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PROPOSED ALDI FOODSTORE, WYNDHAM PLACE, EGREMONT

TRANSPORT ASSESSMENT

JANUARY 2024

REPORT NO 48018-001

PROPOSED ALDI FOODSTORE, WYNDHAM PLACE, EGREMONT

TRANSPORT ASSESSMENT

Aldi UK

Planning Issue

Project no: 48019

Date: January 2024

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QUALITY MANAGEMENT

	First Issue	Revision 1	Revision 2	Revision 3
Remarks	Draft Issue	Planning Issue		
Date	23.01.24	26.01.24		
Prepared	RW	RW		
Checked	AMM	AMM		
Authorised	ATM	ATM		

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INTRODUCTION

1.1 OVERVIEW

1.1.1 Andrew Moseley Associates (AMA) has been commissioned by Aldi (UK) to prepare a Transport Assessment (TA) and Interim Travel Plan (ITP) in support of a full planning application for an Aldi foodstore on land at Wyndham Place in Egremont.

1.1.2 The Local Planning Authority (LPA) and the Local Highway Authority (LHA) is Copeland Council (CC).

1.1.3 The existing site consists of brownfield land, historically used as a petrol filling station (PFS) and car dealership, which therefore does not currently generate any traffic. The site is situated on land to the southeast of the East Road / A595 Egremont Bypass roundabout, located within the settlement of Egremont. The location of the site is illustrated in **Figure 1**.

1.1.4 The site will be accessed by all modes of transport, including deliveries, via an upgraded priority-controlled T-junction from Wyndham Place. In addition to the vehicular access, the development also proposes a non-motorised user (NMU) access to the south-west which will provide a more direct route for pedestrians accessing the site. A detailed site layout plan is attached at **Appendix A**.

1.1.5 The development proposals have been discussed with CC as the LHA and with National Highways (NH), which have been accepted in principle. A copy of the Highways Scoping Request document is provided in **Appendix B** of this TA.

1.1.6 The purpose of this report is to review the local highway network and the sustainable accessibility of the proposed development and to assess the development proposals in a local transport context.

1.1.7 This TA has been prepared with reference to the Department for Communities and Local Government National Planning Policy Framework (NPPF) which was revised in September 2023, Planning Practice Guidance (PPG).

1.1.8 This TA will demonstrate that the site is well served by existing transport provision and is accessible to a range of key services and facilities.

1.1.9 The TA will also demonstrate that the traffic generated by the proposed development can be accommodated on the surrounding road network without resulting in a severe impact in accordance with the NPPF.

1.1.10 An ITP has also been prepared which sets out measures to encourage sustainable travel patterns and reduce the reliance on private car use.

1.2 REPORT STRUCTURE

1.2.1 The structure of the report is set out as follows;

- **Section 2** – outlines the policy background at a national and local level;
- **Section 3** – provides a description of the highway network surrounding the site, details of the existing traffic flows, a review of the personal injury accident records and the results of the baseline junction assessments;
- **Section 4** – examines the accessibility of the site by sustainable modes of travel and also considers the accessibility of a range of key services and facilities;
- **Section 5** – describes the site location development proposals with regard to the proposed quantum of development, the proposed means of access to the site and also the proposed parking provision;
- **Section 6** – summarises the assessment parameters and trips rates that have been adopted within this TA;
- **Section 7** – examines the impact of development traffic on the local highway network and presents the results of the future year junction assessments to determine the potential impact of the proposals; and
- **Section 8** – provides a summary of the TA.

2 POLICY BACKGROUND

2.1 NATIONAL POLICY

2.1.1 The National Planning Policy Framework (NPPF) came into effect in 2012. The document was designed to supersede and simplify previous national planning documents and their policies. A revised version of the NPPF was published in July 2018. The revision implements around 85 reforms announced previously through the Housing White Paper, the planning for the right homes in the right places consultation and the draft revised NPPF consultation. A further update was made in September 2023.

2.1.2 The preparation of this TA is consistent with national transport policy guidance set out in the NPPF which advocates the submission of such documents to support applications for new developments which generate traffic movements.

2.1.3 The NPPF states under the subheading 'Considering development proposals' that:

> *'In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*
>
> *a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
>
> *b) safe and suitable access to the site can be achieved for all users;*
>
> *c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and*
>
> *c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree (Paragraph 110).*
>
> *Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe (Paragraph 111).*
>
> *Within this context, applications for development should:*
>
> *b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
>
> *c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
>
> *d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
>
> *e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations (Paragraph 112).*

All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed Paragraph 113).'

2.1.4 **Section 4** of this report highlights the existing sustainable travel modes within the vicinity of the site and demonstrates that the development will be well suited to this location.

2.1.5 **Section 7** of this report assesses the traffic associated with the development on the surrounding road network and will identify mitigation measures where necessary to ensure that the impact of the development is not severe.

2.1.6 The Government's objectives set out in the revised NPPF are to ensure that new developments are provided in sustainable locations, where the need to travel is minimised and the use of sustainable modes can be maximised.

2.2 LOCAL POLICY

Emerging Copeland Local Plan 2021-2038

2.2.1 Cumberland Council are in the process of producing a new Local Plan for Copeland which will replace the Copeland Local Plan 2013-2028 (Core Strategy and Development Management Policies DPD), adopted December 2013. It is noted that as of 26th June 2023: "The next stage of the Examination in Public will be a consultation carried out by the Council on any proposed Main Modifications which the Inspector deems necessary for the plan to be sound. Due to evidence still outstanding, preparation for this consultation has been paused."

Copeland Local Plan 2021-2038

2.2.2 The current development plan for the area in which the site is located is the Copeland Local Plan which sets out the vision for development in Copeland between 2013 and 2028. The Core Strategy and Development Management Policies DPD sets out the development policy framework for the area within that timeframe. Key transport policies contained within this document which relate to the development proposals are summarised below:

Policy T1: Improving Accessibility and Transport

2.2.3 The Council will support transport improvements that maximise accessibility for all modes of transport but particularly by foot, cycle and public transport:

- Priority will be given to improving the accessibility of the Borough's key development and regeneration sites, town and village centres, service, employment and transport hubs, and rural areas
- Where appropriate land will be allocated or safeguarded to facilitate the following transport priorities for the Borough:
    - Whitehaven Town Centre Transport Interchange
    - Whitehaven Town Centre Enhancements Scheme
    - Pow Beck spine road
    - A595 Whitehaven Eastern Relief Road / Bypass
    - Improvements to the A595
    - Improvements to the A5086
    - Maintaining and improving the stations, infrastructure and services on the Cumbria Coastal Railway

  - Improvements and enhancements of the footpath and cycle network to improve accessibility by these modes
- The Council will support schemes which improve transport including park and ride facilities for areas of employment and new development sites, freight transfer facilities and other rail-related improvements;
- Better connections will be sought outside the Borough to:
  - Key employment sites, service centres and transport hubs, including Lillyhall Business Park, employment zones in and the Port of Workington, Barrow in Furness and Carlisle
  - Regional and national transport links including the A66, M6, A595, A5092, A590 and West Coast Main Line
- Planning obligations for developments at all major new development sites will be sought to mitigate their impact on the Borough's transportation system
- Transport system improvements must include measures to upgrade the environment, safety and convenience of the system and its setting
- A Parking Strategy will be developed to set out guidance for incorporating car parking in new developments with appropriate parking standards and for managing parking in the Borough

2.3 SUMMARY

2.3.1 The development proposals comply with both national and local policy, being located within convenient walking and cycling distance of a significant residential catchment.

2.3.2 An Interim Travel Plan has been prepared as part of the planning application to maximise the use of sustainable transport among all users of the development.

3 EXISTING CONDITIONS

3.1 SITE LOCATION

3.1.1 The existing site consists of brownfield land, and therefore does not currently generate any traffic. The site is situated on land to the south east of the East Road / A595 Egremont Bypass roundabout, located within the settlement of Egremont.

3.1.2 The proposed site is bound to the north by East Road, to the east by Wyndham Place also shared with the National Cycle Network (NCN) Route 72, to the south by residential dwellings accessed from Wyndham Place, and to the west by the A595 Egremont Bypass. The location of the site is illustrated in **Figure 1**.

3.2 EXISTING USE

3.2.1 Although now a brownfield site, the application site was previously occupied by a petrol filing station PFS and car dealership, which would generate a number of daily traffic movements through its existing lawful use.

3.2.2 Therefore, the existing trips could be effectively 'discounted' from those of the proposed use to understand the 'net impact'. However, for robustness this has not been implemented to effectively assess a worst-case scenario for trip generation, as later set out in **Section 6** of this TA.

3.3 LOCAL HIGHWAY NETWORK

3.3.1 Wyndham Place, from which the site would be accessed to the north-east is a single carriageway two-way road which is subject to a 30mph speed limit, is street lit and has a footway present along the southern side of the carriageway. The carriageway is also shared with the National Cycle Network (NCN) Route 72. Wyndham Place runs in a general northwest / southeast alignment providing access to East Road in the northwest and to residential dwellings in the southeast.

3.3.2 Located to the northern extent of the application site, Wyndham Place forms a staggered junction with Wyndham Terrace via an informal arrangement and a priority T-junction with East Road. The junction is subject to a 30mph speed limit, is street lit and has footways provided along both sides of East Road and along the southern side of Wyndham Place.

3.3.3 Forming the north-eastern arm to the informal junction, Wyndham Terrace is a private road which provides access to c. 10 residential dwellings. Wyndham Terrace is a single carriageway two-way road which in some locations reduces in width to a single vehicle and has a steep gradient upon approaching the Wyndham Place junction.

3.3.4 Forming the northern and southern arms to the priority T-junction, East Road is an adopted single carriageway two-way road which runs in a general north / south alignment providing access to residential dwellings and side-streets in the north and to the A595 in the south.

3.3.5 Located approximately 50m to the south of the Wyndham Place priority T-junction, East Road forms the north-eastern arm to the A595 Egremont Bypass roundabout junction. The priority roundabout is subject to a 30mph speed limit, is street lit and has footways present along both sides of the northern, north-eastern and south-western arms. Pedestrian crossing facilities are provided across the southern arm in the form of an underpass which can be accessed via both steps and accessible ramps.

3.3.6 Forming the south-western arm to the A595 roundabout junction, Main Street is a single carriageway two-way road which is subject to a 30mph speed limit, is street lit and has footways present along both sides of the carriageway. Main Street runs in a general north / south alignment providing access to Egremont town centre in the south and its range of amenities, services and residential areas.

3.3.7 Forming the northern and southern arms to the priority roundabout junction, the A595 is a single carriageway two-way road which alternates between 1 – 2 lanes northbound and 1 – 2 lanes southbound. The A595 Egremont Bypass forms part of the National Highways (NH) Strategic Road Network (SRN) providing access to Whitehaven in the north and to Thornhill in the south.

3.3.8 It is therefore considered that the site is well located in terms the of local and regional road network.

3.4 TRAFFIC BASE FLOWS

3.4.1 To determine the highway network peaks, traffic counts were undertaken on the local highway network at the junctions identified, including queue length surveys for validation during the typical network peaks. The surveys were undertaken across the following periods:

- Friday 17th November 2023 between 16:00 and 19:00; and
- Saturday 18th November 2023 between 11:00 and 14:00.

3.4.2 The resultant 2023 Existing peak hour flows have been identified as shown below:

- Friday network PM peak hour between 16:30 and 17:30; and
- Saturday network peak hour between 11:30 and 12:30.

3.4.3 Details of the 2023 Surveyed Traffic Flows are provided at **Figure 2**.

3.5 TRAFFIC GROWTH

3.5.1 The National Traffic Model (NTM) within the TEMPRO software package has been interrogated to provide local growth factors for MSOA area 'Copeland 006, the area best suited to the location of the development site. The resultant growth factors are set out in **Table 3-1**.

Table 3-1 – Copeland 006 - Traffic Growth Factors

	PM Peak	Saturday
2023 to 2024	1.0081	1.0090

3.5.2 These growth factors have been applied to the 2023 base flows. The resultant 2024 'Uplifted' Base flows are illustrated at **Figure 3**.

3.6 EXISTING JUNCTION CAPACITY ANALYSIS

3.6.1 To determine existing highways capacities at the local junctions upon which the development generated flows are predicted to increase by more than 30 two-way trips, models of the existing junctions identified above have been prepared to assess the '2024 Uplifted' Base traffic flow scenario.

3.6.2 JUNCTIONS9 software has been used to assess the capacity of the priority T-junction and roundabout junctions. This analyses the maximum Ratio of Flow to Capacity (RFC) values for the peak hours and the maximum queue length in passenger car units (PCUs).

3.6.3 A summary of the '2024 Uplifted' Base modelling results are provided in **Tables 3-2 – 3-4**. The detailed modelling outputs are in **Appendix C**. The models have been validated against the queue length surveys to ensure that they represent the existing situation.

Wyndham Place / East Road T-Junction - JUNCTIONS9 Results

3.6.4 **Table 3-2** sets out the operational capacity at the Wyndham Place / East Road priority T-junction.

Table 3-2 – Wyndham Place / East Road – 2024 'Uplifted' Scenario Results

Arm	PM Peak		SAT Peak	
	RFC	Queue	RFC	Queue
Wyndham Place	0.01	0	0.01	0
East Road	0.03	0	0.01	0

3.6.5 **Table 3-2** identifies that all arms at the Wyndham Place / East Road priority-controlled T-junction are operating well within the junction's theoretical capacity, with queuing occurring in accordance with those observed during the survey in the Friday PM and Saturday peak periods.

East Road / A595 (S) / Main Street (SW) / A595 (N) - JUNCTIONS9 Results

3.6.6 **Table 3-3** sets out the operational capacity at the East Road / A595 (S) / Main Street (SW) / A595 (N) priority roundabout junction.

Table 3-3 – East Road / A595 (S) / Main Street (SW) / A595 (N) – 2024 'Uplifted' Scenario Results

Arm	PM Peak		SAT Peak	
	RFC	Queue	RFC	Queue
A595 Egremont Bypass (N)	0.67	2	0.50	1
East Road	0.38	1	0.40	1
A595 Egremont Bypass (S)	0.82	4	0.73	3
Main Street	0.74	3	0.69	2

3.6.7 **Table 3-3** identifies that all arms at the East Road / A595 (S) / Main Street (SW) / A595 (N) roundabout junction are operating well within the junction's capacity. The model has been validated against the queue length surveys to ensure that they represent the existing situation.

3.6.8 The ARCADY module within the Junctions9 software would not replicate the queue length surveys. Following discussions with TRL it was confirmed that this is due to unbalanced flows resulting in the software modelling the junction as a standard priority. On this basis, the model has been amended by applying intercept correction factors in order to reflect the recorded queue length measurements (average across each peak hour). The video footage of the traffic survey has also been reviewed as part of the validation process.

A595 (N) / A5086 (NE) / A595 (S) / Howbank Road (SW) - JUNCTIONS9 Results

3.6.9 **Table 3-4** sets out the operational capacity at the A595 (N) / A5086 (NE) / A595 (S) / Howbank Road (SW) priority roundabout junction.

Table 3-4 – A595 (N) / A5086 (NE) / A595 (S) / Howbank Road – 2024 'Uplifted' Scenario Results

Arm	PM Peak		SAT Peak	
	RFC	Queue	RFC	Queue
A595 Egremont Bypass (N)	0.81	4	0.69	2
A5086	0.82	4	0.72	2
A595 Egremont Bypass (S)	0.68	2	0.68	2
Howbank Road	0.70	2	0.76	3

3.6.10 **Table 3-4** identifies that all arms at the A595 (N) / A5086 (NE) / A595 (S) / Howbank Road roundabout junction are operating close to the junction's theoretical capacity. The model has been validated against the queue length surveys to ensure that they represent the existing situation.

3.6.11 The ARCADY module within the Junctions9 software would not replicate the queue length surveys. Following discussions with TRL it was confirmed that this is due to unbalanced flows resulting in the software modelling the junction as a standard priority. On this basis, the model has been amended by applying intercept correction factors in order to reflect the recorded queue length measurements (average across each peak hour). The video footage of the traffic survey has also been reviewed as part of the validation process.

3.7 PERSONAL INJURY COLLISION RECORDS

3.7.1 A review of the existing road safety record on the surrounding roads has been undertaken using Crash Map, a database validated by the Department for Transport (DfT). The most recent five-year period has been considered (January 2018 – December 2022) and the area under consideration includes the length Wyndham Place, its junction with East Road, the A595 Egremont Bypass roundabout junction, and the A595 / Howbank Road roundabout junction.

3.7.2 Within the study area, a total of 12 slight collisions were recorded. The collision plot is attached at **Appendix D** whilst **Table 3-5** provides an overview of the collisions that have occurred in the vicinity of the development site.

Table 3-5 – PIC Summary

Section of Highway	Slight	Serious	Fatal
Wyndham Place	0	0	0
East Road	0	0	0
A595 / East Road Roundabout	5	0	0
A595 (N)	1	0	0
A595 / Howbank Road Roundabout	6	0	0
TOTAL	**12**	**0**	**0**

3.7.3 Over the latest five-year period a total of 12 collisions were recorded, all of which were classified as slight in severity. Given the extent of the study area, the level and severity of collisions recorded across a five-year period is not considered to be a highways safety concern.

3.7.4 Of the 12 slight collisions, it was recorded that one collision involved a pedestrian, two collisions involved a motorcycle, and four collisions involved a pedal cycle.

3.7.5 It is therefore concluded that there are no extant road safety issues on the highway network in the vicinity of the development site. The frequency of collisions that occurred on the wider network, given the extent of the search area assessed within this TA are considered to be low and no mitigation measures are proposed at this stage.

4 EXISTING SUSTAINABLE TRANSPORT PROVISION

4.1 INTRODUCTION

4.1.1 The Government's objectives set out in the NPPF are to ensure that new developments are provided in sustainable locations, where the need to travel is minimised and the use of sustainable modes can be maximised.

4.1.2 The site has a good level of accessibility by sustainable modes of transport which will encourage the use of alternative modes of travel. A Travel Plan has been written for the site which will encourage the use of alternative modes of travel and incentives to use local public transport services.

4.1.3 This section outlines the existing walking, cycling and public transport facilities within the vicinity of the development site and describes the accessibility of the site in terms of its proximity to key services and destinations.

4.2 WALKING ACCESSIBILITY

4.2.1 Whilst superseded by the NPPF, the transport policies in the former PPG13 set out specific guidance related to walking:

> *"Walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2 kilometres" (Para 74)*

4.2.2 Walking is recognised as the most important mode of travel at a local level in that it offers the greatest potential to replace short car trips, particularly those under two kilometres. As such, consideration has been given to the existing pedestrian facilities in the vicinity of the proposed development. A plan showing the 2km walking catchment from the centre of the site is attached in **Figure 4.**

4.2.3 The plan attached at **Figure 4** shows that areas within the 2km catchment area includes the entirety of Egremont. The 2km catchment area provides access to a large residential catchment, providing a feasible means of access by foot for both employees and customers. Within the catchment, there are also a number of public transport services that are accessible by foot.

4.2.4 Footways are provided within the vicinity of the application site, with a footway present along the south-western side of Wyndham Place and along both sides of East Road. The main walking route would see the majority of pedestrian journeys made to / from the south of the A595 Egremont Bypass and using the pedestrian underpass which is present with both via both steps and accessible ramps.

4.2.5 As detailed in **Section 5**, the development proposes to improve the existing pedestrian infrastructure and crossing facilities at the Wyndham Place / East Road junction.

4.2.6 The development proposes a new NMU link to the south-west of the application site, providing a shorter and more direct route for both customers and staff when walking between the Aldi foodstore and the A595 (S) subway path. Details of the proposed new footway connection is provided in the Site Layout Plan, attached at **Appendix A**.

4.3 CYCLING ACCESSIBILITY

4.3.1 Whilst superseded by the NPPF, the transport policies in the former PPG13 set out specific guidance related to cycling:

> *"Cycling also has potential to substitute for short car trips, particularly those under 5 kilometres, and to form part of a longer journey by public transport" (Para 77)*

4.3.2 Cycling has the potential to substitute for short car trips, particularly less than five kilometres. As such, those areas and facilities within a reasonable walking distance can also be considered to be within a reasonable cycling distance. The plan attached at **Figure 5** shows the 5km cycling catchment from the site. The plan identifies that the surrounding areas of Thornhill, Bigrigg, Nethertown, and Cleator Moor are situated within a 5km catchment area of the proposed development.

4.3.3 A review of the Sustrans National Cyle Network (NCN) interactive map identifies that NCN Route 72 runs along the northern boundary of the application site, with on-road sections present along Wyndham Place. To the south of the application site, the NCN Route 72 passes under the A595 via a traffic-free path later providing access to Main Street and a direct route through the town centre of Egremont. To the north of the application site, the NCN Route 72 provides a traffic-free and later a lightly trafficked route to the residential settlement of Cleaton Moor.

4.3.4 Details of the Sustrans NCN cycle routes are set out in **Figure 6**.

4.4 PUBLIC TRANSPORT

4.4.1 A total of four bus stops are situated within an acceptable 400m walking distance of the application site; two bus stops are situated on Main Street (a walking distance of 270m and 350m) to the south-west of the site, two bus stops are situated on the A595 (N) (a walking distance of 300m and 400m).

4.4.2 The bus stops are accessible via the existing pedestrian infrastructure present along Wyndham Place, East Road, Main Street and the A595 Egremont Bypass (N). An uncontrolled pedestrian crossing is present across the southern arm of the A595 roundabout junction, providing a safe route for pedestrians accessing the bus stop facilities.

4.4.3 A plan showing the bus stops set out above is provided at **Figure 7**. The buses that serve the stops and the frequencies of the buses are summarised in **Table 4-1**.

Table 4-1 – Local Bus Services

Service	Route	Monday – Friday	Saturday	Sunday
30	Maryport - Thornhill	Every 30 minutes (05:49 to 23:24)	Every 30 minutes (05:49 to 23:24)	Every hour (09:27 to 18:32)

4.4.4 **Table 4-1** sets out that the bus stop provides a combined frequency of two services per hour on Weekdays, two services per hour on Saturdays and one service per hour on Sundays, providing access to Thornhill in the south and to Maryport in the north.

4.5 SUMMARY

4.5.1 A review of the existing facilities for access to the site by a range of non-car modes has been carried out. It is considered that the existing pedestrian facilities and cycling facilities within the vicinity of the site are of a high quality. There are also good quality public transport links within the vicinity of the site.

4.5.2 The site is considered to be located within a sustainable location and the surrounding transport links are of good quality. The site is therefore considered to be in a sustainable location for access by non-car modes and in line with local and national planning policy.

5 DEVELOPMENT PROPOSALS

5.1 DEVELOPMENT PROPOSAL AND SITE LAYOUT

5.1.1 The development proposals are for a 1,390m^2 Retail Floor Area (RFA) Aldi retail unit with associated site access, servicing arrangements and parking. It is proposed that a delivery area will be situated to the west of the building via a separate dedicated access point from general traffic.

5.1.2 The proposed site layout is attached at **Appendix A**.

5.2 PROPOSED ACCESS AND SERVICING ARRANGEMENTS

5.2.1 Customer vehicular, walking and cycling access is provided at the north-eastern extent of the site via Wyndham Place. The proposed junction provides an upgrade to the existing arrangement, details of the access arrangements are shown on the proposed site layout plan at **Appendix A**.

5.2.2 In addition to the north-eastern access, the development also proposes a dedicated non-motorised user (NMU) footpath to the south-west of the application site. As detailed in the proposed site layout plan at **Appendix A**, the development proposes that a new NMU link will connect the application site to the existing footway provision on the A595 roundabout junction. The NMU link will provide a more direct and shorter walking route for both customers and staff when walking to / from Egremont town centre via the A595 (S) subway connection.

5.2.3 The new footway connection between the application site and the existing footway provision on the A595 roundabout junction is currently undergoing scoping discussions with National Highways.

5.2.4 The proposed T-junction access arrangements will include a 23m wide access mouth tapering down to a width of no less than 2.83m, with 2.0m wide footways present along both sides of the junction, a 3m radii to the south-east and a 10m radii to the north-west of the access. The proposed site access design is set out in drawing no. AMA-48019-SK-004 attached at **Appendix E**.

5.2.5 Visibility splays from the site access are in accordance with the Manual for Streets (MfS) for a 30mph speed limit to the west of the site access at 2.4m x 43m to the nearside kerb. The proposed site access visibility splays are set out in drawing no. AMA-48019-SK-004 attached at **Appendix E.**

5.2.6 In addition to the site access upgrades, the development also proposed upgrades to the carriageway width of Wyndham Place along with the formalisation and upgrades to the Wyndham Place / Wyndham Terrace junction and the Wyndham Place / East Road junction. Details of the proposed off-site improvements are provided in drawing no. AMA-48019-SK-004 attached at **Appendix E**.

5.2.7 As detailed in **Appendix E**, the scheme proposes the improvements to the Wyndham Place / East Road junction arrangement including the realignment of the minor arm to provide a new dedicated footway. As part of these proposals the scheme will consequently require the relocation of two informal parking spaces which currently park on the road adjacent to the gable end of East Road terrace. These two parking spaces will be provided like-for-like as part of the development plans into a more formal arrangement providing a more secure off-road provision.

5.2.8 The realignment of Wyndham Place will also reduce the width of the access mouth and in turn will create a shorter walking distance for pedestrians walking along East Road. Dropped kerbs and tactile paving will be provided across the Wyndham Place arm to provide a safer route for pedestrians when crossing.

5.2.9 In order to demonstrate that visibility splays can be achieved from the Wyndham Place / East Road junction, in line with required standards, Automatic Traffic Counts (ATC) speed surveys were carried out for a 7-day period from 13th December to 19th December 2023 in the vicinity of the site access, measuring speeds at the extent of the northern visibility splays.

5.2.10 The 85th percentile recorded speeds for southbound traffic over a 7-day period was measured at 23.2mph. The full 'raw' results of the ATC speed surveys can be providing upon request if required by CC.

5.2.11 Given the residential nature of East Road, the Manual for Streets (MfS) standards for the recorded 23.2mph 85th percentile speed is appropriate. The northern visibility splay has been calculated with based on a pro-rata distance using the formula within the guidance for Manual for Streets 2 (MfS2) which equates to a visibility splay of 30.1m.

5.2.12 On this basis, as evidenced by the ATC speed surveys, the 2.4m x 30.1m northern visibility splay is considered appropriate based on recorded vehicle speeds, thus meeting the required standards and enabling vehicles to enter and exit the site safely. Details of the visibility splays are illustrated on AMA-48019-SK-004 attached at **Appendix E.**

5.2.13 As part of the off-site improvements, the scheme proposes the formalisation of the Wyndham Place / Wyndham Terrace junction, to now provide a give-way line for manoeuvres pulling out onto Wyndham Place from the minor arm.

5.2.14 The proposed development would be served by a servicing area to the west of the store accessed via the dedicated servicing access. The delivery area has been assessed to ensure suitability of servicing and accommodation of a UK maximum standard (16.5m) articulated HGV and private refuse collection vehicle.

5.2.15 **Appendix F** shows the swept path of an articulated vehicle accessing and egressing the service area for the proposed Aldi development. The drawing demonstrates that the vehicle can satisfactorily access and egress the site in forward gear. It is therefore considered that the proposed service arrangements are satisfactory to accommodate the proposed retail development. Deliveries would be managed to ensure minimal conflicts with other site users.

5.3 PARKING

5.3.1 Based on the Gross External Area (GEA) of 1,933m^2, a total of 86 parking spaces are required in line with Aldi's operational requirements.

5.3.2 A review of Cumberland Council adopted parking standards "Cumbria County Council, Development Design Guide, Appendix 1-Parking" states that Food Supermarkets up to 2,000m^2 require a total of 1 space per 15m^2. Based on the proposed 1,933m^2 GEA, the development requires 129 spaces.

5.3.3 The above adopted CC parking design standards are considered to be overly excessive for a foodstore of this type, this would be more akin to a Tesco Extra etc. whereby customers typically spend over an hour in the store.

5.3.4 It is proposed that a total of 86 parking spaces are provided on site, including; nine Parent and Child (P&C) spaces, five disabled spaces, four active Electric Vehicle Charging Points (EVCP) and 20% passive EVCPs. The proposed level of parking provision is considered to be acceptable for the development as based on the operation of existing stores and are in line with Aldi's operational requirements.

5.3.5 A review of recently surveyed car parking accumulation analysis for an existing Aldi foodstore with a similar quantum of parking provision (89 spaces), across a three-day period of assessment (Friday, Saturday and Sunday), received a maximum occupancy level of 88% on a Friday, 86% on a Saturday

and 82% on a Sunday. This identifies that a similar quantum of parking provision at the Egremont store will provide a sufficient level to meet the operational requirements of Aldi whilst also supplying a 12% to 18% spare capacity to accommodate busier periods of the year e.g. Christmas.

5.3.6 Based on the evidence from the operational requirements of other Aldi food stores in the UK, along with the short stay nature of shopping trips typically taking c. 30minutes, the close proximity to Egremont town centre and a higher proportion of trips being undertaken by sustainable modes of transport. The proposed level of parking provision is considered to be acceptable for the development as based on the operation of existing stores and are in line with Aldi's operational requirements.

5.3.7 Aldi provide larger than standard bays with dimensions of 2.5m x 5m in order to enhance the operation of the car park for customers. The level of parking proposed is based on Aldi's operational requirements through their experience at other stores of comparable size in similar locations.

5.3.8 The scheme proposes eight cycle spaces in the form of four 'Sheffield' cycle hoops for short stay spaces which are located within close proximity to the stores entrance. In addition, long-stay cycle parking is provided within the warehouse for staff to use, this is provided in the form of four semi-vertical bike racks.

5.3.9 As detailed on the site layout plan attached at **Appendix A**, the disabled parking, P&C and cycle spaces are located within close proximity to the Aldi main building entrance.

6 ASSESSMENT PARAMETERS

6.1 INTRODUCTION

6.1.1 This section sets out the methodology and assessment parameters used in assessing the proposed development and its potential impact on the highway network.

6.2 HIGHWAYS SCOPING

6.2.1 The development proposals have been discussed with CC as the LHA and with National Highways (NH), which have been accepted in principle.

6.2.2 A copy of the Highways Scoping Request document is provided in **Appendix B** of this TA. The TA has been undertaken in accordance with the submitted scope and all queries raised by the LHA and NH during the pre-application process are addressed in this report.

6.3 TRAFFIC BASE FLOWS

6.3.1 As set out within **Section 3** of this TA, capacity assessments of the following junctions have been undertaken for the future year 2029 base with and without development scenarios for the following junctions:

- Wyndham Place / East Road T-junction;
- East Road / A595 Egremont Bypass / Main Street roundabout junction; and
- A595 / A5086 / Howbank Road roundabout junction.

6.4 ASSESSMENT YEARS

6.4.1 A horizon period of five years has been assessed after the lodging of the planning application to create a future year scenario of 2029.

6.4.2 As agreed with NH as part of the pre-application scoping exercise, a 2034 future year scenario will be assessed within this TA, providing a ten-year horizon period.

6.5 TRAFFIC GROWTH

6.5.1 The National Traffic Model (NTM) within the TEMPRO software package has been interrogated to provide local growth factors for MSOA area Copeland 006 the area in which the development site is located. The resultant growth factors are set out below in **Table 6-1**.

Table 6-1 – Copeland 006 - Traffic Growth Factors

	PM Peak	Saturday
2024 - 2029	1.0252	1.0274
2024 - 2034	1.0450	1.0489

6.5.2 These growth factors have been applied to the '2024 Uplifted' Base flows. The resultant 2029 and 2034 'Future Year' flows are illustrated at **Figure 8** and **Figure 9** respectively.

6.6 DEVELOPMENT TRAFFIC GENERATION

6.6.1 To determine the predicted trip generation associated with the Aldi foodstore, the TRICS output has been interrogated, considering discount foodstores in Edge of Town Centre and Edge of Town Locations. The TRICS output is attached at **Appendix G.**

6.6.2 The time periods of 15:00 to 16:00 for the PM Peak and 12:00 to 13:00 have been selected for assessment. Although these weekday TRICS peaks do not mirror the surveyed time periods set out in **Section 3.2**, analysis of these trip rates ensure that a worst-case peak hour is considered.

6.6.3 The vehicle trip rates derived are summarised in **Table 6-2** and factored per 100m^2 GFA.

Table 6-2 – Proposed Aldi Food Store Trip Rates and Generation

	PM Peak		Saturday	
	Arrivals	**Departures**	**Arrivals**	**Departures**
Trip Rate	6.307	6.941	8.383	9.545
Trip Generation	88	96	117	133

6.6.4 **Table 6-2** demonstrates that the development proposals are forecast to generate the following vehicular trips during the highway network peak hours:

- Friday PM Peak – 88 Arrivals and 96 Departures – 184 Two-Way Trips
- Saturday Peak – 117 Arrivals and 133 Departures – 250 Two-Way Trips

6.6.5 As the application site is located in a central location with a range of surrounding shops and residential areas, it is considered that the trip rates provided in **Table 6-2** provide an overly robust assessment of traffic generated by the Aldi food store. In reality the town centre location will encourage a larger proportion of trips to be undertaken by non-motorised modes.

