendish House.
- A secure external cycle store located adjacent to the building to the east (34 spaces for staff), with provision of 17 two-tier racks plus two accessible cycle bays and a maintenance area. There are showers, changing areas and lockers proposed on the ground floor of the new Council HQ building. It is proposed that the provision of e-bike / e-cargo charging points will be accommodated in the future active travel hub at the new Lathom Road MSCP.



- Two motorcycle spaces in the area to the rear of Cavendish House, with the potential to provide additional provision (up to a total of seven spaces in line with KMBC policy standards) in the new MSCP.
- Visitor cycle parking for the Council HQ - three Sheffield stands (6 spaces) by Cavendish House and three stands by the Cenotaph near to the southeast corner of the building.

3.48. The above parking provisions are broadly in line with KMBC's policy standards for B1 office use.

3.49. The proposed hotel parking provision will also include:

- Two accessible bays in the hotel service yard area. In addition, there is a publicly available accessible bay (approximately three spaces) on the one-way section of Civic Way in close proximity to the southeast of the site.
- An internal cycle store for staff (12 spaces).
- Two motorcycle spaces in the hotel service yard area, with the potential to provide additional provision (up to a total of five spaces in line with KMBC policy standards) in the new MSCP.
- Visitor cycle parking for the hotel in the Village Green - four Sheffield stands (8 spaces) to the southeast and three stands (6 spaces) close to the main entrance. The visitor cycle parking close to the hotel entrance also includes a cycle repair station with a wheel pump.

3.50. The above parking provisions are broadly in line with KMBC's policy standards for C1 hotel use.

3.51. The public realm general arrangement plan for the proposed phase 1 detailed elements of the St Michael's Place development is included in **Appendix E**, and the vehicle tracking plan for the area to the rear of Cavendish House is included in this TA Addendum. This provides a high-quality outdoor active travel provision consisting of on-site shared routes that are a minimum width of 3m integrated into public realm that is well lit, and includes wayfinding fingerpost signs at decision points / gateway locations and a number of seating locations are proposed around the Village Green area on the main desire lines. The public realm design for the phase 1 scheme does not include proposed water fountains, however the detailed design of the landscaping and public realm will be conditioned and so there is flexibility for additional elements to be added into the proposed design at this stage, as well as confirming locational and specification requirements for the scheme components.

3.52. A public facing active travel hub will be proposed as part of the St Michael's Place masterplan within the footprint of the new MSCP, and it is recommended that the design of this provision can be conditioned to be considered as part of the future reserved matters application process.

3.53. As part of the St Michael's Place regeneration proposals there is the potential opportunity to facilitate community focused spaces supporting education, training and culture change in relation to increasing modal shift to active travel

modes, and these could include the Village Green and utilising the future active travel hub and / or a vacant unit on Derby Road for hosting such activities.

Servicing - Coach Drop-Off on Civic Way - The comments from the LHA are provided in the Highways Consultation Response issued on the 27th April 2026.

- 3.54. The hotel servicing arrangements include a proposed coach bay on the westbound one-way section of Civic Way. The proposed highway design will utilise the existing carriageway layout and one-way westbound arrangement on Civic Way to create the coach bay area with some alterations to the geometry. Hotel guests will board and alight from coaches using the adjacent footway and cross Civic Way to the rear of the parked vehicle, where the proposed raised table and active travel infrastructure on either side is the same level. This provides access to both the Village Green and the main hotel entrance. The public realm streetscape design will provide a safe arrangement for pedestrians with appropriate visibility splays / sightlines to assimilate oncoming vehicles, and the raised table will ensure low traffic speeds on this part of the highway network that will be lightly trafficked in the future following the completion of the St Michael's Place development proposals. The pedestrian crossing location will comprise of tactile paving on either side of the raised table road surface to assist mobility impaired users. The coach drop-off arrangement on Civic Way and the pedestrian access to / from the hotel is detailed in **Figures 2 and 3**.

Figure 2 - Coach Drop-Off Arrangement on Civic Way

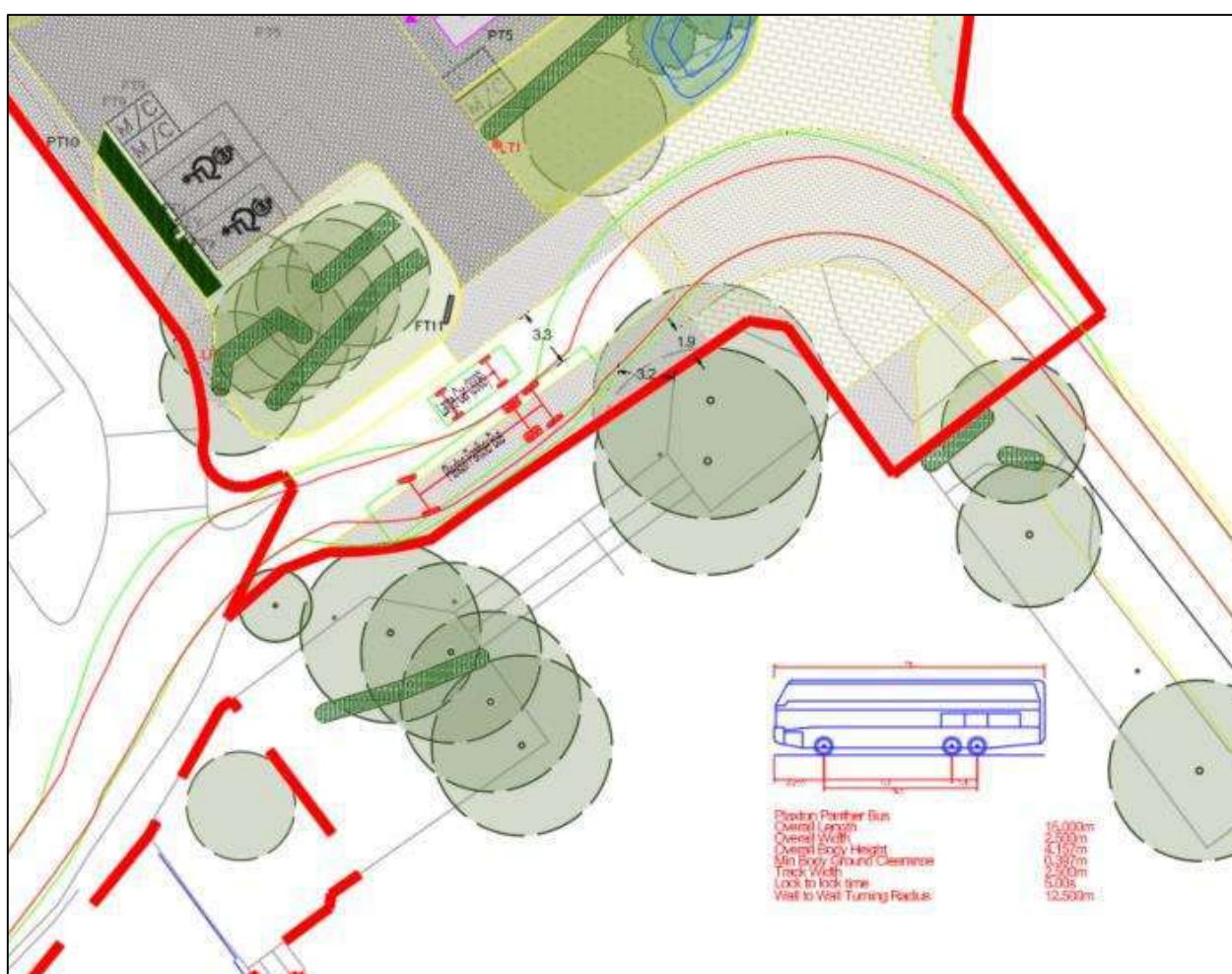
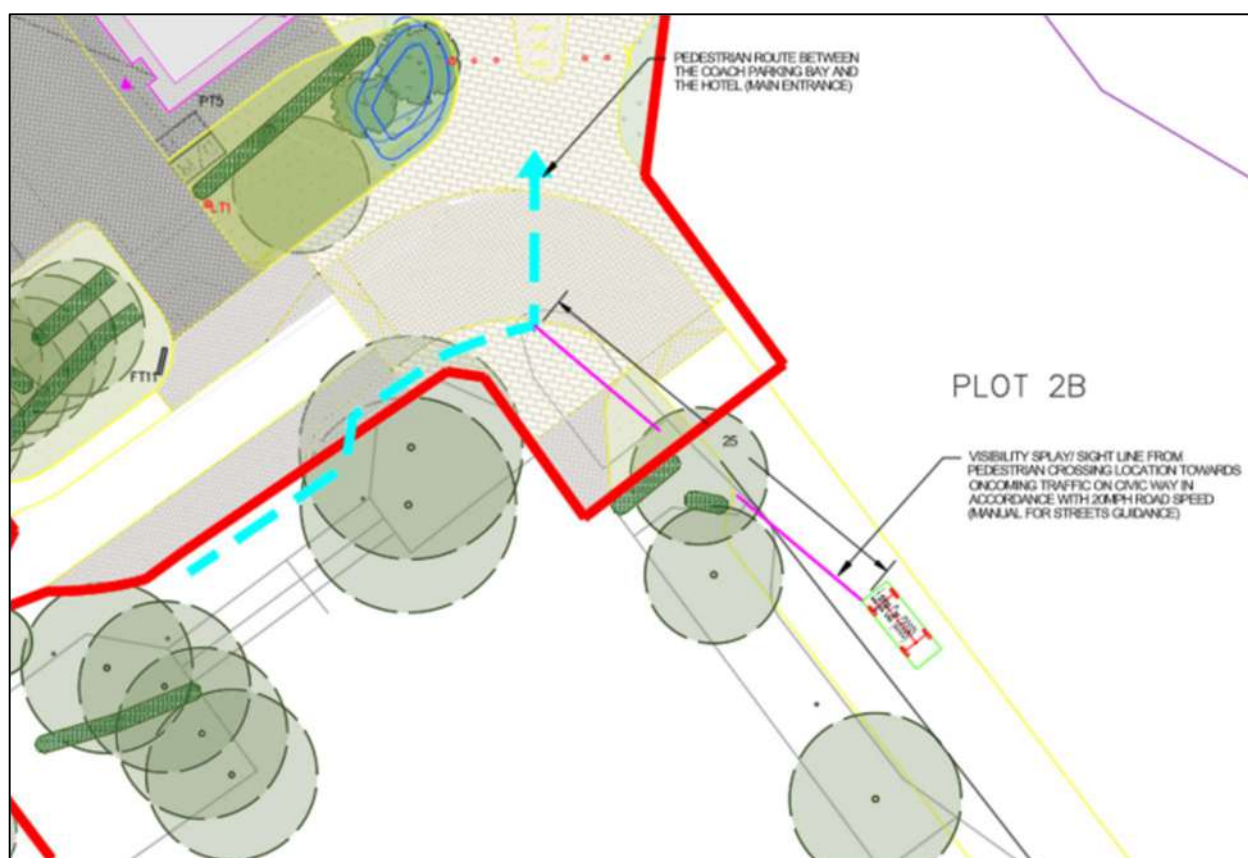


Figure 3 - Pedestrian Access to / from the Hotel from the Coach Parking Bay



- 3.55. The above provision will also provide a suitable location for accommodating mobile health units.
- 3.56. The St Michael's Place development proposals will change the nature of the one-way section of Civic Way due to the displacement of the surrounding surface car parks in this part of the town centre, and as a result the future vehicle movements using this route will be minimal and mainly limited to servicing activity linked to the adjacent development plots. As discussed at the meeting with the LHA on the 27th July 2026, there is the potential opportunity to review changes to the existing layout to provide a shared surface route / controlled pedestrian zone on this part of the highway network by the LHA and / or as part of future reserved matters applications (once Plots 2B and 3 are completed).

Construction Phasing Parking - The latest comments from the LHA are provided in the Highways Consultation Response issued on the 5th June 2026.

- 3.57. Astute provided a framework strategy for contractor parking in paragraphs 5.14 to 5.16 of the Post Submission Transport Scoping Note (**Appendix A**). The updated car parking strategy has been issued to KMBC Planning and Highways Officers on the 26th June 2026 for review and agreement, and this provides details on the short and long stay parking proposals in Huyton Town Centre during the main construction phases of the St Michael's Place development scheme. As agreed at the meeting with the LHA on the 27th July 2026, the KMBC Regeneration Team are providing additional information to the LHA in respect of the approved parking proposals for the construction phase prior to the completion of the new MSCP.



3.58. In addition, Astute have undertaken a detailed access review in relation to the proposed temporary car parking scheme at the former Huyton Fire and Ambulance Station site, including a Stage 1 Road Safety Audit (RSA) on the proposed access arrangement, and this appraisal did not identify any significant safety or capacity concerns / constraints. The detailed access review outputs have been issued to the LHA on the 25th June, 10th July and 31st July 2026 for review and agreement.

Pedestrian and Cycle Connectivity - The LHA have provided commentary on pedestrian and cycle connectivity to and from the site. Particular reference is made to KMBC's Local Cycling and Walking Infrastructure Plan (LCWIP) and a total of nine infrastructure routes. The LHA identified shortfalls in secured funding in relation to these routes.

3.59. Astute consider that any off-site highway interventions such as improvements to LCWIP routes are required to pay due cognisance to both the National Planning Policy Framework (NPPF) and Regulation 122 of the Community Infrastructure Levy (CIL) Regulation 2010. Planning obligations must meet all three of the following tests:

- Necessary to make the development acceptable in planning terms.
- Directly related to the development.
- Fairly and reasonably related in scale and kind to the development.

3.60. It should also be noted that KMBC are bringing forward a number of City Region Sustainable Transport Settlements (CRSTS) funded public realm schemes in and around Huyton Town Centre, such as the Wilson Road Cycle Scheme and the proposed pedestrian connectivity improvements at Derby Road and Station Gateway, and any additional active travel mitigation measures being sought by KMBC should be considered in the context of the proposed CRSTS scope and programme for Huyton.

3.61. Astute have reviewed the adopted Knowsley LCWIP and the identified routes as detailed in the Highways Consultation Response issued on the 27th April 2026, and the findings are summarised below:

- **Derby Road (Town Centre Core)** - the pedestrian zone is not a specific walking route that is identified in the LCWIP.
- **Archway Road** - a proposed straight controlled crossing on Archway Road could be investigated. It is considered that funding to review the design feasibility of a straight crossing proposal could be secured by a S106 contribution from the applicant, subject to agreement with KMBC.
- **Poplar Bank** - the Accessibility Review report does not identify any significant deficiencies on Poplar Bank in relation to provision for active travel users. In addition, future traffic movements on this link and potential conflicts with active travel users will reduce as a result of the parking strategy proposals to consolidate car parking at the new Lathom Road MSCP.



- **Blacklow Brow** -this is considered an important route in relation to the proposed St Michael's Place development and linking to the south and west of the town centre for active travel users. A desktop review by Astute has identified four locations along this route at minor road junctions and to cross Blacklow Brow where there is currently no provision of dropped kerbs and tactile paving.
- **Lathom Road (between Archway Road and Huyton Church Road)** - this is not considered a key active travel route in relation to the proposed St Michael's Place development, as the desire line is not to / from the site's red line boundary.
- **Kingsway** - this is not considered a key active travel route in relation to the proposed St Michael's Place site, given the distance from the development and there are alternative routes that are available for active travel users to / from the north of the town centre.
- **Huyton Hey Road (including connecting spurs)** - this is considered an important route in relation to the proposed St Michael's Place development and linking to the south and east of the town centre for active travel users. A desktop review by Astute has identified two pedestrian underpass routes on the railway bridge where lighting and the finishes of surfaces (walls and ceilings) could be improved to enhance the experience of active travel users.
- **Wilson Road** - the Wilson Road Sustainable Transport Scheme is a package of committed active travel improvements that are being delivered by KMBC between The Orchard and the Wilson Road / Cronton Road / Coppice Lane junction that will enhance footway provision and crossing facilities on this route.
- **LCWIP Route 9, Swanside to Huyton Station** - this is not considered a key active travel route in relation to proposed St Michael's Place site, given the distance from the development and there are alternative routes that are available for active travel users to / from the west of the town centre.

3.62. The applicant is happy to agree a financial contribution towards the proposed improvements to active travel infrastructure on the two LCWIP routes as identified in the review by Astute (Blacklow Brow and Huyton Hey Road), which would benefit the future users of the proposed development at St Michael's Place and would meet the key planning policy tests as summarised above. This could be secured by a S106 contribution from the applicant, subject to agreement with KMBC.

Public Transport Access - *The comments from the LHA are provided in the Highways Consultation Response issued on the 27th April 2026.*

3.63. Astute's response is set out in paragraphs 3.9 to 3.15 of this TA Addendum.



4. Revised Traffic Impact Assessment

- 4.1. Astute has undertaken a revised traffic impact assessment and junction modelling to reflect the updated development proposals at St Michael's Place for the operational phase and with the permanent KMBC staff parking relocated from the Club 3000 Bingo site to the new multi storey car park (MSCP) at Lathom Road (and the current 150 spaces at Club 3000 Bingo used by KMBC staff are assumed to not generate any vehicle trip generation in the weekday AM and PM peak periods).
- 4.2. It should be noted that the LHA raised no concerns in the Highways Consultation Responses with regard to the trip distribution and assignment approach for the existing car parking demand and the forecast development trips, as set out in the Astute TA and the Post Submission Transport Scoping Note, and therefore the same principles and approach have been adopted for the revised traffic impact assessment.
- 4.3. A series of updated traffic flow figures have been provided with these listed below along with commentary on relevant updates from the assessment presented within the TA. The study network has been extended to include the A5080 Roby Road / B5199 Archway Road / Twickenham Drive / A5080 Tarbock Road / Blacklow Brow and B5199 Huyton Lane / Asda Access junctions. The figures are provided in **Appendix F**.
- **Traffic Figure 1 Surveyed Flows:** updated to include the 2026 traffic survey of the Roby Road/ Archway Road junction and the survey flows reported within the Prime Transport Planning TA for the Huyton Lane/ Asda Access junction.
 - **Traffic Figure 2 Committed Development:** traffic flows associated with residential development 25/00458/FUL. It should be noted that the Prime TA prepared in support of this scheme did not distribute trips beyond the Huyton Lane/ Asda Access junction. For the purposes of this revised assessment, these committed development trips have been assigned east-west through the study network.
 - **Traffic Figure 3 2031 Baseline 'Without Development':** the flows presented in Traffic Figures 1 and 2 have been combined to generate a 'Without Development' scenario. To provide a reasonable worst-case assessment the previously adopted 2030 future year has been uplifted to 2031 using updated TEMPRO forecasts.
 - **Traffic Figure 4 Archway Road Car Parks - Existing Distribution:** no change to methodology and updated to reflect the extended network.
 - **Traffic Figure 5 Proposed MSCP - Residential Distribution:** no change to methodology and updated to reflect the extended network.
 - **Traffic Figure 6 Proposed MSCP - Other Distribution:** no change to methodology and updated to reflect the extended network.



- **Traffic Figure 7 Cavendish Walk Car Parking Distribution:** no change to methodology and updated to reflect the extended network.
- **Traffic Figure 8 Archway Road Car Parks - Existing Trips:** no change to methodology and updated to reflect the extended network. However, as previously detailed, this figure has been updated to include traffic associated with the 150 car parking spaces at Club 3000 Bingo as these trips are now to be relocated to the proposed MSCP.
- **Traffic Figure 9 MSCP - Council HQ:** this additional figure has been prepared to reflect the allocation of KMBC staff car parking within the proposed MSCP. Trips associated with the Council HQ have been forecast by factoring existing surveyed Council car parking movements to reflect the 186-space allocation for this element of the proposals.
- **Traffic Figure 10 MSCP - Residential:** this figure has been updated to reflect the latest adopted trip rates and extended network.
- **Traffic Figure 11 MSCP - Hotel:** no change to methodology and updated to reflect the extended network.
- **Traffic Figure 12 MSCP - Displaced Short Stay:** no change to methodology and updated to reflect the extended network.
- **Traffic Figure 13 Cavendish Walk Car Parking:** no change to methodology and updated to reflect the extended network.
- **Traffic Figure 14 MSCP Total & Cavendish Walk Car Parking.**
- **Traffic Figure 15 Net Change - Existing vs Proposed.**
- **Traffic Figure 16 Baseline 'With Development'.**

4.4. The following tables provide a summary of capacity assessments undertaken using the latest traffic flow forecasts.

Archway Road / Blue Bell Lane

- 4.5. The capacity of the Archway Road / Blue Bell Lane priority T-junction has been tested in JUNCTIONS 11 for the 2031 Baseline 'Without Development' and 'With Development' traffic flow scenarios. The software expresses capacity using a Ratio to Flow (RFC) value for each arm of the junction and a corresponding queue value which is given in Passenger Car Units (PCUs).
- 4.6. The full JUNCTIONS modelling outputs for this assessment have been included as **Appendix G** of this report with **Table 2** providing a summary of the results.

**Table 2: Archway Road / Blue Bell Lane - JUNCTION 11 Results Summary**

Arm	'Without Development'				'With Development'			
	AM		PM		AM		PM	
	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC
Blue Bell Lane (left turn)	4	0.82	6	0.87	5	0.84	4	0.80
Blue Bell Lane (right turn)	2	0.70	1	0.54	1	0.56	3	0.73
Archway Road	2	0.51	2	0.60	2	0.58	4	0.69

- 4.7. As shown in **Table 2**, the net change in traffic predicted to occur at the Archway Road / Blue Bell Lane priority junction is not forecast to result in any significant change in the junction's performance.

Archway Road / Lathom Road

- 4.8. The junction has been tested using the forecast 2031 Baseline scenario traffic flows for both the 'Without Development' and 'With Development' forecasts. The full LinSig modelling outputs for this assessment have been included as **Appendix G** of this report with **Table 3** providing a summary of the results.
- 4.9. LinSig expresses capacity using Degree of Saturation (DoS) values and also provides Mean Maximum Queue (MMQ) values for lanes and approaches to a junction. The software also provides a calculated Practical Reserve Capacity (PRC) value for the junction as a whole to indicate the level of available capacity.

Table 3: Archway Road / Lathom Road - LinSig Results Summary

Arm	'Without Development'				'With Development'			
	AM		PM		AM		PM	
	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)
Huyton Lane	11	71.1%	11	72.4%	19	89.8%	17	84.3%
Lathom Road	10	69.9%	10	72.1%	10	85.5%	15	81.7%
Archway Road (ahead)	4	31.2%	7	44.4%	4	29.7%	6	40.3%
Archway Road (right turn)	11	67.6%	6	46.3%	21	88.8%	9	62.9%
PRC	26.6%		24.3%		0.2%		6.8%	

- 4.10. As shown in **Table 3**, the Archway Road / Lathom Road signal junction is forecast to continue to operate within capacity with the addition of traffic from the proposed development,
- 4.11. It is noted that in the 'With Development' scenario for the AM peak, DoS values approaching 90% have been calculated. However, these results still indicate that the junction is operating within its practical capacity and the performance of the junction in the AM peak is not considered unusual in the context of signal junctions located in busy urban areas.



Huyton Lane / Asda Access

- 4.12. The capacity of the Huyton Lane / Asda Access priority roundabout has been tested in JUNCTIONS 11 for the 2031 Baseline 'Without Development' and 'With Development' traffic flow scenarios.
- 4.13. The model includes the site access arm for the now-committed residential development 25/00458/FUL. The model of the junction prepared by consultant Prime Transport Planning has been adopted for this assessment for consistency.
- 4.14. The full JUNCTIONS modelling outputs for this assessment have been included as **Appendix G** of this report with **Table 4** providing a summary of the results.

Table 4: Huyton Lane / Asda Access - JUNCTION 11 Results Summary

Arm	'Without Development'				'With Development'			
	AM		PM		AM		PM	
	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC
B5199 Huyton Lane (NE)	2	0.64	3	0.74	2	0.64	3	0.77
Asda Access	0	0.17	1	0.46	0	0.17	1	0.46
B5199 Huyton Lane (SW)	2	0.61	4	0.82	2	0.63	3	0.77
Residential Development	0	0.05	0	0.04	0	0.05	0	0.04

- 4.15. As shown in **Table 4**, the net change in traffic predicted to occur at the Huyton Lane / Asda Access priority junction is not forecast to result in any significant change in the junction's performance.

Roby Road / Archway Road

- 4.16. The capacity of the Roby Road / Archway Road roundabout has been tested in JUNCTIONS 11 for the 2031 Baseline 'Without Development' and 'With Development' traffic flow scenarios.
- 4.17. In preparing this model, several options for testing capacity were considered to ensure that the operation of the junction was best represented within the software to enable KMBC to make an informed judgement as to the relative impact of development traffic at this location.
- 4.18. The junction arrangement on the northern Archway Road arm is considered atypical (see **Figure 4**) and challenging to accurately represent within the ARCADY module of the JUNCTIONS modelling software.

Figure 4: Roby Road / Archway Road - Arrangement with Archway Road, Blacklow Brow and Tarbock Road



- 4.19. A detailed review of recorded queues at both the internal (1) and Blacklow Brow (2) give way lines suggest that these movements are generally free flowing and have no material interaction with the operation of the main roundabout circulatory. In the case of the internal give-way line (1), no queues were recorded for the entirety of the six-hour period surveyed (07:00-10:00 & 16:00-19:00) with exception of one occasion where a queue of a single vehicle was recorded with no impact on traffic heading north along Archway Road.
- 4.20. The recorded queues also indicate that the pedestrian crossings on Archway Road had no material impact on vehicles exiting the junction via this arm, and therefore no impact on the operation of the roundabout circulatory.
- 4.21. On the basis of the above detailed review, it was judged that the operation of the Roby Road / Archway Road junction would be accurately represented by a model of a standard four-arm roundabout junction. It should be noted that during validation and calibration of the model it was considered that the performance of the Roby Road arm of the junction was being overestimated, with modelled queues considerably shorter than observed. In order to better represent observed average queue length, entry capacity on this arm has been constrained through manual adjustments.
- 4.22. The full JUNCTIONS modelling outputs for this assessment have been included as **Appendix G** of this report with **Table 5** providing a summary of the results. The full traffic count data for the Roby Road / Archway Road / Twickenham Drive / Tarbock Road / Blacklow Brow junction is included as **Appendix H** in this report.

**Table 5: Roby Road / Archway Road - JUNCTION 11 Results Summary**

Arm	'Without Development'				'With Development'			
	AM		PM		AM		PM	
	Queue	RFC	Queue	RFC	Queue	RFC	Queue	RFC
Roby Road	52	1.07	40	1.04	50	1.07	52	1.07
Archway Road	1	0.53	2	0.66	1	0.56	2	0.65
Tarbock Road	1	0.53	1	0.53	1	0.54	1	0.54
Twickenham Drive	1	0.35	0	0.27	1	0.36	0	0.28

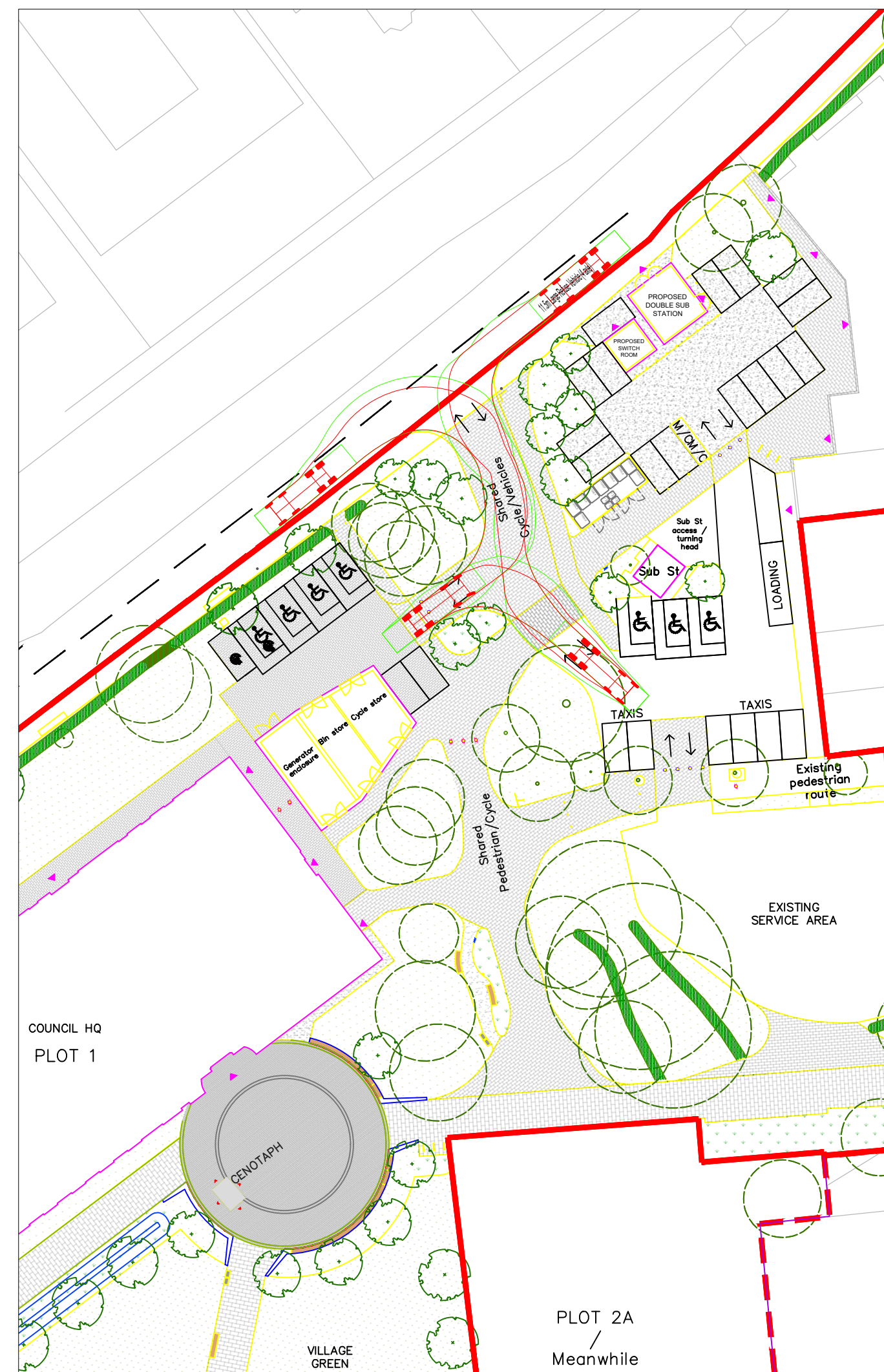
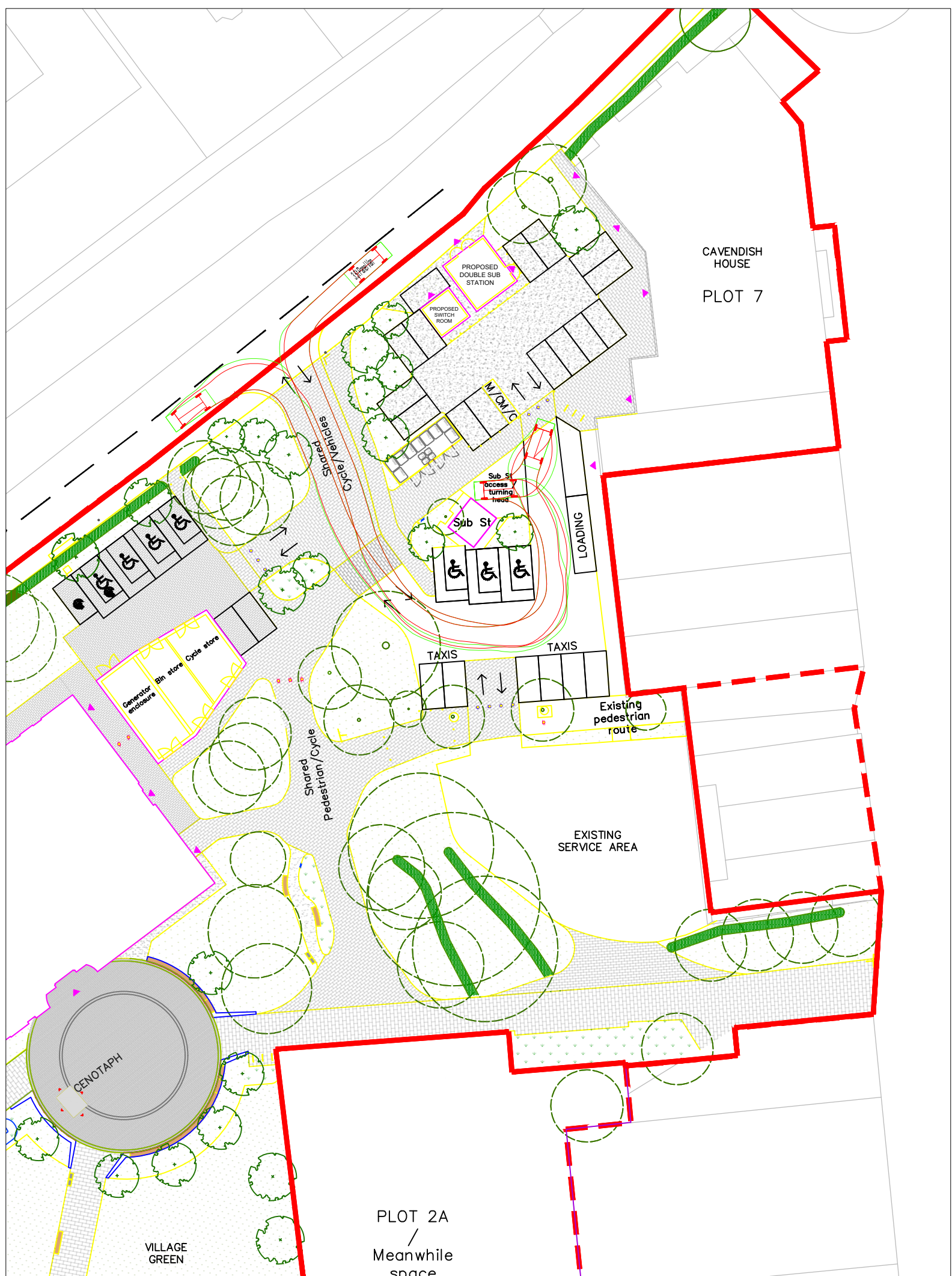
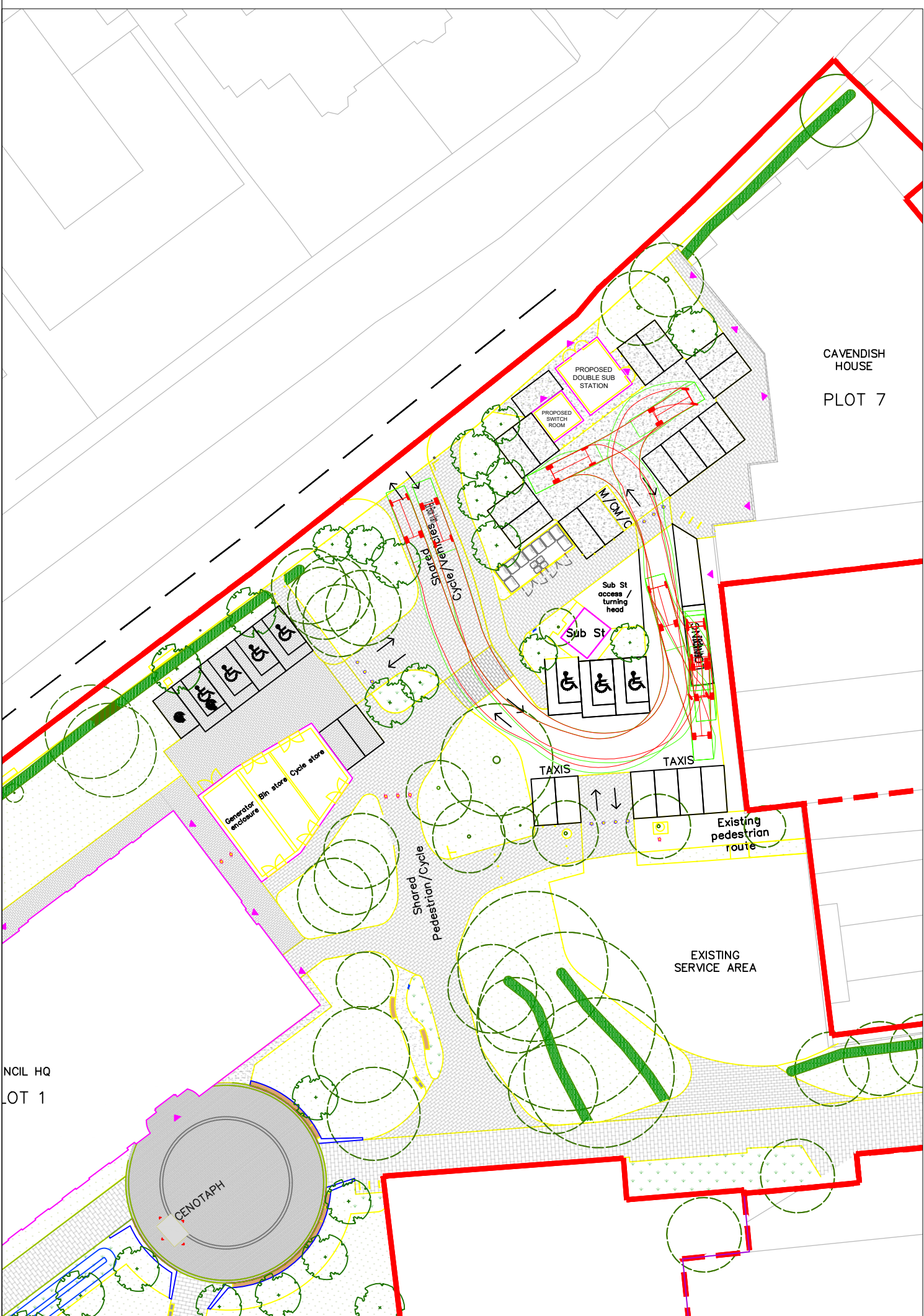
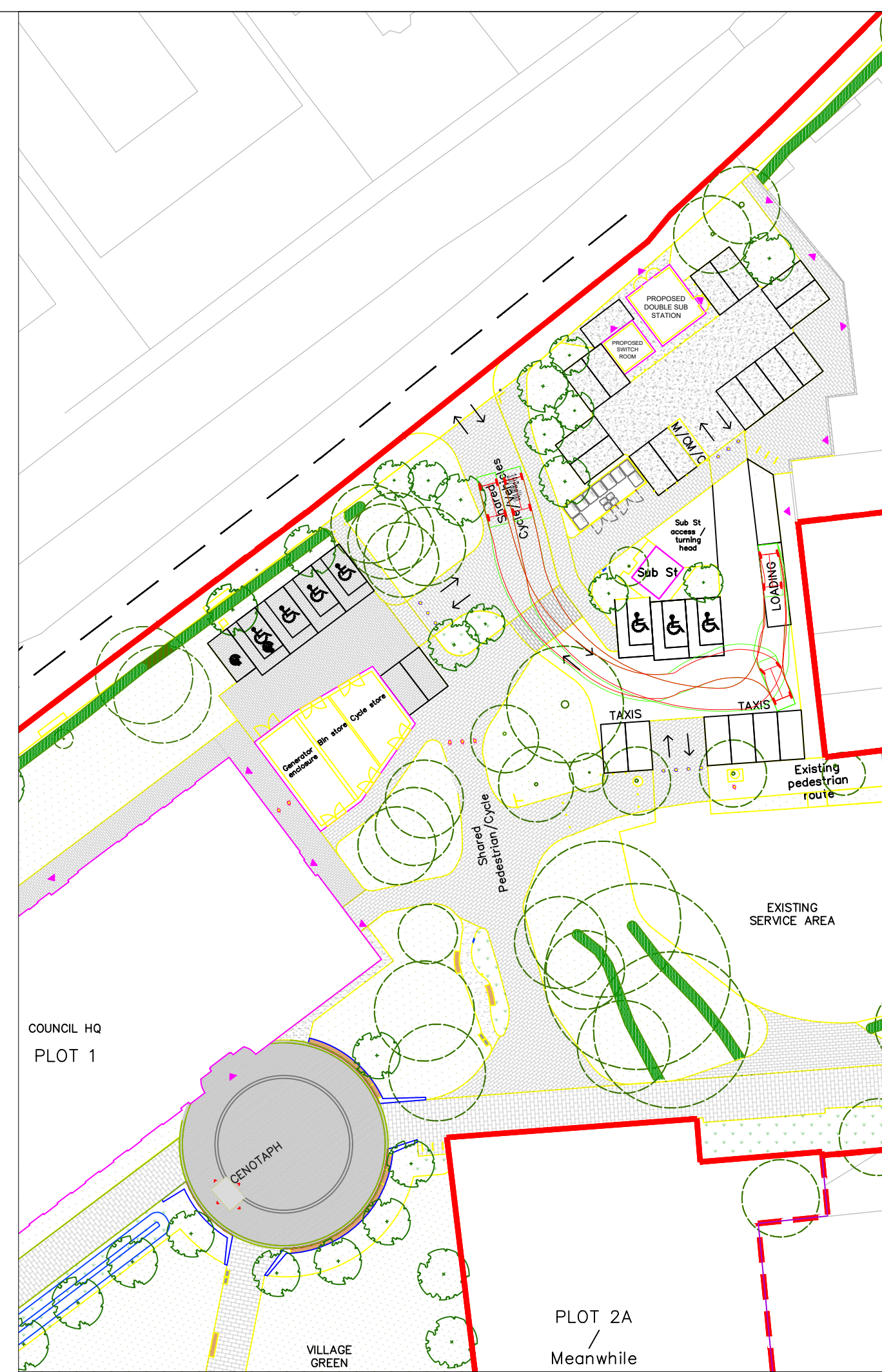
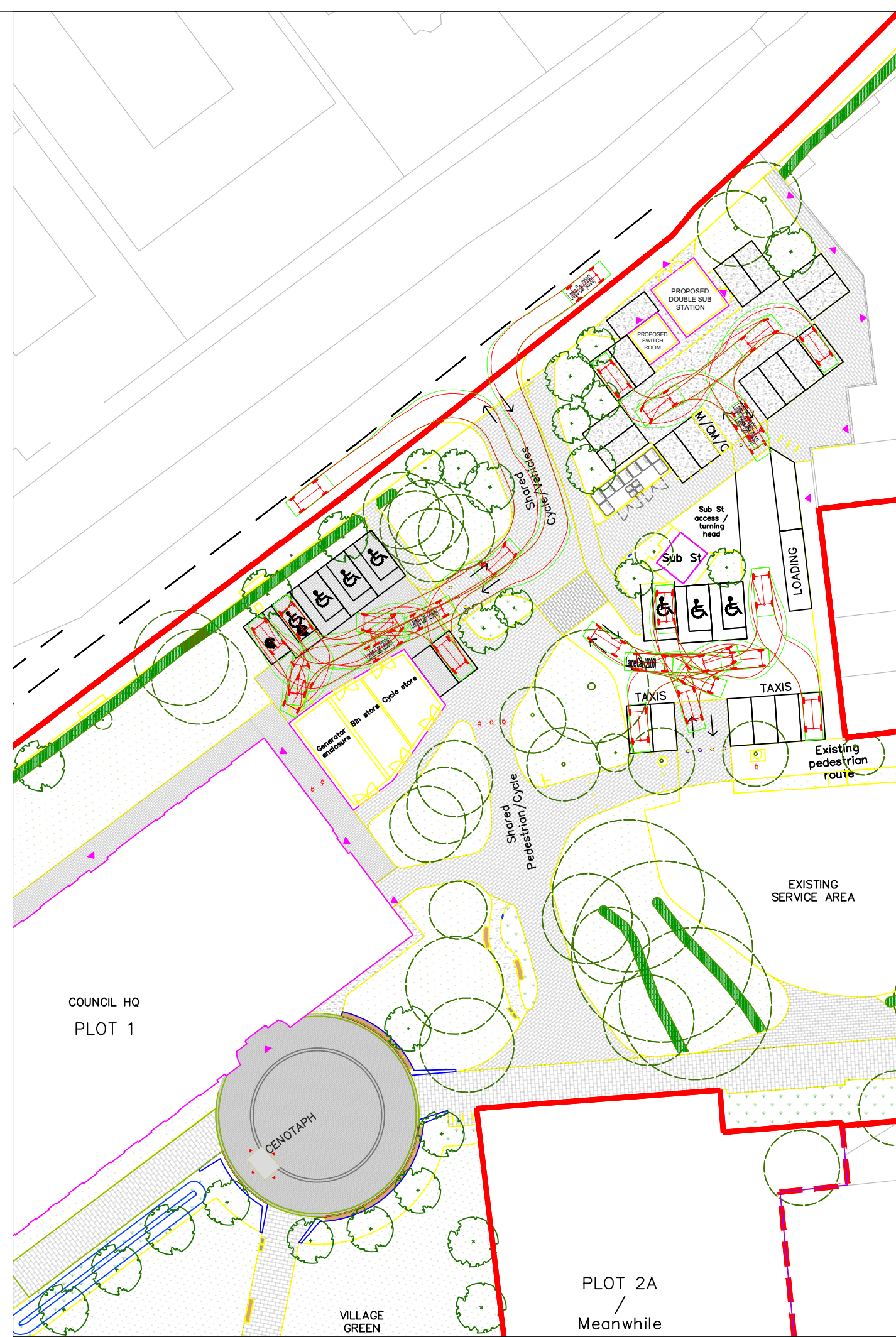
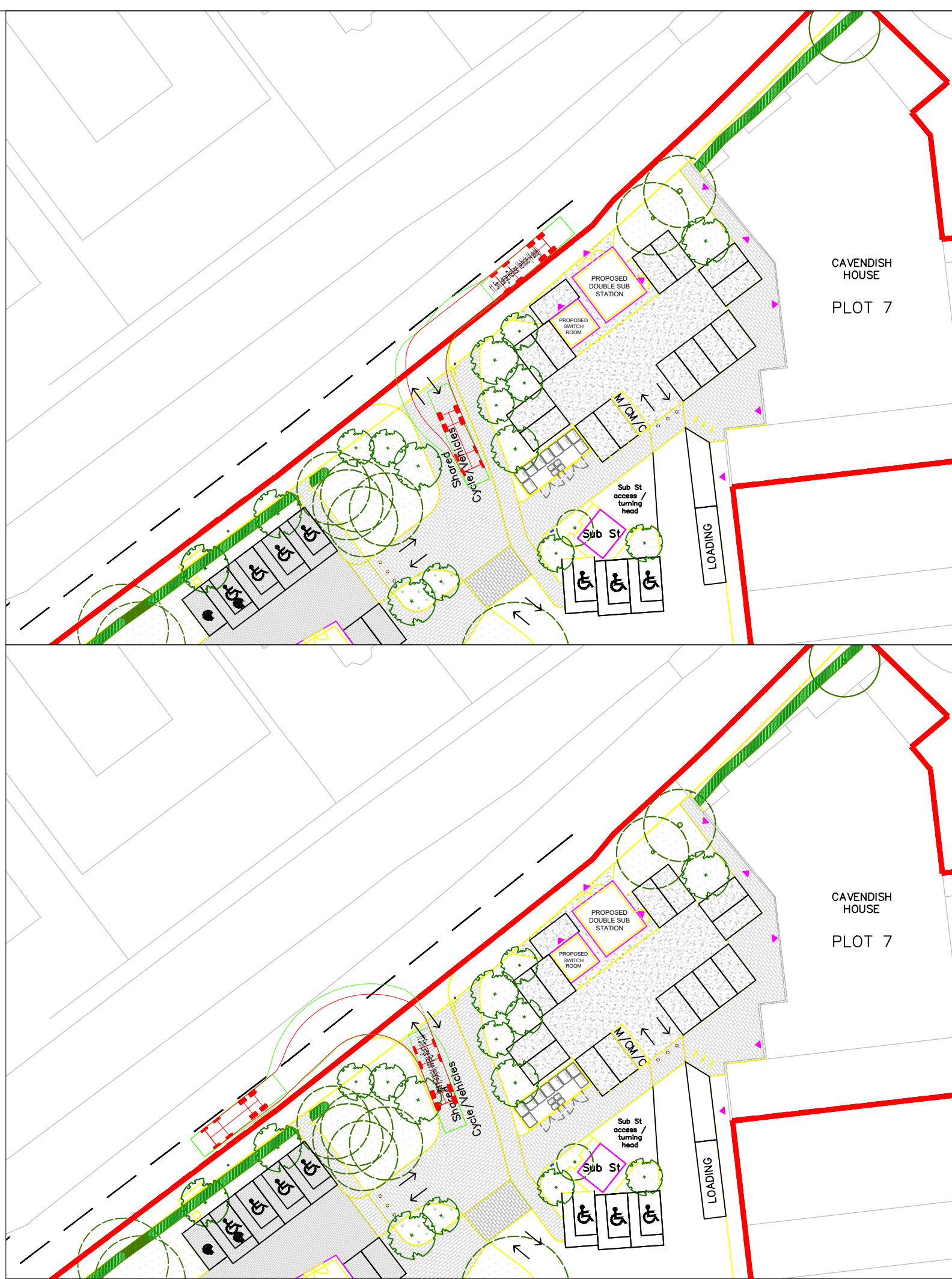
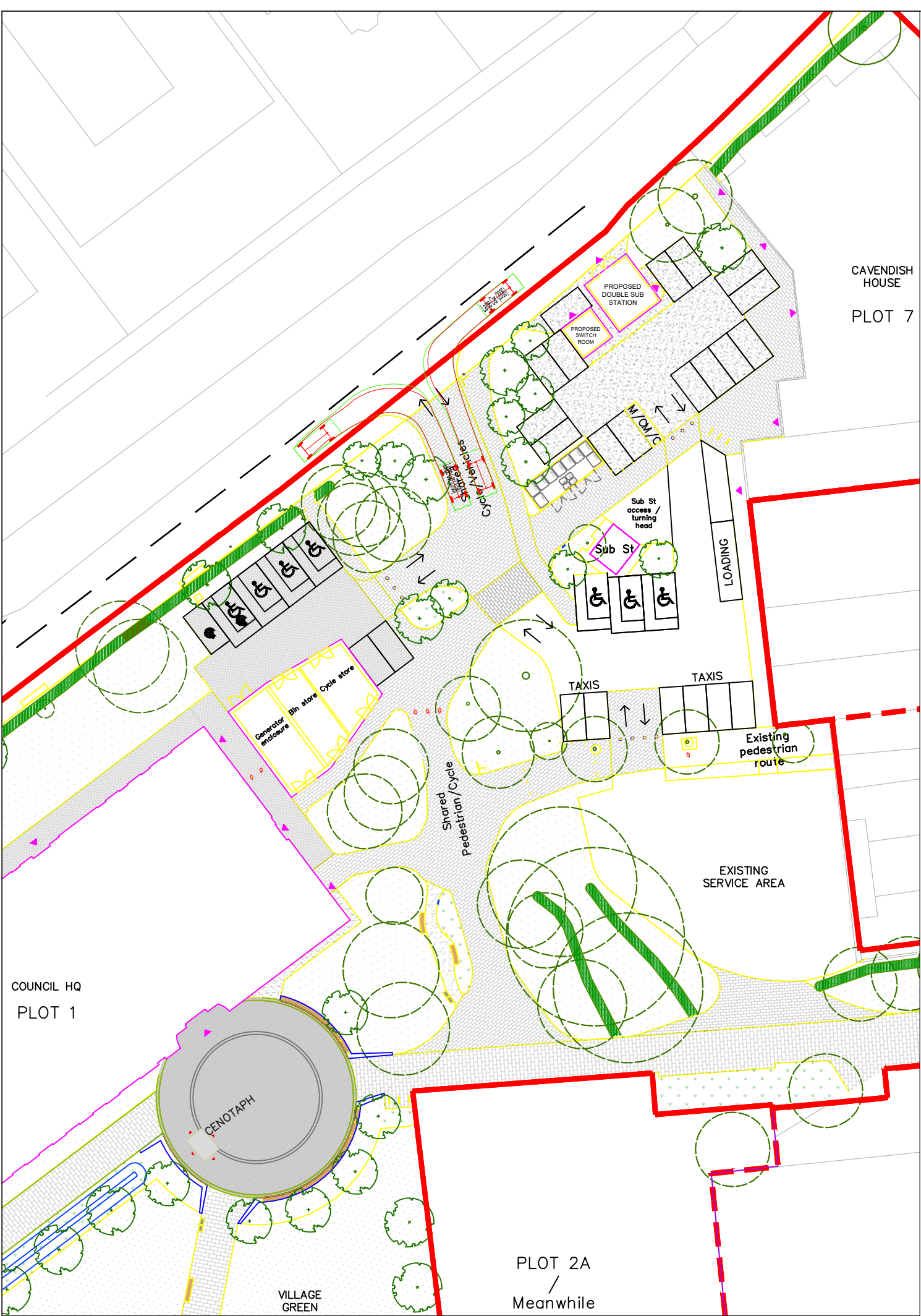
- 4.23. As shown in **Table 5**, whilst the junction operates with some capacity constraints in the AM and PM peak periods, there is not material difference in its operational performance between the 'Without Development' and 'With Development' scenarios, which is not indicative of the development proposals resulting in a severe traffic impact at this location on the highway network.

5. Summary

- 5.1. Astute Transport Planning Ltd has been commissioned by Genr8 Kajima Regeneration Ltd to advise on the on the proposed mixed-use development at St Michael's Place in Huyton Town Centre. This TA Addendum provides a formal highways response by Astute in relation to the above application reference 25/00606/FUL and proposed development at St Michael's Place, addressing comments provided by the LHA in Consultation Responses dated 20th March and 5th June 2026 and in line with discussions at associated meetings.
- 5.2. The transport submissions prepared by Astute demonstrate that the development site is located in a highly accessible location, and that the proposed mixed-use development would not have an unacceptable impact upon the safe or efficient operation of the surrounding highway network.
- 5.3. It is therefore concluded that the residual cumulative impact of the St Michael's Place masterplan would not be severe, and on this basis, there are no material reasons why the proposed development should be refused on highways or transportation grounds.



Vehicle Tracking Plan





Appendix A

St Michael's Place Masterplan, Huyton Town Centre

Transport Scoping Note Post Submission

A25008

1. Introduction

- 1.1. Astute Transport Planning Ltd has been commissioned by Genr8 Kajima Regeneration Ltd to advise on the proposed mixed-use development at St Michael's Place within Huyton Town Centre comprising a new Council Headquarters, hotel, public realm including active travel facilities, residential and commercial floorspace with associated works. As part of the submission of the hybrid planning application, Astute prepared a supporting Transport Assessment (TA), Parking Strategy and Travel Plan (TP) Framework documentation in October 2025.
- 1.2. This Transport Scoping Note has been prepared to outline the scope of transport work proposed to be undertaken to respond to the Consultation Response received from Knowsley Council (KC) Highways on the hybrid planning application for the masterplan (KC application ref: 25/00606/HYB). It follows a meeting held between the project team and officers at KC on 25th March 2026.
- 1.3. The key aim of this note is to agree the methodology of a TA Addendum that will be submitted to address the outstanding transport matters for the planning application. A collaborative approach with KC on the scope of this document and associated assessment parameters is sought to assist in facilitating this significant and transformative development for Huyton.

2. Proposed Development

- 2.1. The proposed development is for the mixed-use regeneration of Huyton Town Centre. The development plots in the current masterplan proposals are illustrated in **Figure 1**.
- 2.2. The detailed and outlined elements of the hybrid planning application are summarised below:

Detailed

- New Council Head Quarters (HQ) (circa 8,461sqm floor area).
- Hotel (130 bedrooms).



Outline

2.3. Two development scenarios for the outline element of the proposals were considered in the original transport submission work:

- Scenario 1 - In the event that 410 residential units come forward then no more than 1,600sqm of commercial floorspace shall be delivered (intended to comprise ground floor active uses and considered to be ancillary development for the purpose of the transport assessment work).
- Scenario 2 - In the event that 5,600sqm of commercial (inclusive of 4,000sqm office uses) floorspace comes forward then no more than 370 residential units shall be delivered.

2.4. At the post submission stage, the applicant is revising the outline element of the application to allow for Scenario 1 only, whereby Plot 5 will come forward as proposed residential use instead of 4,000sqm of commercial floorspace.

Figure 1: St Michael's Place Masterplan Proposed Development Plots





2.5. The proposed post submission scope of transport work adopts the following key principles:

- The updated traffic impact assessment and car parking strategy focuses on the masterplan completion (detailed and outline elements) / operational phase. Other elements, such as phasing and contractor parking will be controlled by condition which is a standard approach.
- Liaison between Astute and Senior Team Managers at KC to help inform the updated car parking strategy.
- The updated car parking strategy addresses the worst-case scenario in terms of the supply of car parking for Council staff in the construction phases before the completion of the proposed new multi-storey car park (MSCP) at Lathom Road that is currently expected by summer 2028.
- The operational phase traffic impact assessment will not allow for the use of the Club 3000 Bingo car parking (circa 150 spaces) by KC for staff, and these spaces are assumed to not generate any vehicle trip generation in the weekday AM and PM peak periods.

2.6. The development proposals support sustainable travel options and put Vision-led transport planning at the forefront of the scheme, to accord with the principles of the National Planning Policy Framework.

3. Transport Assessment Addendum

3.1. With reference to the Consultation Response on the hybrid planning application, a TA Addendum will be prepared to address the comments from the Local Highway Authority (LHA). Additional technical information is included in this Transport Scoping Note, and it also sets out the further work that will be provided in the TA Addendum.

4. Revised Traffic Impact Assessment

4.1. The Transport Scoping Note provides a framework to inform a revised traffic impact assessment.

Study Area and Junction Scope

4.2. Feedback from KC Highways identifies the following additional off-site junctions to be reviewed in more detail by Astute:

- B5199 Huyton Lane / ASDA Supercentre roundabout.
- B5199 Archway Road / A5080 Roby Road / Twickenham Drive / A5080 Tarbock Road / Blacklow Brow roundabout.



Huyton Lane / ASDA Supercentre Roundabout

- 4.3. Astute have reviewed the transport information submitted in support of planning application (KC application ref: 25/00458/FUL) for a residential development of up to 81 dwellings on land northwest of the B5199 Huyton Lane, Huyton (former Huyton Cricket Club site). The development proposals consist of introducing a new fourth arm at the Huyton Lane / ASDA Supercentre roundabout. Astute has reviewed the associated junction modelling assessments in more detail in the context of the predicted trip generation, assignment and net change in vehicle movements forecast to occur as a result of the St Michael's Place development proposals. This review has been undertaken to consider likely implications for this junction in terms of traffic impact.
- 4.4. The modelling for the '2030 With Development' future year scenario forecasts a maximum Ratio of Flow to Capacity (RFC) of 0.83 on Huyton Lane (southwestern arm) during the weekday PM peak with a queue of around five Passenger Car Units (PCUs). An RFC value of between 0.85-0.99 typically indicates that a junction is at or approaching practical reserve capacity, with a value of 1.00 or over indicating that traffic demand has exceeded the theoretical capacity of the junction. It is considered that the Huyton Lane / ASDA Supercentre four-arm roundabout junction is not at capacity in the context of a typical urban environment, where higher RFC values (between 0.90 and 1.00) are more representative of a junction approaching its practical reserve capacity. Therefore, the modelling results for this junction as presented in the transport information in support of planning application 25/00458/FUL indicate that there is still spare capacity to serve the St Michael's Place development. Therefore, in light of the minimal number of 'new' hotel and residential vehicle trips that are predicted to pass through this junction to / from the new MSCP at Lathom Road, it is considered that the proposals will have an imperceptible influence on the operation on this part of the highway network - please refer to Figures 8 and 10 from the Astute TA for further information.
- 4.5. In summary, Astute are of the view that the Huyton Lane / ASDA Supercentre roundabout does not require a detailed modelling assessment as part of the transport submission for the proposed mixed-use development at St Michael's Place.
- 4.6. Notwithstanding the above, further commentary will be provided within the forthcoming TA Addendum to further confirm this position.

Archway Road / Roby Road / Twickenham Drive / Tarbock Road / Blacklow Brow Roundabout

- 4.7. This junction is located to the southwest of the town centre around 1.3km from the new MSCP at Lathom Road.
- 4.8. As detailed within the submitted TA, the proposals will generate relatively low levels of new trips on the local highway network. The forecast changes in traffic at key junctions are largely brought about by changes to parking provision across the town centre and is highly localised to the Archway Road corridor.
- 4.9. As a result, changes to traffic demand at junctions on the wider highway network outside of the adopted study area will be minimal and will not have a material impact on their operation.



- 4.10. It should also be noted that, with the revised car parking strategy, the overall car parking supply in the operational phase of the proposed St Michael's Place development is being reduced and consolidated to the eastern side of the town centre. This will further reduce the trip generation for new trips associated with the residential and hotel elements of the proposals.
- 4.11. In summary, Astute are of the view that the Archway Road / Roby Road / Twickenham Drive / Tarbock Road / Blacklow Brow roundabout does not require a detailed modelling assessment as part of the transport submission for the proposed mixed-use development at St Michael's Place.
- 4.12. Notwithstanding the above, the TA Addendum will draw these conclusions out further and confirm this position.

Other Junctions

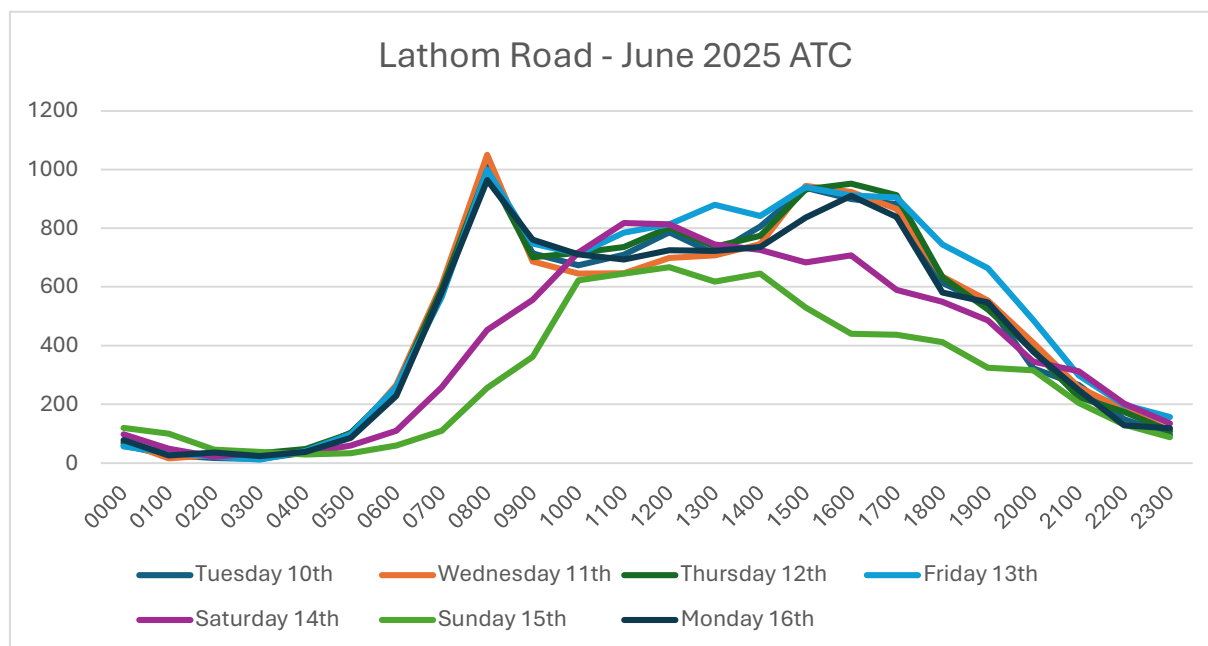
- 4.13. Confirmation is sought from the Highway Authority that the percentage impact assessments presented in the Astute TA for the following junctions are accepted with regard to them not being subject to further detailed assessment.
- Archway Road / Briar Drive/ Poplar Bank.
 - Archway Road / Rupert Road.
- 4.14. As the new MSCP at Lathom Road is part of the outline application element, Astute are of the view that any detailed modelling assessments associated with the proposed access arrangements can be conditioned to be submitted as part of the future reserved matters application.

Baseline Surveys and Peak Hour Identification

- 4.15. In their response, KC has requested additional clarification in respect of the traffic surveys and peak hours adopted for the assessment presented in the TA.
- 4.16. As detailed, manually classified count (MCC) surveys of traffic were undertaken on Thursday 10th June 2025. The approach to the surveys reflects guidance provided within the Department for Transport's (DfT) Transport Analysis Guidance (TAG) Unit M1-2 Data Sources and Surveys, which recognises the normal practice of undertaking MCC's on a single day.
- 4.17. The survey day is considered to represent neutral conditions, with no evidence that traffic flows were influenced by factors such as school holidays or roadworks.
- 4.18. At the request of KC, **Figure 2** has been prepared to show traffic flows recorded by an Automatic Traffic Counter (ATC) in place on Lathom Road between Tuesday 10th June and Monday 16th June 2025.



Figure 2: Summary of Recorded Traffic Flows - Lathom Road ATC, June 2025



- 4.19. **Figure 2** confirms that the adoption of weekday AM (08:00-09:00) and PM (16:30-17:30) peak periods for the assessment is appropriate.

Cumulative Development and Background Growth

- 4.20. As noted by KC in their latest response, TEMPro factors, adjusted by the National Transport Model (NTM), were adopted in the forecasting of future baseline traffic flows. These factors are informed by population, household and employment forecasts and their use is appropriate in the absence of more detailed traffic flows data arising from committed development.
- 4.21. As detailed within the TA, there is local evidence of an overall downward trend in traffic flows. The application of background traffic growth factors is therefore considered to be robust in this context.
- 4.22. At the time of preparing our traffic impact assessment, no relevant committed development was identified through our review of the planning portal. Confirmation of this from KC was sought through the pre-application Transport Scoping Note dated May 2025.
- 4.23. As detailed earlier in this note, in their post application response, KC has subsequently identified a planning application for residential development on land formerly occupied by Huyton Cricket Club (KC application ref: 25/00458/FUL). The application was validated on 5th September 2025 and at the time of drafting this document, has not been determined and is therefore not a committed scheme.
- 4.24. Notwithstanding the above, this planning application will be included within the revised traffic impact assessment. To account for the inclusion of this scheme, the Alternative Assumptions function within TEMPro will be applied to generate revised background traffic growth forecasts.



Interpretation of Junction Capacity Results

- 4.25. The revised traffic impact assessment will set out updated detailed capacity assessments for the Archway Road / Blue Bell Lane priority junction and the Archway Road / Lathom Road signal junction, and it will provide suitable commentary around the performance of the junctions in the TA Addendum.

Modelling Assumptions - LinSig Parameters

- 4.26. KC has requested confirmation of the saturation flow assumptions adopted for the traffic assessments undertaken in LinSig. Full details of the saturation flows adopted for assessment of the Archway Road / Lathom Road signal junction are provided within the LinSig modelling outputs provided at Appendix O of the TA.
- 4.27. For the avoidance of doubt, it is confirmed that the adopted saturation flows for the assessment of this junction have been estimated from lane geometry using the RR67 method.
- 4.28. The Consultation Response states that the TA does not address what happens to trips that currently approach and park via Poplar Bank, Civic Way and adjacent routes once these parking opportunities are removed. The traffic impact assessment set out in the TA focused on the masterplan completion / operational phase, taking into account the redistribution / reassignment effects of the displaced short stay car parking from Archway Road and staff-related vehicular trips being relocated into the proposed MSCP, and as set out earlier in the Transport Scoping Note the same approach will be adopted for the updated assessment in the TA Addendum.
- 4.29. Notwithstanding the above focus of the traffic impact assessment on the masterplan completion scenario, this Note provides some commentary below on the early construction phases. It is understood that the existing position is a total of 394 parking spaces around the Huyton Civic Campus are occupied by Council staff, and the proposal is to reintroduce a permit scheme for staff parking. The proposal is to reintroduce a permit scheme for Council staff during construction in the Archway Road Brown Zone, Yorkon Green Zone, Library Red Zone and Club 3000 Bingo car parks, including potentially using the former fire and ambulance station site as a temporary car park. The displaced short stay car parking from the Archway Road car park during the Enabling and MSCP Construction Phases will be accommodated in the Huyton Hey, Venue and UKPC / Cavendish Walk (accessible bays) car parks. The car parking proposals for the Enabling Works and MSCP Construction Phases are summarised in **Tables 1 to 8**.