6.7 TRIP TYPE ASSUMPTIONS

6.7.1 For the purposes of the assessment of the Aldi foodstore, the following proportions are:

- Friday PM Peak – Pass-By Trips 50% and 'New' Trips 50%; and
- Saturday Peak – Pass-By Trips 50% and 'New' Trips 50%.

6.7.2 The above trip types are considered to provide a robust analysis of the proposed development while ensuring that the assessment constitutes a realistic representation of future customer travel behaviour.

6.7.3 The proportion of trips based on the assumed trip rate types for the Aldi foodstore is summarised in **Table 6-3**.

Table 6-3 – Proposed Development – Trip Types

	Pass-by		Primary Transferred		Total	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Friday PM	44	48	44	48	88	96
Saturday	58	66	58	66	117	133

6.7.4 The trip generations identified in the table above will be assigned onto the surrounding network in order to consider the impact on the surrounding network.

6.8 DEVELOPMENT TRAFFIC DISTRIBUTION AND ASSIGMENT

6.8.1 In order to assess where customers will visit the site from, the distribution has been calculated using analysis to assess the level of housing density within a ten-minute drive time of the site.

6.8.2 The route choice of customers to access the proposed development from within a ten-minute drive time of the site are shown in **Table 6-4** and the distribution diagram is attached at **Figure 10**.

Table 6-4 – Assignment by Route Choice

Route ID	Route Choice	Proportion of Customers Using Route (%)
A	East Road (N)	10%
B	A595 Egremont Bypass (SE)	20%
C	Main Street (SW)	40%
D	Howbank Road	10%
E	A595 Egremont Bypass (N)	10%
F	A5086 (NE)	10%

6.8.3 The total primary transfer trips for the Friday PM and Saturday peak are attached at the **Figure 11**.

6.9 PASS-BY TRIPS

6.9.1 The pass-by trips have been assigned at the proposed site access junction based on the existing proportional split of the A595 Egremont Bypass / Main Street / East Road roundabout junction. The total pass-by trips for the Friday PM and Saturday peak are attached at **Figure 12**.

6.9.2 The primary transfer trips at **Figure 11** and the pass-by trips at **Figure 12** have been combined with the 2029 Future and 2034 Future flows, at **Figure 8 and Figure 9** respectively. The resultant 2029 Future + Development and 2034 Future + Development flows are attached at **Figure 13** and **Figure 14** respectively.

6.10 SUMMARY

6.10.1 Trip generation for the proposed development has been obtained from the TRICS database for a similar discount retail food store, in an edge of town location.

6.10.2 The assumptions behind the proportions of primary transfer and pass-by trips generated by the development are considered appropriate and robust.

7 FUTURE DEVELOPMENT IMPACTS

7.1 INTRODUCTION

7.1.1 Based on the above development generated traffic and the calculated distribution, the junction modelled for the existing situation as set out in **Section 3** will be analysed for the future year scenarios as follows:

- 2029 Base (TEMPRO growth from 2024);
- 2029 Base + Development (attached at **Figure 13**);
- 2034 Base (TEMPRO growth from 2024);
- 2034 Base + Development (attached at **Figure 14**);

7.1.2 As previously highlighted in **Section 6**, the 2029 and 2034 scenarios have been assessed on the HE junctions, with the remaining junctions assessed using the 2029 scenario.

7.1.3 The detailed modelling outputs are provided in **Appendix C** and the findings from the scenarios are set out in this section.

7.1.4 The proposed site access junction has been modelled for the 2028 Base + Development scenario to ensure that it has sufficient capacity to accommodate the future demand during the three network peak periods.

7.1.5 JUNCTIONS9 software has been used to assess the capacity of the priority junctions. This analyses the maximum Ratio of Flow to Capacity (RFC) values for the peak hours and the maximum queue length in passenger car units (PCUs).

Wyndham Place / East Road T-Junction - JUNCTIONS9 Results

7.1.6 **Table 7-1** sets out the operational capacity at the Wyndham Place / East Road priority T-junction.

Table 7-1 – Wyndham Place / East Road – 2029 Scenario Results

Arm	PM Peak		SAT Peak	
	RFC	Queue	RFC	Queue
2029 Base				
Wyndham Place	0.01	0	0.01	0
East Road	0.03	0	0.01	0
2029 Base + Development				
Wyndham Place	0.16	0	0.21	0
East Road	0.18	0	0.21	0

7.1.7 **Table 7-1** identifies that the proposed Wyndham Place / East Road priority-controlled T-junction is predicted to operate well within its theoretical capacity with minimal queuing and delay during the 2029 Base + Development scenario with no queueing or delay predicted at the junction.

East Road / A595 (S) / Main Street (SW) / A595 (N) - JUNCTIONS9 Results

7.1.8 **Table 7-2** sets out the operational capacity at the East Road / A595 (S) / Main Street (SW) / A595 (N) priority roundabout junction.

Table 7-2 – East Road / A595 (S) / Main Street (SW) / A595 (N) – 2024 and 2034 Scenario Results

Arm	PM Peak		SAT Peak	
	RFC	Queue	RFC	Queue
2029 Base				
A595 Egremont Bypass (N)	0.69	2	0.52	1
East Road	0.42	1	0.44	1
A595 Egremont Bypass (S)	0.85	5	0.76	3
Main Street	0.77	3	0.72	2
2029 Base + Development				
A595 Egremont Bypass (N)	0.72	3 (+1)	0.56	1
East Road	0.76	3 (+2)	1.11	17 (+16)
A595 Egremont Bypass (S)	0.91	8 (+3)	0.87	5 (+2)
Main Street	0.86	5 (+2)	0.81	4 (+2)
2034 Base				
A595 Egremont Bypass (N)	0.70	2	0.53	1
East Road	0.45	1	0.47	1
A595 Egremont Bypass (S)	0.88	6	0.79	4
Main Street	0.80	4	0.74	3
2034 Base + Development				
A595 Egremont Bypass (N)	0.73	3 (+1)	0.57	1
East Road	0.81	4 (+3)	1.16	20 (+19)
A595 Egremont Bypass (S)	0.94	10 (+4)	0.89	6 (+2)
Main Street	0.89	6 (+2)	0.82	4 (+1)

7.1.9 The results show that the priority roundabout junction is predicted to operate above the theoretical capacity in all the 'with development' scenarios for both PM and Saturday scenarios as well as the 2029 and 2034 scenarios.

7.1.10 Its important to note that the East Road arm increases from 0.44 RFC in the '2029 Base' Scenario to a value of 1.11 RFC in the '2029 Base + Development' Scenario. The additional traffic generated by the development results in 92 trips in the PM peak and 126 trips in the Saturday on the East Road arm, equating to 2 new cars per minute. This is a problem with the modelling software we experience when the queues increase exponentially once the RFC reaches over 1.00, the impact of the development traffic on the junction is negligible.

7.1.11 The development proposals result in an additional 131 two-way vehicle movements through the junction during the PM peak and 178 two-way vehicle movements during the SAT peak. This equates to between 2 to 3 additional vehicles per minute through the junction which would not justify improvements to the roundabout junction.

7.1.12 It should be noted that 50% of the trips which travel through the roundabout junction as part of the modelling exercise, already travel through the A595 junction as they are considered to be 'Pass-By' based trips.

7.1.13 The modelling exercise provides an absolute worst-case assessment of the associated impact on the A595 Egremont Road / East Road roundabout junction. It is therefore considered that during the remaining hours throughout the week, the Aldi supermarket would generate significantly less traffic and therefore would result in a lesser impact at the junction.

A595 (N) / A5086 (NE) / A595 (S) / Howbank Road (SW) - JUNCTIONS9 Results

7.1.14 **Table 7-3** sets out the operational capacity at the A595 (N) / A5086 (NE) / A595 (S) / Howbank Road (SW) priority roundabout junction.

Table 7-3 – A595 (N) / A5086 (NE) / A595 (S) / Howbank Road – 2029 and 2034 Scenario Results

Arm	PM Peak		SAT Peak	
	RFC	Queue	RFC	Queue
2029 Base				
A595 Egremont Bypass (N)	0.83	5	0.70	2
A5086	0.88	6	0.74	3
A595 Egremont Bypass (S)	0.70	2	0.70	2
Howbank Road	0.75	3	0.75	3
2029 Base + Development				
A595 Egremont Bypass (N)	0.84	5	0.72	3 (+1)
A5086	0.90	7 (+1)	0.78	3
A595 Egremont Bypass (S)	0.71	2	0.72	3 (+1)
Howbank Road	0.79	3	0.80	4 (+1)
2034 Base				
A595 Egremont Bypass (N)	0.85	5	0.72	3
A5086	0.92	7	0.76	3
A595 Egremont Bypass (S)	0.71	2	0.72	3
Howbank Road	0.89	3	0.80	3
2034 Base + Development				
A595 Egremont Bypass (N)	0.86	6 (+1)	0.74	3
A5086	0.95	9 (+2)	0.81	4 (+1)
A595 Egremont Bypass (S)	0.72	3 (+1)	0.74	3
Howbank Road	0.84	4 (+1)	0.86	5 (+2)

7.1.15 The results show that the priority roundabout junction is predicted to operate above the theoretical capacity in the '2034 Base + Development' Saturday scenario, on the A5086 arm with a calculated increase of 0.03 RFC when compared to the without scenario.

7.1.16 The development proposals result in an additional 28 two-way vehicle movements through the junction during the PM peak and 37 two-way vehicle movements during the SAT peak. This equates to less than a single additional vehicle per minute through the junction which would not justify improvements to the roundabout junction.

7.1.17 It should be noted that the modelling exercise provides an absolute worst-case assessment of the associated impact on the A595 (N) / A5086 (NE) / A595 (S) / Howbank Road roundabout junction. It is therefore considered that during the remaining hours throughout the week, the Aldi supermarket would generate significantly less traffic and therefore would result in a lesser impact at the junction.

8 SUMMARY

8.1.1 Andrew Moseley Associates (AMA) has been commissioned by Aldi (UK) to prepare a Transport Assessment (TA) and Interim Travel Plan (ITP) in support of a full planning application for an Aldi foodstore on land at Wyndham Place in Egremont.

8.1.2 The Local Planning Authority (LPA) and the Local Highway Authority (LHA) is Cumberland Council (CC).

8.1.3 The existing site consists of brownfield land, historically used as a petrol filling station (PFS) and car dealership, which therefore does not currently generate any traffic. The site is situated on land to the southeast of the East Road / A595 Egremont Bypass roundabout, located within the settlement of Egremont. The location of the site is illustrated in **Figure 1**.

8.1.4 The site will be accessed by all modes of transport, including deliveries, via an upgraded priority-controlled T-junction from Wyndham Place. In addition to the vehicular access, the development also proposes a non-motorised user (NMU) access to the south-west of the site which will provide a more direct route for pedestrians accessing the site.

8.1.5 The development proposals have been discussed with CC as the LHA and with National Highways (NH), which have been accepted in principle.

8.1.6 The report has shown that the development proposals will be accessible by a range of travel modes and have been developed to accord with current national and local transport policies, including those set out within the Copeland Local Plan and NPPF.

8.1.7 It is concluded that the site is accessible of foot and cycle from the surrounding residential areas of Egremont. Furthermore, a range of key facilities and services can be accessed from the site, supporting future employees and linked trips for customers.

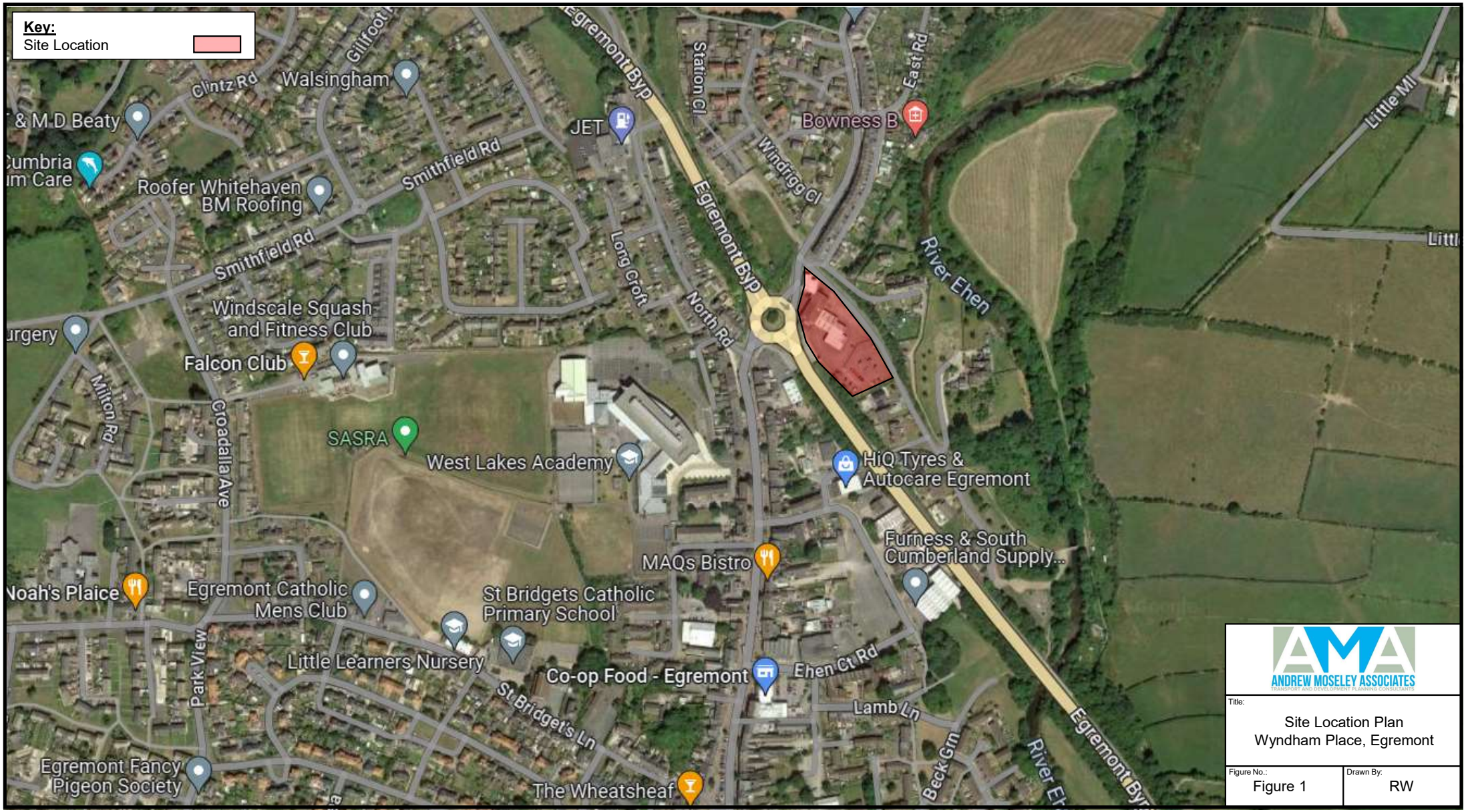
8.1.8 The traffic generation associated with the Aldi foodstore based on a 1,390m^2 RFA is forecast to generate some 184 and 250 two-way vehicle trips during the Friday PM peak and Saturday lunchtime peak hours respectively.

8.1.9 A Travel Plan has also been prepared which sets out measures to encourage sustainable travel patterns and reduce the reliance on private car use.

8.1.10 This TA has demonstrated that the traffic associated with the development proposals can be accommodated on surrounding highway network without having a severe impact in accordance with the NPPF.

8.1.11 Therefore, there are no overriding traffic and transportation reasons preventing the local highway authority from recognising that the proposals are acceptable nor why planning permission could not be granted.

FIGURES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JET
Walsingham
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& M D Beaty
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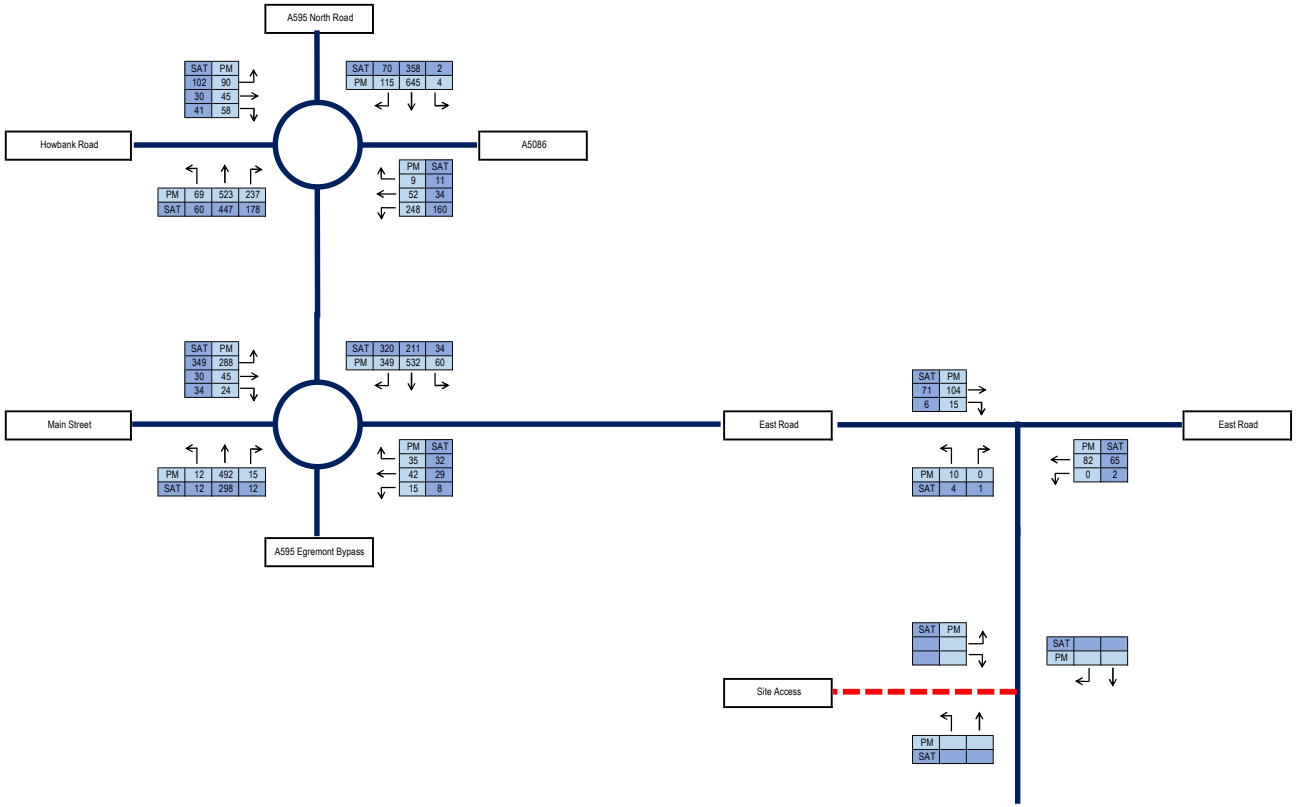
Roofer Whitehaven
BM Roofing
Smithfield Rd
Smithfield Rd
Windrigg Cl
Long Croft
North Rd
River Ehen
Windscale Squash
and Fitness Club
Falcon Club
urgery
Milton Rd
Croadalla Ave
SASRA
West Lakes Academy
HiQ Tyres &
Autocare Egremont
Furness & South
Cumberland Supply...
MAQs Bistro
Noah's Plaice
Egremont Catholic
Mens Club
St Bridgets Catholic
Primary School
Park View
Little Learners Nursery
Co-op Food - Egremont
Ehen Ct Rd
Lamb Ln
St Bridget's Ln
Beck Grn
Egremont Fancy
Pigeon Society
The Wheatsheaf
ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS
Title:
Site Location Plan
Wyndham Place, Egremont
Figure No.:
Figure 1
Drawn By:
RW



ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

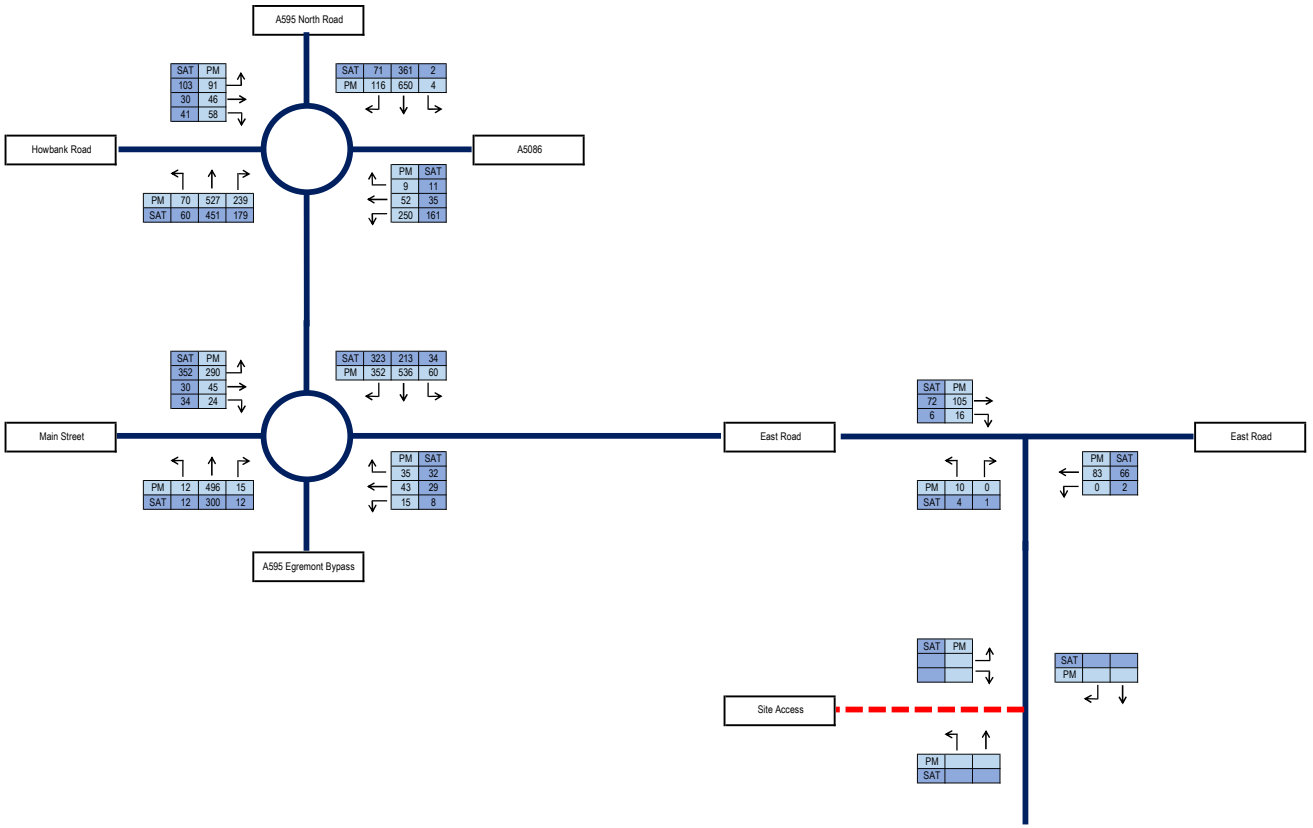
Wyndham Place, Egremont

2023 Base

26/01/2024

Job Number - AMA/48019

Figure 2



ANDREW MOSELEY ASSOCIATES TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS	**Wyndham Place, Egremont**	**26/01/2024**
		Job Number - AMA/48019
	2024 'Uplifted' Base	**Figure 3**

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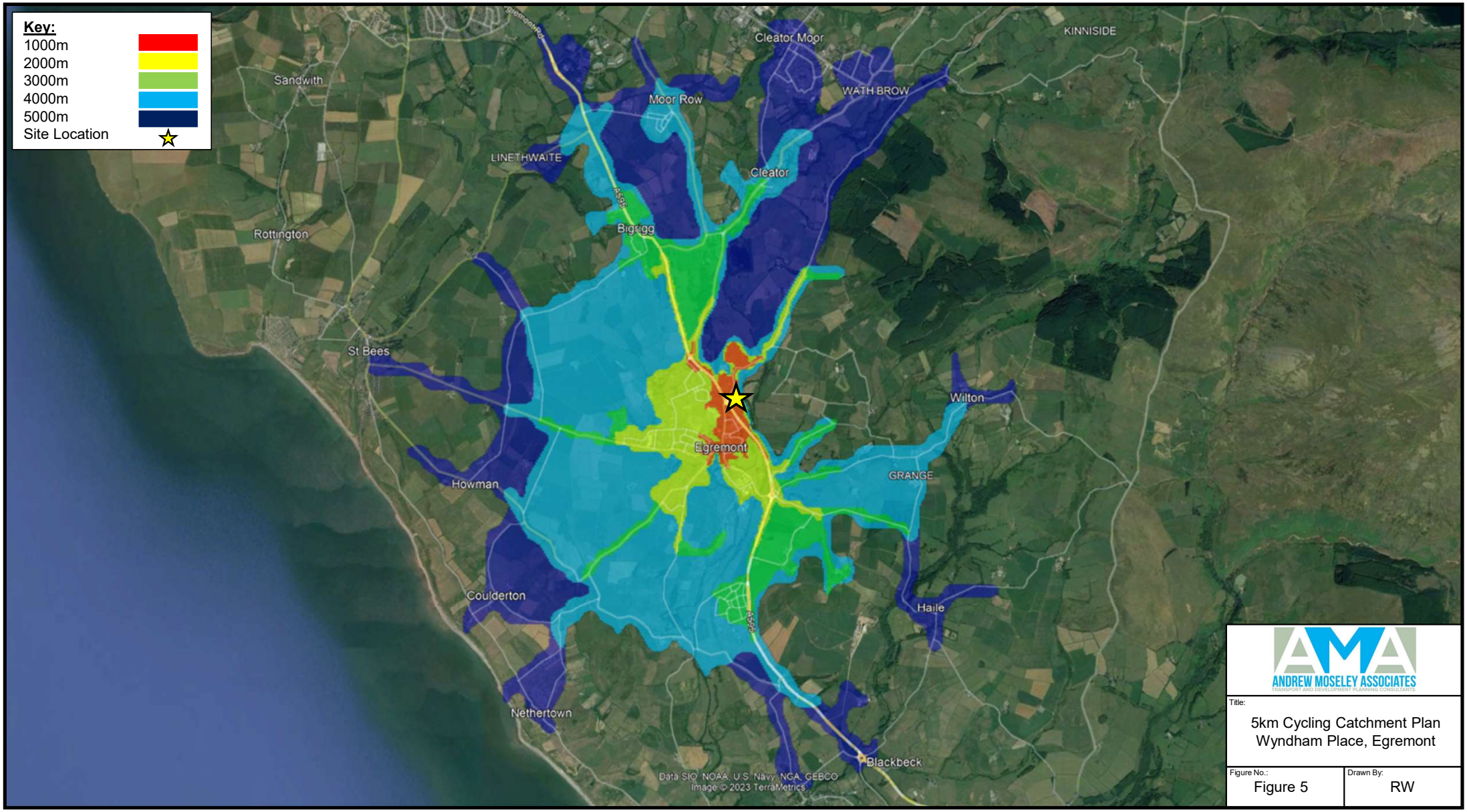
Title:
2km Walking Catchment Plan
Wyndham Place, Egremont

Figure No.:	Drawn By:
Figure 4	RW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3000m
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5000m
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Sandwith
Moor Row
WATH BROW
LINETHWAITE
Cleator
A595
Bigrigg
Rottington
St Bees
Egremont
Wilton
Howman
GRANGE
Coulderton
Haile
Nethertown
Blackbeck
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image © 2023 TerraMetrics
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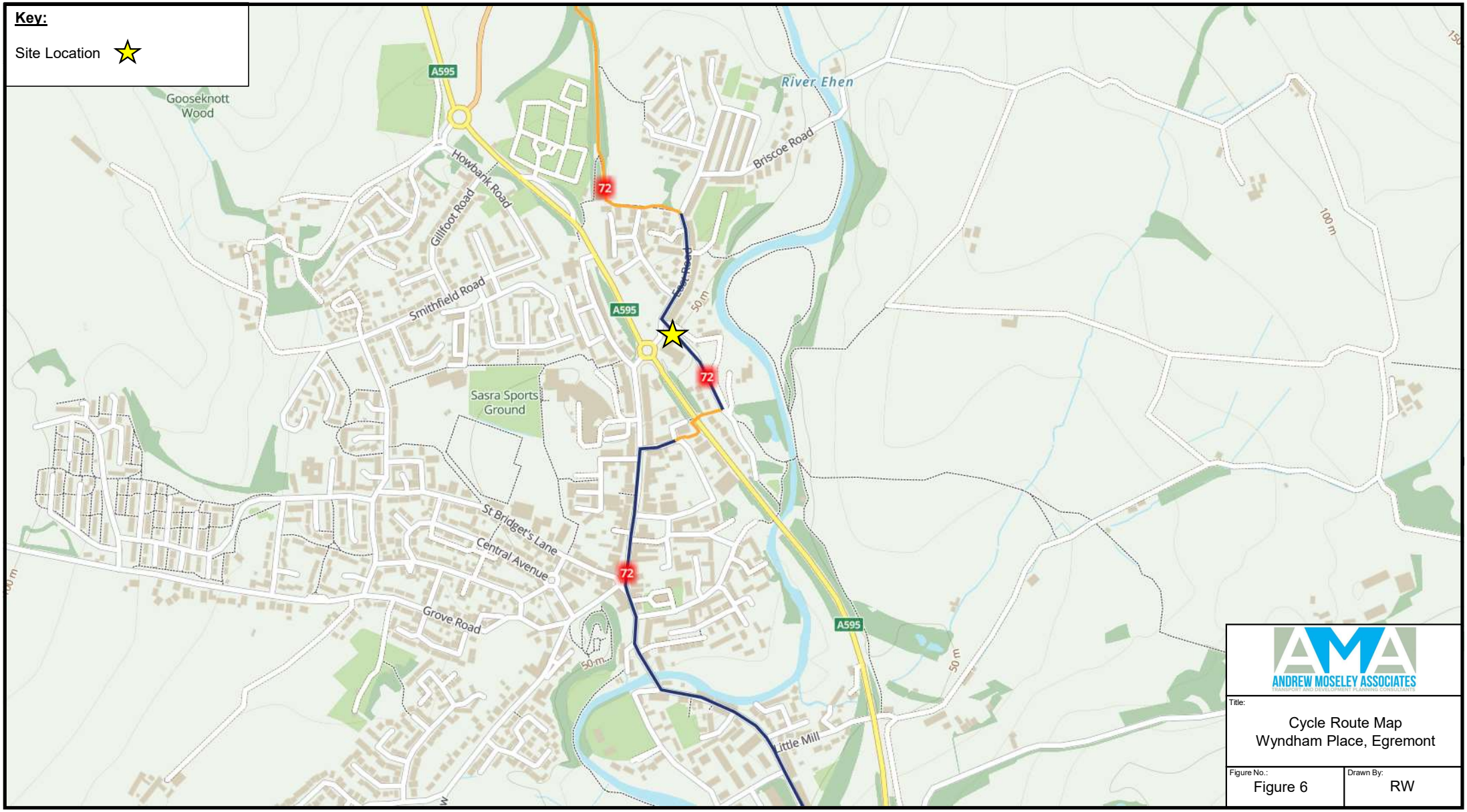
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS
Title:
5km Cycling Catchment Plan
Wyndham Place, Egremont
Figure No.:
Figure 5
Drawn By:
RW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Briscoe Road
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Smithfield Road
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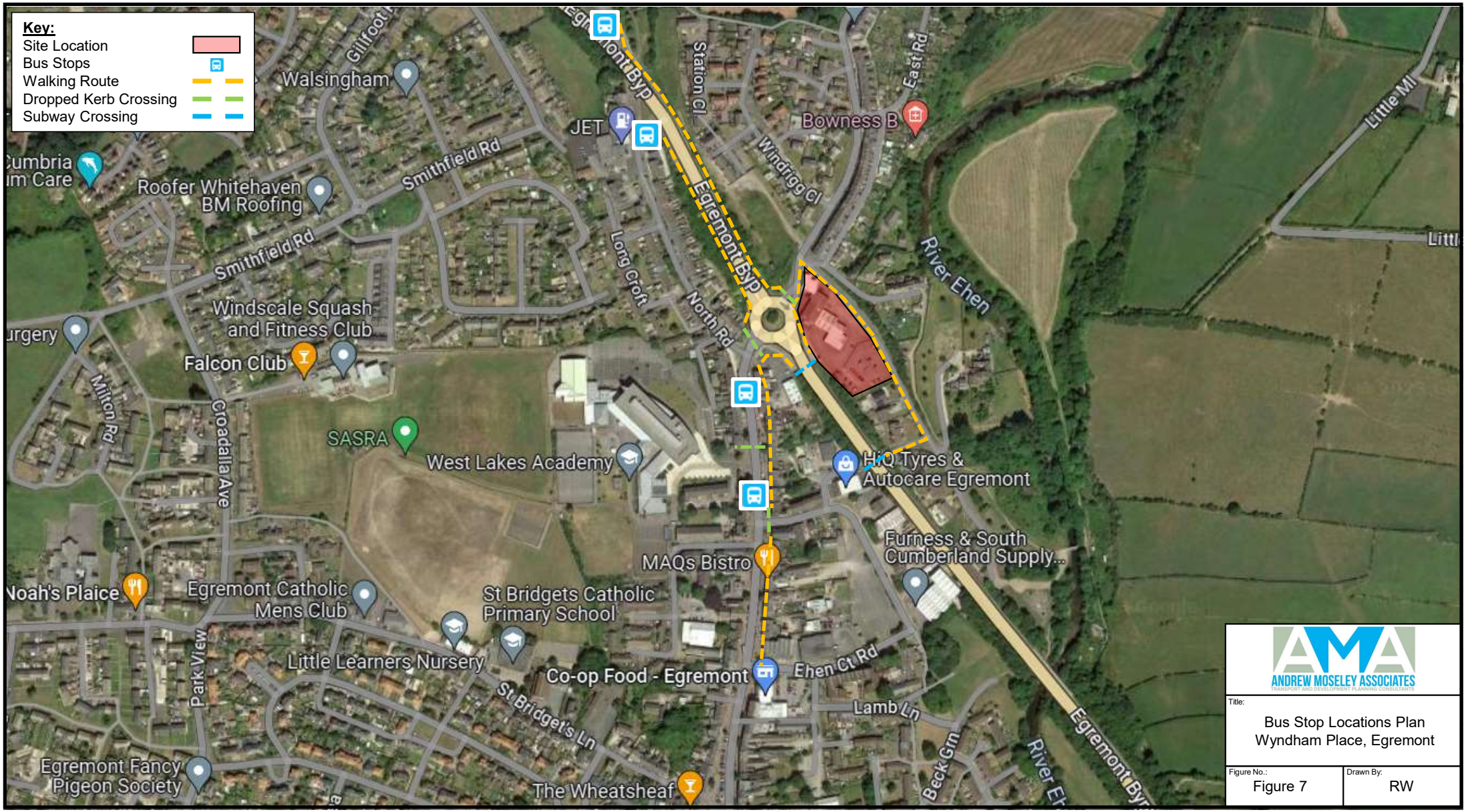
Sasra Sports Ground
St Bridget's Lane
Central Avenue
Grove Road
72
72
A595
Little Mill
50 m
100 m
ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS
Title:
Cycle Route Map
Wyndham Place, Egremont
Figure No.:
Figure 6
Drawn By:
RW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Walking Route
Dropped Kerb Crossing
Subway Crossing
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JET
Bowness B
Smithfield Rd
Roofer Whitehaven
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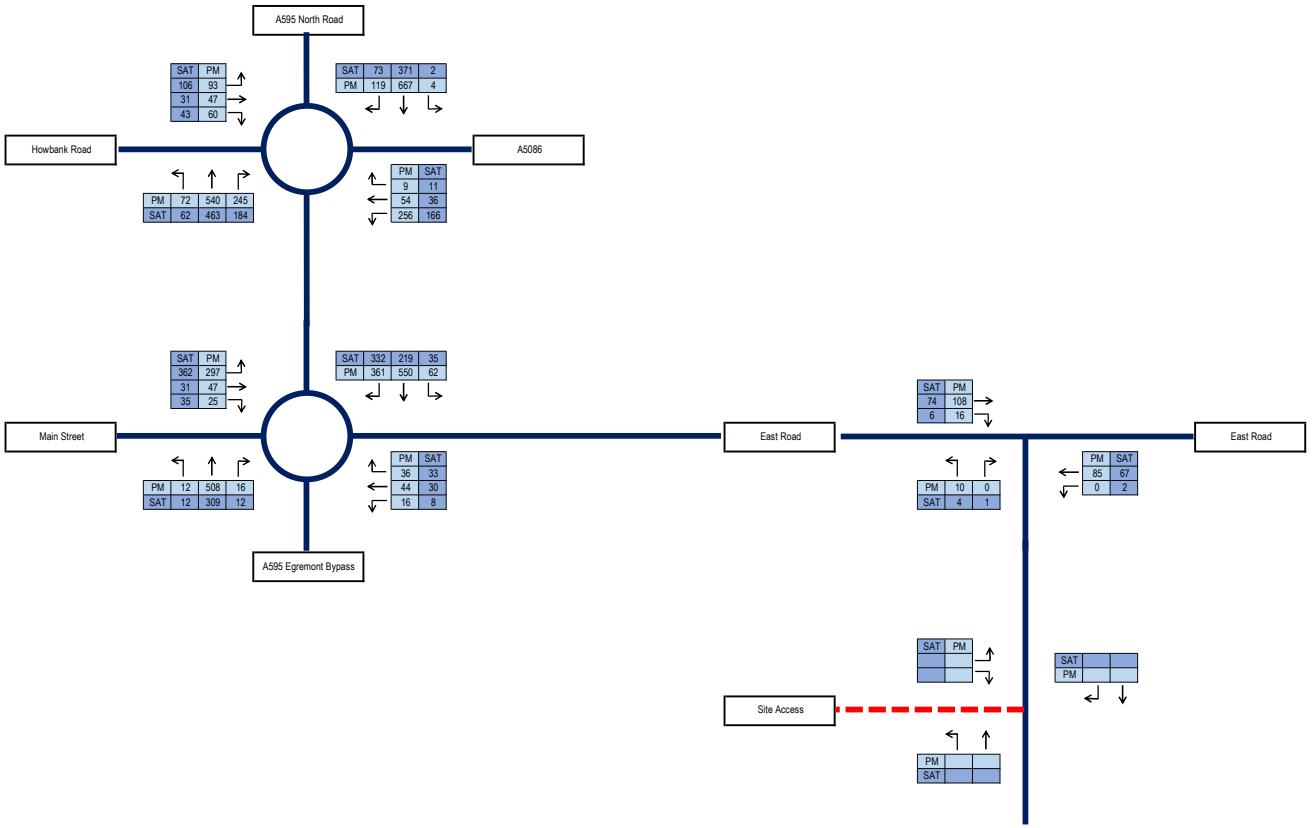
Windscale Squash
and Fitness Club
Falcon Club
SASRA
West Lakes Academy
H:Q Tyres &
Autocare Egremont
MAQs Bistro
Furness & South
Cumberland Supply...
Egremont Catholic
Mens Club
St Bridgets Catholic
Primary School
Little Learners Nursery
Co-op Food - Egremont
Egremont Fancy
Pigeon Society
The Wheatsheaf
Egremont Bypass
Station Cl
East Rd
Windrigg Cl
Long Croft
North Rd
River Ehen
Little Mill
Milton Rd
Croadalla Ave
Park View
St Bridget's Ln
Ehen Ct Rd
Lamb Ln
Beck Grn
ANDREW MOSELEY ASSOCIATES
Title:
Bus Stop Locations Plan
Wyndham Place, Egremont
Figure No.:
Figure 7
Drawn By:
RW



ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

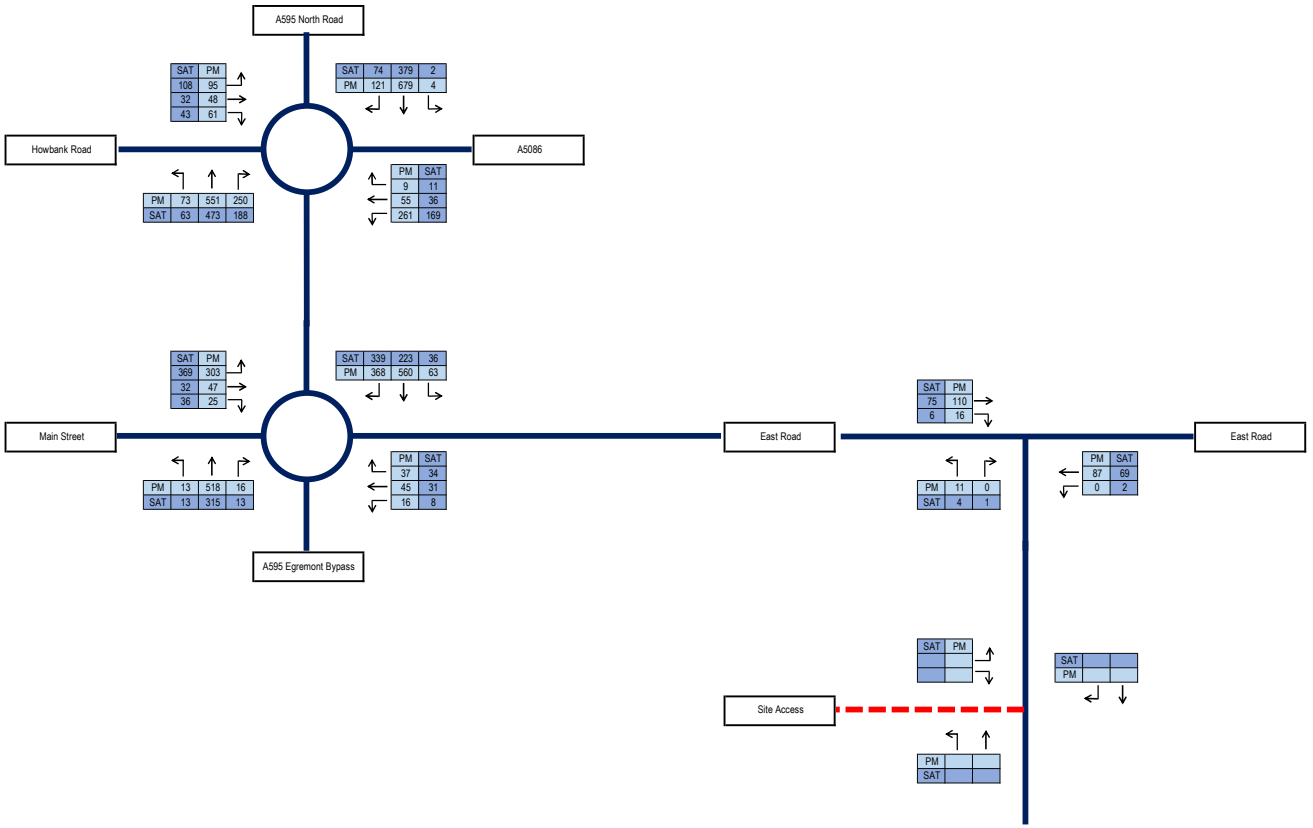
Wyndham Place, Egremont

2029 'Future' Base

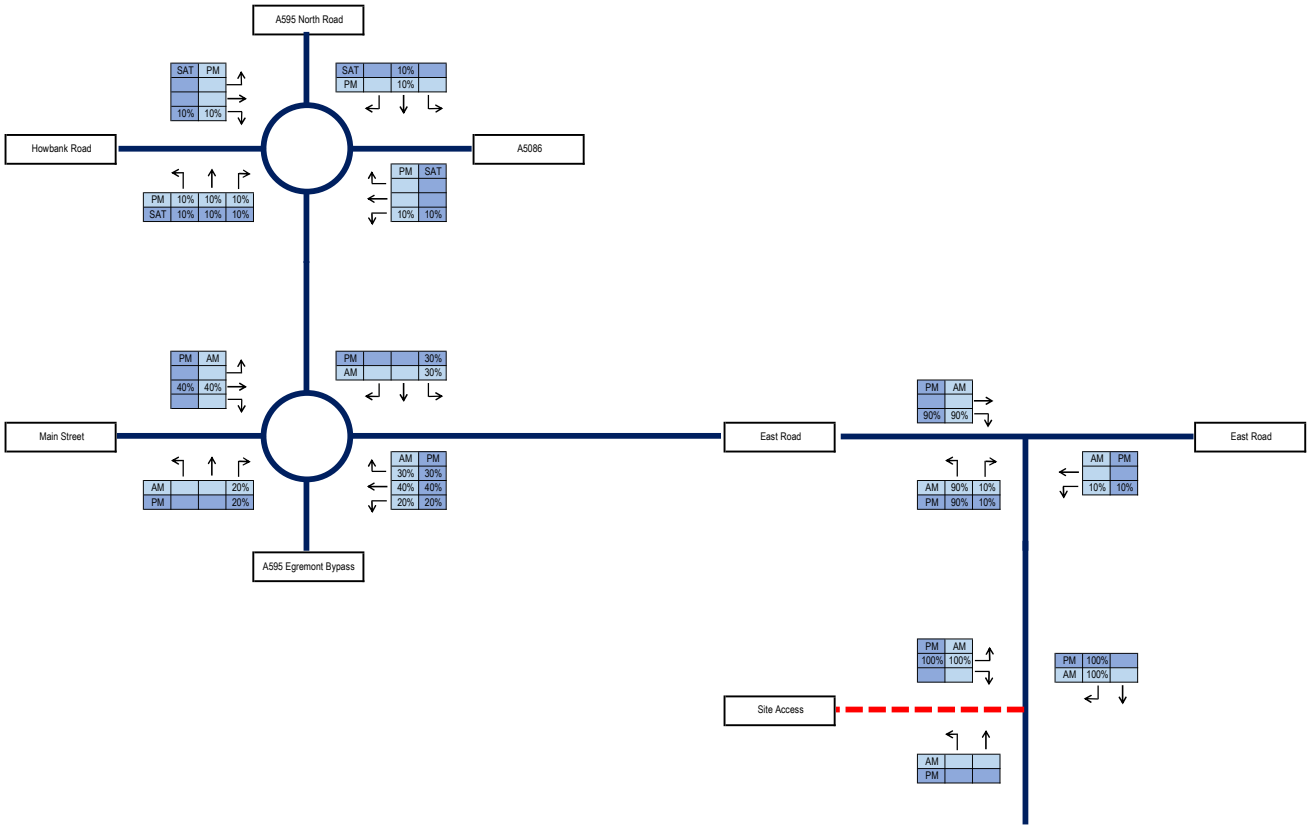
26/01/2024

Job Number - AMA/48019

Figure 8



ANDREW MOSELEY ASSOCIATES TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS	**Wyndham Place, Egremont**	**26/01/2024**
		Job Number - AMA/48019
	2034 'Future' Base	**Figure 9**



ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

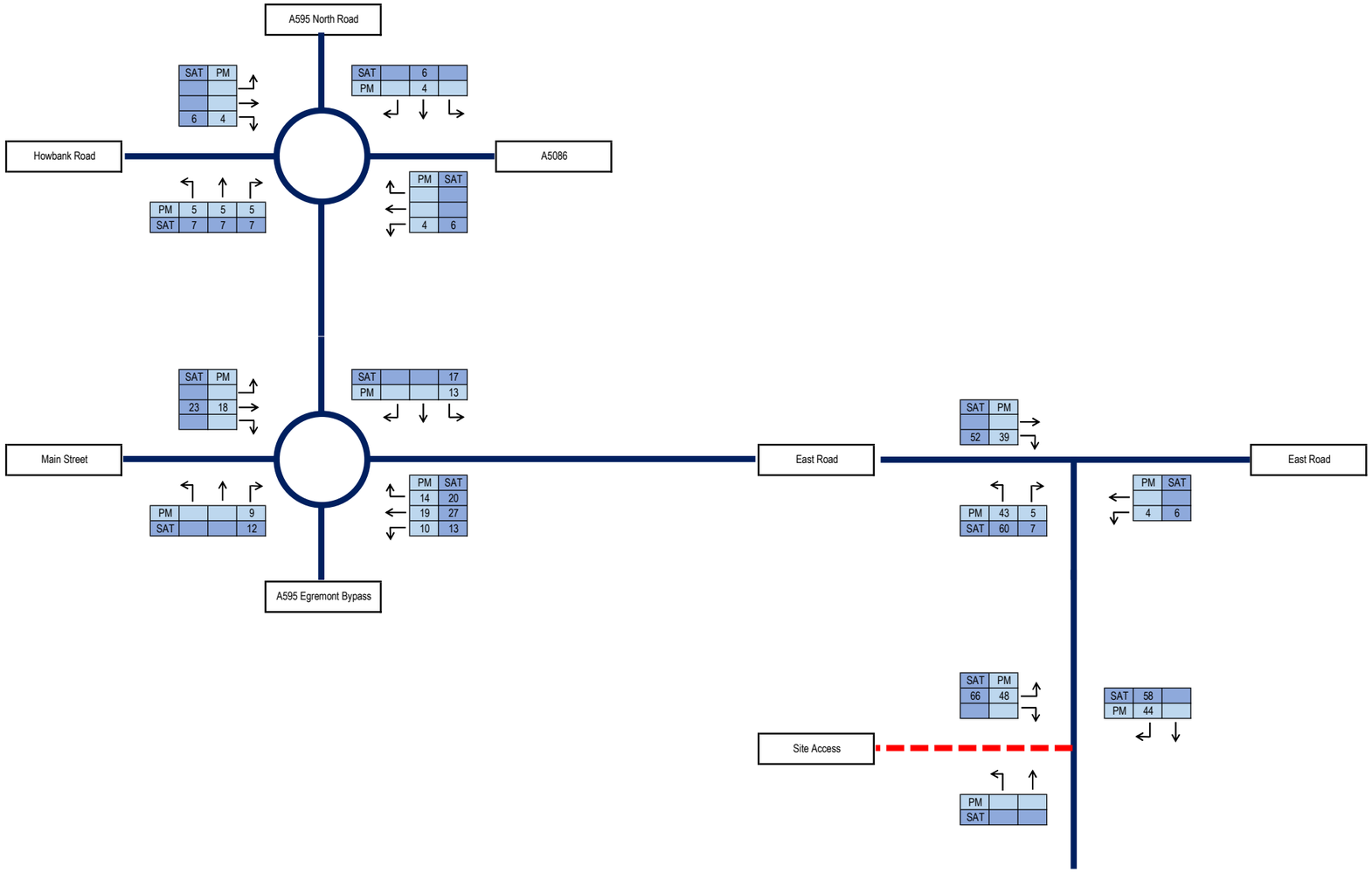
Aldi - Wyndham Place, Egremont

Primary Distribution

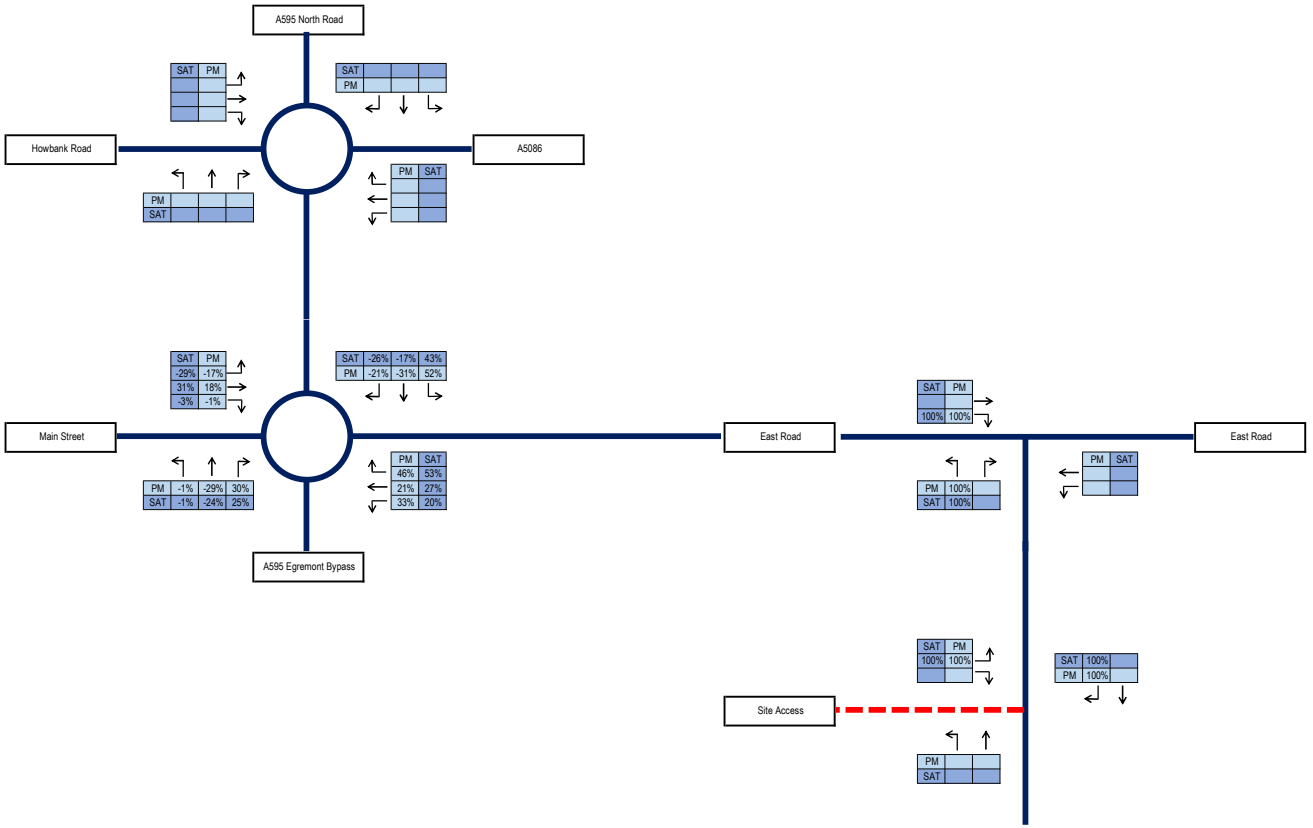
26/01/2024

Job Number - AMA/48019

Figure 10



ANDREW MOSELEY ASSOCIATES TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS	**Wyndham Place, Egremont**	**26/01/2024**
		Job Number - AMA/48019
	Primary Assignment Trips	**Figure 11**



ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

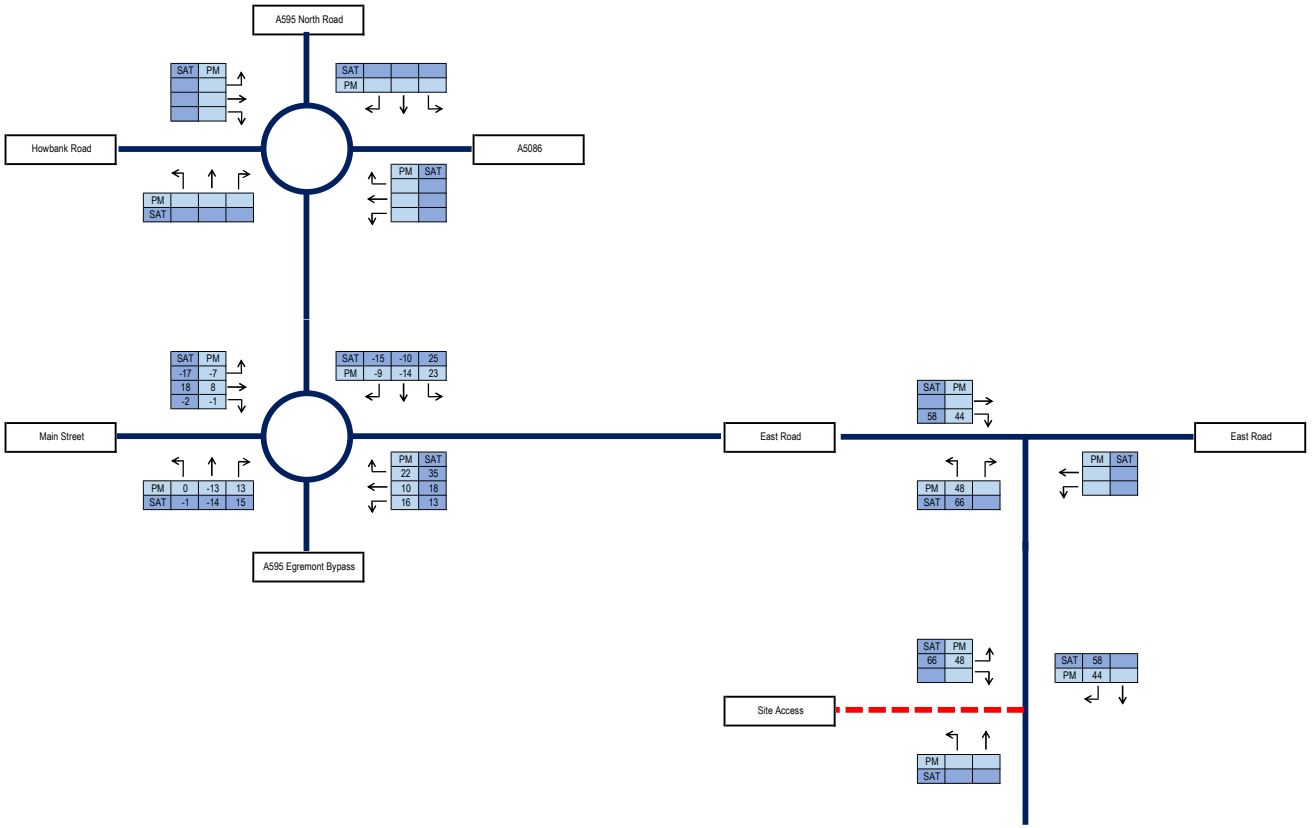
Wyndham Place, Egremont

'Pass-By' Distribution

26/01/2024

Job Number - AMA/48019

Figure 12.1



ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

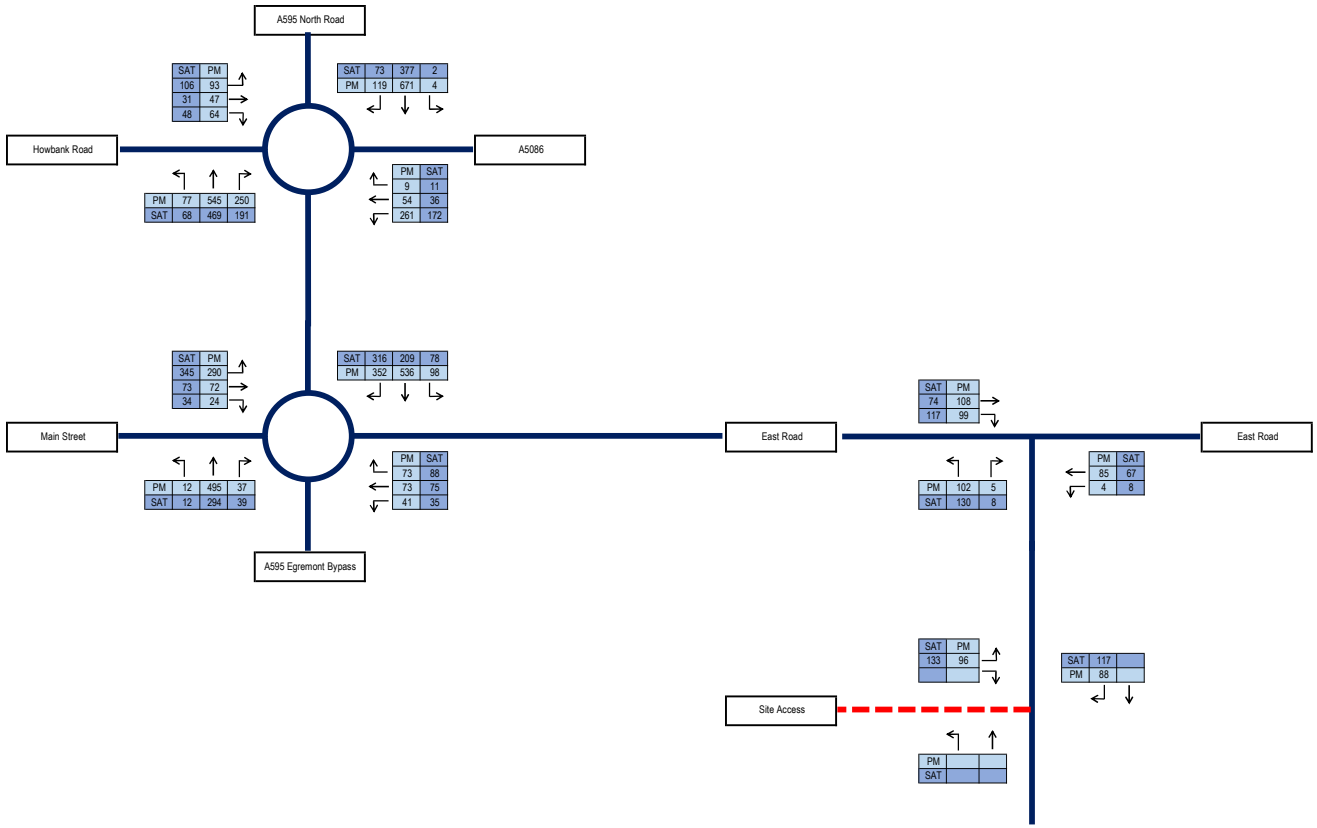
Wyndham Place, Egremont

'Pass-By' Assignment Trips

26/01/2024

Job Number - AMA/48019

Figure 12.2



ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

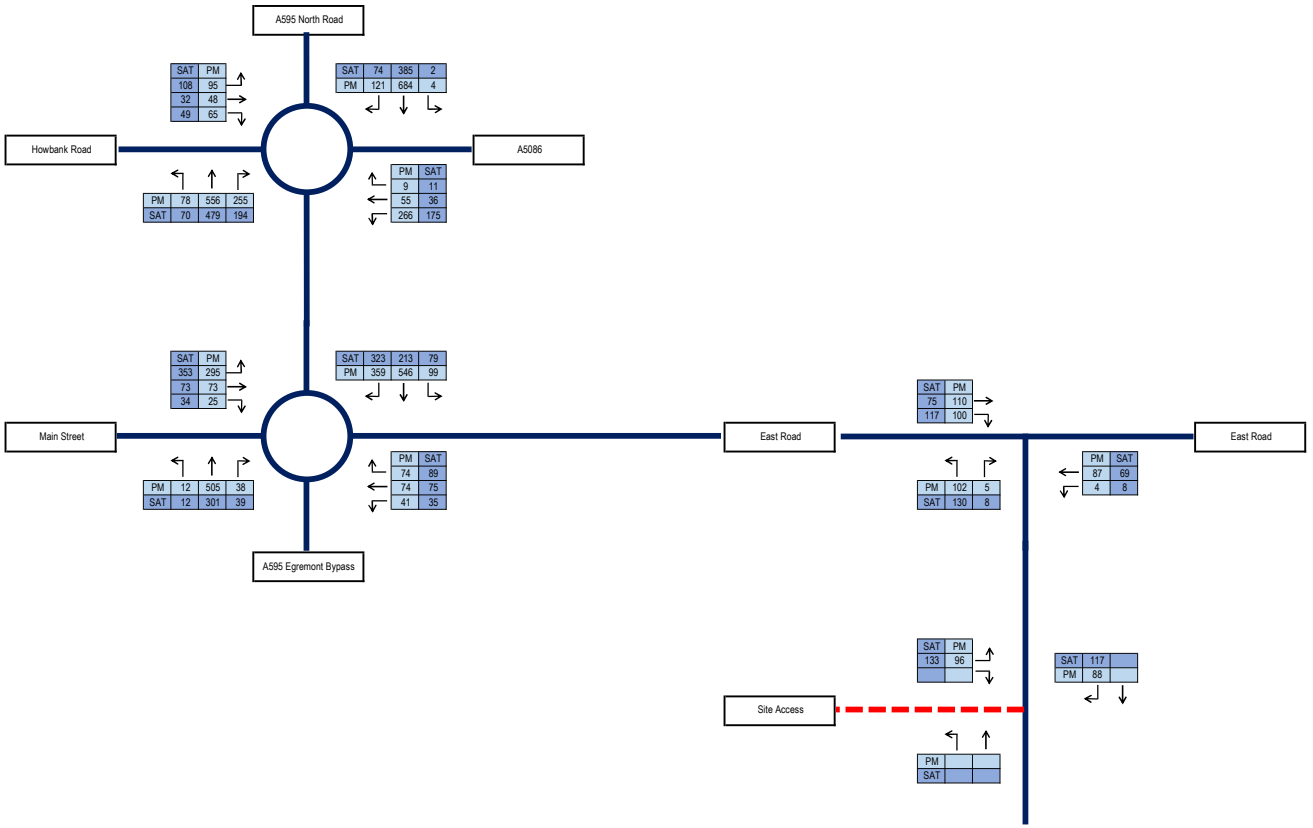
Wyndham Place, Egremont

2029 'Future' Base + Development

26/01/2024

Job Number - AMA/48019

Figure 13



ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

Wyndham Place, Egremont

2029 'Future' Base + Development

26/01/2024

Job Number - AMA/48019

Figure 14

APPENDICES

Appendix A – Proposed Site Layout

Appendix B – Scoping Exercise

Appendix C –Modelling Outputs

Appendix D– PIC Data

Appendix E – Site Access Arrangements & Visibility Splays

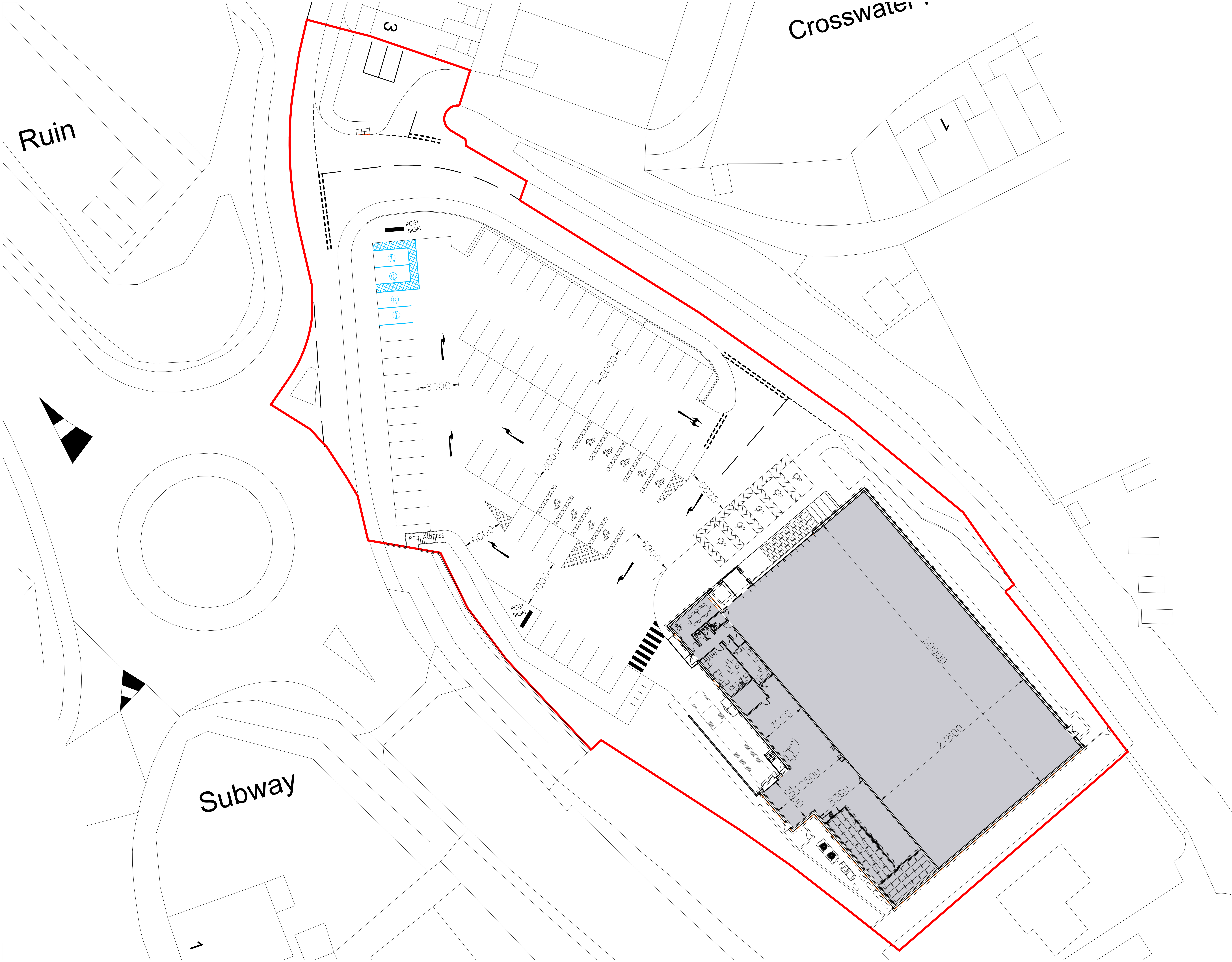
Appendix E – Swept Path Analysis

Appendix G – TRICS

Appendix A

PROPOSED SITE LAYOUT

REV	DATE	DESCRIPTION	DRW	CHK
P01	2024-01-29	First Issue.	JP	AdeL



DRAFT
2024.01.11

0 1 2 3 4 5 10 20m

SITE AREA (Store Plot)	6,512 sq m	1.6 ac
STANDARD PARKING BAYS	2.5 x 5.0m	68
ACCESSIBLE PARKING BAYS	3.7 x 6.2m	5
PARENT & CHILD PARKING BAYS	3.0 x 5.0m	9
TOTAL PARKING BAYS		86

ALDI Building	
GROSS EXTERNAL FLOOR AREA (incl. loading bay, lobby, canopy)	1933 sq m
GROSS INTERNAL AREA (incl. loading bay & lobby)	1855 sq m
NET SALES AREA	1390 sq m

Client
Aldi Stores Ltd.