**Table 1: Phase 1 Enabling Works - Short Stay Car Parking Proposals**

Car Park	Spaces
Archway Road	109
Venue	50
Existing Lathom Road MSCP	97
Cavendish Walk (accessible bays)	8
Total	264

Table 2: Phase 1 Enabling Works - Long Stay Car Parking Proposals

Car Park	Spaces
Club 3000 Bingo	150
Huyton Hey	97
Existing Lathom Road MSCP	191
Front Municipal (EMT / Members)	24
Library Red Zone	96
Total	558

Table 3: Phase 2 Enabling Works - Short Stay Car Parking Proposals

Car Park	Spaces
Huyton Hey	48
Venue	50
Cavendish Walk (accessible bays)	8
Total	106

Table 4: Phase 2 Enabling Works - Long Stay Car Parking Proposals

Car Park	Spaces
Club 3000 Bingo	150
Huyton Hey	49
Front Municipal (EMT / Members)	24
Yorkon Green Zone	61
Archway Road Brown Zone	29
Former Fire and Ambulance Station	70
Library Red Zone	96
Total	479

Table 5: Phase 3 MSCP Construction - Short Stay Car Parking Proposals

Car Park	Spaces
Huyton Hey	48
Venue	50
Cavendish Walk (accessible bays)	8
Total	106

**Table 6: Phase 3 MSCP Construction - Long Stay Car Parking Proposals**

Car Park	Spaces
Club 3000 Bingo	150
Huyton Hey	49
Yorkon Green Zone	61
Archway Road Brown Zone	29
Former Fire and Ambulance Station	70
Library Red Zone	96
Total	455

Table 7: Phase 4 MSCP Completion - Short Stay Car Parking Proposals

Car Park	Spaces
New MSCP	106
Total	106

Table 8: Phase 4 MSCP Completion - Long Stay Car Parking Proposals

Car Park	Spaces
Club 3000 Bingo	150
Huyton Hey	97
Archway Road Brown Zone	29
New MSCP	294
Total	570

- 4.30. This will maintain a similar number of public short stay and long stay parking spaces for Council staff within the core town centre area during construction until the completion of the new MSCP, hence the effects of redistributed traffic on the highway network will be minimal. The traffic impact assessment of the operational phase of the proposed development is considered to be a good proxy for the assessment of the redistributed traffic on the town centre highway network during construction. The displacement of a relatively small number of spaces for KC staff (around 10-20% reduction) as a result of the reintroduction of the permit scheme is not considered to have a significant operational impact on the transport network, and this small envelope of trips will switch to other parking locations, sustainable transport modes and home working.
- 4.31. In summary, Astute are of the view that further highway assessment work is not warranted in relation to the above Enabling Works and MSCP Construction Phases, and in view of the Council being able to use Club 3000 Bingo for staff parking until around 2033 under the current lease agreement and potentially utilising the former fire and ambulance station site as a temporary car park. It is understood that the Council are investigating other lease options to seek to secure additional temporary car parking (circa 70 spaces) in the town centre, which would further increase the long stay parking supply during the Enabling Works and MSCP Construction Phases.

Reliance on Mode Shift

- 4.32. The TA Addendum will provide a high-level assessment of how the displaced Council HQ staff trips will be absorbed by increased use of rail, bus, walking and cycling in the operational phase of the proposed development, and where possible supported by data on existing public transport usage. The new Council HQ will be served by a policy



standards compliant level of car parking of up to 212 spaces. Therefore, circa 130 vehicle trips are predicted to be displaced from the permit spaces that will be available for Council staff in the early construction phases.

Impact on Established Town Centre Travel Patterns

- 4.33. The Transport Scoping Note addresses this section of the Consultation Response in paragraph 4.28.

Residential Unit Mix

- 4.34. In their Consultation Response, KC provides commentary on the residential unit mix stating that *"the submission does not define unit mix by bedroom number."*
- 4.35. As the residential element of the development proposals is applied for in outline, the precise mix of apartments is yet to be determined. This detail would be confirmed at reserved matters stage for the various development plots identified for this use class. If considered to be required, KC could request further detailed information at this stage to confirm these elements and ensure that, *"the highway network and parking strategy would remain acceptable under alternative scenarios."*
- 4.36. Notwithstanding the above, it is proposed that the TRICS-derived trip forecasts are revisited to ensure that a range of residential units are presented and a representative scenario is accounted for, and this information will be shared directly with KC Highways Officers for agreement.
- 4.37. As a general principle, whilst it is acknowledged that bedroom mix does have the potential to influence demand for car use, it is considered that the town centre location of the proposals will directly suppress car ownership amongst future residents.

Distribution and Assignment

- 4.38. To enable Astute to update the traffic impact assessment to be included in the TA Addendum, we are seeking confirmation that the trip distribution and assignment approaches for the existing car parking demand and the forecast demand as set out in the Astute TA is agreed by the Highway Authority, but noting that the distribution for the Council HQ car parking will be updated to reflect that the majority of this parking will be located at the new MSCP in the operational phase instead of at Club 3000 Bingo.

Package of Traffic Regulation Orders / Parking Control Measures

- 4.39. In their Consultation Response, KC considers that a package of Traffic Regulation Orders (TROs) / parking control measures will be required. Astute are of the view that any such requirements can be subject to an appropriately worded condition(s) to enable the agreement of a suitable study area for monitoring parking impacts of the development and / or implementation of TROs to provide parking control measures, and this can be linked to the Section 106 Agreement to secure the Council's standard fee of £6,500 for associated administration works.



- 4.40. It is noted that the Highway Authority considers that additional Civil Enforcement Officer resource will be required in respect of the proposed changes to car parking in Huyton Village Centre linked to the St Michael's Place development. Astute understand that the new MSCP will be managed by KC, and the provision of appropriate monitoring of parking activity on the surrounding highway network and / or enforcement measures can be controlled by condition.

Robustness and Longevity of the Assessment

- 4.41. The Transport Scoping Note addresses this section of the Consultation Response in paragraph 4.28, and the updated traffic impact assessment in the TA Addendum will also robustly account for the proposed residential development with the consideration of an appropriate mix of residential unit sizes.

Travel Plan - Summary and Assessment of Mitigation

- 4.42. A TP Framework has been provided as part of the TA. In their response, KC *"acknowledges that the TP sets out a broad framework of measures intended to encourage sustainable travel choices, including promotion of public transport use, walking and cycling, provision of cycle facilities, travel information for occupiers and staff engagement initiatives."* The KC response further *"accepts that, in principle, the measures identified within the TP are appropriate for a town-centre development and align with the objective of reducing single-occupancy car use."*
- 4.43. KC has requested additional information to support this proposed strategy. As noted within the Astute TA, the TP Framework is intended to provide a structure to inform the development of detailed, site-specific TPs in the future. As is also stated, it is anticipated that separate TPs will be developed for the different uses across the site, but with broadly consistent themes. This could be controlled by an appropriately worded planning condition and additional detail provided at this stage.
- 4.44. Notwithstanding the above, it is proposed that the TP Framework is further developed to provide the requested information. It is still anticipated that further detail will be required and secured by condition as elements of the proposed development are brought forward, and a greater level of certainty in respect of configuration and operations is established. It is considered that this approach represents established practice with regard to the development of TP strategies.
- 4.45. The updated TP Framework will be expanded to include preliminary details of monitoring and remedial triggers strategies.

Design & Access Statement - Highways and Movement Assessment

- 4.46. Astute acknowledge the comments on the highway access, movement, parking and connectivity sections of the submitted Design & Access Statement (DAS).
- 4.47. The DAS content will be reviewed and co-ordinated in line with the updated information in the TA Addendum.



4.48. In their Consultation Response, KC provides commentary on this being a once in a generation moment to replan the adopted highway network around the emerging masterplan, not vice versa. Astute are of the view that retaining the existing adopted highway as the basis for the St Michael's Place masterplan layout will deliver a town centre street and active travel connections design that is in line with the relevant guidance and best practice, and detailed justifications for this approach are as follows:

- Basic arrangement and design principles of working around existing streets is in line with the initial vision in the Council's project brief, and the Highway Authority have been part of the journey of the masterplan evolution, including participation at pre-application meetings where the project team provided updates on the design proposals.
- The existing adopted highway network and transport infrastructure is generally considered to be resilient and appropriate, providing acceptable road and footway widths with localised improvements / streetscape enhancements as part of the proposed development where necessary.
- The masterplan design is more realistic in relation to the phasing of development and responding to utility constraints.
- The design approach supports the viability of the scheme, and it is considered that realigning the existing street network with the associated utilities constraints does not represent the optimum use of the project budget.
- It is considered that some of the recommendations raised in the Consultation Response are not in line with the dialogue with Officers through the design process, and they would rely on significant interventions / investment beyond the red line.

4.49. KC recommend a short, LHA-led Highway Network Options & Realignment Study to test removing / realigning redundant corridors and creating new adopted streets that sit exactly on the actual pedestrian and cycle desire lines, with unbroken sightlines and passive surveillance. Astute support this recommendation in principle and it is considered that the Study can be secured by condition. The findings can be reviewed with the Highway Authority and where appropriate incorporated into the masterplan design.

4.50. Stopping Up requirements under Section 247 of the Town and Country Planning Act will be considered in more detail at the planning stage with commentary to be included in the TA Addendum.

5. Parking and Servicing

Operational Phase Car Parking Strategy

5.1. As detailed earlier in this Transport Scoping Note, an updated car parking strategy will be set out in the TA Addendum and this aligns with liaison between Astute and Senior Team Managers at KC.



- 5.2. The existing car parking in Huyton Town Centre is detailed in Section 3 of the Astute TA, and this can be summarised as follows in relation to the proposed St Michael's Place masterplan / planning application boundary:
- Existing Short Stay parking occupancy - **106** spaces.
 - Existing Long Stay parking occupancy - **424** spaces (excluding the Huyton Hey car park (97 spaces) that is outside of the planning application boundary) of which **30** spaces are in the existing Lathom Road MSCP and the remaining **394** spaces are around the Huyton Civic Campus. The 394 spaces are mainly used by Council staff, although it is understood that some of these spaces are used by Park and Ride visitors for Huyton Train and Bus Stations.
- 5.3. The key principles of the updated car parking strategy proposals in the operational phase of the proposed development are outlined below:
- Parking supply - up to circa **420** spaces in the new MSCP at Lathom Road (completed by around summer 2028) and circa **26** spaces in the Cavendish Walk area.
 - Total Long and Short Stay parking - **446** spaces.
- 5.4. Additional publicly available parking is located in the town centre including at Huyton Hey car park, and the ASDA car park provides a total of around 827 spaces (inclusive of the upper parking deck).
- 5.5. The proposed Short and Long Stay parking allocations are as follows:
- Short Stay parking - **106** spaces in the new MSCP.
 - Long Stay parking - **314** spaces in the new MSCP and **26** in the Cavendish Walk area.
- 5.6. The updated parking strategy will detail the parking capacity from day one for the detailed elements of the proposed development (Council HQ and hotel) following completion of the new MSCP. Furthermore, it will set out the proposed parking allocations when the outline residential plots are brought forward along with relevant supporting information.
- 5.7. The baseline Long Stay parking provision allocations for proposed development uses are summarised below:
- Council HQ - **212** spaces with **186** in the new MSCP and **26** in the Cavendish Walk area. The Cavendish Walk spaces will be designated parking for Council Members and visitors. KC's adopted parking standards allow for a maximum provision of 1 space per 40sqm for B1 office use (town centre maximum), which equates to up to 212 car parking spaces. Therefore, a provision of 212 spaces is 100% of KC's maximum policy standards. It is important to note that visitor numbers to Huyton Town Centre associated with the Council HQ have decreased since the COVID-19 pandemic - in 2019 circa 1,200 staff were office based five days per week (equates to a ratio of approximately



1 space per 3 staff based on 394 Council staff spaces), and in 2026 the average is 417 staff (equates to a ratio of approximately 1 space per 2 staff based on a future provision of 212 Council staff spaces) in the office per day, which is a reduction of approximately 65%. The existing car parking provision in the town centre could support the parking demand associated with KC staff when the Council HQ was operating at 2019 capacity levels, and this should be a material consideration in relation to assessing the appropriateness of the proposed future car parking allocation to serve the Council HQ, which is a reduction of around 45% of car parking spaces compared to the existing situation.

- Hotel - **33** dedicated spaces in the new MSCP in line with the brand requirements (1 space per 4 bedrooms).
- Residential - **95** dedicated spaces for 410 residential units in the new MSCP (low parking ratio of **0.23** spaces per unit).

5.8. 'Knowsley Council Ensuring A Choice of Travel Supplementary Planning Document (SPD) (2010)' contains the Council's parking standards to be applied to new development. The SPD provides an important framework in relation to the consideration of the acceptability of the above car parking proposals, and Policy T6 of the SPD states that proposals for new development should provide, "*car parking facilities which do not exceed the Council's maximum standards*". There is no policy stipulation that parking should meet the maximum standards, indeed the SPD goes on to state in paragraph 4.5 that the standards define 'upper limits' for new developments and that:

"In all areas there may be instances where provision should be less than the maximum specified for example where a site is particularly accessible by modes of transport other than the private car".

- 5.9. There is flexibility with the above parking allocations, and the future parking requirements for the outline plots will be assessed on an individual basis when reserved matters applications come forward, and it is recommended that this can be controlled by condition.
- 5.10. There is also the opportunity to implement a management / operational system at the new MSCP that enables the sharing of parking spaces between the Council HQ and the residential use and the Council HQ and the hotel use, given that there will be minimal overlap between the peak periods of demand associated with these proposed developments.
- 5.11. Astute is of the view that the provision of details pertaining to the implementation of the proposed parking allocations, along with the associated management, operation and enforcement regimes that will need to be in place at the new MSCP can be controlled by condition.
- 5.12. In summary, Astute is seeking agreement from the Highway Authority on the key principles of the car parking strategy for the operational phase of the proposed development that will form the basis of the updated traffic impact assessment.



- 5.13. The TA Addendum will provide further information to address the provision and design related comments on accessible bays, cycle and motorcycle parking for the Council HQ, hotel and residential elements of the proposed development. This will also include the consideration of a proposed public-facing cycle hub as part of the St Michael's Place masterplan.

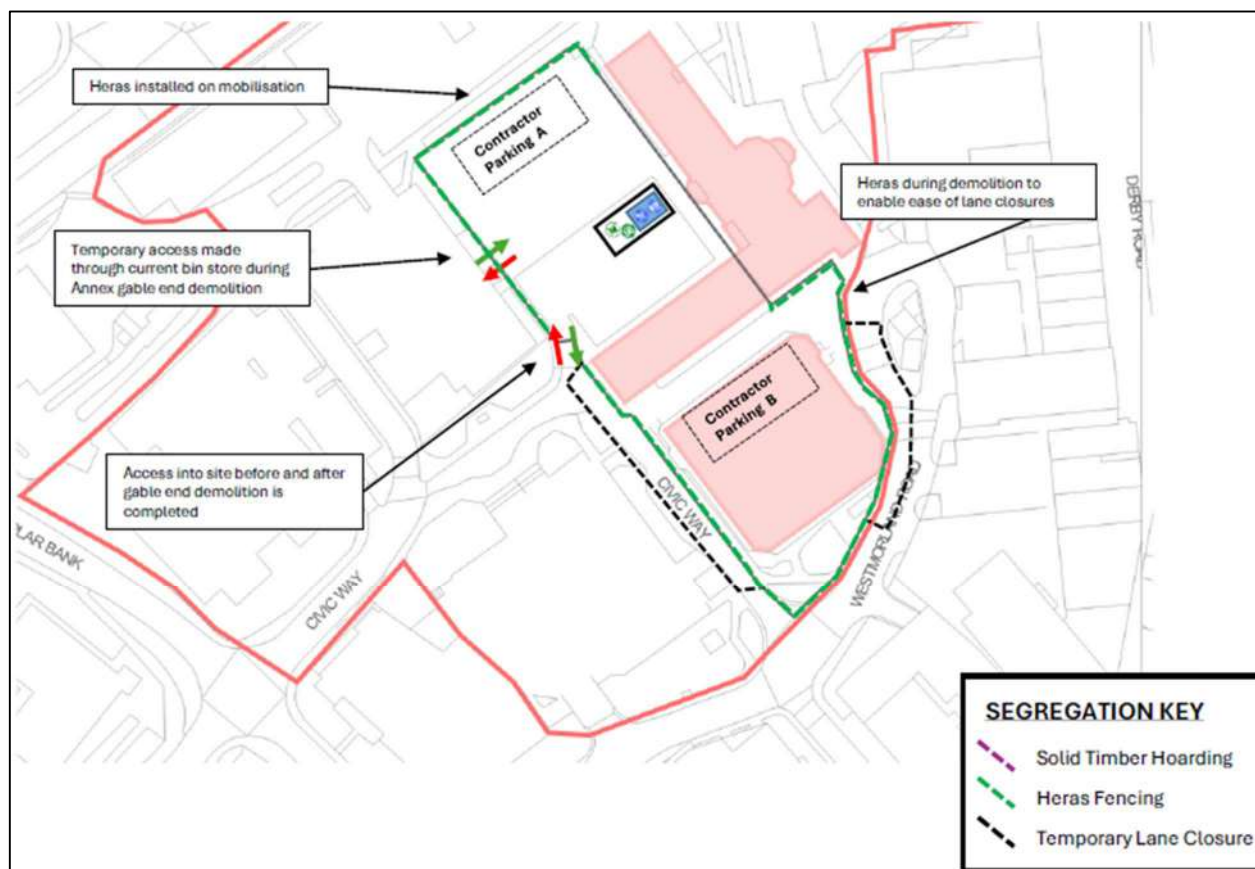
Framework Strategy for Contractor Parking

- 5.14. It is noted that the comments on the Construction Environmental Management Plan (CEMP) in the Consultation Response from KC Highways in relation to contractor parking request further details as follows, *"a contractor parking strategy that is off-street, enforceable and integrated with town centre parking displacement pressures."*
- 5.15. Astute have given this matter further consideration in conjunction with Genr8, KC Officers and following feedback from the supply chain. The strategy would broadly follow the below approach and key principles:

Enabling Works Contract

- Contractor site set up and parking will be kept within the hoarding and working zones for the Enabling Works Phase and will be adapted as required to respond to the proposed phasing of the works. The finalised strategy will be confirmed within the Enabling Works CEMP, which will be completed and submitted to discharge the relevant Enabling Works pre-commencement condition following the selection of the preferred Enabling Works contractor.
- Complying with the approved CEMP and parking obligations will be a contractual requirement for the Enabling Works contractor.
- An example of a proposed Enabling Works site compound and parking strategy, which aligns with the above strategy and provided by one of the tendering contractors, is shown in **Figure 3**.

Figure 3: Example Enabling Works Site Compound and Parking Strategy



Main Contractor Contract

- Contractor site set up will be kept within the hoarding lines, noting this will have to reflect working alongside the end of the Enabling Works Phase and compound area in relation to the demolition of the municipal tower building.
- No contractor parking will be permitted on the Library Red Zone, Venue and Yorkon Green Zone car parks until the proposed MSCP at Lathom Road is operational, at which time temporary short and long stay parking will be relocated from the above car parks into the new MSCP.
- Until such time as the Library Red Zone, Venue and Yorkon Green Zone car parks are available once the new MSCP is operational, Main Contractor parking will only be permitted within the service yard area to the rear of Cavendish Walk or within hoarding lines of the main contract plot working zones boundaries.
- Following the relocation of the temporary short and long stay parking into the new MSCP, it is proposed to permit contractor parking / material storage within the Library Red Zone, Venue and Yorkon Green Zone car parks, subject to agreement from the Local Authority.
- If there is a delay to the opening of the new MSCP and the Library Red Zone, Venue and Yorkon Green Zone car parks are still required for temporary long and short stay parking, then the Main Contractor will utilise



off-site (outside of the application red line boundary) parking options until such time as these car parks become available.

- The finalised contractor site set up and parking strategy will be confirmed within the Main Contractor CEMP, which will be completed and submitted to discharge the relevant pre-commencement condition in relation to the proposed Council HQ and / or hotel following the selection of the preferred Main Contractor.
- Complying with the approved CEMP and parking obligations will be a contractual requirement for the Main Contractor.

5.16. At this stage the information provided in relation to contractor parking proposals should be considered a framework strategy, and more details will be confirmed following the contractor procurement process and production of a Detailed / Implementation CEMP, which can be secured through a pre-commencement condition linked to the detailed elements of the hybrid planning application approval.

Servicing

5.17. A more detailed drawing illustrating the design of the proposed coach bay on Civic Way, including the pedestrian route and crossing point facilities between the drop-off / pick-up location and the hotel entrance will be provided in the TA Addendum, and the servicing strategy will also review a suitable location for accommodating mobile health units.

6. Pedestrian and Cycle Connectivity

6.1. KC provide extensive commentary on pedestrian and cycle connectivity to and from the site. Particular reference is made to KC's Local Cycling and Walking Infrastructure Plan (LCWIP) and a total of nine infrastructure routes.

6.2. KC identify shortfalls in secured funding in relation to these routes.

6.3. Further dialogue on this matter is requested. These discussions would be required to pay due cognisance to the requirements of both the National Planning Policy Framework (NPPF) and Regulation 122 of the Community Infrastructure Levy (CIL) Regulation 2010. Planning obligations must meet all three of the following tests:

- Necessary to make the development acceptable in planning terms.
- Directly related to the development.
- Fairly and reasonably related in scale and kind to the development.

6.4. It should also be noted that KC are bringing forward a number of City Region Sustainable Transport Settlements (CRSTS) funded public realm schemes in and around Huyton Town Centre, such as the Wilson Road cycle scheme and the proposed pedestrian connectivity improvements at Derby Road and Station Gateway, and any additional active



travel mitigation measures being sought by KC need to be considered in the context of the proposed CRSTS scope and programme for Huyton.

7. Summary

- 7.1. Astute Transport Planning Ltd has been commissioned by Genr8 Kajima Regeneration Ltd to advise on the on the proposed mixed-use development at St Michael's Place in Huyton Town Centre. This Transport Scoping Note has been prepared to outline the scope of transportation work proposed to be undertaken to respond to the Consultation Response received from KC Highways on the hybrid planning application for the masterplan (KC application ref: 25/00606/HYB). The feedback and agreement of KMBC Highways is sought to the scoping information contained in this Note.



Appendix B

Highways Observations Memo

Transportation and Traffic Services

Date:	5 th February 2026
To:	Clare Appleyard
Planning App. No:	25/00606/HYB
Proposal:	HYBRID TOWN CENTRE REDEVELOPMENT COMPRISING DETAILED APPLICATION FOR THE ERECTION OF A NEW COUNCIL HEADQUARTERS, HOTEL, PUBLIC REALM WORKS INCLUDING NEW VILLAGE GREEN/RELOCATION OF CENOTAPH, CHANGE OF USE/RECONFIGURATION OF CAVENDISH WALK TO FLEXIBLE CLASS E AND/OR F1 USES (COMMERCIAL AND COMMUNITY USES), SITE-WIDE ENABLING AND ASSOCIATED WORKS FOLLOWING DEMOLITION OF EXISTING BUILDINGS. OUTLINE APPLICATION COMPRISING DETAILS OF ACCESS, WITH ALL OTHER MATTERS RESERVED FOR A MIXED-USE DEVELOPMENT COMPRISING RESIDENTIAL (CLASSES C2 AND C3) USES, COMMERCIAL AND COMMUNITY USES (CLASSES E AND F1), REPLACEMENT CAR PARKING PROVISION AT LATHOM ROAD, PUBLIC REALM AND ASSOCIATED WORKS, WITH PROVISION FOR MEANWHILE USES
Location:	Land at Civic Way, Archway Road, Roby, South Huyton, L36 9UX

☒ **Objection, further information required**

Documents Reviewed

Highways have reviewed the following documents submitted by the agent.

Name	Number	Date	Revision
LOCATION PLAN	SMP-LUD-MP-ZZ-DR-U-91-00-01	26/11/25	03
DEVELOPMENT SCALE PARAMETER PLAN	SMP-LUD-MP-ZZ-DR-U-90-13-04	26/11/25	02
LANDSCAPE AND PUBLIC REALM PARAMETER PLAN	SMP-LUD-MP-ZZ-DR-U-90-13-03	26/11/25	02
ACCESS AND MOVEMENT PARAMETER PLAN	SMP-LUD-MP-ZZ-DR-U-90-13-02	26/11/25	02
LAND USE AND AMOUNT PARAMETER PLAN	SMP-LUD-MP-ZZ-DR-U-90-13-01	26/11/25	03

PLOT DEFINITION PARAMETER PLAN	SMP-LUD-MP-ZZ-DR-U-90-13-00	26/11/25	03
PUBLIC REALM GENERAL ARRANGEMENT PLAN	SMP-LUD-P1-ZZ-DR-L-91-00-00	26/11/25	06
PUBLIC REALM GENERAL ARRANGEMENT PLAN 1	SMP-LUD-P1-ZZ-DR-L-91-00-01	26/11/25	04
PUBLIC REALM GENERAL ARRANGEMENT PLAN 2	SMP-LUD-P1-ZZ-DR-L-91-00-02	26/11/25	04
PUBLIC REALM GENERAL ARRANGEMENT PLAN 3	SMP-LUD-P1-ZZ-DR-L-91-00-03	26/11/25	04
PUBLIC REALM GENERAL ARRANGEMENT LEGEND	SMP-LUD-P1-ZZ-DR-L-91-00-04	26/11/25	02
SITE LIGHTING LAYOUT	ZG-DWG-0002420007-EXT-R00- 040725	08/10/25	P2
LIGHTING ASSESSMENT			
CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN	-	NOV 25	-
STATEMENT OF COMMUNITY INVOLVEMENT	-	JUN 25	-
TRANSPORT ASSESSMENT AND FRAMEWORK TRAVEL PLAN	A25008	OCT 25	2
THRIVE PROGRAMME BROCHURE	-	-	-
DESIGN AND ACCESS STATEMENT	SMP-LUD-ZZ-ZZ-RP-U-900001	15/10/25	02
PLANNING STATEMENT	-	OCT 25	-

Comments

- **Site Access and Visibility**
 - Suitability of access arrangements for all vehicle types
 - Compliance with visibility splay standards
 - Conflict with nearby junctions or existing accesses
- **Traffic Impact and Trip Generation**

Highways have undertaken a detailed assessment of the submitted Transport Assessment (TA), Travel Plan (TP), Design and Access Statement, masterplan drawings, parking strategy information and Construction Environmental Management Plan (CEMP), having regard to the cumulative operation of the town centre highway network for which the Council is responsible.

The TA derives vehicular trip generation using TRICS for the proposed residential, hotel and office uses and forecasts approximately 137 two-way vehicle movements in the AM peak hour and 109 two-way vehicle movements in the PM peak hour attributable to the development alone. The Authority accepts that, in isolation, this level of new development traffic would not normally be considered excessive for a town-centre location.

However, the Authority considers that this approach materially understates the true traffic impact of the proposal, as it fails to adequately assess the redistribution of existing trips caused by the permanent removal of significant town-centre parking supply and the reliance on alternative parking locations. The TA itself forecasts total multi-storey car park (MSCP) demand of approximately 456 two-way movements in the AM peak and 322 two-way movements in the PM peak, combining development traffic with displaced short-stay demand. This demonstrates that the principal impact of the proposal is not new traffic generation, but a fundamental change in traffic patterns, access routes and circulation behaviour across the town centre.

While the TA undertakes limited junction modelling and concludes that the assessed junctions operate within theoretical capacity, the Local Highway Authority considers that the issue is not an absence of modelling, but rather how the submitted evidence has been interpreted and applied.

Study Area and Junction Scope

The Local Highway Authority also considers that the defined study area may be insufficient to capture the full operational effects of the development. In particular, the Roby Road / Archway Road roundabout has not been included within the detailed modelling assessment, despite the introduction of commercial floorspace and the redistribution of town-centre parking movements likely to draw additional traffic through this already busy junction. Given its strategic function within the local network, the Authority considers that a volume/capacity assessment of this junction is required to demonstrate that the cumulative impact of redistributed and development traffic can be accommodated without material degradation of performance.

Baseline Surveys and Peak Hour Identification

The baseline traffic survey data has been collected on a single day (Thursday 10th June 2025). While weekday commuter peaks are commonly used for assessment, the submission does not provide sufficient evidence that this survey date represents neutral operating conditions, nor does it provide graphical peak hour identification demonstrating build-up and dissipation profiles.

The Authority therefore requests production of peak hour identification graphs derived from the ATC data to confirm:

- That the selected peak hours represent true network stress conditions.
- That no abnormal events influenced recorded flows; and
- That school-related peak activity (noting the proximity of Huyton with Roby C of E Primary School and Little Angels Childcare) does not materially alter junction performance outside the standard commuter peak periods.

Without this evidence, it is not possible to conclude that the modelling reflects worst-case operational conditions.

Cumulative Development and Background Growth

The Authority also notes that the assessment applies general traffic growth factors (TEMPro) but does not incorporate committed or planned developments within the surrounding area into the junction modelling.

TEMPro-derived background growth does not capture site-specific committed development demand. In a network already experiencing pressure at key locations, omission of committed schemes risks understating future baseline conditions.

Specifically, application for residential development of the former Huyton Cricket Club are assessing capacity at the junctions of Huyton Lane and the entrance to ASDA, which have demonstrated that it is close to capacity following the

Interpretation of Junction Capacity Results

The TA concludes that the assessed junctions operate within capacity. However, a closer review of the modelling outputs suggests that this conclusion may understate operational sensitivity.

At the Archway Road / Blue Bell Lane junction, the left-turn movement from Blue Bell Lane is reported with a Ratio of Flow to Capacity (RFC) of approximately 0.79 in the baseline scenario. With development traffic included, this increases to approximately 0.85. While technically below the theoretical saturation threshold of 1.0, RFC values approaching 0.85 indicate limited practical reserve capacity. Any further fluctuation in demand, parking search traffic, seasonal variation or modelling underestimation would likely result in the arm operating at or over capacity, leading to queuing and delay.

Similarly, at the Archway Road / Lathom Road junction, while overall capacity is reported as acceptable, there is a marked increase in Degree of Saturation on the Lathom Road arm. Although still marginally within theoretical limits, the increase indicates reduced resilience within a junction that will become increasingly important as traffic patterns shift toward the MSCP access.

The Authority considers that these outputs demonstrate that the network is operating close to its practical limits and that reliance on theoretical capacity compliance does not adequately reflect likely operational performance.

Modelling Assumptions – LinSig Parameters

The LinSig modelling documentation does not explicitly confirm the saturation flow assumptions applied (e.g. RR67 saturation flow values). Given the sensitivity of signal modelling to assumed saturation flow rates, confirmation of the adopted parameters is required to ensure that capacity results are robust and not artificially optimistic.

The TA already contains sufficient baseline survey data, parking accumulation data and forecast redistribution figures to demonstrate that the proposal will materially alter established traffic patterns within the town centre, particularly by displacing short-stay and staff-related vehicular trips from the Archway Road / Poplar Bank side of the centre towards the Lathom Road MSCP. This redistribution is acknowledged within the TA's own demand forecasts and MSCP flow estimates.

However, the TA does not then follow through and assess the operational implications of that redistribution across the wider highway network. In particular, the assessment does not address what happens to trips that currently approach and park via Poplar Bank, Civic Way and adjacent routes once those parking opportunities are removed. The Authority considers that these trips do not simply cease to exist; rather, they are assumed to:

- transfer to the MSCP via alternative routes,
- divert to other parking locations,
- or be replaced by public transport or active travel trips.

These assumptions are not explicitly tested or evidenced within the TA.

Given the scale and permanence of the change proposed, the Authority considers that further targeted assessment may be required, not as a wholesale re-modelling exercise, but to interrogate:

- reassigned route choice and circulation patterns,
- the interaction between redistributed traffic and unmodelled junctions and links,
- and the sensitivity of junction performance to parking search and short-stay activity.

This is a proportionate request, as the TA itself demonstrates that redistribution rather than new development traffic is the dominant impact mechanism.

Reliance on Mode Shift

The TA implicitly assumes that a significant proportion of displaced trips will be absorbed by increased use of rail, bus, walking and cycling, reflecting the town-centre location and proximity to Huyton Station and bus services. While the Authority supports the principle of encouraging sustainable travel, the TA/TP does not sufficiently demonstrate how this mode shift will occur in practice, nor whether the existing public transport network has the capacity to absorb it.

In particular, the assessment does not quantify:

- how many existing car trips are assumed to transfer to rail or bus,
- whether this represents a peak-period increase beyond current public transport usage,
- or whether existing services have sufficient capacity and resilience to accommodate this change without degradation of service quality.

From a trip generation perspective, this is a material gap. If displaced trips are assumed to transfer to public transport, this must be supported by evidence that the services can accommodate additional demand, or by mitigation to support that transfer. In the absence of such evidence, there is a risk that assumed mode shift does not materialise, resulting instead in continued vehicular circulation and displacement onto the highway network.

The Authority therefore considers that the TA relies on unquantified assumptions about behaviour change, rather than demonstrated outcomes.

Impact on Established Town Centre Travel Patterns

The Authority is particularly concerned that the TA does not adequately assess the impact of altering long-established town centre access patterns. Existing travel behaviour is shaped not only by proximity, but by habit, convenience and perceived accessibility. The removal of parking accessed via Archway Road and Poplar Bank represents a structural change to how the town centre is used, particularly for short-stay trips and servicing.

The TA does not assess:

- where these trips reassign within the network,
- whether they divert to alternative centres if perceived convenience is reduced,
- or the cumulative effect of these decisions on traffic flows, circulation and stopping behaviour within Huyton.

From the perspective of the Highway Authority, this is relevant to trip generation because suppressed or displaced trips still influence network performance, even if they are not captured as new development traffic.

Residential Unit Mix

The residential component of the proposal is assessed at outline stage only, with trip generation derived from generic apartment-based TRICS assumptions. The submission does not define the residential unit mix by bedroom number, nor does it provide sensitivity testing to demonstrate that the highway network and parking strategy would remain acceptable under alternative scenarios.

This is a material flaw in the assessment. Residential unit size and bedroom mix are a key determinant of travel behaviour, car ownership and trip generation. A scheme comprising predominantly one-bed units may reasonably support lower car ownership levels and greater reliance on rail and bus travel, particularly in a town-centre location. However, the introduction of a meaningful proportion of two-bed units would materially alter the trip generation profile, including:

- higher car ownership and parking demand.
- increased visitor and servicing trips.
- a greater likelihood of family occupation; and
- additional escort trips, including walking and vehicular trips to nearby schools and childcare facilities during peak periods.

None of these impacts are assessed within the submitted TA or Travel Plan. As such, the current trip generation and traffic impact conclusions are only valid for a narrow and unspecified residential scenario and cannot be relied upon if the eventual reserved matters proposals introduce a higher-car-ownership unit mix.

Given the hybrid nature of the application, the Local Highway Authority considers that it is reasonable, necessary and proportionate to ensure that the outline consent does not enable a form of development that exceeds the assumptions used in the Transport Assessment. This can be achieved either by:

- imposing a planning condition to control the maximum residential unit mix (for example, limiting the proportion of two-bed units), or
- requiring robust sensitivity testing at outline stage to demonstrate that the parking strategy and surrounding highway network would remain acceptable should a higher-car-ownership scenario come forward at reserved matters stage.

Without such a control or evidence, the Authority considers that the Transport Assessment does not provide a robust or reliable basis for assessing traffic impact and trip generation for the residential element of the scheme.

This approach would also enable the Local Highway Authority to properly assess residential parking demand and to determine whether the proposed reduction to 0.4 parking spaces per dwelling, as set out in the submission, is appropriate and acceptable in highway terms, as without clarity on the residential unit size mix it is not possible to robustly assess whether the proposed parking provision aligns with the trip generation and car ownership assumptions relied upon in the Transport Assessment.

Recommendation

The assessment of traffic impact demonstrates that the permanent loss of town-centre parking and reliance on the Lathom Road MSCP and other off-site facilities will result in increased pressure on surrounding streets, particularly during weekday periods when staff, commuter and visitor demand overlaps. In the absence of effective controls, this would lead to overspill parking, informal stopping, obstruction and circulation behaviour that would directly undermine the operation of the local highway network.

The Authority therefore considers that a package of parking control measures will be required, which is likely to include:

- the introduction or amendment of Traffic Regulation Orders to manage displacement and protect key routes, including (but not limited to) parts of Archway Road, Civic Way, Westmorland Road and streets adjacent to the MSCP.
- the creation or modification of waiting restrictions, including limited waiting bays to protect short-stay turnover for town-centre uses.
- loading restrictions and loading-only provision to prevent servicing activity from displacing onto inappropriate parts of the network.
- the provision and protection of disabled parking bays in appropriate locations to ensure continued accessibility to town-centre services; and
- where necessary, the extension or introduction of resident parking controls in nearby streets to prevent displacement into surrounding residential areas. The following locations may need to be considered for such measures, due to the risk of overspill parking:
 - Residential areas not currently covered by RPZ or waiting restrictions - Victoria Road, Seel Road, Hey Road to the east. Gort Road, St Michaels Court,
 - Roads in close proximity to Huyton Station, concerning displacement of commuter parking currently absorbed in the town centre – review of current RPZ to ensure it remains robust.
 - Review of existing RPZ to the North of Huyton Town Centre to ensure coverage remains valid and appropriate.

A standard fee of £6500 administration works would be sought under s106. These measures would require not only the promotion and legal advertisement of TROs, but also physical implementation, including signing, lining and associated highway works. The Authority also notes that the effectiveness of TROs is wholly dependent on active enforcement.

Given the scale of change proposed, and the likelihood of displacement during the initial occupation and transition period, the Authority considers that additional Civil Enforcement Officer (CEO) resource will be required, unless parking within the MSCP and associated areas is to be privately managed to an equivalent and enforceable standard. This is particularly important to ensure that:

- staff and commuter parking does not displace short-stay town-centre users.
- restrictions are complied with during peak periods; and
- assumptions made within the TA regarding parking behaviour and circulation are realised in practice.

The Authority therefore considers it reasonable and necessary that the applicant makes financial contributions towards:

- the legal and administrative costs associated with promoting and implementing TROs.
- the physical installation of associated signing and lining; and
- a time-limited uplift in CEO enforcement capacity, to ensure that the parking and traffic impacts of the development are effectively managed and monitored.
 - Should this not be deliverable through contributions, then a method of enforcing the strategy through physical engineering means should be sought and secured via s278 or s106. Methods such as barriers or ANPR camera control would be considered.

Without these measures being secured, the Authority cannot be confident that the proposed parking strategy, and the associated assumptions regarding trip generation and traffic redistribution, would operate as intended, or that the impacts on the surrounding highway network could be adequately controlled.

While Traffic Regulation Orders and enforcement measures are likely to be necessary to manage displacement, the Authority considers that mitigation cannot rely on TROs alone.

Based on the submitted evidence, the following would be required to address traffic impact and trip generation risks:

- *Further assessment or sensitivity testing* to demonstrate how redistributed trips affect unmodelled junctions and links, particularly those forming key arrival routes to the town centre.
- *Parking management measures* that actively control how different user groups (staff, commuters, shoppers, residents) access and use available parking, thereby influencing trip generation and circulation.
 - Highways require confirmation on whether these user groups have been factored into assessments submitted so that the impact on redirecting such demand needs to be investigated further.
- *Monitoring and review mechanisms* tied to actual travel behaviour and network performance, with the ability to implement additional mitigation should assumptions prove incorrect. The Travel Plan becomes a key document in the management and delivery of robust shift towards sustainable transport and achieving the behaviour change we are striving for.

These measures are considered reasonable and proportionate given the scale, permanence and strategic importance of the proposal.

Robustness and Longevity of the Assessment

The Authority notes that the development represents a long-term restructuring of the town centre, with a construction and delivery programme extending over many years and limited opportunity for further transformational change thereafter. In this context, the traffic impact assessment must be sufficiently robust to account for:

- long-term behavioural patterns,
- cumulative network pressure,
- and the limited opportunity to retrospectively address deficiencies once the scheme is implemented.

- We cannot condition matters that we fundamentally do not understand, and must be confident that the solutions proposed are deliverable and would mitigate the impact on the surrounding network.

The Authority therefore considers that a more rigorous and explicit assessment of trip redistribution, mode shift assumptions and network operation is necessary to ensure that the proposal is fit for purpose over its full lifetime, rather than relying on optimistic assumptions that cannot easily be corrected once embedded.

Travel Plan – Summary and Assessment of Mitigation

The submitted Travel Plan (TP) has been reviewed as part of the Local Highway Authority's assessment of traffic impact and trip generation. The Authority acknowledges that the TP sets out a broad framework of measures intended to encourage sustainable travel choices, including promotion of public transport use, walking and cycling, provision of cycle facilities, travel information for occupiers and staff engagement initiatives.

The Authority accepts that, in principle, the measures identified within the TP are appropriate in type for a town-centre development and align with the objectives of reducing single-occupancy car use. However, the Authority considers that the TP is strategic and aspirational in nature, and does not yet provide a sufficiently robust or deliverable mitigation package to support the scale of parking reduction and trip redistribution proposed.

In particular, the TP does not quantify the level of modal shift required to offset the permanent loss of town-centre parking, nor does it clearly demonstrate:

- how many existing vehicular trips (including staff, commuter and visitor trips) are assumed to transfer to sustainable modes.
- whether realistic alternatives exist for those users, considering origin–destination patterns, service availability, health and mobility constraints and shift patterns; or
- how success or failure will be measured against defined targets.

The Authority notes that there is no clear linkage between the assumed parking reduction, the trip generation assumptions used in the TA, and the mitigation measures proposed within the TP. As a result, it is not possible to conclude that the TP, in its current form, would actively manage or mitigate the traffic impacts arising from displaced parking demand, rather than simply promoting sustainable travel as a general objective.

The TP also lacks detail on enforcement and contingency. There is no defined mechanism to address circumstances where assumed behavioural change does not materialise, particularly during the early occupation period when the risk of displacement and informal parking behaviour is greatest. In the absence of clear monitoring arrangements, remedial triggers and funded intervention measures, the Authority considers that the TP cannot yet be relied upon as effective mitigation for the traffic and parking impacts identified. As part of the monitoring and implementation of the TP, these enforcement triggers should be agreed and clearly identified.

Accordingly, while the Authority supports the principle of the Travel Plan and recognises its alignment with sustainable transport objectives, it considers that further work is required for the TP to function as a credible mitigation tool. This includes clearer targets, quantified assumptions, defined monitoring and review mechanisms, and integration with parking management and enforcement measures, to ensure that the traffic impact of the development can be effectively controlled in practice.

Design and Access Statement – Highways and Movement Assessment

The Design and Access Statement (DAS) has been reviewed in relation to highway access, movement, parking and connectivity, and its alignment with Knowsley Metropolitan Borough Council policy and current national best practice.

The Authority acknowledges that the DAS sets out a clear design intent to prioritise placemaking, pedestrian movement and town-centre regeneration. The emphasis on improving public realm quality, strengthening pedestrian routes and reinforcing the role of the town centre as a focus for activity is consistent with the aims of Core Strategy Policy CS7 and the principles of Manual for Streets, which seek to balance movement and place functions within urban environments.

However, from a Local Highway Authority perspective, the DAS remains high-level and qualitative and does not sufficiently demonstrate how the proposed design outcomes translate into operationally robust highway arrangements once the development is occupied.

In particular, while the DAS promotes reduced reliance on the private car and highlights proximity to public transport, it does not address the practical consequences of the proposed parking strategy on the surrounding highway network. There is limited consideration of:

- how displaced vehicle trips will be managed in practice.
- how servicing, loading, taxi activity and short stay stopping will operate within a more constrained kerbside environment; or
- how conflicts between different users (pedestrians, buses, general traffic and servicing) will be resolved at key locations, including around the bus station and principal access routes.

The DAS also does not provide sufficient clarity on the long-term operation of parking facilities relied upon by the scheme, particularly where these are located outside the application boundary. As such, while the design narrative supports a reduced-parking, sustainable transport model, it does not demonstrate that this model is deliverable or manageable in highway terms without additional controls and mitigation.

In policy terms, the Authority considers that the DAS aligns with the intent of KMBC's Ensuring a Choice of Travel SPD and national guidance but does not yet provide the level of detail required to demonstrate compliance with their operational requirements. Current best practice emphasises not only encouraging sustainable modes but also ensuring that changes to parking provision and movement patterns do not result in unmanaged displacement, reduced accessibility or adverse impacts on the wider network.

Accordingly, while the Authority supports the overall design objectives set out in the DAS, it considers that further detail and alignment with the Transport Assessment, Travel Plan and parking management proposals are required to demonstrate that the development can operate safely, efficiently and sustainably from a highway perspective over its full lifetime.

- **Strategic Recommendation – Highway Layout and Internal Circulation**

As the Local Highway Authority, we support the ambition to transform Huyton's civic core. However, the current proposals largely retain legacy highway alignments and attempt to "fit" a new place around streets that no longer serve their original purpose. The GA plans explicitly annotate multiple areas as "existing surface retained and made good", signalling a "make-do" approach rather than a movement network designed for today's desire lines and tomorrow's town centre uses. In our view, this constrains permeability, creates indirect routes to the rail and bus stations,

leaves poorly overlooked pinch-points and alleyways, and under-delivers the active-travel outcomes sought by LCWIP and ATE.

Given the scale of demolition and reconstruction, this is the once-in-a-generation moment to re-plan the adopted highway network around the emerging masterplan, not vice-versa. The network should be reset to follow actual pedestrian and cycle desire lines, provide continuous step-free, overlooked streets, and create direct, legible links between the civic core and Huyton rail and bus stations, consistent with LCWIP's outcome-based approach (coherence, directness, safety, comfort, attractiveness) and with ATE's conditional approval that hinges on delivering those outcomes at detailed stage.

Desire lines vs. legacy geometry - "Leftover" corridors, indirect linkages and back-of-plot alleys suppress walking/wheeling, undermine passive surveillance and complicate servicing, contrary to LCWIP's Core Walking Zone expectations. ATE's letter explicitly seeks LTN 1/20-compliant outcomes and better links to amenities; this will be far easier if the street pattern is purpose-designed, not forced into historic geometry.

Kerbside management risk - Trying to manage 21st-century loading/taxi/blue-badge needs inside a 20th-century street frame drives continuous TRO "patches" and enforcement burden. A cleaner, re-aligned network reduces the need for perpetual work-arounds. (We will still require funded TROs/CEO uplift, but a fit-for-purpose layout reduces long-term liabilities.)

Connectivity to rail/bus and off-plot parking - The strategy's reliance on off-plot parking and on station access demands formal crossings and priority along the MSCP → core and station → core desire lines. Those are best secured through a deliberate street pattern and S278 works, not piecemeal add-ons.

Recommendation

The regeneration brief is the right one: replace a car-dominated civic core with a permeable, people-first town centre that puts walking, wheeling, cycling, and public transport at the top of the movement hierarchy. On the current drawings, though, the internal street pattern is still forced to "work around" older highway alignments, with large areas marked for "existing surface retained and made good". That legacy geometry does not reflect present desire lines (particularly to rail/bus, and between town-centre anchors), nor does it provide the direct, step-free, overlooked routes we need in a Core Walking Zone. In consequence, several operational issues are being pushed onto TROs, management plans and CEO enforcement, when the layout itself should be doing more of the heavy lifting.

Given the scale of demolition and reconstruction, this is the moment to re-plan the adopted highway network around the masterplan, not vice-versa. We recommend a short, LHA-led Highway Network Options & Realignment Study to test removing/realigning redundant corridors and creating new adopted streets that sit exactly on the actual pedestrian and cycle desire lines, with unbroken sightlines and passive surveillance. This is squarely in line with the Knowsley LCWIP (outcome-based compliance with LTN 1/20: coherence, directness, safety, comfort, attractiveness), with ATE's conditional approval (which expects LTN 1/20 outcomes to be demonstrated at detail), and with Manual for Streets guidance on permeability and desire-line based town-centre street design.

To deliver that network cleanly and lawfully, we will set out a legal route-map that:

- Stops up or diverts obsolete highway under TCPA s247/s249 (and, where appropriate, HA s116) so that the redundant geometry is not "baked in"; and

- Adopts the new streets that follow the masterplan's desire lines under HA s38; and
- Delivers the off-site links (e.g., MSCP → core; station → core) via HA s278 (crossings, kerb realignment, signing/lining, wayfinding) with commuted sums as required.

The above is all standard practice and DfT guidance confirms stopping-up cannot be retrospective, so early sequencing and consideration into this at planning stage is essential.

In the long term, considering the above achieves a number of things for Huyton, including:

- *A network that fits the new place:* rather than trying to force a modern public realm to work around legacy geometry.
- *Cleaner operations:* less reliance on “patch” TROs and CEO firefighting because the alignment, widths and priorities are inherently right.
- *Faster compliance with ATE/LCWIP:* outcome drawings (crossings, tactiles, gradients, side-road priority, any segregation) and RSA 1/2 can be tied to a single, coherent layout brief rather than piecemeal fixes

Specific operational issues are highlighted throughout this response for context.

- **Parking and Servicing**

Council Headquarters Parking Provision (Clas B1/E(g)(i))

The detailed application includes a new Council Headquarters of 8,461 sqm GFA over ground plus four storey, which is the basis for applying Knowsley's adopted parking standards to the HQ element.

The Council's Ensuring a Choice of Travel SPD (Appendix A) sets the Town Centre standard for a B1/E(g)(i) office as 1 space per 40 sqm GFA; disabled parking provided relative to the actual capacity proposed (≤ 200 spaces: the greater of 2 bays or 5%; > 200 spaces: 6 bays + 2% of capacity); the minimum cycle parking at 1 space per 300 sqm; and the minimum motorcycle parking is 1 space per 750 sqm. On 8,461 sqm this equates to a maximum of ~211 car spaces, ≥ 28 cycle spaces, and ≥ 12 motorcycle spaces (exact disabled provision depends on the final car capacity proposed, but is likely to be in the region of 10 spaces based on maximum capacity requirements).

The TA states that the applicant “*will retain circa 180 car parking spaces for KMBC staff*” and that these “*will be made up of existing parking provision of 150 spaces that is being retained*” together with “*30 new spaces ... at the back of Cavendish Walk in two car parking areas.*” In addition to those off-plot and Cavendish Walk areas, the building-specific description confirms a very small car park “*for the Council HQ (circa 11 spaces including four accessible bays)*” directly adjacent to the HQ. For cycles, the HQ building includes “*secure cycle parking ... for staff (42 spaces)*” in the lower ground floor.” The TA does not set out any HQ visitor cycle or HQ motorcycle numbers, stating only that provision will be “*in general accordance with KMBC policy standards.*”

The TA explicitly identifies that the current arrangement relies on Club 3000 Bingo: “*their car park is used by Council staff as KMBC have an agreement in place to use approximately 150 spaces in the car park.*” The Parking Strategy then carries those 150 forward into the claimed 180 HQ spaces. While this reflects the existing operational practice, it remains third-party land outside the applicant's control. The pre-application minutes also record that this reliance was raised as a concern and that “*if this is removed, alternative solutions must be identified.*” In assessing a planning application, the Authority cannot count such spaces for the life of a development unless a robust, legally binding agreement is secured to the satisfaction of the LPA (the same principle

would, and does, apply to any other developer). On the basis of the submission, no such lifetime-secure legal tie is before us; therefore, those 150 spaces cannot be counted toward HQ provision at decision stage.

The TA positions the Lathom Road MSCP as the hub for relocated short-stay public parking (permanent transfer of the 109 Archway Road spaces in the first surface phase, with the site future-proofed to ~400 spaces) and to serve aggregate demand from the hotel, residential and office elements; it assigns flows to the MSCP from the displaced short-stay and from these uses accordingly.

However, the TA does not identify any HQ-specific, ring-fenced allocation within the MSCP [HQ staff parking is otherwise presented as 150 at Club 3000 Bingo plus ~30 at Cavendish Walk, with only ~11 spaces (4 disabled) directly adjacent to the HQ] so MSCP capacity cannot be assumed to be available to the HQ without a secured mechanism.

On that basis, the Authority will therefore impose a Grampian (pre-commencement) condition to read, in effect: no development (works) shall commence on the HQ plot until the Lathom Road MSCP is constructed and operational to the agreed phase/capacity and management standard necessary to

- i. permanently absorb the transferred short-stay and
- ii. accommodate an interim HQ staff allocation pending residential build-out.

This phasing allows the MSCP to host HQ staff initially and still serve the hotel's 31-space requirement, with residential demand added only as further MSCP capacity comes online. The applicant must evidence the capacity envelope and point of saturation, i.e., the precise occupancy/phase at which the MSCP can no longer accommodate HQ (and hotel) alongside other plots, together with a clear, enforceable allocation and control regime (permits/ANPR/signage/TROs) that specifies who uses what, when, and on what terms. Absent such a trigger and regime, no reliance on the MSCP for HQ operation can be accepted.

The town centre is used by multiple non-HQ user groups, including NHS staff, Royal Mail staff, other town-centre employees, shoppers and rail/bus commuters, who will occupy any uncontrolled capacity offered in pooled facilities. The applicant's own Parking Strategy acknowledges the importance of management and enforcement; a robust approach is therefore essential to ensure fair, effective and non-discriminatory use. In practical terms, the HQ element must be accompanied by a single, enforceable schedule (HQ staff/visitor car totals; disabled calculation from the HQ car capacity; cycle totals with a clear long-stay vs short-stay split; motorcycle totals), and a Car Parking Management Plan that demonstrates:

- Where the HQ allocation sits (site plan references) and how it will be controlled in practice (e.g., permit regime, ANPR, barrier control, operational hours, validation against staff lists);
- How disabled bays are safeguarded and managed at all times close to building entrances;
- How conflicts with other town-centre users are avoided (e.g., TROs, pricing parity rules where relevant, signage/wayfinding, time-of-day controls); and
- How compliance is enforced (civil enforcement, penalties, monitoring and review).

We recognise the risk that uncontrolled first-come, first-served arrangements can disadvantage some groups, for example, employees arriving after school runs, if peak-hour capacity is already taken. While the planning system cannot micromanage individual staff circumstances, the Travel Plan and employer communications should explicitly consider equitable access, flexible working windows, and alternative travel options, so that demand management does not unfairly

disadvantage any cohort. This is acknowledged as a management and behavioural issue, not a static quantum issue, and sits alongside, rather than instead of, the need for a secured HQ allocation.

Summary Position

The SPD allows up to ~211 car spaces for an office of 8,461 sqm in a Town Centre; it also requires ≥28 cycles and ≥12 motorcycles (with disabled provision derived from the final capacity).

The application does not present an enforceable HQ-only schedule that meets these minima and caps; it relies on third-party spaces at Club 3000 Bingo (150) and small Cavendish Walk areas (~30), with only ~11 spaces (4 disabled) directly adjacent to the HQ and 42 staff cycle spaces inside the building. There is no HQ visitor-cycle (short stay) or HQ motorcycle schedule.

As submitted, the reliance on Club 3000 Bingo is not countable without a robust, life-of-development legal agreement. The MSCP is being considered in outline and is modelled primarily for short-stay relocation and hotel/residential/other demand, with no HQ-specific allocation set out. Both must therefore be treated as unavailable to the HQ for the purpose of determining policy compliance, unless and until suitable legal/condition mechanisms are secured.

Highways are not opposed in principle to provision below the SPD maximum in a Town Centre location, provided the applicant demonstrates a self-contained, enforceable HQ package that meets Appendix A outcomes.

It is recommended that the applicant submit an HQ-specific Schedule of Parking, Cycle and Motorcycle Provision together with a Car Parking Management Plan that are capable of being conditioned and enforced. These must

- a) set out a phasing and capacity statement confirming how far surrounding/pooled capacity (including the Lathom Road MSCP in its delivered phase) can temporarily accommodate HQ (and hotel) while other plots are not yet developed, and the exact saturation point (by occupancy or phase) beyond which parking can no longer be absorbed within the plots/MSCP without additional deck(s) or re-allocation; and
- b) confirm visitor short-stay cycle stands in the public realm and motorcycle spaces at or above SPD minima, with the split between internal long-stay (staff) and external short-stay (visitors) made explicit for each building entrance.
- c) Create a proper, people-centred cycle hub—not a token pair of Sheffield stands—by delivering a covered, well-lit, step-free space that welcomes all cycle types (non-standard/adapted cycles, trikes, trailers and cargo-bikes) with clear sightlines, CCTV/passive surveillance and doors wide enough for easy manoeuvring.
- d) Provide a mix of secure parking (ground-level Sheffield stands in generous numbers, accessible bays for larger cycles, and any two-tier racks only where a meaningful proportion remains at ground level), plus weather-resistant e-bike/e-cargo charging points with safe cable management and integrated fire-safe charging cabinets where appropriate.
- e) Add seating and a small “pause” area immediately adjacent, somewhere to wait, rearrange bags or supervise children, alongside wayfinding, a basic fix-it stand/pump, and drinking water. Locate the hub close to principal entrances and on primary pedestrian desire lines (not tucked around the back).

The emphasis should be on dignified, intuitive use: clear signage, easy access for mobility aids and adapted cycles, lighting that feels safe after dark, and management that keeps the area clean, dry and reliably available.

For B1/E(g)(i) office (HQ) the TA reproduces the SPD minimums of 1 cycle per 300 sqm and 1 motorcycle per 750 sqm, with disabled bays calculated against actual car-parking capacity; for the hotel, the SPD minimums are 1 cycle per 10 guest rooms and 1 motorcycle per 25 guest rooms.

These are minimum standards and the submission should note any internal (long-stay) provision proposed in addition; as the SPD does not prescribe a visitor/staff number split, the plan must show a clear allocation between visitor short-stay (public realm stands near entrances) and staff long-stay (secure internal stores) to the Authority's satisfaction.

Club 3000 Bingo spaces will not be counted unless secured by a robust legal agreement acceptable to the LPA for the life of the development; if not secured, the HQ totals must be re-set without those spaces.

On the evidence submitted, the HQ parking strategy has not yet demonstrated a policy-compliant or operationally robust position for the HQ element. The applicant should therefore either: (a) secure the third-party and MSCP dependencies as above, with a fully specified HQ allocation and management plan; or (b) revise the HQ provision so that it is met on assets wholly under the applicant's control, supported by demand-management measures that ensure fair, effective and non-discriminatory operation across competing town-centre users.

Hotel Parking Provision (Class C1)

The submitted application proposes a hotel comprising 130 guest bedrooms within the town centre regeneration scheme. The applicant's parking strategy relies on shared use of the proposed Lathom Road Multi-Storey Car Park (MSCP) rather than dedicated general parking provision within the hotel curtilage. The submission indicates that a minimum allocation of spaces within the MSCP would serve the hotel; however, the plans do not clearly identify how many spaces are allocated to hotel use, how those spaces would be controlled, or how peak demand would be managed alongside other competing town centre uses.

Appendix A of the Council's adopted *Ensuring a Choice of Travel SPD* sets out the parking standard for hotels (Class C1) in a Town Centre location as 1 space per bedroom (maximum), including staff parking provision. On that basis, a 130-bedroom hotel would generate an SPD benchmark of 130 car parking spaces. In addition, the SPD requires disabled parking provision of 3 bays or 6% of total capacity (whichever is greater); applying this to a 130-space benchmark equates to 8 disabled bays. The SPD also sets minimum cycle parking standards of 1 space per 10 guest rooms (minimum of 2 spaces), which for 130 rooms equates to 13 cycle spaces, and motorcycle provision of 1 space per 25 guest rooms (minimum of 2 spaces), equating to 6 motorcycle spaces.

The submitted layout drawings indicate that the hotel element does not benefit from dedicated general parking provision within its immediate curtilage. The only parking shown adjacent to the hotel building comprises two disabled parking bays, positioned in close proximity to the entrance, together with motorcycle parking and cycle storage. No additional hotel-specific parking spaces are identified on the plans, and there is no clearly defined allocation of spaces within the proposed MSCP for hotel guests or staff. The proposal therefore relies on shared use of the wider town centre parking stock to accommodate hotel-related demand.

While the Authority accepts that town centre hotels can operate successfully with shared parking arrangements and reduced on-site provision, best practice requires that such arrangements are supported by a clearly defined allocation, peak demand analysis and enforceable management measures. The current submission does not include a shared parking assessment demonstrating how hotel peak occupancy would be accommodated alongside residential, commuter and Council

HQ demand within the proposed MSCP. Nor does it identify how disabled parking provision will be safeguarded to ensure compliance with Appendix A standards. In the absence of a quantified allocation and operational management strategy, it has not been demonstrated that the proposal accords with the requirements of the adopted SPD or that the parking strategy for the hotel element is robust and operationally deliverable.

The Proposed Site Plan further shows the coach/taxi drop-off located on the opposite side of Civic Way to the hotel entrance. In operational terms this arrangement would require hotel guests, including those with luggage and mobility needs, to cross Civic Way at a point where vehicle stopping and manoeuvring will be concentrated. No pedestrian desire line or crossing arrangement is shown linking the drop-off to the entrance, and the submission therefore does not currently demonstrate that this movement can be made safely, legibly and conveniently in practice. While the Authority recognises that the one-way operation of Civic Way may influence drop-off positioning, the preferred solution would be to locate the drop-off on the same side as the hotel entrance where feasible. Where this cannot be achieved, the applicant must provide a detailed design drawing demonstrating the pedestrian route between drop-off and entrance, including crossing provision, tactile and dropped-kerb treatment, visibility, surface treatment, wayfinding and lighting, to ensure the arrangement is inclusive and operationally robust.

In assessing the hotel parking provision, the Local Highway Authority recognises that the standards set out in Appendix A of the Ensuring a Choice of Travel SPD represent maximum benchmarks and that town centre hotels, particularly those in locations with access to rail and bus services, frequently operate successfully with reduced on-site parking provision supported by shared or consolidated public car parking. Industry practice across comparable UK town and district centres indicates that urban hotels typically operate within a reduced parking range relative to out-of-centre or motorway locations, reflecting higher levels of public transport accessibility and lower levels of car-based guest arrivals.

However, such reduced provision is generally supported by a clearly defined allocation within a shared facility, evidence of anticipated occupancy levels, assessment of peak demand overlap with other land uses, and a documented management strategy. The current submission identifies a reliance on shared use of the proposed MSCP but does not provide a detailed shared-parking assessment or operational allocation strategy demonstrating that hotel demand can be accommodated without conflict with residential, commuter or Council HQ use, particularly at periods of peak occupancy.

The Authority therefore accepts in principle that a reduced provision may be appropriate in a town centre context; however, the extent of reduction must be supported by evidence and accompanied by a clear management and allocation framework. In the absence of such analysis, it has not yet been demonstrated that the proposed hotel parking strategy is proportionate, robust or operationally resilient over the lifetime of the development.

Residential/Commercial Parking Provision

The residential component is outline only. The application allows either up to 420 dwellings (C2/C3) with $\leq 1,600$ sqm commercial, or 370 dwellings where $\leq 5,600$ sqm commercial (incl. 4,000 sqm office) comes forward. No unit-mix is fixed at this stage; the mix and detailed layouts are deferred to reserved matters.

The Ensuring a Choice of Travel SPD applies maxima by unit size, e.g., 0.5–1 space for a 1-bed dwelling and 1.5 spaces for a 2–3-bed dwelling, and this is before accessible/Blue Badge, cycle and motorcycle standards are added. In the absence of a plot-by-plot mix, the resulting parking requirement could vary materially between a 1-bed dominated scheme and one with a higher

proportion of 2-bed homes (which also tends to correlate with higher car ownership and wider family-related infrastructure demands). This mix sensitivity is not resolvable at outline on the information submitted.

The TA adopts a ratio of 0.4 spaces per dwelling for the town-centre residential plots, with all residential parking to be provided off-plot at Lathom Road rather than within the residential parcels.

The transport submission is explicit about how Lathom Road MSCP comes forward and what it must absorb:

- *First stage:* provide a 109-space surface car park at Lathom Road to permanently relocate the existing 109 short-stay public spaces from Archway Road (i.e., short-stay is re-provided first).
- *Thereafter:* the site is future-proofed so that parking decks can be added up to ~400 spaces total if later phases require it. The TA also identifies a permanent draw of 31 hotel spaces at Lathom Road.

[The above is a contradiction to what is stated in the main body of the TA]

On the applicant's own narrative, the initial 109-space surface arrangement is reserved for public short-stay relocation, not residents; residential long-stay at the proposed 0.4 ratio only becomes deliverable once decked capacity is constructed and operational at Lathom Road. In addition, the hotel's 31-space allocation further erodes the net headroom available to residents within the future ~400-space envelope. Without the deck, the outline residential demand cannot be readily accommodated at the ratio suggested.

The applicant's justification for reducing residential parking to 0.4 relies, in part, on an assumption of modal shift to rail/bus. The LHA's reviewed position (set out elsewhere in the memo) is that public-transport practicality varies sharply by origin, with stronger performance on the Liverpool–Huyton corridor but weaker performance for many cross-borough trips (less frequent stopping, longer door-to-door times, and higher peak costs). The TA/TP do not identify where the residents expected to forgo parking would be travelling from, nor whether peak-time capacity and service patterns support that shift. In the absence of origin-based evidence and committed delivery of the station to site walking links, a blanket reduction to 0.4 across all plots and phases is not evidenced. (ATE's advice to ground decisions in multi-modal forecasting and outcome compliance, rather than generic intent, points the same way.)

Based on the evidence above, the Local Highway Authority considers it essential that the hybrid consent fixes a practical capacity envelope for the town-centre parking strategy and that all subsequent residential consents are tested within, rather than against, this fixed frame. In concrete terms, the hybrid must commit the Lathom Road schedule already embedded in the TA:

- i. the permanent relocation of the 109 short-stay spaces to Lathom Road,
- ii. the hotel's permanent requirement (31 spaces) there, and
- iii. a clearly quantified headroom for residential long-stay by outline scenario, shown on drawings and capable of delivery.

However, it is not clear whether the MSCP will be delivered in a single build rather than decked in later phases. That needs to be made explicit and secured in the decision, because the TA also describes Lathom Road as being "future-proofed," so that additional decks could be added at a later stage", which contradicts a single-phase build and introduces a deliverability and operational

risk (closing an operational MSCP to add decks later, securing a contractor years after practical completion, and managing town-centre disruption).

Accordingly, the hybrid permission should:

- a) lock in the single-phase MSCP capacity and programme that will permanently re-provide the 109 short-stay spaces and accommodate the hotel's 31-space requirement.
- b) fix the residential headroom that remains within that committed capacity; and
- c) require a Delivery & Continuity Plan confirming how parking will be kept operational during build and how any later change (were "future-proofing" ever pursued) would avoid closure or provide like-for-like alternative provision throughout.

Without this committed, single-phase envelope, the headline 0.4 spaces per dwelling remains at risk of becoming an unenforceable aspiration, particularly given the TA's own reliance on Lathom Road to re-provide short-stay first and then absorb other uses

In parallel, occupation must be tied to real, delivered capacity. No residential block should be brought into use unless and until the specific Lathom Road capacity needed for that block and phase is constructed, open and operating, an approved Residential Parking Allocation Plan is in place (defining numbers, locations, hours and controls), and the Car Park Management Plan demonstrates clear segregation between residents, short-stay and hotel users, through an appropriate mix of permits, ANPR/barrier control, pricing/time restrictions and enforcement, to avoid displacement and to protect fairness across competing town-centre users. The applicant's own Parking Strategy recognises the necessity of active management and enforcement; those mechanisms must therefore be defined, funded and conditioned now rather than deferred to a later stage.