Project Title
Aldi - Egremont

Project Address
Wyndham Terrace
Egremont

Drawing Title
Proposed Site Plan

Job No.	Originator	Zone	Level	Type	Role
0541	PA	XX	00	DR	A

System Classification	Drawing No.	Suitability	Revision
PM_40_50_21-0002		S3	P01

Drawn	Checked	Date	Scale	Size
JP	AdeL	2023-09-22	1:250	A1

Studio 303, Maling Exchange,
Hoults Yard, Walker Road,
Newcastle Upon Tyne,
NE6 2HL

One Lochrin Square,
92 Fountainbridge,
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Appendix B

SCOPING EXERCISE

- **SCOPING STUDY FOR:** Proposed Aldi Food Store, Wyndham Place, Egremont
- **LOCAL HIGHWAY AUTHORITY:** Cumberland Council (CC)

- **SUPPORTED BY:** Appendix A – Indicative Site Layout, Appendix B – TRICS Data, Appendix C – Distribution Diagram

<table>
<tr><th>Ref</th><th>Item</th><th>Parameters</th><th>Comments from CC</th></tr>
<tr><td>1</td><td>Level of planning approval sought?
E.g. outline, full.</td><td>A full planning application for the proposed development of an Aldi food store (A1 land use class) located on land to the east of the A595 Egremont Bypass / East Road / Main Street roundabout junction, within the residential settlement of Egremont.

The site is a brownfield site, previously occupied by Esso Petrol Filling Station (PFS), which is bound to the north and east by Cycle Route 72, to the south by the A595 Egremont Bypass, and to the west by the roundabout junction.

Although now a superseded policy document, ‘Guidance for Transport Assessment’ (TA) requires a land use of this type over 1,500m^2 GFA to be supported by a TA and Travel Plan (TP), therefore these will be provided with the planning application.</td><td></td></tr>
<tr><td>2</td><td>Size and description of development proposals</td><td>The planning application is for an Aldi food store.

The proposed development has a Retail Floor Area (RFA) of 1,315m^2 with a delivery area located on site to the west of the building accessed via the same access point for all vehicles.

An indicative layout is provided in Appendix A.</td><td></td></tr>
<tr><td>3</td><td>Description of existing land uses, existing trip distribution</td><td>The site consists of a brownfield site which has the lawful land use of a PFS, previously consisting of an Esso PFS with a retail unit and six filling pumps.

To determine the predicted trips associated with the PFS, the TRICS database has been interrogated for Petrol Filling Stations with retail facilities in Edge of Town Centre / Suburban areas. The TRICS output is attached at Appendix B.

Table 1. PFS – Lawful Vehicle Trip Rates and Generation
<table>
<tr><th></th><th colspan="2">Friday 17:00 to 18:00</th></tr>
<tr><th></th><th>Arrivals</th><th>Departures</th></tr>
<tr><td>Trip Rates</td><td>8.011</td><td>8.228</td></tr>
<tr><td>Trip Generation</td><td>48</td><td>49</td></tr>
</table>
The trip rates and corresponding generated trips shown below in Table 2 are for Saturday network peak periods from 12:00 to 13:00.

Table 2. PFS – Lawful Vehicle Trip Rates and Generation
<table>
<tr><th></th><th colspan="2">Saturday 12:00 to 13:00</th></tr>
<tr><th></th><th>Arrivals</th><th>Departures</th></tr>
<tr><td>Trip Rates</td><td>9.083</td><td>8.958</td></tr>
<tr><td>Trip Generation</td><td>54</td><td>54</td></tr>
</table>
Please can CC confirm these existing trip generation calculations are acceptable for assessment as part of the junction capacity analysis.</td><td></td></tr>
<tr><td>4</td><td>Does the development involve the relocation of an existing use?</td><td>Yes, it is proposed that the vacant PFS will be demolished to cater for the proposed Aldi food store.</td><td></td></tr>
</table>

<table>
<tr><th>Ref</th><th>Item</th><th>Parameters</th><th>Comments from CC</th></tr>
<tr><td>5</td><td>How are existing land use flows going to be dealt with?</td><td>As part of the Transport Assessment, the existing trips generated by the lawful PFS land use will be subtracted from the impact generated by the proposed Aldi food store and therefore a net difference in the proposed development will be assessed.</td><td></td></tr>
<tr><td>6</td><td>Are traffic surveys of the existing conditions available or required?</td><td>It is assumed that assessment of both the Friday PM and Saturday peak will be required for the TA.

Traffic surveys will be undertaken at identified junctions where there are forecast flows result in an increase of 30 or more additional vehicle movements. This will be informed by the assignment of the predicted development traffic (primary transferred and pass-by) as described in more detail later in this document.</td><td></td></tr>
<tr><td>7</td><td>Details of any other developments to be taken into account.</td><td>A review of the Copeland Council planning portal has identified the following development is located within the vicinity of the application site, which will be considered as part of our assessment;

• 4/17/2392/0F1 – Full application for a residential development comprising 23 apartments and 10 dwellings on land to the north of East Road.

Please can CC advise of any other committed developments which should be included as part of the junction capacity assessments.</td><td></td></tr>
<tr><td>8</td><td>Details of any adjacent highway improvement proposals by others</td><td>Please advise of any adjacent highway improvements planned in the vicinity of the site.</td><td></td></tr>
<tr><td>9</td><td>When are the critical periods for assessments?</td><td>The critical periods for assessment will be based on the identified network Weekday PM and Saturday peak hours and the food retail development peak trip generation.</td><td></td></tr>
<tr><td>10</td><td>What are the assessment years?</td><td>Base year of submission and five years post submission (2023 and 2028).</td><td></td></tr>
<tr><td>11</td><td>Traffic growth factors?</td><td>To establish the likely growth in traffic flow for a future year of 2028 (year of application plus 5 years) the Department for Transport computer program TEMPRO 7.2 has been utilised in conjunction with Data Set AF15 of the National Transport Model.

Due to the proximity of the A595 Egremont Bypass, this falls within National Highways ownership and therefore a 10-year horizon period will also be assessed in accordance with the required standards.

The growth factors for the Copeland 006 Middle Super Output Area to 2023, 2028 and 2033 are as follows:-

Table 3. TEMPRO Traffic Growth Factors – 2023 to 2028
<table><tr><th></th><th>PM</th><th>SAT</th></tr><tr><td>2023 – 2028</td><td>1.0299</td><td>1.033</td></tr><tr><td>2023 - 2033</td><td>1.0491</td><td>1.0535</td></tr></table>
These growth figures take account of future increases in households and jobs and are therefore considered to be robust.</td><td></td></tr>
</table>

<table>
<tr><th>Ref</th><th>Item</th><th>Parameters</th><th>Comments from CC</th></tr>
<tr><td>12</td><td>What will be the trip generation for the proposals?</td><td>
The vehicle-based trip rates, set out within Table 4 and Table 5, have been obtained from the TRICS database for a similar sized discount retail food store development in a similar edge of town location.

The average vehicle rates for the proposed Aldi store (per 100sqm RFA) for the Friday PM peak period from 17:00 – 18:00 trip generation has been calculated by multiplying the trip rates by the RFA (1,315). The trip rates and corresponding generated trips are set out in Table 4 and Table 5.

Table 4. Vehicle Trip Rates and Generation
<table>
<tr><th></th><th colspan="2">Friday 17:00 to 18:00</th></tr>
<tr><th></th><th>Arrivals</th><th>Departures</th></tr>
<tr><td>Trip Rates</td><td>6.307</td><td>6.941</td></tr>
<tr><td>Trip Generation</td><td>83</td><td>91</td></tr>
</table>
The trip rates and corresponding generated trips shown below in Table 5 are for Saturday network peak periods from 12:00 to 13:00.

Table 5. Vehicle Trip Rates and Generation
<table>
<tr><th></th><th colspan="2">Saturday 12:00 to 13:00</th></tr>
<tr><th></th><th>Arrivals</th><th>Departures</th></tr>
<tr><td>Trip Rates</td><td>8.383</td><td>9.545</td></tr>
<tr><td>Trip Generation</td><td>110</td><td>126</td></tr>
</table>
A copy of the TRICS data is attached to this Highways Scoping Note in Appendix B.
</td><td></td></tr>
<tr><td>13</td><td>What is the assumed trip distribution?</td><td>The traffic distribution of the Aldi store will be based on the existing housing density located within a 10-minute drive time catchment area of the site.

A diagram showing the anticipated distribution is attached at Appendix C.</td><td></td></tr>
<tr><td>14</td><td>Would traffic from adjacent sites be attracted to the site?
Pass-by traffic?
Transferred Trips?</td><td>The proposed ‘Pass-by’ trips are 50% on weekdays and Saturdays, therefore, 50% of the trips respectively are considered to be ‘Primary Transferred’ trips which effectively divert to the proposed Aldi store from other local food retail destinations.

We request the LHA confirm that this approach is acceptable.</td><td></td></tr>
<tr><td>15</td><td>Capacity tests required?</td><td>Dependant on the results of the trip distribution and trip generation exercise, the junctions that are predicted to see an increase of more than 30 two-way trips will be assessed as part of the Transport Assessment. At this stage, the following junctions are considered likely to require modelling:

▪ Site Access / ‘Cycle Route 72’ priority T-junction;
▪ ‘Cycke Route 72’ / East Road priority T-junction;
▪ East Road / A595 Ergemont Bypass / Main Street roundabout junction; and
▪ A595 / Howbank Road / A5086 roundabout junction

We request the LHA confirm that the approach of carrying out junction capacity assessments at the four junctions is acceptable.</td><td></td></tr>
</table>

Ref	Item	Parameters	Comments from CC
16	Are adjacent junctions or links likely to become overloaded?	Modelling of the identified junctions will be undertaken to analyse capacities based on current traffic flows and the future year scenarios with and without development flows to determine the requirements for any mitigation requirements as a result of the development impact.	
17	Is a new or modified highway access likely?	The development proposes a slight relocation of the existing access on the 'Cycle Route 72' carriageway, along with some improvements to the arrangement and width of carriageway. As detailed in the proposed layout at **Appendix A** the development proposes the formalisation of the access arrangement onto the 'Cycle Route 72' carriageway, and the removal of previous dropped kerb access points previously used by the PFS use. The vehicular access will provide access for both shoppers and servicing / delivery vehicles. The site access junction is shown on the proposed layout at **Appendix A**.	
18	What are the visibility requirements? Are those requirements met?	Appropriate visibility from the site access onto the main carriageway 'Cycle Route 72' will be achieved in accordance with the design standards for MfS.	
19	What level of car parking is required?	Parking will be provided with reference to the Cumberland Council parking standards and Aldi's operational requirements. The level of car and cycle parking spaces will be justified within the TA.	
20	Are special provisions required for cyclists, pedestrians, the disabled or public transport?	All sustainable transport modes will be considered and addressed in detail in the TA.	
21	Do the proposals comply with Transport Policy?	The proposals will be considered in-line with National and Local policy.	
22	Are there any further transport related reports required? E.g. Travel Plans, Car Park Management Plans.	An Interim Travel Plan will be submitted as part of the planning application for the proposed food retail development.	
23	Will a review of Road Traffic Accidents (RTA's) be undertaken?	A review of accidents, for the latest 5 year period, within the vicinity of the development will be reviewed.	

Appendix C

MODELLING OUTPUTS

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Wyndham Place - East Road T-Junction.j9
Path: C:\AMA\AMA\AMA - Documents\001-03 - Aldi - Dar\48019 - Wyndham Place, Egremont\D Models and Drawings\PICADY
Report generation date: 16/01/2024 15:59:36

Summary of junction performance

	PM					SAT				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2023 Base									
Stream B-AC	D1	0.0	4.94	0.01	A	D2	0.0	5.17	0.01	A
Stream C-AB		0.0	5.97	0.03	A		0.0	5.86	0.01	A
	2024 Uplifted Base									
Stream B-AC	D3	0.0	4.94	0.01	A	D4	0.0	5.17	0.01	A
Stream C-AB		0.0	5.98	0.03	A		0.0	5.86	0.01	A
	2029 Base									
Stream B-AC	D5	0.0	4.94	0.01	A	D6	0.0	5.18	0.01	A
Stream C-AB		0.0	5.98	0.03	A		0.0	5.86	0.01	A
	2029 Base + Development									
Stream B-AC	D7	0.2	5.93	0.16	A	D8	0.3	6.27	0.21	A
Stream C-AB		0.2	6.88	0.18	A		0.3	7.16	0.21	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.

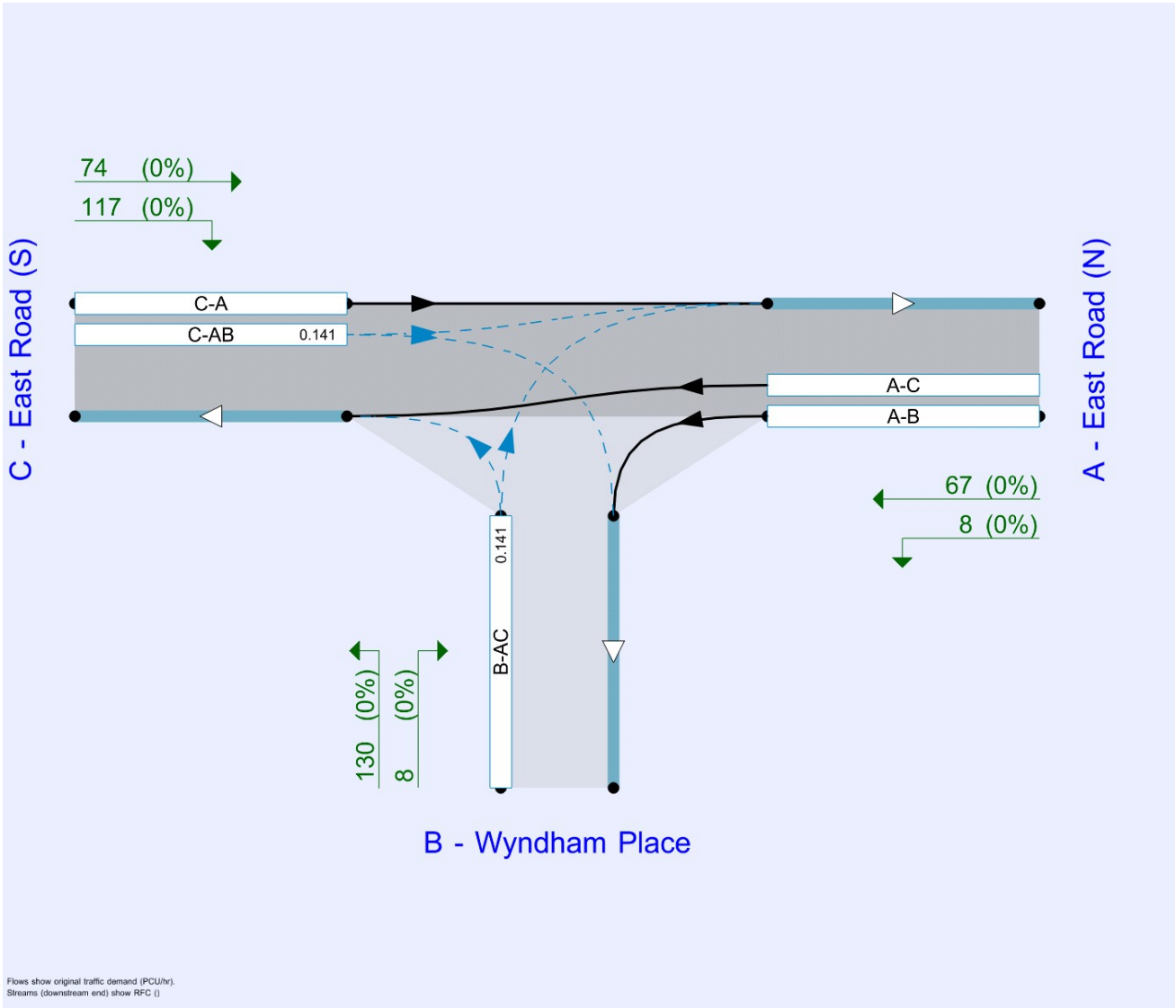
File summary

File Description

Title	Wyndham Place, Egremont
Location	Egremont
Site number	
Date	10/01/2024
Version	
Status	(new file)
Identifier	
Client	Aldi
Jobnumber	48019
Enumerator	AzureAD\Modellinglaptop
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



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	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Base	PM	ONE HOUR	16:15	17:45	15
D2	2023 Base	SAT	ONE HOUR	11:15	12:45	15
D3	2024 Uplifted Base	PM	ONE HOUR	16:15	17:45	15
D4	2024 Uplifted Base	SAT	ONE HOUR	11:15	12:45	15
D5	2029 Base	PM	ONE HOUR	16:15	17:45	15
D6	2029 Base	SAT	ONE HOUR	11:15	12:45	15
D7	2029 Base + Development	PM	ONE HOUR	16:15	17:45	15
D8	2029 Base + Development	SAT	ONE HOUR	11:15	12:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023 Base, 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	East Road (N)		Major
B	Wyndham Place		Minor
C	East Road (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - East Road (S)	7.34			110.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Wyndham Place	One lane	5.00	43	22

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	603	0.103	0.261	0.164	0.373
B-C	765	0.110	0.279	-	-
C-B	638	0.233	0.233	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Base	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - East Road (N)		✓	82	100.000
B - Wyndham Place		✓	10	100.000
C - East Road (S)		✓	119	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	0	82
	B - Wyndham Place	0	0	10
	C - East Road (S)	104	15	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	0	0
	B - Wyndham Place	0	0	0
	C - East Road (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	4.94	0.0	A
C-AB	0.03	5.97	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	748	0.010	7	0.0	4.859	A
C-AB	11	625	0.018	11	0.0	5.868	A
C-A	78			78			
A-B	0			0			
A-C	62			62			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	745	0.012	9	0.0	4.891	A
C-AB	14	623	0.022	14	0.0	5.910	A
C-A	93			93			
A-B	0			0			
A-C	74			74			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	740	0.015	11	0.0	4.936	A
C-AB	17	620	0.027	17	0.0	5.968	A
C-A	114			114			
A-B	0			0			
A-C	90			90			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	740	0.015	11	0.0	4.936	A
C-AB	17	620	0.027	17	0.0	5.968	A
C-A	114			114			
A-B	0			0			
A-C	90			90			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	745	0.012	9	0.0	4.891	A
C-AB	14	623	0.022	14	0.0	5.913	A
C-A	93			93			
A-B	0			0			
A-C	74			74			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	748	0.010	8	0.0	4.861	A
C-AB	11	625	0.018	11	0.0	5.870	A
C-A	78			78			
A-B	0			0			
A-C	62			62			

2023 Base, SAT

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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.41	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Base	SAT	ONE HOUR	11:15	12:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - East Road (N)		✓	67	100.000
B - Wyndham Place		✓	5	100.000
C - East Road (S)		✓	77	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	2	65
	B - Wyndham Place	1	0	4
	C - East Road (S)	71	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	0	0
	B - Wyndham Place	0	0	0
	C - East Road (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	5.17	0.0	A
C-AB	0.01	5.86	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

11:15 - 11:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	709	0.005	4	0.0	5.101	A
C-AB	5	626	0.007	4	0.0	5.789	A
C-A	53			53			
A-B	2			2			
A-C	49			49			

11:30 - 11:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	706	0.006	4	0.0	5.130	A
C-AB	5	624	0.009	5	0.0	5.817	A
C-A	64			64			
A-B	2			2			
A-C	58			58			

11:45 - 12:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	702	0.008	5	0.0	5.171	A
C-AB	7	621	0.011	7	0.0	5.855	A
C-A	78			78			
A-B	2			2			
A-C	72			72			

12:00 - 12:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	702	0.008	6	0.0	5.171	A
C-AB	7	621	0.011	7	0.0	5.855	A
C-A	78			78			
A-B	2			2			
A-C	72			72			

12:15 - 12:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	706	0.006	5	0.0	5.130	A
C-AB	5	624	0.009	5	0.0	5.819	A
C-A	64			64			
A-B	2			2			
A-C	58			58			

12:30 - 12:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	709	0.005	4	0.0	5.101	A
C-AB	5	626	0.007	5	0.0	5.791	A
C-A	53			53			
A-B	2			2			
A-C	49			49			

2024 Uplifted Base, 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.68	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2024 Uplifted Base	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - East Road (N)		✓	83	100.000
B - Wyndham Place		✓	10	100.000
C - East Road (S)		✓	121	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	0	83
	B - Wyndham Place	0	0	10
	C - East Road (S)	105	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	0	0
	B - Wyndham Place	0	0	0
	C - East Road (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	4.94	0.0	A
C-AB	0.03	5.98	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	748	0.010	7	0.0	4.861	A
C-AB	12	625	0.019	12	0.0	5.876	A
C-A	79			79			
A-B	0			0			
A-C	62			62			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	745	0.012	9	0.0	4.893	A
C-AB	14	622	0.023	14	0.0	5.919	A
C-A	94			94			
A-B	0			0			
A-C	75			75			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	740	0.015	11	0.0	4.938	A
C-AB	18	620	0.029	18	0.0	5.979	A
C-A	116			116			
A-B	0			0			
A-C	91			91			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	740	0.015	11	0.0	4.938	A
C-AB	18	620	0.029	18	0.0	5.979	A
C-A	116			116			
A-B	0			0			
A-C	91			91			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	745	0.012	9	0.0	4.895	A
C-AB	14	622	0.023	14	0.0	5.922	A
C-A	94			94			
A-B	0			0			
A-C	75			75			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	748	0.010	8	0.0	4.861	A
C-AB	12	625	0.019	12	0.0	5.876	A
C-A	79			79			
A-B	0			0			
A-C	62			62			

2024 Uplifted Base, SAT

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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2024 Uplifted Base	SAT	ONE HOUR	11:15	12:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - East Road (N)		✓	68	100.000
B - Wyndham Place		✓	5	100.000
C - East Road (S)		✓	78	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	2	66
	B - Wyndham Place	1	0	4
	C - East Road (S)	72	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	0	0
	B - Wyndham Place	0	0	0
	C - East Road (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	5.17	0.0	A
C-AB	0.01	5.86	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

11:15 - 11:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	709	0.005	4	0.0	5.102	A
C-AB	5	626	0.007	4	0.0	5.790	A
C-A	54			54			
A-B	2			2			
A-C	50			50			

11:30 - 11:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	706	0.006	4	0.0	5.132	A
C-AB	5	624	0.009	5	0.0	5.818	A
C-A	65			65			
A-B	2			2			
A-C	59			59			

11:45 - 12:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	701	0.008	5	0.0	5.173	A
C-AB	7	621	0.011	7	0.0	5.858	A
C-A	79			79			
A-B	2			2			
A-C	73			73			

12:00 - 12:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	701	0.008	6	0.0	5.173	A
C-AB	7	621	0.011	7	0.0	5.858	A
C-A	79			79			
A-B	2			2			
A-C	73			73			

12:15 - 12:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	706	0.006	5	0.0	5.132	A
C-AB	5	624	0.009	5	0.0	5.821	A
C-A	65			65			
A-B	2			2			
A-C	59			59			

12:30 - 12:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	709	0.005	4	0.0	5.104	A
C-AB	5	626	0.007	5	0.0	5.790	A
C-A	54			54			
A-B	2			2			
A-C	50			50			

2029 Base, 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2029 Base	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - East Road (N)		✓	85	100.000
B - Wyndham Place		✓	10	100.000
C - East Road (S)		✓	124	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	0	85
	B - Wyndham Place	0	0	10
	C - East Road (S)	108	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	0	0
	B - Wyndham Place	0	0	0
	C - East Road (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	4.94	0.0	A
C-AB	0.03	5.98	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	748	0.010	7	0.0	4.863	A
C-AB	12	624	0.019	12	0.0	5.879	A
C-A	81			81			
A-B	0			0			
A-C	64			64			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	744	0.012	9	0.0	4.896	A
C-AB	14	622	0.023	14	0.0	5.923	A
C-A	97			97			
A-B	0			0			
A-C	76			76			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	739	0.015	11	0.0	4.942	A
C-AB	18	619	0.029	18	0.0	5.983	A
C-A	119			119			
A-B	0			0			
A-C	94			94			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	739	0.015	11	0.0	4.942	A
C-AB	18	619	0.029	18	0.0	5.983	A
C-A	119			119			
A-B	0			0			
A-C	94			94			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	744	0.012	9	0.0	4.896	A
C-AB	14	622	0.023	14	0.0	5.926	A
C-A	97			97			
A-B	0			0			
A-C	76			76			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	8	748	0.010	8	0.0	4.863	A
C-AB	12	624	0.019	12	0.0	5.881	A
C-A	81			81			
A-B	0			0			
A-C	64			64			

2029 Base, SAT

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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2029 Base	SAT	ONE HOUR	11:15	12:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - East Road (N)		✓	69	100.000
B - Wyndham Place		✓	5	100.000
C - East Road (S)		✓	80	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	2	67
	B - Wyndham Place	1	0	4
	C - East Road (S)	74	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	0	0
	B - Wyndham Place	0	0	0
	C - East Road (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	5.18	0.0	A
C-AB	0.01	5.86	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

11:15 - 11:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	709	0.005	4	0.0	5.104	A
C-AB	5	626	0.007	4	0.0	5.792	A
C-A	56			56			
A-B	2			2			
A-C	50			50			

11:30 - 11:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	706	0.006	4	0.0	5.134	A
C-AB	5	624	0.009	5	0.0	5.820	A
C-A	67			67			
A-B	2			2			
A-C	60			60			

11:45 - 12:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	701	0.008	5	0.0	5.176	A
C-AB	7	621	0.011	7	0.0	5.860	A
C-A	81			81			
A-B	2			2			
A-C	74			74			

12:00 - 12:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	701	0.008	6	0.0	5.176	A
C-AB	7	621	0.011	7	0.0	5.860	A
C-A	81			81			
A-B	2			2			
A-C	74			74			

12:15 - 12:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	706	0.006	5	0.0	5.136	A
C-AB	5	624	0.009	5	0.0	5.820	A
C-A	67			67			
A-B	2			2			
A-C	60			60			

12:30 - 12:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	709	0.005	4	0.0	5.106	A
C-AB	5	626	0.007	5	0.0	5.792	A
C-A	56			56			
A-B	2			2			
A-C	50			50			

2029 Base + 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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.31	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2029 Base + Development	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - East Road (N)		✓	89	100.000
B - Wyndham Place		✓	107	100.000
C - East Road (S)		✓	207	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	4	85
	B - Wyndham Place	5	0	102
	C - East Road (S)	108	99	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	0	0
	B - Wyndham Place	0	0	0
	C - East Road (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.16	5.93	0.2	A
C-AB	0.18	6.88	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	735	0.110	80	0.1	5.498	A
C-AB	76	632	0.120	75	0.1	6.462	A
C-A	80			80			
A-B	3			3			
A-C	64			64			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	96	730	0.132	96	0.2	5.677	A
C-AB	91	633	0.144	91	0.2	6.638	A
C-A	95			95			
A-B	4			4			
A-C	76			76			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	118	724	0.163	118	0.2	5.932	A
C-AB	113	636	0.177	113	0.2	6.877	A
C-A	115			115			
A-B	4			4			
A-C	94			94			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	118	724	0.163	118	0.2	5.934	A
C-AB	113	636	0.177	113	0.2	6.883	A
C-A	115			115			
A-B	4			4			
A-C	94			94			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	96	730	0.132	96	0.2	5.682	A
C-AB	91	633	0.144	91	0.2	6.646	A
C-A	95			95			
A-B	4			4			
A-C	76			76			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	734	0.110	81	0.1	5.506	A
C-AB	76	632	0.120	76	0.1	6.476	A
C-A	80			80			
A-B	3			3			
A-C	64			64			

2029 Base + Development , SAT

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	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2029 Base + Development	SAT	ONE HOUR	11:15	12:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - East Road (N)		✓	75	100.000
B - Wyndham Place		✓	138	100.000
C - East Road (S)		✓	191	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	8	67
	B - Wyndham Place	8	0	130
	C - East Road (S)	74	117	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - East Road (N)	B - Wyndham Place	C - East Road (S)
From	A - East Road (N)	0	0	0
	B - Wyndham Place	0	0	0
	C - East Road (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.21	6.27	0.3	A
C-AB	0.21	7.16	0.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

11:15 - 11:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	104	735	0.141	103	0.2	5.693	A
C-AB	89	632	0.141	89	0.2	6.611	A
C-A	55			55			
A-B	6			6			
A-C	50			50			

11:30 - 11:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	124	731	0.170	124	0.2	5.927	A
C-AB	107	633	0.169	107	0.2	6.838	A
C-A	65			65			
A-B	7			7			
A-C	60			60			

11:45 - 12:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	152	726	0.209	152	0.3	6.266	A
C-AB	132	635	0.208	132	0.3	7.149	A
C-A	78			78			
A-B	9			9			
A-C	74			74			

12:00 - 12:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	152	726	0.209	152	0.3	6.271	A
C-AB	132	635	0.208	132	0.3	7.155	A
C-A	78			78			
A-B	9			9			
A-C	74			74			

12:15 - 12:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	124	731	0.170	124	0.2	5.936	A
C-AB	107	633	0.169	107	0.2	6.848	A
C-A	65			65			
A-B	7			7			
A-C	60			60			

12:30 - 12:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	104	735	0.141	104	0.2	5.710	A
C-AB	89	632	0.141	89	0.2	6.630	A
C-A	55			55			
A-B	6			6			
A-C	50			50			

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

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

Filename: East Road Roundabout PM Scenario.j9
Path: C:\AMA\AMA\AMA - Documents\001-03 - Aldi - Dar\48019 - Wyndham Place, Egremont\D Models and Drawings\ARCADY
Report generation date: 16/01/2024 16:15:27

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	2023 Base			
1 - A595 Egremont Bypass (N)	2.0	6.90	0.67	A
2 - East Road	0.6	20.83	0.37	C
3 - A595 Egremont Bypass (S)	4.1	26.81	0.81	D
4 - Main Street	2.6	24.46	0.73	C
	2024 Uplifted Base			
1 - A595 Egremont Bypass (N)	2.0	7.00	0.67	A
2 - East Road	0.6	21.55	0.38	C
3 - A595 Egremont Bypass (S)	4.3	28.20	0.82	D
4 - Main Street	2.7	25.29	0.74	D
	2029 Base			
1 - A595 Egremont Bypass (N)	2.2	7.44	0.69	A
2 - East Road	0.7	24.41	0.42	C
3 - A595 Egremont Bypass (S)	5.1	33.36	0.85	D
4 - Main Street	3.2	29.38	0.77	D
	2029 Base + Development			
1 - A595 Egremont Bypass (N)	2.5	8.31	0.72	A
2 - East Road	2.9	53.74	0.76	F
3 - A595 Egremont Bypass (S)	8.0	51.60	0.91	F
4 - Main Street	5.0	45.80	0.86	E
	2034 Base			
1 - A595 Egremont Bypass (N)	2.3	7.76	0.70	A
2 - East Road	0.8	26.90	0.45	D
3 - A595 Egremont Bypass (S)	6.1	39.07	0.88	E
4 - Main Street	3.6	32.89	0.80	D
	2034 Base + Development			
1 - A595 Egremont Bypass (N)	2.6	8.75	0.73	A
2 - East Road	3.5	66.27	0.81	F
3 - A595 Egremont Bypass (S)	10.0	62.67	0.94	F
4 - Main Street	6.0	53.61	0.89	F

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.