At reserved matters, each residential parcel should then be re-tested within this fixed envelope. The Authority will expect a unit-mix schedule and a compliance table against the SPD, including cars by unit size, a block-by-block Blue Badge schedule located close to cores, fully specified cycle parking (allocated and communal, secure, covered and step-free) and motorcycle provision, and a demonstration that the block fits within the hybrid envelope agreed at outline/hybrid. Where a block's calculated need would breach the committed capacity, the proposal will need to adjust its mix and/or its parking ask to remain compliant; the alternative cannot be to assume capacity that has not been consented or delivered.

Given the Authority's position on public transport practicality set out earlier in this memo, the applicant should not predicate a borough-wide reduction to 0.4 on a generalised promise of modal shift. If the applicant wishes to maintain 0.4 as a working ratio across phases, then evidence must precede expectation: an origin-based multi-modal note identifying who is expected to switch, from where, and with what door-to-door times, interchanges and costs relative to the car; and peak-time capacity confirmations from the operators/transport authority, or else a clear statement of the service enhancements that will be delivered and when. In the same vein, the station-site pedestrian interface that the TA relies upon to make rail/bus genuinely attractive, the detailed crossings, side-road priority, gradients and tactiles, lighting, wayfinding and materials, must be secured now (with RSA and S278) and delivered prior to occupation of affected phases, not left as a future intention. This is consistent with Active Travel England's outcome-led approach and with the TA's own reliance on new internal and external pedestrian links to support modal shift. A plan showing the proposed mitigation should be secured showing routes and improvements required.

Finally, the Authority will secure a kerbside management package to protect the wider network during and after the transition. The consolidation of demand at Lathom Road will only work if the surrounding streets are actively managed to prevent overspill into areas already used by NHS staff, Royal Mail staff, other town-centre employees, shoppers and commuters. Accordingly, the hybrid consent should include funding and a programme for the necessary TROs, signing/wayfinding, and an initial CEO uplift, with monitoring provisions to ensure that the regime remains fair, effective and non-discriminatory across user groups over time. The applicant's Parking Strategy already acknowledges that a robust enforcement framework will be critical; the decision should therefore make that framework an integral condition of the development's operation.

In summary, the LHA's support for residential parking reductions is conditional on

- a fixed, deliverable capacity envelope at hybrid
- occupation triggers tied to delivered capacity and approved management plans,
- reserved-matters retesting within that envelope and against the SPD by unit size,
- evidence-first treatment of public-transport mode shift with the station-site walking environment secured and built pre-occupation, and
- a TRO and enforcement package that protects neighbouring streets and underwrites fair use.

Anything less risks over-promising on mode shift, under-providing on capacity, and displacing demand onto a town-centre network that the TA itself recognises must be actively managed to function well.

- **Pedestrian and Cycle Connectivity**

The Local Highway Authority recognises that pedestrian and cycle connectivity is a key component of sustainable town centre regeneration. In this instance, however, the importance of pedestrian and cycle provision extends beyond localised public realm enhancements and becomes fundamental to the operation of the development as proposed.

The Transport Assessment and supporting documents place significant reliance on modal shift away from private car use, arising primarily from the substantial reduction in town centre parking provision. For that reliance to be credible, the walking and cycling network serving Huyton Town Centre must be capable of accommodating a materially higher level of everyday pedestrian and cycle trips, including journeys to and from residential areas, public transport interchanges and displaced parking locations.

Existing Network and Identified Deficiencies

While the immediate town centre core around Derby Road benefits from pedestrianised streets and recent or emerging public realm investment, the wider walking and cycling network that would be relied upon by this development is fragmented, inconsistent and, in places, unattractive or unsafe for everyday use.

The Council's adopted Local Cycling and Walking Infrastructure Plan (LCWIP) identifies Huyton Town Centre as a Core Walking Zone and highlights a number of specific routes and corridors where improvements are required in order to support everyday walking and cycling trips. These deficiencies have been identified through LCWIP audits and relate to matters such as:

- severance caused by highway layouts.

- lack of safe and convenient crossing points at key desire lines.
- narrow, obstructed or poor-quality footways.
- inadequate lighting and perceived safety concerns.
- lack of continuity and legibility for cyclists; and
- weak connections between residential areas, the rail station, bus station and town centre uses.

Critically, many of the routes identified in the LCWIP extend beyond the immediate Derby Road frontage and include key approach routes that would be relied upon by users accessing the town centre on foot or by cycle as a result of the proposed parking strategy.

Given the scale of parking reduction proposed, the Authority considers that the development's success is directly dependent on people being willing and able to walk and cycle to, from and within the town centre over a wider area than is currently attractive or comfortable. The reliance placed on modal shift therefore cannot be supported solely by improvements within the immediate vicinity of the high street.

In this context, the LCWIP provides a clear, evidence-based framework identifying routes which require some form of intervention or mitigation. The Authority considers it reasonable and proportionate that a development of this scale contributes towards addressing those deficiencies where the routes form part of the walking and cycling network that the development will rely upon.

The Authority considers that mitigation should not be limited to cosmetic or localised measures but should address the underlying barriers identified through the LCWIP audit process. Depending on route and context, this is likely to include a combination of:

- new or upgraded pedestrian crossings (formal and informal) at key desire lines.
- increased crossing times and reduced waiting times where signalised.
- junction geometry changes to reduce crossing distances and vehicle speeds.
- footway widening, resurfacing and decluttering.
- lighting upgrades to improve actual and perceived safety.
- traffic calming and speed management measures where appropriate.
- improvements to cycle continuity, including protected or low-stress provision where required; and
- coherent wayfinding to link residential areas, parking locations, public transport interchanges and the town centre core.

Based on the above, the Local Highway Authority has identified the following routes from the Council's adopted LCWIP as forming the core walking and cycling network that would be relied upon by the development. For each route, the Authority has set out the specific deficiencies identified through LCWIP audit and operational experience, the barriers these create for users, and the minimum measures required to bring the route up to a standard capable of supporting the level of modal shift assumed by the proposal.

Identified Routes, Deficiencies and Required Mitigation

- ***Derby Road (Town Centre Core)***

Distance from Huyton Town Centre core: 0 m

LCWIP Priority: Medium (Core Walking Zone)

Route Type: Walking

Mitigation Scope: Directly affected – core walking mitigation

Derby Road functions as the primary pedestrian spine of Huyton Town Centre and will experience the greatest intensification of use as a direct result of the proposed development and associated parking reduction. While the route benefits from pedestrianisation and recent or emerging public realm investment, LCWIP audits and on-site observations identify inconsistent surface quality, street clutter, variable lighting and weak legibility to destinations beyond the immediate retail frontage. For users arriving on foot or by cycle, the absence of clear onward routing to the rail station, bus station, displaced parking locations and wider walking and cycling corridors creates uncertainty and undermines confidence. Further public realm-led interventions are therefore required, including surface rationalisation, decluttering, targeted lighting upgrades and clear, consistent wayfinding. These measures would reinforce Derby Road as the anchor of a wider active travel network and support intuitive movement through the town centre without reliance on private car access.

- **Archway Road**

Distance from Huyton Town Centre core: approximately 0–150 m

LCWIP Priority: Medium

Route Type: Walking

Mitigation Scope: Directly affected – core walking mitigation

Archway Road is a critical east–west pedestrian corridor linking Derby Road with Poplar Bank and Lathom Road. The route is identified within the LCWIP Core Walking Zone as a significant source of severance, characterised by vehicle-dominated layouts, priority junctions and limited pedestrian crossing opportunities. Footways are narrow in places and crossing movements are indirect or subject to long delays. For pedestrians approaching the town centre, this creates discomfort, delay and a perception of risk, discouraging walking for trips that could otherwise be undertaken on foot. Mitigation is required in the form of additional or upgraded pedestrian crossings at key desire lines, increased crossing times where signalised, and junction geometry changes to reduce crossing distances and vehicle speeds. These interventions would materially improve permeability and remove a key barrier to walking into the town centre.

- **Poplar Bank**

Distance from Huyton Town Centre core: approximately 150–300 m

LCWIP Priority: Medium

Route Type: Walking

Mitigation Scope: Directly affected – core walking mitigation

Poplar Bank forms a key pedestrian desire line between Archway Road, Civic Way and surrounding residential areas and has historically accommodated users accessing short-stay town centre parking. LCWIP audits identify that the route is adversely affected by traffic dominance and kerbside activity, with narrow or obstructed footways and limited formal crossing provision. For current users, this results in informal crossing behaviour and walking in close proximity to moving traffic, reducing comfort and safety. As parking is displaced by the development, reliance on this route is likely to increase. Mitigation should therefore focus on formalising pedestrian movement through new or upgraded crossings at key desire lines,

footway widening or decluttering, and kerbside management measures to prevent obstruction. These measures would transform Poplar Bank into a legible and attractive pedestrian approach route, supporting walking as a realistic alternative to driving.

- **Blacklow Brow**

Distance from Huyton Town Centre core: approximately 100–200 m

LCWIP Priority: Medium

Route Type: Walking

Mitigation Scope: Directly affected – core walking mitigation

Blacklow Brow is a short but strategically important connector between Derby Road and surrounding streets. Despite its limited length, LCWIP audits highlight safety and comfort issues arising from poor crossing provision at its junctions, sub-standard surfacing and inadequate lighting. For users, particularly those with mobility impairments or travelling after dark, this creates a weak link in the pedestrian network where confidence is lost. Targeted mitigation in the form of dropped kerbs, tactile paving, improved lighting and surface upgrades would remove these barriers and significantly improve network continuity, disproportionately enhancing the attractiveness of walking trips relative to car use.

- **Lathom Road**

Distance from Huyton Town Centre core: approximately 200–400 m

LCWIP Priority: Low (deliverability-led)

Route Type: Walking and Cycling

Mitigation Scope: Directly affected – core walking and cycling mitigation

Lathom Road is of increasing importance as an approach route to the town centre, particularly in light of the proposed parking strategy and reliance on the multi-storey car park and station-side access. Although identified as a lower-priority route within the LCWIP, this reflects deliverability constraints rather than a lack of need. The existing environment is vehicle-dominated, with limited pedestrian priority, weak crossing provision and poor legibility for cyclists. For users, this creates an unwelcoming route that discourages walking and cycling despite its functional importance. Mitigation is required in the form of a coherent crossing strategy, junction geometry changes to reduce vehicle dominance, kerbside controls to maintain clear pedestrian routes, and measures to improve cycling continuity. These interventions are essential to make the development's access and parking strategy function as intended.

- **Kingsway**

Distance from Huyton Town Centre core: approximately 300–450 m

LCWIP Priority: Medium

Route Type: Walking

Mitigation Scope: Secondary – walking mitigation

Kingsway provides an important secondary pedestrian approach to the town centre. LCWIP audits identify narrow footways, limited pedestrian comfort and poor crossing opportunities, particularly where traffic volumes are higher. For users, this creates constrained movement and a lack of pedestrian priority that discourages walking for everyday trips. Targeted mitigation, including footway widening or decluttering, improved crossing provision and

enforcement against pavement parking, would materially improve the pedestrian experience and support modal shift for local journeys.

- **Huyton Hey Road (including connecting spurs)**

Distance from Huyton Town Centre core: approximately 300–600 m

LCWIP Priority: Medium (walking) / Low–Medium (cycling)

Route Type: Walking and Cycling

Mitigation Scope: Secondary walking mitigation and cycling mitigation

Huyton Hey Road forms a key north–south corridor linking surrounding residential areas to the town centre. The LCWIP identifies fragmented pedestrian provision, inconsistent crossing treatments and poor legibility, with additional concerns around perceived safety on quieter sections. For cyclists, provision is discontinuous and low-stress routes are not clearly defined. These factors suppress walking and cycling demand despite relatively short distances. Mitigation should include continuous footway and crossing improvements, lighting upgrades, decluttering and quietway-style traffic calming measures where appropriate. Improving this corridor would unlock active travel trips from nearby neighbourhoods that are currently undertaken by car.

- **Wilson Road**

Distance from Huyton Town Centre core: approximately 400–700 m

LCWIP Priority: Medium

Route Type: Walking

Mitigation Scope: Secondary – walking mitigation

Wilson Road serves residential areas and schools and connects into the wider town centre network. LCWIP audits identify footway obstruction, poor visibility at crossing points and traffic speeds that undermine pedestrian comfort. For users, particularly children and carers, these conditions create a strong disincentive to walking. Targeted mitigation in the form of safer crossing provision, footway continuity, speed management and parking controls would address these barriers and support everyday walking trips.

- **LCWIP Route 9 – Swanside to Huyton Station**

Distance from Huyton Town Centre core: approximately 500–900 m

LCWIP Priority: Medium (walking) / Medium–Low (cycling)

Route Type: Walking and Cycling

Mitigation Scope: Secondary walking mitigation and core cycling mitigation

This route is identified within the LCWIP as critical for connecting residential areas to Huyton Station and, by extension, the town centre. Existing provision is fragmented, with weak crossing treatments at busier roads and a poor arrival experience for cyclists at the station. For users, this creates uncertainty and perceived risk, reducing the attractiveness of cycling and combined cycle–rail trips. Mitigation should include low-stress cycling measures through residential sections, safe crossings at severance points, and high-quality cycle parking and wayfinding at the station. These measures would directly support the development's reliance on public transport and active travel.

Taken together, the routes identified above represent the minimum walking and cycling network that would be relied upon by the development, having regard to proximity to the town centre core for walking routes and the wider catchment required to support cycling-based access. Addressing

the deficiencies identified on these routes would remove existing barriers to active travel, improve comfort and safety for users, and provide a credible basis for the level of modal shift assumed by the proposal.

The Local Highway Authority notes that a number of walking and cycling improvements within Huyton Town Centre and its immediate catchment are already funded, designed or in delivery through a combination of internal capital programmes and external funding sources. These include works on Wilson Road and elements of Derby Road, including the station frontage, with further public realm investment proposed through the Town Centre Regeneration programme.

However, the Authority emphasises that the existence of committed schemes does not negate the need for development-related mitigation. In several cases, existing funding is limited in scope, geographically constrained, or designed to address existing conditions rather than the intensified demand arising from this development and its associated parking strategy. In addition, not all routes identified within the LCWIP as forming part of the town centre access network currently benefit from secured funding.

Accordingly, the Authority considers it necessary to distinguish between:

- routes where existing schemes deliver the required outcomes in full.
- routes where existing schemes partially address identified deficiencies but require enhancement or extension; and
- routes where no funding is currently secured and where the development's reliance on walking and cycling creates a clear justification for contribution.

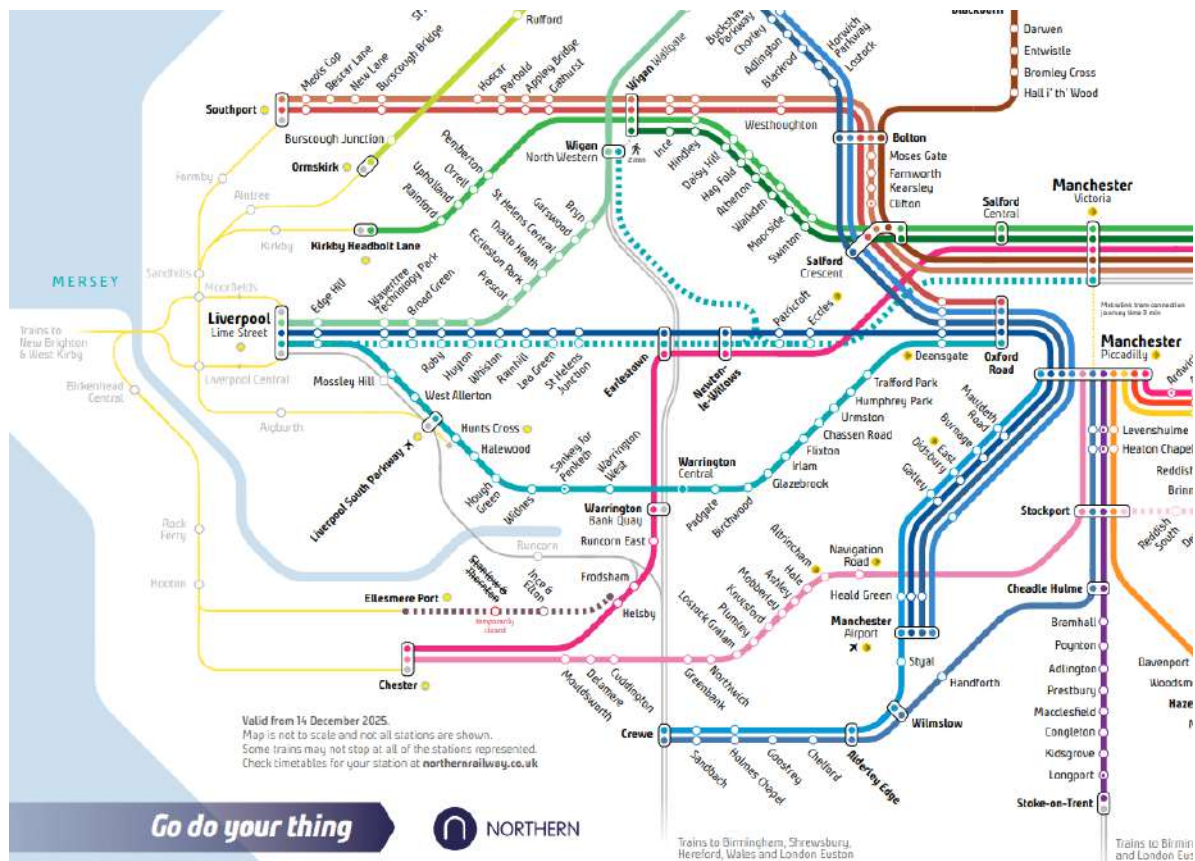
This approach ensures that mitigation is proportionate, avoids duplication of funding, and focuses developer contributions on addressing genuine gaps in the walking and cycling network.

- **Public Transport Access**

Rail Connectivity to Huyton

The Local Highway Authority has undertaken a detailed review of rail connectivity to Huyton railway station, focusing on the actual services calling at the station and the journey time, frequency and cost implications for users travelling to and from Huyton during peak periods. This assessment is intended to demonstrate the practical availability of rail travel, rather than its theoretical presence.

The image below sets out the stations served by rail services that call at Huyton, and the table provides detail of indicative peak journey times, service frequency and typical peak return fares. Figures are indicative and based on weekday peak conditions. Journey times exclude access and egress.



Map taken from www.northernrailway.co.uk

Origin / Destination Station	Typical One-Way Journey Time	Typical Peak Frequency	Indicative Peak Return Fare (daily)	Notes
Liverpool Lime Street	15–18 mins	Every 15–20 mins	£8–£10	Consistent
Broadgreen	~5 mins	Every 15–20 mins	£6–£8	Consistent
Roby	~3 mins	Every 15–20 mins	£6–£8	Consistent
Whiston	~6 mins	Every 15–20 mins	£6–£8	Consistent
Rainhill	~9 mins	Every 15–20 mins	£8–£10	Consistent
Lea Green	12–18 mins	Variable	£8–£12	Service-dependent
St Helens Junction	35–55 mins	Limited	£12–£16	Service-dependent
Earlestown	40–60 mins	Limited	£14–£18	Service-dependent

Newton-le-Willows	45–65 mins	Limited	£14–£20	Service-dependent
Prescot	~4mins	Every 30mins	£5-£6	Consistent
Eccleston Park	~7mins	Every 30mins	£6-£7	Consistent
Thatto Heath	~10mins	Every 30mins	£7-£8	Consistent
St Helens Central	~14mins	Every 30mins	£7-£8	Consistent
Wigan Northwestern	30-40mins	Every 30-60mins	£16-£20	Service-dependent
Manchester Piccadilly	45-60 mins	Limited	£10–£20	
Manchester Airport	75–105 mins	Very limited	£18–£30	
Manchester Oxford Road	45–75 mins	Limited	£15–£25	
Warrington Bank Quay	60-90mins	Limited	£15-£25	1 Change via Earlestown
Runcorn East	70-90mins	Limited	£20-£25	1 Change via Earlestown
Chester	60-90mins	Limited	£15-£25	1 Change via Liverpool Lime Street
Warrington Central	60-90mins	Limited	£18-£25	1 Change via Liverpool Lime Street
Birkenhead Central	45-90mins	Limited	£10-£15	1 Change via Liverpool Lime Street
West Kirby	60-90mins	Limited	£10-£15	1 Change via Liverpool Lime Street

The table demonstrates that rail accessibility to Huyton varies significantly by origin.

Consistent, frequent and comparatively low-cost rail access is available primarily from Liverpool city centre and immediately adjacent suburban stations (Broadgreen, Roby, Whiston and Rainhill). From these locations, journey times are short, services operate at regular intervals and rail travel can reasonably compete with the private car.

Beyond this area, the characteristics of rail travel change materially. Stations such as Lea Green are only served by some stopping services, meaning that rail access to Huyton becomes service-dependent rather than reliable. For stations further east, including St Helens Junction, Earlestown and Newton-le-Willows, the table shows substantially longer journey times, reduced service frequency and higher peak fares. Although rail services may technically call at Huyton, the combination of time, cost and limited stopping significantly reduces the attractiveness of rail for regular commuting.

For Manchester Piccadilly and Manchester Airport, stopping services at Huyton are infrequent, journey times are long and peak fares are high. On this basis, rail travel from Manchester cannot reasonably be regarded as a practical commuting option to Huyton for most users.

This evidence demonstrates that the presence of a railway station does not equate to universal rail accessibility. The practical ability to use rail services to travel to and from Huyton is limited to a relatively narrow geographic corridor and diminishes rapidly beyond that.

The Transport Assessment and Travel Plan do not identify where users affected by the proposed parking reduction are travelling from, nor do they quantify how many users fall within the areas shown above where rail travel is realistic. Without this information, it is not possible to determine whether the level of modal shift assumed by the submission is feasible in practice.

Where users are travelling from locations shown in the table to have long journey times, limited service frequency or high peak fares, rail travel is unlikely to be chosen in preference to the private car. In these circumstances, reliance on rail-based mode shift to support significant reductions in parking provision cannot be assumed without further evidence.

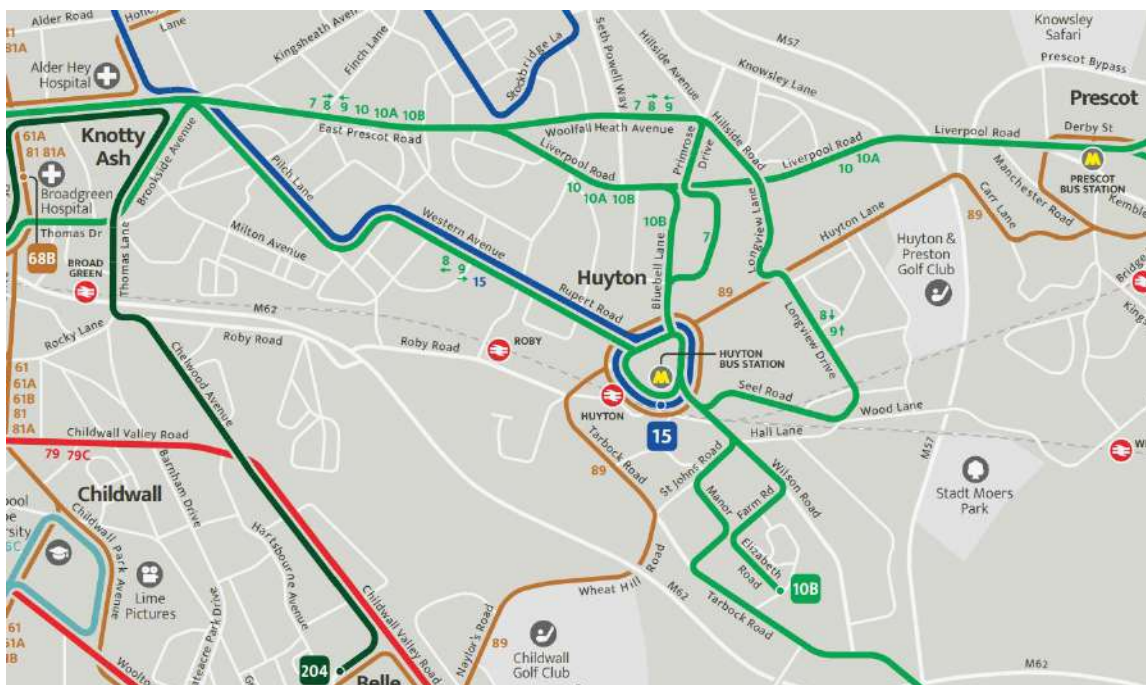
The table above demonstrates that rail connectivity to Huyton is strong for some users but constrained for many others. While rail forms an important part of the town centre's transport offer, the evidence shows that its practical use is dependent on origin, cost and service availability. A clear understanding of where users are travelling from, and whether rail services provide a realistic alternative for those journeys, is therefore essential if rail connectivity is to be relied upon to support the proposed parking strategy and associated modal shift.

Bus Connectivity to Huyton

The Local Highway Authority has reviewed bus connectivity to Huyton Town Centre, focusing on services that directly serve Huyton Bus Station or nearby bus stops within walking distance of the development site. This assessment considers journey time, frequency, indicative peak cost and service characteristics during weekday peak periods.

The purpose of this assessment is to demonstrate the practical availability of bus travel, rather than its theoretical presence within the network.

The table below summarises typical weekday peak conditions for bus services serving Huyton Bus Station and adjacent town-centre stops. Journey times and fares are indicative and based on published timetables and standard adult fares. Times exclude walking access to stops and are subject to highway congestion



Map taken from www.merseytravel.com

Origin / Destination Area	Bus Service(s)	Typical One-Way Journey Time	Typical Peak Frequency	Indicative Peak Return Fare (daily)	Service Characteristics
Liverpool City Centre	15, 10/10A (via Prescott Rd / Broadgreen)	45–60 mins	Every 20–30 mins	£4–£6	Core inter-urban routes, congestion-sensitive
Prescot	10, 10A, local routes	20–30 mins	Every 20–30 mins	£3–£4	Reasonable local connectivity
St Helens	10 / connecting services	45–70 mins	Hourly or less	£4–£6	Long journey time, limited peak appeal
Kirkby	89 / local connections	40–60 mins	Hourly	£4–£6	Indirect, variable reliability
Local Knowsley (Page Moss, Stockbridge Village, Halewood fringe)	174, 206, 214, 215 (Huyton Travel)	15–40 mins	Variable (often hourly)	£2–£4	Local coverage, limited peak capacity
Widnes / Warrington corridors	Connecting services only	45–60 mins	Infrequent / multi-leg	£6–£8	Poor alternative to car

The table demonstrates that bus services provide reasonable local accessibility to Huyton from nearby residential areas and neighbouring centres. Huyton Bus Station is centrally located, and

most services terminate or pass through the town centre, making bus access physically convenient for users already within the local catchment.

However, the characteristics of bus travel vary significantly depending on origin. While services from Prescot and parts of Knowsley offer relatively short journey times, journeys from Liverpool city centre and beyond are substantially longer than rail or car travel, particularly during peak periods. Bus services on these corridors are highly sensitive to congestion, resulting in variable journey times and reduced reliability for time-critical trips.

For longer-distance journeys, including those from St Helens, Kirkby and wider sub-regional locations, the table shows that bus travel typically involves:

- journey times in excess of 45–60 minutes one way.
- lower service frequencies, often hourly or worse; and
- increased exposure to delay due to general traffic conditions.

In these circumstances, bus travel is unlikely to represent a competitive or attractive alternative to the private car for regular commuting.

Capacity, Cost and Reliability Considerations

While bus services are available, the Transport Assessment and Travel Plan do not quantify:

- how many users are expected to transfer from car to bus.
- whether existing services have spare peak-time capacity; or
- whether any service enhancements, frequency increases or infrastructure improvements would be required.

Peak return fares for longer journeys are also materially higher than local trips, and when combined with longer journey times, this may present a practical barrier to uptake. No evidence has been submitted to demonstrate that bus travel offers a time or cost-competitive alternative for those users most affected by the proposed parking reduction.

No response has been provided from Merseytravel confirming that existing bus services can accommodate additional demand or that no changes to service provision would be required.

The evidence set out above demonstrates that while bus services form an important component of local accessibility in Huyton, their practical role in supporting significant modal shift is limited. Bus travel is most effective for short-distance local trips; it becomes progressively less attractive as journey length, congestion exposure and cost increase.

The submission does not identify where users affected by the parking reduction are travelling from, nor does it demonstrate that bus services align with those origin-destination patterns in a way that would support the level of behavioural change assumed. In the absence of this information, reliance on bus travel as a primary mitigation measure remains unproven.

Accordingly, while bus services contribute positively to the town centre's transport offer, the evidence does not demonstrate that they can, in isolation, support the scale of parking reduction and modal shift implied by the proposal without further substantiation or engagement with service providers.

The Local Highway Authority recognises that no public transport network can be expected to provide universal coverage or cater equally well for all journeys. In this context, Huyton benefits from a good baseline level of public transport provision, including a centrally located railway station

and bus station, with frequent rail services to Liverpool city centre and a range of local and inter-urban bus services. This provides a positive foundation for encouraging sustainable travel and reducing reliance on the private car where feasible.

However, the Authority considers that the extent of parking reduction proposed as part of this application places significant reliance on modal shift for the development to operate effectively. Where modal shift is a central component of the transport strategy, it is necessary to demonstrate that such a shift is realistic and achievable for the users affected, rather than assumed.

The Authority considers that the following factors typically discourage users from choosing public transport over the private car, particularly for regular commuting:

- **Journey time:** Public transport journeys that are materially longer than equivalent car journeys are unlikely to be chosen, particularly where journey times exceed 45–60 minutes one way.
- **Interchanges:** The need to change trains or buses introduces inconvenience, reduces reliability and increases perceived journey cost.
- **Service frequency and reliability:** Infrequent or service-dependent stopping patterns reduce confidence in public transport as a dependable option.
- **Cost:** Peak rail fares and cumulative bus fares can exceed the marginal cost of driving, particularly for users who already own a vehicle.
- **Congestion exposure:** Bus services are subject to highway congestion, resulting in variable and unpredictable journey times.
- **Flexibility and personal circumstances:** Shift patterns, caring responsibilities, health or mobility issues and the need to travel at short notice reduce the practicality of fixed-timetable services.

The following locations are particularly constrained in terms of practical public transport access to Huyton:

- **Widnes**
Widnes is not located on the rail corridor serving Huyton and would require interchange via Liverpool. Bus journeys are indirect, infrequent and typically exceed one hour in duration. Journey complexity, time and cost present a significant barrier to regular public transport use.
- **Wigan**
Although some rail services operate on the wider Liverpool–Wigan corridor, stopping services at Huyton are limited and not designed around commuting to Huyton as a destination. Rail journey times are long, and service frequency is low. Bus services are similarly indirect and slow, making public transport unattractive compared to car travel.
- **Warrington**
Rail travel from Warrington to Huyton requires interchange and involves long journey times relative to driving. Bus travel is indirect, infrequent and subject to congestion. As a result, public transport does not provide a competitive or reliable option for daily commuting.
- **Wirral**
Travel from the Wirral to Huyton by rail typically requires interchange in Liverpool city centre, adding complexity, cost and time. Bus alternatives are slow and involve multiple legs. These factors materially reduce the attractiveness of public transport for regular journeys.

- **Parts of Greater Manchester (outside the immediate Liverpool–Manchester stopping corridor)**

While Manchester city centre is connected in network terms, services stopping at Huyton are infrequent, journey times are long and peak fares are high. For many Greater Manchester locations, interchange is required and public transport journeys are significantly longer than by car.

In this context, while the Authority accepts that public transport provision in Huyton represents reasonable accessibility, it does not consider that the application has demonstrated that the level of modal shift relied upon is as straightforward or universally achievable as described. The submission does not identify who is expected to make the shift from car to public transport, where those users are travelling from, or whether existing services provide a realistic alternative for those journeys.

Accordingly, the Authority considers that the reliance on modal shift is more complex than presented, and that further clarity is required to understand whether the assumed behavioural change is feasible in practice. Without this understanding, there remains a risk that the proposed parking reduction and reliance on sustainable modes will not operate as intended, leading to continued car use and pressure on the surrounding highway network.

- **KMBC Public Health Comments**

Response from Public Health

Public Health have submitted detailed comments emphasising the importance of creating an accessible, inclusive and health-promoting environment within Huyton Village Centre. The points they raise relating to movement, connectivity and public realm design largely align with the position already taken by Highways and reinforce the need for the mitigation measures we have recommended. In particular, Public Health stress the importance of safe, legible and well-lit pedestrian routes between the train station, bus station and the village centre, including during evening hours and throughout the construction phases. This supports our requirement for high-quality, direct and attractive pedestrian links that follow key desire lines and are integrated with the wider Derby Road corridor improvements. Their recommendation for controlled pedestrian crossings with audible/tactile signals is consistent with Highways' commitment to inclusive design standards and provides further justification for avoiding uncontrolled crossing points where vulnerable users may be present. Public Health also highlight concerns regarding potential shared pedestrian/cycle areas and advocate for separation or, where sharing is unavoidable, clear delineation through surface treatments, detectable kerbs and tonal contrast. This aligns with Highways' own position, and we support the need for clarity in the cycling strategy and materials specification at detailed design stage.

The comments on accessible parking provision, specifically within the sustainable travel hub, future residential phases and in proximity to medical facilities, are consistent with our approach to ensuring that parking strategies cater for mobility-impaired users and support a balanced, sustainable transport network. Similarly, their comments on surfacing materials, consistent placement of street furniture and wayfinding signage (including distances and walking times) align with the inclusive public realm principles we have set out and further support our request for a coordinated public realm strategy. Public Health have also identified the need for a suitable location for mobile health units, such as the breast screening vehicle, which will need to be incorporated into operational planning and service access arrangements; this is compatible with the wider servicing considerations being addressed across the site.

Overall, Public Health's submission reinforces many of the points raised within the Highways consultation response, particularly in relation to pedestrian-first design, active travel priorities, accessibility, safety and legibility. Their comments add further justification for the mitigations we have requested and should be incorporated, where appropriate, at detailed design stage to ensure a development that is fully inclusive and supports healthier travel behaviours. If required, we would welcome further dialogue with Public Health during the refinement of the movement framework and detailed public realm proposals.

- **Road Safety Considerations**

- Local collision data and site-specific safety risks
- Proximity to vulnerable users (schools, crossings, etc.)
- Whether a Road Safety Audit is required

- **Construction Impacts**

The Local Highway Authority (LHA) acknowledges receipt of the submitted Construction Environmental Management Plan (CEMP) (November 2025). The CEMP confirms it applies to the demolition, enabling and construction phases of the proposed development and is supported by:

- Appendix 1 (EIA Screening Mitigation Measures),
- Appendix 2 (Demolition Management Plan), and
- Appendix 3 (Parking Strategy Document).

Given the scale, town-centre location and long programme of the regeneration, the LHA agrees that a detailed Construction Management Plan / Construction Traffic Management Plan is essential. This is not a short duration build with contained impacts; it is a multi-phase regeneration that will interact with an already constrained town centre highway network and with other highway / public realm works in or around the town centre, including works already under construction. The LHA must be satisfied that the construction programme can be delivered without unacceptable disruption to network operation, public transport reliability, pedestrian safety, and day-to-day access for residents and businesses, and without creating conditions that could lead to network gridlock.

Temporary Disruption, Routing and Network Interaction

The submitted Demolition Management Plan (Appendix 2) includes a specific section on site-related traffic, stating that demolition traffic movements will be "strictly controlled" to minimise disruption and that HGV access will be via Civic Way, with arrivals/departures scheduled to avoid peak periods "where practicable", and a gate-controlled access arrangement. The document also confirms that pedestrian access routes across and around the town centre shall be maintained at all times, with diversions signed in accordance with Chapter 8 where affected.

The LHA considers these principles appropriate, but they are not yet sufficient for a scheme of this scale and duration. The submitted material does not yet provide a phase-by-phase assessment of how demolition, enabling works, construction deliveries and temporary traffic management will interact with:

- existing congestion points and peak period operation within the town centre.
- bus movements and the operation of the bus station environment.

- temporary changes in access and circulation caused by displaced parking during construction; and
- other committed highway/public realm works (long term and planned schemes) that will affect traffic flow and available road space.

For this proposal, the LHA requires a phased CMP/CTMP that is aligned to the development programme and includes the ability to review and update controls as phases progress, including clear controls on delivery hours, routing, holding areas, temporary traffic management measures, and the maintenance of safe pedestrian/cycle routes.

Contractor parking and parking displacement during construction

The submitted CEMP includes Appendix 3: Parking Strategy Document which is directly relevant to construction impacts because it sets out how town centre parking supply is intended to be managed through a series of phases as car parks are closed, relocated or replaced.

Appendix 3 confirms, amongst other matters:

- existing short-stay provision includes 109 short stay spaces at Archway Road, which are intended to be relocated to the Lathom Road multi-storey car park (MSCP) once delivered.
- construction of the Lathom Road MSCP is stated as circa 400 spaces.
- interim/temporary arrangements include references to temporary car parks on development plots, including a temporary car park on Plot 3 providing 50 spaces, and a temporary car park on Plot 6 of 83 spaces (with further phasing describing displacement and relocation of demand).
- displacement of other named car parks is acknowledged through the phasing (e.g. Yorkon Green Zone car park (61 spaces) and Library Red Zone car park (103 spaces) being displaced at later phases).
- the document expressly notes the need for a comprehensive sustainable travel approach for the Council HQ and states that robust parking management and enforcement measures are critical; it also refers to enforcement measures that could include the use of Civil Enforcement Officers in relation to staff/visitor parking areas.

From an LHA perspective, this is helpful because it acknowledges the problem and sets out the intended direction of travel. However, it also highlights why construction impacts are a significant risk: the parking strategy is highly dependent on sequencing and availability of alternative car parks at any one time, and the consequences of failure are not theoretical, they manifest as:

- circulation/search traffic,
- overspill into surrounding streets,
- obstructive parking affecting junction operation and pedestrian safety, and
- disruption to bus operations and servicing activity.

The LHA therefore considers that the CMP/CTMP must explicitly integrate with the Appendix 3 phasing assumptions, including:

- how parking displacement will be managed at each phase (not just described).
- how contractor parking will be accommodated off-street, so it does not compete with town centre users during constrained phases; and

- what enforcement mechanism will be in place where the strategy relies on compliance, noting Appendix 3's recognition that enforcement (including CEO involvement) may be required.

Civil Enforcement Capacity and Deliverability

The Parking Strategy (Appendix 3) acknowledges that effective parking management and enforcement will be critical to the success of the phased displacement approach and refers to the potential role of Civil Enforcement Officers (CEOs) in managing staff and visitor parking areas.

The Local Highway Authority must, however, be clear that the existing Civil Enforcement service operated by Knowsley Metropolitan Borough Council is resourced on a borough-wide basis and is not structured around the level of concentrated and sustained enforcement activity that would be required to manage the scale of parking displacement proposed within Huyton Town Centre.

The Council's establishment currently provides for five Civil Enforcement Officers across the borough. Recruitment and retention challenges mean that this level of provision is not consistently achieved in practice. The existing budget does not allow for additional officers to be employed without external funding. In this context, it cannot be assumed that the current enforcement provision has sufficient capacity to absorb the additional and ongoing burden that would arise from the phased removal, relocation and reconfiguration of town centre parking.

Furthermore, no detailed assessment has been undertaken within the CEMP or Parking Strategy to quantify:

- the anticipated increase in enforcement demand during each construction phase.
- the spatial extent of displacement risk requiring monitoring.
- the additional patrol frequency required to ensure compliance; or
- whether the current enforcement contract has capacity to deliver that level of intervention.

At present, the proposed parking management arrangements rely on assumptions regarding behavioural compliance and enforcement effectiveness which have not been tested with the Council's Highways Parking Management team. In the absence of a quantified assessment and a secured funding mechanism for any required uplift in enforcement provision, the Authority cannot conclude that the proposed phased parking strategy is deliverable without adverse impacts on the surrounding highway network.

Accordingly, the Local Highway Authority considers that:

- enforcement requirements must be formally assessed as part of the phased Construction Traffic Management Plan; and
- where additional Civil Enforcement capacity is required to manage parking displacement and prevent overspill during construction, provision for a developer-funded uplift in enforcement resource must be secured.

Without such measures, there is a material risk that parking displacement during construction will result in unmanaged overspill, obstruction of junctions and pedestrian routes, and deterioration in network operation within Huyton Town Centre.

Engagement with Local Businesses and Key Stakeholders

The Local Highway Authority notes that while the submitted CEMP includes general commitments to communication and minimising disruption, it does not set out a structured or detailed

engagement plan for local town centre businesses or other key stakeholders whose day-to-day operations will be materially affected by the proposed construction programme.

This omission is significant. The development will be delivered over a prolonged period and will involve phased changes to parking provision, access arrangements, pedestrian routes and traffic circulation within a live town centre environment. In addition to retail and service businesses fronting Derby Road and surrounding streets, there are key operational stakeholders in close proximity, including NHS facilities, filling station and the Royal Mail delivery office, whose servicing patterns, staff access and customer access are sensitive to disruption. Wider premises to the west of the development site also need to be included in this engagement exercise, with businesses and services located on Ellison Grove also being directly affected by the demolition and construction. The CEMP does not demonstrate that these parties have been consulted on the likely impacts, nor does it include a defined framework for ongoing liaison, advance notification of works, escalation of issues or coordinated management of access changes.

For a regeneration scheme of this scale and duration, reliance on generic contractor communication commitments is not sufficient. A more robust, structured and proactive stakeholder engagement approach is required to ensure that temporary access restrictions, changes to parking arrangements and construction traffic movements do not inadvertently undermine business continuity, service delivery or customer access within Huyton Town Centre. In the absence of such a framework, there is a risk that disruption arising from construction activity could have avoidable operational and economic impacts beyond the immediate site boundary.

In this context, the Local Highway Authority considers that a structured Town Centre Stakeholder Engagement Plan is required, proportionate to the scale and duration of the works. This should include, as a minimum, identification of all directly and indirectly affected premises (including retail frontages, service providers, NHS facilities, filling station, the Royal Mail delivery office and businesses located to the west of the site including Ellison Grove), and a clear programme of engagement prior to and throughout each construction phase. The plan should set out how advance notice of works will be provided, how temporary access or parking changes will be communicated, how servicing arrangements will be maintained or adjusted in agreement with affected parties, and how issues will be escalated and resolved where disruption arises. It should also include a defined point of contact, frequency of liaison meetings where appropriate, and mechanisms for coordinating works to minimise cumulative disruption. For a town centre environment of this sensitivity, engagement must be proactive rather than reactive, and capable of responding to evolving phasing arrangements over the lifetime of the development. Without such a structured framework, there is insufficient assurance that the operational needs of businesses and key stakeholders can be safeguarded during the construction period.

Highways consider this request is proportionate to the scale and duration of the works and aligned with recognised best practice in construction management and highway network coordination. This includes adherence to the Council's duties under the Traffic Management Act 2004 to secure the expeditious movement of traffic (including pedestrians and cyclists), as well as national policy requirements within the National Planning Policy Framework to ensure safe and suitable access for all users throughout the lifetime of development, including during construction.

The engagement framework should reflect principles consistent with the Considerate Constructors Scheme and good practice in town centre regeneration, including early and ongoing liaison with affected businesses and service providers, advance notification of access changes, coordinated servicing arrangements, and clear escalation mechanisms where issues arise. For a scheme of this scale, such engagement cannot be informal or reactive; it must be structured, documented

and capable of responding to evolving construction phases to ensure that access, servicing and customer movement are maintained safely and efficiently.

Adequacy and further requirements

In summary, the submitted CEMP and appendices provide an initial framework, but the LHA does not consider the information is yet sufficiently detailed to demonstrate that construction impacts can be controlled across the full regeneration programme without unacceptable effects on the wider highway network. Further detail is required, secured through planning condition, including:

- a phased CMP/CTMP aligned to the construction programme and updated as phases change.
- defined HGV routes, delivery windows and holding arrangements, with explicit avoidance of peak periods and sensitive locations where practicable.
- detailed measures for maintaining safe pedestrian and cycle routes at all times, including signed diversions where required.
- a contractor parking strategy that is off-street, enforceable and integrated with town centre parking displacement pressures; and
- clear arrangements for coordination with other highway/public realm work to prevent cumulative disruption leading to network congestion or gridlock.

I've now had a chance to go through the Transport Scoping Note in detail, alongside the additional TRICS information, and I thought it would be helpful to set out my understanding of what is being proposed through the Addendum and how that relates to the issues raised in the original Highways response.

In summary the information submitted is not sufficient to address the concerns raised. We have previously advised that further work needs to be done with regard to junction modelling and a traffic impact assessment due to the redistribution of trips that the development would cause but this has not been provided and we can not assess the impacts of the development without it. In simple terms we would not be able to write a report that explains what the potential impacts are or address any queries that elected members or members of the public raise at planning committee. As we set out last time the following is required:

1. Junction Modelling/Traffic Impact Assessment

This is most apparent in the way junction impacts are dealt with. Taking the example of the ASDA / Huyton Lane roundabout, the note refers to a forecast Ratio of Flow to Capacity (RFC) of around 0.83 and then concludes that there is still spare capacity and that the development would have an "imperceptible" impact.

Whilst an RFC of 1.0 represents theoretical capacity, junctions typically begin to exhibit operational stress well before that point. Once flows reach around 0.80 RFC, a junction is generally considered to be operating within a sensitive range, where practical reserve capacity is limited and relatively small increases in demand can lead to disproportionate increases in delay, queue lengths and peak period instability. In operational terms, this is typically where queues become more regular, discharge rates vary between cycles, and performance becomes less resilient to normal day-to-day fluctuations.

To be clear, this RFC value is derived from modelling undertaken in relation to the former Huyton Cricket Club development and reflects the impact of that scheme only. It does not include any assessment of the redistribution effects associated with the proposed town centre regeneration, including displaced parking demand and reassigned trips to the Lathom Road car park. As such, it does not represent a valid assessment of the development being considered here. From a transport assessment perspective, junction performance must be tested against the actual development scenario, rather than inferred from unrelated modelling exercises. An RFC of approximately 0.83 should therefore be understood as a junction already under pressure, rather than one with meaningful spare capacity, and one which requires appropriate testing where additional demand or redistribution is proposed.

In this case, the proposed town centre development fundamentally alters how traffic is distributed across the network rather than simply introducing new trips. The assumption that existing routing patterns will remain unchanged is not supported by evidence, and without modelling of the redistributed flows it is not possible to conclude that the impact on the junction, or the wider network, would be negligible.

The introduction of additional or redistributed demand into a junction already operating at this level of utilisation is likely to result in increased queueing and reduced operational efficiency, particularly when considered alongside cumulative effects from other development and background demand. In the absence of modelling, sensitivity testing, or cumulative assessment, there is no evidence to demonstrate that this additional demand can be accommodated without adverse impact. On that basis, the conclusion that the effect would be "imperceptible" is not substantiated.

In this specific case, the strategy is also proposing additional parking provision in the form of approximately 70 spaces at the former fire station site. Given the access constraints described, it is likely that a significant proportion of traffic associated with that site would need to route via the ASDA roundabout. Even applying conservative assumptions, a car park of that scale could generate in the order of 10–20 vehicle movements in a peak hour. Introducing that level of additional or redistributed demand into a junction already operating at around 0.83 RFC is precisely the type of scenario that would be expected to result in increased queueing and delay.

The same issue carries through to other parts of the network. The scoping note proposes to *scope out* further assessment of junctions such as Roby Road / Twickenham Drive on the basis that they fall outside the immediate study area or are not expected to be materially affected. However, these are established arrival routes into the town centre and are already known to experience peak period congestion. From an operational perspective, this junction regularly queues during both morning and evening peaks, with blockage and delay sufficient to generate repeated concerns from local residents and Members. Whilst this does not automatically indicate that the junction is operating beyond theoretical capacity, it does demonstrate that it is already functioning close to its practical limits during peak periods.

The key point here is that, without any modelling, flow data or sensitivity testing, it is not possible to determine whether the scheme would result in an improvement, a deterioration or a redistribution of those queues. Simply assuming that impacts will be minimal because of distance from the site or study area boundaries doesn't reflect how traffic behaves in reality. If parking and access patterns within the town centre are changing, then established approach routes such as this are likely to experience some effect, and that needs to be demonstrated, not assumed.

2. Completed Development - Parking

Another issue that becomes clearer throughout the document is the extent to which the parking strategy relies on provision that is either not secured, not within the applicant's control, or does not yet exist. Whilst the scoping note indicates that reliance on Club 3000 Bingo will be removed from the operational assessments, it continues to be referenced within the construction phase strategy, alongside other third-party and temporary sites. In addition, the proposed use of the former fire station site as a car park introduces further uncertainty, as this site would require its own planning consent to be granted. As such, it cannot reasonably be relied upon as mitigation for this application unless and until that consent is granted and the delivery of the site is demonstrably secured.

From a transport assessment perspective, this is a fundamental issue. Parking provision is a key input into trip generation, distribution and assignment, and therefore into network performance. It is not sufficient to reference potential or aspirational provision without certainty of delivery. Furthermore, as set out above, a car park of this scale represents a traffic generator in its own right and must be assessed as part of the cumulative impact of the scheme. Relying on such provision to support conclusions on capacity, whilst not assessing its effects, introduces a clear inconsistency.

3. Construction Phasing - Parking

A further issue arises in relation to the treatment of parking provision within the construction phasing strategy and the way in which it is presented. The scoping note suggests that there is not a significant reduction in parking; however, this is not supported by the figures provided.

At Phase 1, the baseline position includes 558 long stay spaces, of which 150 are located at Club 3000 Bingo. These spaces are third-party provision and not within the control of the applicant. It is therefore not appropriate to include them within the assessment of available parking provision. This is particularly relevant given the stated intention to remove reliance on the Bingo site; however, it continues to be included within the figures presented, which artificially inflates the baseline position. These spaces should be removed from the assessment in order to present a realistic and consistent position. We have previously encouraged you to seek advice from your planning advisors Turleys in relation to this matter. They may be able to assist you in creating a robust case or providing more justification.

When this is accounted for, the reduction in provision between Phase 1 and Phase 2 is not insignificant, but substantial. Even on the figures presented, overall provision reduces from approximately 822 spaces to 585 spaces, representing a reduction of around 30%. This is before considering that elements of the Phase 2 provision are themselves uncertain or unconsented.

In addition, accessible parking bays are included within overall provision figures in several instances. These spaces serve a specific user group and cannot reasonably be treated as general parking supply. Their inclusion within headline totals further overstates the level of parking available in practice.

There are also concerns regarding the deliverability of elements of the Phase 1 baseline. The inclusion of 191 spaces within the existing Lathom Road MSCP is not consistent with the stated construction sequence, as the MSCP is identified as being demolished as part of the Phase 1 enabling works. It is therefore unclear how these spaces are assumed to remain available during this phase. If the phasing approach has changed, this has not been clearly communicated; if not, the figures presented are not internally consistent.

Taken together, this results in a parking strategy that overstates available provision, relies on inputs that are either outside the applicant's control or not deliverable, and does not present a clear or consistent baseline. This is further compounded by the way information is presented, with headline figures masking reductions in provision and including elements that are either not available in practice or do not form part of general supply. As a result, it becomes difficult to clearly understand the true extent of parking available at each phase, and therefore how demand will realistically be accommodated. This lack of transparency and internal consistency significantly reduces confidence in the reliability of the assessment and the conclusions drawn from it.

4. Continued Reliance on Modal Shift

There is a consistent reliance on behavioural change to offset these pressures, particularly through mode shift and home working. Whilst this is supported in principle, it must be evidenced. At present there is no quantification of expected modal shift, no analysis of origin–destination patterns, and no assessment of whether alternative modes offer realistic and attractive options for users. Nor is there any assessment of network capacity to accommodate that change.

Without this supporting evidence, the approach moves beyond robust assessment and instead relies on assumed demand suppression. This introduces a clear level of uncertainty, and in the absence of testing or validation, represents a material risk to the overall robustness of the transport strategy.

5. Clarity of Parking Strategy

More broadly, it appears that elements of the parking and demand management strategy remain under development outside of the application process, with reliance placed on measures that are not yet clearly defined or secured. This results in uncertainty and, at times, internal inconsistency within the proposals, making it difficult to form a clear understanding of how the development would operate in practice.

6. Existing Highway Layout

I do not concur with the justification provided for retaining the existing highway layout, and I do not consider that the points set out adequately support the approach taken. Whilst it is noted that the design has evolved through pre-application discussions, the role of Highways Development Control at that stage was to respond to high-level proposals as presented. A number of issues were raised during those discussions, including concerns around connectivity, legibility, level changes, and the ability for users to navigate effectively between key destinations such as the MSCP, rail station and bus station. There was an expectation that these constraints could be addressed and resolved through the design development process. It does appear this has not been realised (or justified) in the current submission.

The assertion that the existing highway network is “resilient and appropriate” is not sufficiently supported by observed operation or user behaviour. Issues relating to accessibility, wayfinding, perceived safety and connectivity will potentially remain. The existing MSCP is demonstrably underutilised, reflecting not only its condition but also its location, accessibility, integration with key pedestrian desire lines, and wider perceptions of safety and convenience. These are matters that influence how the network operates in practice and how users interact with the town centre environment.

The reference to utilities constraints as justification for retaining the layout may not be considered reasonable in this context. The scheme involves the demolition and redevelopment of significant parts of the site, including the delivery of new buildings such as the Council HQ and hotel. Some utility infrastructure is therefore already being affected as part of the proposals, and diversion or coordination of services is a normal component of schemes of this scale. It is not sufficiently evidenced why some utilities are being treated as fixed constraints in this case, particularly where doing so, results in a missed opportunity to improve a layout that could function better in safety, operational and user terms.

Similarly, the reference to viability does not in itself justify retaining an arrangement that fails to address movement and accessibility issues.

The suggestion that improvements outside of the red line are not appropriate is also not accepted and not considered to be sufficient justification. This is a comprehensive, Council-controlled scheme, and the surrounding highway network is also within the control of the Council as Highway Authority. The red line boundary should not preclude consideration of a more effective and coherent movement strategy where this is necessary to ensure safe and functional operation.

As currently presented, the scheme appears to be working around existing infrastructure constraints rather than addressing the underlying causes of poor performance and pursuing opportunities for improvement. This is a missed opportunity for a development of this scale, which presents a clear opportunity to fundamentally reconsider how movement within the town centre is organised, including the role and location of strategic parking provision. Retaining and re-providing core elements of the existing layout, while citing constraints such as utilities, risks

perpetuating known deficiencies in connectivity, legibility, and accessibility, as well as reinforcing indirect routes and potential conflict between pedestrian and vehicular movements.

Whilst it is recognised that factors such as utilities and viability are relevant considerations in the design of highway layouts, current guidance and best practice emphasise the need for an evidence-led, user-focused approach which addresses known operational and behavioural issues. In the context of a comprehensive redevelopment scheme, it would typically be expected that such constraints are resolved through design where they materially affect the function, safety or usability of the network. As currently presented, the approach appears to place greater weight on existing infrastructure constraints than on resolving identified issues relating to connectivity, legibility and user experience. This is less consistent with the principles set out in Manual for Streets and current transport assessment guidance, which emphasise designing networks around how they are intended to function in practice.

In addition, a number of matters that are fundamental to how the site will function, including highway layout, access arrangements and stopping-up requirements, are proposed to be deferred to condition or subsequent stages. In my view, these are not secondary details but core components of the transport strategy. Deferring them potentially limits the ability to properly assess whether safe and suitable access can be achieved, and whether the development would operate effectively in practice.

7. Reliance on Provision of Information via Conditions

There is also a consistent reliance throughout the document on matters being secured by condition or deferred to reserved matters stage. Whilst this may be appropriate for certain detailed elements, a number of the matters being deferred, including aspects of junction performance, parking operation and network function, are fundamental to understanding whether the development is acceptable in highway terms. These are key components of the transport strategy and should be demonstrated through evidence at this stage, rather than assumed or addressed later.

8. Off-Site Highway Works – LCWIP and Ped/Cycle Connectivity

In relation to pedestrian infrastructure and the reference to a “need to discuss” the LCWIP, I do not consider this to be an appropriate position at this stage. A comprehensive set of expectations and opportunities for improvement was identified both during pre-application discussions and in my original Highways Development Control response, including specific corridors, connections and potential interventions to support active travel and improve movement within the town centre. These were intended to provide a clear and structured framework for the applicant to develop a proportionate and policy-aligned response.

the current submission still does not include any substantive proposals or justification for omission of such schemes in response to those points. There is no defined strategy in relation to pedestrian connectivity, modal shift or sustainable travel, and no clear indication that the LCWIP or engagement with Active Travel colleagues has informed the redevelopment.

At this stage, it is not appropriate for these matters to remain at a point where they are still being framed as requiring discussion. The expectation would be that they had been considered, tested and translated into a developed and evidence-based design response as part of the submission. The current position instead suggests that fundamental aspects of the scheme remain unresolved, despite having been clearly identified over a prolonged period of engagement.

It is however, acknowledged that there are a number of Highways-led schemes and wider interventions being progressed across the town centre, including some that may be aligned with LCWIP objectives, and these will form an important part of the overall movement network. However, these cannot be relied upon in isolation to make the proposed development acceptable from a pedestrian and cycle perspective. The responsibility remains with the applicant to demonstrate how the development itself delivers safe, direct and attractive routes, and how it responds to established deficiencies in connectivity and accessibility within and immediately surrounding the site.

As currently presented, there is no clear evidence of how the scheme integrates with or builds upon these wider interventions, nor how it contributes to the delivery of a cohesive and legible active travel network. A site-specific and deliverable strategy is therefore still required to demonstrate that the development accords with active travel objectives and provides an appropriate level of infrastructure for all users. In terms of moving forward I suggest that we look to jointly agree a specific list of offsite highway interventions required and whether they to be delivered by the scheme directly or as part of wider Council led Highway works programmes.

9. TRICS Data

In terms of the TRICS work, I note the additional analysis and the attempt to broaden the dataset. However, the revised trip rates are broadly consistent with those already presented and do not materially change the assessment. More importantly, trip generation is not the primary issue; the critical matter is how those trips interact with the network once parking provision is altered. TRICS does not address redistribution, nor does it resolve the uncertainty associated with residential mix and car ownership.

Summary

Stepping back from the detail, the overarching concern is that a number of key aspects of the development's transport impact remain either untested, assumed, or deferred.

Given that this is a Council-led scheme, it is important that the assessment demonstrates a level of robustness and transparency that is at least consistent with, and ideally exceeds, that expected of external applicants. This is necessary both to ensure that the scheme represents sound investment in public infrastructure and to maintain confidence in the decision-making process.

In the absence of the above, the current scope does not provide a sufficient basis to demonstrate compliance with NPPF requirements in respect of highway safety and residual cumulative impacts. This is not a matter of further refinement, but of gaps in the assessment which need to be addressed.

I am, of course, happy to discuss this further; however, it is important that any further engagement is supported by a revised scope that substantively addresses the issues raised, to ensure that discussions can be focused and constructive.



Appendix C

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL

Category: C - FLATS PRIVATELY OWNED

Selected Vehicle Type: Total Vehicles

**BOLD print indicates peak (busiest) period*

Selected regions and areas:

01	GREATER LONDON	
	BE	BEXLEY 1 day
	BK	BARKING 1 day
	HM	HAMMERSMITH AND FULHAM 1 day
	IS	ISLINGTON 2 days
	SK	SOUTHWARK 1 day
	TH	TOWER HAMLETS 1 day
	WF	WALTHAM FOREST 4 days
02	SOUTH EAST	
	CT	CENTRAL BEDFORDSHIRE 3 days
	HF	HERTFORDSHIRE 1 day
	PO	PORTSMOUTH 1 day
	SC	SURREY 1 day
04	EAST ANGLIA	
	SF	SUFFOLK 1 day
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	BY	BARNSELY 1 day
11	SCOTLAND	
	HI	HIGHLAND 1 day
12	CONNAUGHT	
	MA	MAYO 1 day
14	LEINSTER	
	WX	WEXFORD 1 day

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

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

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:	Total Bedrooms
Actual Range:	12 to 556 (units:Total Bedrooms)
Range Selected by User:	10 to 1265 (units:Total Bedrooms)
Parking Spaces Range:	2 - 550

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	01/01/15 to 26/11/25

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:

Tuesday	14 days
Wednesday	4 days
Thursday	4 days

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

Selected survey types:

Manual count	22
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 undertaken using machines

Selected Locations:

Town Centre	4 days
Edge of Town Centre	18 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:

Built-Up Zone	7 days
Development Zone	2 days
High Street	1 days
No Sub Category	3 days
Residential Zone	9 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 Included	16 days
Servicing vehicles Unknown	6 days

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Secondary Filtering Selection:

Use Class:

C3

22 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:

750 - 14642

Population within 1 mile:

1,001 to 5,000	1 surveys
5,001 to 10,000	2 surveys
25,001 to 50,000	11 surveys
50,001 to 100,000	5 surveys
100,001 or More	3 surveys

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

Population within 5 miles:

5,001 to 25,000	1 surveys
25,001 to 50,000	2 surveys
50,001 to 75,000	2 surveys
125,001 to 250,000	3 surveys
250,001 to 500,000	3 surveys
500,001 or More	11 surveys

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

Car ownership within 5 miles:

0.5 or Less	4 surveys
0.6 to 1.0	10 surveys
1.1 to 1.5	7 surveys
1.6 to 2.0	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.

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

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	16 surveys
Yes	6 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:

3 - Moderate	1 surveys
4 - Good	3 surveys
5 - Very good	2 surveys
6a - Excellent	2 surveys
6b - Excellent	3 surveys
No PTAL Present	11 surveys

This data displays the number of surveys within the selected set by PTAL rating category.

COVID-19 Restrictions:

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

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

1 CROOK LOG BEXLEYHEATH Edge of Town Centre Residential Zone Total Bedrooms: 146.00 Survey date: Wednesday 19/09/2018	BE-03-C-01	BLOCKS OF FLATS	BEXLEY	Survey Type: Manual
2 NORTH STREET BARKING Town Centre No Sub Category Total Bedrooms: 80.00 Survey date: Thursday 10/09/2020	BK-03-C-01	BLOCKS OF FLATS	BARKING	Survey Type: Manual
3 HEELIS STREET BARNLEY Edge of Town Centre Built-Up Zone Total Bedrooms: 137.00 Survey date: Tuesday 08/09/2020	BY-03-C-01	BLOCKS OF FLATS	BARNLEY	Survey Type: Manual
4 WING ROAD LEIGHTON BUZZARD LINSLADE Edge of Town Centre Residential Zone Total Bedrooms: 350.00 Survey date: Tuesday 15/05/2018	CT-03-C-01	BLOCKS OF FLATS	CENTRAL BEDFORDSHIRE	Survey Type: Manual
5 STANBRIDGE ROAD LEIGHTON BUZZARD Edge of Town Centre Residential Zone Total Bedrooms: 124.00 Survey date: Tuesday 15/05/2018	CT-03-C-02	BLOCKS OF FLATS	CENTRAL BEDFORDSHIRE	Survey Type: Manual
6 COURT DRIVE DUNSTABLE Edge of Town Centre No Sub Category Total Bedrooms: 233.00 Survey date: Tuesday 15/05/2018	CT-03-C-03	BLOCKS OF FLATS	CENTRAL BEDFORDSHIRE	Survey Type: Manual
7 SHENLEY ROAD BOREHAMWOOD Edge of Town Centre Built-Up Zone Total Bedrooms: 91.00 Survey date: Thursday 14/11/2019	HF-03-C-03	BLOCK OF FLATS	HERTFORDSHIRE	Survey Type: Manual

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

8 KING STREET NAIRN Edge of Town Centre Residential Zone Total Bedrooms: 28.00 Survey date: Wednesday 19/04/2023	HI-03-C-02	BLOCK OF FLATS	HIGHLAND Survey Type: Manual
9 GLENTHORNE ROAD HAMMERSMITH Town Centre Built-Up Zone Total Bedrooms: 375.00 Survey date: Tuesday 30/04/2019	HM-03-C-02	BLOCKS OF FLATS	HAMMERSMITH AND FULHAM Survey Type: Manual
10 LEVER STREET FINSBURY Edge of Town Centre Built-Up Zone Total Bedrooms: 27.00 Survey date: Wednesday 29/06/2016	IS-03-C-05	BLOCK OF FLATS	ISLINGTON Survey Type: Manual
11 CITY ROAD ISLINGTON Edge of Town Centre Development Zone Total Bedrooms: 307.00 Survey date: Tuesday 22/10/2024	IS-03-C-09	BLOCK OF FLATS	ISLINGTON Survey Type: Manual
12 KNOCK ROAD CLAREMORRIS Edge of Town Centre No Sub Category Total Bedrooms: 44.00 Survey date: Tuesday 14/09/2021	MA-03-C-01	BLOCKS OF FLATS	MAYO Survey Type: Manual
13 CROSS STREET PORTSMOUTH Edge of Town Centre Built-Up Zone Total Bedrooms: 189.00 Survey date: Tuesday 05/06/2018	PO-03-C-01	BLOCKS OF FLATS	PORTSMOUTH Survey Type: Manual
14 CHURCH ROAD ASHFORD Town Centre High Street Total Bedrooms: 556.00 Survey date: Tuesday 05/11/2024	SC-03-C-05	BLOCKS OF FLATS	SURREY Survey Type: Manual

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

15 FORE STREET IPSWICH IPSWICH WATERFRONT Edge of Town Centre Development Zone Total Bedrooms: 151.00 Survey date: Wednesday 23/06/2021	SF-03-C-05	BLOCKS OF FLATS	SUFFOLK	Survey Type: Manual
16 LAMB WALK BERMONDSEY Edge of Town Centre Built-Up Zone Total Bedrooms: 55.00 Survey date: Thursday 23/04/2015	SK-03-C-02	BLOCK OF FLATS	SOUTHWARK	Survey Type: Manual
17 LEMAN STREET ALDGATE Town Centre Built-Up Zone Total Bedrooms: 130.00 Survey date: Tuesday 24/06/2025	TH-03-C-05	BLOCKS OF FLATS	TOWER HAMLETS	Survey Type: Manual
18 ERSKINE ROAD WALTHAMSTOW Edge of Town Centre Residential Zone Total Bedrooms: 184.00 Survey date: Tuesday 05/11/2019	WF-03-C-01	BLOCKS OF FLATS	WALTHAM FOREST	Survey Type: Manual
19 GROSVENOR ROAD WANSTEAD Edge of Town Centre Residential Zone Total Bedrooms: 52.00 Survey date: Tuesday 25/05/2021	WF-03-C-02	BLOCKS OF FLATS	WALTHAM FOREST	Survey Type: Manual
20 GROSVENOR ROAD WANSTEAD Edge of Town Centre Residential Zone Total Bedrooms: 76.00 Survey date: Tuesday 25/05/2021	WF-03-C-04	BLOCKS OF FLATS	WALTHAM FOREST	Survey Type: Manual
21 NEW WANSTEAD WANSTEAD Edge of Town Centre Residential Zone Total Bedrooms: 12.00 Survey date: Tuesday 25/05/2021	WF-03-C-05	BLOCK OF FLATS	WALTHAM FOREST	Survey Type: Manual

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

22	WX-03-C-01	BLOCKS OF FLATS	WEXFORD
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UPPER GEORGE'S STREET

WEXFORD

Edge of Town Centre

Residential Zone

Total Bedrooms: 57.00

Survey date: Thursday 20/04/2023

Survey Type: Manual

DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
IS-03-C-04	14-07-2016	Removed: Site re-surveyed by IS-03-C-07
IS-03-C-07	06-06-2019	Removed: Site re-surveyed by IS-03-C-08
IS-03-C-08	20-10-2022	Removed: Site re-surveyed by IS-03-C-09

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Total Vehicles

Calculation factor: 1 Total Bedrooms

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. Total Bedrooms	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	2	192	0.005	0.005	0.010
07:00-08:00	22	155	0.018	0.072	0.090
08:00-09:00	22	155	0.027	0.075	0.102
09:00-10:00	22	155	0.030	0.038	0.068
10:00-11:00	22	155	0.032	0.032	0.064
11:00-12:00	22	155	0.030	0.035	0.065
12:00-13:00	22	155	0.035	0.037	0.072
13:00-14:00	22	155	0.032	0.033	0.065
14:00-15:00	22	155	0.027	0.031	0.058
15:00-16:00	22	155	0.045	0.033	0.078
16:00-17:00	22	155	0.055	0.035	0.090
17:00-18:00	22	155	0.075	0.043	0.118
18:00-19:00	22	155	0.079	0.040	0.119
19:00-20:00	11	131	0.029	0.020	0.049
20:00-21:00	11	131	0.016	0.013	0.029
21:00-22:00	1	307	0.007	0.010	0.017
22:00-23:00					
23:00-00:00					
Total Rates:			0.542	0.552	1.094

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.