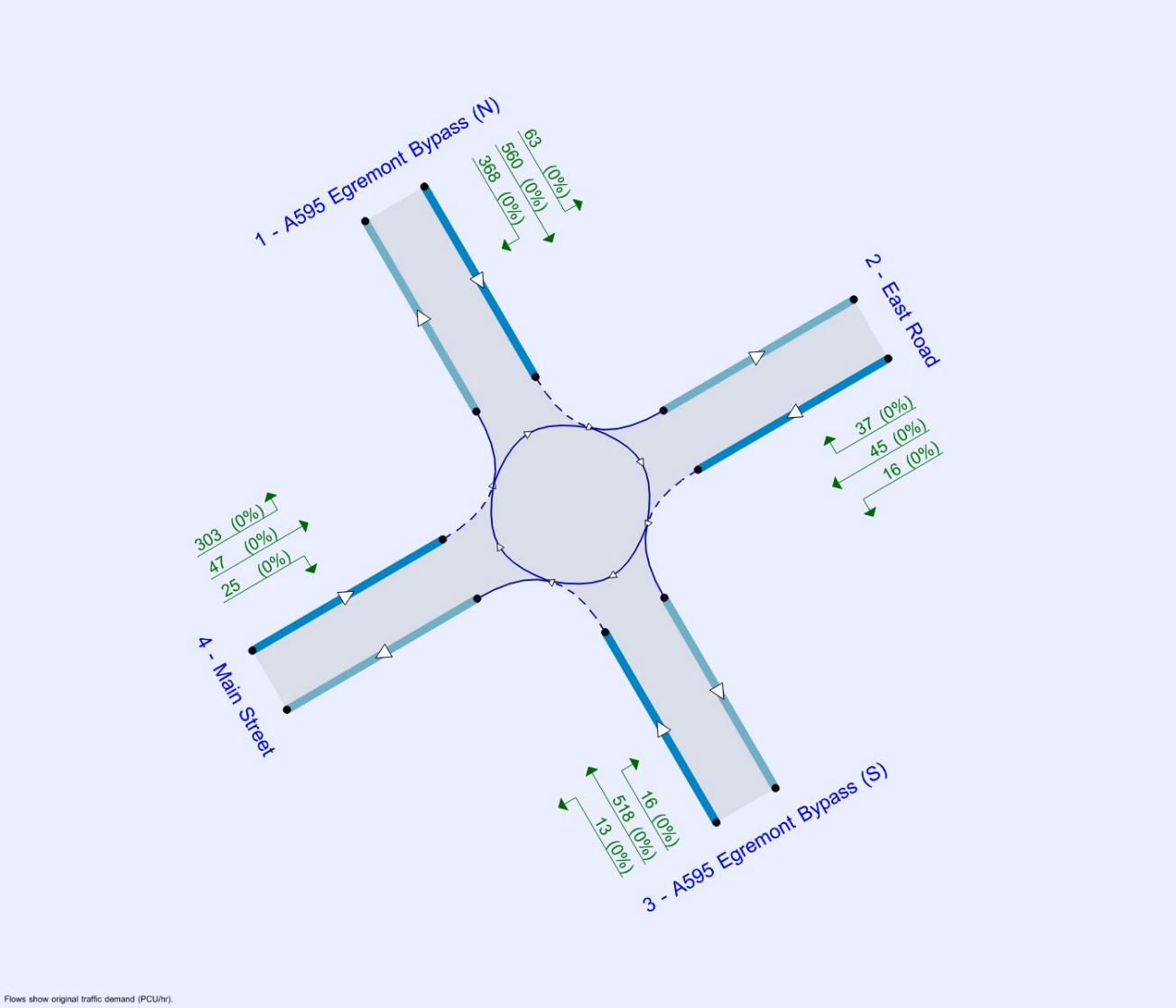
File summary

File Description

Title	Wyndham Place, Egremont
Location	Egremont
Site number	
Date	10/01/2024
Version	
Status	(new file)
Identifier	
Client	Aldi
Jobnumber	48019
Enumerator	AzureAD\Modellinglaptop
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	PM	ONE HOUR	16:15	17:45	15	✓
D2	2024 Uplifted Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2029 Base	PM	ONE HOUR	16:15	17:45	15	✓
D4	2029 Base + Development	PM	ONE HOUR	16:15	17:45	15	✓
D5	2034 Base	PM	ONE HOUR	16:15	17:45	15	✓
D6	2034 Base + Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

2023 Base , 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	untitled	Standard Roundabout		1, 2, 3, 4	16.27	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A595 Egremont Bypass (N)	
2	East Road	
3	A595 Egremont Bypass (S)	
4	Main Street	

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)	Exit only
1 - A595 Egremont Bypass (N)	6.92	9.14	12.8	19.2	43.7	45.0	
2 - East Road	4.30	5.77	21.0	66.5	43.7	43.0	
3 - A595 Egremont Bypass (S)	3.50	6.67	20.0	17.0	43.7	42.0	
4 - Main Street	4.30	6.24	30.0	121.1	43.7	35.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Percentage intercept adjustment (%)
1 - A595 Egremont Bypass (N)	Percentage	Validation	68.00
2 - East Road	Percentage	Validation	54.00
3 - A595 Egremont Bypass (S)	Percentage	Validation	61.00
4 - Main Street	Percentage	Validation	51.00

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A595 Egremont Bypass (N)	0.752	1627
2 - East Road	0.619	890
3 - A595 Egremont Bypass (S)	0.600	983
4 - Main Street	0.665	934

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	941	100.000
2 - East Road		ONE HOUR	✓	92	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	519	100.000
4 - Main Street		ONE HOUR	✓	357	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	60	532	349
	2 - East Road	35	0	15	42
	3 - A595 Egremont Bypass (S)	492	15	0	12
	4 - Main Street	288	45	24	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.67	6.90	2.0	A	863	1295
2 - East Road	0.37	20.83	0.6	C	84	127
3 - A595 Egremont Bypass (S)	0.81	26.81	4.1	D	476	714
4 - Main Street	0.73	24.46	2.6	C	328	491

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	708	177	63	1580	0.448	705	608	0.0	0.8	4.100	A
2 - East Road	69	17	678	471	0.147	69	90	0.0	0.2	8.935	A
3 - A595 Egremont Bypass (S)	391	98	319	792	0.493	387	428	0.0	1.0	8.803	A
4 - Main Street	269	67	404	666	0.404	266	302	0.0	0.7	8.953	A

16:30 - 16:45

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 - A595 Egremont Bypass (N)	846	211	75	1571	0.539	845	729	0.8	1.2	4.948	A
2 - East Road	83	21	812	388	0.213	82	108	0.2	0.3	11.766	B
3 - A595 Egremont Bypass (S)	467	117	382	754	0.619	464	512	1.0	1.6	12.297	B
4 - Main Street	321	80	485	612	0.524	319	362	0.7	1.1	12.229	B

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 - A595 Egremont Bypass (N)	1036	259	91	1559	0.665	1033	884	1.2	1.9	6.806	A
2 - East Road	101	25	993	276	0.367	100	131	0.3	0.6	20.343	C
3 - A595 Egremont Bypass (S)	571	143	467	703	0.812	563	626	1.6	3.8	24.124	C
4 - Main Street	393	98	588	544	0.723	388	442	1.1	2.4	22.363	C

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 - A595 Egremont Bypass (N)	1036	259	92	1558	0.665	1036	896	1.9	2.0	6.895	A
2 - East Road	101	25	996	274	0.370	101	132	0.6	0.6	20.827	C
3 - A595 Egremont Bypass (S)	571	143	469	702	0.814	570	629	3.8	4.1	26.812	D
4 - Main Street	393	98	596	538	0.730	392	444	2.4	2.6	24.459	C

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 - A595 Egremont Bypass (N)	846	211	77	1569	0.539	849	747	2.0	1.2	5.018	A
2 - East Road	83	21	817	385	0.215	84	109	0.6	0.3	12.005	B
3 - A595 Egremont Bypass (S)	467	117	385	753	0.620	476	516	4.1	1.7	13.434	B
4 - Main Street	321	80	497	604	0.531	327	364	2.6	1.2	13.224	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 - A595 Egremont Bypass (N)	708	177	64	1579	0.449	710	618	1.2	0.8	4.146	A
2 - East Road	69	17	683	468	0.148	70	91	0.3	0.2	9.049	A
3 - A595 Egremont Bypass (S)	391	98	322	791	0.494	394	431	1.7	1.0	9.129	A
4 - Main Street	269	67	411	661	0.407	271	304	1.2	0.7	9.263	A

2024 Uplifted Base , 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	untitled	Standard Roundabout		1, 2, 3, 4	16.88	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 Uplifted Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	948	100.000
2 - East Road		ONE HOUR	✓	93	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	523	100.000
4 - Main Street		ONE HOUR	✓	359	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	60	536	352
	2 - East Road	35	0	15	43
	3 - A595 Egremont Bypass (S)	496	15	0	12
	4 - Main Street	290	45	24	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.67	7.00	2.0	A	870	1305
2 - East Road	0.38	21.55	0.6	C	85	128
3 - A595 Egremont Bypass (S)	0.82	28.20	4.3	D	480	720
4 - Main Street	0.74	25.29	2.7	D	329	494

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	714	178	63	1580	0.452	710	612	0.0	0.8	4.123	A
2 - East Road	70	18	683	468	0.150	69	90	0.0	0.2	9.025	A
3 - A595 Egremont Bypass (S)	394	98	322	790	0.498	390	431	0.0	1.0	8.904	A
4 - Main Street	270	68	407	664	0.407	268	305	0.0	0.7	9.028	A

16:30 - 16:45

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 - A595 Egremont Bypass (N)	852	213	75	1571	0.543	851	734	0.8	1.2	4.990	A
2 - East Road	84	21	818	384	0.218	83	108	0.2	0.3	11.953	B
3 - A595 Egremont Bypass (S)	470	118	386	752	0.625	468	516	1.0	1.6	12.535	B
4 - Main Street	323	81	488	610	0.529	321	365	0.7	1.1	12.399	B

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 - A595 Egremont Bypass (N)	1044	261	91	1559	0.670	1041	890	1.2	2.0	6.902	A
2 - East Road	102	26	1001	271	0.378	101	131	0.3	0.6	21.013	C
3 - A595 Egremont Bypass (S)	576	144	471	701	0.822	566	631	1.6	4.0	25.120	D
4 - Main Street	395	99	591	541	0.730	390	446	1.1	2.5	22.973	C

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 - A595 Egremont Bypass (N)	1044	261	92	1558	0.670	1044	902	2.0	2.0	6.999	A
2 - East Road	102	26	1004	269	0.380	102	132	0.6	0.6	21.555	C
3 - A595 Egremont Bypass (S)	576	144	473	700	0.823	575	633	4.0	4.3	28.198	D
4 - Main Street	395	99	600	535	0.738	395	448	2.5	2.7	25.294	D

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 - A595 Egremont Bypass (N)	852	213	77	1569	0.543	855	753	2.0	1.2	5.064	A
2 - East Road	84	21	823	381	0.219	85	109	0.6	0.3	12.208	B
3 - A595 Egremont Bypass (S)	470	118	389	750	0.627	480	519	4.3	1.7	13.801	B
4 - Main Street	323	81	501	601	0.537	329	368	2.7	1.2	13.484	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 - A595 Egremont Bypass (N)	714	178	64	1579	0.452	715	623	1.2	0.8	4.172	A
2 - East Road	70	18	688	465	0.151	70	91	0.3	0.2	9.144	A
3 - A595 Egremont Bypass (S)	394	98	325	789	0.499	397	434	1.7	1.0	9.247	A
4 - Main Street	270	68	414	659	0.410	272	307	1.2	0.7	9.353	A

2029 Base, 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	untitled	Standard Roundabout		1, 2, 3, 4	19.41	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	973	100.000
2 - East Road		ONE HOUR	✓	96	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	536	100.000
4 - Main Street		ONE HOUR	✓	369	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	62	550	361
	2 - East Road	36	0	16	44
	3 - A595 Egremont Bypass (S)	508	16	0	12
	4 - Main Street	297	47	25	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.69	7.44	2.2	A	893	1339
2 - East Road	0.42	24.41	0.7	C	88	132
3 - A595 Egremont Bypass (S)	0.85	33.36	5.1	D	492	738
4 - Main Street	0.77	29.38	3.2	D	339	508

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	733	183	66	1578	0.464	729	627	0.0	0.9	4.224	A
2 - East Road	72	18	701	456	0.158	72	93	0.0	0.2	9.335	A
3 - A595 Egremont Bypass (S)	404	101	330	786	0.514	399	443	0.0	1.0	9.229	A
4 - Main Street	278	69	417	657	0.423	275	312	0.0	0.7	9.357	A

16:30 - 16:45

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 - A595 Egremont Bypass (N)	875	219	79	1568	0.558	873	752	0.9	1.2	5.168	A
2 - East Road	86	22	840	371	0.233	86	112	0.2	0.3	12.617	B
3 - A595 Egremont Bypass (S)	482	120	396	746	0.646	479	530	1.0	1.8	13.320	B
4 - Main Street	332	83	500	602	0.551	330	374	0.7	1.2	13.155	B

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 - A595 Egremont Bypass (N)	1071	268	95	1556	0.689	1068	909	1.2	2.2	7.321	A
2 - East Road	106	26	1027	255	0.414	104	136	0.3	0.7	23.614	C
3 - A595 Egremont Bypass (S)	590	148	483	694	0.851	578	648	1.8	4.7	28.614	D
4 - Main Street	406	102	604	532	0.763	400	457	1.2	2.9	25.864	D

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 - A595 Egremont Bypass (N)	1071	268	97	1555	0.689	1071	923	2.2	2.2	7.441	A
2 - East Road	106	26	1030	253	0.418	106	137	0.7	0.7	24.412	C
3 - A595 Egremont Bypass (S)	590	148	485	692	0.852	588	651	4.7	5.1	33.358	D
4 - Main Street	406	102	615	526	0.773	405	459	2.9	3.2	29.382	D

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 - A595 Egremont Bypass (N)	875	219	81	1566	0.558	878	775	2.2	1.3	5.260	A
2 - East Road	86	22	845	367	0.235	88	114	0.7	0.3	12.950	B
3 - A595 Egremont Bypass (S)	482	120	399	744	0.648	495	534	5.1	1.9	15.118	C
4 - Main Street	332	83	517	591	0.562	339	377	3.2	1.3	14.687	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 - A595 Egremont Bypass (N)	733	183	67	1577	0.464	734	638	1.3	0.9	4.280	A
2 - East Road	72	18	706	453	0.159	73	95	0.3	0.2	9.472	A
3 - A595 Egremont Bypass (S)	404	101	333	784	0.515	407	446	1.9	1.1	9.634	A
4 - Main Street	278	69	425	652	0.426	280	315	1.3	0.8	9.744	A

2029 Base + 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	untitled	Standard Roundabout		1, 2, 3, 4	30.43	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2029 Base + Development	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	986	100.000
2 - East Road		ONE HOUR	✓	187	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	544	100.000
4 - Main Street		ONE HOUR	✓	386	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	98	536	352
	2 - East Road	73	0	41	73
	3 - A595 Egremont Bypass (S)	495	37	0	12
	4 - Main Street	290	72	24	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.72	8.31	2.5	A	905	1357
2 - East Road	0.76	53.74	2.9	F	172	257
3 - A595 Egremont Bypass (S)	0.91	51.60	8.0	F	499	749
4 - Main Street	0.86	45.80	5.0	E	354	531

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	742	186	99	1553	0.478	739	639	0.0	0.9	4.403	A
2 - East Road	141	35	683	468	0.301	139	155	0.0	0.4	10.902	B
3 - A595 Egremont Bypass (S)	410	102	372	760	0.539	405	450	0.0	1.1	10.013	B
4 - Main Street	291	73	450	635	0.458	287	327	0.0	0.8	10.264	B

16:30 - 16:45

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 - A595 Egremont Bypass (N)	886	222	119	1538	0.576	885	766	0.9	1.3	5.496	A
2 - East Road	168	42	818	384	0.438	167	185	0.4	0.8	16.460	C
3 - A595 Egremont Bypass (S)	489	122	446	716	0.683	485	539	1.1	2.0	15.367	C
4 - Main Street	347	87	540	575	0.603	344	392	0.8	1.5	15.419	C

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 - A595 Egremont Bypass (N)	1086	271	142	1520	0.714	1081	917	1.3	2.4	8.122	A
2 - East Road	206	51	1000	272	0.757	199	224	0.8	2.6	45.333	E
3 - A595 Egremont Bypass (S)	599	150	541	659	0.909	580	657	2.0	6.7	38.882	E
4 - Main Street	425	106	645	505	0.841	414	476	1.5	4.2	35.701	E

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 - A595 Egremont Bypass (N)	1086	271	145	1518	0.715	1085	937	2.4	2.5	8.313	A
2 - East Road	206	51	1004	269	0.764	205	227	2.6	2.9	53.743	F
3 - A595 Egremont Bypass (S)	599	150	547	655	0.914	594	661	6.7	8.0	51.596	F
4 - Main Street	425	106	661	495	0.858	422	481	4.2	5.0	45.799	E

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 - A595 Egremont Bypass (N)	886	222	124	1534	0.578	891	805	2.5	1.4	5.637	A
2 - East Road	168	42	825	380	0.442	176	191	2.9	0.8	18.314	C
3 - A595 Egremont Bypass (S)	489	122	456	710	0.689	512	545	8.0	2.3	19.928	C
4 - Main Street	347	87	569	556	0.624	360	398	5.0	1.7	19.499	C

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 - A595 Egremont Bypass (N)	742	186	101	1551	0.479	744	653	1.4	0.9	4.471	A
2 - East Road	141	35	688	464	0.303	142	157	0.8	0.4	11.229	B
3 - A595 Egremont Bypass (S)	410	102	377	758	0.541	414	454	2.3	1.2	10.616	B
4 - Main Street	291	73	461	628	0.463	294	330	1.7	0.9	10.885	B

2034 Base, 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	untitled	Standard Roundabout		1, 2, 3, 4	21.89	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2034 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	991	100.000
2 - East Road		ONE HOUR	✓	98	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	547	100.000
4 - Main Street		ONE HOUR	✓	375	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	63	560	368
	2 - East Road	37	0	16	45
	3 - A595 Egremont Bypass (S)	518	16	0	13
	4 - Main Street	303	47	25	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.70	7.76	2.3	A	909	1364
2 - East Road	0.45	26.90	0.8	D	90	135
3 - A595 Egremont Bypass (S)	0.88	39.07	6.1	E	502	753
4 - Main Street	0.80	32.89	3.6	D	344	516

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	746	187	66	1578	0.473	743	639	0.0	0.9	4.291	A
2 - East Road	74	18	714	449	0.164	73	94	0.0	0.2	9.566	A
3 - A595 Egremont Bypass (S)	412	103	337	781	0.527	407	450	0.0	1.1	9.518	A
4 - Main Street	282	71	425	651	0.433	279	319	0.0	0.8	9.598	A

16:30 - 16:45

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 - A595 Egremont Bypass (N)	891	223	79	1568	0.568	889	766	0.9	1.3	5.290	A
2 - East Road	88	22	855	361	0.244	88	113	0.2	0.3	13.128	B
3 - A595 Egremont Bypass (S)	492	123	404	741	0.663	489	539	1.1	1.9	14.053	B
4 - Main Street	337	84	510	595	0.566	335	382	0.8	1.3	13.728	B

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 - A595 Egremont Bypass (N)	1091	273	95	1556	0.701	1087	924	1.3	2.3	7.616	A
2 - East Road	108	27	1045	244	0.443	106	137	0.3	0.8	25.835	D
3 - A595 Egremont Bypass (S)	602	151	493	688	0.875	588	659	1.9	5.5	32.159	D
4 - Main Street	413	103	614	526	0.785	405	466	1.3	3.2	28.145	D

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 - A595 Egremont Bypass (N)	1091	273	97	1555	0.702	1091	941	2.3	2.3	7.758	A
2 - East Road	108	27	1049	241	0.447	108	138	0.8	0.8	26.905	D
3 - A595 Egremont Bypass (S)	602	151	495	686	0.877	600	662	5.5	6.1	39.067	E
4 - Main Street	413	103	626	518	0.797	411	469	3.2	3.6	32.891	D

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 - A595 Egremont Bypass (N)	891	223	81	1566	0.569	895	794	2.3	1.3	5.392	A
2 - East Road	88	22	861	358	0.246	90	115	0.8	0.3	13.530	B
3 - A595 Egremont Bypass (S)	492	123	408	739	0.665	508	543	6.1	2.1	16.542	C
4 - Main Street	337	84	530	582	0.579	346	386	3.6	1.4	15.732	C

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 - A595 Egremont Bypass (N)	746	187	67	1577	0.473	748	652	1.3	0.9	4.350	A
2 - East Road	74	18	719	445	0.166	74	95	0.3	0.2	9.715	A
3 - A595 Egremont Bypass (S)	412	103	340	780	0.528	416	454	2.1	1.1	9.985	A
4 - Main Street	282	71	434	646	0.437	285	322	1.4	0.8	10.041	B

2034 Base + 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	untitled	Standard Roundabout		1, 2, 3, 4	36.04	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2034 Base + Development	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	1004	100.000
2 - East Road		ONE HOUR	✓	189	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	555	100.000
4 - Main Street		ONE HOUR	✓	393	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	99	546	359
	2 - East Road	74	0	41	74
	3 - A595 Egremont Bypass (S)	505	38	0	12
	4 - Main Street	295	73	25	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.73	8.75	2.6	A	921	1382
2 - East Road	0.81	66.27	3.5	F	173	260
3 - A595 Egremont Bypass (S)	0.94	62.67	10.0	F	509	764
4 - Main Street	0.89	53.61	6.0	F	361	541

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	756	189	101	1551	0.487	752	650	0.0	0.9	4.485	A
2 - East Road	142	36	697	459	0.310	141	157	0.0	0.4	11.230	B
3 - A595 Egremont Bypass (S)	418	104	379	756	0.553	413	458	0.0	1.2	10.351	B
4 - Main Street	296	74	459	629	0.470	292	333	0.0	0.9	10.589	B

16:30 - 16:45

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 - A595 Egremont Bypass (N)	903	226	121	1536	0.588	901	779	0.9	1.4	5.648	A
2 - East Road	170	42	834	374	0.454	168	188	0.4	0.8	17.371	C
3 - A595 Egremont Bypass (S)	499	125	454	711	0.702	495	549	1.2	2.2	16.330	C
4 - Main Street	353	88	550	569	0.621	350	399	0.9	1.6	16.299	C

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 - A595 Egremont Bypass (N)	1105	276	145	1518	0.728	1101	928	1.4	2.6	8.523	A
2 - East Road	208	52	1019	260	0.800	199	227	0.8	3.1	52.905	F
3 - A595 Egremont Bypass (S)	611	153	549	654	0.934	588	668	2.2	8.0	44.216	E
4 - Main Street	433	108	653	500	0.866	420	484	1.6	4.8	39.682	E

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 - A595 Egremont Bypass (N)	1105	276	148	1516	0.729	1105	951	2.6	2.6	8.753	A
2 - East Road	208	52	1023	257	0.809	206	230	3.1	3.5	66.273	F
3 - A595 Egremont Bypass (S)	611	153	557	650	0.941	603	673	8.0	10.0	62.667	F
4 - Main Street	433	108	671	488	0.886	428	489	4.8	6.0	53.609	F

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 - A595 Egremont Bypass (N)	903	226	128	1531	0.590	907	829	2.6	1.5	5.816	A
2 - East Road	170	42	841	370	0.459	181	194	3.5	0.9	20.002	C
3 - A595 Egremont Bypass (S)	499	125	466	704	0.709	528	556	10.0	2.6	23.380	C
4 - Main Street	353	88	588	544	0.650	369	407	6.0	2.0	22.322	C

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 - A595 Egremont Bypass (N)	756	189	104	1549	0.488	758	667	1.5	1.0	4.561	A
2 - East Road	142	36	702	456	0.312	144	159	0.9	0.5	11.603	B
3 - A595 Egremont Bypass (S)	418	104	384	753	0.555	423	462	2.6	1.3	11.069	B
4 - Main Street	296	74	470	622	0.476	300	337	2.0	0.9	11.333	B

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

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

Filename: East Road Roundabout SAT Scenario.j9
Path: C:\AMA\AMA\AMA - Documents\001-03 - Aldi - Dar\48019 - Wyndham Place, Egremont\D Models and Drawings\ARCADY
Report generation date: 16/01/2024 16:43:32

Summary of junction performance

	SAT				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base					
1 - A595 Egremont Bypass (N)	D1	1.0	5.70	0.50	A
2 - East Road		0.6	30.89	0.40	D
3 - A595 Egremont Bypass (S)		2.5	26.24	0.72	D
4 - Main Street		2.1	16.96	0.68	C
2024 Uplifted Base					
1 - A595 Egremont Bypass (N)	D2	1.0	5.75	0.50	A
2 - East Road		0.7	31.81	0.40	D
3 - A595 Egremont Bypass (S)		2.6	27.04	0.73	D
4 - Main Street		2.1	17.35	0.69	C
2029 Base					
1 - A595 Egremont Bypass (N)	D3	1.1	5.93	0.52	A
2 - East Road		0.8	35.94	0.44	E
3 - A595 Egremont Bypass (S)		3.0	30.86	0.76	D
4 - Main Street		2.4	19.20	0.72	C
2029 Base + Development					
1 - A595 Egremont Bypass (N)	D4	1.2	6.77	0.56	A
2 - East Road		16.7	269.87	1.11	F
3 - A595 Egremont Bypass (S)		5.3	54.04	0.87	F
4 - Main Street		3.8	29.03	0.81	D
2034 Base					
1 - A595 Egremont Bypass (N)	D5	1.1	6.09	0.53	A
2 - East Road		0.9	40.04	0.47	E
3 - A595 Egremont Bypass (S)		3.5	35.02	0.79	E
4 - Main Street		2.7	20.89	0.74	C
2034 Base + Development					
1 - A595 Egremont Bypass (N)	D6	1.3	6.94	0.57	A
2 - East Road		20.1	319.32	1.16	F
3 - A595 Egremont Bypass (S)		6.1	60.99	0.89	F
4 - Main Street		4.2	31.86	0.82	D

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.

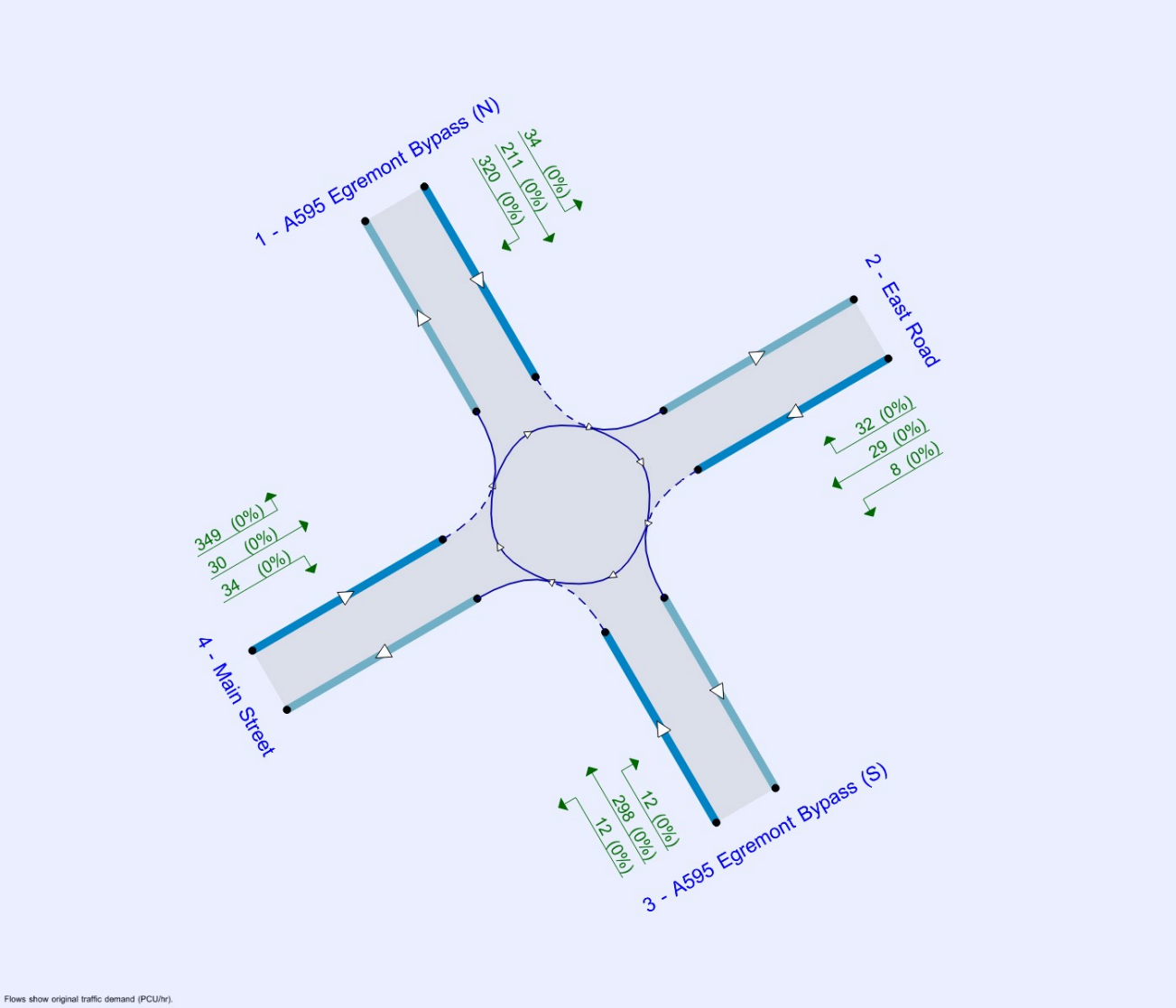
File summary

File Description

Title	Wyndham Place, Egremont
Location	Egremont
Site number	
Date	10/01/2024
Version	
Status	(new file)
Identifier	
Client	Aldi
Jobnumber	48019
Enumerator	AzureAD\Modellinglaptop
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	SAT	ONE HOUR	11:15	12:45	15	✓
D2	2024 Uplifted Base	SAT	ONE HOUR	11:15	12:45	15	✓
D3	2029 Base	SAT	ONE HOUR	11:15	12:45	15	✓
D4	2029 Base + Development	SAT	ONE HOUR	11:15	12:45	15	✓
D5	2034 Base	SAT	ONE HOUR	11:15	12:45	15	✓
D6	2034 Base + Development	SAT	ONE HOUR	11:15	12:45	15	✓

Analysis Set Details

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

2023 Base, SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	15.20	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A595 Egremont Bypass (N)	
2	East Road	
3	A595 Egremont Bypass (S)	
4	Main Street	

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)	Exit only
1 - A595 Egremont Bypass (N)	6.92	9.14	12.8	19.2	43.7	45.0	
2 - East Road	4.30	5.77	21.0	66.5	43.7	43.0	
3 - A595 Egremont Bypass (S)	3.50	6.67	20.0	17.0	43.7	42.0	
4 - Main Street	4.30	6.24	30.0	121.1	43.7	35.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Percentage intercept adjustment (%)
1 - A595 Egremont Bypass (N)	Percentage	Validation	55.00
2 - East Road	Percentage	Validation	35.00
3 - A595 Egremont Bypass (S)	Percentage	Validation	46.00
4 - Main Street	Percentage	Validation	50.00