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Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

Parameter Summary:

Trip rate parameter range selected:	10 - 1265 (units: Total Bedrooms)
Survey date date range:	23/04/2015 - 24/06/2025
Number of weekdays (Monday-Friday):	22
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Cyclists

Calculation factor: 1 Total Bedrooms

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. Total Bedrooms	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	2	192	0.003	0.008	0.011
07:00-08:00	22	155	0.001	0.004	0.005
08:00-09:00	22	155	0.001	0.010	0.011
09:00-10:00	22	155	0.001	0.004	0.005
10:00-11:00	22	155	0.001	0.003	0.004
11:00-12:00	22	155	0.002	0.003	0.005
12:00-13:00	22	155	0.002	0.003	0.005
13:00-14:00	22	155	0.003	0.002	0.005
14:00-15:00	22	155	0.005	0.003	0.008
15:00-16:00	22	155	0.004	0.001	0.005
16:00-17:00	22	155	0.004	0.001	0.005
17:00-18:00	22	155	0.005	0.002	0.007
18:00-19:00	22	155	0.006	0.004	0.010
19:00-20:00	11	131	0.013	0.003	0.016
20:00-21:00	11	131	0.008	0.003	0.011
21:00-22:00	1	307	0.023	0.016	0.039
22:00-23:00					
23:00-00:00					
Total Rates:			0.082	0.070	0.152

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Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

Parameter Summary:

Trip rate parameter range selected:	10 - 1265 (units: Total Bedrooms)
Survey date date range:	23/04/2015 - 24/06/2025
Number of weekdays (Monday-Friday):	19
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

PSVs

Calculation factor: 1 Total Bedrooms

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. Total Bedrooms	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	2	192	0.000	0.000	0.000
07:00-08:00	22	155	0.000	0.000	0.000
08:00-09:00	22	155	0.000	0.000	0.000
09:00-10:00	22	155	0.000	0.000	0.000
10:00-11:00	22	155	0.000	0.000	0.000
11:00-12:00	22	155	0.000	0.000	0.000
12:00-13:00	22	155	0.000	0.000	0.000
13:00-14:00	22	155	0.000	0.000	0.000
14:00-15:00	22	155	0.000	0.000	0.000
15:00-16:00	22	155	0.000	0.000	0.000
16:00-17:00	22	155	0.000	0.000	0.000
17:00-18:00	22	155	0.000	0.000	0.000
18:00-19:00	22	155	0.000	0.000	0.000
19:00-20:00	11	131	0.000	0.000	0.000
20:00-21:00	11	131	0.000	0.000	0.000
21:00-22:00	1	307	0.000	0.000	0.000
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.

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Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

Parameter Summary:

Trip rate parameter range selected:	10 - 1265 (units: Total Bedrooms)
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

OGVs

Calculation factor: 1 Total Bedrooms

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. Total Bedrooms	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	2	192	0.000	0.000	0.000
07:00-08:00	22	155	0.001	0.001	0.002
08:00-09:00	22	155	0.000	0.000	0.000
09:00-10:00	22	155	0.001	0.001	0.002
10:00-11:00	22	155	0.000	0.000	0.000
11:00-12:00	22	155	0.002	0.002	0.004
12:00-13:00	22	155	0.000	0.001	0.001
13:00-14:00	22	155	0.000	0.000	0.000
14:00-15:00	22	155	0.001	0.001	0.002
15:00-16:00	22	155	0.000	0.000	0.000
16:00-17:00	22	155	0.000	0.000	0.000
17:00-18:00	22	155	0.000	0.000	0.000
18:00-19:00	22	155	0.000	0.000	0.000
19:00-20:00	11	131	0.000	0.000	0.000
20:00-21:00	11	131	0.000	0.000	0.000
21:00-22:00	1	307	0.000	0.000	0.000
22:00-23:00					
23:00-00:00					
Total Rates:			0.005	0.006	0.011

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.

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Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

Parameter Summary:

Trip rate parameter range selected:	10 - 1265 (units: Total Bedrooms)
Survey date range:	15/05/2018 - 05/11/2024
Number of weekdays (Monday-Friday):	10
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Taxis

Calculation factor: 1 Total Bedrooms

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. Total Bedrooms	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	2	192	0.005	0.005	0.010
07:00-08:00	22	155	0.002	0.002	0.004
08:00-09:00	22	155	0.004	0.003	0.007
09:00-10:00	22	155	0.003	0.003	0.006
10:00-11:00	22	155	0.002	0.002	0.004
11:00-12:00	22	155	0.002	0.002	0.004
12:00-13:00	22	155	0.003	0.003	0.006
13:00-14:00	22	155	0.001	0.001	0.002
14:00-15:00	22	155	0.001	0.001	0.002
15:00-16:00	22	155	0.002	0.002	0.004
16:00-17:00	22	155	0.002	0.002	0.004
17:00-18:00	22	155	0.003	0.003	0.006
18:00-19:00	22	155	0.002	0.002	0.004
19:00-20:00	11	131	0.006	0.006	0.012
20:00-21:00	11	131	0.002	0.002	0.004
21:00-22:00	1	307	0.007	0.007	0.014
22:00-23:00					
23:00-00:00					
Total Rates:			0.047	0.046	0.093

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.

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Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

Parameter Summary:

Trip rate parameter range selected:	10 - 1265 (units: Total Bedrooms)
Survey date range:	23/04/2015 - 24/06/2025
Number of weekdays (Monday-Friday):	16
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Cars

Calculation factor: 1 Total Bedrooms

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. Total Bedrooms	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	2	192	0.000	0.000	0.000
07:00-08:00	22	155	0.012	0.063	0.075
08:00-09:00	22	155	0.017	0.065	0.082
09:00-10:00	22	155	0.019	0.027	0.046
10:00-11:00	22	155	0.021	0.022	0.043
11:00-12:00	22	155	0.017	0.023	0.040
12:00-13:00	22	155	0.023	0.024	0.047
13:00-14:00	22	155	0.023	0.024	0.047
14:00-15:00	22	155	0.022	0.025	0.047
15:00-16:00	22	155	0.036	0.025	0.061
16:00-17:00	22	155	0.046	0.026	0.072
17:00-18:00	22	155	0.064	0.036	0.100
18:00-19:00	22	155	0.073	0.034	0.107
19:00-20:00	11	131	0.017	0.008	0.025
20:00-21:00	11	131	0.010	0.009	0.019
21:00-22:00	1	307	0.000	0.000	0.000
22:00-23:00					
23:00-00:00					
Total Rates:			0.400	0.411	0.811

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.

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Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

Parameter Summary:

Trip rate parameter range selected:	10 - 1265 (units: Total Bedrooms)
Survey date date range:	23/04/2015 - 05/11/2024
Number of weekdays (Monday-Friday):	21
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

LGVs

Calculation factor: 1 Total Bedrooms

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. Total Bedrooms	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	2	192	0.000	0.000	0.000
07:00-08:00	22	155	0.002	0.006	0.008
08:00-09:00	22	155	0.006	0.006	0.012
09:00-10:00	22	155	0.007	0.006	0.013
10:00-11:00	22	155	0.007	0.007	0.014
11:00-12:00	22	155	0.007	0.007	0.014
12:00-13:00	22	155	0.009	0.009	0.018
13:00-14:00	22	155	0.006	0.008	0.014
14:00-15:00	22	155	0.003	0.004	0.007
15:00-16:00	22	155	0.005	0.004	0.009
16:00-17:00	22	155	0.006	0.006	0.012
17:00-18:00	22	155	0.006	0.003	0.009
18:00-19:00	22	155	0.003	0.002	0.005
19:00-20:00	11	131	0.003	0.002	0.005
20:00-21:00	11	131	0.000	0.000	0.000
21:00-22:00	1	307	0.000	0.000	0.000
22:00-23:00					
23:00-00:00					
Total Rates:			0.070	0.070	0.140

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.

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Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

Parameter Summary:

Trip rate parameter range selected:	10 - 1265 (units: Total Bedrooms)
Survey date range:	23/04/2015 - 24/06/2025
Number of weekdays (Monday-Friday):	22
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Motorcycles

Calculation factor: 1 Total Bedrooms

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. Total Bedrooms	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	2	192	0.000	0.000	0.000
07:00-08:00	22	155	0.000	0.000	0.000
08:00-09:00	22	155	0.000	0.001	0.001
09:00-10:00	22	155	0.001	0.001	0.002
10:00-11:00	22	155	0.001	0.001	0.002
11:00-12:00	22	155	0.001	0.001	0.002
12:00-13:00	22	155	0.001	0.001	0.002
13:00-14:00	22	155	0.001	0.001	0.002
14:00-15:00	22	155	0.001	0.000	0.001
15:00-16:00	22	155	0.002	0.001	0.003
16:00-17:00	22	155	0.001	0.001	0.002
17:00-18:00	22	155	0.002	0.001	0.003
18:00-19:00	22	155	0.002	0.002	0.004
19:00-20:00	11	131	0.003	0.003	0.006
20:00-21:00	11	131	0.003	0.002	0.005
21:00-22:00	1	307	0.000	0.003	0.003
22:00-23:00					
23:00-00:00					
Total Rates:			0.019	0.019	0.038

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.

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Audit Code: 94eba7b7-4997-46a5-aaec-721c1745a80f

Parameter Summary:

Trip rate parameter range selected:	10 - 1265 (units: Total Bedrooms)
Survey date date range:	15/05/2018 - 24/06/2025
Number of weekdays (Monday-Friday):	16
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL

Category: C - FLATS PRIVATELY OWNED

Selected Vehicle Type: Total Vehicles

Selected regions and areas:

01	GREATER LONDON		
	BE	BEXLEY	1 day
	IS	ISLINGTON	1 day
	WF	WALTHAM FOREST	1 day
02	SOUTH EAST		
	CT	CENTRAL BEDFORDSHIRE	3 days
	HF	HERTFORDSHIRE	1 day
	PO	PORTSMOUTH	1 day
	SC	SURREY	1 day
11	SCOTLAND		
	HI	HIGHLAND	1 day
14	LEINSTER		
	WX	WEXFORD	1 day

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

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7**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:	DWELLS
Actual Range:	6 to 832 (units:DWELLS)
Range Selected by User:	6 to 832 (units:DWELLS)
Parking Spaces Range:	2 - 550

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	01/01/15 to 26/11/25

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:

Thursday	2 days
Tuesday	7 days
Wednesday	2 days

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

Selected survey types:

Manual count	11
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 undertaken using machines

Selected Locations:

Edge of Town Centre	10 days
Town Centre	1 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:

Built-Up Zone	2 days
Development Zone	1 days
High Street	1 days
No Sub Category	1 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 Included	9 days
Servicing vehicles Unknown	2 days

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7**Secondary Filtering Selection:****Use Class:**

C3	11 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:**750 - 14642****Population within 1 mile:**

100,001 or More	1 surveys
25,001 to 50,000	7 surveys
5,001 to 10,000	2 surveys
50,001 to 100,000	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	1 surveys
25,001 to 50,000	2 surveys
250,001 to 500,000	3 surveys
50,001 to 75,000	2 surveys
500,001 or More	3 surveys

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

Car ownership within 5 miles:

0.5 or Less	1 surveys
0.6 to 1.0	4 surveys
1.1 to 1.5	6 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.

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

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	8 surveys
Yes	3 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:

3 - Moderate	1 surveys
5 - Very good	2 surveys
No PTAL Present	8 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

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

1	BE-03-C-01	BLOCKS OF FLATS	BEXLEY
CROOK LOG BEXLEYHEATH Edge of Town Centre Residential Zone Number of dwellings: 79.00 DWELLS Survey date: Wednesday 19/09/2018			
			Survey Type: Manual
2	CT-03-C-01	BLOCKS OF FLATS	CENTRAL BEDFORDSHIRE
WING ROAD LEIGHTON BUZZARD LINSLADE Edge of Town Centre Residential Zone Number of dwellings: 175.00 DWELLS Survey date:			
			Survey Type: Manual
3	CT-03-C-02	BLOCKS OF FLATS	CENTRAL BEDFORDSHIRE
STANBRIDGE ROAD LEIGHTON BUZZARD Edge of Town Centre Residential Zone Number of dwellings: 62.00 DWELLS Survey date:			
			Survey Type: Manual
4	CT-03-C-03	BLOCKS OF FLATS	CENTRAL BEDFORDSHIRE
COURT DRIVE DUNSTABLE Edge of Town Centre No Sub Category Number of dwellings: 146.00 DWELLS Survey date:			
			Survey Type: Manual
5	HF-03-C-03	BLOCK OF FLATS	HERTFORDSHIRE
SHENLEY ROAD BOREHAMWOOD Edge of Town Centre Built-Up Zone Number of dwellings: 91.00 DWELLS Survey date: Thursday 14/11/2019			
			Survey Type: Manual
6	HI-03-C-02	BLOCK OF FLATS	HIGHLAND
KING STREET NAIRN Edge of Town Centre Residential Zone Number of dwellings: 16.00 DWELLS Survey date: Wednesday 19/04/2023			
			Survey Type: Manual
7	IS-03-C-09	BLOCK OF FLATS	ISLINGTON
CITY ROAD ISLINGTON Edge of Town Centre Development Zone Number of dwellings: 190.00 DWELLS Survey date:			
			Survey Type: Manual
8	PO-03-C-01	BLOCKS OF FLATS	PORTSMOUTH
CROSS STREET PORTSMOUTH Edge of Town Centre Built-Up Zone			

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

Number of dwellings: 90.00 DWELLS

Survey date:

Survey Type: Manual

9	SC-03-C-05	BLOCKS OF FLATS	SURREY
CHURCH ROAD			
ASHFORD			
Town Centre			
High Street			
Number of dwellings: 331.00 DWELLS			
Survey date:			
Survey Type: Manual			

10	WF-03-C-01	BLOCKS OF FLATS	WALTHAM FOREST
ERSKINE ROAD			
WALTHAMSTOW			
Edge of Town Centre			
Residential Zone			
Number of dwellings: 97.00 DWELLS			
Survey date:			
Survey Type: Manual			

11	WX-03-C-01	BLOCKS OF FLATS	WEXFORD
UPPER GEORGE'S STREET			
WEXFORD			
Edge of Town Centre			
Residential Zone			
Number of dwellings: 28.00 DWELLS			
Survey date: Thursday 20/04/2023			
Survey Type: Manual			

DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
BY-03-C-01 08-09-2020	08-09-2020	Covid-19 restrictions
MA-03-C-01 14-09-2021	14-09-2021	Covid-19 restrictions
SF-03-C-05 23-06-2021	23-06-2021	Covid-19 restrictions
WF-03-C-02 25-05-2021	25-05-2021	Covid-19 restrictions
WF-03-C-04 25-05-2021	25-05-2021	Covid-19 restrictions
WF-03-C-05 25-05-2021	25-05-2021	Covid-19 restrictions

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Total Vehicles

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	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	1	190	0.011	0.011	0.022
07:00-08:00	11	119	0.036	0.151	0.187
08:00-09:00	11	119	0.051	0.168	0.219
09:00-10:00	11	119	0.054	0.074	0.128
10:00-11:00	11	119	0.057	0.057	0.114
11:00-12:00	11	119	0.054	0.068	0.122
12:00-13:00	11	119	0.077	0.076	0.153
13:00-14:00	11	119	0.063	0.065	0.128
14:00-15:00	11	119	0.058	0.054	0.112
15:00-16:00	11	119	0.086	0.067	0.153
16:00-17:00	11	119	0.113	0.068	0.181
17:00-18:00	11	119	0.162	0.095	0.257
18:00-19:00	11	119	0.169	0.082	0.251
19:00-20:00	3	122	0.071	0.049	0.120
20:00-21:00	3	122	0.044	0.041	0.085
21:00-22:00	1	190	0.011	0.016	0.027
22:00-23:00					
23:00-00:00					
Total Rates:			1.117	1.142	2.259

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: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

Parameter Summary:

Trip rate parameter range selected:	6 - 832 (units: DWELLS)
Survey date date range:	15/05/2018 - 05/11/2024
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	8
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.

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Cyclists

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	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	1	190	0.005	0.016	0.021
07:00-08:00	11	119	0.002	0.006	0.008
08:00-09:00	11	119	0.001	0.011	0.012
09:00-10:00	11	119	0.002	0.004	0.006
10:00-11:00	11	119	0.002	0.001	0.003
11:00-12:00	11	119	0.004	0.004	0.008
12:00-13:00	11	119	0.002	0.002	0.004
13:00-14:00	11	119	0.005	0.005	0.010
14:00-15:00	11	119	0.007	0.005	0.012
15:00-16:00	11	119	0.005	0.002	0.007
16:00-17:00	11	119	0.004	0.000	0.004
17:00-18:00	11	119	0.007	0.005	0.012
18:00-19:00	11	119	0.008	0.005	0.013
19:00-20:00	3	122	0.019	0.011	0.030
20:00-21:00	3	122	0.022	0.011	0.033
21:00-22:00	1	190	0.037	0.026	0.063
22:00-23:00					
23:00-00:00					
Total Rates:			0.132	0.114	0.246

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: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

Parameter Summary:

Trip rate parameter range selected:	6 - 832 (units: DWELLS)
Survey date date range:	15/05/2018 - 05/11/2024
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	8
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

PSVs

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	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	1	190	0.000	0.000	0.000
07:00-08:00	11	119	0.000	0.000	0.000
08:00-09:00	11	119	0.000	0.000	0.000
09:00-10:00	11	119	0.000	0.000	0.000
10:00-11:00	11	119	0.000	0.000	0.000
11:00-12:00	11	119	0.000	0.000	0.000
12:00-13:00	11	119	0.000	0.000	0.000
13:00-14:00	11	119	0.000	0.000	0.000
14:00-15:00	11	119	0.000	0.000	0.000
15:00-16:00	11	119	0.000	0.000	0.000
16:00-17:00	11	119	0.000	0.000	0.000
17:00-18:00	11	119	0.000	0.000	0.000
18:00-19:00	11	119	0.000	0.000	0.000
19:00-20:00	3	122	0.000	0.000	0.000
20:00-21:00	3	122	0.000	0.000	0.000
21:00-22:00	1	190	0.000	0.000	0.000
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: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7**Parameter Summary:**

Trip rate parameter range selected:	6 - 832 (units: DWELLS)
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:	8
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

OGVs

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	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	1	190	0.000	0.000	0.000
07:00-08:00	11	119	0.003	0.003	0.006
08:00-09:00	11	119	0.000	0.000	0.000
09:00-10:00	11	119	0.002	0.002	0.004
10:00-11:00	11	119	0.001	0.000	0.001
11:00-12:00	11	119	0.003	0.003	0.006
12:00-13:00	11	119	0.000	0.001	0.001
13:00-14:00	11	119	0.000	0.000	0.000
14:00-15:00	11	119	0.002	0.002	0.004
15:00-16:00	11	119	0.000	0.000	0.000
16:00-17:00	11	119	0.000	0.000	0.000
17:00-18:00	11	119	0.000	0.000	0.000
18:00-19:00	11	119	0.000	0.000	0.000
19:00-20:00	3	122	0.000	0.000	0.000
20:00-21:00	3	122	0.000	0.000	0.000
21:00-22:00	1	190	0.000	0.000	0.000
22:00-23:00					
23:00-00:00					
Total Rates:			0.011	0.011	0.022

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.

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Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

Parameter Summary:

Trip rate parameter range selected:	6 - 832 (units: DWELLS)
Survey date date range:	15/05/2018 - 05/11/2024
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	8
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Taxis

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	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	1	190	0.011	0.011	0.022
07:00-08:00	11	119	0.003	0.004	0.007
08:00-09:00	11	119	0.008	0.008	0.016
09:00-10:00	11	119	0.005	0.006	0.011
10:00-11:00	11	119	0.004	0.004	0.008
11:00-12:00	11	119	0.004	0.004	0.008
12:00-13:00	11	119	0.007	0.007	0.014
13:00-14:00	11	119	0.002	0.002	0.004
14:00-15:00	11	119	0.002	0.002	0.004
15:00-16:00	11	119	0.004	0.004	0.008
16:00-17:00	11	119	0.004	0.004	0.008
17:00-18:00	11	119	0.005	0.005	0.010
18:00-19:00	11	119	0.003	0.003	0.006
19:00-20:00	3	122	0.016	0.016	0.032
20:00-21:00	3	122	0.008	0.008	0.016
21:00-22:00	1	190	0.011	0.011	0.022
22:00-23:00					
23:00-00:00					
Total Rates:			0.097	0.099	0.196

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: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

Parameter Summary:

Trip rate parameter range selected:	6 - 832 (units: DWELLS)
Survey date date range:	15/05/2018 - 05/11/2024
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	8
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Cars

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	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	1	190	0.000	0.000	0.000
07:00-08:00	11	119	0.026	0.133	0.159
08:00-09:00	11	119	0.034	0.148	0.182
09:00-10:00	11	119	0.035	0.057	0.092
10:00-11:00	11	119	0.043	0.041	0.084
11:00-12:00	11	119	0.031	0.047	0.078
12:00-13:00	11	119	0.052	0.048	0.100
13:00-14:00	11	119	0.050	0.048	0.098
14:00-15:00	11	119	0.048	0.046	0.094
15:00-16:00	11	119	0.072	0.055	0.127
16:00-17:00	11	119	0.097	0.054	0.151
17:00-18:00	11	119	0.139	0.080	0.219
18:00-19:00	11	119	0.158	0.074	0.232
19:00-20:00	3	122	0.044	0.022	0.066
20:00-21:00	3	122	0.025	0.025	0.050
21:00-22:00	1	190	0.000	0.000	0.000
22:00-23:00					
23:00-00:00					
Total Rates:			0.854	0.878	1.732

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: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7**Parameter Summary:**

Trip rate parameter range selected:	6 - 832 (units: DWELLS)
Survey date date range:	15/05/2018 - 05/11/2024
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	8
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

LGVs

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	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	1	190	0.000	0.000	0.000
07:00-08:00	11	119	0.003	0.011	0.014
08:00-09:00	11	119	0.008	0.010	0.018
09:00-10:00	11	119	0.010	0.007	0.017
10:00-11:00	11	119	0.010	0.011	0.021
11:00-12:00	11	119	0.014	0.012	0.026
12:00-13:00	11	119	0.016	0.018	0.034
13:00-14:00	11	119	0.008	0.012	0.020
14:00-15:00	11	119	0.005	0.004	0.009
15:00-16:00	11	119	0.007	0.006	0.013
16:00-17:00	11	119	0.011	0.010	0.021
17:00-18:00	11	119	0.012	0.005	0.017
18:00-19:00	11	119	0.005	0.003	0.008
19:00-20:00	3	122	0.003	0.003	0.006
20:00-21:00	3	122	0.000	0.000	0.000
21:00-22:00	1	190	0.000	0.000	0.000
22:00-23:00					
23:00-00:00					
Total Rates:			0.112	0.112	0.224

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: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

Parameter Summary:

Trip rate parameter range selected:	6 - 832 (units: DWELLS)
Survey date date range:	15/05/2018 - 05/11/2024
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	8
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Motorcycles

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	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	1	190	0.000	0.000	0.000
07:00-08:00	11	119	0.001	0.000	0.001
08:00-09:00	11	119	0.001	0.002	0.003
09:00-10:00	11	119	0.002	0.003	0.005
10:00-11:00	11	119	0.000	0.000	0.000
11:00-12:00	11	119	0.002	0.002	0.004
12:00-13:00	11	119	0.002	0.002	0.004
13:00-14:00	11	119	0.003	0.003	0.006
14:00-15:00	11	119	0.001	0.000	0.001
15:00-16:00	11	119	0.003	0.002	0.005
16:00-17:00	11	119	0.002	0.001	0.003
17:00-18:00	11	119	0.005	0.004	0.009
18:00-19:00	11	119	0.002	0.002	0.004
19:00-20:00	3	122	0.008	0.008	0.016
20:00-21:00	3	122	0.011	0.008	0.019
21:00-22:00	1	190	0.000	0.005	0.005
22:00-23:00					
23:00-00:00					
Total Rates:			0.043	0.042	0.085

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: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 5c510a52-e5bd-481d-bcd2-4dc4c4d818c7

Parameter Summary:

Trip rate parameter range selected:	6 - 832 (units: DWELLS)
Survey date date range:	15/05/2018 - 05/11/2024
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	8
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



Appendix D

ST MICHAEL'S PLACE MASTERPLAN

ACCESSIBILITY REVIEW

610/2026/051/01

13 July 2026

six:TEN Highways & Traffic Ltd
Bartle House
9 Oxford Court
Manchester
M2 3WQ

t 0151 216 6421
m 07985 283074
e contact@610traffic.co.uk
www.610traffic.co.uk

REV	ISSUE STATUS	PREPARED BY/DATE	CHECKED BY/DATE	APPROVED BY/DATE
0	DRAFT	Tristan Brooks 13 July 2026	R Lister 13 July 2026	
1	FINAL	Tristan Brooks 13 July 2026	R Lister 13 July 2026	Tristan Brooks 13 July 2026

Disclaimer note

The client has confirmed that it is entering into the agreement under which this report is being prepared on its own behalf and not on behalf of, or for the benefit of any other party and has agreed that in any event of any claim arising out of or in connection with that agreement and/or the report itself it shall be entitled to recover from six:TEN Highways & Traffic Limited only the losses, if any, it has itself suffered.

This report therefore is for the private and confidential use of the client for whom it was prepared solely for the purposes requested by the client. It should not be reproduced in whole or in part or relied upon by any third party for any use whatsoever without the express written authority of six:TEN Highways & Traffic Limited.

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1.0 INTRODUCTION

1.1 Terms of reference.

1.1.1 six:TEN Highways and Traffic Ltd have been commissioned by Astute, to conduct an independent Accessibility Review of the proposed St Michael's Place Masterplan regeneration/public realm scheme (Knowsley Council application ref: 25/00606/HYB). The accessibility review is focused on the detailed elements of the hybrid planning application which are summarised below:

- New Council Head Quarters;
- Hotel (130 bedrooms); and
- A new village green including active travel routes.

1.1.2 The purpose of this assessment is to study the main active travel routes for those walking, cycling or scooting to/from the proposed scheme and where relevant, provide comment on any issues that could potentially compromise road safety or accessibility.

1.2 Methodology

1.2.1 The author visited site on Wednesday 1 July 2026 between 11:00am and 12:00pm to ascertain the existing highway layout, vehicle speed/flow, driver behaviour, and active travel user movements. Photographs are shown in Appendix Two.

1.2.2 The routes examined for this assessment are Archway Road between Lathom Road and Poplar Bank, Griffiths Road, Westmorland Road, Civic Way, Derby Road and Cavendish Walk.

1.2.3 Collision data was obtained for the latest five-year period for which data is available 2020-2024 from the online Crashmap database and is shown in Appendix One.

1.2.4 The potential Huyton Town Centre Pedestrian Connectivity scheme has been considered as part of this accessibility assessment. The proposed plan for this work is shown in Appendix One

2.0 PROPOSED SCHEME DESCRIPTION / LOCATION

2.1 The scheme is located in Huyton town centre bounded by Archway Road to the northwest, Cavendish Walk to the east and Civic Way to the south. The location plan is shown in Appendix One.

2.2 The proposed scheme involves the reconfiguration of existing buildings/car parks and the provision of a hotel, new Council offices, potential residential/retail developments, car parking and associated public realm works. The proposed scheme plan is shown in Appendix One.

3.0 EXISTING HIGHWAY LAYOUT

3.1 Archway Road

- 3.1.1 There are traffic signal-controlled pedestrian crossings that are either standalone or incorporated within a traffic signal junction at Poplar Bank junction, Rupert Road junction, Cavendish Walk (standalone) and Lathom Road junction.
- 3.1.2 Archway Road is a dual carriageway with either 2 or 3 lanes in each direction.
- 3.1.3 There are footways provided on both sides of the carriageway.
- 3.1.4 Bus stops in both directions are located on Archway Road between Blue Bell Lane and Rupert Road.
- 3.1.5 There is a 30mph speed limit in place and there is street lighting throughout.

3.2 Poplar Bank

- 3.2.1 There is a zebra crossing to the south of the junction with Civic Way and uncontrolled pedestrian crossings at its junction with Derby Road.
- 3.2.2 Poplar Bank is a two-way single carriageway road open to all traffic.
- 3.2.3 There are footways provided on both sides of the carriageway.
- 3.2.4 A bus stop (south-eastbound) is located near its junction with Derby Road.
- 3.2.5 There is a 30mph speed limit in place and there is street lighting throughout.

3.3 Derby Road (east/west section)

- 3.3.1 There are uncontrolled pedestrian crossings outside the railway station and near its junction with Griffiths Road.
- 3.3.2 Derby Road is a two-way single carriageway road open to all traffic with a bus/taxi only restriction at its eastern end.
- 3.3.3 There are footways provided on both sides of the carriageway.
- 3.3.4 There is a 30mph speed limit in place and there is street lighting throughout.

3.4 Griffiths Road

- 3.4.1 There are uncontrolled pedestrian crossings at its junction with Derby Road and Westmorland Road. The crossing at Westmorland Road incorporates a raised table within the carriageway.

3.4.2 Griffiths Street is a one-way south-eastbound single carriageway road open to all traffic with a taxi rank on its north-eastern side.

3.4.3 There are footways provided on both sides of the carriageway.

3.4.4 There is a 30mph speed limit in place and there is street lighting throughout.

3.5 Westmorland Road

3.5.1 There are uncontrolled pedestrian crossings at its junction with Poplar Bank, at its junction with Griffiths Road, at the interface of the walkway to Derby Road/Cavendish Walk incorporating a raised table in the carriageway and across the accesses to the existing car parks/service areas along the road.

3.5.2 Westmorland Road is a two-way single carriageway road open to all traffic with a “loop” at its northern end at the entry to the existing council car park.

3.5.3 There are footways provided on both sides of the carriageway for the majority of its length.

3.5.4 There is a 30mph speed limit in place and there is street lighting throughout.

3.6 Civic Way

3.6.1 There is a zebra crossing northeast of its junction with Poplar Bank and there are uncontrolled pedestrian crossings near its junction with Westmorland Road, near the existing council buildings and across the two-way section at the access to the existing car park incorporating a raised table in the carriageway.

3.6.2 Civic Way is a one-way single carriageway road open to all traffic from its junction with Westmorland Road to its two-way section. The two-way section runs from Poplar Bank to/from the existing car park access.

3.6.3 There are loading only and disabled bays located on its south-western side to the northwest of Westmorland Road.

3.6.4 There are footways provided on both sides of the carriageway.

3.6.5 There is a 30mph speed limit in place and there is street lighting throughout.

3.6 Derby Road (north/south section) and Cavendish Walk

3.6.1 This is the main shopping area of Huyton town centre and is fully pedestrianised.

3.6.2 There are links through to Lathom Road, Sherborne Square and the existing multi-story car park to the east and to the bus station and fast-food restaurant to the south.

3.6.3 Vehicular access is restricted by way of bollards and gates.

4.0 ACCESSIBILITY ASSESSMENT

- 4.1 The proposed scheme is generally easily accessed by all forms of active travel and there are also links provided to the nearby bus stops, bus station and railway station.
- 4.2 Traffic signal-controlled pedestrian crossing facilities are provided on all existing desire lines across Archway Road to/from the existing residential areas to the northwest.
- 4.3 On all the other roads within the study area uncontrolled pedestrian crossing facilities are generally provided on the existing desire lines with some exceptions, refer to Section 7.0 below.
- 4.4 Generally pedestrian/driver intervisibility throughout the study area is acceptable with some locations suffering from reduced visibility due to overgrown vegetation.
- 4.4 There are good links through to the main shopping area of the town centre and the proposed scheme will maintain and improve these.
- 4.5 There are currently no controlled crossing facilities for cyclists to cross Archway Road, and it was noted during the site visit that cyclists are currently restricted from using Derby Road (north/south section) and Cavendish Walk.
- 4.6 The width of the footways throughout the study area are adequate to accommodate pedestrians without them having to enter the carriageway when passing other pedestrians, however, there are some locations where overgrown vegetation reduces the available footway width.
- 4.7 Pedestrian guardrail is provided at locations throughout the study area to guide pedestrians to the appropriate places to cross the roads.
- 4.8 Traffic speeds were generally low within the study area and even though speeds appeared to be slightly higher on Archway Road, speeds were restricted by the volume of traffic and the numerous traffic signal junctions.

5.0 Road Traffic Collisions

- 5.1 Personal injury collision data was obtained from online Crashmap database latest five-year period for which data is available 2020-2024. The personal injury collision location plan is shown in Appendix One.
- 5.2 There has been five personal injury collisions within the study area during the five-year period resulting in a total of five casualties.
- 5.3 One collision was classified as serious in severity, and the remaining four collisions were classified as slight in severity.
- 5.4 The collision classified as serious occurred on Archway Road to the north of the proposed scheme and resulted in injuries to a pedestrian.
- 5.5 Two collisions resulted in injuries to a pedal cyclist with both collisions classified as slight in severity.
- 5.6 The remaining two collisions resulted in casualties to vehicle occupants.

6.0 CONCLUSION

- 6.1 Active travel links throughout the town centre and to/from the proposed development are considered to be adequate, however, some potential improvements are recommended below.
- 6.2 No existing road safety issues have been identified for active travel users throughout the study area, however, refer to the recommendations below.

7.0 RECOMMENDATIONS

- 7.1 Whilst the current active travel accessibility throughout the town centre is considered to be adequate and no existing road safety issues have been identified, the following potential recommendations are made to help improve accessibility for active travel users throughout the study area:
- The existing uncontrolled pedestrian crossing provision is inconsistent in kerb height, tactile paving type and tactile paving provision, therefore, it is recommended that the existing uncontrolled pedestrian crossing facilities throughout the study area are all renewed with dropped kerbs between 0mm-6mm and buff coloured tactile paving provided;
 - Any overhanging/overgrown vegetation that encroaches onto the adjacent footway or obscures pedestrian/driver intervisibility splays should be cut back;
 - The potential for north/south and east/west cycle links and appropriate cycle crossing facilities throughout the town centre and across Archway Road linking into the proposed development should be investigated; and
 - There is currently no appropriate pedestrian link and pedestrian crossing facilities from the proposed development/town centre into the Asda petrol station which includes a small convenience store, therefore, it is recommended that this is investigated, as the provision of a hotel may increase the likelihood of pedestrians wishing to access the convenience store.

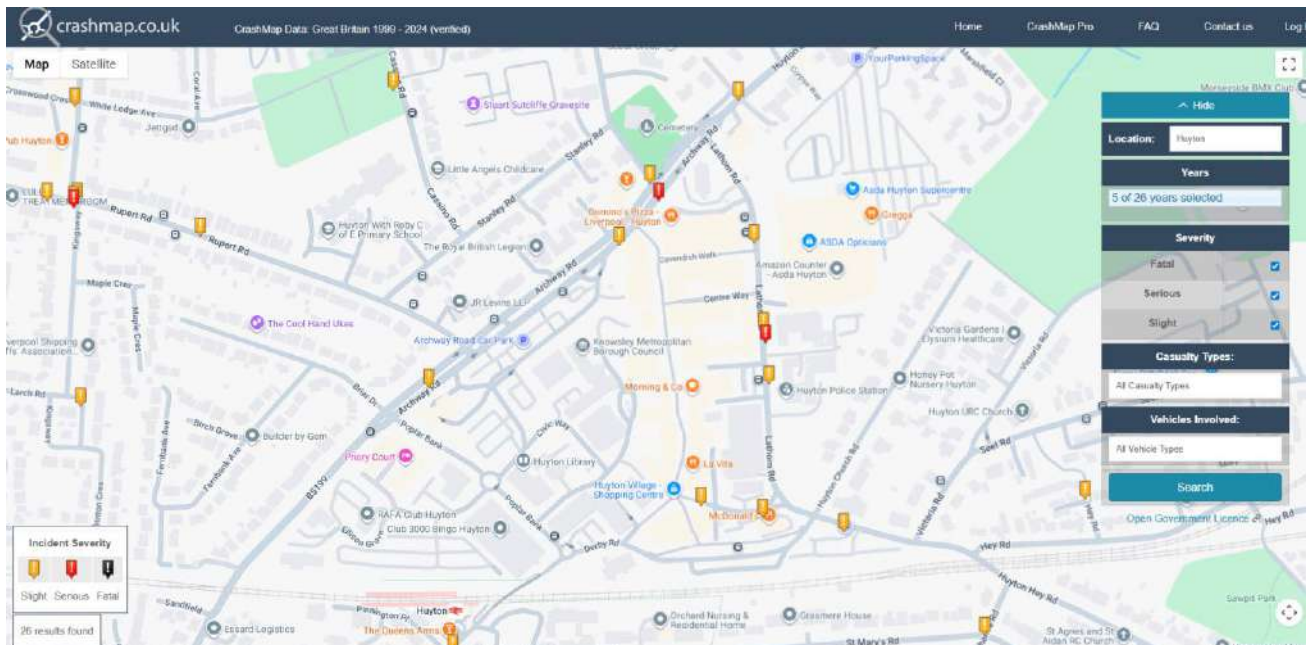
APPENDIX ONE

8.0 DRAWINGS AND DOCUMENTS

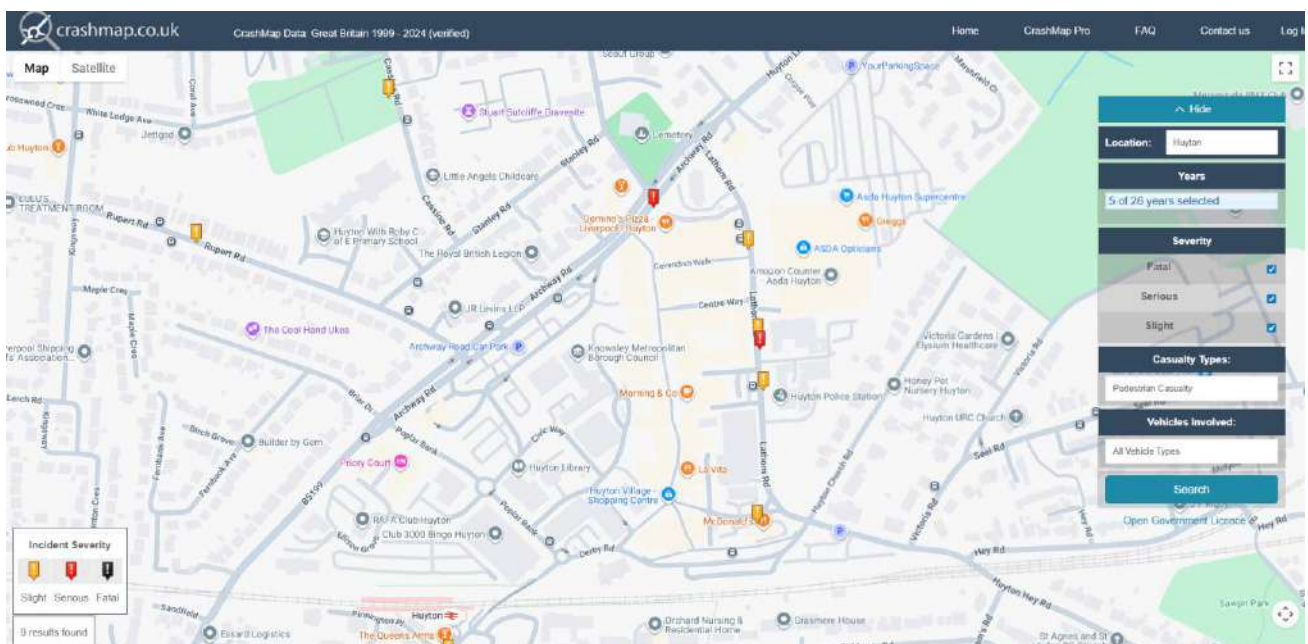


8.1 Location Plan

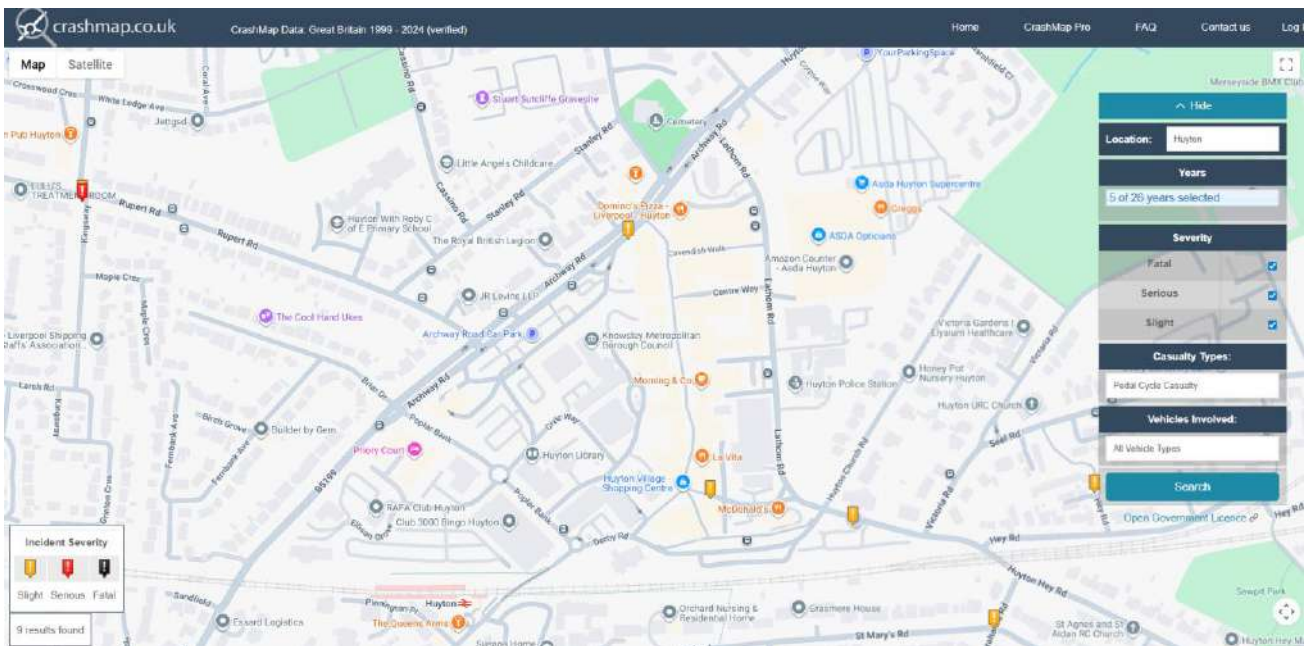




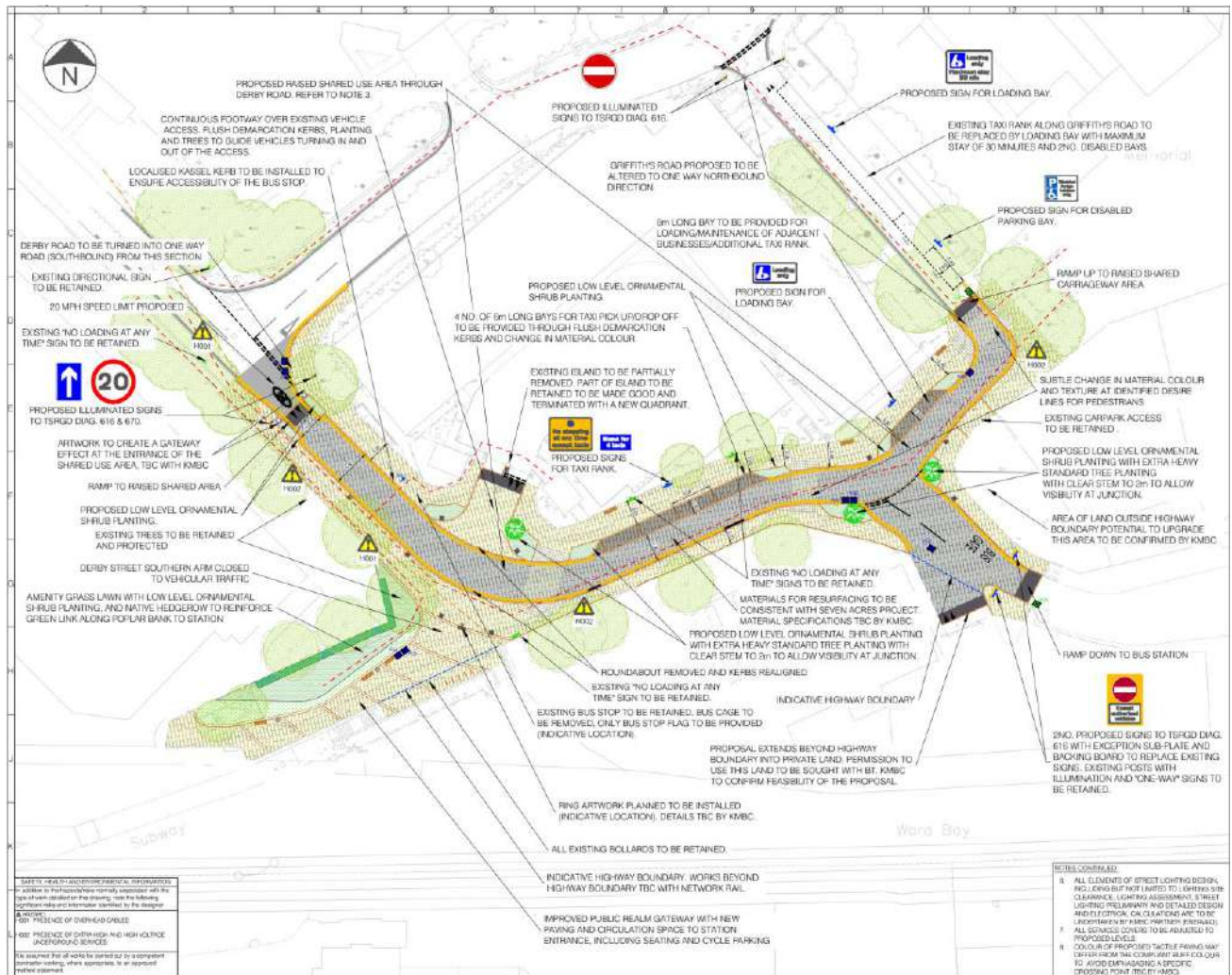
8.3 Latest Five-Year Personal Injury Collision Location Plan (2020-2024)



8.4 Latest Five-Year Pedestrian Personal Injury Collision Location Plan (2020-2024)



8.5 Latest Five-Year Pedal Cyclist Personal Injury Collision Location Plan (2020-2024)



8.6 Potential Huyton Town Centre Pedestrian Connectivity Scheme

APPENDIX TWO

9.0 PHOTOGRAPHS



9.1 Archway Road



9.2 Archway Road



9.3 Poplar Bank



9.4 Griffiths Road



9.5 Westmorland Road



9.6 Westmorland Road



9.7 Westmorland Road pedestrian link to Derby Road



9.8 Civic Way



9.9 Civic Way



9.10 Civic Way



9.11 Cavendish Walk/Derby Road



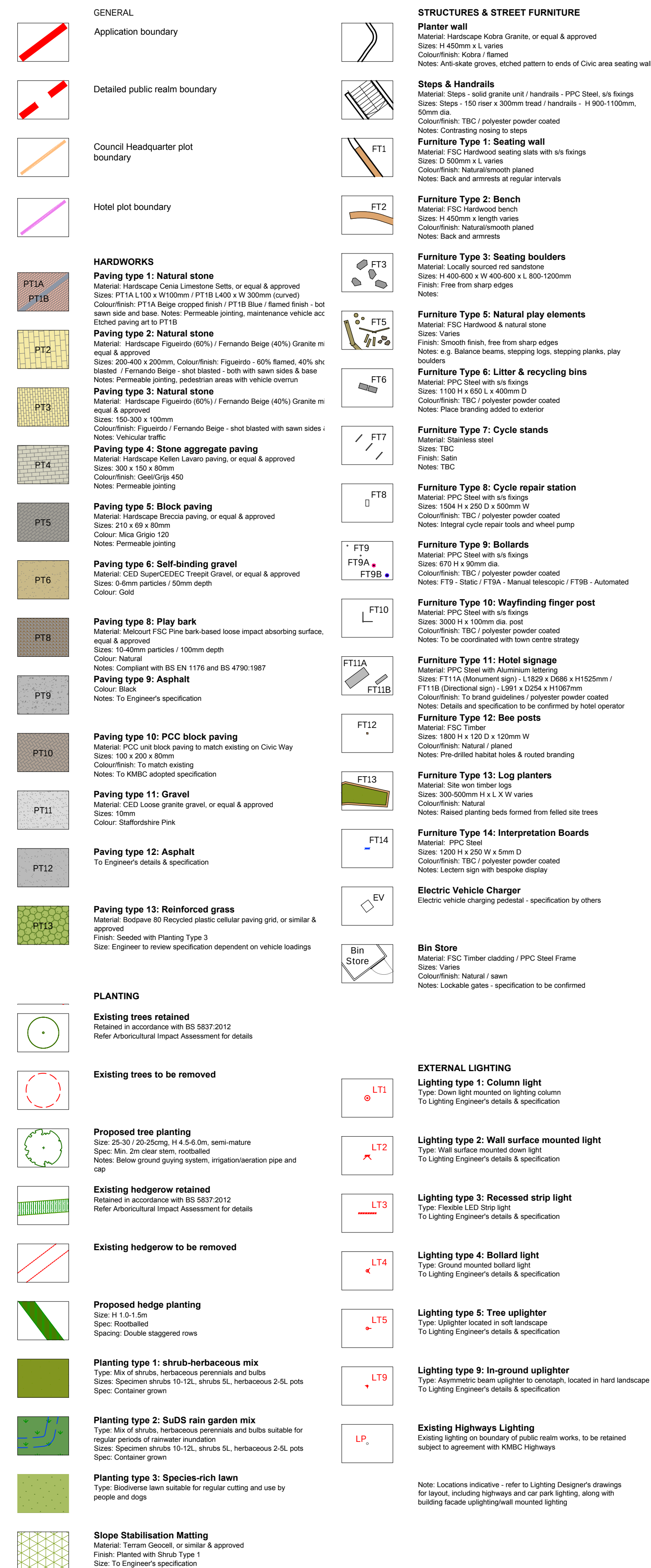
9.12 Cavendish Walk pedestrian link to existing Archway Road car park



9.13 Derby Road pedestrian link towards existing Council building



Appendix E



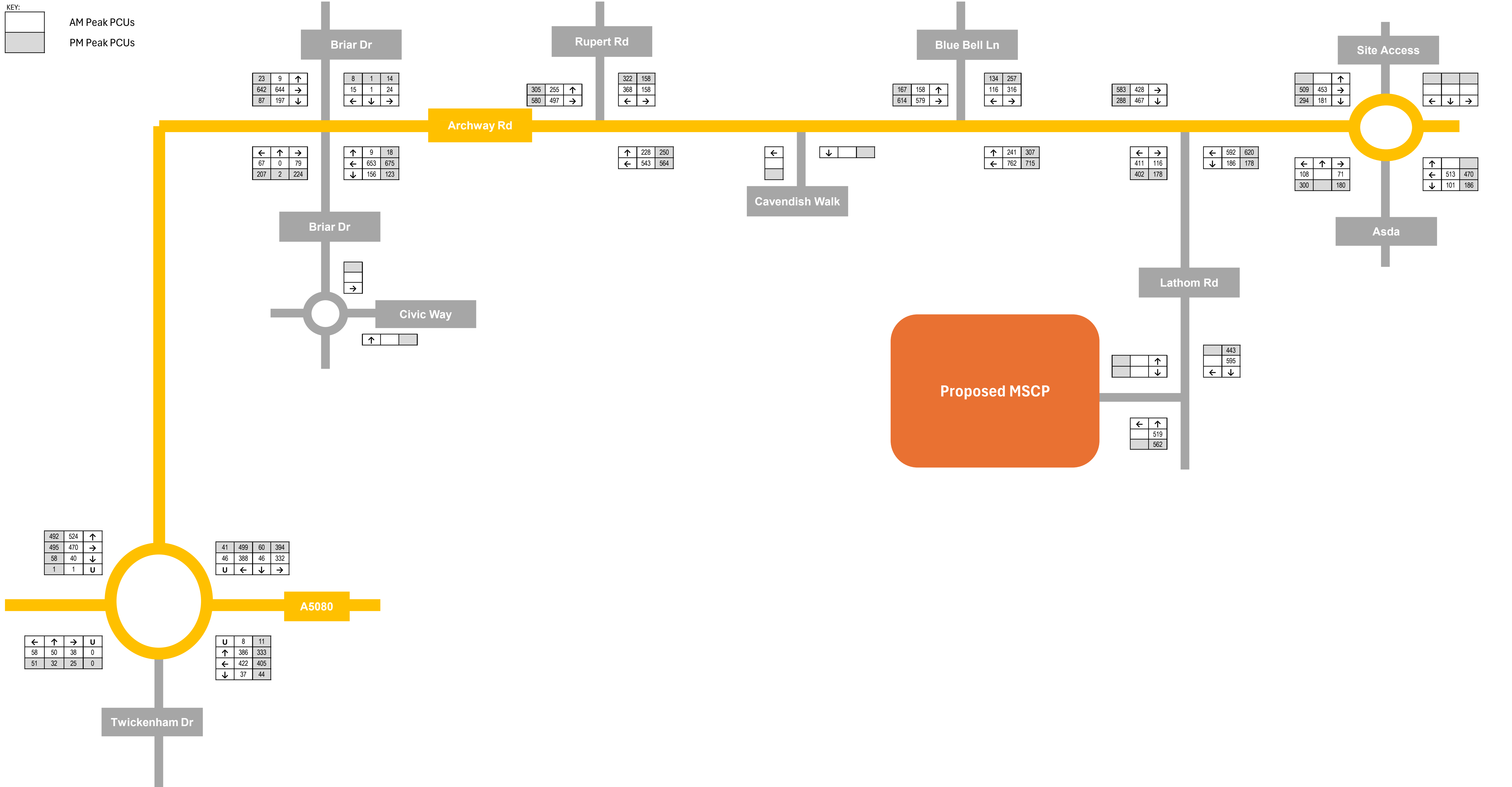
09	Council Headquarters footprint revised.	AW	14/07/26
08	Cavendish House bin store and parking revised.	AW	11/05/26
	Proposed sub station relocated.		
07	Additional trees removed along Archway Rd	AW	12/01/26
	Additional trees retained along Civic Way		
06	Civic Way layout revised	EB	21/10/25
05	Detailed public realm works boundary revised	AW	08/10/25
04	Area around Cavendish House revised. Primary sub st added. Paths amended for fire access. EV's added.	AW	09/09/25
03	Public realm and parking layout revised	AW	08/08/25
02	Additional benches added & hotel service area amended	AW	18/06/25
01	Street furniture and lighting added	AW	05/06/25
Revision	Reason	Initial	Date

Public Realm - General Arrangement Plan

SMP-LUD-MP-ZZ-DR-L-91-02-00



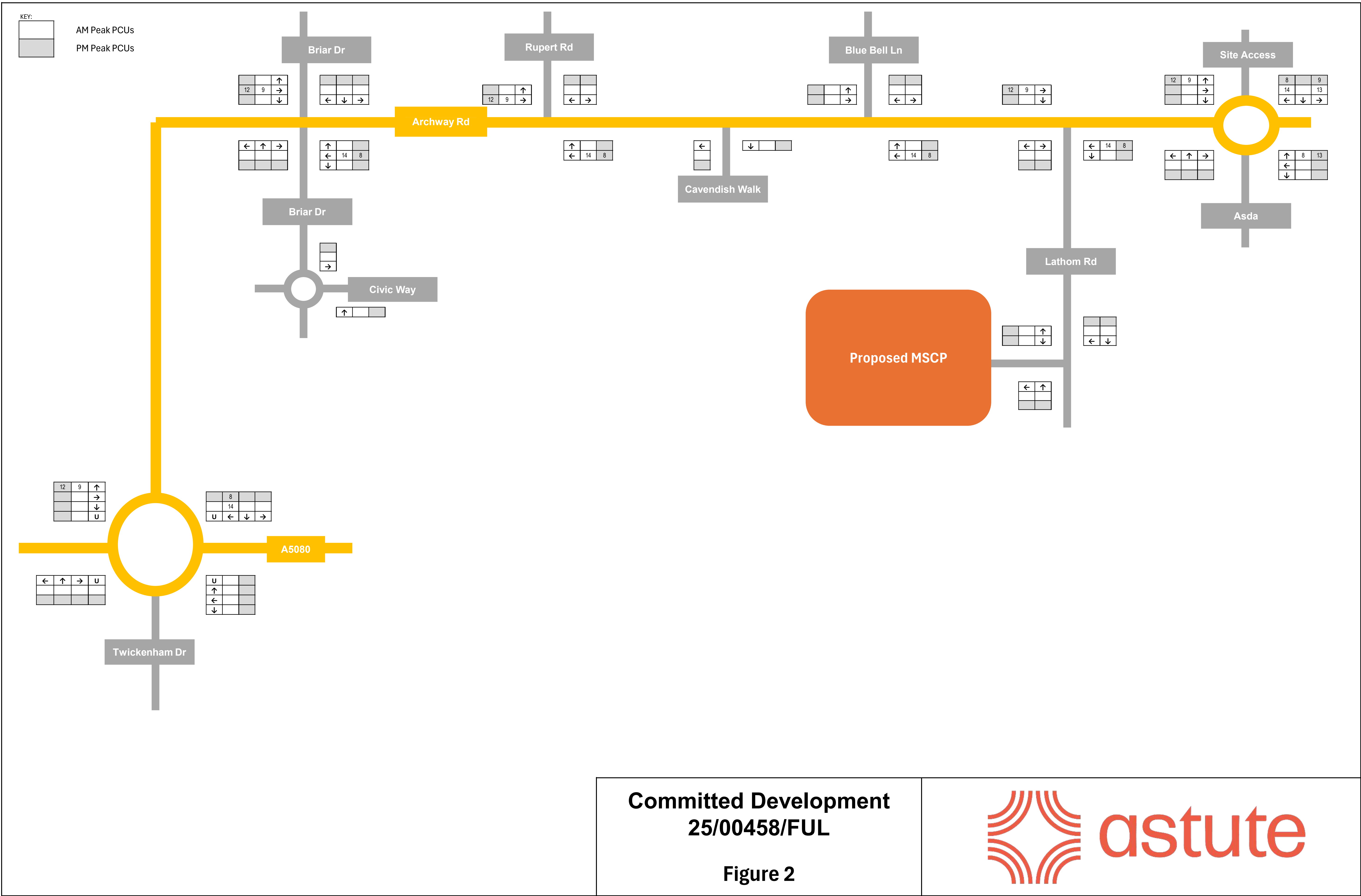
Appendix F



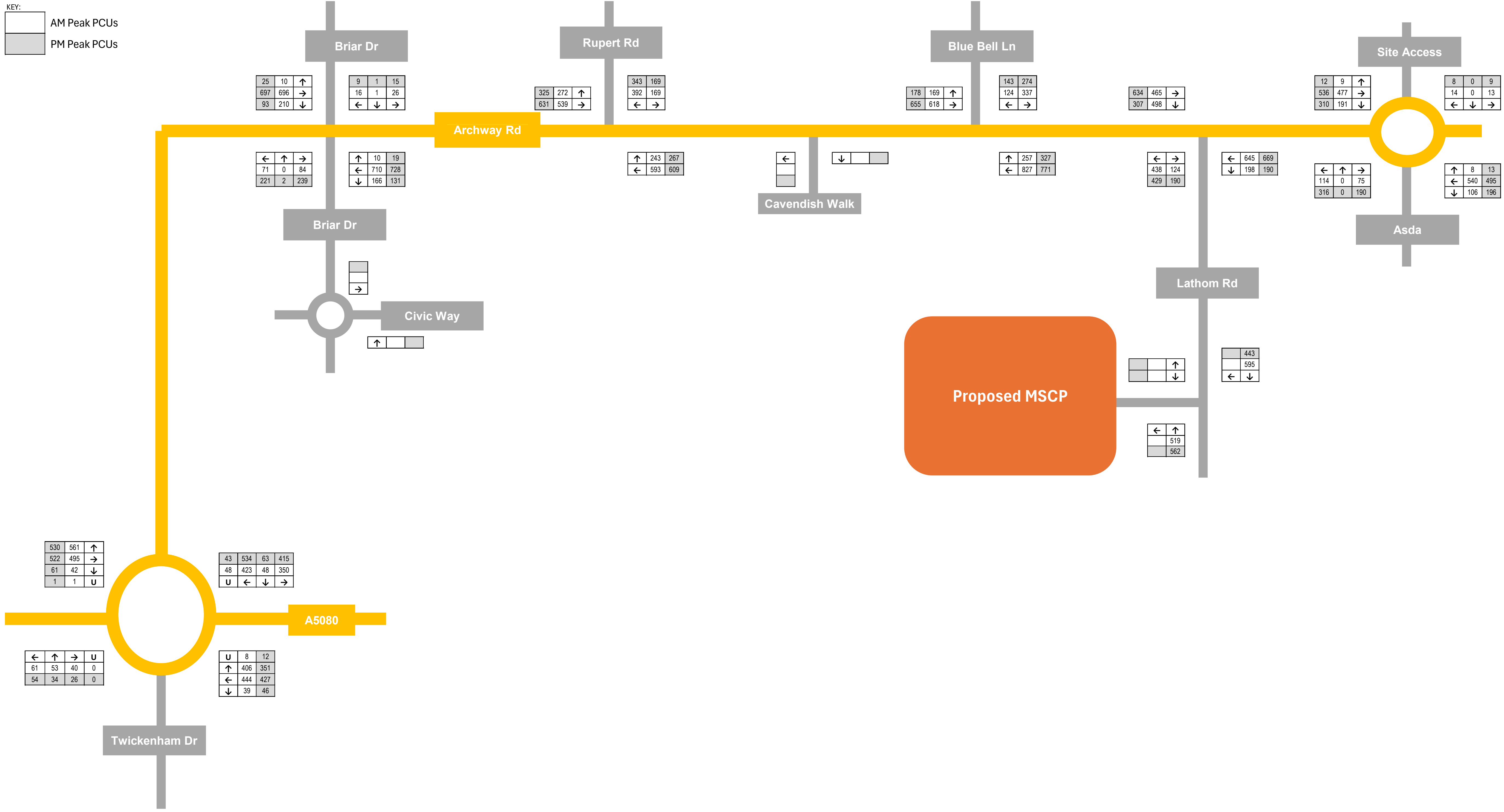
Surveyed Flows

Figure 1





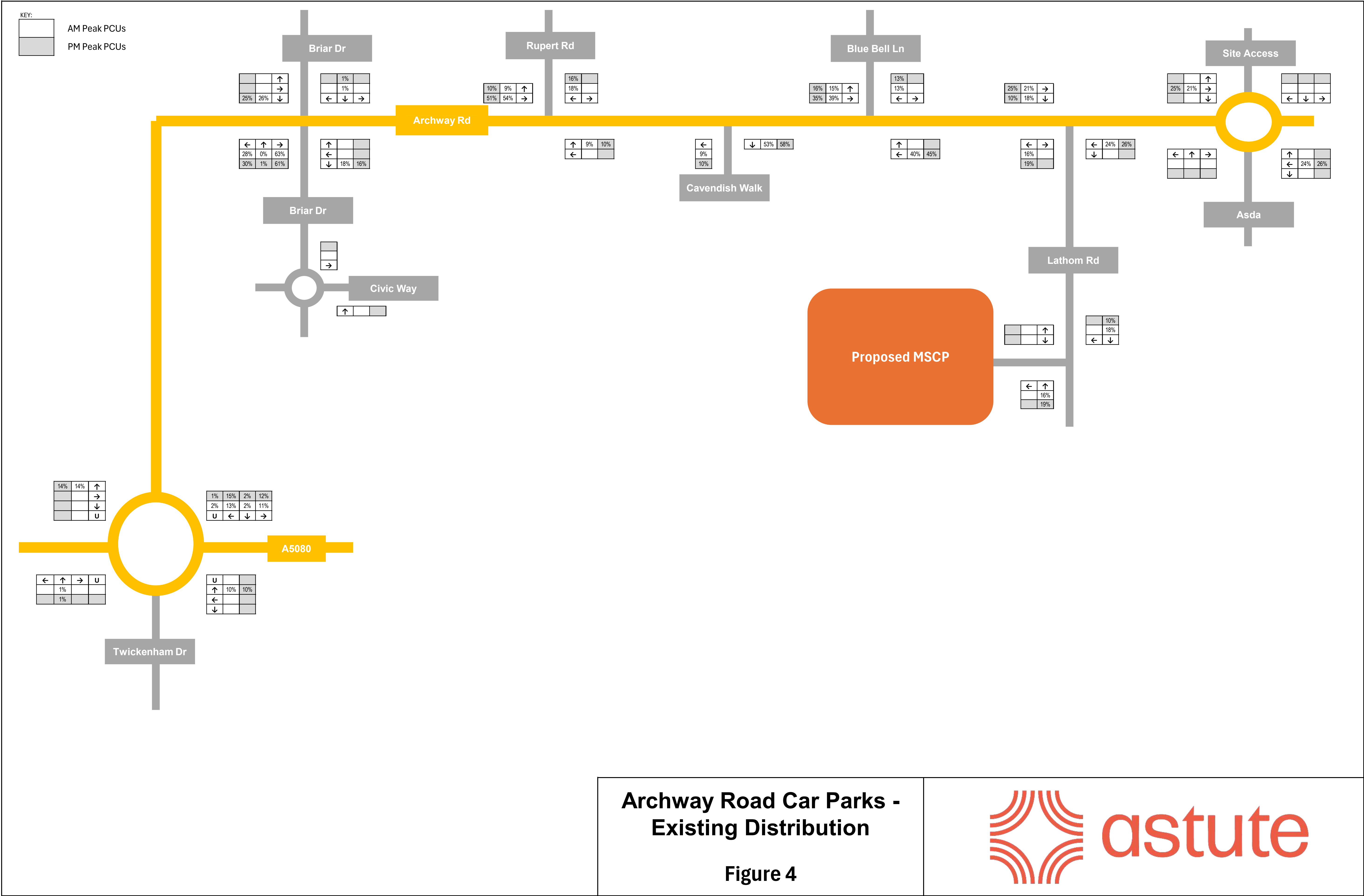
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PM Peak PCUs