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A595 Egremont Bypass (N)	0.752	1316
2 - East Road	0.619	577
3 - A595 Egremont Bypass (S)	0.600	742
4 - Main Street	0.665	916

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	565	100.000
2 - East Road		ONE HOUR	✓	69	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	322	100.000
4 - Main Street		ONE HOUR	✓	413	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	34	211	320
	2 - East Road	32	0	8	29
	3 - A595 Egremont Bypass (S)	298	12	0	12
	4 - Main Street	349	30	34	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.50	5.70	1.0	A	518	778
2 - East Road	0.40	30.89	0.6	D	63	95
3 - A595 Egremont Bypass (S)	0.72	26.24	2.5	D	295	443
4 - Main Street	0.68	16.96	2.1	C	379	568

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	425	106	57	1274	0.334	423	506	0.0	0.5	4.225	A
2 - East Road	52	13	423	315	0.165	51	57	0.0	0.2	13.596	B
3 - A595 Egremont Bypass (S)	242	61	285	571	0.425	240	189	0.0	0.7	10.781	B
4 - Main Street	311	78	254	747	0.416	308	270	0.0	0.7	8.154	A

11:30 - 11:45

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 - A595 Egremont Bypass (N)	508	127	68	1265	0.402	507	607	0.5	0.7	4.747	A
2 - East Road	62	16	507	263	0.236	62	68	0.2	0.3	17.807	C
3 - A595 Egremont Bypass (S)	289	72	342	537	0.539	288	227	0.7	1.1	14.367	B
4 - Main Street	371	93	306	713	0.521	370	324	0.7	1.1	10.453	B

11:45 - 12:00

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 - A595 Egremont Bypass (N)	622	156	83	1254	0.496	621	739	0.7	1.0	5.675	A
2 - East Road	76	19	621	193	0.393	75	83	0.3	0.6	30.089	D
3 - A595 Egremont Bypass (S)	355	89	418	491	0.722	350	278	1.1	2.4	24.590	C
4 - Main Street	455	114	371	669	0.680	451	396	1.1	2.0	16.212	C

12:00 - 12:15

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 - A595 Egremont Bypass (N)	622	156	84	1253	0.496	622	747	1.0	1.0	5.702	A
2 - East Road	76	19	622	192	0.395	76	84	0.6	0.6	30.892	D
3 - A595 Egremont Bypass (S)	355	89	419	490	0.723	354	279	2.4	2.5	26.241	D
4 - Main Street	455	114	376	666	0.683	454	397	2.0	2.1	16.964	C

12:15 - 12:30

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 - A595 Egremont Bypass (N)	508	127	69	1264	0.402	509	619	1.0	0.7	4.776	A
2 - East Road	62	16	509	262	0.237	63	69	0.6	0.3	18.233	C
3 - A595 Egremont Bypass (S)	289	72	344	535	0.541	295	228	2.5	1.2	15.256	C
4 - Main Street	371	93	313	708	0.524	375	326	2.1	1.1	10.938	B

12:30 - 12:45

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 - A595 Egremont Bypass (N)	425	106	58	1273	0.334	426	514	0.7	0.5	4.255	A
2 - East Road	52	13	426	313	0.166	52	57	0.3	0.2	13.816	B
3 - A595 Egremont Bypass (S)	242	61	288	569	0.426	244	191	1.2	0.8	11.144	B
4 - Main Street	311	78	259	743	0.418	313	272	1.1	0.7	8.384	A

2024 Uplifted Base, SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	15.55	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 Uplifted Base	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	570	100.000
2 - East Road		ONE HOUR	✓	69	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	324	100.000
4 - Main Street		ONE HOUR	✓	416	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	34	213	323
	2 - East Road	32	0	8	29
	3 - A595 Egremont Bypass (S)	300	12	0	12
	4 - Main Street	352	30	34	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.50	5.75	1.0	A	523	785
2 - East Road	0.40	31.81	0.7	D	63	95
3 - A595 Egremont Bypass (S)	0.73	27.04	2.6	D	297	446
4 - Main Street	0.69	17.35	2.1	C	382	573

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	429	107	57	1274	0.337	427	509	0.0	0.5	4.242	A
2 - East Road	52	13	427	313	0.166	51	57	0.0	0.2	13.718	B
3 - A595 Egremont Bypass (S)	244	61	287	569	0.428	241	191	0.0	0.7	10.871	B
4 - Main Street	313	78	256	746	0.420	310	272	0.0	0.7	8.213	A

11:30 - 11:45

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 - A595 Egremont Bypass (N)	512	128	68	1265	0.405	512	612	0.5	0.7	4.775	A
2 - East Road	62	16	512	261	0.238	62	68	0.2	0.3	18.057	C
3 - A595 Egremont Bypass (S)	291	73	344	535	0.544	290	229	0.7	1.2	14.559	B
4 - Main Street	374	93	307	712	0.526	372	327	0.7	1.1	10.569	B

11:45 - 12:00

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 - A595 Egremont Bypass (N)	628	157	83	1254	0.501	626	744	0.7	1.0	5.725	A
2 - East Road	76	19	626	190	0.400	75	83	0.3	0.6	30.937	D
3 - A595 Egremont Bypass (S)	357	89	421	489	0.729	352	280	1.2	2.4	25.233	D
4 - Main Street	458	115	373	668	0.686	454	399	1.1	2.1	16.535	C

12:00 - 12:15

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 - A595 Egremont Bypass (N)	628	157	84	1253	0.501	628	752	1.0	1.0	5.752	A
2 - East Road	76	19	628	189	0.402	76	84	0.6	0.7	31.814	D
3 - A595 Egremont Bypass (S)	357	89	423	488	0.731	356	281	2.4	2.6	27.038	D
4 - Main Street	458	115	378	664	0.689	458	401	2.1	2.1	17.345	C

12:15 - 12:30

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 - A595 Egremont Bypass (N)	512	128	69	1264	0.405	514	624	1.0	0.7	4.804	A
2 - East Road	62	16	514	259	0.239	63	69	0.7	0.3	18.506	C
3 - A595 Egremont Bypass (S)	291	73	347	533	0.546	297	230	2.6	1.2	15.515	C
4 - Main Street	374	93	315	707	0.529	378	329	2.1	1.2	11.084	B

12:30 - 12:45

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 - A595 Egremont Bypass (N)	429	107	58	1273	0.337	430	518	0.7	0.5	4.275	A
2 - East Road	52	13	430	311	0.167	52	57	0.3	0.2	13.942	B
3 - A595 Egremont Bypass (S)	244	61	290	568	0.430	246	192	1.2	0.8	11.248	B
4 - Main Street	313	78	261	742	0.422	315	275	1.2	0.7	8.452	A

2029 Base, SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	17.29	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029 Base	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	586	100.000
2 - East Road		ONE HOUR	✓	71	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	333	100.000
4 - Main Street		ONE HOUR	✓	428	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	35	219	332
	2 - East Road	33	0	8	30
	3 - A595 Egremont Bypass (S)	309	12	0	12
	4 - Main Street	362	31	35	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.52	5.93	1.1	A	538	807
2 - East Road	0.44	35.94	0.8	E	65	98
3 - A595 Egremont Bypass (S)	0.76	30.86	3.0	D	306	458
4 - Main Street	0.72	19.20	2.4	C	393	589

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	441	110	58	1272	0.347	439	524	0.0	0.5	4.310	A
2 - East Road	53	13	439	305	0.175	53	58	0.0	0.2	14.193	B
3 - A595 Egremont Bypass (S)	251	63	295	564	0.444	248	196	0.0	0.8	11.255	B
4 - Main Street	322	81	263	741	0.435	319	280	0.0	0.8	8.476	A

11:30 - 11:45

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 - A595 Egremont Bypass (N)	527	132	70	1264	0.417	526	630	0.5	0.7	4.875	A
2 - East Road	64	16	526	252	0.254	63	70	0.2	0.3	19.064	C
3 - A595 Egremont Bypass (S)	299	75	354	529	0.566	297	235	0.8	1.3	15.404	C
4 - Main Street	385	96	316	706	0.545	383	336	0.8	1.2	11.100	B

11:45 - 12:00

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 - A595 Egremont Bypass (N)	645	161	85	1252	0.515	644	765	0.7	1.0	5.903	A
2 - East Road	78	20	644	179	0.437	77	85	0.3	0.7	34.653	D
3 - A595 Egremont Bypass (S)	367	92	433	482	0.760	360	287	1.3	2.8	28.199	D
4 - Main Street	471	118	383	661	0.713	467	410	1.2	2.3	18.064	C

12:00 - 12:15

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 - A595 Egremont Bypass (N)	645	161	86	1252	0.515	645	774	1.0	1.1	5.935	A
2 - East Road	78	20	645	178	0.439	78	86	0.7	0.8	35.943	E
3 - A595 Egremont Bypass (S)	367	92	435	481	0.762	366	288	2.8	3.0	30.856	D
4 - Main Street	471	118	389	657	0.717	471	412	2.3	2.4	19.196	C

12:15 - 12:30

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 - A595 Egremont Bypass (N)	527	132	71	1263	0.417	528	644	1.1	0.7	4.909	A
2 - East Road	64	16	528	250	0.255	65	71	0.8	0.4	19.652	C
3 - A595 Egremont Bypass (S)	299	75	357	527	0.568	306	237	3.0	1.4	16.698	C
4 - Main Street	385	96	325	700	0.550	389	338	2.4	1.3	11.774	B

12:30 - 12:45

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 - A595 Egremont Bypass (N)	441	110	59	1272	0.347	442	534	0.7	0.5	4.343	A
2 - East Road	53	13	442	304	0.176	54	59	0.4	0.2	14.453	B
3 - A595 Egremont Bypass (S)	251	63	298	563	0.445	253	198	1.4	0.8	11.696	B
4 - Main Street	322	81	269	737	0.437	324	282	1.3	0.8	8.752	A

2029 Base + Development , SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	55.87	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2029 Base + Development	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	603	100.000
2 - East Road		ONE HOUR	✓	198	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	345	100.000
4 - Main Street		ONE HOUR	✓	452	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	78	209	316
	2 - East Road	88	0	35	75
	3 - A595 Egremont Bypass (S)	294	39	0	12
	4 - Main Street	345	73	34	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.56	6.77	1.2	A	553	830
2 - East Road	1.11	269.87	16.7	F	182	273
3 - A595 Egremont Bypass (S)	0.87	54.04	5.3	F	317	475
4 - Main Street	0.81	29.03	3.8	D	415	622

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	454	113	109	1234	0.368	452	540	0.0	0.6	4.586	A
2 - East Road	149	37	419	318	0.469	146	142	0.0	0.8	20.508	C
3 - A595 Egremont Bypass (S)	260	65	357	528	0.492	256	208	0.0	0.9	13.073	B
4 - Main Street	340	85	312	709	0.480	337	301	0.0	0.9	9.589	A

11:30 - 11:45

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 - A595 Egremont Bypass (N)	542	136	130	1218	0.445	541	648	0.6	0.8	5.311	A
2 - East Road	178	44	502	267	0.667	174	170	0.8	1.8	37.434	E
3 - A595 Egremont Bypass (S)	310	78	427	486	0.639	307	249	0.9	1.7	19.859	C
4 - Main Street	406	102	374	667	0.609	404	360	0.9	1.5	13.542	B

11:45 - 12:00

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 - A595 Egremont Bypass (N)	664	166	158	1198	0.554	662	770	0.8	1.2	6.702	A
2 - East Road	218	55	613	198	1.103	184	206	1.8	10.2	151.645	F
3 - A595 Egremont Bypass (S)	380	95	499	443	0.858	368	299	1.7	4.5	43.019	E
4 - Main Street	498	124	437	625	0.796	490	430	1.5	3.4	25.252	D

12:00 - 12:15

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 - A595 Egremont Bypass (N)	664	166	160	1196	0.555	664	785	1.2	1.2	6.767	A
2 - East Road	218	55	615	196	1.110	192	209	10.2	16.7	269.872	F
3 - A595 Egremont Bypass (S)	380	95	506	438	0.867	377	301	4.5	5.3	54.043	F
4 - Main Street	498	124	449	617	0.806	496	434	3.4	3.8	29.035	D

12:15 - 12:30

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 - A595 Egremont Bypass (N)	542	136	134	1215	0.446	544	695	1.2	0.8	5.378	A
2 - East Road	178	44	505	265	0.672	234	174	16.7	2.6	137.875	F
3 - A595 Egremont Bypass (S)	310	78	478	455	0.682	322	261	5.3	2.3	29.066	D
4 - Main Street	406	102	415	640	0.635	414	385	3.8	1.8	16.464	C

12:30 - 12:45

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 - A595 Egremont Bypass (N)	454	113	111	1232	0.368	455	557	0.8	0.6	4.634	A
2 - East Road	149	37	422	316	0.472	156	144	2.6	0.9	23.313	C
3 - A595 Egremont Bypass (S)	260	65	367	522	0.498	265	211	2.3	1.0	14.282	B
4 - Main Street	340	85	325	700	0.486	344	307	1.8	1.0	10.200	B

2034 Base, SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	19.07	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2034 Base	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	598	100.000
2 - East Road		ONE HOUR	✓	73	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	341	100.000
4 - Main Street		ONE HOUR	✓	437	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	36	223	339
	2 - East Road	34	0	8	31
	3 - A595 Egremont Bypass (S)	315	13	0	13
	4 - Main Street	369	32	36	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.53	6.09	1.1	A	549	823
2 - East Road	0.47	40.04	0.9	E	67	100
3 - A595 Egremont Bypass (S)	0.79	35.02	3.5	E	313	469
4 - Main Street	0.74	20.89	2.7	C	401	601

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	450	113	60	1271	0.354	448	534	0.0	0.5	4.364	A
2 - East Road	55	14	448	300	0.183	54	60	0.0	0.2	14.592	B
3 - A595 Egremont Bypass (S)	257	64	302	560	0.458	253	200	0.0	0.8	11.606	B
4 - Main Street	329	82	269	737	0.446	326	287	0.0	0.8	8.688	A

11:30 - 11:45

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 - A595 Egremont Bypass (N)	538	134	72	1262	0.426	537	642	0.5	0.7	4.961	A
2 - East Road	66	16	537	245	0.268	65	73	0.2	0.4	19.947	C
3 - A595 Egremont Bypass (S)	307	77	362	524	0.585	304	240	0.8	1.4	16.208	C
4 - Main Street	393	98	323	701	0.560	391	344	0.8	1.2	11.543	B

11:45 - 12:00

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 - A595 Egremont Bypass (N)	658	165	88	1250	0.527	657	778	0.7	1.1	6.056	A
2 - East Road	80	20	657	171	0.470	78	88	0.4	0.8	38.242	E
3 - A595 Egremont Bypass (S)	375	94	442	476	0.788	368	293	1.4	3.2	31.251	D
4 - Main Street	481	120	391	656	0.733	476	420	1.2	2.5	19.403	C

12:00 - 12:15

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 - A595 Egremont Bypass (N)	658	165	89	1249	0.527	658	789	1.1	1.1	6.092	A
2 - East Road	80	20	658	170	0.473	80	89	0.8	0.9	40.036	E
3 - A595 Egremont Bypass (S)	375	94	445	475	0.790	374	294	3.2	3.5	35.020	E
4 - Main Street	481	120	398	652	0.738	481	422	2.5	2.7	20.886	C

12:15 - 12:30

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 - A595 Egremont Bypass (N)	538	134	74	1261	0.426	539	658	1.1	0.8	5.000	A
2 - East Road	66	16	539	243	0.270	68	74	0.9	0.4	20.686	C
3 - A595 Egremont Bypass (S)	307	77	366	522	0.587	314	241	3.5	1.5	17.920	C
4 - Main Street	393	98	334	694	0.566	398	346	2.7	1.3	12.384	B

12:30 - 12:45

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 - A595 Egremont Bypass (N)	450	113	61	1270	0.354	451	545	0.8	0.6	4.401	A
2 - East Road	55	14	451	298	0.184	56	61	0.4	0.2	14.889	B
3 - A595 Egremont Bypass (S)	257	64	305	559	0.460	259	202	1.5	0.9	12.118	B
4 - Main Street	329	82	275	733	0.449	331	289	1.3	0.8	9.000	A

2034 Base + Development, SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	63.92	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2034 Base + Development	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	615	100.000
2 - East Road		ONE HOUR	✓	199	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	352	100.000
4 - Main Street		ONE HOUR	✓	460	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	79	213	323
	2 - East Road	89	0	35	75
	3 - A595 Egremont Bypass (S)	301	39	0	12
	4 - Main Street	353	73	34	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - East Road	3 - A595 Egremont Bypass (S)	4 - Main Street
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - East Road	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Main Street	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 - A595 Egremont Bypass (N)	0.57	6.94	1.3	A	564	847
2 - East Road	1.16	319.32	20.1	F	183	274
3 - A595 Egremont Bypass (S)	0.89	60.99	6.1	F	323	485
4 - Main Street	0.82	31.86	4.2	D	422	633

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	463	116	109	1235	0.375	461	552	0.0	0.6	4.638	A
2 - East Road	150	37	427	313	0.479	146	142	0.0	0.9	21.184	C
3 - A595 Egremont Bypass (S)	265	66	362	524	0.505	261	211	0.0	1.0	13.486	B
4 - Main Street	346	87	318	705	0.491	343	306	0.0	0.9	9.838	A

11:30 - 11:45

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 - A595 Egremont Bypass (N)	553	138	130	1218	0.454	552	661	0.6	0.8	5.395	A
2 - East Road	179	45	511	261	0.686	175	171	0.9	1.9	40.035	E
3 - A595 Egremont Bypass (S)	316	79	434	481	0.657	313	252	1.0	1.8	20.987	C
4 - Main Street	414	103	381	663	0.624	411	366	0.9	1.6	14.140	B

11:45 - 12:00

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 - A595 Egremont Bypass (N)	677	169	157	1198	0.565	675	782	0.8	1.3	6.863	A
2 - East Road	219	55	625	190	1.152	179	207	1.9	11.8	173.268	F
3 - A595 Egremont Bypass (S)	388	97	503	440	0.880	374	302	1.8	5.1	47.135	E
4 - Main Street	506	127	442	622	0.814	498	435	1.6	3.8	27.154	D

12:00 - 12:15

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 - A595 Egremont Bypass (N)	677	169	160	1196	0.566	677	799	1.3	1.3	6.935	A
2 - East Road	219	55	627	189	1.160	186	210	11.8	20.1	319.323	F
3 - A595 Egremont Bypass (S)	388	97	509	436	0.888	384	305	5.1	6.1	60.993	F
4 - Main Street	506	127	454	614	0.825	505	439	3.8	4.2	31.859	D

12:15 - 12:30

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 - A595 Egremont Bypass (N)	553	138	135	1215	0.455	555	716	1.3	0.8	5.470	A
2 - East Road	179	45	515	259	0.692	245	175	20.1	3.5	187.457	F
3 - A595 Egremont Bypass (S)	316	79	493	446	0.710	330	266	6.1	2.7	33.903	D
4 - Main Street	414	103	428	631	0.655	422	395	4.2	2.0	17.920	C

12:30 - 12:45

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 - A595 Egremont Bypass (N)	463	116	112	1232	0.376	464	572	0.8	0.6	4.692	A
2 - East Road	150	37	430	311	0.482	160	145	3.5	1.0	25.285	D
3 - A595 Egremont Bypass (S)	265	66	376	516	0.513	271	215	2.7	1.1	15.050	C
4 - Main Street	346	87	334	694	0.499	350	313	2.0	1.0	10.582	B

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

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

Filename: Northern Roundabout PM Scenario.j9
Path: C:\AMA\AMA\AMA - Documents\001-03 - Aldi - Dar\48019 - Wyndham Place, Egremont\D Models and Drawings\ARCADY
Report generation date: 16/01/2024 16:51:53

Summary of junction performance

	PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base					
1 - A595 Egremont Bypass (N)	D1	3.8	16.73	0.80	C
2 - A5086		3.7	41.77	0.81	E
3 - A595 Egremont Bypass (S)		2.0	8.05	0.67	A
4 - Howbank Road		2.0	35.16	0.68	E
2024 Uplifted Base					
1 - A595 Egremont Bypass (N)	D2	4.0	17.41	0.81	C
2 - A5086		4.0	44.89	0.82	E
3 - A595 Egremont Bypass (S)		2.1	8.21	0.68	A
4 - Howbank Road		2.1	37.63	0.70	E
2029 Base					
1 - A595 Egremont Bypass (N)	D3	4.6	20.04	0.83	C
2 - A5086		5.5	60.89	0.88	F
3 - A595 Egremont Bypass (S)		2.3	8.74	0.70	A
4 - Howbank Road		2.7	47.21	0.75	E
2029 Base + Development					
1 - A595 Egremont Bypass (N)	D4	4.9	21.22	0.84	C
2 - A5086		6.5	70.99	0.90	F
3 - A595 Egremont Bypass (S)		2.4	9.09	0.71	A
4 - Howbank Road		3.2	55.30	0.79	F
2034 Base					
1 - A595 Egremont Bypass (N)	D5	5.2	22.40	0.85	C
2 - A5086		7.2	77.66	0.92	F
3 - A595 Egremont Bypass (S)		2.4	9.19	0.71	A
4 - Howbank Road		3.4	59.13	0.80	F
2034 Base + Development					
1 - A595 Egremont Bypass (N)	D6	5.6	24.00	0.86	C
2 - A5086		8.8	91.46	0.95	F
3 - A595 Egremont Bypass (S)		2.6	9.59	0.72	A
4 - Howbank Road		4.2	71.21	0.84	F

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.

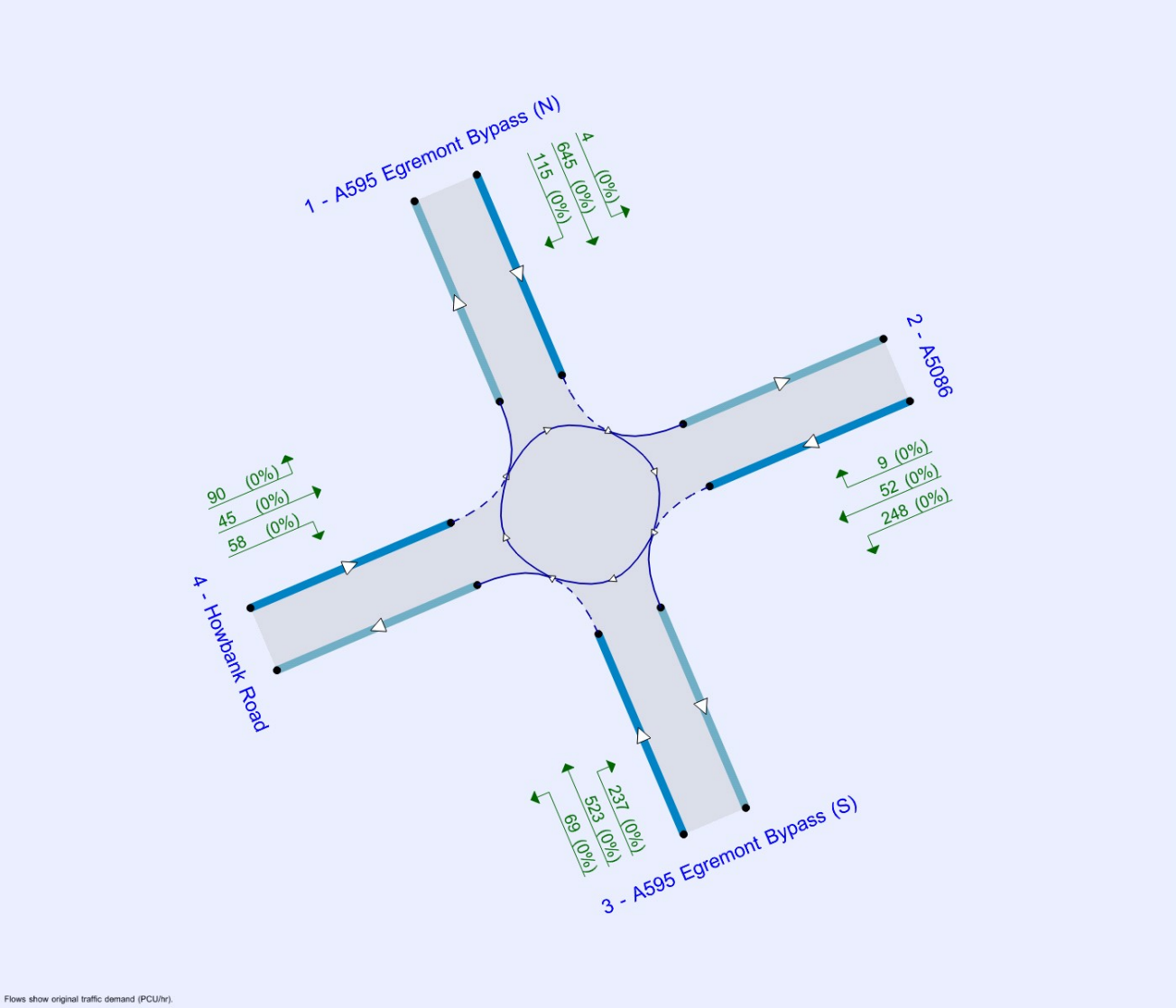
File summary

File Description

Title	Wyndham Place, Egremont
Location	Egremont
Site number	
Date	11/01/2024
Version	
Status	(new file)
Identifier	
Client	Aldi
Jobnumber	48019
Enumerator	AzureAD\Modellinglaptop
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	PM	ONE HOUR	16:15	17:45	15	✓
D2	2024 Uplifted Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2029 Base	PM	ONE HOUR	16:15	17:45	15	✓
D4	2029 Base + Development	PM	ONE HOUR	16:15	17:45	15	✓
D5	2034 Base	PM	ONE HOUR	16:15	17:45	15	✓
D6	2034 Base + Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

2023 Base, 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	untitled	Standard Roundabout		1, 2, 3, 4	18.69	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A595 Egremont Bypass (N)	
2	A5086	
3	A595 Egremont Bypass (S)	
4	Howbank Road	

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)	Exit only
1 - A595 Egremont Bypass (N)	3.52	8.27	22.9	20.9	47.9	39.0	
2 - A5086	4.14	8.13	24.5	42.5	47.9	30.0	
3 - A595 Egremont Bypass (S)	5.49	8.42	20.6	28.6	47.9	39.0	
4 - Howbank Road	5.84	8.37	10.1	55.4	47.9	34.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Percentage intercept adjustment (%)
1 - A595 Egremont Bypass (N)	Percentage	Validation	69.00
2 - A5086	Percentage	Validation	50.10
3 - A595 Egremont Bypass (S)	Percentage	Validation	67.00
4 - Howbank Road	Percentage	Validation	41.50

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A595 Egremont Bypass (N)	0.643	1294
2 - A5086	0.702	1053
3 - A595 Egremont Bypass (S)	0.715	1498
4 - Howbank Road	0.725	927

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	764	100.000
2 - A5086		ONE HOUR	✓	309	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	829	100.000
4 - Howbank Road		ONE HOUR	✓	193	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	4	645	115
	2 - A5086	9	0	248	52
	3 - A595 Egremont Bypass (S)	523	237	0	69
	4 - Howbank Road	90	45	58	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.80	16.73	3.8	C	701	1052
2 - A5086	0.81	41.77	3.7	E	284	425
3 - A595 Egremont Bypass (S)	0.67	8.05	2.0	A	761	1141
4 - Howbank Road	0.68	35.16	2.0	E	177	266

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	575	144	254	1131	0.509	571	465	0.0	1.0	6.383	A
2 - A5086	233	58	611	624	0.373	230	214	0.0	0.6	9.090	A
3 - A595 Egremont Bypass (S)	624	156	131	1404	0.445	621	710	0.0	0.8	4.581	A
4 - Howbank Road	145	36	576	509	0.285	144	176	0.0	0.4	9.805	A

16:30 - 16:45

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 - A595 Egremont Bypass (N)	687	172	305	1099	0.625	684	558	1.0	1.6	8.637	A
2 - A5086	278	69	733	539	0.515	276	256	0.6	1.0	13.600	B
3 - A595 Egremont Bypass (S)	745	186	158	1385	0.538	744	851	0.8	1.1	5.601	A
4 - Howbank Road	174	43	690	427	0.407	172	211	0.4	0.7	14.092	B

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 - A595 Egremont Bypass (N)	841	210	371	1056	0.796	833	680	1.6	3.6	15.611	C
2 - A5086	340	85	891	427	0.796	331	313	1.0	3.3	34.642	D
3 - A595 Egremont Bypass (S)	913	228	191	1361	0.671	909	1032	1.1	2.0	7.908	A
4 - Howbank Road	212	53	843	316	0.673	208	257	0.7	1.9	32.077	D

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 - A595 Egremont Bypass (N)	841	210	374	1054	0.798	841	684	3.6	3.8	16.728	C
2 - A5086	340	85	900	421	0.807	339	315	3.3	3.7	41.772	E
3 - A595 Egremont Bypass (S)	913	228	193	1359	0.671	913	1045	2.0	2.0	8.050	A
4 - Howbank Road	212	53	847	313	0.678	212	259	1.9	2.0	35.164	E

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 - A595 Egremont Bypass (N)	687	172	309	1096	0.627	695	564	3.8	1.7	9.159	A
2 - A5086	278	69	745	530	0.524	288	259	3.7	1.1	15.453	C
3 - A595 Egremont Bypass (S)	745	186	161	1382	0.539	749	872	2.0	1.2	5.709	A
4 - Howbank Road	174	43	695	423	0.410	179	215	2.0	0.7	14.996	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 - A595 Egremont Bypass (N)	575	144	257	1129	0.509	578	470	1.7	1.1	6.561	A
2 - A5086	233	58	619	619	0.376	235	216	1.1	0.6	9.424	A
3 - A595 Egremont Bypass (S)	624	156	133	1402	0.445	626	720	1.2	0.8	4.643	A
4 - Howbank Road	145	36	580	506	0.287	147	179	0.7	0.4	10.042	B

2024 Uplifted Base , 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	untitled	Standard Roundabout		1, 2, 3, 4	19.68	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 Uplifted Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	770	100.000
2 - A5086		ONE HOUR	✓	311	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	836	100.000
4 - Howbank Road		ONE HOUR	✓	195	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	4	650	116
	2 - A5086	9	0	250	52
	3 - A595 Egremont Bypass (S)	527	239	0	70
	4 - Howbank Road	91	46	58	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.81	17.41	4.0	C	707	1060
2 - A5086	0.82	44.89	4.0	E	285	428
3 - A595 Egremont Bypass (S)	0.68	8.21	2.1	A	767	1151
4 - Howbank Road	0.70	37.63	2.1	E	179	268

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	580	145	256	1130	0.513	576	469	0.0	1.0	6.450	A
2 - A5086	234	59	616	621	0.377	232	216	0.0	0.6	9.195	A
3 - A595 Egremont Bypass (S)	629	157	132	1403	0.449	626	715	0.0	0.8	4.615	A
4 - Howbank Road	147	37	580	506	0.290	145	178	0.0	0.4	9.932	A

16:30 - 16:45

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 - A595 Egremont Bypass (N)	692	173	307	1097	0.631	690	562	1.0	1.7	8.783	A
2 - A5086	280	70	738	535	0.522	278	259	0.6	1.1	13.883	B
3 - A595 Egremont Bypass (S)	752	188	158	1384	0.543	750	857	0.8	1.2	5.662	A
4 - Howbank Road	175	44	695	423	0.415	174	213	0.4	0.7	14.407	B

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 - A595 Egremont Bypass (N)	848	212	374	1054	0.804	839	685	1.7	3.8	16.149	C
2 - A5086	342	86	897	423	0.809	333	316	1.1	3.5	36.485	E
3 - A595 Egremont Bypass (S)	920	230	192	1361	0.677	917	1038	1.2	2.0	8.052	A
4 - Howbank Road	215	54	850	311	0.691	209	259	0.7	2.0	33.930	D

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 - A595 Egremont Bypass (N)	848	212	377	1052	0.806	847	690	3.8	4.0	17.411	C
2 - A5086	342	86	906	417	0.821	340	318	3.5	4.0	44.888	E
3 - A595 Egremont Bypass (S)	920	230	194	1359	0.677	920	1052	2.0	2.1	8.206	A
4 - Howbank Road	215	54	853	309	0.696	214	262	2.0	2.1	37.630	E

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 - A595 Egremont Bypass (N)	692	173	312	1094	0.633	701	569	4.0	1.8	9.359	A
2 - A5086	280	70	751	526	0.532	291	262	4.0	1.2	15.993	C
3 - A595 Egremont Bypass (S)	752	188	163	1381	0.544	755	879	2.1	1.2	5.779	A
4 - Howbank Road	175	44	700	419	0.418	181	217	2.1	0.7	15.428	C

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 - A595 Egremont Bypass (N)	580	145	259	1128	0.514	582	474	1.8	1.1	6.636	A
2 - A5086	234	59	624	615	0.380	236	218	1.2	0.6	9.549	A
3 - A595 Egremont Bypass (S)	629	157	134	1402	0.449	631	726	1.2	0.8	4.678	A
4 - Howbank Road	147	37	585	503	0.292	148	180	0.7	0.4	10.182	B