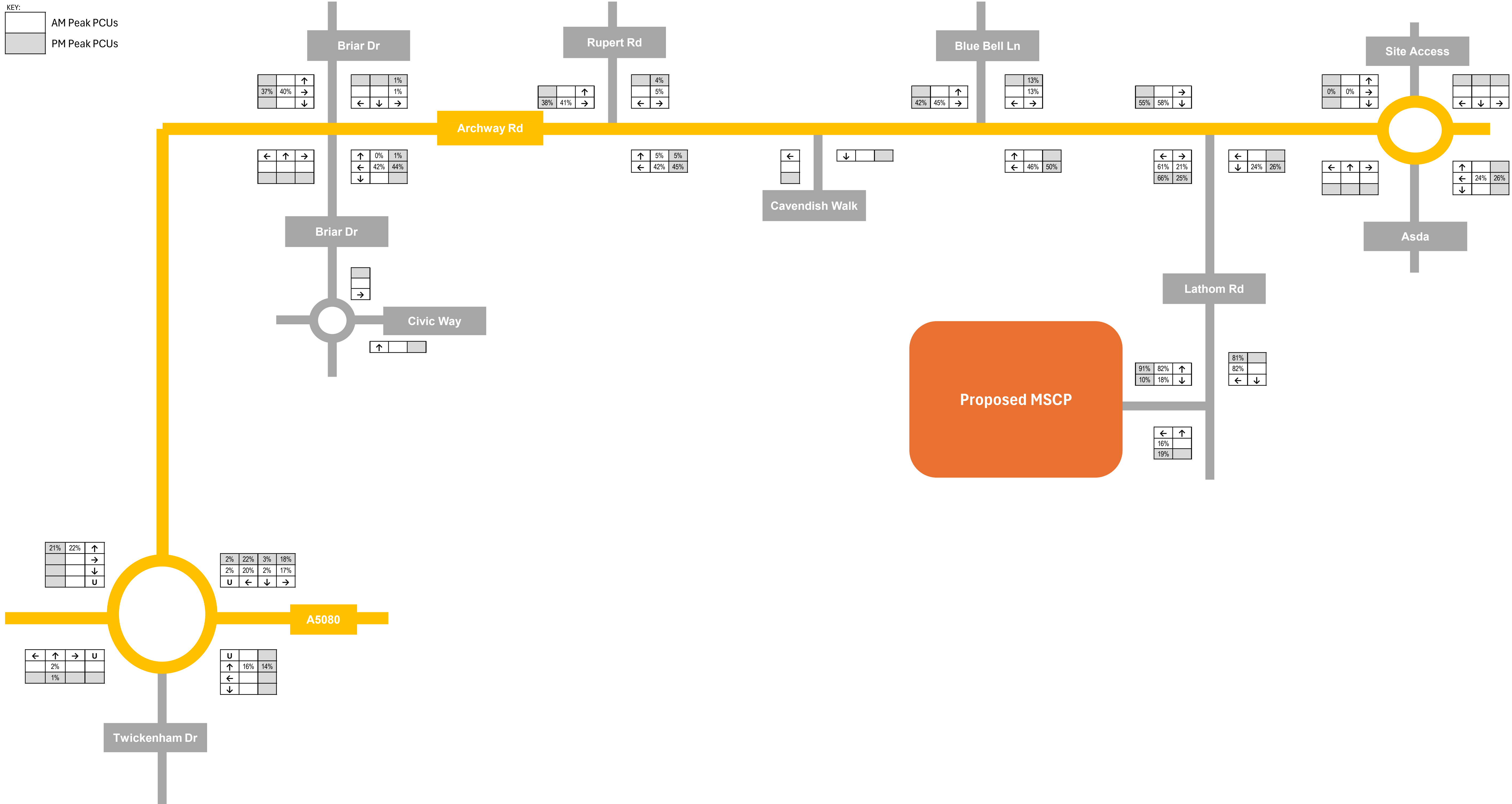
2031 Baseline 'Without Development'

Figure 3





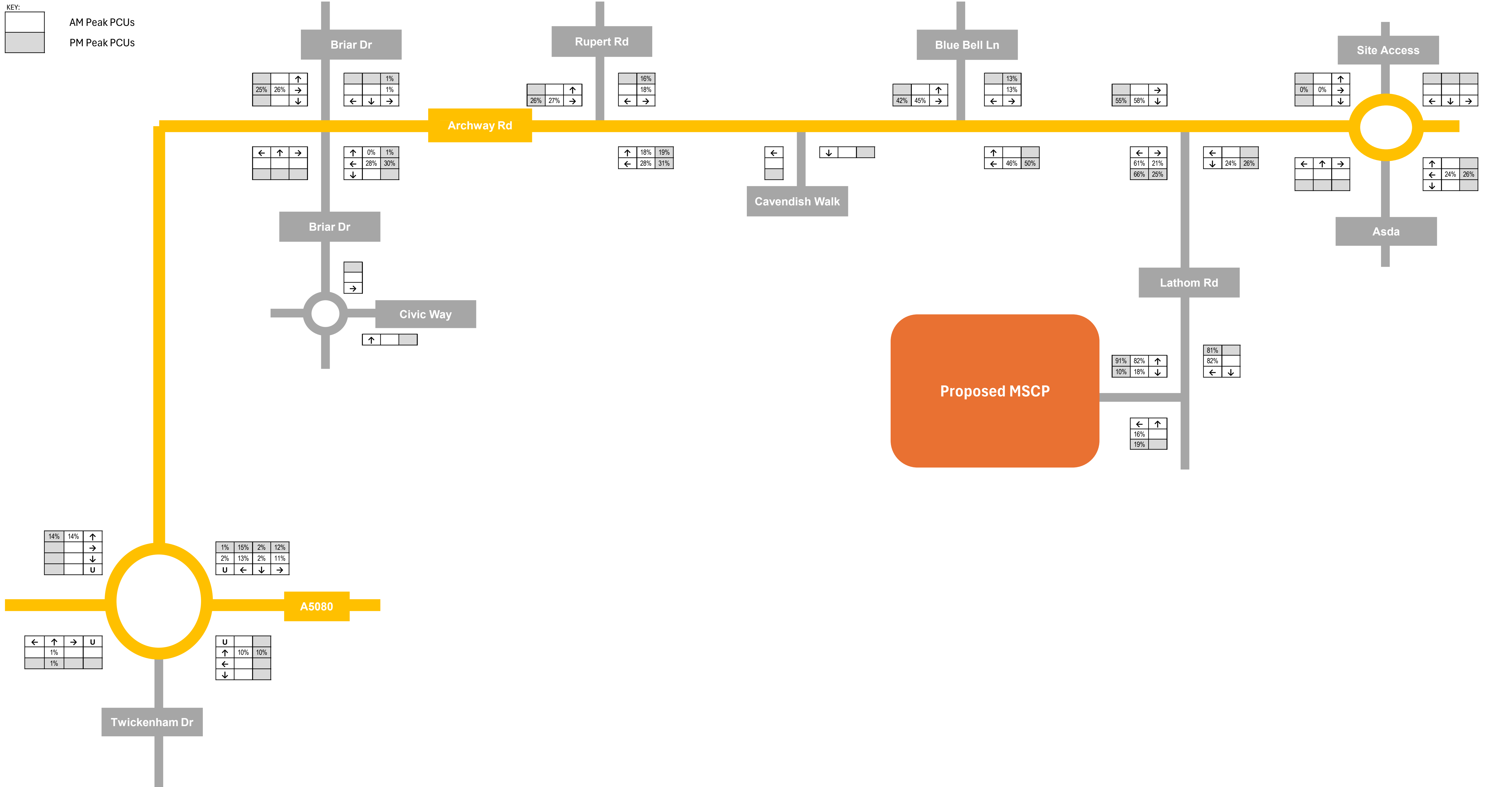
KEY:
AM Peak PCUs
PM Peak PCUs



Proposed MSCP - Residential
Distribution

Figure 5

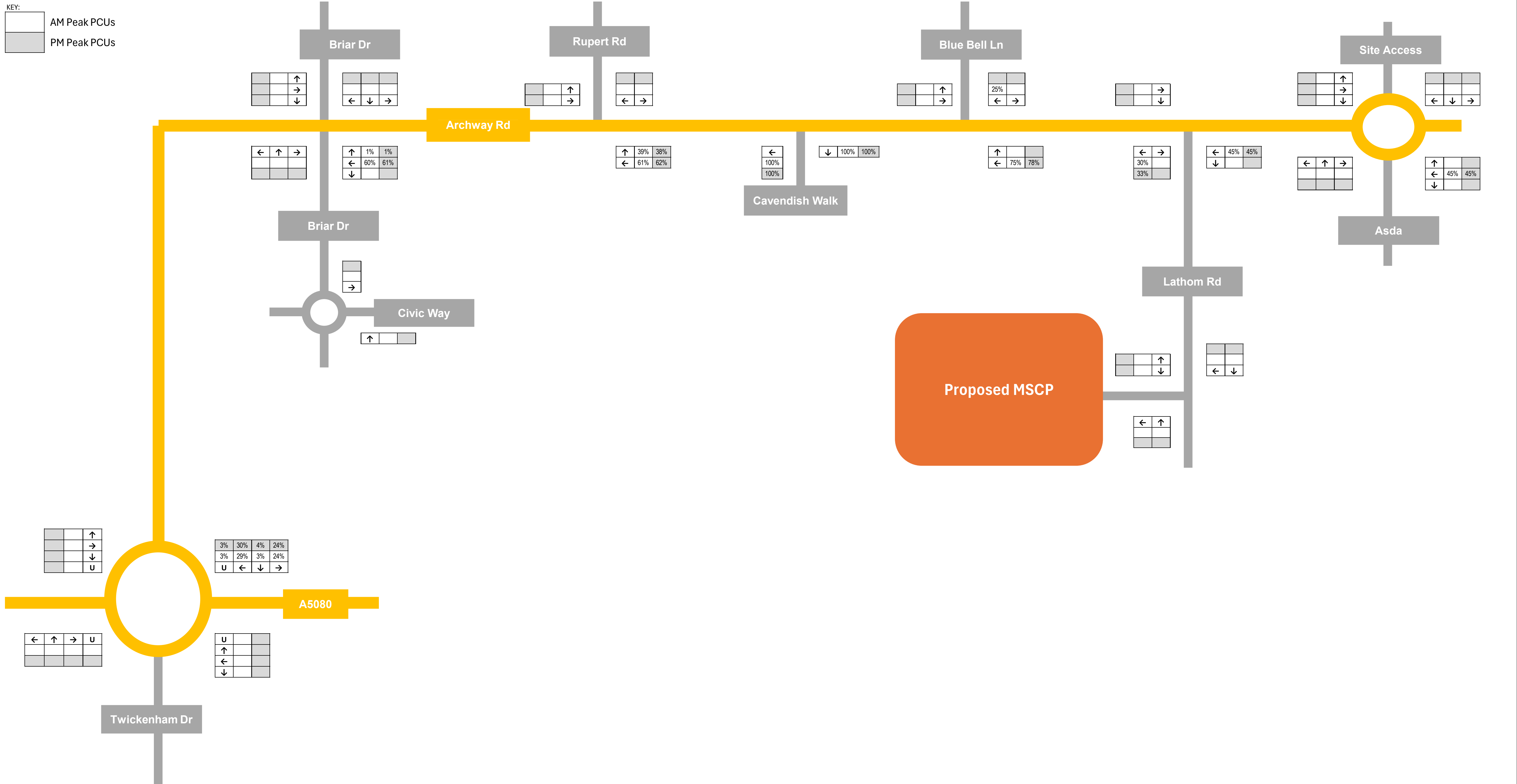




Proposed MSCP - Other
Distribution

Figure 6

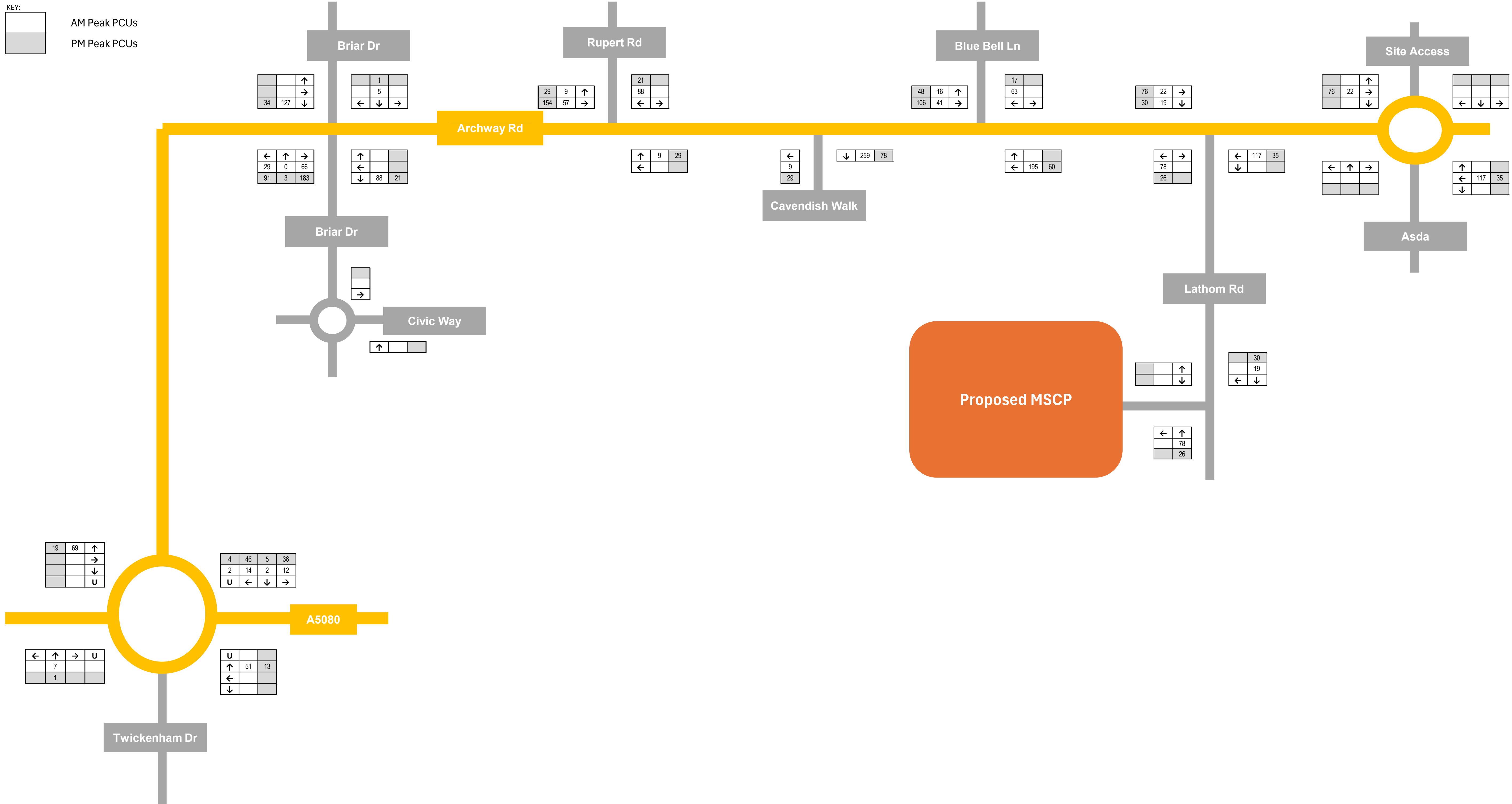




**Cavendish Walk Car Parking -
Distribution**

Figure 7

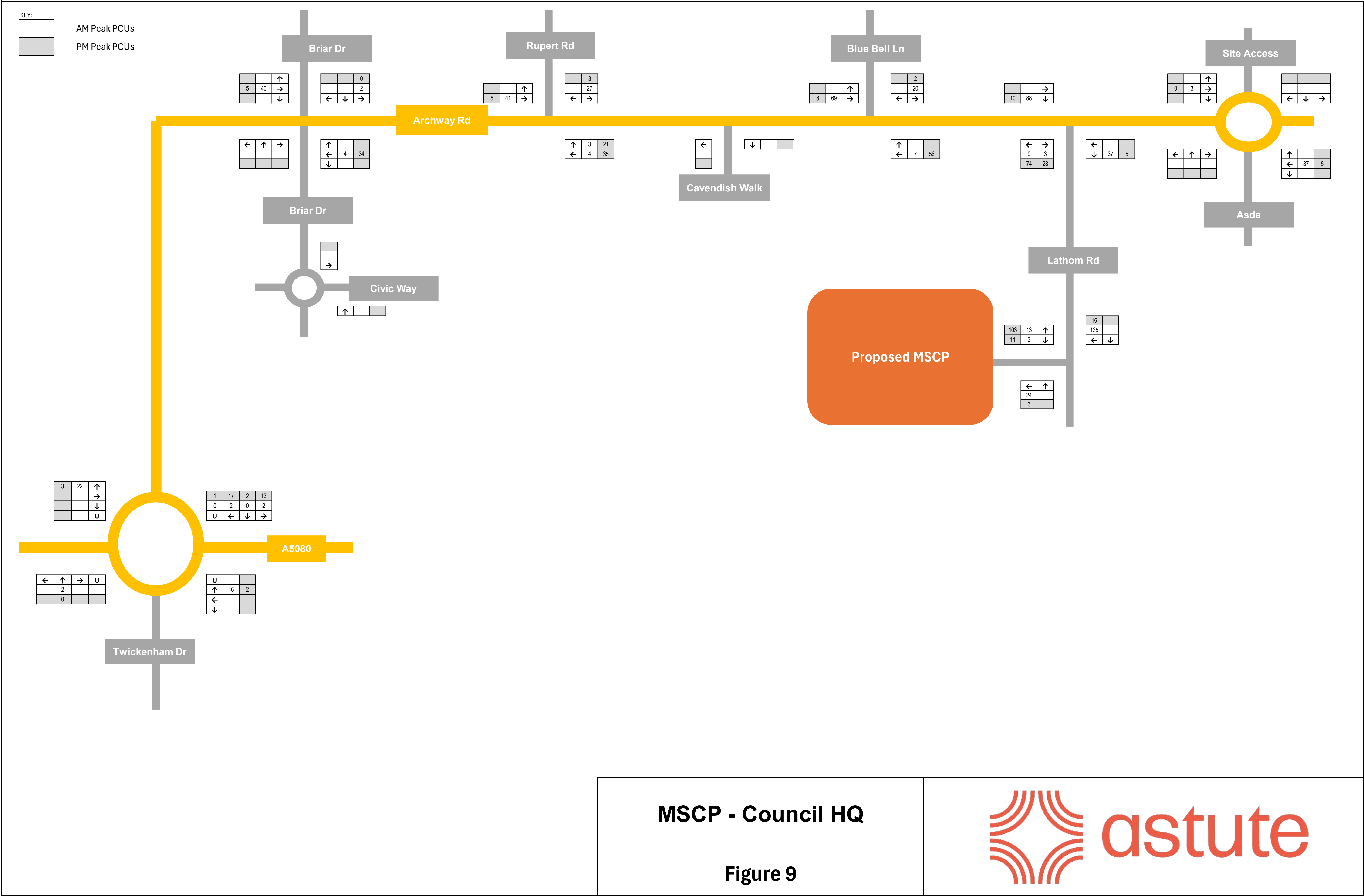


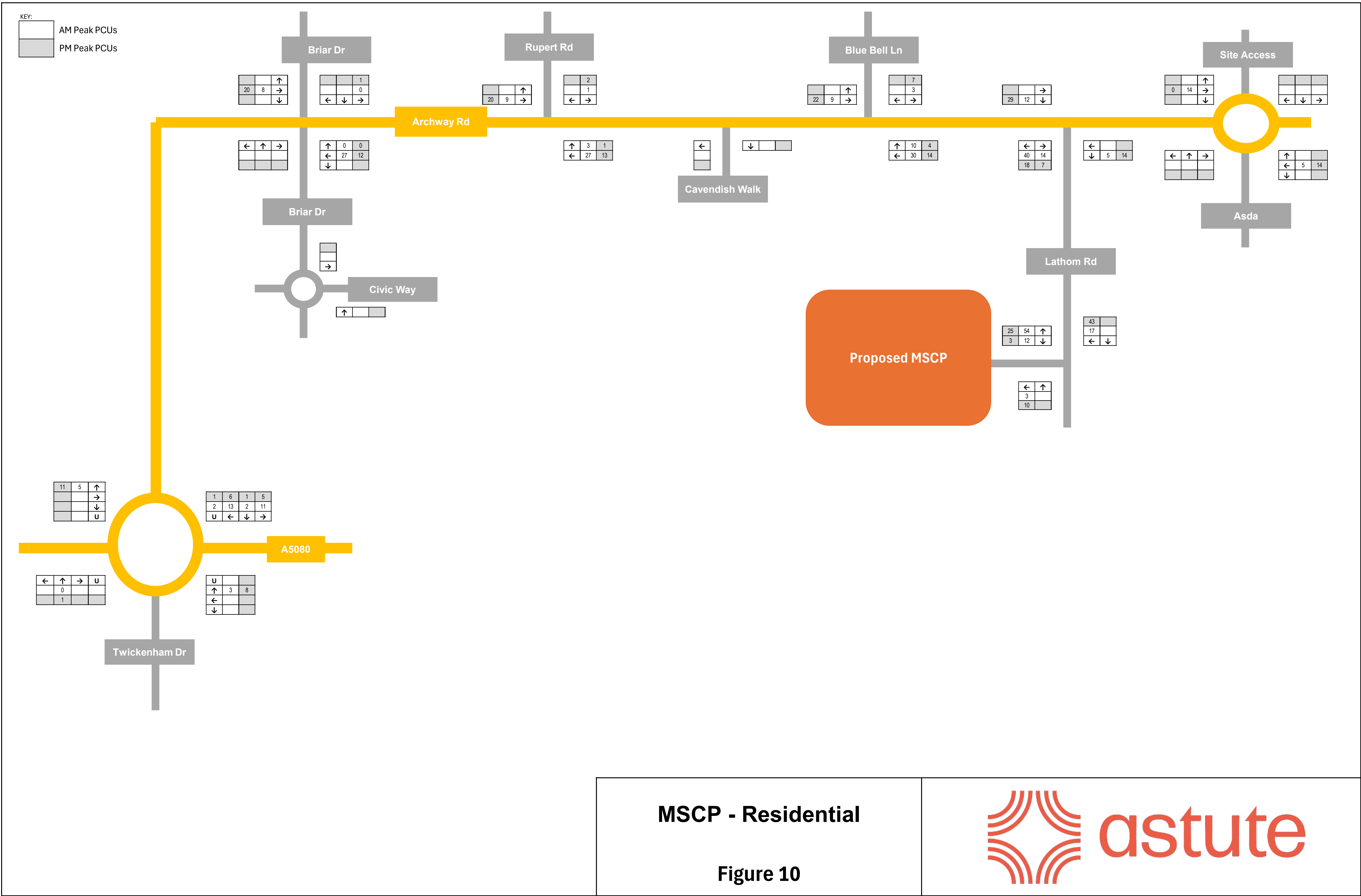


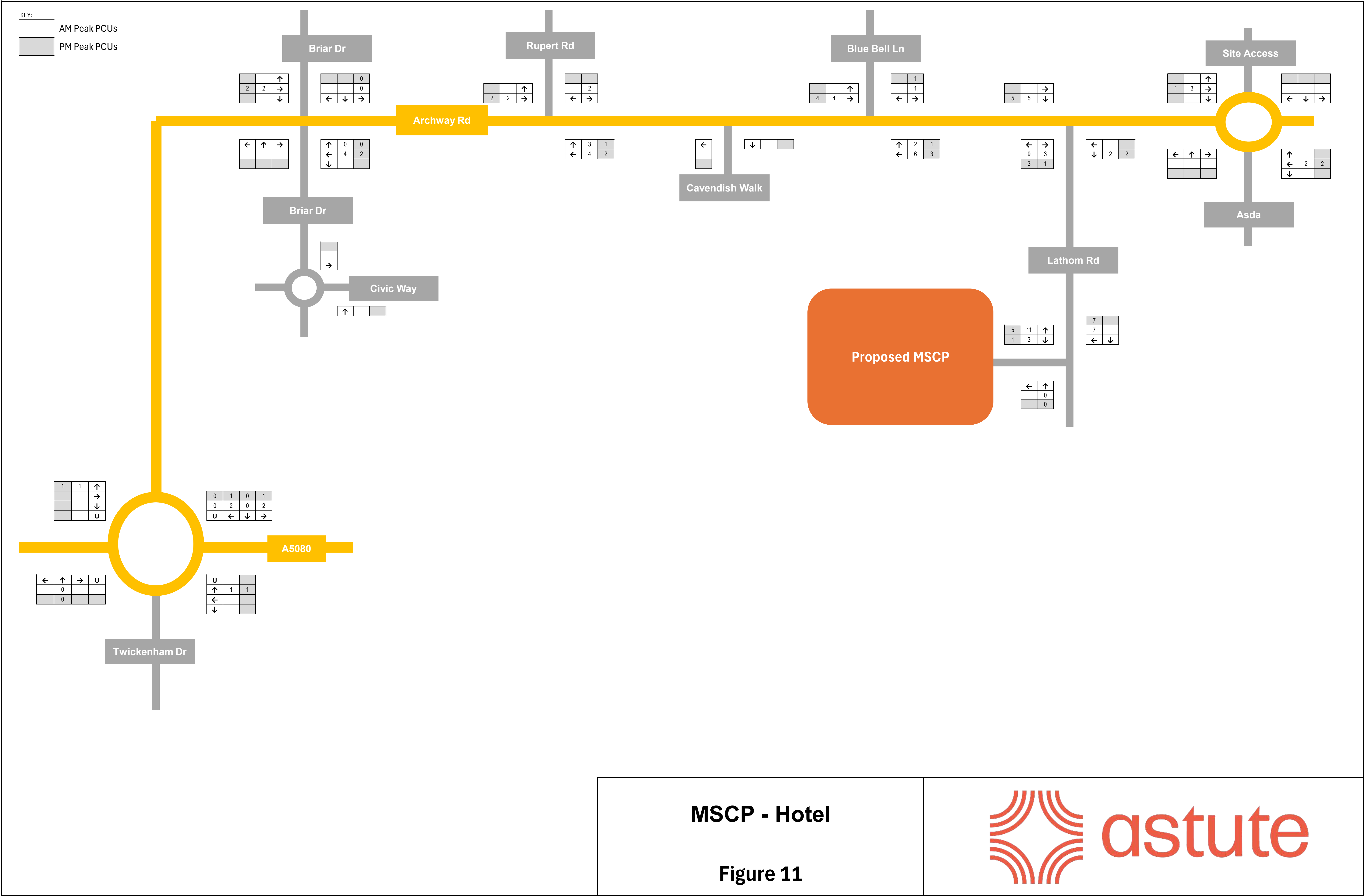
Archway Road Car Parks - Existing Trips

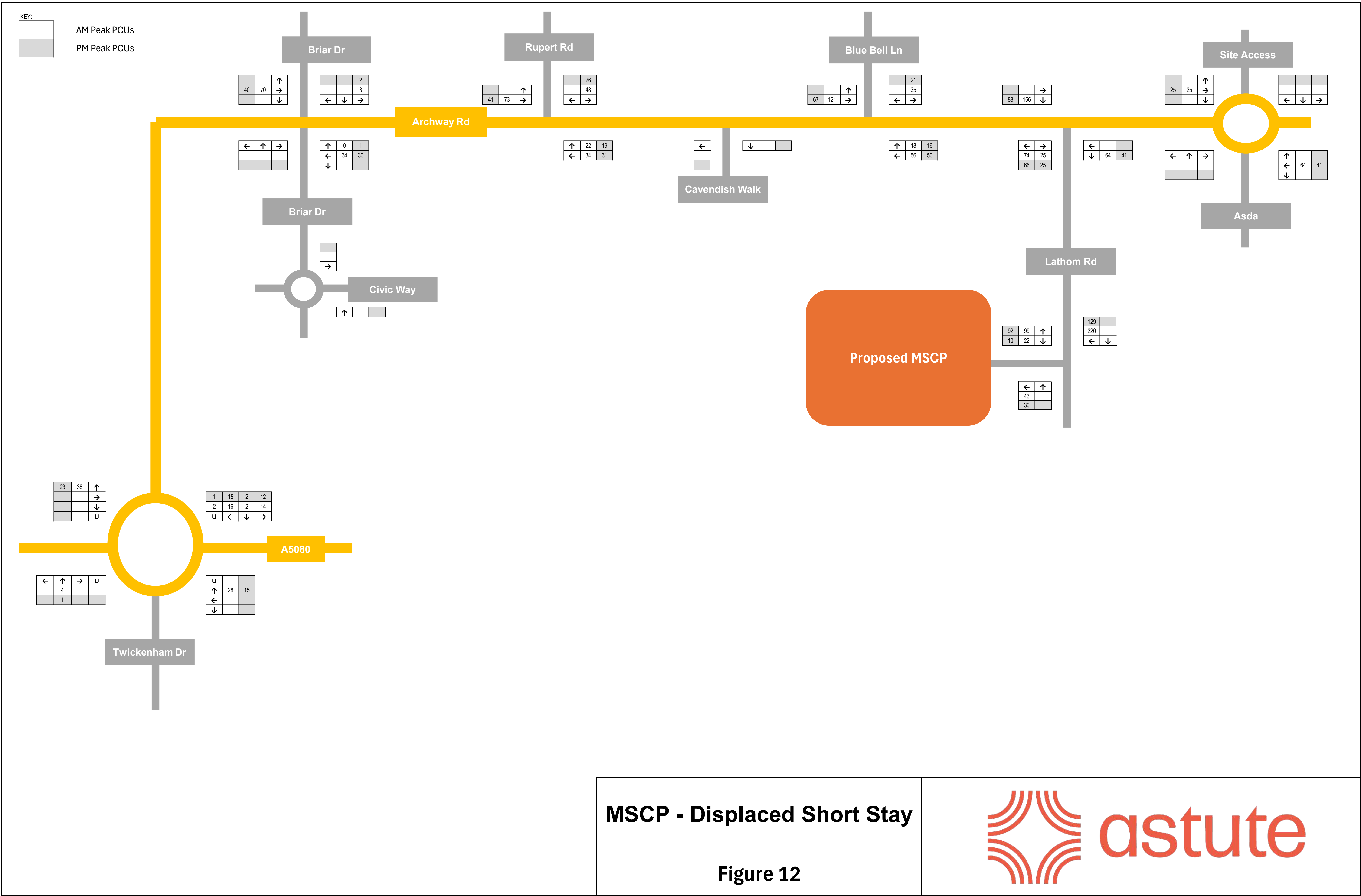
Figure 8

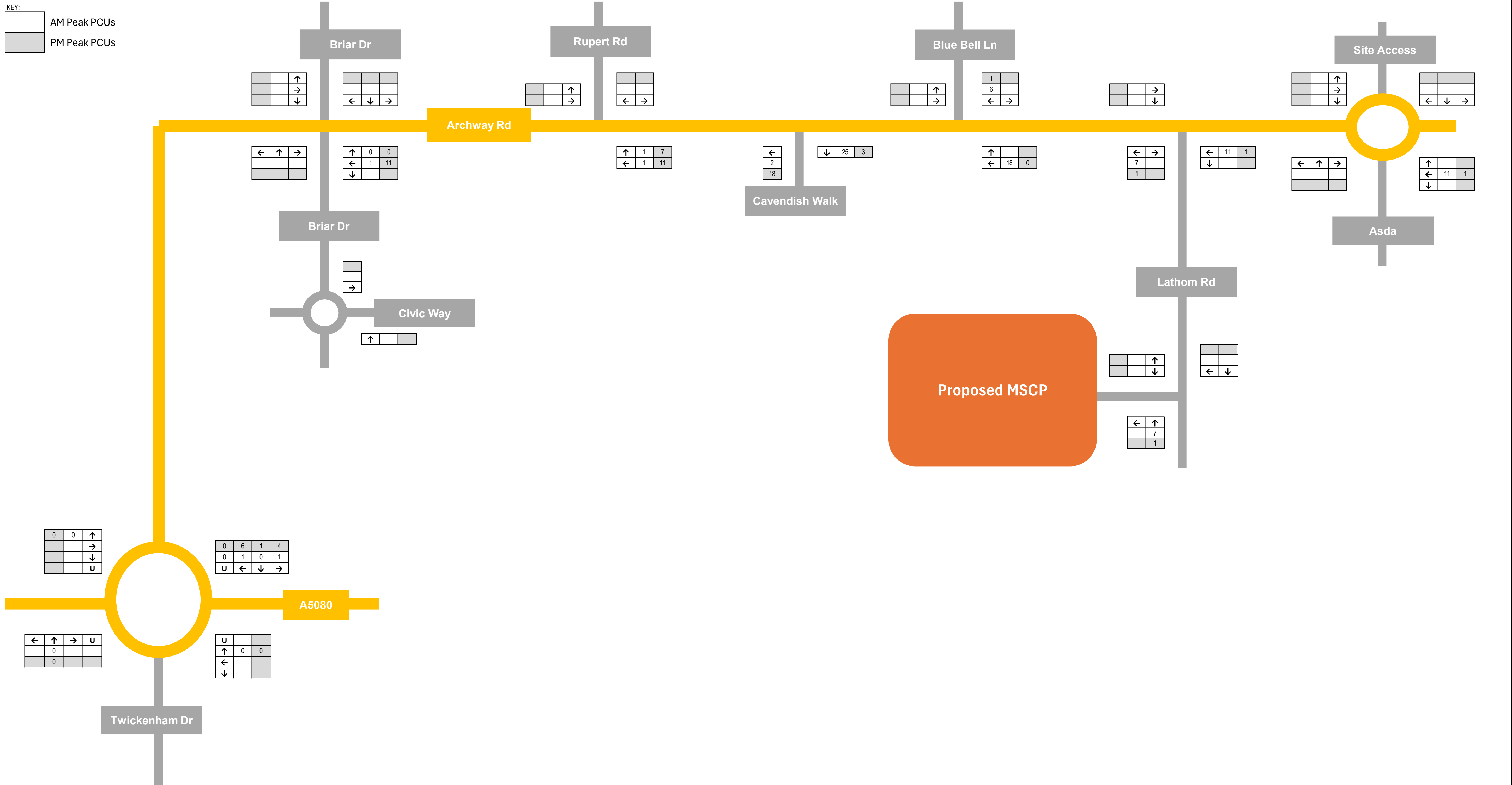








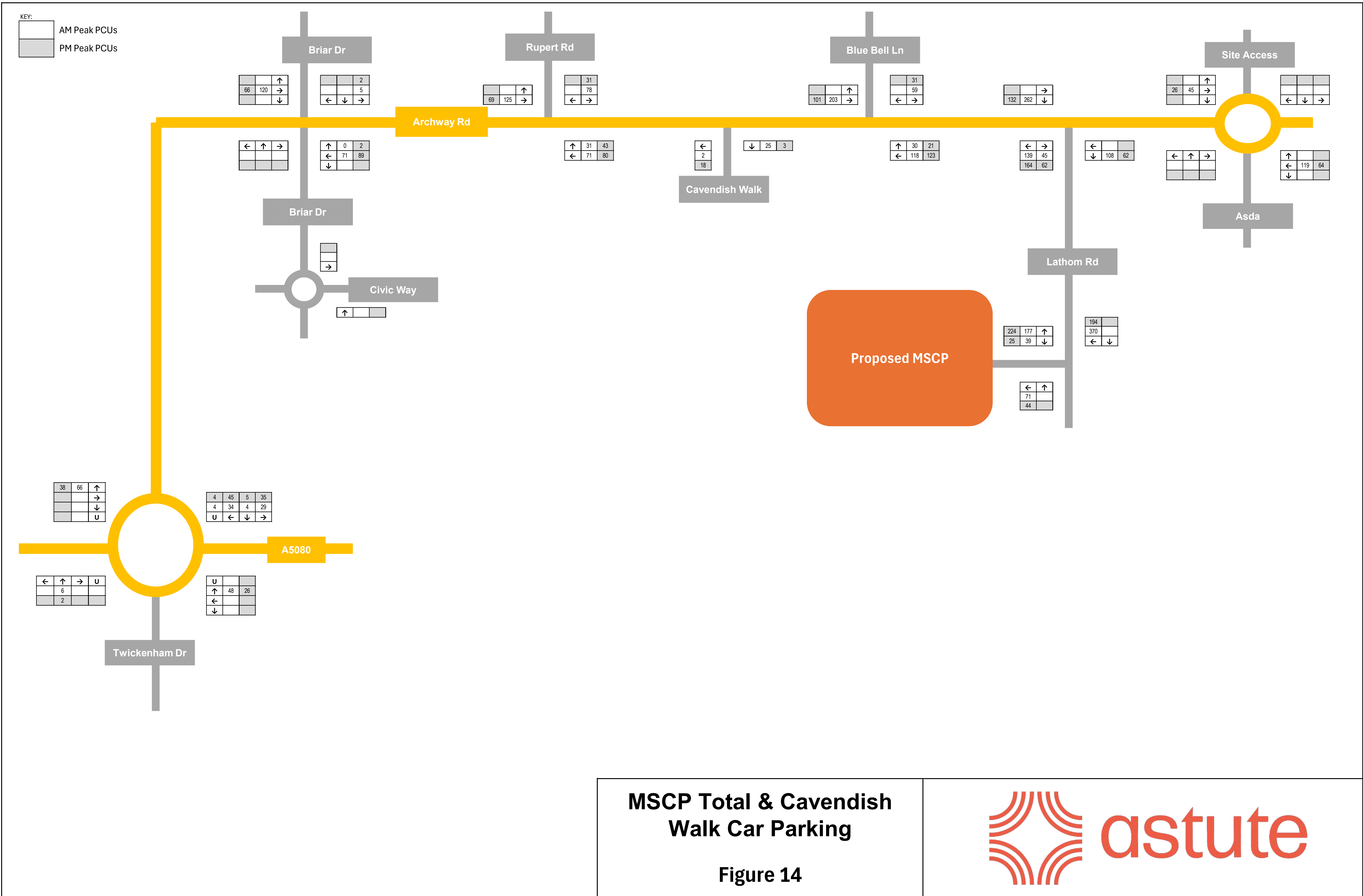


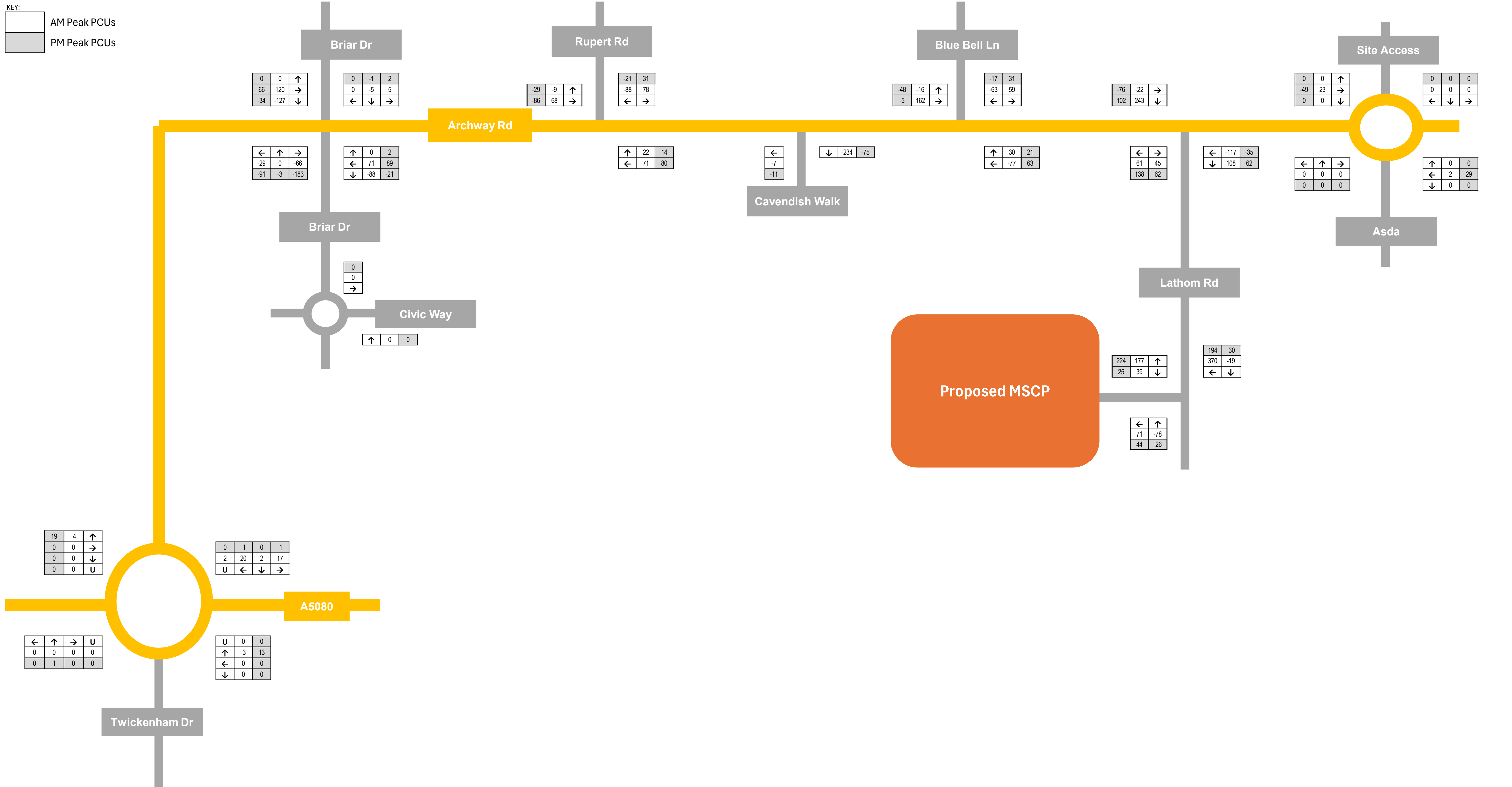


Cavendish Walk Car Parking

Figure 13



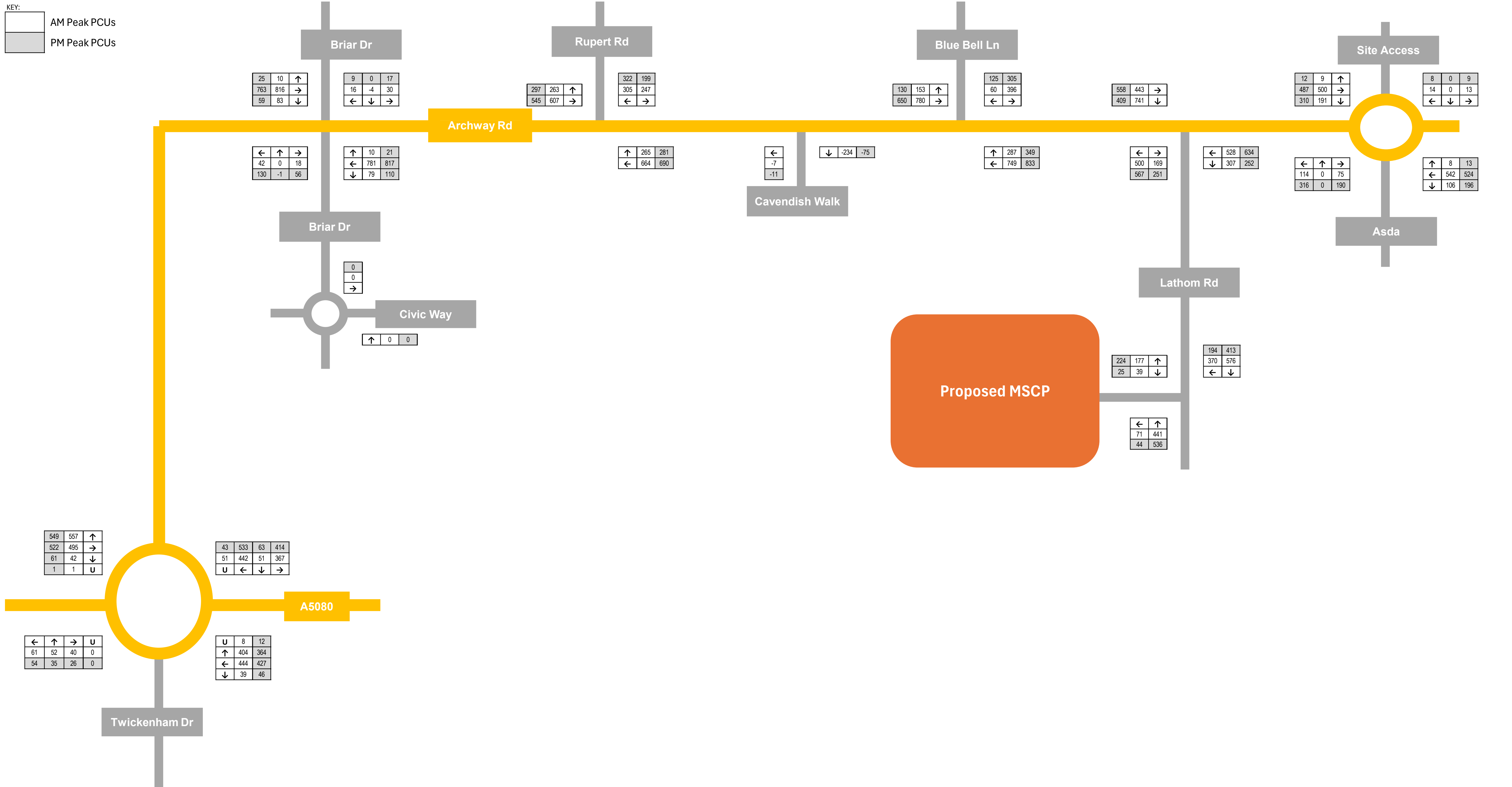




Net Change - Existing vs Proposed

Figure 15





2031 Baseline 'With Development'

Figure 16



Junctions 11														
PICADY 11 - Priority Intersection Module														
Version: 11.1.0.2307														
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+44 (0)1344 379777 software@trl.co.uk trlsoftware.com														
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution														

Filename: Archway Rd-Blue Bell Ln_existing config v2.j11

Path: C:\Users\OliverMcLaughlin\Astute Transport\Astute Transport - Shared Drive\Jobs\2025\A25008 Huyton TC Regeneration\Analysis\JUNCTIONS\Post App TAA

Report generation date: 05/08/2026 12:17:33

»D1 - 2025 | Survey | AM

»D2 - 2025 | Survey | PM

»D3 - 2031 | Base | AM

»D4 - 2031 | Base | PM

»D5 - 2031 | Base+Dev | AM

»D6 - 2031 | Base+Dev | PM

Summary of junction performance

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
	2025 - Survey													
Stream B-C	D1	2.4	25.99	0.71	D	6.93	A	D2	1.7	22.74	0.64	C	7.23	A
Stream B-A		1.2	34.85	0.54	D				1.6	40.84	0.61	E		
Stream C-AB		1.3	9.41	0.47	A				2.3	11.13	0.60	B		
	2031 - Base													
Stream B-C	D3	4.2	43.10	0.82	E	10.88	B	D4	5.7	50.54	0.87	F	11.75	B
Stream B-A		2.2	61.68	0.70	F				1.2	68.09	0.54	F		
Stream C-AB		1.6	9.63	0.51	A				2.3	11.26	0.60	B		
	2031 - Base+Dev													
Stream B-C	D5	4.6	42.73	0.84	E	10.31	B	D6	3.6	41.10	0.80	E	11.61	B
Stream B-A		1.2	54.13	0.56	F				2.5	70.80	0.73	F		
Stream C-AB		2.2	10.91	0.58	B				3.8	12.21	0.69	B		

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.



Appendix G

File summary

File Description

Title	B5199 Archway Road / Blue Bell Lane
Location	Huyton
Site number	
Date	23/07/2023
Version	v2
Status	Updated File
Identifier	GW
Client	
Jobnumber	
Enumerator	AzureAD\GennaWoods
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

PICADY short flare model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
JUNCTIONS 11.1	5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓
D3	2031	Base	AM	ONE HOUR	08:00	09:30	15	✓
D4	2031	Base	PM	ONE HOUR	16:30	18:00	15	✓
D5	2031	Base+Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2031	Base+Dev	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

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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	B5199 Archway Road / Blue Bell Lane	T-Junction	Two-way	Two-way	Two-way		6.93	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.93	A

Arms

Arms

Arm	Name	Description	Arm type
A	Archway Rd W		Major
B	Blue Bell Ln		Minor
C	Archway Rd E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Archway Rd E	13.75	✓	1.40		250.0	✓	2.00

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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Blue Bell Ln	One lane plus flare	10.00	7.60	5.60	3.50	2.50	✓	2.00	60	53

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	546	0.064	0.161	0.101	0.230
B-C	710	0.072	0.183	-	-
C-B	719	0.185	0.185	-	-

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	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Archway Rd W		ONE HOUR	✓	737	100.000
B - Blue Bell Ln		ONE HOUR	✓	432	100.000
C - Archway Rd E		ONE HOUR	✓	1003	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	158	579
	B - Blue Bell Ln	116	0	316
	C - Archway Rd E	762	241	0

Proportions

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0.00	0.21	0.79
	B - Blue Bell Ln	0.27	0.00	0.73
	C - Archway Rd E	0.76	0.24	0.00

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	3	1
	B - Blue Bell Ln	7	0	2
	C - Archway Rd E	4	9	0

Average PCU Per Veh

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	1.000	1.030	1.010
	B - Blue Bell Ln	1.070	1.000	1.020
	C - Archway Rd E	1.040	1.090	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Archway Rd W	555	555
	B - Blue Bell Ln	325	325
	C - Archway Rd E	755	755
08:15-08:30	A - Archway Rd W	663	663
	B - Blue Bell Ln	388	388
	C - Archway Rd E	902	902
08:30-08:45	A - Archway Rd W	811	811
	B - Blue Bell Ln	476	476
	C - Archway Rd E	1104	1104
08:45-09:00	A - Archway Rd W	811	811
	B - Blue Bell Ln	476	476
	C - Archway Rd E	1104	1104
09:00-09:15	A - Archway Rd W	663	663
	B - Blue Bell Ln	388	388
	C - Archway Rd E	902	902
09:15-09:30	A - Archway Rd W	555	555
	B - Blue Bell Ln	325	325
	C - Archway Rd E	755	755

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.71	25.99	2.4	D	290	435
B-A	0.54	34.85	1.2	D	106	160
C-AB	0.47	9.41	1.3	A	272	408
C-A					648	972
A-B					145	217
A-C					531	797

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	238	59	0.00	582	0.408	235	0.0	0.7	10.491	B
B-A	87	22	0.00	361	0.242	86	0.0	0.3	13.932	B
C-AB	199	50	0.00	677	0.294	197	0.0	0.5	8.117	A
C-A	556	139	0.00			556				
A-B	119	30	0.00			119				
A-C	436	109	0.00			436				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	284	71	0.00	550	0.517	283	0.7	1.1	13.658	B
B-A	104	26	0.00	317	0.329	104	0.3	0.5	18.016	C
C-AB	255	64	0.00	704	0.363	255	0.5	0.7	8.679	A
C-A	646	162	0.00			646				
A-B	142	36	0.00			142				
A-C	521	130	0.00			521				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	348	87	0.00	491	0.709	343	1.1	2.3	24.089	C
B-A	128	32	0.00	241	0.530	125	0.5	1.1	32.669	D
C-AB	362	90	0.00	778	0.465	360	0.7	1.2	9.318	A
C-A	742	186	0.00			742				
A-B	174	43	0.00			174				
A-C	637	159	0.00			637				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	348	87	0.00	487	0.714	347	2.3	2.4	25.986	D
B-A	128	32	0.00	237	0.538	127	1.1	1.2	34.846	D
C-AB	362	90	0.00	776	0.466	362	1.2	1.3	9.408	A
C-A	742	186	0.00			742				
A-B	174	43	0.00			174				
A-C	637	159	0.00			637				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	284	71	0.00	547	0.519	289	2.4	1.1	14.493	B
B-A	104	26	0.00	314	0.332	107	1.2	0.5	18.786	C
C-AB	255	64	0.00	701	0.364	258	1.3	0.8	8.800	A
C-A	646	162	0.00			646				
A-B	142	36	0.00			142				
A-C	521	130	0.00			521				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	238	59	0.00	581	0.409	240	1.1	0.7	10.800	B
B-A	87	22	0.00	360	0.243	88	0.5	0.3	14.209	B
C-AB	199	50	0.00	676	0.295	200	0.8	0.5	8.218	A
C-A	556	139	0.00			556				
A-B	119	30	0.00			119				
A-C	436	109	0.00			436				

D2 - 2025 | Survey | 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	B5199 Archway Road / Blue Bell Lane	T-Junction	Two-way	Two-way	Two-way		7.23	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.23	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Archway Rd W		ONE HOUR	✓	781	100.000
B - Blue Bell Ln		ONE HOUR	✓	391	100.000
C - Archway Rd E		ONE HOUR	✓	1022	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	167	614
	B - Blue Bell Ln	134	0	257
	C - Archway Rd E	715	307	0

Proportions

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0.00	0.21	0.79
	B - Blue Bell Ln	0.34	0.00	0.66
	C - Archway Rd E	0.70	0.30	0.00

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	2	1
	B - Blue Bell Ln	9	0	2
	C - Archway Rd E	3	4	0

Average PCU Per Veh

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	1.000	1.020	1.010
	B - Blue Bell Ln	1.090	1.000	1.020
	C - Archway Rd E	1.030	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Archway Rd W	588	588
	B - Blue Bell Ln	294	294
	C - Archway Rd E	769	769
16:45-17:00	A - Archway Rd W	702	702
	B - Blue Bell Ln	352	352
	C - Archway Rd E	919	919
17:00-17:15	A - Archway Rd W	860	860
	B - Blue Bell Ln	430	430
	C - Archway Rd E	1125	1125
17:15-17:30	A - Archway Rd W	860	860
	B - Blue Bell Ln	430	430
	C - Archway Rd E	1125	1125
17:30-17:45	A - Archway Rd W	702	702
	B - Blue Bell Ln	352	352
	C - Archway Rd E	919	919
17:45-18:00	A - Archway Rd W	588	588
	B - Blue Bell Ln	294	294
	C - Archway Rd E	769	769

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.64	22.74	1.7	C	236	354
B-A	0.61	40.84	1.6	E	123	184
C-AB	0.60	11.13	2.3	B	376	563
C-A					562	843
A-B					153	230
A-C					563	845

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	193	48	0.00	564	0.343	191	0.0	0.5	9.799	A
B-A	101	25	0.00	356	0.283	99	0.0	0.4	15.178	C
C-AB	263	66	0.00	693	0.379	260	0.0	0.7	8.584	A
C-A	507	127	0.00			507				
A-B	126	31	0.00			126				
A-C	462	116	0.00			462				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	231	58	0.00	526	0.439	230	0.5	0.8	12.363	B
B-A	120	30	0.00	313	0.385	120	0.4	0.7	20.176	C
C-AB	346	87	0.00	739	0.468	344	0.7	1.1	9.477	A
C-A	573	143	0.00			573				
A-B	150	38	0.00			150				
A-C	552	138	0.00			552				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	283	71	0.00	449	0.630	280	0.8	1.6	21.239	C
B-A	148	37	0.00	245	0.603	144	0.7	1.5	37.812	E
C-AB	518	129	0.00	859	0.603	513	1.1	2.2	10.854	B
C-A	607	152	0.00			607				
A-B	184	46	0.00			184				
A-C	676	169	0.00			676				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	283	71	0.00	443	0.638	283	1.6	1.7	22.741	C
B-A	148	37	0.00	242	0.609	147	1.5	1.6	40.842	E
C-AB	518	129	0.00	858	0.604	518	2.2	2.3	11.132	B
C-A	607	152	0.00			607				
A-B	184	46	0.00			184				
A-C	676	169	0.00			676				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	231	58	0.00	522	0.443	235	1.7	0.8	12.944	B
B-A	120	30	0.00	311	0.387	124	1.6	0.7	21.341	C
C-AB	346	87	0.00	738	0.469	351	2.3	1.2	9.789	A
C-A	573	143	0.00			573				
A-B	150	38	0.00			150				
A-C	552	138	0.00			552				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	193	48	0.00	562	0.344	195	0.8	0.5	10.021	B
B-A	101	25	0.00	355	0.284	102	0.7	0.4	15.575	C
C-AB	263	66	0.00	693	0.379	264	1.2	0.7	8.771	A
C-A	507	127	0.00			507				
A-B	126	31	0.00			126				
A-C	462	116	0.00			462				

D3 - 2031 | Base | 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	B5199 Archway Road / Blue Bell Lane	T-Junction	Two-way	Two-way	Two-way		10.88	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.88	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2031	Base	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Archway Rd W		ONE HOUR	✓	787	100.000
B - Blue Bell Ln		ONE HOUR	✓	461	100.000
C - Archway Rd E		ONE HOUR	✓	1084	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	169	618
	B - Blue Bell Ln	124	0	337
	C - Archway Rd E	827	257	0

Proportions

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0.00	0.21	0.79
	B - Blue Bell Ln	0.27	0.00	0.73
	C - Archway Rd E	0.76	0.24	0.00

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	3	1
	B - Blue Bell Ln	7	0	2
	C - Archway Rd E	4	9	0

Average PCU Per Veh

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	1.000	1.030	1.010
	B - Blue Bell Ln	1.070	1.000	1.020
	C - Archway Rd E	1.040	1.090	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Archway Rd W	592	592
	B - Blue Bell Ln	347	347
	C - Archway Rd E	816	816
08:15-08:30	A - Archway Rd W	707	707
	B - Blue Bell Ln	414	414
	C - Archway Rd E	974	974
08:30-08:45	A - Archway Rd W	867	867
	B - Blue Bell Ln	508	508
	C - Archway Rd E	1194	1194
08:45-09:00	A - Archway Rd W	867	867
	B - Blue Bell Ln	508	508
	C - Archway Rd E	1194	1194
09:00-09:15	A - Archway Rd W	707	707
	B - Blue Bell Ln	414	414
	C - Archway Rd E	974	974
09:15-09:30	A - Archway Rd W	592	592
	B - Blue Bell Ln	347	347
	C - Archway Rd E	816	816

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.82	43.10	4.2	E	309	464
B-A	0.70	61.68	2.2	F	114	171
C-AB	0.51	9.63	1.6	A	305	458
C-A					689	1034
A-B					155	233
A-C					567	851

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	254	63	0.00	572	0.444	251	0.0	0.8	11.321	B
B-A	93	23	0.00	346	0.270	92	0.0	0.4	15.078	C
C-AB	218	54	0.00	685	0.318	215	0.0	0.6	8.277	A
C-A	599	150	0.00			599				
A-B	127	32	0.00			127				
A-C	465	116	0.00			465				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	303	76	0.00	534	0.567	301	0.8	1.3	15.612	C
B-A	111	28	0.00	295	0.378	111	0.4	0.6	20.758	C
C-AB	284	71	0.00	723	0.392	282	0.6	0.8	8.850	A
C-A	691	173	0.00			691				
A-B	152	38	0.00			152				
A-C	556	139	0.00			556				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	371	93	0.00	459	0.809	362	1.3	3.6	35.064	E
B-A	137	34	0.00	204	0.670	132	0.6	1.9	50.296	F
C-AB	415	104	0.00	822	0.505	412	0.8	1.5	9.500	A
C-A	778	195	0.00			778				
A-B	186	47	0.00			186				
A-C	680	170	0.00			680				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	371	93	0.00	450	0.824	369	3.6	4.2	43.099	E
B-A	137	34	0.00	196	0.698	135	1.9	2.2	61.682	F
C-AB	415	104	0.00	820	0.506	415	1.5	1.6	9.627	A
C-A	778	195	0.00			778				
A-B	186	47	0.00			186				
A-C	680	170	0.00			680				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	303	76	0.00	528	0.574	314	4.2	1.4	17.954	C
B-A	111	28	0.00	290	0.385	117	2.2	0.7	23.065	C
C-AB	284	71	0.00	719	0.394	286	1.6	0.9	9.014	A
C-A	691	173	0.00			691				
A-B	152	38	0.00			152				
A-C	556	139	0.00			556				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	254	63	0.00	570	0.445	256	1.4	0.8	11.784	B
B-A	93	23	0.00	344	0.271	95	0.7	0.4	15.498	C
C-AB	218	54	0.00	684	0.318	219	0.9	0.6	8.400	A
C-A	599	150	0.00			599				
A-B	127	32	0.00			127				
A-C	465	116	0.00			465				

D4 - 2031 | Base | 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	B5199 Archway Road / Blue Bell Lane	T-Junction	Two-way	Two-way	Two-way		11.75	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.75	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2031	Base	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Archway Rd W		ONE HOUR	✓	933	100.000
B - Blue Bell Ln		ONE HOUR	✓	456	100.000
C - Archway Rd E		ONE HOUR	✓	1036	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	153	780
	B - Blue Bell Ln	60	0	396
	C - Archway Rd E	749	287	0

Proportions

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0.00	0.16	0.84
	B - Blue Bell Ln	0.13	0.00	0.87
	C - Archway Rd E	0.72	0.28	0.00

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	2	1
	B - Blue Bell Ln	9	0	2
	C - Archway Rd E	3	4	0

Average PCU Per Veh

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	1.000	1.020	1.010
	B - Blue Bell Ln	1.090	1.000	1.020
	C - Archway Rd E	1.030	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Archway Rd W	702	702
	B - Blue Bell Ln	343	343
	C - Archway Rd E	780	780
16:45-17:00	A - Archway Rd W	839	839
	B - Blue Bell Ln	410	410
	C - Archway Rd E	931	931
17:00-17:15	A - Archway Rd W	1027	1027
	B - Blue Bell Ln	502	502
	C - Archway Rd E	1141	1141
17:15-17:30	A - Archway Rd W	1027	1027
	B - Blue Bell Ln	502	502
	C - Archway Rd E	1141	1141
17:30-17:45	A - Archway Rd W	839	839
	B - Blue Bell Ln	410	410
	C - Archway Rd E	931	931
17:45-18:00	A - Archway Rd W	702	702
	B - Blue Bell Ln	343	343
	C - Archway Rd E	780	780

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.87	50.54	5.7	F	363	545
B-A	0.54	68.09	1.2	F	55	83
C-AB	0.60	11.26	2.3	B	357	536
C-A					594	890
A-B					140	211
A-C					716	1074

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	298	75	0.00	584	0.511	294	0.0	1.0	12.493	B
B-A	45	11	0.00	313	0.144	44	0.0	0.2	14.586	B
C-AB	246	62	0.00	671	0.367	243	0.0	0.7	8.706	A
C-A	534	133	0.00			534				
A-B	115	29	0.00			115				
A-C	587	147	0.00			587				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	356	89	0.00	553	0.644	353	1.0	1.7	18.102	C
B-A	54	13	0.00	250	0.216	53	0.2	0.3	19.908	C
C-AB	326	82	0.00	714	0.457	325	0.7	1.1	9.613	A
C-A	605	151	0.00			605				
A-B	138	34	0.00			138				
A-C	701	175	0.00			701				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	436	109	0.00	503	0.866	423	1.7	5.0	40.585	E
B-A	66	17	0.00	135	0.489	63	0.3	0.9	53.048	F
C-AB	499	125	0.00	836	0.597	494	1.1	2.2	10.974	B
C-A	642	160	0.00			642				
A-B	168	42	0.00			168				
A-C	859	215	0.00			859				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	436	109	0.00	500	0.872	433	5.0	5.7	50.540	F
B-A	66	17	0.00	122	0.544	65	0.9	1.2	68.089	F
C-AB	499	125	0.00	835	0.597	498	2.2	2.3	11.264	B
C-A	642	160	0.00			642				
A-B	168	42	0.00			168				
A-C	859	215	0.00			859				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	356	89	0.00	550	0.647	371	5.7	2.0	21.944	C
B-A	54	13	0.00	240	0.225	57	1.2	0.3	21.864	C
C-AB	326	82	0.00	713	0.458	331	2.3	1.2	9.938	A
C-A	605	151	0.00			605				
A-B	138	34	0.00			138				
A-C	701	175	0.00			701				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	298	75	0.00	583	0.511	302	2.0	1.1	13.199	B
B-A	45	11	0.00	310	0.146	46	0.3	0.2	14.884	B
C-AB	246	62	0.00	671	0.367	248	1.2	0.7	8.892	A
C-A	534	133	0.00			534				
A-B	115	29	0.00			115				
A-C	587	147	0.00			587				

D5 - 2031 | Base+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	B5199 Archway Road / Blue Bell Lane	T-Junction	Two-way	Two-way	Two-way		10.31	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.31	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2031	Base+Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Archway Rd W		ONE HOUR	✓	871	100.000
B - Blue Bell Ln		ONE HOUR	✓	453	100.000
C - Archway Rd E		ONE HOUR	✓	1048	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	152	719
	B - Blue Bell Ln	79	0	374
	C - Archway Rd E	764	284	0

Proportions

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0.00	0.17	0.83
	B - Blue Bell Ln	0.17	0.00	0.83
	C - Archway Rd E	0.73	0.27	0.00

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	3	1
	B - Blue Bell Ln	7	0	2
	C - Archway Rd E	4	9	0

Average PCU Per Veh

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	1.000	1.030	1.010
	B - Blue Bell Ln	1.070	1.000	1.020
	C - Archway Rd E	1.040	1.090	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Archway Rd W	656	656
	B - Blue Bell Ln	341	341
	C - Archway Rd E	789	789
08:15-08:30	A - Archway Rd W	783	783
	B - Blue Bell Ln	407	407
	C - Archway Rd E	942	942
08:30-08:45	A - Archway Rd W	959	959
	B - Blue Bell Ln	499	499
	C - Archway Rd E	1154	1154
08:45-09:00	A - Archway Rd W	959	959
	B - Blue Bell Ln	499	499
	C - Archway Rd E	1154	1154
09:00-09:15	A - Archway Rd W	783	783
	B - Blue Bell Ln	407	407
	C - Archway Rd E	942	942
09:15-09:30	A - Archway Rd W	656	656
	B - Blue Bell Ln	341	341
	C - Archway Rd E	789	789

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.84	42.73	4.6	E	343	515
B-A	0.56	54.13	1.2	F	72	109
C-AB	0.58	10.91	2.2	B	353	530
C-A					609	913
A-B					139	209
A-C					660	990

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	282	70	0.00	582	0.483	278	0.0	0.9	11.915	B
B-A	59	15	0.00	326	0.183	59	0.0	0.2	14.374	B
C-AB	245	61	0.00	685	0.358	242	0.0	0.7	8.774	A
C-A	544	136	0.00			544				
A-B	114	29	0.00			114				
A-C	541	135	0.00			541				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	336	84	0.00	550	0.611	334	0.9	1.5	16.761	C
B-A	71	18	0.00	269	0.264	70	0.2	0.4	19.379	C
C-AB	324	81	0.00	731	0.444	323	0.7	1.1	9.554	A
C-A	618	154	0.00			618				
A-B	137	34	0.00			137				
A-C	646	162	0.00			646				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	412	103	0.00	495	0.831	402	1.5	4.1	35.774	E
B-A	87	22	0.00	166	0.524	84	0.4	1.1	45.652	E
C-AB	490	122	0.00	851	0.576	486	1.1	2.1	10.659	B
C-A	664	166	0.00			664				
A-B	167	42	0.00			167				
A-C	792	198	0.00			792				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	412	103	0.00	492	0.837	410	4.1	4.6	42.729	E
B-A	87	22	0.00	156	0.556	86	1.1	1.2	54.125	F
C-AB	490	122	0.00	849	0.577	489	2.1	2.2	10.905	B
C-A	664	166	0.00			664				
A-B	167	42	0.00			167				
A-C	792	198	0.00			792				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	336	84	0.00	547	0.614	348	4.6	1.7	19.336	C
B-A	71	18	0.00	262	0.272	74	1.2	0.4	20.903	C
C-AB	324	81	0.00	726	0.447	329	2.2	1.2	9.848	A
C-A	618	154	0.00			618				
A-B	137	34	0.00			137				
A-C	646	162	0.00			646				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	282	70	0.00	581	0.484	284	1.7	1.0	12.480	B
B-A	59	15	0.00	323	0.184	60	0.4	0.2	14.676	B
C-AB	245	61	0.00	683	0.359	247	1.2	0.7	8.952	A
C-A	544	136	0.00			544				
A-B	114	29	0.00			114				
A-C	541	135	0.00			541				