2029 Base , 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	untitled	Standard Roundabout		1, 2, 3, 4	24.09	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	790	100.000
2 - A5086		ONE HOUR	✓	319	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	857	100.000
4 - Howbank Road		ONE HOUR	✓	200	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	4	667	119
	2 - A5086	9	0	256	54
	3 - A595 Egremont Bypass (S)	540	245	0	72
	4 - Howbank Road	93	47	60	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.83	20.04	4.6	C	725	1087
2 - A5086	0.88	60.89	5.5	F	293	439
3 - A595 Egremont Bypass (S)	0.70	8.74	2.3	A	786	1180
4 - Howbank Road	0.75	47.21	2.7	E	184	275

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	595	149	263	1125	0.528	590	480	0.0	1.1	6.674	A
2 - A5086	240	60	632	610	0.394	238	221	0.0	0.6	9.616	A
3 - A595 Egremont Bypass (S)	645	161	136	1401	0.461	642	734	0.0	0.8	4.724	A
4 - Howbank Road	151	38	595	496	0.304	149	183	0.0	0.4	10.325	B

16:30 - 16:45

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 - A595 Egremont Bypass (N)	710	178	315	1092	0.650	707	575	1.1	1.8	9.293	A
2 - A5086	287	72	757	522	0.550	285	265	0.6	1.2	15.057	C
3 - A595 Egremont Bypass (S)	770	193	163	1381	0.558	769	879	0.8	1.2	5.862	A
4 - Howbank Road	180	45	712	411	0.438	178	219	0.4	0.8	15.424	C

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 - A595 Egremont Bypass (N)	870	217	383	1048	0.830	860	701	1.8	4.4	18.139	C
2 - A5086	351	88	919	408	0.861	338	323	1.2	4.5	45.001	E
3 - A595 Egremont Bypass (S)	944	236	196	1357	0.695	940	1061	1.2	2.2	8.539	A
4 - Howbank Road	220	55	870	296	0.744	213	266	0.8	2.5	40.654	E

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 - A595 Egremont Bypass (N)	870	217	387	1046	0.832	869	706	4.4	4.6	20.039	C
2 - A5086	351	88	930	400	0.878	347	326	4.5	5.5	60.891	F
3 - A595 Egremont Bypass (S)	944	236	199	1355	0.696	943	1078	2.2	2.3	8.735	A
4 - Howbank Road	220	55	874	293	0.751	219	269	2.5	2.7	47.210	E

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 - A595 Egremont Bypass (N)	710	178	322	1088	0.653	721	584	4.6	1.9	10.087	B
2 - A5086	287	72	774	510	0.562	303	269	5.5	1.3	18.697	C
3 - A595 Egremont Bypass (S)	770	193	169	1377	0.559	774	908	2.3	1.3	6.010	A
4 - Howbank Road	180	45	718	407	0.442	187	225	2.7	0.8	16.951	C

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 - A595 Egremont Bypass (N)	595	149	266	1123	0.529	598	485	1.9	1.1	6.891	A
2 - A5086	240	60	641	604	0.398	243	224	1.3	0.7	10.052	B
3 - A595 Egremont Bypass (S)	645	161	138	1399	0.461	647	745	1.3	0.9	4.796	A
4 - Howbank Road	151	38	599	492	0.306	152	186	0.8	0.4	10.624	B

2029 Base + 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	untitled	Standard Roundabout		1, 2, 3, 4	26.92	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2029 Base + Development	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	794	100.000
2 - A5086		ONE HOUR	✓	324	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	872	100.000
4 - Howbank Road		ONE HOUR	✓	204	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	4	671	119
	2 - A5086	9	0	261	54
	3 - A595 Egremont Bypass (S)	545	250	0	77
	4 - Howbank Road	93	47	64	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.84	21.22	4.9	C	729	1093
2 - A5086	0.90	70.99	6.5	F	297	446
3 - A595 Egremont Bypass (S)	0.71	9.09	2.4	A	800	1200
4 - Howbank Road	0.79	55.30	3.2	F	187	281

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	598	149	270	1121	0.533	593	484	0.0	1.1	6.765	A
2 - A5086	244	61	638	605	0.403	241	225	0.0	0.7	9.818	A
3 - A595 Egremont Bypass (S)	656	164	136	1401	0.469	653	743	0.0	0.9	4.794	A
4 - Howbank Road	154	38	602	490	0.313	152	187	0.0	0.4	10.575	B

16:30 - 16:45

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 - A595 Egremont Bypass (N)	714	178	323	1087	0.657	711	580	1.1	1.9	9.501	A
2 - A5086	291	73	764	517	0.564	289	270	0.7	1.2	15.652	C
3 - A595 Egremont Bypass (S)	784	196	163	1381	0.567	782	891	0.9	1.3	5.992	A
4 - Howbank Road	183	46	721	404	0.454	182	224	0.4	0.8	16.101	C

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 - A595 Egremont Bypass (N)	874	219	392	1043	0.838	863	706	1.9	4.6	18.986	C
2 - A5086	357	89	927	403	0.886	341	328	1.2	5.1	49.736	E
3 - A595 Egremont Bypass (S)	960	240	196	1358	0.707	956	1072	1.3	2.3	8.864	A
4 - Howbank Road	225	56	881	288	0.779	216	271	0.8	2.9	45.798	E

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 - A595 Egremont Bypass (N)	874	219	397	1040	0.841	873	711	4.6	4.9	21.224	C
2 - A5086	357	89	939	394	0.905	351	331	5.1	6.5	70.987	F
3 - A595 Egremont Bypass (S)	960	240	199	1355	0.708	960	1091	2.3	2.4	9.093	A
4 - Howbank Road	225	56	885	285	0.787	223	274	2.9	3.2	55.303	F

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 - A595 Egremont Bypass (N)	714	178	331	1082	0.660	725	589	4.9	2.0	10.412	B
2 - A5086	291	73	782	504	0.578	312	274	6.5	1.4	20.514	C
3 - A595 Egremont Bypass (S)	784	196	169	1377	0.569	788	925	2.4	1.3	6.158	A
4 - Howbank Road	183	46	727	400	0.459	193	230	3.2	0.9	18.111	C

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 - A595 Egremont Bypass (N)	598	149	273	1119	0.534	601	489	2.0	1.2	6.995	A
2 - A5086	244	61	647	599	0.407	247	228	1.4	0.7	10.302	B
3 - A595 Egremont Bypass (S)	656	164	138	1399	0.469	658	756	1.3	0.9	4.873	A
4 - Howbank Road	154	38	607	487	0.315	155	189	0.9	0.5	10.908	B

2034 Base , 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	untitled	Standard Roundabout		1, 2, 3, 4	28.70	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2034 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	804	100.000
2 - A5086		ONE HOUR	✓	325	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	874	100.000
4 - Howbank Road		ONE HOUR	✓	204	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	4	679	121
	2 - A5086	9	0	261	55
	3 - A595 Egremont Bypass (S)	551	250	0	73
	4 - Howbank Road	95	48	61	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.85	22.40	5.2	C	738	1107
2 - A5086	0.92	77.66	7.2	F	298	447
3 - A595 Egremont Bypass (S)	0.71	9.19	2.4	A	802	1203
4 - Howbank Road	0.80	59.13	3.4	F	187	281

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	605	151	268	1122	0.539	601	490	0.0	1.2	6.845	A
2 - A5086	245	61	643	602	0.407	242	226	0.0	0.7	9.935	A
3 - A595 Egremont Bypass (S)	658	164	138	1399	0.470	654	747	0.0	0.9	4.814	A
4 - Howbank Road	154	38	607	487	0.315	152	186	0.0	0.5	10.674	B

16:30 - 16:45

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 - A595 Egremont Bypass (N)	723	181	321	1088	0.664	720	587	1.2	1.9	9.695	A
2 - A5086	292	73	771	512	0.570	290	271	0.7	1.3	16.003	C
3 - A595 Egremont Bypass (S)	786	196	165	1379	0.570	784	895	0.9	1.3	6.029	A
4 - Howbank Road	183	46	727	400	0.458	182	223	0.5	0.8	16.380	C

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 - A595 Egremont Bypass (N)	885	221	389	1044	0.848	873	714	1.9	4.9	19.814	C
2 - A5086	358	89	934	398	0.900	341	329	1.3	5.5	52.689	F
3 - A595 Egremont Bypass (S)	962	241	199	1356	0.710	958	1076	1.3	2.4	8.957	A
4 - Howbank Road	225	56	887	284	0.792	216	269	0.8	3.0	48.133	E

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 - A595 Egremont Bypass (N)	885	221	394	1041	0.850	884	720	4.9	5.2	22.402	C
2 - A5086	358	89	946	389	0.920	351	332	5.5	7.2	77.658	F
3 - A595 Egremont Bypass (S)	962	241	202	1353	0.711	962	1095	2.4	2.4	9.193	A
4 - Howbank Road	225	56	891	281	0.800	223	273	3.0	3.4	59.127	F

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 - A595 Egremont Bypass (N)	723	181	329	1083	0.667	735	597	5.2	2.1	10.716	B
2 - A5086	292	73	790	499	0.586	315	275	7.2	1.5	21.781	C
3 - A595 Egremont Bypass (S)	786	196	173	1374	0.572	790	932	2.4	1.4	6.204	A
4 - Howbank Road	183	46	733	396	0.463	194	230	3.4	0.9	18.618	C

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 - A595 Egremont Bypass (N)	605	151	272	1120	0.540	609	495	2.1	1.2	7.093	A
2 - A5086	245	61	652	595	0.411	248	228	1.5	0.7	10.445	B
3 - A595 Egremont Bypass (S)	658	164	140	1397	0.471	660	760	1.4	0.9	4.894	A
4 - Howbank Road	154	38	612	484	0.318	155	189	0.9	0.5	11.020	B

2034 Base + 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	untitled	Standard Roundabout		1, 2, 3, 4	32.62	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2034 Base + Development	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	809	100.000
2 - A5086		ONE HOUR	✓	330	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	889	100.000
4 - Howbank Road		ONE HOUR	✓	208	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	4	684	121
	2 - A5086	9	0	266	55
	3 - A595 Egremont Bypass (S)	556	255	0	78
	4 - Howbank Road	95	48	65	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.86	24.00	5.6	C	742	1114
2 - A5086	0.95	91.46	8.8	F	303	454
3 - A595 Egremont Bypass (S)	0.72	9.59	2.6	A	816	1224
4 - Howbank Road	0.84	71.21	4.2	F	191	286

Main Results for each time segment

16:15 - 16:30

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 - A595 Egremont Bypass (N)	609	152	275	1118	0.545	604	494	0.0	1.2	6.951	A
2 - A5086	248	62	650	597	0.416	246	230	0.0	0.7	10.165	B
3 - A595 Egremont Bypass (S)	669	167	138	1399	0.478	666	757	0.0	0.9	4.886	A
4 - Howbank Road	157	39	614	482	0.325	155	190	0.0	0.5	10.945	B

16:30 - 16:45

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 - A595 Egremont Bypass (N)	727	182	329	1083	0.672	724	591	1.2	2.0	9.943	A
2 - A5086	297	74	778	507	0.585	294	275	0.7	1.4	16.719	C
3 - A595 Egremont Bypass (S)	799	200	165	1379	0.579	797	907	0.9	1.4	6.166	A
4 - Howbank Road	187	47	735	394	0.475	185	227	0.5	0.9	17.143	C

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 - A595 Egremont Bypass (N)	891	223	398	1039	0.858	878	718	2.0	5.2	20.890	C
2 - A5086	363	91	942	392	0.927	343	334	1.4	6.4	58.862	F
3 - A595 Egremont Bypass (S)	979	245	198	1356	0.722	974	1087	1.4	2.5	9.311	A
4 - Howbank Road	229	57	898	276	0.830	218	274	0.9	3.6	54.907	F

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 - A595 Egremont Bypass (N)	891	223	404	1035	0.861	889	725	5.2	5.6	23.999	C
2 - A5086	363	91	955	383	0.950	354	337	6.4	8.8	91.463	F
3 - A595 Egremont Bypass (S)	979	245	202	1354	0.723	979	1107	2.5	2.6	9.586	A
4 - Howbank Road	229	57	902	273	0.839	227	278	3.6	4.2	71.206	F

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 - A595 Egremont Bypass (N)	727	182	339	1077	0.676	741	603	5.6	2.2	11.147	B
2 - A5086	297	74	800	492	0.603	325	280	8.8	1.6	25.030	D
3 - A595 Egremont Bypass (S)	799	200	174	1373	0.582	804	951	2.6	1.4	6.370	A
4 - Howbank Road	187	47	742	389	0.481	200	236	4.2	1.0	20.225	C

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 - A595 Egremont Bypass (N)	609	152	279	1115	0.546	613	499	2.2	1.2	7.215	A
2 - A5086	248	62	659	590	0.421	252	232	1.6	0.7	10.739	B
3 - A595 Egremont Bypass (S)	669	167	141	1397	0.479	671	771	1.4	0.9	4.971	A
4 - Howbank Road	157	39	619	478	0.328	158	193	1.0	0.5	11.330	B

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

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

Filename: Northern Roundabout SAT Scenario.j9
Path: C:\AMA\AMA\AMA - Documents\001-03 - Aldi - Dar\48019 - Wyndham Place, Egremont\D Models and Drawings\ARCADY
Report generation date: 16/01/2024 16:56:50

Summary of junction performance

	SAT				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base					
1 - A595 Egremont Bypass (N)	D1	2.0	15.45	0.67	C
2 - A5086		2.0	33.53	0.68	D
3 - A595 Egremont Bypass (S)		2.0	9.92	0.68	A
4 - Howbank Road		2.0	39.07	0.68	E
2024 Uplifted Base					
1 - A595 Egremont Bypass (N)	D2	2.2	16.64	0.69	C
2 - A5086		2.4	40.03	0.72	E
3 - A595 Egremont Bypass (S)		2.1	10.11	0.68	B
4 - Howbank Road		2.8	51.44	0.76	F
2029 Base					
1 - A595 Egremont Bypass (N)	D3	2.3	17.18	0.70	C
2 - A5086		2.6	41.90	0.74	E
3 - A595 Egremont Bypass (S)		2.3	10.82	0.70	B
4 - Howbank Road		2.7	52.56	0.75	F
2029 Base + Development					
1 - A595 Egremont Bypass (N)	D4	2.5	18.47	0.72	C
2 - A5086		3.1	49.79	0.78	E
3 - A595 Egremont Bypass (S)		2.5	11.53	0.72	B
4 - Howbank Road		3.5	66.03	0.80	F
2034 Base					
1 - A595 Egremont Bypass (N)	D5	2.5	18.32	0.72	C
2 - A5086		2.9	47.00	0.76	E
3 - A595 Egremont Bypass (S)		2.5	11.40	0.72	B
4 - Howbank Road		3.4	64.68	0.80	F
2034 Base + Development					
1 - A595 Egremont Bypass (N)	D6	2.7	19.77	0.74	C
2 - A5086		3.6	57.25	0.81	F
3 - A595 Egremont Bypass (S)		2.7	12.20	0.74	B
4 - Howbank Road		4.5	84.53	0.86	F

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.

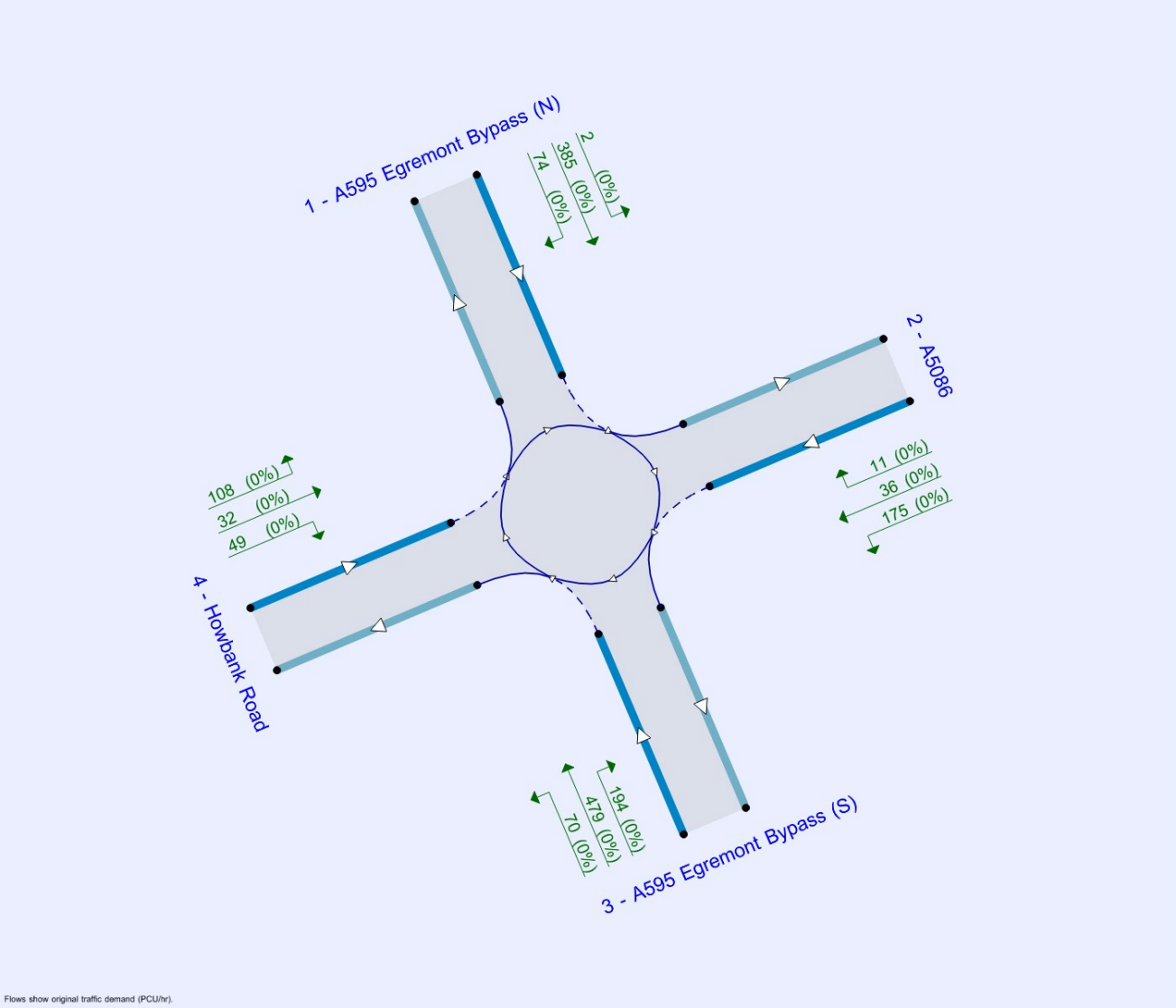
File summary

File Description

Title	Wyndham Place, Egremont
Location	Egremont
Site number	
Date	11/01/2024
Version	
Status	(new file)
Identifier	
Client	Aldi
Jobnumber	48019
Enumerator	AzureAD\Modellinglaptop
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	SAT	ONE HOUR	11:15	12:45	15	✓
D2	2024 Uplifted Base	SAT	ONE HOUR	11:15	12:45	15	✓
D3	2029 Base	SAT	ONE HOUR	11:15	12:45	15	✓
D4	2029 Base + Development	SAT	ONE HOUR	11:15	12:45	15	✓
D5	2034 Base	SAT	ONE HOUR	11:15	12:45	15	✓
D6	2034 Base + Development	SAT	ONE HOUR	11:15	12:45	15	✓

Analysis Set Details

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

2023 Base, SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	18.13	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A595 Egremont Bypass (N)	
2	A5086	
3	A595 Egremont Bypass (S)	
4	Howbank Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A595 Egremont Bypass (N)	3.52	8.27	22.9	20.9	47.9	39.0	
2 - A5086	4.14	8.13	24.5	42.5	47.9	30.0	
3 - A595 Egremont Bypass (S)	5.49	8.42	20.6	28.6	47.9	39.0	
4 - Howbank Road	5.84	8.37	10.1	55.4	47.9	34.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Percentage intercept adjustment (%)
1 - A595 Egremont Bypass (N)	Percentage	Validation	47.00
2 - A5086	Percentage	Validation	33.00
3 - A595 Egremont Bypass (S)	Percentage	Validation	54.00
4 - Howbank Road	Percentage	Validation	35.30

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A595 Egremont Bypass (N)	0.643	882
2 - A5086	0.702	694
3 - A595 Egremont Bypass (S)	0.715	1207
4 - Howbank Road	0.725	788

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	430	100.000
2 - A5086		ONE HOUR	✓	205	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	685	100.000
4 - Howbank Road		ONE HOUR	✓	173	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	2	358	70
	2 - A5086	11	0	160	34
	3 - A595 Egremont Bypass (S)	447	178	0	60
	4 - Howbank Road	102	30	41	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.67	15.45	2.0	C	395	592
2 - A5086	0.68	33.53	2.0	D	188	282
3 - A595 Egremont Bypass (S)	0.68	9.92	2.0	A	629	943
4 - Howbank Road	0.68	39.07	2.0	E	159	238

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	324	81	186	762	0.425	321	418	0.0	0.7	8.105	A
2 - A5086	154	39	350	448	0.344	152	157	0.0	0.5	12.086	B
3 - A595 Egremont Bypass (S)	516	129	86	1146	0.450	512	416	0.0	0.8	5.656	A
4 - Howbank Road	130	33	476	444	0.294	129	122	0.0	0.4	11.379	B

11:30 - 11:45

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 - A595 Egremont Bypass (N)	387	97	223	738	0.523	385	502	0.7	1.1	10.150	B
2 - A5086	184	46	420	399	0.462	183	188	0.5	0.8	16.576	C
3 - A595 Egremont Bypass (S)	616	154	103	1134	0.543	614	500	0.8	1.2	6.914	A
4 - Howbank Road	156	39	570	375	0.415	154	147	0.4	0.7	16.238	C

11:45 - 12:00

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 - A595 Egremont Bypass (N)	473	118	271	707	0.669	470	611	1.1	1.9	14.949	B
2 - A5086	226	56	512	334	0.675	221	230	0.8	1.9	30.794	D
3 - A595 Egremont Bypass (S)	754	189	125	1118	0.675	751	608	1.2	2.0	9.725	A
4 - Howbank Road	190	48	697	283	0.673	186	179	0.7	1.8	35.467	E

12:00 - 12:15

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 - A595 Egremont Bypass (N)	473	118	274	706	0.671	473	616	1.9	2.0	15.445	C
2 - A5086	226	56	516	331	0.681	225	231	1.9	2.0	33.529	D
3 - A595 Egremont Bypass (S)	754	189	126	1117	0.675	754	615	2.0	2.0	9.917	A
4 - Howbank Road	190	48	700	281	0.678	190	180	1.8	2.0	39.071	E

12:15 - 12:30

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 - A595 Egremont Bypass (N)	387	97	227	736	0.525	390	509	2.0	1.1	10.503	B
2 - A5086	184	46	426	395	0.467	189	191	2.0	0.9	17.839	C
3 - A595 Egremont Bypass (S)	616	154	105	1132	0.544	619	510	2.0	1.2	7.062	A
4 - Howbank Road	156	39	575	372	0.419	160	149	2.0	0.7	17.417	C

12:30 - 12:45

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 - A595 Egremont Bypass (N)	324	81	188	761	0.426	325	423	1.1	0.8	8.297	A
2 - A5086	154	39	355	445	0.347	156	159	0.9	0.5	12.526	B
3 - A595 Egremont Bypass (S)	516	129	87	1145	0.450	517	424	1.2	0.8	5.752	A
4 - Howbank Road	130	33	480	440	0.296	132	124	0.7	0.4	11.706	B

2024 Uplifted Base, SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	21.23	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 Uplifted Base	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	434	100.000
2 - A5086		ONE HOUR	✓	207	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	690	100.000
4 - Howbank Road		ONE HOUR	✓	191	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	2	361	71
	2 - A5086	11	0	161	35
	3 - A595 Egremont Bypass (S)	451	179	0	60
	4 - Howbank Road	103	30	58	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.69	16.64	2.2	C	398	597
2 - A5086	0.72	40.03	2.4	E	190	285
3 - A595 Egremont Bypass (S)	0.68	10.11	2.1	B	633	950
4 - Howbank Road	0.76	51.44	2.8	F	175	263

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	327	82	199	754	0.434	324	422	0.0	0.8	8.316	A
2 - A5086	156	39	365	437	0.356	154	158	0.0	0.5	12.601	B
3 - A595 Egremont Bypass (S)	519	130	87	1145	0.454	516	432	0.0	0.8	5.697	A
4 - Howbank Road	144	36	479	441	0.326	142	124	0.0	0.5	11.969	B

11:30 - 11:45

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 - A595 Egremont Bypass (N)	390	98	239	728	0.536	389	506	0.8	1.1	10.556	B
2 - A5086	186	47	439	386	0.482	185	189	0.5	0.9	17.765	C
3 - A595 Egremont Bypass (S)	620	155	105	1132	0.548	619	519	0.8	1.2	6.989	A
4 - Howbank Road	172	43	575	372	0.462	170	149	0.5	0.8	17.744	C

11:45 - 12:00

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 - A595 Egremont Bypass (N)	478	119	290	695	0.687	474	616	1.1	2.1	15.979	C
2 - A5086	228	57	534	319	0.714	223	230	0.9	2.2	35.561	E
3 - A595 Egremont Bypass (S)	760	190	127	1116	0.681	756	629	1.2	2.1	9.902	A
4 - Howbank Road	210	53	702	279	0.753	203	181	0.8	2.5	44.033	E

12:00 - 12:15

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 - A595 Egremont Bypass (N)	478	119	293	693	0.689	478	621	2.1	2.2	16.642	C
2 - A5086	228	57	539	315	0.723	227	232	2.2	2.4	40.029	E
3 - A595 Egremont Bypass (S)	760	190	129	1115	0.681	760	637	2.1	2.1	10.111	B
4 - Howbank Road	210	53	706	277	0.759	209	183	2.5	2.8	51.436	F

12:15 - 12:30

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 - A595 Egremont Bypass (N)	390	98	244	725	0.538	394	515	2.2	1.2	11.009	B
2 - A5086	186	47	447	380	0.489	192	192	2.4	1.0	19.618	C
3 - A595 Egremont Bypass (S)	620	155	107	1131	0.549	624	531	2.1	1.2	7.149	A
4 - Howbank Road	172	43	580	368	0.466	179	151	2.8	0.9	19.762	C

12:30 - 12:45

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 - A595 Egremont Bypass (N)	327	82	202	752	0.435	328	427	1.2	0.8	8.536	A
2 - A5086	156	39	371	433	0.360	158	160	1.0	0.6	13.136	B
3 - A595 Egremont Bypass (S)	519	130	89	1144	0.454	521	440	1.2	0.8	5.796	A
4 - Howbank Road	144	36	484	437	0.329	145	126	0.9	0.5	12.395	B

2029 Base , SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	21.78	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029 Base	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	446	100.000
2 - A5086		ONE HOUR	✓	213	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	709	100.000
4 - Howbank Road		ONE HOUR	✓	180	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	2	371	73
	2 - A5086	11	0	166	36
	3 - A595 Egremont Bypass (S)	463	184	0	62
	4 - Howbank Road	106	31	43	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.70	17.18	2.3	C	409	614
2 - A5086	0.74	41.90	2.6	E	195	293
3 - A595 Egremont Bypass (S)	0.70	10.82	2.3	B	651	976
4 - Howbank Road	0.75	52.56	2.7	F	165	248

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	336	84	193	758	0.443	333	433	0.0	0.8	8.404	A
2 - A5086	160	40	363	439	0.365	158	162	0.0	0.6	12.727	B
3 - A595 Egremont Bypass (S)	534	133	89	1143	0.467	530	432	0.0	0.9	5.841	A
4 - Howbank Road	136	34	492	432	0.314	134	128	0.0	0.4	12.012	B

11:30 - 11:45

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 - A595 Egremont Bypass (N)	401	100	231	733	0.547	399	519	0.8	1.2	10.726	B
2 - A5086	191	48	436	388	0.494	190	194	0.6	0.9	18.064	C
3 - A595 Egremont Bypass (S)	637	159	107	1130	0.564	636	519	0.9	1.3	7.252	A
4 - Howbank Road	162	40	590	361	0.449	160	153	0.4	0.8	17.852	C

11:45 - 12:00

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 - A595 Egremont Bypass (N)	491	123	280	702	0.700	487	632	1.2	2.2	16.454	C
2 - A5086	235	59	531	321	0.730	229	237	0.9	2.4	36.890	E
3 - A595 Egremont Bypass (S)	781	195	130	1114	0.701	777	629	1.3	2.3	10.546	B
4 - Howbank Road	198	50	721	266	0.745	192	186	0.8	2.4	44.901	E

12:00 - 12:15

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 - A595 Egremont Bypass (N)	491	123	284	700	0.702	491	638	2.2	2.3	17.181	C
2 - A5086	235	59	536	318	0.738	234	239	2.4	2.6	41.899	E
3 - A595 Egremont Bypass (S)	781	195	132	1113	0.701	780	637	2.3	2.3	10.815	B
4 - Howbank Road	198	50	724	263	0.752	197	188	2.4	2.7	52.563	F

12:15 - 12:30

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 - A595 Egremont Bypass (N)	401	100	236	730	0.549	405	529	2.3	1.2	11.212	B
2 - A5086	191	48	444	382	0.501	198	197	2.6	1.0	20.084	C
3 - A595 Egremont Bypass (S)	637	159	110	1129	0.565	641	531	2.3	1.3	7.446	A
4 - Howbank Road	162	40	595	357	0.454	169	156	2.7	0.9	19.881	C

12:30 - 12:45

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 - A595 Egremont Bypass (N)	336	84	195	756	0.444	338	439	1.2	0.8	8.633	A
2 - A5086	160	40	369	435	0.369	162	164	1.0	0.6	13.284	B
3 - A595 Egremont Bypass (S)	534	133	91	1142	0.467	536	440	1.3	0.9	5.954	A
4 - Howbank Road	136	34	497	428	0.317	137	129	0.9	0.5	12.433	B

2029 Base + Development , SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	25.17	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2029 Base + Development	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	452	100.000
2 - A5086		ONE HOUR	✓	219	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	728	100.000
4 - Howbank Road		ONE HOUR	✓	185	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	2	377	73
	2 - A5086	11	0	172	36
	3 - A595 Egremont Bypass (S)	469	191	0	68
	4 - Howbank Road	106	31	48	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.72	18.47	2.5	C	415	622
2 - A5086	0.78	49.79	3.1	E	201	301
3 - A595 Egremont Bypass (S)	0.72	11.53	2.5	B	668	1002
4 - Howbank Road	0.80	66.03	3.5	F	170	255

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	340	85	201	752	0.452	337	438	0.0	0.8	8.604	A
2 - A5086	165	41	371	433	0.381	162	167	0.0	0.6	13.178	B
3 - A595 Egremont Bypass (S)	548	137	89	1143	0.479	544	444	0.0	0.9	5.976	A
4 - Howbank Road	139	35	502	425	0.328	137	132	0.0	0.5	12.450	B

11:30 - 11:45

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 - A595 Egremont Bypass (N)	406	102	242	726	0.559	405	525	0.8	1.2	11.125	B
2 - A5086	197	49	446	381	0.517	195	201	0.6	1.0	19.202	C
3 - A595 Egremont Bypass (S)	654	164	107	1130	0.579	653	534	0.9	1.3	7.506	A
4 - Howbank Road	166	42	602	352	0.472	165	158	0.5	0.9	19.034	C

11:45 - 12:00

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 - A595 Egremont Bypass (N)	498	124	292	694	0.717	493	637	1.2	2.4	17.535	C
2 - A5086	241	60	542	314	0.769	234	244	1.0	2.8	42.081	E
3 - A595 Egremont Bypass (S)	802	200	130	1114	0.719	797	646	1.3	2.5	11.192	B
4 - Howbank Road	204	51	734	256	0.795	195	193	0.9	3.0	53.143	F

12:00 - 12:15

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 - A595 Egremont Bypass (N)	498	124	296	691	0.720	497	644	2.4	2.5	18.471	C
2 - A5086	241	60	547	309	0.779	240	246	2.8	3.1	49.794	E
3 - A595 Egremont Bypass (S)	802	200	132	1113	0.720	801	655	2.5	2.5	11.533	B
4 - Howbank Road	204	51	739	253	0.805	202	195	3.0	3.5	66.034	F

12:15 - 12:30

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 - A595 Egremont Bypass (N)	406	102	248	722	0.563	411	536	2.5	1.3	11.727	B
2 - A5086	197	49	455	374	0.526	205	204	3.1	1.2	22.091	C
3 - A595 Egremont Bypass (S)	654	164	110	1128	0.580	659	549	2.5	1.4	7.740	A
4 - Howbank Road	166	42	608	348	0.478	176	162	3.5	1.0	22.076	C

12:30 - 12:45

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 - A595 Egremont Bypass (N)	340	85	205	750	0.454	342	444	1.3	0.8	8.861	A
2 - A5086	165	41	377	429	0.384	167	169	1.2	0.6	13.850	B
3 - A595 Egremont Bypass (S)	548	137	91	1142	0.480	550	453	1.4	0.9	6.099	A
4 - Howbank Road	139	35	507	421	0.331	141	134	1.0	0.5	12.944	B

2034 Base, SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	24.45	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2034 Base	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	455	100.000
2 - A5086		ONE HOUR	✓	216	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	724	100.000
4 - Howbank Road		ONE HOUR	✓	183	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	2	379	74
	2 - A5086	11	0	169	36
	3 - A595 Egremont Bypass (S)	473	188	0	63
	4 - Howbank Road	108	32	43	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.72	18.32	2.5	C	418	626
2 - A5086	0.76	47.00	2.9	E	198	297
3 - A595 Egremont Bypass (S)	0.72	11.40	2.5	B	664	997
4 - Howbank Road	0.80	64.68	3.4	F	168	252

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	343	86	196	756	0.453	339	442	0.0	0.8	8.582	A
2 - A5086	163	41	370	434	0.375	160	166	0.0	0.6	13.038	B
3 - A595 Egremont Bypass (S)	545	136	90	1143	0.477	541	440	0.0	0.9	5.952	A
4 - Howbank Road	138	34	503	424	0.325	136	129	0.0	0.5	12.411	B

11:30 - 11:45

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 - A595 Egremont Bypass (N)	409	102	235	731	0.560	407	530	0.8	1.2	11.080	B
2 - A5086	194	49	444	382	0.508	193	199	0.6	1.0	18.823	C
3 - A595 Egremont Bypass (S)	651	163	108	1130	0.576	649	528	0.9	1.3	7.463	A
4 - Howbank Road	165	41	602	352	0.468	163	155	0.5	0.8	18.926	C

11:45 - 12:00

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 - A595 Egremont Bypass (N)	501	125	285	699	0.717	496	644	1.2	2.4	17.414	C
2 - A5086	238	59	540	315	0.755	231	242	1.0	2.6	40.294	E
3 - A595 Egremont Bypass (S)	797	199	131	1113	0.716	793	640	1.3	2.4	11.078	B
4 - Howbank Road	201	50	736	255	0.789	193	188	0.8	2.9	52.412	F

12:00 - 12:15

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 - A595 Egremont Bypass (N)	501	125	289	696	0.720	501	651	2.4	2.5	18.320	C
2 - A5086	238	59	545	311	0.765	237	244	2.6	2.9	46.996	E
3 - A595 Egremont Bypass (S)	797	199	133	1112	0.717	797	649	2.4	2.5	11.401	B
4 - Howbank Road	201	50	740	252	0.799	200	190	2.9	3.4	64.681	F

12:15 - 12:30

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 - A595 Egremont Bypass (N)	409	102	242	727	0.563	414	541	2.5	1.3	11.666	B
2 - A5086	194	49	453	376	0.517	201	202	2.9	1.1	21.390	C
3 - A595 Egremont Bypass (S)	651	163	111	1128	0.577	655	543	2.5	1.4	7.687	A
4 - Howbank Road	165	41	608	347	0.474	174	158	3.4	0.9	21.831	C

12:30 - 12:45

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 - A595 Egremont Bypass (N)	343	86	199	754	0.454	344	448	1.3	0.8	8.837	A
2 - A5086	163	41	376	430	0.378	165	168	1.1	0.6	13.665	B
3 - A595 Egremont Bypass (S)	545	136	92	1141	0.478	547	448	1.4	0.9	6.075	A
4 - Howbank Road	138	34	508	420	0.328	140	131	0.9	0.5	12.898	B

2034 Base + Development , SAT

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	untitled	Standard Roundabout		1, 2, 3, 4	29.02	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2034 Base + Development	SAT	ONE HOUR	11:15	12:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A595 Egremont Bypass (N)		ONE HOUR	✓	461	100.000
2 - A5086		ONE HOUR	✓	222	100.000
3 - A595 Egremont Bypass (S)		ONE HOUR	✓	743	100.000
4 - Howbank Road		ONE HOUR	✓	189	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	2	385	74
	2 - A5086	11	0	175	36
	3 - A595 Egremont Bypass (S)	479	194	0	70
	4 - Howbank Road	108	32	49	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A595 Egremont Bypass (N)	2 - A5086	3 - A595 Egremont Bypass (S)	4 - Howbank Road
From	1 - A595 Egremont Bypass (N)	0	0	0	0
	2 - A5086	0	0	0	0
	3 - A595 Egremont Bypass (S)	0	0	0	0
	4 - Howbank Road	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 - A595 Egremont Bypass (N)	0.74	19.77	2.7	C	423	635
2 - A5086	0.81	57.25	3.6	F	204	306
3 - A595 Egremont Bypass (S)	0.74	12.20	2.7	B	682	1023
4 - Howbank Road	0.86	84.53	4.5	F	173	260

Main Results for each time segment

11:15 - 11:30

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 - A595 Egremont Bypass (N)	347	87	205	750	0.463	344	446	0.0	0.8	8.791	A
2 - A5086	167	42	379	428	0.391	165	170	0.0	0.6	13.547	B
3 - A595 Egremont Bypass (S)	559	140	90	1143	0.490	556	453	0.0	0.9	6.093	A
4 - Howbank Road	142	36	511	418	0.341	140	134	0.0	0.5	12.887	B

11:30 - 11:45

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 - A595 Egremont Bypass (N)	414	104	246	724	0.573	413	535	0.8	1.3	11.501	B
2 - A5086	200	50	454	375	0.533	198	204	0.6	1.1	20.124	C
3 - A595 Egremont Bypass (S)	668	167	108	1130	0.591	666	544	0.9	1.4	7.730	A
4 - Howbank Road	170	42	613	344	0.494	168	161	0.5	0.9	20.277	C

11:45 - 12:00

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 - A595 Egremont Bypass (N)	508	127	297	691	0.734	502	648	1.3	2.6	18.594	C
2 - A5086	244	61	551	307	0.797	236	248	1.1	3.1	46.598	E
3 - A595 Egremont Bypass (S)	818	205	131	1114	0.735	813	657	1.4	2.6	11.787	B
4 - Howbank Road	208	52	748	246	0.846	197	196	0.9	3.7	63.163	F

12:00 - 12:15

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 - A595 Egremont Bypass (N)	508	127	301	688	0.738	507	656	2.6	2.7	19.765	C
2 - A5086	244	61	558	302	0.809	243	250	3.1	3.6	57.253	F
3 - A595 Egremont Bypass (S)	818	205	133	1112	0.736	818	668	2.6	2.7	12.198	B
4 - Howbank Road	208	52	753	243	0.857	205	198	3.7	4.5	84.531	F

12:15 - 12:30

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 - A595 Egremont Bypass (N)	414	104	254	718	0.577	420	549	2.7	1.4	12.250	B
2 - A5086	200	50	465	367	0.544	209	209	3.6	1.3	23.980	C
3 - A595 Egremont Bypass (S)	668	167	112	1127	0.593	673	563	2.7	1.5	8.005	A
4 - Howbank Road	170	42	620	339	0.501	184	165	4.5	1.1	24.980	C

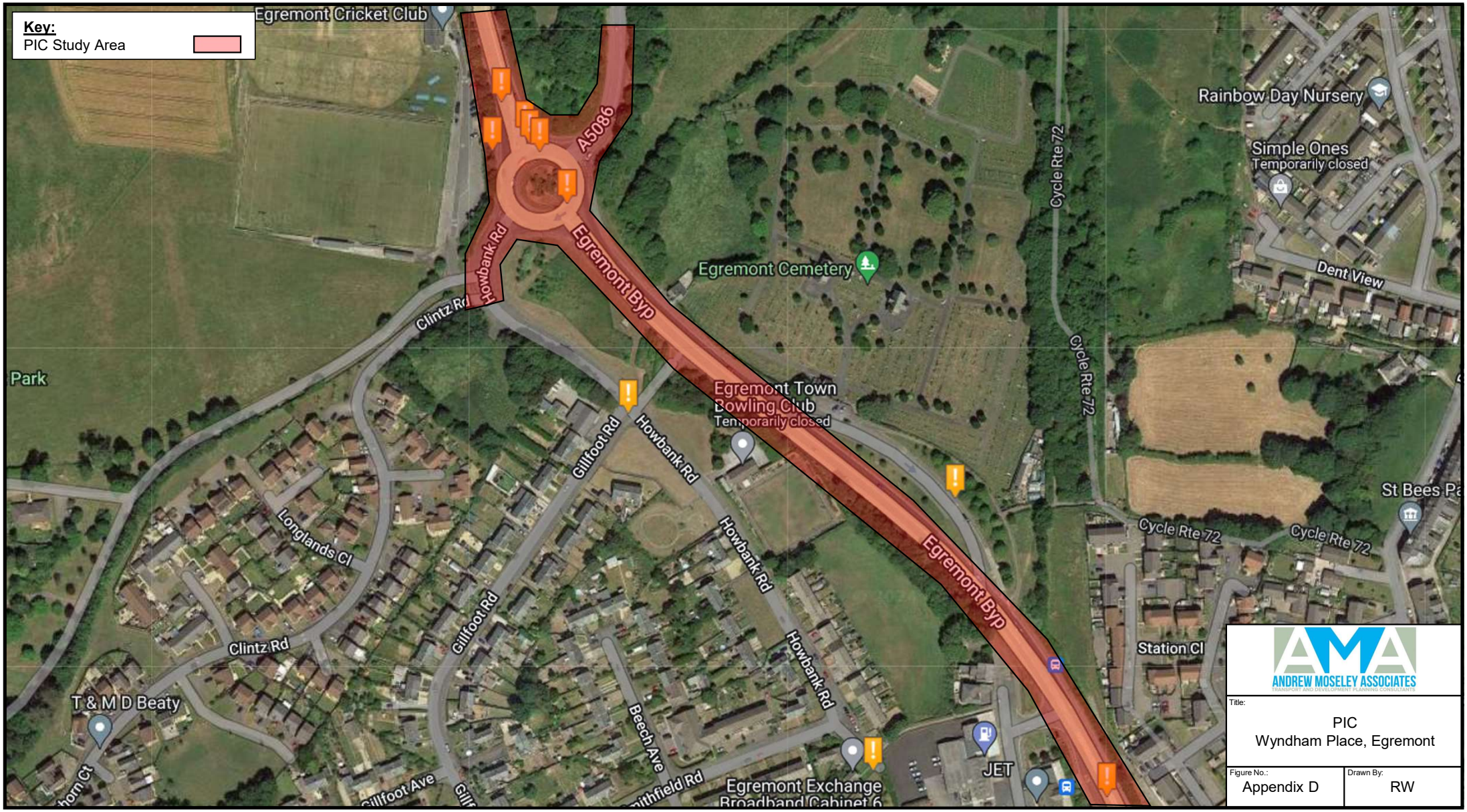
12:30 - 12:45

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 - A595 Egremont Bypass (N)	347	87	208	748	0.464	349	453	1.4	0.9	9.077	A
2 - A5086	167	42	385	423	0.395	169	173	1.3	0.7	14.304	B
3 - A595 Egremont Bypass (S)	559	140	92	1141	0.490	561	463	1.5	1.0	6.228	A
4 - Howbank Road	142	36	517	414	0.344	144	136	1.1	0.5	13.464	B

Appendix D

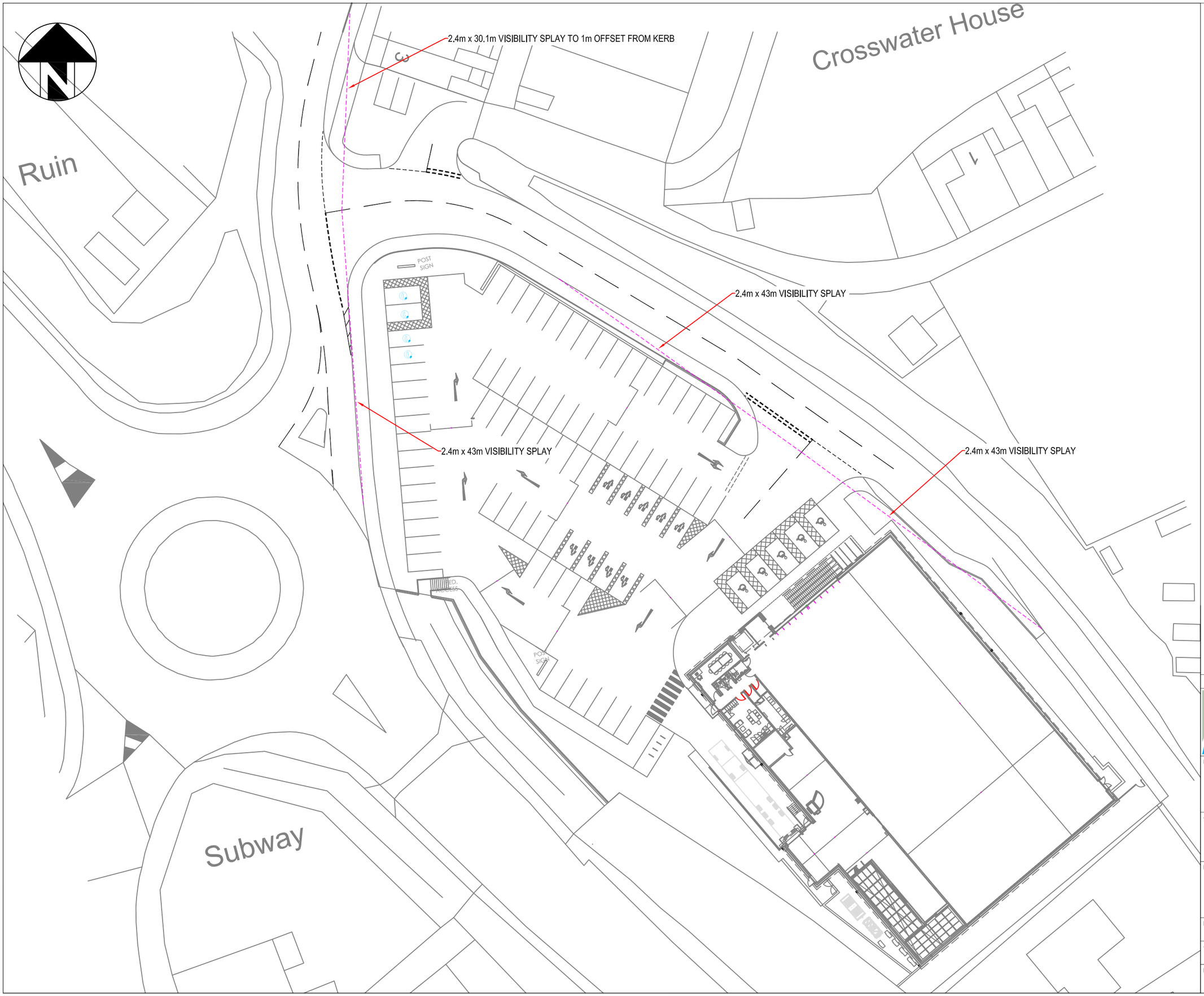
PIC DATA


Key:
PIC Study Area
Egremont Byp
Cycle Rte 72
Cycle Rte 72
St Bees Parish Council
Station Cl
River Ehen
East Rd
Bowness B
Howbank Rd
Howbank Rd
Gillfoot Rd
Beech Ave
Smithfield Rd
Egremont Exchange
Broadband Cabinet 6
Temporarily closed
JET
Egremont Rangers
Amateur Rugby...
Windrigg Cl
Gillfoot Rd
Green Moor Rd
Smithfield Rd
Long Croft
Copeland Ave
Green Moor Rd
Scallywagz Pet Services
North Rd
Cycle Rte 72
Wyndham Terrace
River Ehen
Calderwood House
Elite Mot Centre Cumbria
Wyndham Terrace
Egremont Library
Teza Spice Restaurant
& Takeaway
Indian
SASRA
West Lakes Academy
ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS
Title:
PIC
Wyndham Place, Egremont
Figure No.:
Appendix D
Drawn By:
RW


Key:
PIC Study Area
Egremont Cricket Club
A5086
Howbank Rd
Egremont Byp
Cycle Rte 72
Rainbow Day Nursery
Simple Ones
Temporarily closed
Egremont Cemetery
Dent View
Clintz Rd
Park
Egremont Town
Bowling Club
Temporarily closed
Gillfoot Rd
Howbank Rd
Longlands Cl
Clintz Rd
Gillfoot Rd
Howbank Rd
Howbank Rd
Egremont Byp
Cycle Rte 72
Cycle Rte 72
St Bees Pa
Station Cl
T & M D Beaty
Beech Ave
Gillfoot Ave
Egremont Exchange
Broadband Cabinet 6
JET
ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS
Title:
PIC
Wyndham Place, Egremont
Figure No.:
Appendix D
Drawn By:
RW

Appendix E

SITE ACCESS ARRANGEMENT & VISIBILITY SPLAYS



P01	Preliminary Issue	00.00.00	XX

ANDREW MOSELEY ASSOCIATES

Transport & Infrastructure Consultants

St Paul's Street
Second Floor
Leeds
LS1 2JG
www.amatp.co.uk

Project:

WYNDHAM PLACE
EGREMONT

Client:

ALDI

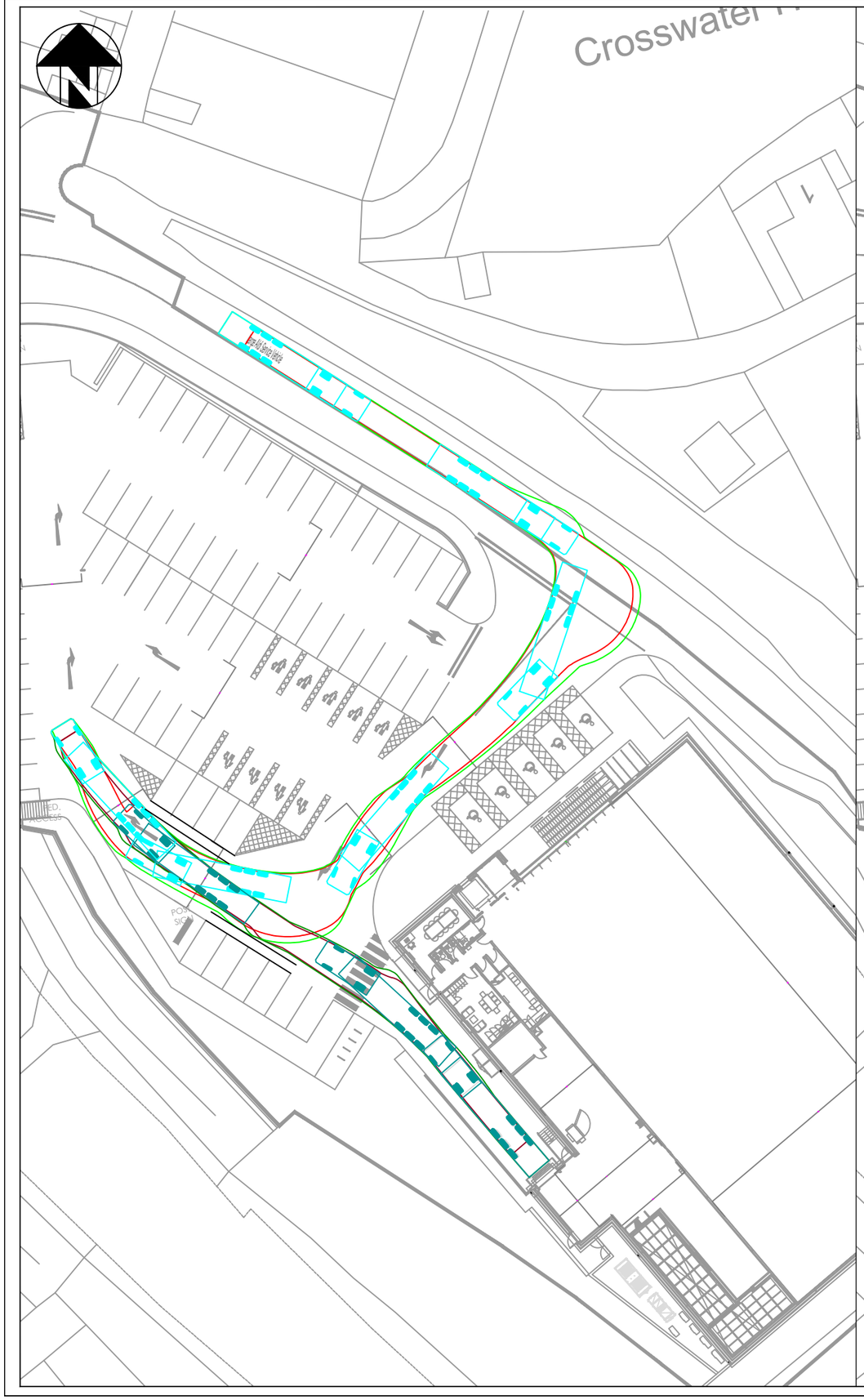
Drawing:

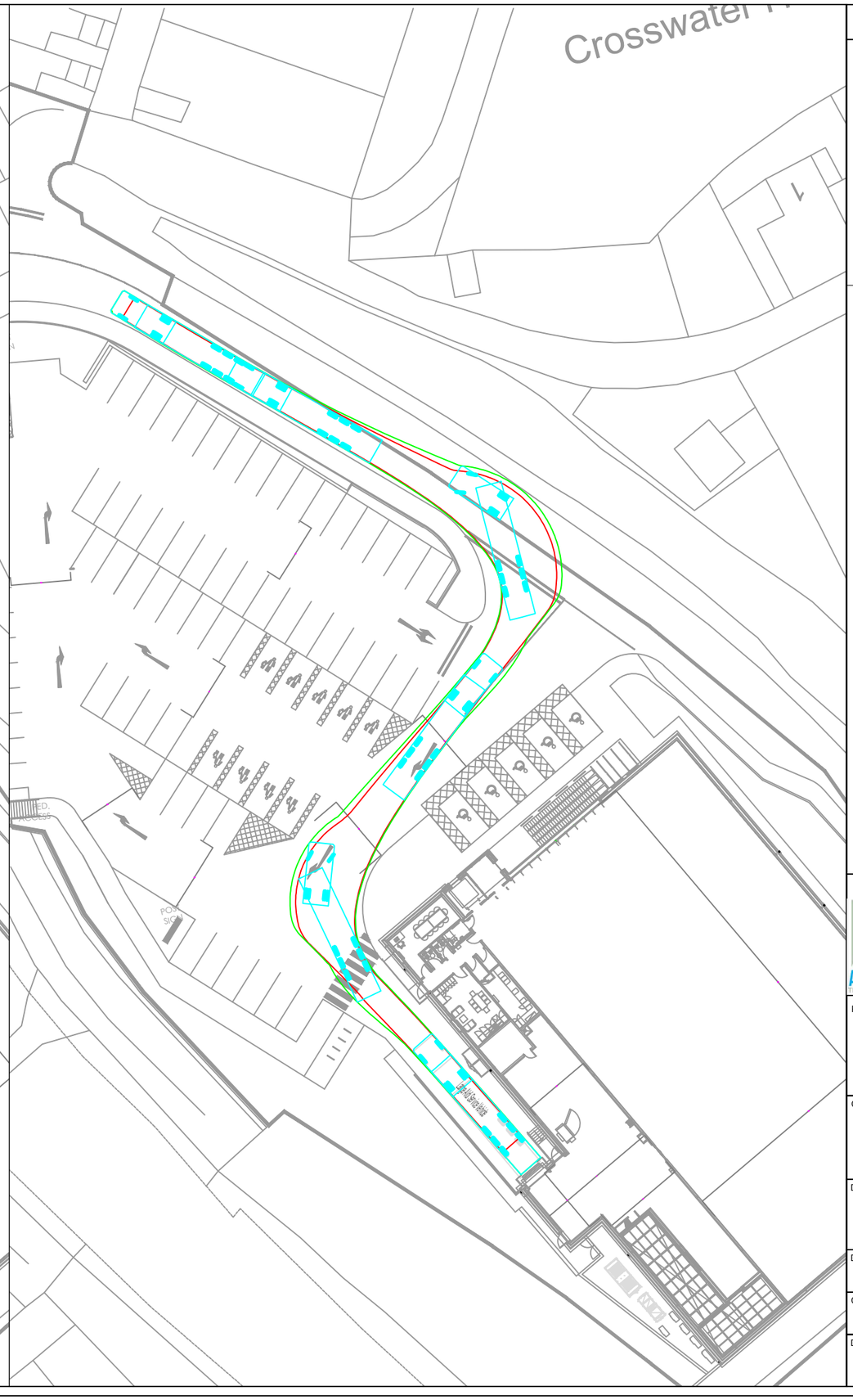
PROPOSED SITE ACCESS
VISIBILITY SPLAYS

Drawn By: RID	Date: 26.01.2024	
Checked: AMM	Scale: 1:500	Paper: A3
Drawing No. AMA-48019-SK004		Rev. P01

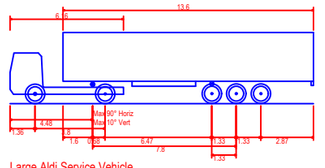
Appendix F

SWEPT PATH ANALYSIS





NOTES



Large Aldi Service Vehicle	
Overall Length	16.480m
Overall Width	2.600m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.600m

P1	Preliminary - Initial Issue	-	-

ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

Project:
WYNDHAM PLACE, EGREMONT

Client:
ALDI

Drawing:
LARGE ALDI SERVICE VEHICLE SWEPT PATH ANALYSIS

Drawn By:	Date:	
RW	16/01/24	
Checked:	Scale:	A3
AMM	1:500	
Drawing No.		Rev.
AMA/48019/ATR/001		A

Appendix G

TRICS

Calculation Reference: AUDIT-710001-211109-1132

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : C - DISCOUNT FOOD STORES
TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST		
	SM	SOMERSET	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
11	SCOTLAND		
	HI	HIGHLAND	1 days
16	ULSTER (REPUBLIC OF IRELAND)		
	MG	MONAGHAN	1 days
17	ULSTER (NORTHERN IRELAND)		
	AN	ANTRIM	1 days

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

Primary Filtering selection:

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

Parameter: Retail floor area
Actual Range: 913 to 1407 (units: sqm)
Range Selected by User: 600 to 1900 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 28/11/20

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	1 days
Wednesday	2 days
Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	2
Edge of Town	3

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:

Industrial Zone	1
Development Zone	1
Retail Zone	2
No Sub Category	1

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.

Secondary Filtering selection:

Use Class:

E(a)	5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	3 days

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

Population within 5 miles:

5,001 to 25,000	3 days
25,001 to 50,000	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	3 days
1.6 to 2.0	1 days

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

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	5 days

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:

Not Known	1 days
No	4 days

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

PTAL Rating:

No PTAL Present	5 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	AN-01-C-02	LIDL		ANTRIM
	BELFAST ROAD			
	CARRICKFERGUS			
	Edge of Town			
	Development Zone			
	Total Retail floor area:		1198 sqm	
	Survey date: WEDNESDAY		*12/10/16*	*Survey Type: MANUAL*
2	CA-01-C-01	LIDL		CAMBRIDGESHIRE
	CROMWELL ROAD			
	WISBECH			
	Edge of Town			
	Retail Zone			
	Total Retail floor area:		913 sqm	
	Survey date: FRIDAY		*21/10/16*	*Survey Type: MANUAL*
3	HI-01-C-02	LIDL		HIGHLAND
	CAMANACHD CRESCENT			
	FORT WILLIAM			
	Edge of Town Centre			
	Retail Zone			
	Total Retail floor area:		1075 sqm	
	Survey date: TUESDAY		*17/06/14*	*Survey Type: MANUAL*
4	MG-01-C-01	LIDL		MONAGHAN
	NORTH ROAD			
	MONAGHAN			
	Edge of Town Centre			
	Industrial Zone			
	Total Retail floor area:		1400 sqm	
	Survey date: WEDNESDAY		*16/11/16*	*Survey Type: MANUAL*
5	SM-01-C-01	LIDL		SOMERSET
	SEAWARD WAY			
	MINEHEAD			
	Edge of Town			
	No Sub Category			
	Total Retail floor area:		1407 sqm	
	Survey date: THURSDAY		*22/06/17*	*Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	1199	0.617	5	1199	0.300	5	1199	0.917
08:00 - 09:00	5	1199	3.337	5	1199	1.986	5	1199	5.323
09:00 - 10:00	5	1199	4.455	5	1199	3.421	5	1199	7.876
10:00 - 11:00	5	1199	4.989	5	1199	4.105	5	1199	9.094
11:00 - 12:00	5	1199	5.907	5	1199	5.874	5	1199	11.781
12:00 - 13:00	5	1199	5.940	5	1199	5.590	5	1199	11.530
13:00 - 14:00	5	1199	5.740	5	1199	5.473	5	1199	11.213
14:00 - 15:00	5	1199	6.074	5	1199	6.007	5	1199	12.081
15:00 - 16:00	5	1199	6.307	5	1199	6.941	5	1199	13.248
16:00 - 17:00	5	1199	5.957	5	1199	6.574	5	1199	12.531
17:00 - 18:00	5	1199	5.790	5	1199	6.324	5	1199	12.114
18:00 - 19:00	5	1199	4.655	5	1199	5.673	5	1199	10.328
19:00 - 20:00	5	1199	3.371	5	1199	3.854	5	1199	7.225
20:00 - 21:00	4	1230	1.932	4	1230	2.826	4	1230	4.758
21:00 - 22:00	4	1230	0.549	4	1230	0.671	4	1230	1.220
22:00 - 23:00	2	1160	0.172	2	1160	0.388	2	1160	0.560
23:00 - 24:00									
Total Rates:			65.792			66.007			131.799

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

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

Parameter summary

Trip rate parameter range selected:	913 - 1407 (units: sqm)
Survey date date range:	01/01/13 - 28/11/20
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
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.

Calculation Reference: AUDIT-710001-211109-1156

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : C - DISCOUNT FOOD STORES
TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST		
	SM	SOMERSET	1 days
05	EAST MIDLANDS		
	NT	NOTTINGHAMSHIRE	1 days
10	WALES		
	MM	MONMOUTHSHIRE	1 days
14	LEINSTER		
	LU	LOUTH	1 days

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

Primary Filtering selection:

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

Parameter: Retail floor area
Actual Range: 1140 to 1424 (units: sqm)
Range Selected by User: 600 to 1900 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 28/11/20

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:

Saturday	4 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	3

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:

Industrial Zone	2
No Sub Category	2

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.

Secondary Filtering selection:

Use Class:

E(a)	4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000	4 days

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 days
25,001 to 50,000	2 days
50,001 to 75,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	2 days
1.6 to 2.0	1 days

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

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	4 days

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:

Not Known	1 days
Yes	1 days
No	2 days

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

PTAL Rating:

No PTAL Present	4 days

This data displays the number of selected surveys with PTAL Ratings.

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

LIST OF SITES relevant to selection parameters

1	LU-01-C-01	ALDI		LOUTH
	NEWRY ROAD			
	DUNDALK			
	Edge of Town			
	Industrial Zone			
	Total Retail floor area:		1278 sqm	
	Survey date: SATURDAY		*07/11/20*	*Survey Type: MANUAL*
2	MM-01-C-01	LIDL		MONMOUTHSHIRE
	A466			
	MONMOUTH			
	MAYHILL			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Retail floor area:		1140 sqm	
	Survey date: SATURDAY		*28/11/20*	*Survey Type: MANUAL*
3	NT-01-C-01	LIDL		NOTTINGHAMSHIRE
	CHAPEL LANE			
	BINGHAM			
	Edge of Town			
	Industrial Zone			
	Total Retail floor area:		1424 sqm	
	Survey date: SATURDAY		*16/07/16*	*Survey Type: MANUAL*
4	SM-01-C-01	LIDL		SOMERSET
	SEAWARD WAY			
	MINEHEAD			
	Edge of Town			
	No Sub Category			
	Total Retail floor area:		1407 sqm	
	Survey date: SATURDAY		*24/06/17*	*Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	Trip Rate	No. Days	Ave. RFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	1416	0.459	2	1416	0.035	2	1416	0.494
08:00 - 09:00	4	1312	2.839	4	1312	1.696	4	1312	4.535
09:00 - 10:00	4	1312	6.096	4	1312	4.134	4	1312	10.230
10:00 - 11:00	4	1312	6.725	4	1312	5.906	4	1312	12.631
11:00 - 12:00	4	1312	9.145	4	1312	8.344	4	1312	17.489
12:00 - 13:00	4	1312	8.383	4	1312	9.545	4	1312	17.928
13:00 - 14:00	4	1312	7.601	4	1312	7.373	4	1312	14.974
14:00 - 15:00	4	1312	8.249	4	1312	7.830	4	1312	16.079
15:00 - 16:00	4	1312	8.287	4	1312	9.068	4	1312	17.355
16:00 - 17:00	4	1312	8.192	4	1312	8.440	4	1312	16.632
17:00 - 18:00	4	1312	7.411	4	1312	7.792	4	1312	15.203
18:00 - 19:00	4	1312	4.001	4	1312	5.106	4	1312	9.107
19:00 - 20:00	4	1312	3.182	4	1312	4.153	4	1312	7.335
20:00 - 21:00	4	1312	1.715	4	1312	2.324	4	1312	4.039
21:00 - 22:00	4	1312	0.610	4	1312	1.086	4	1312	1.696
22:00 - 23:00	2	1416	0.000	2	1416	0.000	2	1416	0.000
23:00 - 24:00									
Total Rates:			82.895			82.832			165.727

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

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Parameter summary

Trip rate parameter range selected:	1140 - 1424 (units: sqm)
Survey date date range:	01/01/13 - 28/11/20
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	4
Number of Sundays:	0
Surveys automatically removed from selection:	0
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.

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