D6 - 2031 | Base+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	B5199 Archway Road / Blue Bell Lane	T-Junction	Two-way	Two-way	Two-way		11.61	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.61	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2031	Base+Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Archway Rd W		ONE HOUR	✓	780	100.000
B - Blue Bell Ln		ONE HOUR	✓	430	100.000
C - Archway Rd E		ONE HOUR	✓	1182	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	130	650
	B - Blue Bell Ln	125	0	305
	C - Archway Rd E	833	349	0

Proportions

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0.00	0.17	0.83
	B - Blue Bell Ln	0.29	0.00	0.71
	C - Archway Rd E	0.70	0.30	0.00

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	0	2	1
	B - Blue Bell Ln	9	0	2
	C - Archway Rd E	3	4	0

Average PCU Per Veh

	To			
		A - Archway Rd W	B - Blue Bell Ln	C - Archway Rd E
From	A - Archway Rd W	1.000	1.020	1.010
	B - Blue Bell Ln	1.090	1.000	1.020
	C - Archway Rd E	1.030	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Archway Rd W	587	587
	B - Blue Bell Ln	324	324
	C - Archway Rd E	890	890
16:45-17:00	A - Archway Rd W	701	701
	B - Blue Bell Ln	387	387
	C - Archway Rd E	1063	1063
17:00-17:15	A - Archway Rd W	859	859
	B - Blue Bell Ln	473	473
	C - Archway Rd E	1301	1301
17:15-17:30	A - Archway Rd W	859	859
	B - Blue Bell Ln	473	473
	C - Archway Rd E	1301	1301
17:30-17:45	A - Archway Rd W	701	701
	B - Blue Bell Ln	387	387
	C - Archway Rd E	1063	1063
17:45-18:00	A - Archway Rd W	587	587
	B - Blue Bell Ln	324	324
	C - Archway Rd E	890	890

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.80	41.10	3.6	E	280	420
B-A	0.73	70.80	2.5	F	115	172
C-AB	0.69	12.21	3.8	B	479	719
C-A					605	908
A-B					119	179
A-C					596	895

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	230	57	0.00	565	0.406	227	0.0	0.7	10.766	B
B-A	94	24	0.00	332	0.284	92	0.0	0.4	16.295	C
C-AB	316	79	0.00	734	0.430	312	0.0	0.9	8.809	A
C-A	574	143	0.00			574				
A-B	98	24	0.00			98				
A-C	489	122	0.00			489				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	274	69	0.00	524	0.523	273	0.7	1.1	14.503	B
B-A	112	28	0.00	281	0.400	111	0.4	0.7	22.946	C
C-AB	432	108	0.00	812	0.532	430	0.9	1.5	9.780	A
C-A	630	158	0.00			630				
A-B	117	29	0.00			117				
A-C	584	146	0.00			584				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	336	84	0.00	432	0.777	328	1.1	3.1	32.954	D
B-A	138	34	0.00	196	0.702	132	0.7	2.1	56.968	F
C-AB	689	172	0.00	1005	0.685	680	1.5	3.7	11.622	B
C-A	612	153	0.00			612				
A-B	143	36	0.00			143				
A-C	716	179	0.00			716				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	336	84	0.00	419	0.801	334	3.1	3.6	41.096	E
B-A	138	34	0.00	189	0.728	136	2.1	2.5	70.797	F
C-AB	689	172	0.00	1004	0.686	688	3.7	3.8	12.213	B
C-A	612	153	0.00			612				
A-B	143	36	0.00			143				
A-C	716	179	0.00			716				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	274	69	0.00	515	0.532	284	3.6	1.2	16.449	C
B-A	112	28	0.00	276	0.407	119	2.5	0.8	26.005	D
C-AB	432	108	0.00	811	0.533	441	3.8	1.7	10.389	B
C-A	630	158	0.00			630				
A-B	117	29	0.00			117				
A-C	584	146	0.00			584				

17:45 - 18:00

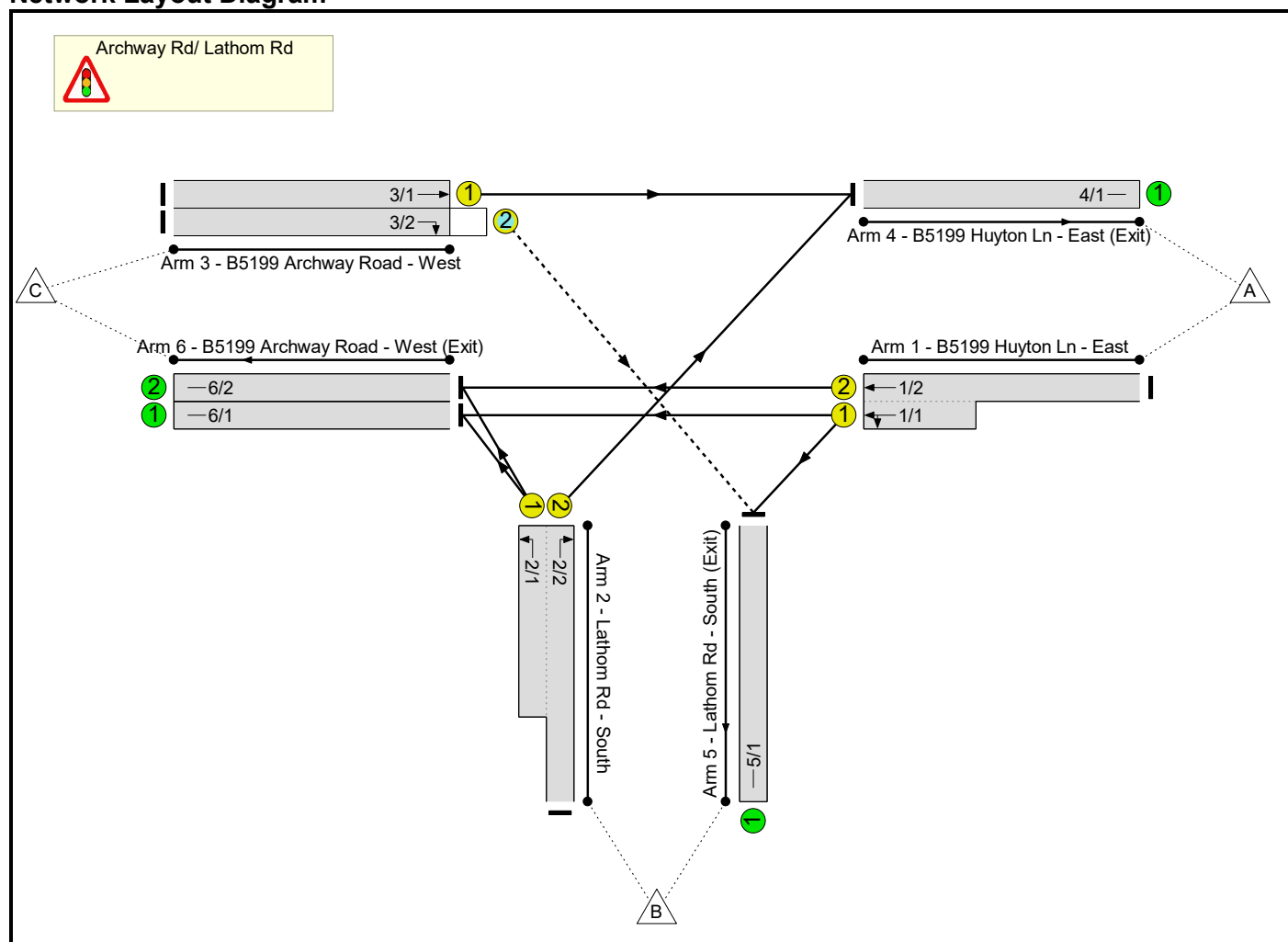
Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	230	57	0.00	563	0.408	232	1.2	0.7	11.140	B
B-A	94	24	0.00	330	0.285	95	0.8	0.4	16.840	C
C-AB	316	79	0.00	734	0.431	319	1.7	1.0	9.096	A
C-A	574	143	0.00			574				
A-B	98	24	0.00			98				
A-C	489	122	0.00			489				

Detailed Input Data And Results

User and Project Details

Project:	A25008 Huyton TC Regeneration
Title:	Archway Rd/ Lathom Rd_Existing Junction Layout
Location:	
Client:	Genr8 Kajima
Design Layout Ref:	v2
Checked By:	GW
Additional detail:	
File name:	Archway Rd-Lathom Rd_existing config v2.lsg3x
Author:	Genna Woods
Company:	Astute Transport Planning Limited
Address:	Huckletree Ancoats, The Express Building, 9 Great Ancoats St, Ancoats, Greater Manchester M4 5AD
Linsig Version:	3, 3, 0, 6

Network Layout Diagram

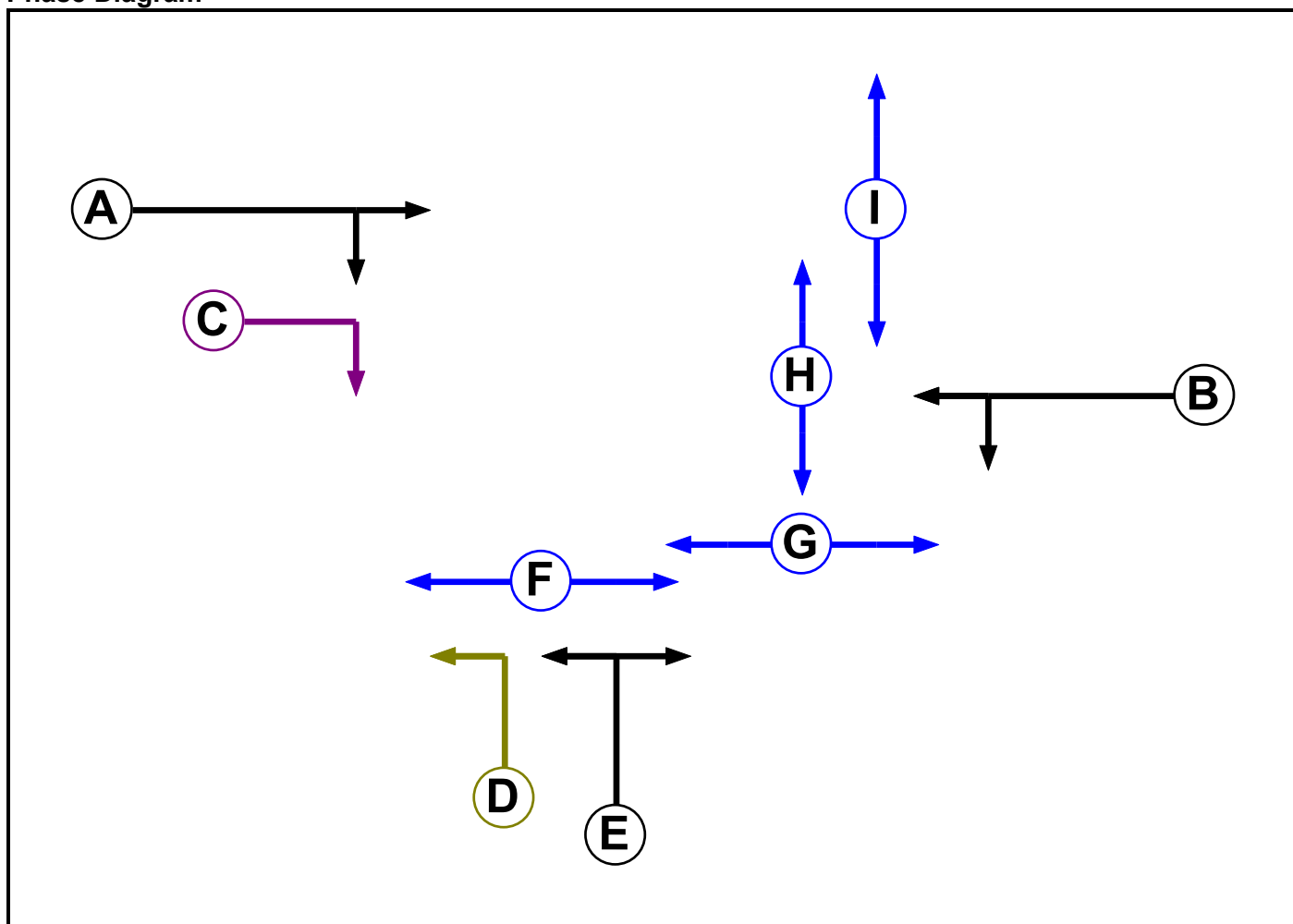


Scenarios

Number	Scenario Name	Flow Group	Network Control Plan	Time	Cycle Time (s)	PRC (%)	Delay (pcuHr)
1	2025 Survey AM	2025 Survey AM	Network Control Plan 1	08:00 - 09:00	90	37.2	12.62
2	2025 Survey PM	2025 Survey PM	Network Control Plan 1	16:30 - 17:30	90	34.2	12.53
3	2030 Without Dev AM	2031 No Dev AM	Network Control Plan 1	08:00 - 09:00	90	26.6	14.82
4	2030 Without Dev PM	2031 No Dev PM	Network Control Plan 1	16:30 - 17:30	90	24.3	14.34
5	2030 With Dev AM	2031 With Dev AM	Network Control Plan 1	08:00 - 09:00	90	0.2	24.31
6	2030 With Dev PM	2031 With Dev PM	Network Control Plan 1	16:30 - 17:30	90	6.8	20.80

Controller Summary

Controller	Type	SCN	Stage Stream	Num Phases	Num Stages	Controls Junctions	Controller Notes
C1	Gen		Stage Stream 1	9	4	Archway Rd/ Lathom Rd	

Phase Diagram

Phase Input Data

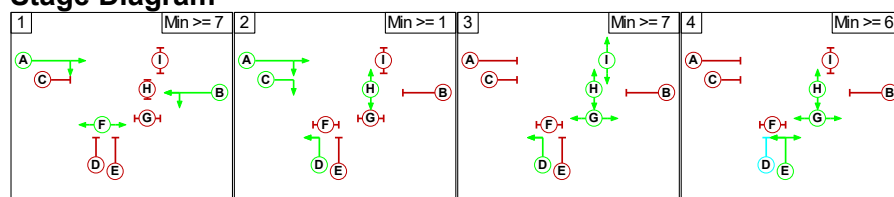
Phase Name	Phase Type	Assoc. Phase	Street Min (s)	Cont Min (s)
A	Traffic		7	7
B	Traffic		7	7
C	Ind. Arrow	A	4	4
D	Filter	E	4	2
E	Traffic		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7

Phase Intergreens Matrix

Terminating Phase	Starting Phase									
		A	B	C	D	E	F	G	H	I
	A		-	-	-	7	-	8	-	9
	B	-		4	7	7	-	7	6	-
	C	-	4		-	6	-	6	-	9
	D	-	6	-		-	5	-	-	-
	E	7	7	7	-		5	-	-	12
	F	-	-	-	0	0		-	-	-
	G	0	0	0	-	-	-		-	-
	H	-	0	-	-	-	-	-		-
	I	0	-	0	-	0	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B F
2	A C D H
3	D G H I
4	E G H

Stage Diagram**Phase Delays**

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage	To Stage			
	1	2	3	4
	1		7	9
	2	X		9
	3	X	X	
	4	7	7	12

Lane Input Data

Junction: Archway Rd/ Lathom Rd												
Lane	Lane Type	Phases	Start Disp. (s)	End Disp. (s)	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient (%)	Nearside Lane	Turns	Turning Radius (m)
1/1 (B5199 Huyton Ln - East)	U	B	2	3	6.1	Geom	-	3.60	0.00	Y	Arm 5 Left	15.00
											Arm 6 Ahead	Inf
1/2 (B5199 Huyton Ln - East)	U	B	2	3	60.0	Geom	-	3.60	0.00	N	Arm 6 Ahead	Inf
2/1 (Lathom Rd - South)	U	E D	2	3	10.4	Geom	-	3.50	0.00	Y	Arm 6 Left	11.00
2/2 (Lathom Rd - South)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 4 Right	23.00
3/1 (B5199 Archway Road - West)	U	A	2	3	60.0	Geom	-	3.30	0.00	Y	Arm 4 Ahead	Inf
3/2 (B5199 Archway Road - West)	O	A C	2	3	60.0	Geom	-	3.30	0.00	N	Arm 5 Right	16.00
4/1 (B5199 Huyton Ln - East (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Lathom Rd - South (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B5199 Archway Road - West (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (B5199 Archway Road - West (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Archway Rd/ Lathom Rd											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
3/2 (B5199 Archway Road - West)	5/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00
				1/2	1.09	All					

Lane Connector Input Data

Junction: Archway Rd/ Lathom Rd				
Org Lane	Dest Lane	Junction	Modelled Mean Cruise Time (s)	Platoon Dispersion
1/1	5/1	Internal	5	35
1/1	6/1	Internal	5	35
1/2	6/2	Internal	5	35
2/1	6/1	Internal	5	35
2/1	6/2	Internal	5	35
2/2	4/1	Internal	5	35
3/1	4/1	Internal	5	35
3/2	5/1	Internal	5	35

Scenario 1: '2025 Survey AM' (FG1: '2025 Survey AM', Plan 1: 'Network Control Plan 1')

Lane Saturation Flows

Junction: Archway Rd/ Lathom Rd								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B5199 Huyton Ln - East)	3.60	0.00	Y	Arm 5 Left	15.00	51.2 %	1879	1879
				Arm 6 Ahead	Inf	48.8 %		
1/2 (B5199 Huyton Ln - East)	3.60	0.00	N	Arm 6 Ahead	Inf	100.0 %	2115	2115
2/1 (Lathom Rd - South)	3.50	0.00	Y	Arm 6 Left	11.00	100.0 %	1729	1729
2/2 (Lathom Rd - South)	3.50	0.00	N	Arm 4 Right	23.00	100.0 %	1976	1976
3/1 (B5199 Archway Road - West)	3.30	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1945	1945
3/2 (B5199 Archway Road - West)	3.30	0.00	N	Arm 5 Right	16.00	100.0 %	1906	1906
4/1 (B5199 Huyton Ln - East (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Lathom Rd - South (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B5199 Archway Road - West (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B5199 Archway Road - West (Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 1

Scenario 2: '2025 Survey PM' (FG2: '2025 Survey PM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

Junction: Archway Rd/ Lathom Rd								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B5199 Huyton Ln - East)	3.60	0.00	Y	Arm 5 Left	15.00	47.8 %	1885	1885
				Arm 6 Ahead	Inf	52.2 %		
1/2 (B5199 Huyton Ln - East)	3.60	0.00	N	Arm 6 Ahead	Inf	100.0 %	2115	2115
2/1 (Lathom Rd - South)	3.50	0.00	Y	Arm 6 Left	11.00	100.0 %	1729	1729
2/2 (Lathom Rd - South)	3.50	0.00	N	Arm 4 Right	23.00	100.0 %	1976	1976
3/1 (B5199 Archway Road - West)	3.30	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1945	1945
3/2 (B5199 Archway Road - West)	3.30	0.00	N	Arm 5 Right	16.00	100.0 %	1906	1906
4/1 (B5199 Huyton Ln - East (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Lathom Rd - South (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B5199 Archway Road - West (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B5199 Archway Road - West (Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 2

Scenario 3: '2030 Without Dev AM' (FG3: '2031 No Dev AM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

Junction: Archway Rd/ Lathom Rd								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B5199 Huyton Ln - East)	3.60	0.00	Y	Arm 5 Left	15.00	50.8 %	1880	1880
				Arm 6 Ahead	Inf	49.2 %		
1/2 (B5199 Huyton Ln - East)	3.60	0.00	N	Arm 6 Ahead	Inf	100.0 %	2115	2115
2/1 (Lathom Rd - South)	3.50	0.00	Y	Arm 6 Left	11.00	100.0 %	1729	1729
2/2 (Lathom Rd - South)	3.50	0.00	N	Arm 4 Right	23.00	100.0 %	1976	1976
3/1 (B5199 Archway Road - West)	3.30	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1945	1945
3/2 (B5199 Archway Road - West)	3.30	0.00	N	Arm 5 Right	16.00	100.0 %	1906	1906
4/1 (B5199 Huyton Ln - East (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Lathom Rd - South (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B5199 Archway Road - West (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B5199 Archway Road - West (Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 3

Scenario 4: '2030 Without Dev PM' (FG4: '2031 No Dev PM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

Junction: Archway Rd/ Lathom Rd								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B5199 Huyton Ln - East)	3.60	0.00	Y	Arm 5 Left	15.00	47.9 %	1885	1885
				Arm 6 Ahead	Inf	52.1 %		
1/2 (B5199 Huyton Ln - East)	3.60	0.00	N	Arm 6 Ahead	Inf	100.0 %	2115	2115
2/1 (Lathom Rd - South)	3.50	0.00	Y	Arm 6 Left	11.00	100.0 %	1729	1729
2/2 (Lathom Rd - South)	3.50	0.00	N	Arm 4 Right	23.00	100.0 %	1976	1976
3/1 (B5199 Archway Road - West)	3.30	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1945	1945
3/2 (B5199 Archway Road - West)	3.30	0.00	N	Arm 5 Right	16.00	100.0 %	1906	1906
4/1 (B5199 Huyton Ln - East (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Lathom Rd - South (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B5199 Archway Road - West (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B5199 Archway Road - West (Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 4

Scenario 5: '2030 With Dev AM' (FG5: '2031 With Dev AM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

Junction: Archway Rd/ Lathom Rd								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B5199 Huyton Ln - East)	3.60	0.00	Y	Arm 5 Left	15.00	86.2 %	1818	1818
				Arm 6 Ahead	Inf	13.8 %		
1/2 (B5199 Huyton Ln - East)	3.60	0.00	N	Arm 6 Ahead	Inf	100.0 %	2115	2115
2/1 (Lathom Rd - South)	3.50	0.00	Y	Arm 6 Left	11.00	100.0 %	1729	1729
2/2 (Lathom Rd - South)	3.50	0.00	N	Arm 4 Right	23.00	100.0 %	1976	1976
3/1 (B5199 Archway Road - West)	3.30	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1945	1945
3/2 (B5199 Archway Road - West)	3.30	0.00	N	Arm 5 Right	16.00	100.0 %	1906	1906
4/1 (B5199 Huyton Ln - East (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Lathom Rd - South (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B5199 Archway Road - West (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B5199 Archway Road - West (Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 5

Scenario 6: '2030 With Dev PM' (FG6: '2031 With Dev PM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

Junction: Archway Rd/ Lathom Rd								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B5199 Huyton Ln - East)	3.60	0.00	Y	Arm 5 Left	15.00	65.3 %	1854	1854
				Arm 6 Ahead	Inf	34.7 %		
1/2 (B5199 Huyton Ln - East)	3.60	0.00	N	Arm 6 Ahead	Inf	100.0 %	2115	2115
2/1 (Lathom Rd - South)	3.50	0.00	Y	Arm 6 Left	11.00	100.0 %	1729	1729
2/2 (Lathom Rd - South)	3.50	0.00	N	Arm 4 Right	23.00	100.0 %	1976	1976
3/1 (B5199 Archway Road - West)	3.30	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1945	1945
3/2 (B5199 Archway Road - West)	3.30	0.00	N	Arm 5 Right	16.00	100.0 %	1906	1906
4/1 (B5199 Huyton Ln - East (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Lathom Rd - South (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (B5199 Archway Road - West (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B5199 Archway Road - West (Exit) Lane 2)	Infinite Saturation Flow						Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 6

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2025 Survey AM'	08:00	09:00	01:00	
2: '2025 Survey PM'	16:30	17:30	01:00	
3: '2031 No Dev AM'	08:00	09:00	01:00	
4: '2031 No Dev PM'	16:30	17:30	01:00	
5: '2031 With Dev AM'	08:00	09:00	01:00	
6: '2031 With Dev PM'	16:30	17:30	01:00	

Traffic Flows, Desired**FG1: '2025 Survey AM'****Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	186	592	778
	B	116	0	411	527
	C	428	467	0	895
	Tot.	544	653	1003	2200

FG2: '2025 Survey PM'**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	178	620	798
	B	177	0	402	579
	C	583	288	0	871
	Tot.	760	466	1022	2248

FG3: '2031 No Dev AM'**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	198	645	843
	B	124	0	438	562
	C	465	498	0	963
	Tot.	589	696	1083	2368

FG4: '2031 No Dev PM'**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	190	669	859
	B	190	0	429	619
	C	634	307	0	941
	Tot.	824	497	1098	2419

Detailed Input Data And Results

FG5: '2031 With Dev AM'

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	307	528	835
	B	169	0	500	669
	C	443	741	0	1184
	Tot.	612	1048	1028	2688

FG6: '2031 With Dev PM'

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	252	634	886
	B	251	0	567	818
	C	558	409	0	967
	Tot.	809	661	1201	2671

Scenario 1: '2025 Survey AM' (FG1: '2025 Survey AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	186	592	778
	B	116	0	411	527
	C	428	467	0	895
	Tot.	544	653	1003	2200

Traffic Flows, Difference

Difference :

	Destination				
		A	B	C	Tot.
Origin	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	Tot.	0	0	0	0

Detailed Input Data And Results

Scenario 2: '2025 Survey PM' (FG2: '2025 Survey PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	178	620	798
	B	177	0	402	579
	C	583	288	0	871
	Tot.	760	466	1022	2248

Traffic Flows, Difference

Difference :

	Destination				
		A	B	C	Tot.
Origin	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	Tot.	0	0	0	0

Scenario 3: '2030 Without Dev AM' (FG3: '2031 No Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	198	645	843
	B	124	0	438	562
	C	465	498	0	963
	Tot.	589	696	1083	2368

Traffic Flows, Difference

Difference :

	Destination				
		A	B	C	Tot.
Origin	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	Tot.	0	0	0	0

Scenario 4: '2030 Without Dev PM' (FG4: '2031 No Dev PM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	190	669	859
	B	190	0	429	619
	C	634	307	0	941
	Tot.	824	497	1098	2419

Traffic Flows, Difference**Difference :**

	Destination				
		A	B	C	Tot.
Origin	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	Tot.	0	0	0	0

Scenario 5: '2030 With Dev AM' (FG5: '2031 With Dev AM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	307	528	835
	B	169	0	500	669
	C	443	741	0	1184
	Tot.	612	1048	1028	2688

Traffic Flows, Difference**Difference :**

	Destination				
		A	B	C	Tot.
Origin	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	Tot.	0	0	0	0

Detailed Input Data And Results

Scenario 6: '2030 With Dev PM' (FG6: '2031 With Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	252	634	886
	B	251	0	567	818
	C	558	409	0	967
	Tot.	809	661	1201	2671

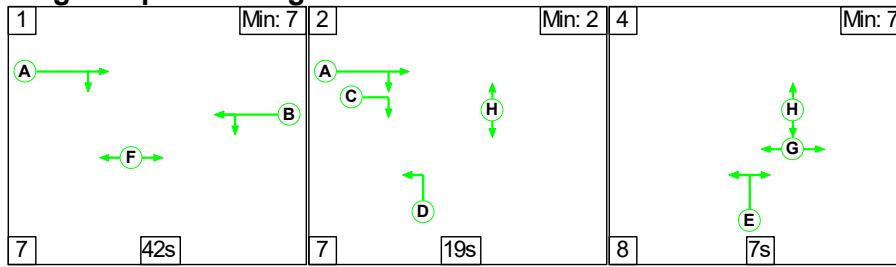
Traffic Flows, Difference

Difference :

Origin	Destination				
		A	B	C	Tot.
	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	Tot.	0	0	0	0

Traffic Lane Flows

Lane	Scenario 1: 2025 Survey AM	Scenario 2: 2025 Survey PM	Scenario 3: 2030 Without Dev AM	Scenario 4: 2030 Without Dev PM	Scenario 5: 2030 With Dev AM	Scenario 6: 2030 With Dev PM
Junction: Archway Rd/ Lathom Rd						
1/1 (short)	363	372	390	397	356	386
1/2 (with short)	778(In) 415(Out)	798(In) 426(Out)	843(In) 453(Out)	859(In) 462(Out)	835(In) 479(Out)	886(In) 500(Out)
2/1 (short)	411	402	438	429	500	567
2/2 (with short)	527(In) 116(Out)	579(In) 177(Out)	562(In) 124(Out)	619(In) 190(Out)	669(In) 169(Out)	818(In) 251(Out)
3/1	428	583	465	634	443	558
3/2	467	288	498	307	741	409
4/1	544	760	589	824	612	809
5/1	653	466	696	497	1048	661
6/1	383	395	411	422	299	418
6/2	620	627	672	676	729	783

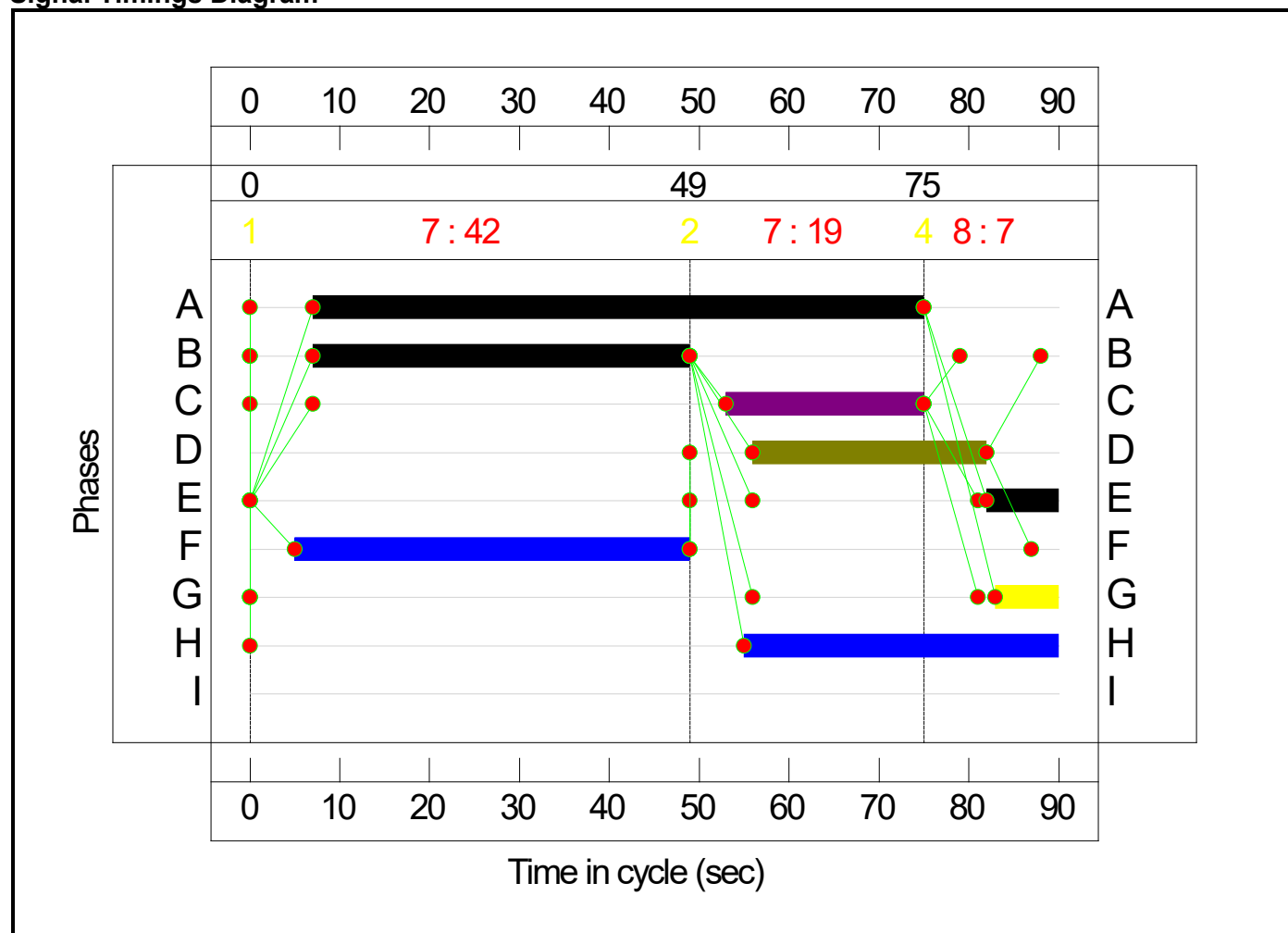
Scenario 1: '2025 Survey AM' (FG1: '2025 Survey AM', Plan 1: 'Network Control Plan 1')**Stage Sequence Diagram****Stage Timings**

Stage	1	2	4
Duration	42	19	7
Change Point	0	49	75

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	B5199 Archway Road - West Ahead Right	Traffic	68	7	75
B	B5199 Huyton Ln - East Left Ahead	Traffic	42	7	49
C	B5199 Archway Road - West Right IGA	Ind. Arrow	22	53	75
D	Lathom Rd - South Left Filter	Filter	26	56	82
E	Lathom Rd - South Right Left	Traffic	8	82	0
F	Pedestrians across	Pedestrian	44	5	49
G	Pedestrians across	Pedestrian	7	83	0
H	Pedestrians across	Pedestrian	35	55	0
I	Pedestrians across	Pedestrian			

Signal Timings Diagram



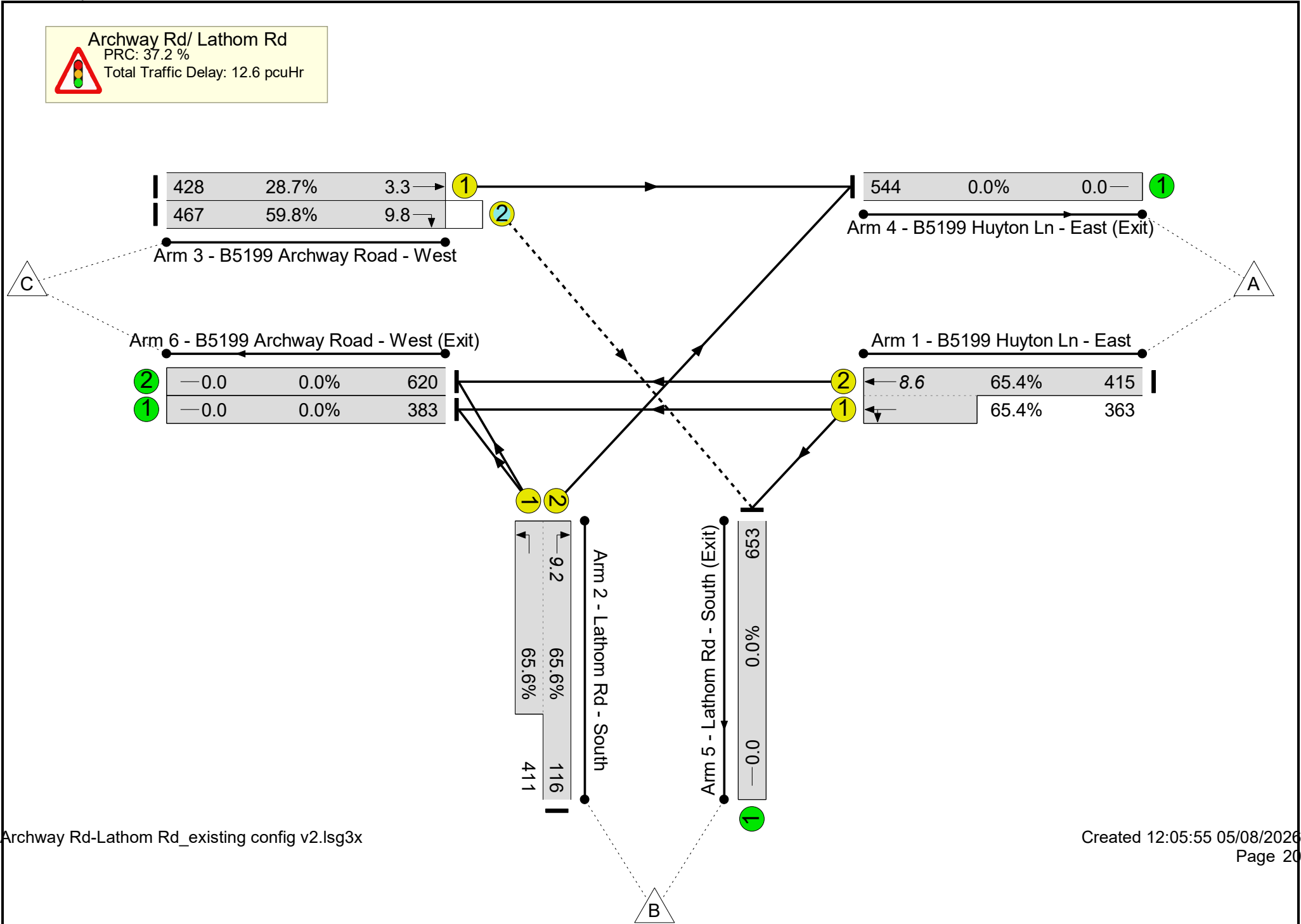
Lane Green Times

Junction: Archway Rd/ Lathom Rd					
Lane	Description	Type	Phases	Start Green	End Green
1/1	B5199 Huyton Ln - East Left Ahead	U	B	7	49
1/2	B5199 Huyton Ln - East Ahead	U	B	7	49
2/1	Lathom Rd - South Left	U	E D	56	0
2/2	Lathom Rd - South Right	U	E	82	0
3/1	B5199 Archway Road - West Ahead	U	A	7	75
3/2	B5199 Archway Road - West Right	O	A C	7	75

Detailed Input Data And Results

Network Layout Diagram

Detailed Input Data And Results



Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	N/A	-	-		-	-	-	-	-	-	-	65.6%
Archway Rd/ Lathom Rd	-	-	N/A	-	-		-	-	-	-	-	-	-	65.6%
1/2+1/1	B5199 Huyton Ln - East Left Ahead	U	N/A	N/A	B		1	42	-	-	778	2115:1879	634+555	65.4 : 65.4%
2/2+2/1	Lathom Rd - South Right Left	U	N/A	N/A	E	D	1	8:34	26	-	527	1976:1729	177+626	65.6 : 65.6%
3/1	B5199 Archway Road - West Ahead	U	N/A	N/A	A		1	68	-	-	428	1945	1491	28.7%
3/2	B5199 Archway Road - West Right	O	N/A	N/A	A	C	1	68	22	-	467	1906	780	59.8%
4/1	B5199 Huyton Ln - East (Exit)	U	N/A	N/A	-		-	-	-	-	544	Inf	Inf	0.0%
5/1	Lathom Rd - South (Exit)	U	N/A	N/A	-		-	-	-	-	653	Inf	Inf	0.0%
6/1	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	383	Inf	Inf	0.0%
6/2	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	620	Inf	Inf	0.0%

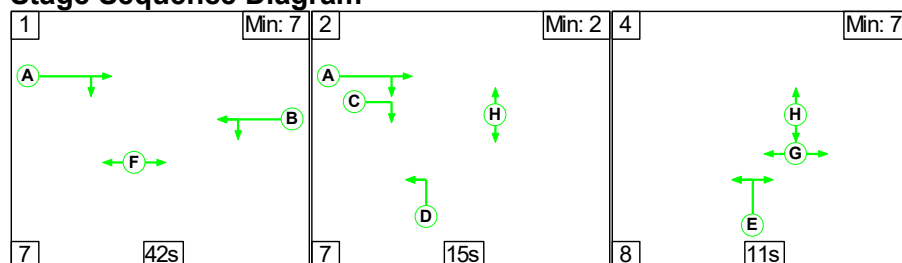
Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	Item
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	192	264	10	8.9	2.8	0.9	12.6	-	-	-	-	Network: Archway Rd/ Lathom Rd_Existing Junction Layout
Archway Rd/ Lathom Rd	-	-	192	264	10	8.9	2.8	0.9	12.6	-	-	-	-	Archway Rd/ Lathom Rd
1/2+1/1	778	778	-	-	-	3.3	0.9	-	4.2	19.7	7.6	0.9	8.6	1/2+1/1
2/2+2/1	527	527	-	-	-	3.8	0.9	-	4.7	32.2	8.2	0.9	9.2	2/2+2/1
3/1	428	428	-	-	-	0.4	0.2	-	0.6	4.8	3.1	0.2	3.3	3/1
3/2	467	467	192	264	10	1.4	0.7	0.9	3.1	23.8	9.1	0.7	9.8	3/2
4/1	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	4/1
5/1	653	653	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	5/1
6/1	383	383	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/1
6/2	620	620	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/2
C1 PRC for Signalled Lanes (%): 37.2 PRC Over All Lanes (%): 37.2 Total Delay for Signalled Lanes (pcuHr): 12.62 Total Delay Over All Lanes(pcuHr): 12.62 Cycle Time (s): 90														

Detailed Input Data And Results

Scenario 2: '2025 Survey PM' (FG2: '2025 Survey PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



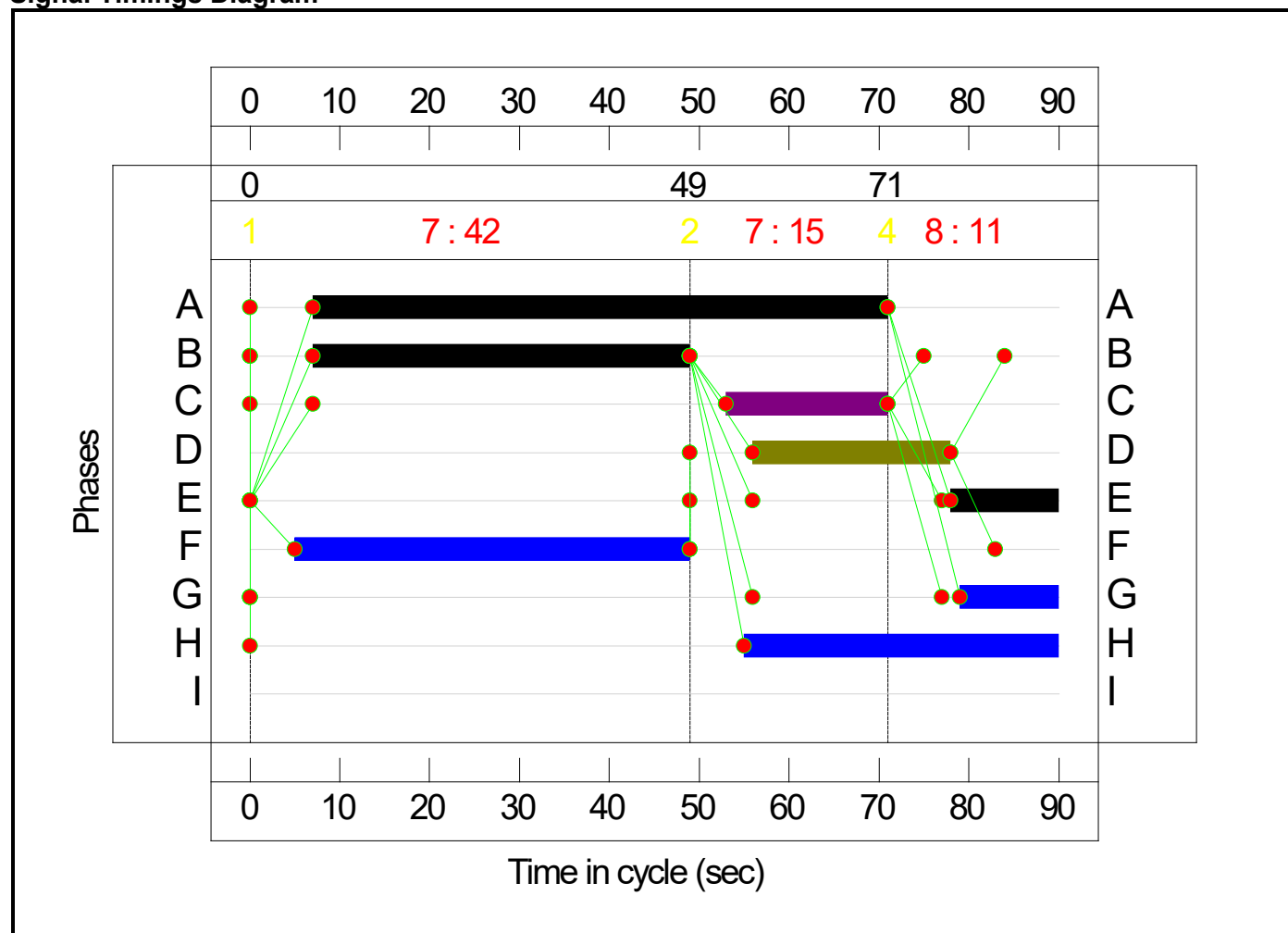
Stage Timings

Stage	1	2	4
Duration	42	15	11
Change Point	0	49	71

Phase Timings

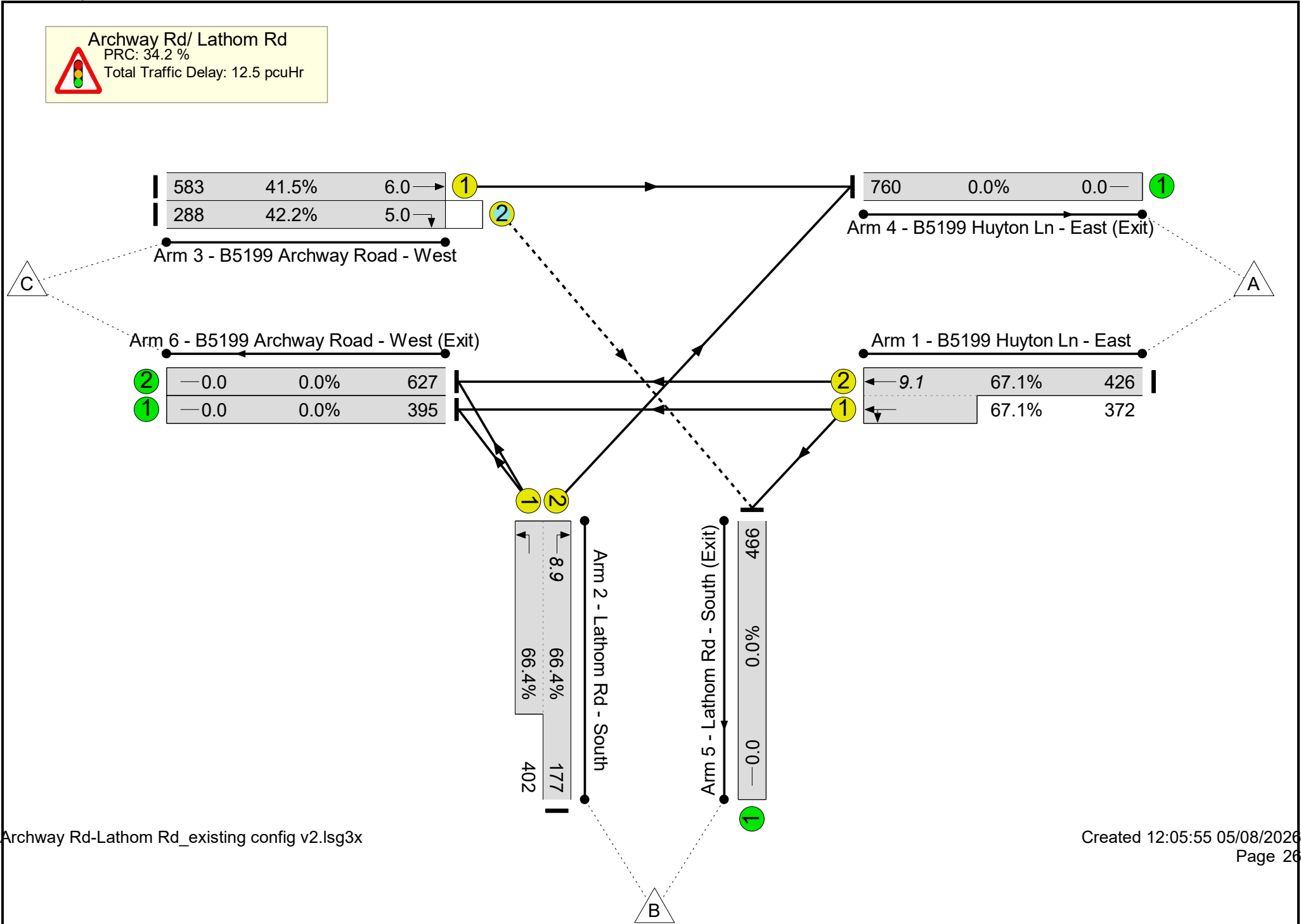
Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	B5199 Archway Road - West Ahead Right	Traffic	64	7	71
B	B5199 Huyton Ln - East Left Ahead	Traffic	42	7	49
C	B5199 Archway Road - West Right IGA	Ind. Arrow	18	53	71
D	Lathom Rd - South Left Filter	Filter	22	56	78
E	Lathom Rd - South Right Left	Traffic	12	78	0
F	Pedestrians across	Pedestrian	44	5	49
G	Pedestrians across	Pedestrian	11	79	0
H	Pedestrians across	Pedestrian	35	55	0
I	Pedestrians across	Pedestrian			

Signal Timings Diagram



Lane Green Times

Junction: Archway Rd/ Lathom Rd					
Lane	Description	Type	Phases	Start Green	End Green
1/1	B5199 Huyton Ln - East Left Ahead	U	B	7	49
1/2	B5199 Huyton Ln - East Ahead	U	B	7	49
2/1	Lathom Rd - South Left	U	E D	56	0
2/2	Lathom Rd - South Right	U	E	78	0
3/1	B5199 Archway Road - West Ahead	U	A	7	71
3/2	B5199 Archway Road - West Right	O	A C	7	71



Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	N/A	-	-		-	-	-	-	-	-	-	67.1%
Archway Rd/ Lathom Rd	-	-	N/A	-	-		-	-	-	-	-	-	-	67.1%
1/2+1/1	B5199 Huyton Ln - East Left Ahead	U	N/A	N/A	B		1	42	-	-	798	2115:1885	635+555	67.1 : 67.1%
2/2+2/1	Lathom Rd - South Right Left	U	N/A	N/A	E	D	1	12:34	22	-	579	1976:1729	267+606	66.4 : 66.4%
3/1	B5199 Archway Road - West Ahead	U	N/A	N/A	A		1	64	-	-	583	1945	1405	41.5%
3/2	B5199 Archway Road - West Right	O	N/A	N/A	A	C	1	64	18	-	288	1906	682	42.2%
4/1	B5199 Huyton Ln - East (Exit)	U	N/A	N/A	-		-	-	-	-	760	Inf	Inf	0.0%
5/1	Lathom Rd - South (Exit)	U	N/A	N/A	-		-	-	-	-	466	Inf	Inf	0.0%
6/1	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	395	Inf	Inf	0.0%
6/2	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	627	Inf	Inf	0.0%

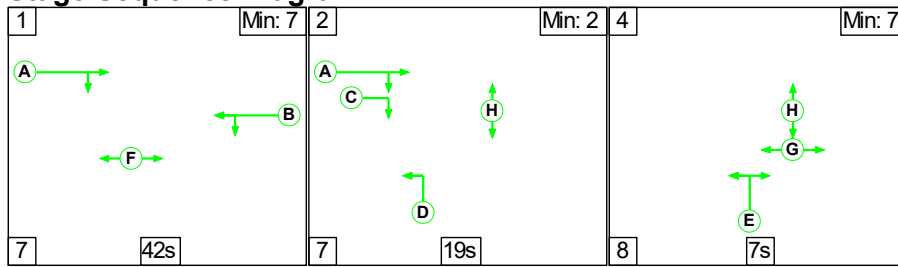
Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	Item
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	179	103	6	9.0	2.7	0.8	12.5	-	-	-	-	Network: Archway Rd/ Lathom Rd_Existing Junction Layout
Archway Rd/ Lathom Rd	-	-	179	103	6	9.0	2.7	0.8	12.5	-	-	-	-	Archway Rd/ Lathom Rd
1/2+1/1	798	798	-	-	-	3.4	1.0	-	4.4	20.0	8.1	1.0	9.1	1/2+1/1
2/2+2/1	579	579	-	-	-	4.2	1.0	-	5.2	32.4	7.9	1.0	8.9	2/2+2/1
3/1	583	583	-	-	-	0.8	0.4	-	1.2	7.1	5.7	0.4	6.0	3/1
3/2	288	288	179	103	6	0.6	0.4	0.8	1.7	21.6	4.6	0.4	5.0	3/2
4/1	760	760	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	4/1
5/1	466	466	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	5/1
6/1	395	395	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/1
6/2	627	627	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/2
C1 PRC for Signalled Lanes (%): 34.2 PRC Over All Lanes (%): 34.2 Total Delay for Signalled Lanes (pcuHr): 12.53 Total Delay Over All Lanes(pcuHr): 12.53 Cycle Time (s): 90														

Detailed Input Data And Results

Scenario 3: '2030 Without Dev AM' (FG3: '2031 No Dev AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



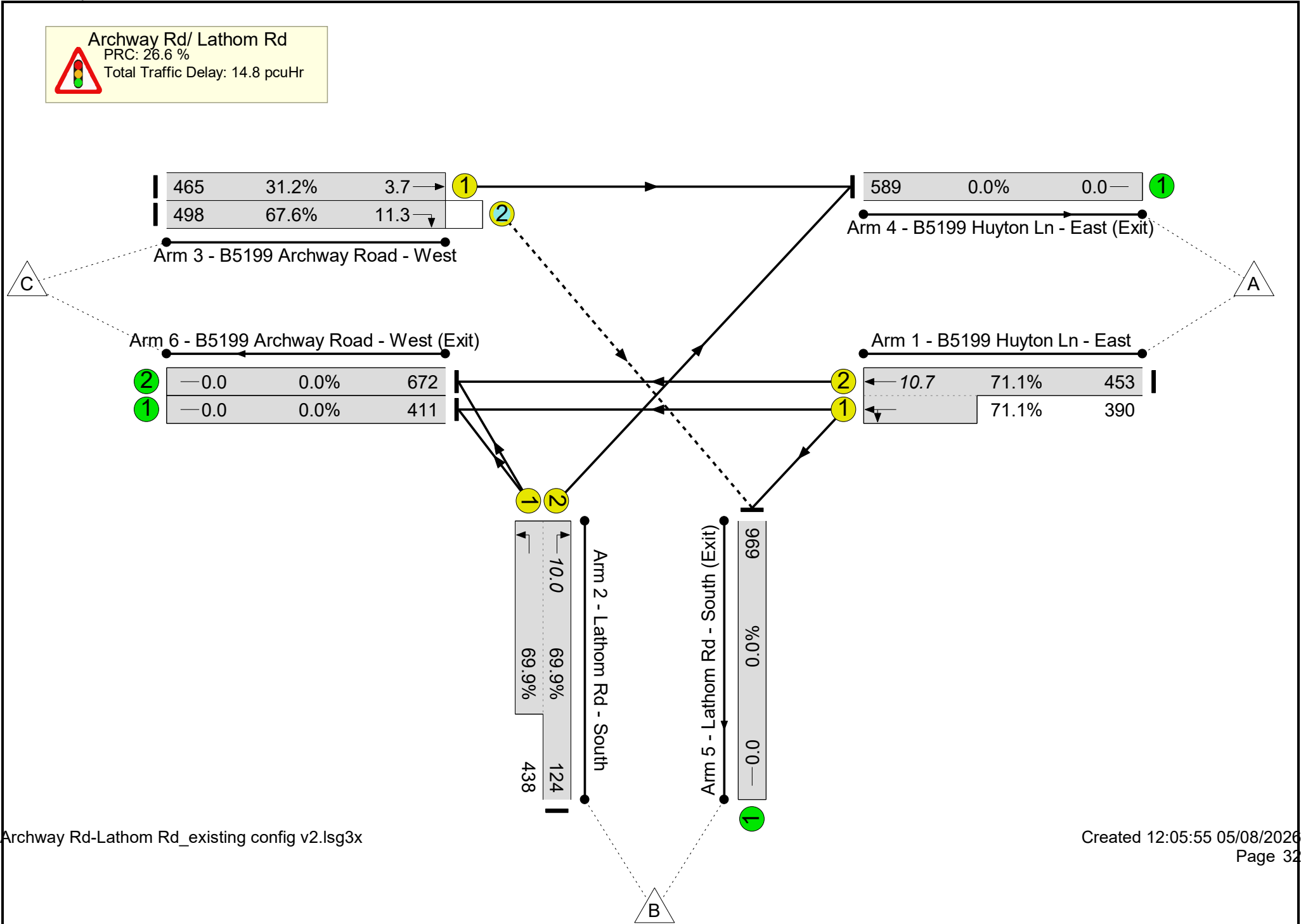
Stage Timings

Stage	1	2	4
Duration	42	19	7
Change Point	0	49	75

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	B5199 Archway Road - West Ahead Right	Traffic	68	7	75
B	B5199 Huyton Ln - East Left Ahead	Traffic	42	7	49
C	B5199 Archway Road - West Right IGA	Ind. Arrow	22	53	75
D	Lathom Rd - South Left Filter	Filter	26	56	82
E	Lathom Rd - South Right Left	Traffic	8	82	0
F	Pedestrians across	Pedestrian	44	5	49
G	Pedestrians across	Pedestrian	7	83	0
H	Pedestrians across	Pedestrian	35	55	0
I	Pedestrians across	Pedestrian			

Archway Rd-Lathom Rd_existing config v2.lsg3x



Archway Rd-Lathom Rd_existing config v2.lsg3x

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Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	N/A	-	-		-	-	-	-	-	-	-	71.1%
Archway Rd/ Lathom Rd	-	-	N/A	-	-		-	-	-	-	-	-	-	71.1%
1/2+1/1	B5199 Huyton Ln - East Left Ahead	U	N/A	N/A	B		1	42	-	-	843	2115:1880	637+549	71.1 : 71.1%
2/2+2/1	Lathom Rd - South Right Left	U	N/A	N/A	E	D	1	8:34	26	-	562	1976:1729	177+626	69.9 : 69.9%
3/1	B5199 Archway Road - West Ahead	U	N/A	N/A	A		1	68	-	-	465	1945	1491	31.2%
3/2	B5199 Archway Road - West Right	O	N/A	N/A	A	C	1	68	22	-	498	1906	737	67.6%
4/1	B5199 Huyton Ln - East (Exit)	U	N/A	N/A	-		-	-	-	-	589	Inf	Inf	0.0%
5/1	Lathom Rd - South (Exit)	U	N/A	N/A	-		-	-	-	-	696	Inf	Inf	0.0%
6/1	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	411	Inf	Inf	0.0%
6/2	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	672	Inf	Inf	0.0%

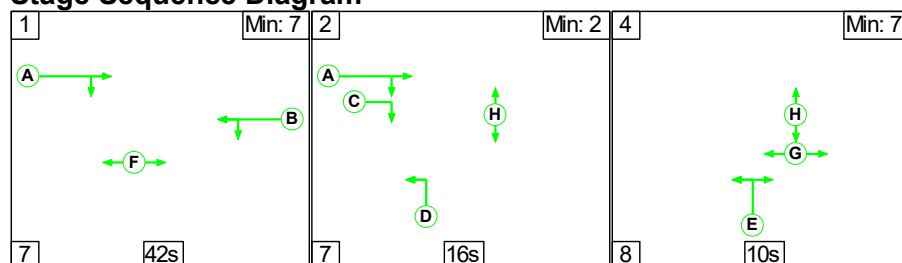
Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	Item
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	148	339	11	10.2	3.6	1.0	14.8	-	-	-	-	Network: Archway Rd/ Lathom Rd_Existing Junction Layout
Archway Rd/ Lathom Rd	-	-	148	339	11	10.2	3.6	1.0	14.8	-	-	-	-	Archway Rd/ Lathom Rd
1/2+1/1	843	843	-	-	-	3.7	1.2	-	4.9	21.0	9.5	1.2	10.7	1/2+1/1
2/2+2/1	562	562	-	-	-	4.1	1.2	-	5.2	33.5	8.9	1.2	10.0	2/2+2/1
3/1	465	465	-	-	-	0.4	0.2	-	0.6	5.0	3.5	0.2	3.7	3/1
3/2	498	498	148	339	11	2.0	1.0	1.0	4.0	29.1	10.2	1.0	11.3	3/2
4/1	589	589	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	4/1
5/1	696	696	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	5/1
6/1	411	411	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/1
6/2	672	672	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/2
C1 PRC for Signalled Lanes (%): 26.6 PRC Over All Lanes (%): 26.6 Total Delay for Signalled Lanes (pcuHr): 14.82 Total Delay Over All Lanes(pcuHr): 14.82 Cycle Time (s): 90														

Detailed Input Data And Results

Scenario 4: '2030 Without Dev PM' (FG4: '2031 No Dev PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



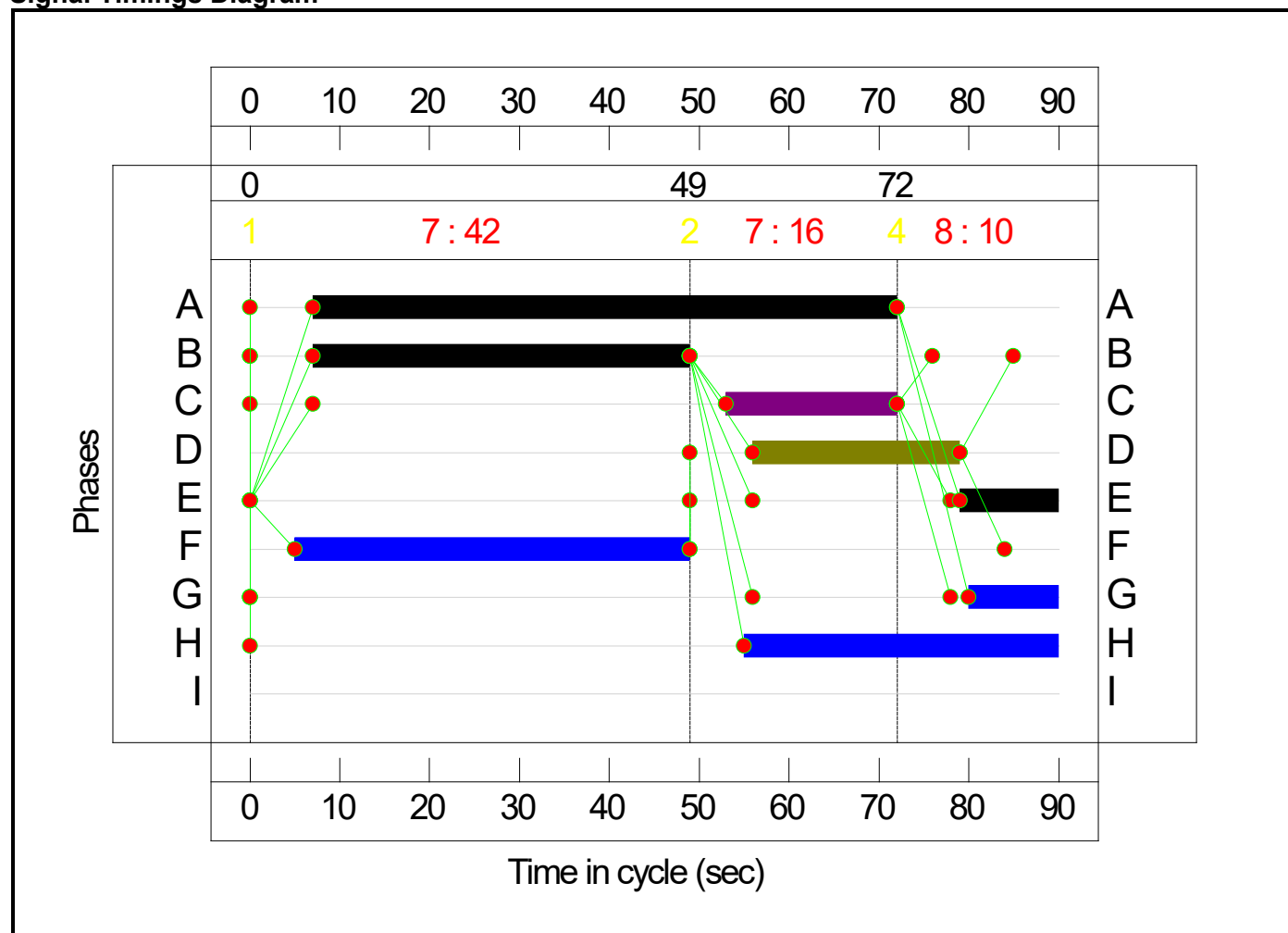
Stage Timings

Stage	1	2	4
Duration	42	16	10
Change Point	0	49	72

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	B5199 Archway Road - West Ahead Right	Traffic	65	7	72
B	B5199 Huyton Ln - East Left Ahead	Traffic	42	7	49
C	B5199 Archway Road - West Right IGA	Ind. Arrow	19	53	72
D	Lathom Rd - South Left Filter	Filter	23	56	79
E	Lathom Rd - South Right Left	Traffic	11	79	0
F	Pedestrians across	Pedestrian	44	5	49
G	Pedestrians across	Pedestrian	10	80	0
H	Pedestrians across	Pedestrian	35	55	0
I	Pedestrians across	Pedestrian			

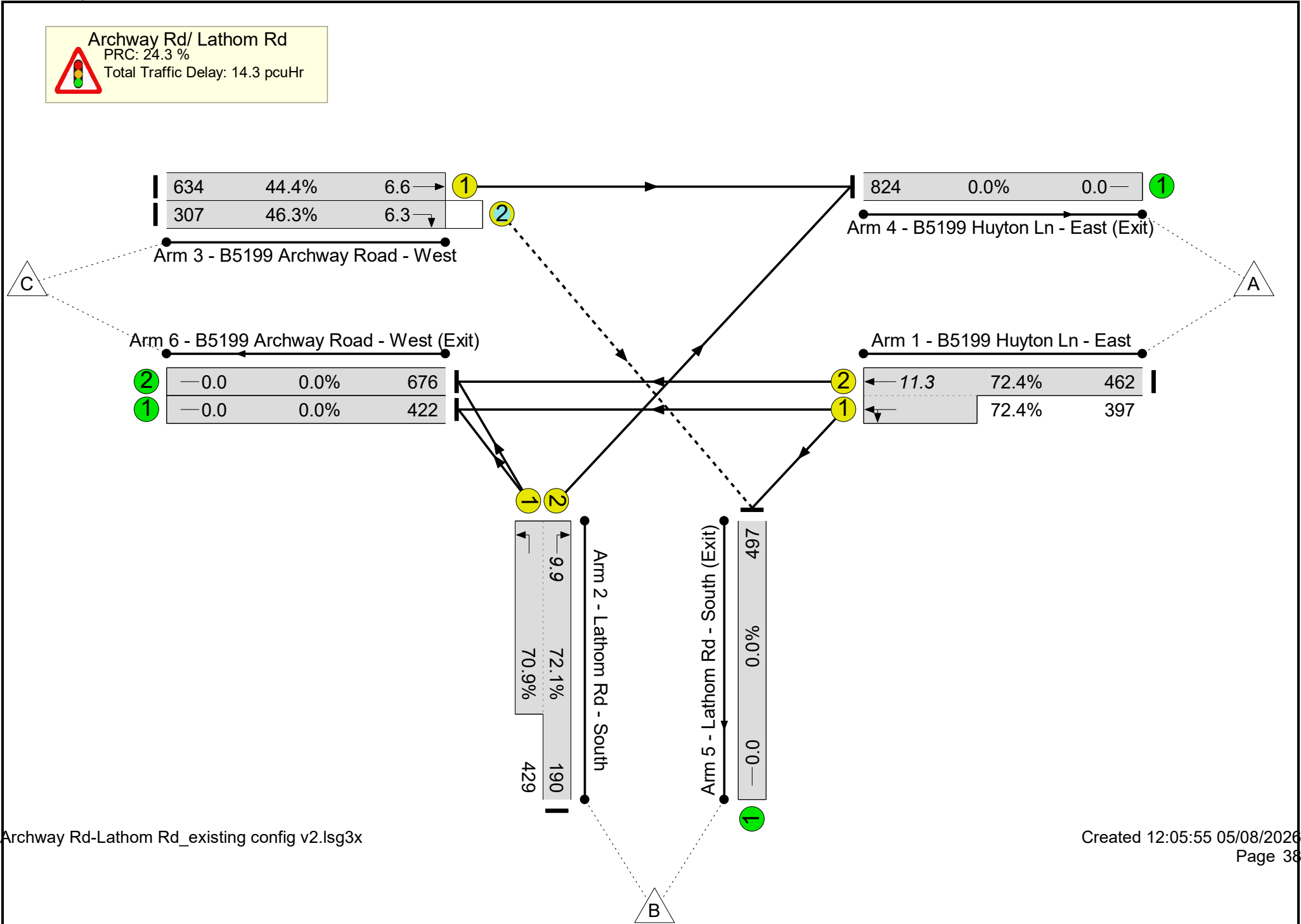
Signal Timings Diagram



Lane Green Times

Junction: Archway Rd/ Lathom Rd					
Lane	Description	Type	Phases	Start Green	End Green
1/1	B5199 Huyton Ln - East Left Ahead	U	B	7	49
1/2	B5199 Huyton Ln - East Ahead	U	B	7	49
2/1	Lathom Rd - South Left	U	E D	56	0
2/2	Lathom Rd - South Right	U	E	79	0
3/1	B5199 Archway Road - West Ahead	U	A	7	72
3/2	B5199 Archway Road - West Right	O	A C	7	72

Detailed Input Data And Results



Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	N/A	-	-		-	-	-	-	-	-	-	72.4%
Archway Rd/ Lathom Rd	-	-	N/A	-	-		-	-	-	-	-	-	-	72.4%
1/2+1/1	B5199 Huyton Ln - East Left Ahead	U	N/A	N/A	B		1	42	-	-	859	2115:1885	638+548	72.4 : 72.4%
2/2+2/1	Lathom Rd - South Right Left	U	N/A	N/A	E	D	1	11:34	23	-	619	1976:1729	263+605	72.1 : 70.9%
3/1	B5199 Archway Road - West Ahead	U	N/A	N/A	A		1	65	-	-	634	1945	1426	44.4%
3/2	B5199 Archway Road - West Right	O	N/A	N/A	A	C	1	65	19	-	307	1906	663	46.3%
4/1	B5199 Huyton Ln - East (Exit)	U	N/A	N/A	-		-	-	-	-	824	Inf	Inf	0.0%
5/1	Lathom Rd - South (Exit)	U	N/A	N/A	-		-	-	-	-	497	Inf	Inf	0.0%
6/1	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	422	Inf	Inf	0.0%
6/2	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	676	Inf	Inf	0.0%

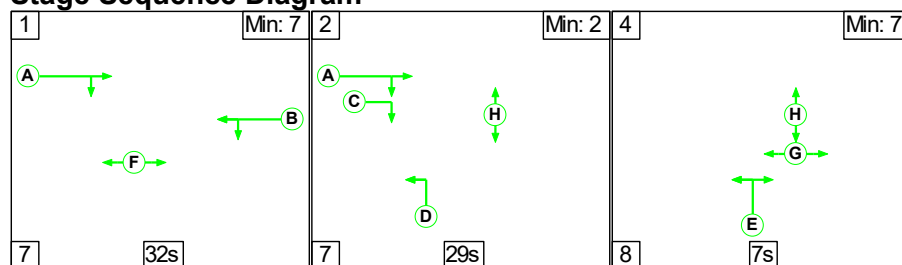
Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	Item
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	138	162	7	10.1	3.4	0.9	14.3	-	-	-	-	Network: Archway Rd/ Lathom Rd_Existing Junction Layout
Archway Rd/ Lathom Rd	-	-	138	162	7	10.1	3.4	0.9	14.3	-	-	-	-	Archway Rd/ Lathom Rd
1/2+1/1	859	859	-	-	-	3.8	1.3	-	5.1	21.4	10.0	1.3	11.3	1/2+1/1
2/2+2/1	619	619	-	-	-	4.6	1.2	-	5.9	34.1	8.7	1.2	9.9	2/2+2/1
3/1	634	634	-	-	-	0.8	0.4	-	1.2	7.0	6.2	0.4	6.6	3/1
3/2	307	307	138	162	7	0.8	0.4	0.9	2.1	25.2	5.9	0.4	6.3	3/2
4/1	824	824	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	4/1
5/1	497	497	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	5/1
6/1	422	422	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/1
6/2	676	676	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/2
C1 PRC for Signalled Lanes (%): 24.3 PRC Over All Lanes (%): 24.3 Total Delay for Signalled Lanes (pcuHr): 14.34 Total Delay Over All Lanes(pcuHr): 14.34 Cycle Time (s): 90														

Detailed Input Data And Results

Scenario 5: '2030 With Dev AM' (FG5: '2031 With Dev AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



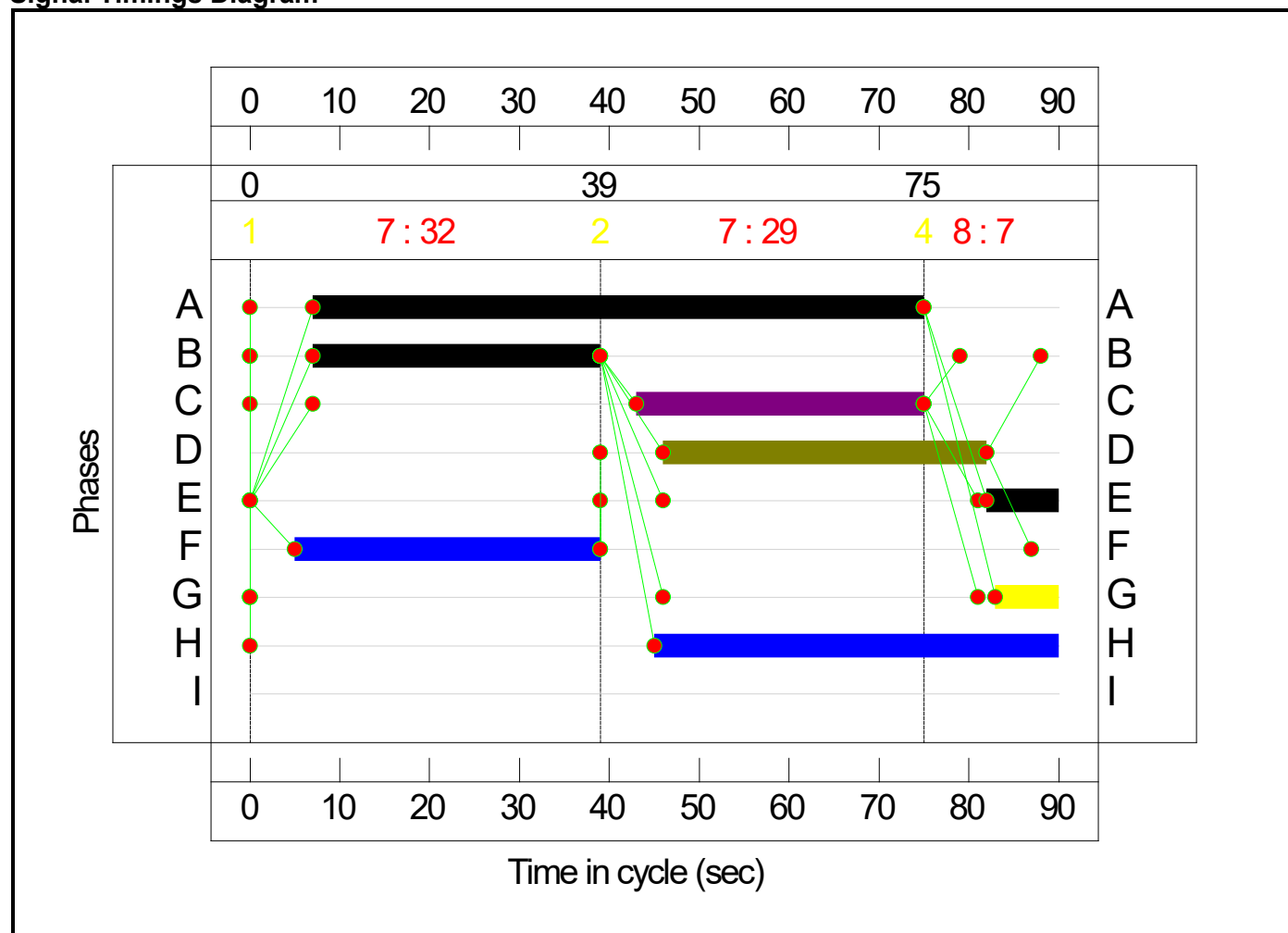
Stage Timings

Stage	1	2	4
Duration	32	29	7
Change Point	0	39	75

Phase Timings

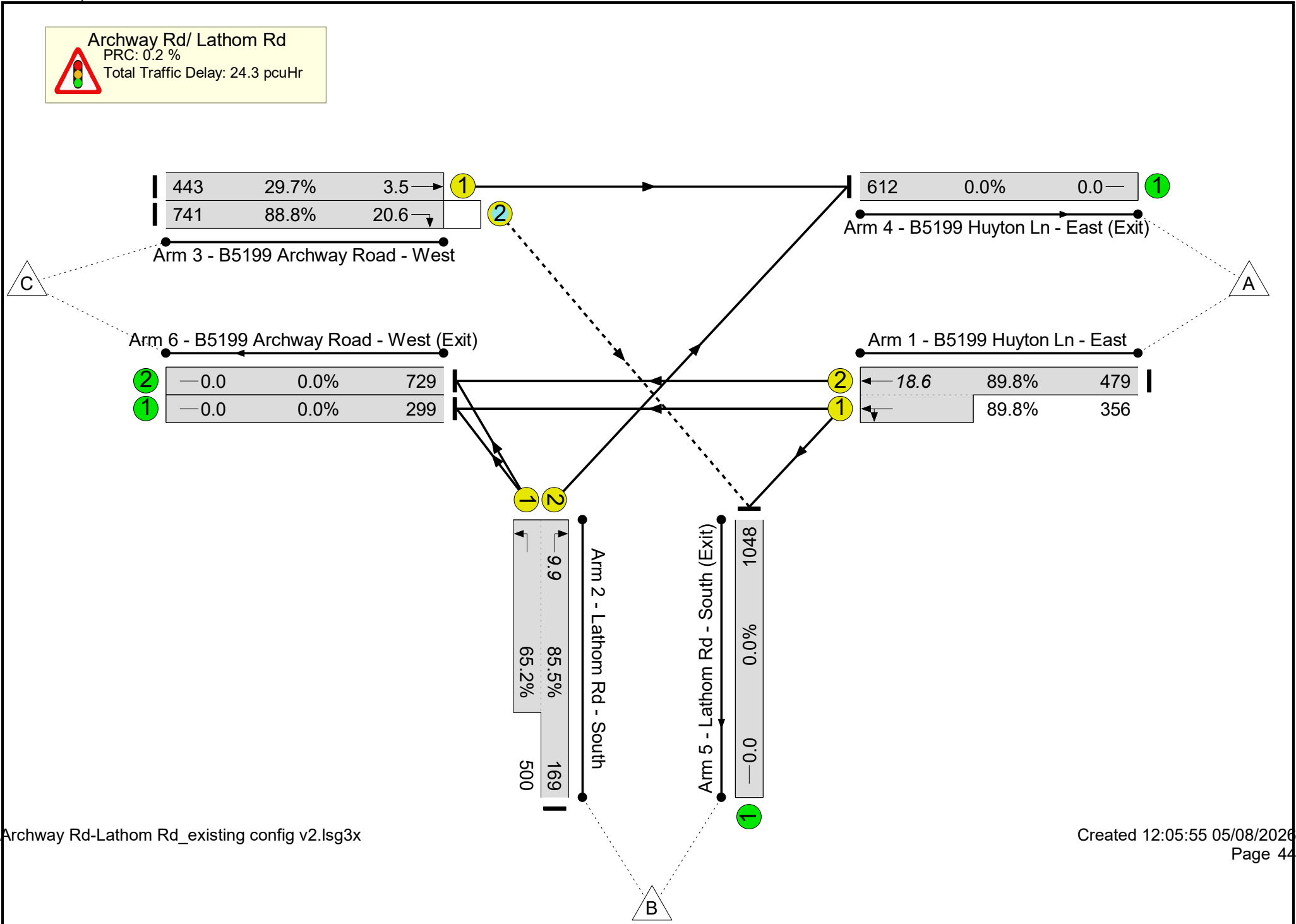
Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	B5199 Archway Road - West Ahead Right	Traffic	68	7	75
B	B5199 Huyton Ln - East Left Ahead	Traffic	32	7	39
C	B5199 Archway Road - West Right IGA	Ind. Arrow	32	43	75
D	Lathom Rd - South Left Filter	Filter	36	46	82
E	Lathom Rd - South Right Left	Traffic	8	82	0
F	Pedestrians across	Pedestrian	34	5	39
G	Pedestrians across	Pedestrian	7	83	0
H	Pedestrians across	Pedestrian	45	45	0
I	Pedestrians across	Pedestrian			

Signal Timings Diagram



Lane Green Times

Junction: Archway Rd/ Lathom Rd					
Lane	Description	Type	Phases	Start Green	End Green
1/1	B5199 Huyton Ln - East Left Ahead	U	B	7	39
1/2	B5199 Huyton Ln - East Ahead	U	B	7	39
2/1	Lathom Rd - South Left	U	E D	46	0
2/2	Lathom Rd - South Right	U	E	82	0
3/1	B5199 Archway Road - West Ahead	U	A	7	75
3/2	B5199 Archway Road - West Right	O	A C	7	75



Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	N/A	-	-		-	-	-	-	-	-	-	89.8%
Archway Rd/ Lathom Rd	-	-	N/A	-	-		-	-	-	-	-	-	-	89.8%
1/2+1/1	B5199 Huyton Ln - East Left Ahead	U	N/A	N/A	B		1	32	-	-	835	2115:1818	533+396	89.8 : 89.8%
2/2+2/1	Lathom Rd - South Right Left	U	N/A	N/A	E	D	1	8:44	36	-	669	1976:1729	198+767	85.5 : 65.2%
3/1	B5199 Archway Road - West Ahead	U	N/A	N/A	A		1	68	-	-	443	1945	1491	29.7%
3/2	B5199 Archway Road - West Right	O	N/A	N/A	A	C	1	68	32	-	741	1906	834	88.8%
4/1	B5199 Huyton Ln - East (Exit)	U	N/A	N/A	-		-	-	-	-	612	Inf	Inf	0.0%
5/1	Lathom Rd - South (Exit)	U	N/A	N/A	-		-	-	-	-	1048	Inf	Inf	0.0%
6/1	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	299	Inf	Inf	0.0%
6/2	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	729	Inf	Inf	0.0%

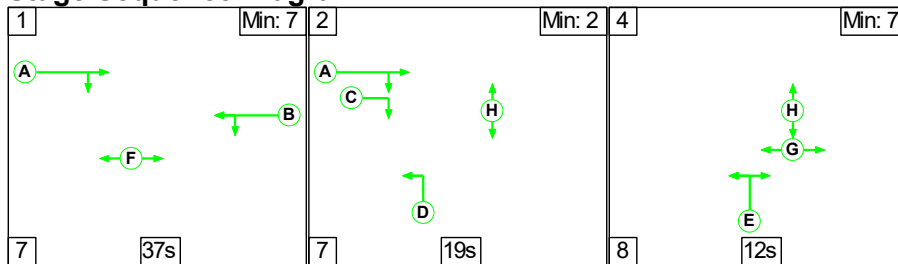
Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	Item
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	34	690	16	14.2	9.1	1.0	24.3	-	-	-	-	Network: Archway Rd/ Lathom Rd_Existing Junction Layout
Archway Rd/ Lathom Rd	-	-	34	690	16	14.2	9.1	1.0	24.3	-	-	-	-	Archway Rd/ Lathom Rd
1/2+1/1	835	835	-	-	-	5.7	4.1	-	9.7	41.9	14.5	4.1	18.6	1/2+1/1
2/2+2/1	669	669	-	-	-	4.1	1.1	-	5.2	28.0	8.8	1.1	9.9	2/2+2/1
3/1	443	443	-	-	-	0.4	0.2	-	0.6	4.9	3.3	0.2	3.5	3/1
3/2	741	741	34	690	16	4.1	3.7	1.0	8.8	42.7	16.9	3.7	20.6	3/2
4/1	612	612	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	4/1
5/1	1048	1048	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	5/1
6/1	299	299	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/1
6/2	729	729	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/2
C1 PRC for Signalled Lanes (%): 0.2 PRC Over All Lanes (%): 0.2 Total Delay for Signalled Lanes (pcuHr): 24.31 Total Delay Over All Lanes(pcuHr): 24.31 Cycle Time (s): 90														

Detailed Input Data And Results

Scenario 6: '2030 With Dev PM' (FG6: '2031 With Dev PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



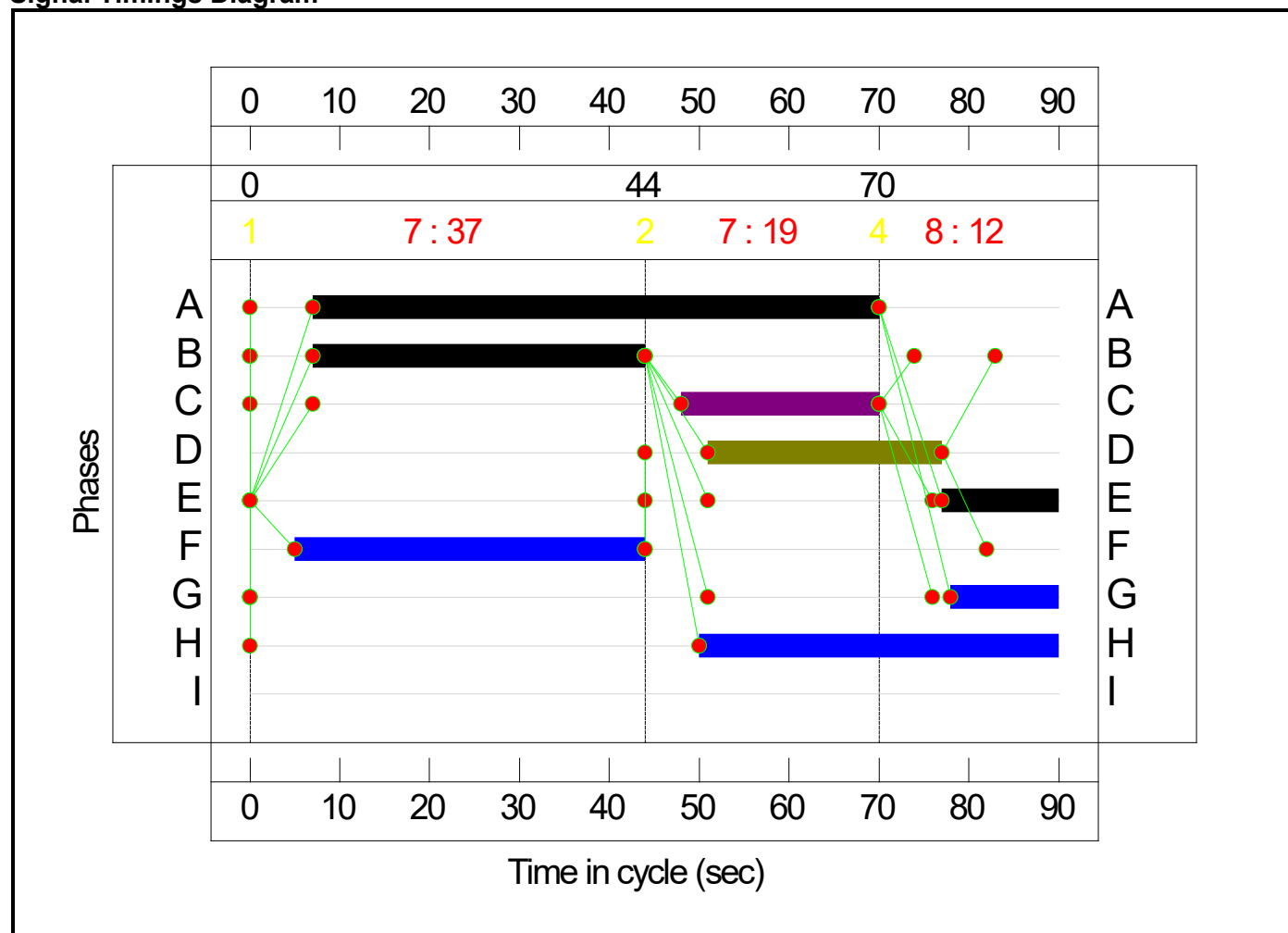
Stage Timings

Stage	1	2	4
Duration	37	19	12
Change Point	0	44	70

Phase Timings

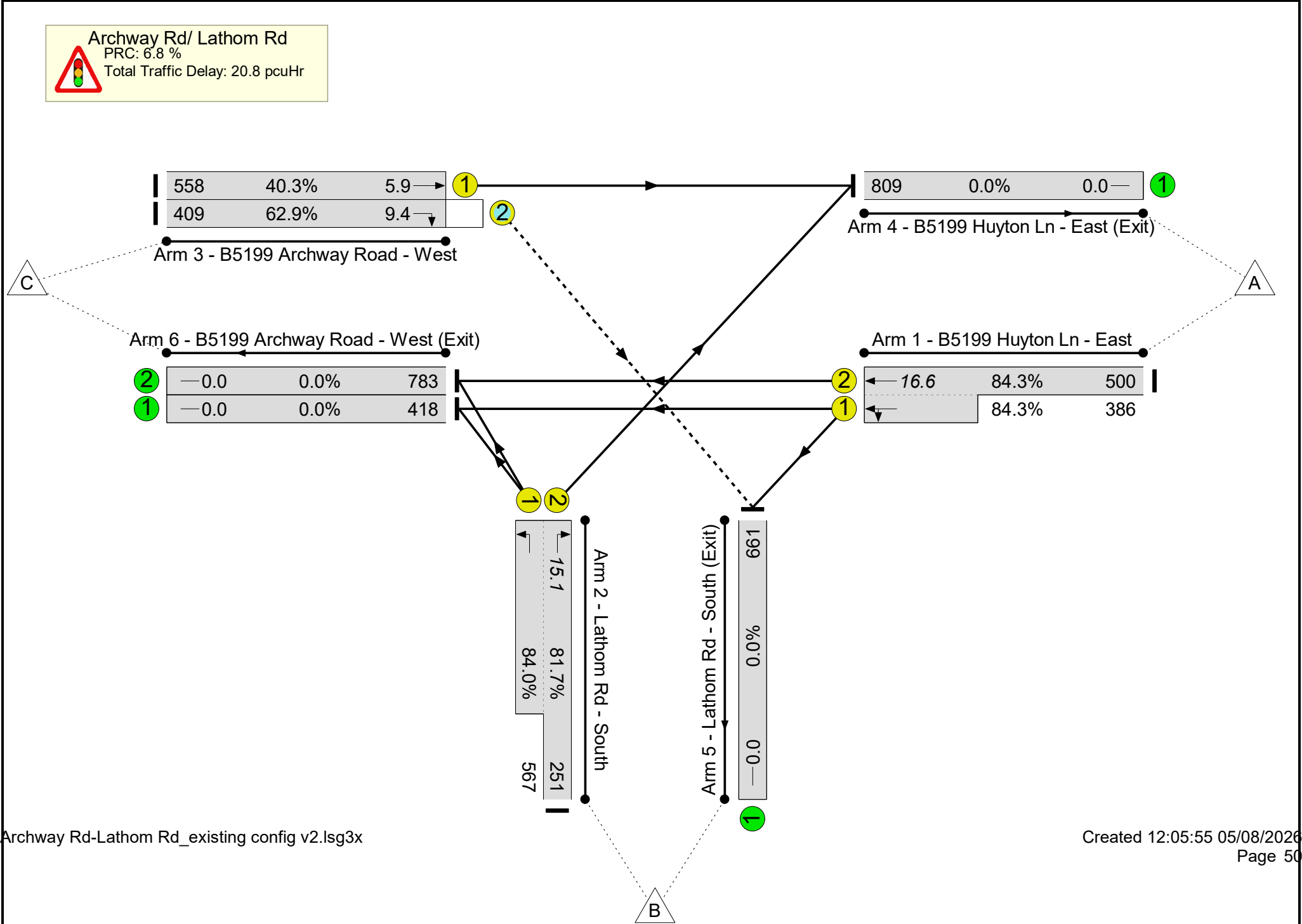
Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	B5199 Archway Road - West Ahead Right	Traffic	63	7	70
B	B5199 Huyton Ln - East Left Ahead	Traffic	37	7	44
C	B5199 Archway Road - West Right IGA	Ind. Arrow	22	48	70
D	Lathom Rd - South Left Filter	Filter	26	51	77
E	Lathom Rd - South Right Left	Traffic	13	77	0
F	Pedestrians across	Pedestrian	39	5	44
G	Pedestrians across	Pedestrian	12	78	0
H	Pedestrians across	Pedestrian	40	50	0
I	Pedestrians across	Pedestrian			

Signal Timings Diagram



Lane Green Times

Junction: Archway Rd/ Lathom Rd					
Lane	Description	Type	Phases	Start Green	End Green
1/1	B5199 Huyton Ln - East Left Ahead	U	B	7	44
1/2	B5199 Huyton Ln - East Ahead	U	B	7	44
2/1	Lathom Rd - South Left	U	E D	51	0
2/2	Lathom Rd - South Right	U	E	77	0
3/1	B5199 Archway Road - West Ahead	U	A	7	70
3/2	B5199 Archway Road - West Right	O	A C	7	70



Archway Rd-Lathom Rd_existing config v2.lsg3x

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Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	N/A	-	-		-	-	-	-	-	-	-	84.3%
Archway Rd/ Lathom Rd	-	-	N/A	-	-		-	-	-	-	-	-	-	84.3%
1/2+1/1	B5199 Huyton Ln - East Left Ahead	U	N/A	N/A	B		1	37	-	-	886	2115:1854	593+458	84.3 : 84.3%
2/2+2/1	Lathom Rd - South Right Left	U	N/A	N/A	E	D	1	13:39	26	-	818	1976:1729	307+675	81.7 : 84.0%
3/1	B5199 Archway Road - West Ahead	U	N/A	N/A	A		1	63	-	-	558	1945	1383	40.3%
3/2	B5199 Archway Road - West Right	O	N/A	N/A	A	C	1	63	22	-	409	1906	650	62.9%
4/1	B5199 Huyton Ln - East (Exit)	U	N/A	N/A	-		-	-	-	-	809	Inf	Inf	0.0%
5/1	Lathom Rd - South (Exit)	U	N/A	N/A	-		-	-	-	-	661	Inf	Inf	0.0%
6/1	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	418	Inf	Inf	0.0%
6/2	B5199 Archway Road - West (Exit)	U	N/A	N/A	-		-	-	-	-	783	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	Item
Network: Archway Rd/ Lathom Rd_Existing Junction Layout	-	-	62	338	9	13.7	6.2	0.9	20.8	-	-	-	-	Network: Archway Rd/ Lathom Rd_Existing Junction Layout
Archway Rd/ Lathom Rd	-	-	62	338	9	13.7	6.2	0.9	20.8	-	-	-	-	Archway Rd/ Lathom Rd
1/2+1/1	886	886	-	-	-	5.0	2.6	-	7.7	31.1	14.0	2.6	16.6	1/2+1/1
2/2+2/1	818	818	-	-	-	5.8	2.4	-	8.2	36.3	12.7	2.4	15.1	2/2+2/1
3/1	558	558	-	-	-	0.8	0.3	-	1.2	7.4	5.6	0.3	5.9	3/1
3/2	409	409	62	338	9	2.0	0.8	0.9	3.8	33.0	8.5	0.8	9.4	3/2
4/1	809	809	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	4/1
5/1	661	661	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	5/1
6/1	418	418	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/1
6/2	783	783	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/2
C1 PRC for Signalled Lanes (%): 6.8 PRC Over All Lanes (%): 6.8 Total Delay for Signalled Lanes (pcuHr): 20.80 Total Delay Over All Lanes(pcuHr): 20.80 Cycle Time (s): 90														

Junctions 11										
ARCADY 11 - Roundabout Module										
Version: 11.1.0.2307										
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Filename: A25008-Huyton Lane_Asda Roundabout-Proposed Layout-P01.j11
Path: C:\Users\OliverMcLaughlin\Astute Transport\Astute Transport - Shared Drive\Jobs\2025\A25008 Huyton TC Regeneration\Analysis\JUNCTIONS\Post App TAA
Report generation date: 05/08/2026 12:15:53

- »Proposed Layout - D3 - 2031 | Without Development | AM
- »Proposed Layout - D4 - 2031 | Without Development | PM
- »Proposed Layout - D5 - 2031 | With Development | AM
- »Proposed Layout - D6 - 2031 | With Development | PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	Proposed Layout - 2031 - Without Development									
1 - B5199 Huyton Lane (NE)	D3	1.8	8.97	0.64	A	D4	2.7	13.07	0.74	B
2 - Asda Access		0.2	3.66	0.17	A		0.8	5.41	0.46	A
3 - B5199 Huyton Lane (SW)		1.5	7.42	0.61	A		4.2	16.62	0.82	C
4 - Residential Development		0.1	6.31	0.05	A		0.0	8.31	0.04	A
	Proposed Layout - 2031 - With Development									
1 - B5199 Huyton Lane (NE)	D5	1.8	9.02	0.64	A	D6	3.2	14.76	0.77	B
2 - Asda Access		0.2	3.67	0.17	A		0.9	5.57	0.46	A
3 - B5199 Huyton Lane (SW)		1.7	7.82	0.63	A		3.2	13.36	0.77	B
4 - Residential Development		0.1	6.44	0.05	A		0.0	7.86	0.04	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

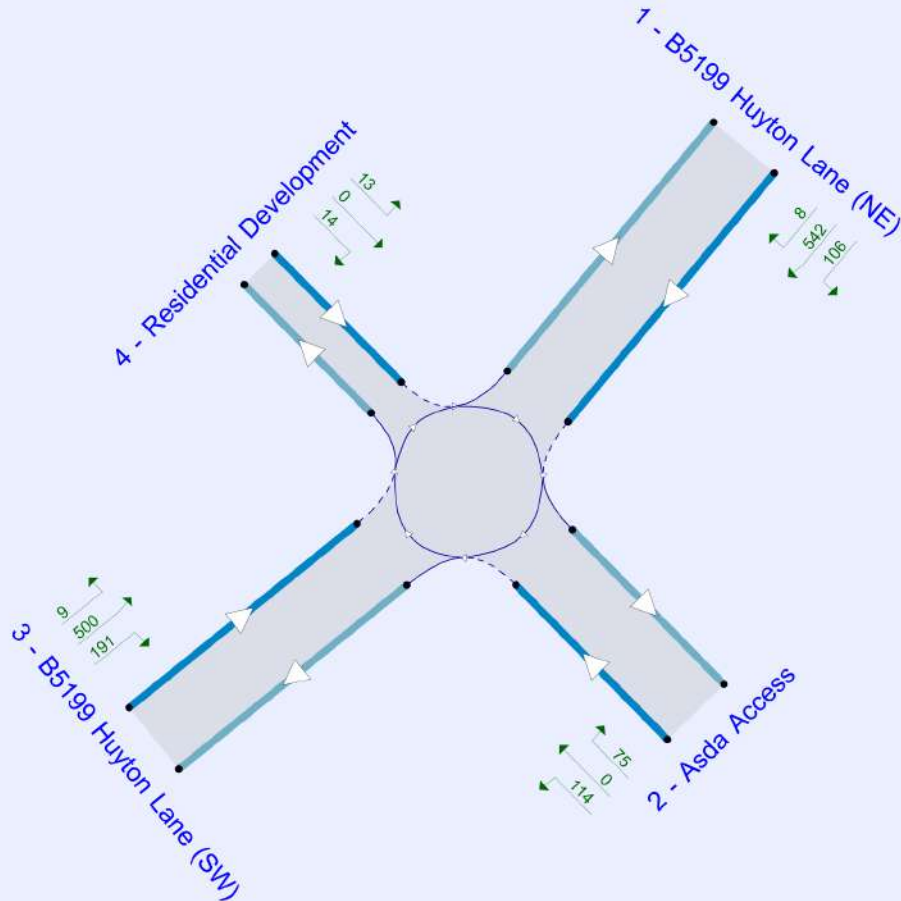
File summary

File Description

Title	B5199 Huyton Lane/ Asda Access
Location	Huyton
Site number	
Date	24/06/2026
Version	P01
Status	(new file)
Identifier	RF
Client	
Jobnumber	A25008
Enumerator	AzureAD\RobFranklin
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	PCU	PCU	perHour	s	-Min	perMin



Flows show original traffic demand (PCU/hr)

The junction diagram reflects the last run of Junctions.

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	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2031	Without Development	AM	ONE HOUR	07:45	09:15	15
D4	2031	Without Development	PM	ONE HOUR	16:45	18:15	15
D5	2031	With Development	AM	ONE HOUR	07:45	09:15	15
D6	2031	With Development	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Proposed Layout	100.000

Proposed Layout - D3 - 2031 | Without Development | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Huyton Lane/ Asda Roundabout	Standard Roundabout		1, 2, 3, 4	7.60	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.60	A

Arms

Arms

Arm	Name	Description	No give-way line
1	B5199 Huyton Lane (NE)		
2	Asda Access		
3	B5199 Huyton Lane (SW)		
4	Residential Development		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - B5199 Huyton Lane (NE)	3.50	4.30	4.0	93.8	32.0	31.0		
2 - Asda Access	3.80	6.40	10.2	23.8	32.0	33.0		
3 - B5199 Huyton Lane (SW)	3.70	5.90	5.2	14.4	32.0	50.0		
4 - Residential Development	2.80	4.60	7.5	10.0	32.0	61.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B5199 Huyton Lane (NE)	0.575	1251
2 - Asda Access	0.631	1581
3 - B5199 Huyton Lane (SW)	0.543	1280
4 - Residential Development	0.460	976

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2031	Without Development	AM	ONE HOUR	07:45	09:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B5199 Huyton Lane (NE)		✓	654	100.000
2 - Asda Access		✓	189	100.000
3 - B5199 Huyton Lane (SW)		✓	677	100.000
4 - Residential Development		✓	27	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - B5199 Huyton Lane (NE)	2 - Asda Access	3 - B5199 Huyton Lane (SW)	4 - Residential Development
	1 - B5199 Huyton Lane (NE)	0	106	540	8
	2 - Asda Access	75	0	114	0
	3 - B5199 Huyton Lane (SW)	477	191	0	9
	4 - Residential Development	13	0	14	0

Vehicle Mix

Heavy Vehicle %

	To				
From		1 - B5199 Huyton Lane (NE)	2 - Asda Access	3 - B5199 Huyton Lane (SW)	4 - Residential Development
	1 - B5199 Huyton Lane (NE)	0	0	0	0
	2 - Asda Access	0	0	0	0
	3 - B5199 Huyton Lane (SW)	0	0	0	0
	4 - Residential Development	0	0	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	1 - B5199 Huyton Lane (NE)	492	492
	2 - Asda Access	142	142
	3 - B5199 Huyton Lane (SW)	510	510
	4 - Residential Development	20	20
08:00-08:15	1 - B5199 Huyton Lane (NE)	588	588
	2 - Asda Access	170	170
	3 - B5199 Huyton Lane (SW)	609	609
	4 - Residential Development	24	24
08:15-08:30	1 - B5199 Huyton Lane (NE)	720	720
	2 - Asda Access	208	208
	3 - B5199 Huyton Lane (SW)	745	745
	4 - Residential Development	30	30
08:30-08:45	1 - B5199 Huyton Lane (NE)	720	720
	2 - Asda Access	208	208
	3 - B5199 Huyton Lane (SW)	745	745
	4 - Residential Development	30	30
08:45-09:00	1 - B5199 Huyton Lane (NE)	588	588
	2 - Asda Access	170	170
	3 - B5199 Huyton Lane (SW)	609	609
	4 - Residential Development	24	24
09:00-09:15	1 - B5199 Huyton Lane (NE)	492	492
	2 - Asda Access	142	142
	3 - B5199 Huyton Lane (SW)	510	510
	4 - Residential Development	20	20

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B5199 Huyton Lane (NE)	0.64	8.97	1.8	A
2 - Asda Access	0.17	3.66	0.2	A
3 - B5199 Huyton Lane (SW)	0.61	7.42	1.5	A
4 - Residential Development	0.05	6.31	0.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	492	154	1162	0.424	489	0.7	5.328	A
2 - Asda Access	142	421	1316	0.108	142	0.1	3.064	A
3 - B5199 Huyton Lane (SW)	510	62	1246	0.409	507	0.7	4.852	A
4 - Residential Development	20	556	720	0.028	20	0.0	5.144	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	588	184	1145	0.514	587	1.0	6.435	A
2 - Asda Access	170	504	1263	0.135	170	0.2	3.291	A
3 - B5199 Huyton Lane (SW)	609	75	1240	0.491	608	1.0	5.686	A
4 - Residential Development	24	667	669	0.036	24	0.0	5.580	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	720	225	1121	0.642	717	1.7	8.849	A
2 - Asda Access	208	616	1192	0.175	208	0.2	3.656	A
3 - B5199 Huyton Lane (SW)	745	91	1231	0.606	743	1.5	7.351	A
4 - Residential Development	30	816	601	0.049	30	0.1	6.302	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	720	226	1121	0.642	720	1.8	8.974	A
2 - Asda Access	208	619	1191	0.175	208	0.2	3.661	A
3 - B5199 Huyton Lane (SW)	745	91	1231	0.606	745	1.5	7.416	A
4 - Residential Development	30	818	600	0.050	30	0.1	6.313	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	588	185	1144	0.514	591	1.1	6.537	A
2 - Asda Access	170	508	1261	0.135	170	0.2	3.299	A
3 - B5199 Huyton Lane (SW)	609	75	1240	0.491	611	1.0	5.744	A
4 - Residential Development	24	670	668	0.036	24	0.0	5.594	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	492	155	1162	0.424	494	0.7	5.401	A
2 - Asda Access	142	424	1314	0.108	142	0.1	3.075	A
3 - B5199 Huyton Lane (SW)	510	63	1246	0.409	511	0.7	4.902	A
4 - Residential Development	20	561	718	0.028	20	0.0	5.158	A

Proposed Layout - D4 - 2031 | Without Development | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Huyton Lane/ Asda Roundabout	Standard Roundabout		1, 2, 3, 4	12.63	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	12.63	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2031	Without Development	PM	ONE HOUR	16:45	18:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B5199 Huyton Lane (NE)		✓	704	100.000
2 - Asda Access		✓	506	100.000
3 - B5199 Huyton Lane (SW)		✓	858	100.000
4 - Residential Development		✓	17	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - B5199 Huyton Lane (NE)	2 - Asda Access	3 - B5199 Huyton Lane (SW)	4 - Residential Development
	1 - B5199 Huyton Lane (NE)	0	196	495	13
	2 - Asda Access	190	0	316	0
	3 - B5199 Huyton Lane (SW)	536	310	0	12
	4 - Residential Development	9	0	8	0

Vehicle Mix

Heavy Vehicle %

	To				
		1 - B5199 Huyton Lane (NE)	2 - Asda Access	3 - B5199 Huyton Lane (SW)	4 - Residential Development
From	1 - B5199 Huyton Lane (NE)	0	0	0	0
	2 - Asda Access	0	0	0	0
	3 - B5199 Huyton Lane (SW)	0	0	0	0
	4 - Residential Development	0	0	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	1 - B5199 Huyton Lane (NE)	530	530
	2 - Asda Access	381	381
	3 - B5199 Huyton Lane (SW)	646	646
	4 - Residential Development	13	13
17:00-17:15	1 - B5199 Huyton Lane (NE)	633	633
	2 - Asda Access	455	455
	3 - B5199 Huyton Lane (SW)	771	771
	4 - Residential Development	15	15
17:15-17:30	1 - B5199 Huyton Lane (NE)	775	775
	2 - Asda Access	557	557
	3 - B5199 Huyton Lane (SW)	945	945
	4 - Residential Development	19	19
17:30-17:45	1 - B5199 Huyton Lane (NE)	775	775
	2 - Asda Access	557	557
	3 - B5199 Huyton Lane (SW)	945	945
	4 - Residential Development	19	19
17:45-18:00	1 - B5199 Huyton Lane (NE)	633	633
	2 - Asda Access	455	455
	3 - B5199 Huyton Lane (SW)	771	771
	4 - Residential Development	15	15
18:00-18:15	1 - B5199 Huyton Lane (NE)	530	530
	2 - Asda Access	381	381
	3 - B5199 Huyton Lane (SW)	646	646
	4 - Residential Development	13	13

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B5199 Huyton Lane (NE)	0.74	13.07	2.7	B
2 - Asda Access	0.46	5.41	0.8	A
3 - B5199 Huyton Lane (SW)	0.82	16.62	4.2	C
4 - Residential Development	0.04	8.31	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	530	238	1114	0.476	526	0.9	6.091	A
2 - Asda Access	381	386	1338	0.285	379	0.4	3.749	A
3 - B5199 Huyton Lane (SW)	646	152	1198	0.539	641	1.2	6.421	A
4 - Residential Development	13	775	620	0.021	13	0.0	5.930	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	633	285	1087	0.582	631	1.4	7.864	A
2 - Asda Access	455	463	1289	0.353	454	0.5	4.308	A
3 - B5199 Huyton Lane (SW)	771	182	1181	0.653	769	1.8	8.665	A
4 - Residential Development	15	928	549	0.028	15	0.0	6.743	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	775	347	1051	0.737	770	2.7	12.566	B
2 - Asda Access	557	564	1225	0.455	556	0.8	5.370	A
3 - B5199 Huyton Lane (SW)	945	223	1159	0.815	936	4.0	15.532	C
4 - Residential Development	19	1132	456	0.041	19	0.0	8.235	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	775	350	1049	0.739	775	2.7	13.069	B
2 - Asda Access	557	568	1223	0.456	557	0.8	5.405	A
3 - B5199 Huyton Lane (SW)	945	223	1159	0.815	944	4.2	16.617	C
4 - Residential Development	19	1140	452	0.041	19	0.0	8.310	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	633	289	1084	0.584	638	1.4	8.161	A
2 - Asda Access	455	468	1286	0.354	456	0.6	4.341	A
3 - B5199 Huyton Lane (SW)	771	183	1181	0.653	780	1.9	9.187	A
4 - Residential Development	15	941	543	0.028	15	0.0	6.819	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	530	240	1112	0.476	532	0.9	6.224	A
2 - Asda Access	381	390	1335	0.285	382	0.4	3.776	A
3 - B5199 Huyton Lane (SW)	646	153	1197	0.540	649	1.2	6.602	A
4 - Residential Development	13	783	616	0.021	13	0.0	5.969	A

Proposed Layout - D5 - 2031 | With Development | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Huyton Lane/ Asda Roundabout	Standard Roundabout		1, 2, 3, 4	7.80	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.80	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2031	With Development	AM	ONE HOUR	07:45	09:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B5199 Huyton Lane (NE)		✓	656	100.000
2 - Asda Access		✓	189	100.000
3 - B5199 Huyton Lane (SW)		✓	700	100.000
4 - Residential Development		✓	27	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - B5199 Huyton Lane (NE)	2 - Asda Access	3 - B5199 Huyton Lane (SW)	4 - Residential Development
	1 - B5199 Huyton Lane (NE)	0	106	542	8
	2 - Asda Access	75	0	114	0
	3 - B5199 Huyton Lane (SW)	500	191	0	9
	4 - Residential Development	13	0	14	0

Vehicle Mix

Heavy Vehicle %

	To				
		1 - B5199 Huyton Lane (NE)	2 - Asda Access	3 - B5199 Huyton Lane (SW)	4 - Residential Development
From	1 - B5199 Huyton Lane (NE)	0	0	0	0
	2 - Asda Access	0	0	0	0
	3 - B5199 Huyton Lane (SW)	0	0	0	0
	4 - Residential Development	0	0	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	1 - B5199 Huyton Lane (NE)	494	494
	2 - Asda Access	142	142
	3 - B5199 Huyton Lane (SW)	527	527
	4 - Residential Development	20	20
08:00-08:15	1 - B5199 Huyton Lane (NE)	590	590
	2 - Asda Access	170	170
	3 - B5199 Huyton Lane (SW)	629	629
	4 - Residential Development	24	24
08:15-08:30	1 - B5199 Huyton Lane (NE)	722	722
	2 - Asda Access	208	208
	3 - B5199 Huyton Lane (SW)	771	771
	4 - Residential Development	30	30
08:30-08:45	1 - B5199 Huyton Lane (NE)	722	722
	2 - Asda Access	208	208
	3 - B5199 Huyton Lane (SW)	771	771
	4 - Residential Development	30	30
08:45-09:00	1 - B5199 Huyton Lane (NE)	590	590
	2 - Asda Access	170	170
	3 - B5199 Huyton Lane (SW)	629	629
	4 - Residential Development	24	24
09:00-09:15	1 - B5199 Huyton Lane (NE)	494	494
	2 - Asda Access	142	142
	3 - B5199 Huyton Lane (SW)	527	527
	4 - Residential Development	20	20

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B5199 Huyton Lane (NE)	0.64	9.02	1.8	A
2 - Asda Access	0.17	3.67	0.2	A
3 - B5199 Huyton Lane (SW)	0.63	7.82	1.7	A
4 - Residential Development	0.05	6.44	0.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	494	153	1162	0.425	491	0.7	5.341	A
2 - Asda Access	142	422	1315	0.108	142	0.1	3.066	A
3 - B5199 Huyton Lane (SW)	527	62	1246	0.423	524	0.7	4.964	A
4 - Residential Development	20	574	712	0.029	20	0.0	5.202	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	590	184	1145	0.515	588	1.0	6.456	A
2 - Asda Access	170	506	1262	0.135	170	0.2	3.295	A
3 - B5199 Huyton Lane (SW)	629	75	1240	0.508	628	1.0	5.876	A
4 - Residential Development	24	687	660	0.037	24	0.0	5.663	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	722	225	1121	0.644	719	1.8	8.893	A
2 - Asda Access	208	619	1191	0.175	208	0.2	3.661	A
3 - B5199 Huyton Lane (SW)	771	91	1231	0.626	768	1.6	7.743	A
4 - Residential Development	30	841	589	0.050	30	0.1	6.431	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	722	226	1121	0.644	722	1.8	9.024	A
2 - Asda Access	208	621	1190	0.175	208	0.2	3.666	A
3 - B5199 Huyton Lane (SW)	771	91	1231	0.626	771	1.7	7.824	A
4 - Residential Development	30	843	588	0.051	30	0.1	6.445	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	590	185	1144	0.515	593	1.1	6.560	A
2 - Asda Access	170	509	1260	0.135	170	0.2	3.305	A
3 - B5199 Huyton Lane (SW)	629	75	1240	0.508	632	1.0	5.945	A
4 - Residential Development	24	691	658	0.037	24	0.0	5.679	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	494	155	1162	0.425	495	0.7	5.413	A
2 - Asda Access	142	426	1313	0.108	142	0.1	3.075	A
3 - B5199 Huyton Lane (SW)	527	63	1246	0.423	528	0.7	5.022	A
4 - Residential Development	20	578	710	0.029	20	0.0	5.220	A

Proposed Layout - D6 - 2031 | With Development | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Huyton Lane/ Asda Roundabout	Standard Roundabout		1, 2, 3, 4	11.90	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.90	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2031	With Development	PM	ONE HOUR	16:45	18:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B5199 Huyton Lane (NE)		✓	733	100.000
2 - Asda Access		✓	506	100.000
3 - B5199 Huyton Lane (SW)		✓	809	100.000
4 - Residential Development		✓	17	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - B5199 Huyton Lane (NE)	2 - Asda Access	3 - B5199 Huyton Lane (SW)	4 - Residential Development
	1 - B5199 Huyton Lane (NE)	0	196	524	13
	2 - Asda Access	190	0	316	0
	3 - B5199 Huyton Lane (SW)	487	310	0	12
	4 - Residential Development	9	0	8	0

Vehicle Mix

Heavy Vehicle %

	To				
		1 - B5199 Huyton Lane (NE)	2 - Asda Access	3 - B5199 Huyton Lane (SW)	4 - Residential Development
From	1 - B5199 Huyton Lane (NE)	0	0	0	0
	2 - Asda Access	0	0	0	0
	3 - B5199 Huyton Lane (SW)	0	0	0	0
	4 - Residential Development	0	0	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	1 - B5199 Huyton Lane (NE)	552	552
	2 - Asda Access	381	381
	3 - B5199 Huyton Lane (SW)	609	609
	4 - Residential Development	13	13
17:00-17:15	1 - B5199 Huyton Lane (NE)	659	659
	2 - Asda Access	455	455
	3 - B5199 Huyton Lane (SW)	727	727
	4 - Residential Development	15	15
17:15-17:30	1 - B5199 Huyton Lane (NE)	807	807
	2 - Asda Access	557	557
	3 - B5199 Huyton Lane (SW)	891	891
	4 - Residential Development	19	19
17:30-17:45	1 - B5199 Huyton Lane (NE)	807	807
	2 - Asda Access	557	557
	3 - B5199 Huyton Lane (SW)	891	891
	4 - Residential Development	19	19
17:45-18:00	1 - B5199 Huyton Lane (NE)	659	659
	2 - Asda Access	455	455
	3 - B5199 Huyton Lane (SW)	727	727
	4 - Residential Development	15	15
18:00-18:15	1 - B5199 Huyton Lane (NE)	552	552
	2 - Asda Access	381	381
	3 - B5199 Huyton Lane (SW)	609	609
	4 - Residential Development	13	13

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B5199 Huyton Lane (NE)	0.77	14.76	3.2	B
2 - Asda Access	0.46	5.57	0.9	A
3 - B5199 Huyton Lane (SW)	0.77	13.36	3.2	B
4 - Residential Development	0.04	7.86	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	552	238	1114	0.495	548	1.0	6.319	A
2 - Asda Access	381	407	1324	0.288	379	0.4	3.803	A
3 - B5199 Huyton Lane (SW)	609	152	1198	0.509	605	1.0	6.035	A
4 - Residential Development	13	738	636	0.020	13	0.0	5.771	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	659	285	1087	0.606	657	1.5	8.330	A
2 - Asda Access	455	488	1273	0.357	454	0.6	4.393	A
3 - B5199 Huyton Lane (SW)	727	182	1181	0.616	725	1.6	7.854	A
4 - Residential Development	15	885	569	0.027	15	0.0	6.499	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	807	348	1051	0.768	801	3.1	14.039	B
2 - Asda Access	557	595	1206	0.462	556	0.8	5.530	A
3 - B5199 Huyton Lane (SW)	891	223	1159	0.768	884	3.1	12.817	B
4 - Residential Development	19	1080	479	0.039	19	0.0	7.812	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	807	350	1049	0.769	807	3.2	14.760	B
2 - Asda Access	557	600	1203	0.463	557	0.9	5.573	A
3 - B5199 Huyton Lane (SW)	891	223	1159	0.769	890	3.2	13.360	B
4 - Residential Development	19	1086	477	0.039	19	0.0	7.863	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	659	288	1085	0.607	665	1.6	8.714	A
2 - Asda Access	455	495	1269	0.358	456	0.6	4.433	A
3 - B5199 Huyton Lane (SW)	727	183	1181	0.616	734	1.6	8.161	A
4 - Residential Development	15	894	565	0.027	15	0.0	6.549	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B5199 Huyton Lane (NE)	552	240	1112	0.496	554	1.0	6.474	A
2 - Asda Access	381	412	1321	0.288	382	0.4	3.832	A
3 - B5199 Huyton Lane (SW)	609	153	1197	0.509	611	1.0	6.171	A
4 - Residential Development	13	746	633	0.020	13	0.0	5.805	A

Junctions 11				
ARCADY 11 - Roundabout Module				
Version: 11.1.0.2307				
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Filename: A25008-Roby Road Roundabout-P03.j11

Path: C:\Users\OliverMcLaughlin\Astute Transport\Astute Transport - Shared Drive\Jobs\2025\A25008 Huyton TC Regeneration\Analysis\JUNCTIONS\Post App TAA

Report generation date: 31/07/2026 15:01:29

- »Existing Layout - D1 - 2026 | Survey | AM
- »Existing Layout - D2 - 2026 | Survey | PM
- »Existing Layout - D3 - 2031 | Base | AM
- »Existing Layout - D4 - 2031 | Base | PM
- »Existing Layout - D5 - 2031 | Base + Dev | AM
- »Existing Layout - D6 - 2031 | Base + Dev | PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	Existing Layout - 2026 - Survey									
1 - Roby Road	D1	22.7	72.35	1.00	F	D2	16.3	53.31	0.97	F
2 - Archway Road		1.0	4.09	0.50	A		1.6	5.38	0.62	A
3 - Tarbock Road		1.0	3.93	0.50	A		1.0	4.06	0.49	A
4 - Twickenham Drive		0.4	9.93	0.31	A		0.3	9.33	0.24	A
	Existing Layout - 2031 - Base									
1 - Roby Road	D3	52.0	142.06	1.07	F	D4	40.2	110.92	1.04	F
2 - Archway Road		1.2	4.40	0.53	A		1.9	6.04	0.66	A
3 - Tarbock Road		1.2	4.29	0.53	A		1.1	4.44	0.53	A
4 - Twickenham Drive		0.5	11.59	0.35	B		0.4	10.71	0.27	B
	Existing Layout - 2031 - Base + Dev									
1 - Roby Road	D5	50.2	137.76	1.07	F	D6	51.6	136.67	1.07	F
2 - Archway Road		1.3	4.66	0.56	A		1.9	5.94	0.65	A
3 - Tarbock Road		1.2	4.37	0.54	A		1.2	4.51	0.54	A
4 - Twickenham Drive		0.6	11.97	0.36	B		0.4	10.96	0.28	B

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

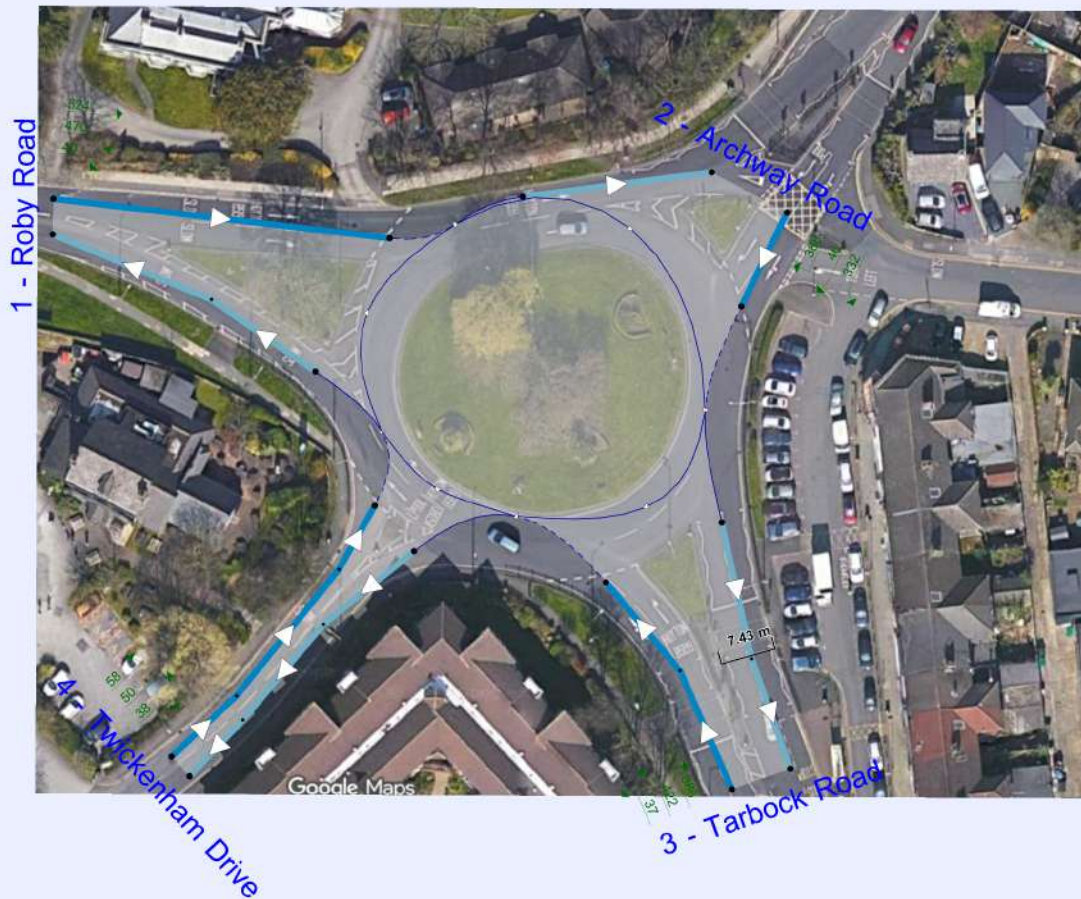
File summary

File Description

Title	Roby Road Roundabout
Location	Huyton
Site number	1
Date	22/06/2026
Version	P01
Status	(new file)
Identifier	RF
Client	
Jobnumber	
Enumerator	AzureAD\RobFranklin
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	PCU	PCU	perHour	s	-Min	perMin



Flows show original traffic demand (PCU/hr)

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2026	Survey	AM	ONE HOUR	07:45	09:15	15	✓
D2	2026	Survey	PM	ONE HOUR	16:45	18:15	15	✓
D3	2031	Base	AM	ONE HOUR	07:45	09:15	15	✓
D4	2031	Base	PM	ONE HOUR	16:45	18:15	15	✓
D5	2031	Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2031	Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	100.000	100.000

Existing Layout - D1 - 2026 | Survey | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Roby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roby Road Roundabout	Standard Roundabout		1, 2, 3, 4	29.17	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	29.17	D

Arms

Arms

Arm	Name	Description	No give-way line
1	Roby Road		
2	Archway Road		
3	Tarbock Road		
4	Twickenham Drive		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Roby Road	3.60	7.00	32.0	98.0	54.0	36.1		
2 - Archway Road	5.40	7.90	15.2	44.0	54.0	26.0		
3 - Tarbock Road	6.60	7.80	10.3	25.0	54.0	30.5		
4 - Twickenham Drive	3.50	5.72	2.1	22.0	54.0	30.5		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Roby Road	0.630	1893
2 - Archway Road	0.696	2219
3 - Tarbock Road	0.699	2283
4 - Twickenham Drive	0.502	1217

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - Roby Road	Percentage		75.00
2 - Archway Road	Percentage		100.00

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2026	Survey	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Roby Road		ONE HOUR	✓	1035	100.000
2 - Archway Road		ONE HOUR	✓	812	100.000
3 - Tarbock Road		ONE HOUR	✓	853	100.000
4 - Twickenham Drive		ONE HOUR	✓	146	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
From	1 - Roby Road	1	524	470	40
	2 - Archway Road	388	46	332	46
	3 - Tarbock Road	422	386	8	37
	4 - Twickenham Drive	58	50	38	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
From	1 - Roby Road	0	2	4	0
	2 - Archway Road	2	5	4	2
	3 - Tarbock Road	2	4	0	7
	4 - Twickenham Drive	2	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Roby Road	1.00	72.35	22.7	F	950	1425
2 - Archway Road	0.50	4.09	1.0	A	745	1118
3 - Tarbock Road	0.50	3.93	1.0	A	783	1174
4 - Twickenham Drive	0.31	9.93	0.4	A	134	201

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	779	195	396	1232	0.632	772	652	0.0	1.7	7.931	A
2 - Archway Road	611	153	416	1930	0.317	609	753	0.0	0.5	2.804	A
3 - Tarbock Road	642	161	391	2010	0.320	640	634	0.0	0.5	2.706	A
4 - Twickenham Drive	110	27	939	746	0.147	109	92	0.0	0.2	5.691	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	930	233	474	1196	0.778	924	780	1.7	3.4	13.296	B
2 - Archway Road	730	182	497	1873	0.390	729	901	0.5	0.7	3.240	A
3 - Tarbock Road	767	192	468	1956	0.392	766	759	0.5	0.7	3.117	A
4 - Twickenham Drive	131	33	1124	654	0.201	131	110	0.2	0.3	6.938	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1140	285	580	1145	0.995	1088	955	3.4	16.3	44.358	E
2 - Archway Road	894	224	588	1810	0.494	893	1080	0.7	1.0	4.035	A
3 - Tarbock Road	939	235	571	1884	0.498	938	909	0.7	1.0	3.916	A
4 - Twickenham Drive	161	40	1375	527	0.305	160	133	0.3	0.4	9.860	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1140	285	581	1145	0.995	1114	957	16.3	22.7	72.353	F
2 - Archway Road	894	224	601	1801	0.496	894	1095	1.0	1.0	4.087	A
3 - Tarbock Road	939	235	573	1883	0.499	939	922	1.0	1.0	3.932	A
4 - Twickenham Drive	161	40	1377	526	0.305	161	134	0.4	0.4	9.927	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	930	233	476	1195	0.779	1005	783	22.7	3.9	25.823	D
2 - Archway Road	730	182	538	1845	0.396	731	943	1.0	0.7	3.332	A
3 - Tarbock Road	767	192	472	1953	0.393	768	797	1.0	0.7	3.135	A
4 - Twickenham Drive	131	33	1127	652	0.201	132	114	0.4	0.3	6.987	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	779	195	398	1231	0.633	788	655	3.9	1.8	8.492	A
2 - Archway Road	611	153	424	1924	0.318	612	762	0.7	0.5	2.828	A
3 - Tarbock Road	642	161	393	2008	0.320	643	643	0.7	0.5	2.718	A
4 - Twickenham Drive	110	27	943	744	0.148	110	93	0.3	0.2	5.725	A

Existing Layout - D2 - 2026 | Survey | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Roby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roby Road Roundabout	Standard Roundabout		1, 2, 3, 4	22.22	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	22.22	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2026	Survey	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Roby Road		ONE HOUR	✓	1046	100.000
2 - Archway Road		ONE HOUR	✓	994	100.000
3 - Tarbock Road		ONE HOUR	✓	793	100.000
4 - Twickenham Drive		ONE HOUR	✓	108	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
	1 - Roby Road	1	492	495	58
	2 - Archway Road	499	41	394	60
	3 - Tarbock Road	405	333	11	44
	4 - Twickenham Drive	51	32	25	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
	1 - Roby Road	0	2	1	0
	2 - Archway Road	1	0	2	0
	3 - Tarbock Road	2	2	0	0
	4 - Twickenham Drive	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Roby Road	0.97	53.31	16.3	F	960	1440
2 - Archway Road	0.62	5.38	1.6	A	912	1368
3 - Tarbock Road	0.49	4.06	1.0	A	728	1092
4 - Twickenham Drive	0.24	9.33	0.3	A	99	149

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	787	197	332	1263	0.624	781	717	0.0	1.6	7.478	A
2 - Archway Road	748	187	441	1912	0.391	746	672	0.0	0.6	3.119	A
3 - Tarbock Road	597	149	494	1938	0.308	595	692	0.0	0.5	2.728	A
4 - Twickenham Drive	81	20	968	732	0.111	81	121	0.0	0.1	5.529	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	940	235	397	1232	0.763	935	858	1.6	3.1	12.034	B
2 - Archway Road	894	223	527	1852	0.482	892	804	0.6	0.9	3.794	A
3 - Tarbock Road	713	178	591	1870	0.381	712	828	0.5	0.6	3.166	A
4 - Twickenham Drive	97	24	1158	636	0.153	97	145	0.1	0.2	6.673	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1152	288	486	1190	0.968	1113	1050	3.1	12.8	36.132	E
2 - Archway Road	1094	274	629	1781	0.614	1092	970	0.9	1.6	5.268	A
3 - Tarbock Road	873	218	722	1779	0.491	872	999	0.6	1.0	4.038	A
4 - Twickenham Drive	119	30	1418	506	0.235	118	176	0.2	0.3	9.275	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1152	288	487	1190	0.968	1138	1052	12.8	16.3	53.313	F
2 - Archway Road	1094	274	642	1772	0.618	1094	982	1.6	1.6	5.379	A
3 - Tarbock Road	873	218	725	1777	0.491	873	1012	1.0	1.0	4.058	A
4 - Twickenham Drive	119	30	1420	505	0.236	119	178	0.3	0.3	9.331	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	940	235	398	1231	0.764	991	862	16.3	3.5	18.054	C
2 - Archway Road	894	223	558	1831	0.488	896	832	1.6	1.0	3.912	A
3 - Tarbock Road	713	178	597	1866	0.382	714	857	1.0	0.6	3.189	A
4 - Twickenham Drive	97	24	1162	634	0.153	98	149	0.3	0.2	6.716	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	787	197	333	1262	0.624	795	721	3.5	1.7	7.923	A
2 - Archway Road	748	187	448	1907	0.392	750	680	1.0	0.7	3.155	A
3 - Tarbock Road	597	149	497	1935	0.308	598	700	0.6	0.5	2.744	A
4 - Twickenham Drive	81	20	973	729	0.111	82	122	0.2	0.1	5.558	A

Existing Layout - D3 - 2031 | Base | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Roby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roby Road Roundabout	Standard Roundabout		1, 2, 3, 4	54.85	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	54.85	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2031	Base	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Roby Road		ONE HOUR	✓	1099	100.000
2 - Archway Road		ONE HOUR	✓	869	100.000
3 - Tarbock Road		ONE HOUR	✓	897	100.000
4 - Twickenham Drive		ONE HOUR	✓	154	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
	1 - Roby Road	1	561	495	42
	2 - Archway Road	423	48	350	48
	3 - Tarbock Road	444	406	8	39
	4 - Twickenham Drive	61	53	40	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
	1 - Roby Road	0	2	4	0
	2 - Archway Road	2	5	4	2
	3 - Tarbock Road	2	4	0	7
	4 - Twickenham Drive	2	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Roby Road	1.07	142.06	52.0	F	1008	1513
2 - Archway Road	0.53	4.40	1.2	A	797	1196
3 - Tarbock Road	0.53	4.29	1.2	A	823	1235
4 - Twickenham Drive	0.35	11.59	0.5	B	141	212

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	827	207	416	1223	0.677	819	697	0.0	2.1	8.991	A
2 - Archway Road	654	164	437	1915	0.342	652	798	0.0	0.5	2.930	A
3 - Tarbock Road	675	169	422	1988	0.340	673	667	0.0	0.5	2.816	A
4 - Twickenham Drive	116	29	998	716	0.162	115	97	0.0	0.2	6.026	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	988	247	498	1184	0.834	978	834	2.1	4.7	17.115	C
2 - Archway Road	781	195	522	1856	0.421	780	954	0.5	0.7	3.442	A
3 - Tarbock Road	806	202	504	1931	0.418	806	798	0.5	0.7	3.297	A
4 - Twickenham Drive	138	35	1194	618	0.224	138	115	0.2	0.3	7.553	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1210	303	610	1132	1.069	1106	1021	4.7	30.7	70.262	F
2 - Archway Road	957	239	594	1806	0.530	955	1122	0.7	1.1	4.350	A
3 - Tarbock Road	988	247	614	1854	0.533	986	935	0.7	1.2	4.265	A
4 - Twickenham Drive	170	42	1462	484	0.350	169	138	0.3	0.5	11.473	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1210	303	611	1131	1.070	1125	1023	30.7	52.0	142.063	F
2 - Archway Road	957	239	603	1799	0.532	957	1132	1.1	1.2	4.400	A
3 - Tarbock Road	988	247	615	1853	0.533	988	945	1.2	1.2	4.288	A
4 - Twickenham Drive	170	42	1464	483	0.351	170	139	0.5	0.5	11.587	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	988	247	500	1183	0.835	1162	837	52.0	8.5	101.148	F
2 - Archway Road	781	195	612	1793	0.436	783	1050	1.2	0.8	3.673	A
3 - Tarbock Road	806	202	513	1925	0.419	808	882	1.2	0.7	3.328	A
4 - Twickenham Drive	138	35	1198	616	0.225	139	123	0.5	0.3	7.626	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	827	207	419	1222	0.677	853	701	8.5	2.2	10.674	B
2 - Archway Road	654	164	454	1903	0.344	655	818	0.8	0.5	2.971	A
3 - Tarbock Road	675	169	425	1986	0.340	676	684	0.7	0.5	2.834	A
4 - Twickenham Drive	116	29	1003	714	0.162	116	98	0.3	0.2	6.072	A

Existing Layout - D4 - 2031 | Base | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Roby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roby Road Roundabout	Standard Roundabout		1, 2, 3, 4	43.24	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	43.24	E

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2031	Base	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Roby Road		ONE HOUR	✓	1114	100.000
2 - Archway Road		ONE HOUR	✓	1055	100.000
3 - Tarbock Road		ONE HOUR	✓	836	100.000
4 - Twickenham Drive		ONE HOUR	✓	114	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
	1 - Roby Road	1	530	522	61
	2 - Archway Road	534	43	415	63
	3 - Tarbock Road	427	351	12	46
	4 - Twickenham Drive	54	34	26	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
	1 - Roby Road	0	2	1	0
	2 - Archway Road	1	0	2	0
	3 - Tarbock Road	2	2	0	0
	4 - Twickenham Drive	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Roby Road	1.04	110.92	40.2	F	1022	1533
2 - Archway Road	0.66	6.04	1.9	A	968	1452
3 - Tarbock Road	0.53	4.44	1.1	A	767	1151
4 - Twickenham Drive	0.27	10.71	0.4	B	105	157

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	839	210	350	1254	0.669	831	762	0.0	2.0	8.468	A
2 - Archway Road	794	199	464	1896	0.419	791	716	0.0	0.7	3.293	A
3 - Tarbock Road	629	157	526	1915	0.329	627	729	0.0	0.5	2.844	A
4 - Twickenham Drive	86	21	1026	702	0.122	85	127	0.0	0.1	5.830	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1001	250	418	1222	0.820	993	912	2.0	4.2	15.339	C
2 - Archway Road	948	237	554	1833	0.517	947	856	0.7	1.1	4.108	A
3 - Tarbock Road	752	188	630	1843	0.408	751	872	0.5	0.7	3.356	A
4 - Twickenham Drive	102	26	1228	601	0.171	102	152	0.1	0.2	7.215	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1227	307	512	1178	1.041	1143	1116	4.2	25.1	58.512	F
2 - Archway Road	1162	290	641	1773	0.655	1158	1014	1.1	1.9	5.900	A
3 - Tarbock Road	920	230	766	1748	0.527	919	1033	0.7	1.1	4.415	A
4 - Twickenham Drive	126	31	1503	463	0.271	125	182	0.2	0.4	10.618	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1227	307	513	1177	1.042	1166	1118	25.1	40.2	110.919	F
2 - Archway Road	1162	290	653	1764	0.658	1161	1026	1.9	1.9	6.042	A
3 - Tarbock Road	920	230	769	1745	0.527	920	1045	1.1	1.1	4.445	A
4 - Twickenham Drive	126	31	1506	462	0.272	125	184	0.4	0.4	10.710	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1001	250	420	1221	0.820	1140	916	40.2	5.5	62.311	F
2 - Archway Road	948	237	632	1779	0.533	951	928	1.9	1.2	4.423	A
3 - Tarbock Road	752	188	641	1835	0.409	753	943	1.1	0.7	3.393	A
4 - Twickenham Drive	102	26	1233	599	0.171	103	161	0.4	0.2	7.275	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	839	210	351	1253	0.669	852	766	5.5	2.1	9.398	A
2 - Archway Road	794	199	476	1888	0.421	796	728	1.2	0.7	3.346	A
3 - Tarbock Road	629	157	530	1912	0.329	630	741	0.7	0.5	2.861	A
4 - Twickenham Drive	86	21	1032	700	0.123	86	129	0.2	0.1	5.869	A

Existing Layout - D5 - 2031 | Base + Dev | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Roby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roby Road Roundabout	Standard Roundabout		1, 2, 3, 4	52.67	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	52.67	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2031	Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Roby Road		ONE HOUR	✓	1095	100.000
2 - Archway Road		ONE HOUR	✓	911	100.000
3 - Tarbock Road		ONE HOUR	✓	895	100.000
4 - Twickenham Drive		ONE HOUR	✓	153	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
	1 - Roby Road	1	557	495	42
	2 - Archway Road	442	51	367	51
	3 - Tarbock Road	444	404	8	39
	4 - Twickenham Drive	61	52	40	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
	1 - Roby Road	0	2	4	0
	2 - Archway Road	2	5	4	2
	3 - Tarbock Road	2	4	0	7
	4 - Twickenham Drive	2	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Roby Road	1.07	137.76	50.2	F	1005	1507
2 - Archway Road	0.56	4.66	1.3	A	836	1254
3 - Tarbock Road	0.54	4.37	1.2	A	821	1232
4 - Twickenham Drive	0.36	11.97	0.6	B	140	211

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	824	206	416	1223	0.674	816	711	0.0	2.1	8.928	A
2 - Archway Road	686	171	437	1915	0.358	684	795	0.0	0.6	3.005	A
3 - Tarbock Road	674	168	440	1975	0.341	672	680	0.0	0.5	2.841	A
4 - Twickenham Drive	115	29	1013	709	0.162	114	99	0.0	0.2	6.095	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	984	246	498	1184	0.831	974	851	2.1	4.6	16.870	C
2 - Archway Road	819	205	522	1856	0.441	818	951	0.6	0.8	3.568	A
3 - Tarbock Road	805	201	527	1915	0.420	804	813	0.5	0.7	3.339	A
4 - Twickenham Drive	138	34	1212	609	0.226	137	118	0.2	0.3	7.683	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1206	301	610	1132	1.065	1105	1041	4.6	29.8	68.702	F
2 - Archway Road	1003	251	595	1805	0.556	1001	1119	0.8	1.3	4.603	A
3 - Tarbock Road	985	246	641	1835	0.537	984	955	0.7	1.2	4.351	A
4 - Twickenham Drive	168	42	1484	473	0.356	167	141	0.3	0.5	11.839	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1206	301	611	1131	1.066	1124	1044	29.8	50.2	137.765	F
2 - Archway Road	1003	251	605	1798	0.558	1003	1130	1.3	1.3	4.663	A
3 - Tarbock Road	985	246	643	1834	0.537	985	965	1.2	1.2	4.374	A
4 - Twickenham Drive	168	42	1486	472	0.357	168	142	0.5	0.6	11.968	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	984	246	500	1183	0.832	1155	854	50.2	7.5	94.974	F
2 - Archway Road	819	205	611	1794	0.457	821	1045	1.3	0.9	3.817	A
3 - Tarbock Road	805	201	535	1909	0.422	806	896	1.2	0.8	3.373	A
4 - Twickenham Drive	138	34	1216	607	0.227	139	125	0.6	0.3	7.764	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	824	206	419	1222	0.675	845	715	7.5	2.2	10.352	B
2 - Archway Road	686	171	452	1905	0.360	687	812	0.9	0.6	3.046	A
3 - Tarbock Road	674	168	443	1973	0.342	675	695	0.8	0.5	2.861	A
4 - Twickenham Drive	115	29	1018	707	0.163	116	100	0.3	0.2	6.145	A

Existing Layout - D6 - 2031 | Base + Dev | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Roby Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roby Road Roundabout	Standard Roundabout		1, 2, 3, 4	52.76	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	52.76	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2031	Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Roby Road		ONE HOUR	✓	1133	100.000
2 - Archway Road		ONE HOUR	✓	1053	100.000
3 - Tarbock Road		ONE HOUR	✓	849	100.000
4 - Twickenham Drive		ONE HOUR	✓	115	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
	1 - Roby Road	1	549	522	61
	2 - Archway Road	533	43	414	63
	3 - Tarbock Road	427	364	12	46
	4 - Twickenham Drive	54	35	26	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - Roby Road	2 - Archway Road	3 - Tarbock Road	4 - Twickenham Drive
	1 - Roby Road	0	2	1	0
	2 - Archway Road	1	0	2	0
	3 - Tarbock Road	2	2	0	0
	4 - Twickenham Drive	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Roby Road	1.07	136.67	51.6	F	1040	1559
2 - Archway Road	0.65	5.94	1.9	A	966	1449
3 - Tarbock Road	0.54	4.51	1.2	A	779	1169
4 - Twickenham Drive	0.28	10.96	0.4	B	106	158

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	853	213	360	1249	0.683	845	761	0.0	2.1	8.845	A
2 - Archway Road	793	198	464	1896	0.418	790	741	0.0	0.7	3.288	A
3 - Tarbock Road	639	160	526	1916	0.334	637	728	0.0	0.5	2.862	A
4 - Twickenham Drive	87	22	1035	698	0.124	86	127	0.0	0.1	5.880	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1019	255	431	1216	0.838	1008	911	2.1	4.7	16.775	C
2 - Archway Road	947	237	554	1834	0.516	945	885	0.7	1.1	4.097	A
3 - Tarbock Road	763	191	629	1844	0.414	762	870	0.5	0.7	3.390	A
4 - Twickenham Drive	103	26	1239	596	0.174	103	152	0.1	0.2	7.307	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1247	312	527	1170	1.066	1144	1115	4.7	30.6	67.893	F
2 - Archway Road	1159	290	631	1780	0.651	1156	1040	1.1	1.9	5.821	A
3 - Tarbock Road	935	234	764	1749	0.534	933	1023	0.7	1.2	4.484	A
4 - Twickenham Drive	127	32	1516	457	0.277	126	181	0.2	0.4	10.862	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1247	312	528	1170	1.066	1163	1117	30.6	51.6	136.666	F
2 - Archway Road	1159	290	641	1773	0.654	1159	1050	1.9	1.9	5.943	A
3 - Tarbock Road	935	234	767	1747	0.535	935	1034	1.2	1.2	4.514	A
4 - Twickenham Drive	127	32	1519	455	0.278	127	183	0.4	0.4	10.962	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	1019	255	433	1215	0.838	1192	915	51.6	8.2	97.016	F
2 - Archway Road	947	237	649	1768	0.536	949	976	1.9	1.2	4.472	A
3 - Tarbock Road	763	191	641	1835	0.416	765	957	1.2	0.7	3.432	A
4 - Twickenham Drive	103	26	1244	593	0.174	104	162	0.4	0.2	7.373	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Roby Road	853	213	362	1248	0.683	877	766	8.2	2.3	10.423	B
2 - Archway Road	793	198	481	1884	0.421	795	758	1.2	0.7	3.352	A
3 - Tarbock Road	639	160	530	1913	0.334	640	745	0.7	0.5	2.883	A
4 - Twickenham Drive	87	22	1041	695	0.125	87	129	0.2	0.1	5.921	A

SURVEY CONTROL

Client: Astute

Client Contact: Oliver McLaughlin

Survey Location: Huyton

Date(s) of Survey: Thursday 23rd April 2026

Notes:

On Site Supervisor: Neil Harley/David Cheng

Data Checking: David Cheng

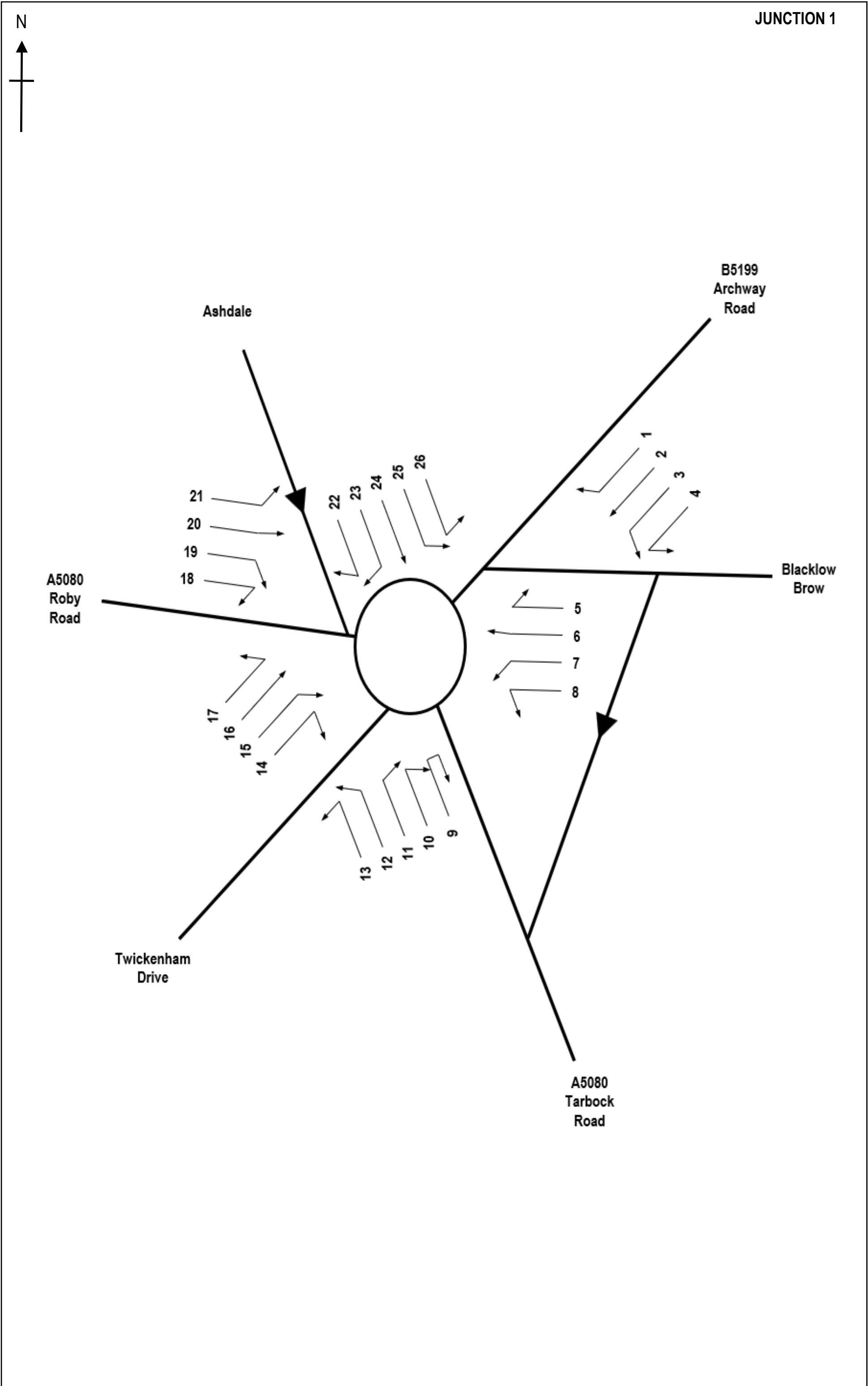
Survey Reference: 26.016 Roby Road, Huyton

Status: Final

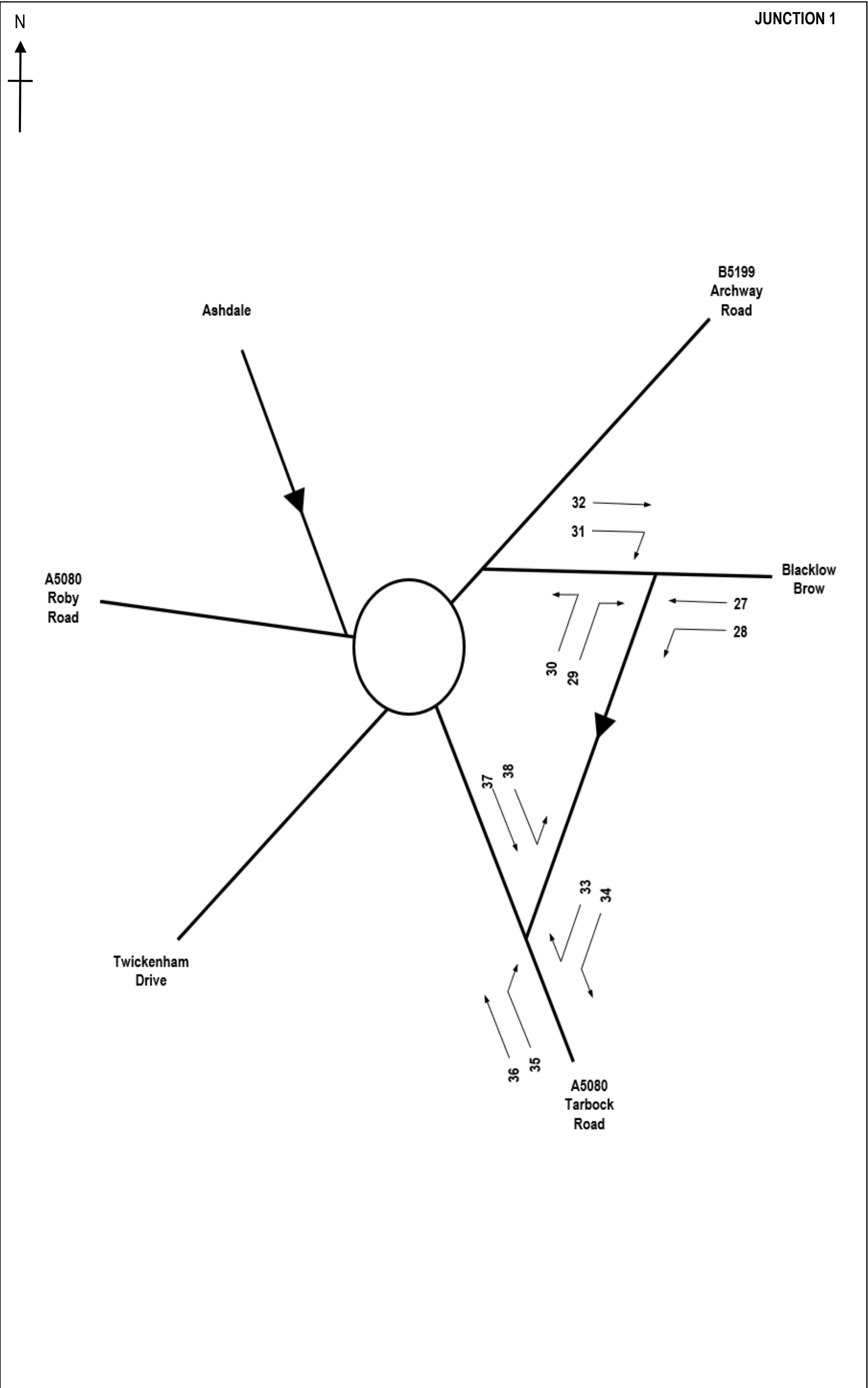
Date of Issue: 5th May 2026



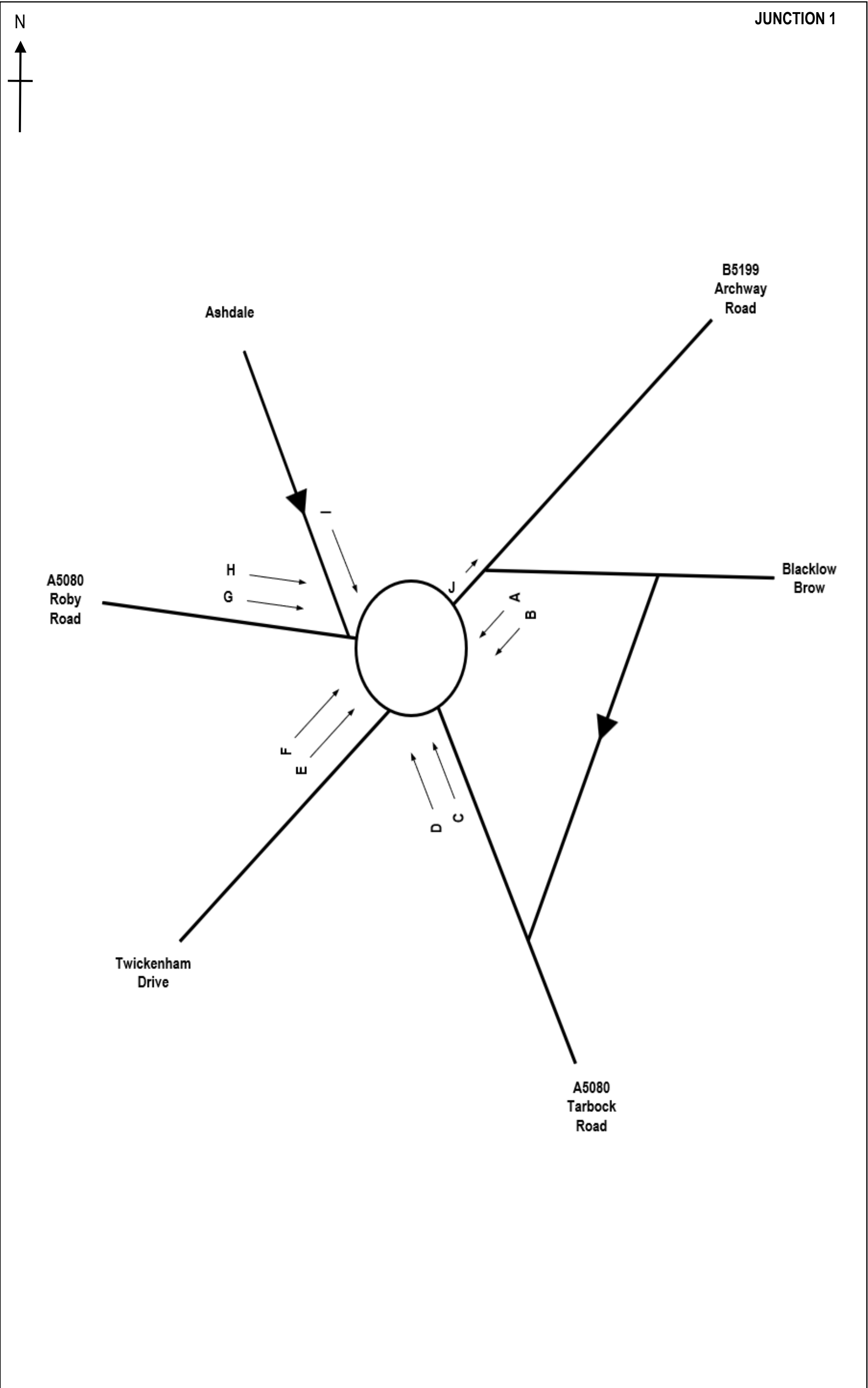
Appendix H



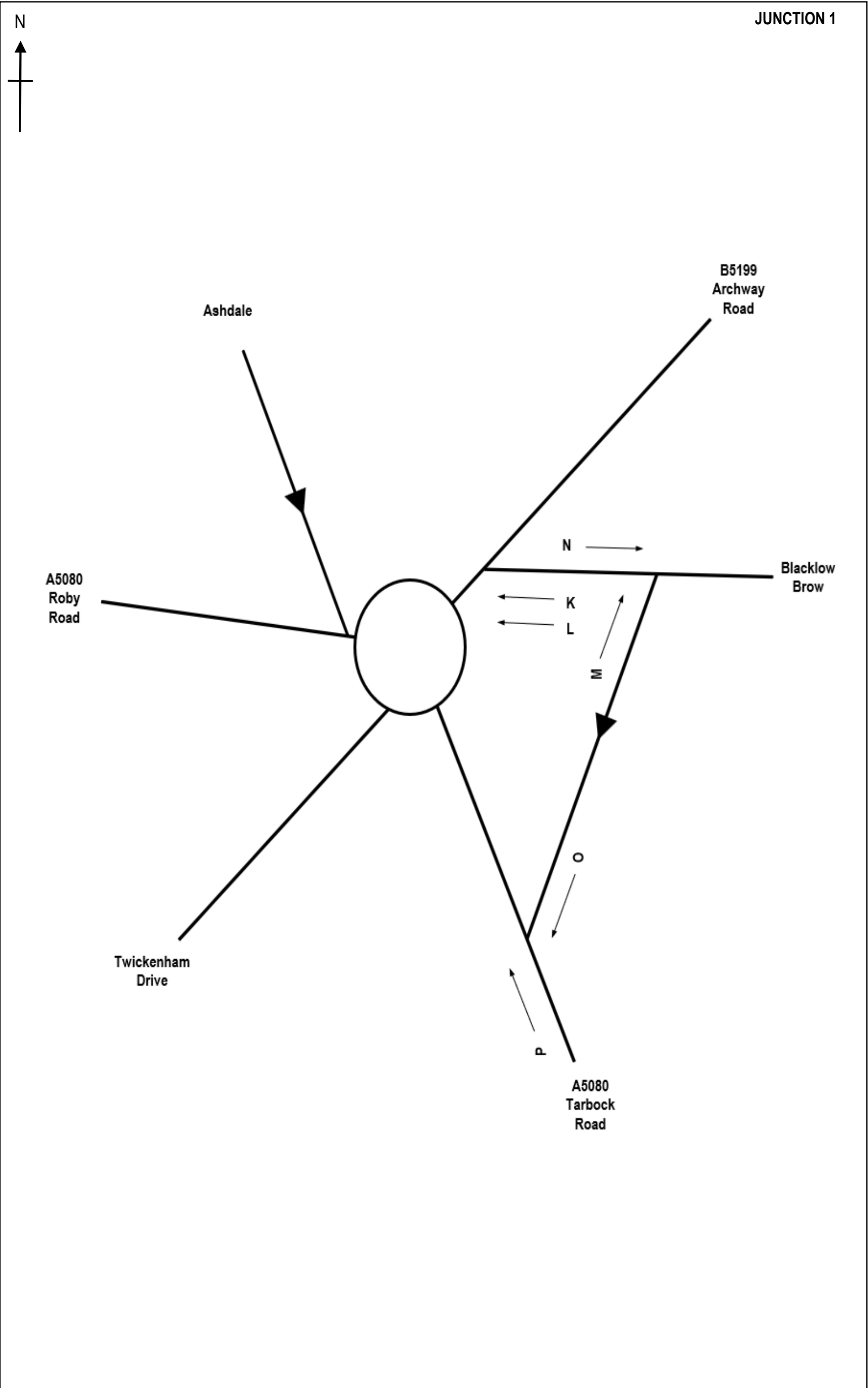
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TRAFFIC MOVEMENT REFERENCE				
JOB TITLE				
26.016 ROBY ROAD, HUYTON				
DRAWN BY	DATE	SCALE	REF	
CC	APR 2026	NTS	FIGURE 1	



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TRAFFIC MOVEMENT REFERENCE				
JOB TITLE				
26.016 ROBY ROAD, HUYTON				
DRAWN BY	DATE	SCALE	REF	
CC	APR 2026	NTS	FIGURE 2	



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QUEUE REFERENCE				
JOB TITLE				
26.016 ROBY ROAD, HUYTON				
DRAWN BY CC	DATE APR 2026	SCALE NTS	REF FIGURE 3	



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QUEUE REFERENCE				
JOB TITLE				
26.016 ROBY ROAD, HUYTON				
DRAWN BY CC	DATE APR 2026	SCALE NTS	REF FIGURE 4	

Time Beginning	B5199 Archway Road/Blacklow Brow/A5080 Tarbock Road/Twickenham Drive/A5080 Roby Road/Ashdale - Thursday 23rd April 2026																									
	1		2		3		4		5		6		7		8		9		10		11		12		13	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
0700	82	0	2	0	51	3	13	0	4	0	6	0	0	0	1	0	0	0	1	0	28	6	58	3	3	1
0715	83	4	0	0	61	3	10	0	11	0	7	0	3	0	1	0	0	0	1	0	44	2	77	1	2	1
0730	114	2	5	1	84	3	10	0	8	0	11	0	0	0	0	0	2	0	1	0	66	3	79	2	3	0
0745	117	2	9	0	93	4	19	0	11	0	13	0	1	0	1	0	4	0	0	0	98	5	94	3	3	0
0800	93	1	3	1	91	5	15	1	11	0	23	0	3	0	3	0	1	0	3	0	80	4	99	0	9	1
0815	96	2	18	0	67	3	15	0	6	2	15	0	4	0	2	0	2	0	4	0	76	1	101	2	9	0
0830	66	4	5	0	76	1	15	1	14	0	9	0	1	0	5	0	4	0	4	0	92	3	105	3	6	1
0845	58	3	9	0	62	3	14	0	11	0	8	0	1	0	2	0	1	0	3	0	96	6	103	2	7	1
0900	72	0	11	0	73	6	15	1	9	0	8	0	0	0	4	1	0	1	2	1	78	0	99	3	1	0
0915	69	2	3	0	72	3	12	0	5	0	11	0	0	0	1	1	2	0	3	0	63	2	83	1	6	0
0930	66	2	4	0	68	3	11	0	4	0	6	0	1	1	3	1	1	0	2	0	58	2	68	5	3	0
0945	70	2	3	0	64	3	9	1	9	0	5	1	0	0	5	0	0	0	3	0	53	3	64	5	2	0

Time Beginning	B5199 Archway Road/Blacklow Brow/A5080 Tarbock Road/Twickenham Drive/A5080 Roby Road/Ashdale - Thursday 23rd April 2026																									
	14		15		16		17		18		19		20		21		22		23		24		25		26	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
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0715	8	0	2	0	12	0	11	0	2	0	121	3	4	0	84	4	0	0	0	0	0	0	0	0	0	0
0730	9	0	1	0	11	0	13	1	6	0	84	0	7	0	93	1	0	0	0	0	0	1	0	0	0	0
0745	10	0	1	0	5	0	9	0	2	0	110	3	10	0	141	2	0	0	0	0	0	0	0	0	0	0
0800	10	0	2	0	4	0	14	1	15	0	114	4	6	1	117	2	0	0	0	0	0	0	0	0	0	0
0815	14	0	0	0	15	0	13	0	18	0	113	7	9	0	106	2	0	0	0	0	0	0	0	0	0	0
0830	9	0	2	0	13	0	14	0	3	0	92	5	12	0	114	2	0	0	0	0	0	0	0	0	0	0
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0930	6	1	0	0	14	0	4	0	3	0	79	9	9	0	103	5	0	0	0	0	0	0	0	0	0	0
0945	6	0	0	0	13	0	9	0	6	1	95	6	8	0	89	5	1	0	0	0	0	0	0	0	0	0

Time Beginning	B5199 Archway Road/Blacklow Brow/A5080 Tarbock Road/Twickenham Drive/A5080 Roby Road/Ashdale - Thursday 23rd April 2026																									
	1		2		3		4		5		6		7		8		9		10		11		12		13	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
1600	104	0	8	0	97	4	11	0	10	0	10	0	1	0	3	0	2	0	5	0	89	2	109	3	21	0
1615	107	1	10	0	122	1	18	1	5	0	3	0	3	0	0	0	2	0	2	0	73	1	107	2	14	0
1630	92	3	16	0	92	0	15	0	18	0	10	0	0	0	2	0	1	0	7	0	90	1	110	1	13	0
1645	115	1	14	0	78	1	15	0	9	0	8	0	1	0	2	0	6	0	3	0	76	3	107	1	13	0
1700	116	2	12	1	100	1	10	0	5	0	15	0	0	0	2	0	3	0	4	0	75	1	98	1	11	0
1715	109	1	15	0	109	2	21	0	9	0	20	0	0	0	1	0	1	0	3	0	61	2	84	0	7	0
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1745	82	1	17	0	83	0	9	0	6	0	9	0	0	0	2	0	2	0	1	0	69	1	64	1	15	0
1800	96	1	6	0	82	1	18	0	10	0	9	0	1	0	1	0	0	0	2	0	85	1	72	1	13	0
1815	71	0	11	0	51	1	12	0	8	0	7	0	3	0	4	0	1	0	5	0	83	1	78	0	13	0
1830	83	1	9	0	85	2	13	0	5	0	12	0	1	0	1	0	0	0	2	0	71	2	58	1	6	0
1845	47	0	11	0	73	2	9	0	7	0	7	0	1	0	2	0	0	0	6	0	59	1	70	0	8	0

Time Beginning	Blacklow Brow/Tarbock Road/A5080 Tarbock Road - Thursday 23rd April 2026																							
	27		28		29		30		31		32		33		34		35		36		37		38	
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0715	19	0	0	0	0	0	3	0	7	0	10	0	1	0	5	0	1	0	123	4	191	6	0	0
0730	15	0	0	0	0	0	4	0	3	0	16	0	0	0	0	0	0	0	151	5	179	3	0	0
0745	24	0	1	0	1	0	2	0	9	0	21	0	0	0	4	0	0	0	199	8	218	7	0	0
0800	39	0	0	0	0	0	1	0	6	1	20	1	0	0	1	0	1	0	192	5	219	9	0	0
0815	22	2	1	0	0	0	5	0	10	0	18	0	1	0	2	0	0	0	191	3	198	10	0	0
0830	23	0	2	0	0	0	6	0	6	0	27	1	3	0	3	0	0	0	208	7	186	6	0	0
0845	17	0	1	0	0	0	5	0	7	0	22	0	2	0	1	0	0	0	208	9	181	7	0	0
0900	20	1	0	0	0	0	1	0	12	0	14	2	3	0	5	0	0	0	177	5	204	12	1	0
0915	13	1	3	0	0	0	4	0	10	0	14	0	0	0	2	0	1	0	157	3	138	11	1	0
0930	13	2	2	0	0	0	1	0	6	0	16	0	0	0	7	0	0	0	132	7	157	14	0	0
0945	18	1	2	0	0	0	1	0	2	0	18	1	3	0	3	0	0	0	119	8	170	9	0	0
Time Beginning	Blacklow Brow/Tarbock Road/A5080 Tarbock Road - Thursday 23rd April 2026																							
	27		28		29		30		31		32		33		34		35		36		37		38	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
1600	22	0	2	0	1	0	2	0	5	0	23	0	2	0	4	0	0	0	224	5	237	6	0	0
1615	8	0	0	0	0	0	3	0	14	0	20	1	0	0	7	0	0	0	198	3	243	4	0	0
1630	27	0	3	0	0	0	3	0	8	0	25	0	2	0	8	0	0	0	219	2	221	0	0	0
1645	17	0	0	0	0	0	3	0	9	0	21	0	3	0	9	0	0	0	202	4	205	3	0	0
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1830	18	0	2	0	0	0	1	0	11	0	13	0	4	0	1	0	0	0	133	3	197	3	1	0
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Time Beginning	B5199 Archway Road/Blacklow Brow/A5080 Tarbock Road/Twickenham Drive/A5080 Roby Road/Ashdale/Tarbock Road, Queues (vehs) - Thursday 23rd April 2026																Time Beginning	B5199 Archway Road/Blacklow Brow/A5080 Tarbock Road/Twickenham Drive/A5080 Roby Road/Ashdale/Tarbock Road, Queues (vehs) - Thursday 23rd April 2026																	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P		
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1600	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0		
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0710	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1610	0	0	2	7	1	0	0	0	0	0	1	2	0	0	0	0	0	
0715	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1615	0	0	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	
0720	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1620	4	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
0725	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1625	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0730	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1630	1	6	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
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0740	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1640	30+	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
0745	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	1645	30+	3	2	5	0	0	3	18	0	0	0	0	0	0	0	0	0	0
0750	2	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	1650	2	4	3	1	7	0	1	40+	0	0	0	0	0	0	0	0	0	0
0755	0	0	3	4	0	0	0	1	4	0	0	0	1	0	0	0	1655	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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0805	1	30+	0	0	0	0	0	1	24	0	0	0	0	0	0	0	1705	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
0810	7	0	0	0	0	0	0	1	40+	0	0	4	0	0	0	0	1710	30+	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0815	30+	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	1715	1	1	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0
0820	30+	2	0	1	0	0	0	0	8	0	0	0	0	0	0	1	0	1720	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
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0840	0	0	1	1	0	0	0	2	40+	0	0	0	0	0	0	0	1740	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0845	6	0	0	0	0	0	0	0	40+	0	0	0	0	0	0	0	1745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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0855	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0	1755	0	0	0	0	0	0	0	5	6	0	0	0	0	0	0	0	0	0
0900	1	1	1	0	1	0	5	1	0	0	0	0	0	0	0	0	1800	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
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0920	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1820	0	0	0	0	0	0	1	3	0	0	1	0	0	0	0	0	0	0
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0930	0	1	0	0	1	0	5	1	0	0	0	0	0	0	0	0	1830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0935	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	1	1835	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	
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0945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1845	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
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0955	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	1	1855	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
1000	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Key:
Queues back up and onto roundabout from B5199 Archway Road

SURVEY CONTROL

Client: Astute

Client Contact: Oliver McLaughlin

Survey Location: Huyton

Date(s) of Survey: Thursday 23rd April 2026

Notes:

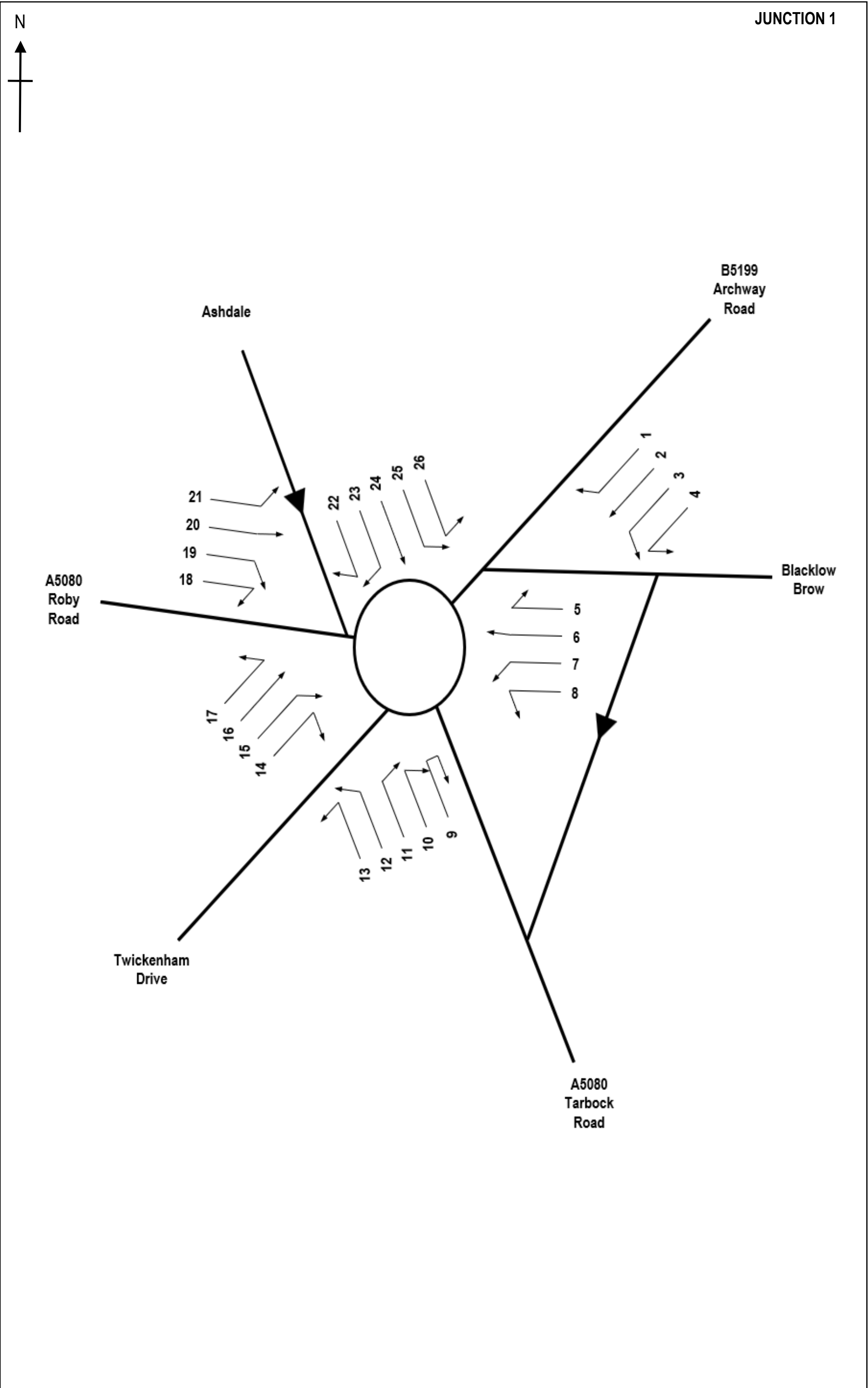
On Site Supervisor: Neil Harley/David Cheng

Data Checking: David Cheng

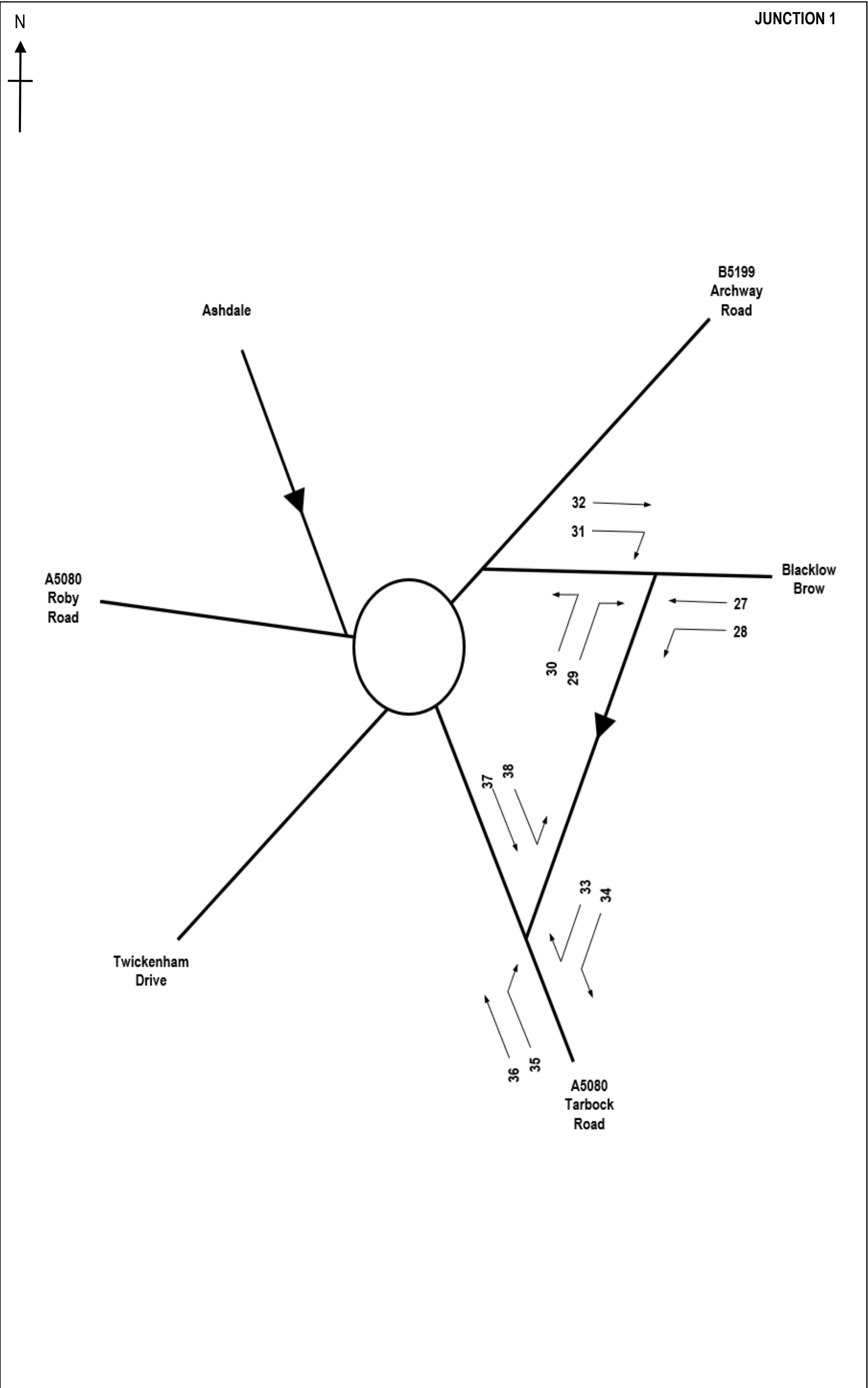
Survey Reference: 26.016 Roby Road, Huyton

Status: Final

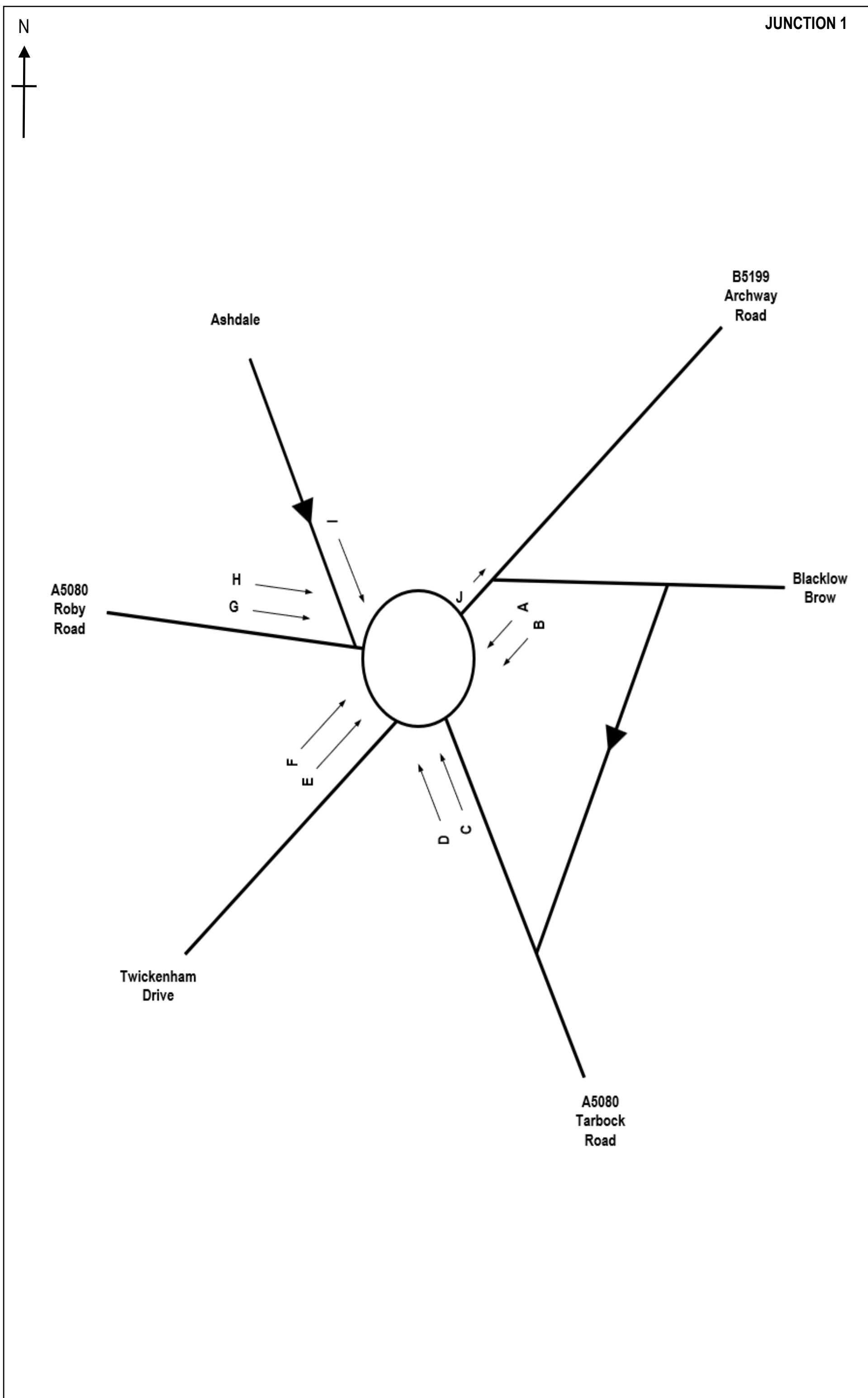
Date of Issue: 5th May 2026



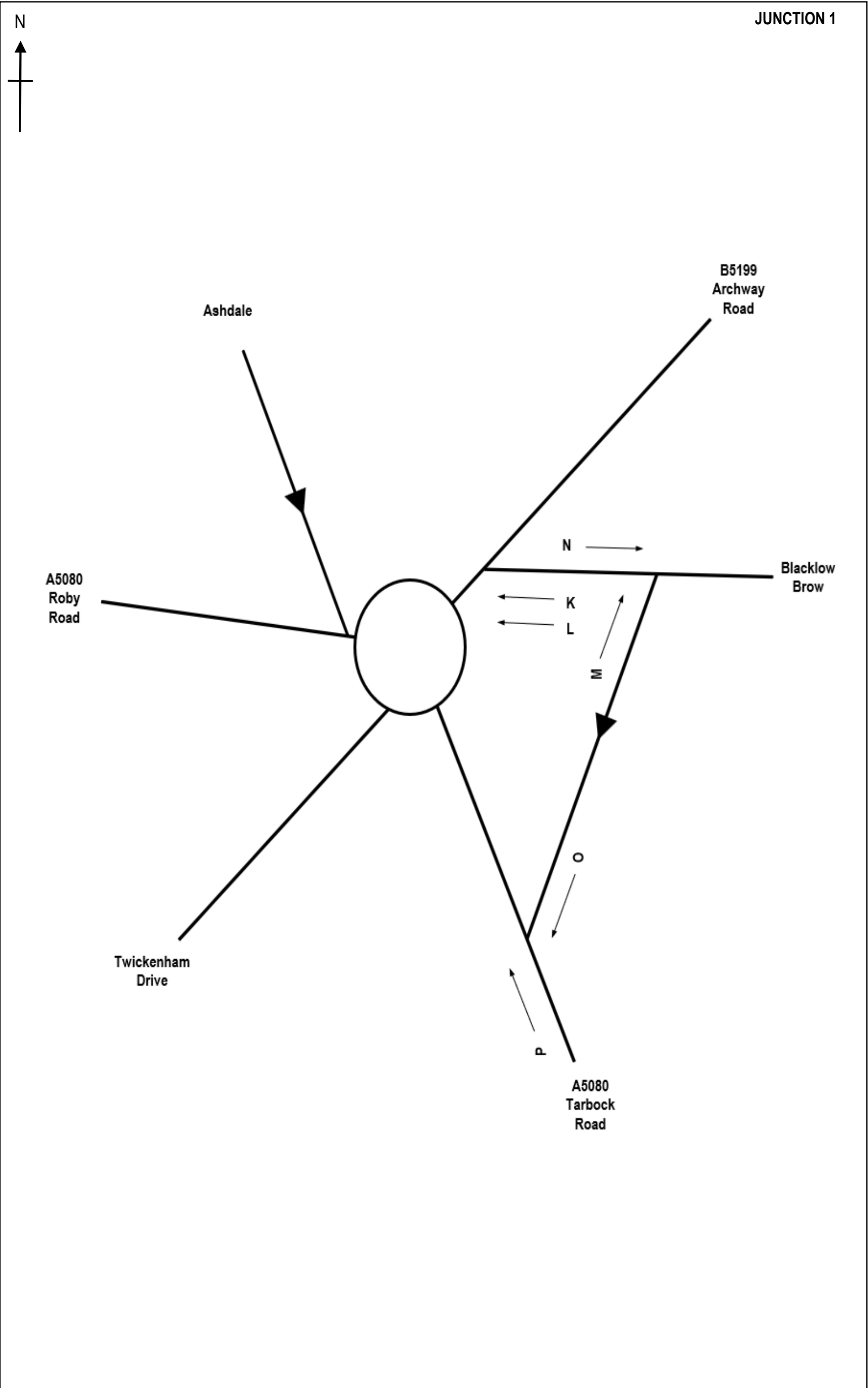
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TRAFFIC MOVEMENT REFERENCE				
JOB TITLE				
26.016 ROBY ROAD, HUYTON				
DRAWN BY	DATE	SCALE	REF	
CC	APR 2026	NTS	FIGURE 1	



DRAWING TITLE				Transport Data Specialists Ltd W: www.transportds.co.uk E: enquiries@transportds.co.uk T: 0777 625 2475 T: 0794 007 1260
TRAFFIC MOVEMENT REFERENCE				
JOB TITLE				
26.016 ROBY ROAD, HUYTON				
DRAWN BY	DATE	SCALE	REF	
CC	APR 2026	NTS	FIGURE 2	



DRAWING TITLE				Transport Data Specialists Ltd W: www.transportds.co.uk E: enquiries@transportds.co.uk T: 0777 625 2475 T: 0794 007 1260
QUEUE REFERENCE				
JOB TITLE				
26.016 ROBY ROAD, HUYTON				
DRAWN BY CC	DATE APR 2026	SCALE NTS	REF FIGURE 3	



DRAWING TITLE				Transport Data Specialists Ltd W: www.transportds.co.uk E: enquiries@transportds.co.uk T: 0777 625 2475 T: 0794 007 1260
QUEUE REFERENCE				
JOB TITLE				
26.016 ROBY ROAD, HUYTON				
DRAWN BY CC	DATE APR 2026	SCALE NTS	REF FIGURE 4	

Time Beginning	B5199 Archway Road/Blacklow Brow/A5080 Tarbock Road/Twickenham Drive/A5080 Roby Road/Ashdale - Thursday 23rd April 2026																														
	1		PCU	2		PCU	3		PCU	4		PCU	5		PCU	6		PCU	7		PCU	8		PCU	9		PCU	10		PCU	LV
	LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		
0700	82	0	82	2	0	2	51	3	57	13	0	13	4	0	4	6	0	6	0	0	0	1	0	1	0	0	0	1	0	1	28
0715	83	4	91	0	0	0	61	3	67	10	0	10	11	0	11	7	0	7	3	0	3	1	0	1	0	0	0	1	0	1	44
0730	114	2	118	5	1	7	84	3	90	10	0	10	8	0	8	11	0	11	0	0	0	0	0	0	2	0	2	1	0	1	66
0745	117	2	121	9	0	9	93	4	101	19	0	19	11	0	11	13	0	13	1	0	1	1	0	1	4	0	4	0	0	0	98
0800	93	1	95	3	1	5	91	5	101	15	1	17	11	0	11	23	0	23	3	0	3	3	0	3	1	0	1	3	0	3	80
0815	96	2	100	18	0	18	67	3	73	15	0	15	6	2	10	15	0	15	4	0	4	2	0	2	2	0	2	4	0	4	76
0830	66	4	74	5	0	5	76	1	78	15	1	17	14	0	14	9	0	9	1	0	1	5	0	5	4	0	4	4	0	4	92
0845	58	3	64	9	0	9	62	3	68	14	0	14	11	0	11	8	0	8	1	0	1	2	0	2	1	0	1	3	0	3	96
0900	72	0	72	11	0	11	73	6	85	15	1	17	9	0	9	8	0	8	0	0	0	4	1	6	0	1	2	2	1	4	78
0915	69	2	73	3	0	3	72	3	78	12	0	12	5	0	5	11	0	11	0	0	0	1	1	3	2	0	2	3	0	3	63
0930	66	2	70	4	0	4	68	3	74	11	0	11	4	0	4	6	0	6	1	1	3	3	1	5	1	0	1	2	0	2	58
0945	70	2	74	3	0	3	64	3	70	9	1	11	9	0	9	5	1	7	0	0	0	5	0	5	0	0	0	3	0	3	53
Time Beginning	B5199 Archway Road/Blacklow Brow/A5080 Tarbock Road/Twickenham Drive/A5080 Roby Road/Ashdale - Thursday 23rd April 2026																														
	1		PCU	2		PCU	3		PCU	4		PCU	5		PCU	6		PCU	7		PCU	8		PCU	9		PCU	10		PCU	LV
	LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		LV	HV		
1600	104	0	104	8	0	8	97	4	105	11	0	11	10	0	10	10	0	10	1	0	1	3	0	3	2	0	2	5	0	5	89
1615	107	1	109	10	0	10	122	1	124	18	1	20	5	0	5	3	0	3	3	0	3	0	0	0	2	0	2	2	0	2	73
1630	92	3	98	16	0	16	92	0	92	15	0	15	18	0	18	10	0	10	0	0	0	2	0	2	1	0	1	7	0	7	90
1645	115	1	117	14	0	14	78	1	80	15	0	15	9	0	9	8	0	8	1	0	1	2	0	2	6	0	6	3	0	3	76
1700	116	2	120	12	1	14	100	1	102	10	0	10	5	0	5	15	0	15	0	0	0	2	0	2	3	0	3	4	0	4	75
1715	109	1	111	15	0	15	109	2	113	21	0	21	9	0	9	20	0	20	0	0	0	1	0	1	1	0	1	3	0	3	61
1730	89	1	91	5	0	5	80	2	84	12	0	12	9	0	9	10	0	10	1	0	1	0	0	0	1	0	1	3	0	3	69
1745	82	1	84	17	0	17	83	0	83	9	0	9	6	0	6	9	0	9	0	0	0	2	0	2	2	0	2	1	0	1	69
1800	96	1	98	6	0	6	82	1	84	18	0	18	10	0	10	9	0	9	1	0	1	1	0	1	0	0	0	2	0	2	85
1815	71	0	71	11	0	11	51	1	53	12	0	12	8	0	8	7	0	7	3	0	3	4	0	4	1	0	1	5	0	5	83
1830	83	1	85	9	0	9	85	2	89	13	0	13	5	0	5	12	0	12	1	0	1	1	0	1	0	0	0	2	0	2	71
1845	47	0	47	11	0	11	73	2	77	9	0	9	7	0	7	7	0	7	1	0	1	2	0	2	0	0	0	6	0	6	59

								B5199 Archway Road/Blacklow Brow/A5080 Tarbock Road/Twickenham Drive/A5080 Roby Road//																											
1	12			13			Time Beginning	14		15			16		17		18		19		20		21												
HV	PCU	LV	HV	PCU	LV	HV		LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV								
6	40	58	3	64	3	1	5	0700	6	0	6	3	0	3	4	0	4	8	0	8	0	1	2	102	4	110	8	0	8	68	2				
2	48	77	1	79	2	1	4	0715	8	0	8	2	0	2	12	0	12	11	0	11	2	0	2	121	3	127	4	0	4	84	4				
3	72	79	2	83	3	0	3	0730	9	0	9	1	0	1	11	0	11	13	1	15	6	0	6	84	0	84	7	0	7	93	1				
5	108	94	3	100	3	0	3	0745	10	0	10	1	0	1	5	0	5	9	0	9	2	0	2	110	3	116	10	0	10	141	2				
4	88	99	0	99	9	1	11	0800	10	0	10	2	0	2	4	0	4	14	1	16	15	0	15	114	4	122	6	1	8	117	2				
1	78	101	2	105	9	0	9	0815	14	0	14	0	0	0	15	0	15	13	0	13	18	0	18	113	7	127	9	0	9	106	2				
3	98	105	3	111	6	1	8	0830	9	0	9	2	0	2	13	0	13	14	0	14	3	0	3	92	5	102	12	0	12	114	2				
6	108	103	2	107	7	1	9	0845	5	0	5	1	0	1	13	0	13	15	0	15	4	0	4	111	4	119	11	0	11	131	2				
0	78	99	3	105	1	0	1	0900	4	0	4	0	0	0	8	0	8	4	0	4	4	0	4	124	4	132	9	0	9	129	5				
2	67	83	1	85	6	0	6	0915	3	0	3	2	0	2	15	0	15	9	0	9	7	0	7	61	7	75	7	0	7	78	5				
2	62	68	5	78	3	0	3	0930	6	1	8	0	0	0	14	0	14	4	0	4	3	0	3	79	9	97	9	0	9	103	5				
3	59	64	5	74	2	0	2	0945	6	0	6	0	0	0	13	0	13	9	0	9	6	1	8	95	6	107	8	0	8	89	5				
								B5199 Archway Road/Blacklow Brow/A5080 Tarbock Road/Twickenham Drive/A5080 Roby Road//																											
1	12			13			Time Beginning	14		15			16		17		18		19		20		21												
HV	PCU	LV	HV	PCU	LV	HV		LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV								
2	93	109	3	115	21	0	21	1600	13	0	13	1	0	1	17	0	17	9	0	9	9	0	9	122	2	126	11	0	11	100	3				
1	75	107	2	111	14	0	14	1615	8	0	8	1	0	1	9	0	9	6	0	6	13	0	13	111	3	117	13	0	13	103	1				
1	92	110	1	112	13	0	13	1630	6	0	6	3	0	3	5	0	5	8	0	8	15	0	15	120	0	120	8	0	8	117	2				
3	82	107	1	109	13	0	13	1645	4	0	4	0	0	0	8	0	8	16	0	16	15	0	15	115	2	119	12	0	12	84	2				
1	77	98	1	100	11	0	11	1700	9	0	9	1	0	1	8	0	8	16	0	16	19	0	19	129	2	133	16	0	16	115	1				
2	65	84	0	84	7	0	7	1715	6	0	6	1	0	1	6	0	6	11	0	11	9	0	9	123	0	123	12	0	12	112	2				
0	69	89	0	89	14	0	14	1730	8	0	8	2	0	2	6	0	6	5	0	5	15	0	15	114	3	120	18	0	18	116	1				
1	71	64	1	66	15	0	15	1745	14	0	14	4	0	4	10	0	10	6	0	6	16	0	16	135	1	137	13	0	13	134	3				
1	87	72	1	74	13	0	13	1800	5	0	5	3	0	3	13	0	13	16	0	16	13	0	13	116	0	116	11	0	11	102	0				
1	85	78	0	78	13	0	13	1815	5	0	5	5	0	5	14	0	14	6	0	6	19	0	19	95	2	99	8	0	8	112	2				
2	75	58	1	60	6	0	6	1830	4	0	4	1	0	1	5	0	5	4	0	4	6	0	6	108	1	110	8	0	8	102	1				
1	61	70	0	70	8	0	8	1845	3	0	3	0	0	0	8	0	8	10	0	10	7	0	7	92	1	94	13	0	13	98	1				

Ashdale - Thursday 23rd April 2026

	22			23			24			25			26		
PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU
72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
139	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
88	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
99	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Ashdale - Thursday 23rd April 2026

	22			23			24			25			26		
PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU	LV	HV	PCU
106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
118	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID	AM	PM
1	333	446
2	37	59
3	320	387
4	63	61
5	46	41
6	55	53
7	9	1
8	12	7
9	8	11
10	14	17
11	372	316
12	422	405
13	37	44
14	38	25
15	5	5
16	45	27
17	58	51
18	40	58
19	470	495
20	40	48
21	484	442
22	1	1
23	0	0
24	0	0
25	0	0
26	0	2

Time Beginning	Blacklow Brow/Tarbock Road/A5080 Tarbock Road - Thursday 23rd April 2026																							
	27		28		29		30		31		32		33		34		35		36		37		38	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
0700	6	0	1	0	0	0	5	0	6	0	19	0	0	0	2	0	0	0	90	10	160	7	0	0
0715	19	0	0	0	0	0	3	0	7	0	10	0	1	0	5	0	1	0	123	4	191	6	0	0
0730	15	0	0	0	0	0	4	0	3	0	16	0	0	0	0	0	0	0	151	5	179	3	0	0
0745	24	0	1	0	1	0	2	0	9	0	21	0	0	0	4	0	0	0	199	8	218	7	0	0
0800	39	0	0	0	0	0	1	0	6	1	20	1	0	0	1	0	1	0	192	5	219	9	0	0
0815	22	2	1	0	0	0	5	0	10	0	18	0	1	0	2	0	0	0	191	3	198	10	0	0
0830	23	0	2	0	0	0	6	0	6	0	27	1	3	0	3	0	0	0	208	7	186	6	0	0
0845	17	0	1	0	0	0	5	0	7	0	22	0	2	0	1	0	0	0	208	9	181	7	0	0
0900	20	1	0	0	0	0	1	0	12	0	14	2	3	0	5	0	0	0	177	5	204	12	1	0
0915	13	1	3	0	0	0	4	0	10	0	14	0	0	0	2	0	1	0	157	3	138	11	1	0
0930	13	2	2	0	0	0	1	0	6	0	16	0	0	0	7	0	0	0	132	7	157	14	0	0
0945	18	1	2	0	0	0	1	0	2	0	18	1	3	0	3	0	0	0	119	8	170	9	0	0
Time Beginning	Blacklow Brow/Tarbock Road/A5080 Tarbock Road - Thursday 23rd April 2026																							
	27		28		29		30		31		32		33		34		35		36		37		38	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
1600	22	0	2	0	1	0	2	0	5	0	23	0	2	0	4	0	0	0	224	5	237	6	0	0
1615	8	0	0	0	0	0	3	0	14	0	20	1	0	0	7	0	0	0	198	3	243	4	0	0
1630	27	0	3	0	0	0	3	0	8	0	25	0	2	0	8	0	0	0	219	2	221	0	0	0
1645	17	0	0	0	0	0	3	0	9	0	21	0	3	0	9	0	0	0	202	4	205	3	0	0
1700	19	0	1	0	1	0	3	0	10	0	21	0	1	0	7	0	0	0	190	2	243	3	0	0
1715	28	0	4	0	0	0	2	0	11	0	26	0	2	0	7	0	0	0	154	2	240	2	0	0
1730	19	0	2	0	0	0	1	0	11	0	24	0	7	0	6	0	0	0	169	0	203	5	0	0
1745	14	0	2	0	0	0	3	0	13	0	14	0	2	0	12	0	0	0	149	2	236	1	0	0
1800	18	0	1	0	2	0	3	0	15	0	19	0	1	0	5	0	0	0	171	2	204	1	0	0
1815	18	0	2	0	0	0	4	0	13	0	17	0	1	1	10	0	0	0	179	0	156	3	0	0
1830	18	0	2	0	0	0	1	0	11	0	13	0	4	0	1	0	0	0	133	3	197	3	1	0
1845	15	0	1	0	0	0	2	0	12	0	16	0	5	0	5	0	0	0	138	1	170	3	0	0

Time Beginning	B5199 Archway Road/Blacklow Brow/A5080 Tarbock Road/Twickenham Drive/A5080 Roby Road/Ashdale/Tarbock Road, Queues (vehs) - Thursday 23rd April 2026															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0705	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0710	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0715	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0720	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0725	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0730	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0735	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0740	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0745	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0
0750	2	0	0	0	0	0	6	1	0	0	0	0	0	0	0	0
0755	0	0	3	4	0	0	1	4	0	0	0	1	0	0	0	0
0800	11	0	0	0	0	0	4	10	0	0	0	0	0	0	0	0
0805	1	30+	0	0	0	0	1	24	0	0	0	0	0	0	0	0
0810	7	0	0	0	0	0	1	40	0	0	4	0	0	0	0	0
0815	30+	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0
0820	30+	2	0	1	0	0	0	8	0	0	0	0	0	0	1	0
0825	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0
0830	0	2	4	1	0	0	7	5	0	0	0	0	0	0	0	0
0835	1	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0
0840	0	0	1	1	0	0	2	40	0	0	0	0	0	0	0	0
0845	6	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0
0850	0	0	2	0	0	0	0	40	0	0	1	0	0	0	0	0
0855	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0
0900	1	1	1	0	1	0	5	1	0	0	0	0	0	0	0	0
0905	0	0	0	0	1	1	3	11	0	0	0	0	0	0	0	0
0910	0	0	0	0	0	0	1	15	0	0	0	0	0	0	0	0
0915	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0920	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
0925	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
0930	0	1	0	0	1	0	5	1	0	0	0	0	0	0	0	0
0935	0	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0
0940	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0950	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0955	0	0	0	0	0	0	3	1	0	0	0	0	0	0	1	0
1000	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

[illegible]

