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# PROPOSED ALDI FOODSTORE RELOCATION, PRESTON STREET, WHITEHAVEN

## TRANSPORT ASSESSMENT

OCTOBER 2023

REPORT NO 48013-001

# PROPOSED ALDI FOODSTORE RELOCATION, PRESTON STREET, WHITEHAVEN

## TRANSPORT ASSESSMENT

Aldi UK

Planning Issue

Project no: 48013

Date: October 2023

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# 1 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 the relocation of the Aldi Preston Street foodstore to land located to the east of Preston Street at the former Preston Street Car Park, Whitehaven. The proposed site layout plan is attached at **Appendix A**.

1.1.2 The Local Planning and Highway Authority (LP&HA) is Cumberland Council (CC).

1.1.3 Historically, the site has been used as a public car park. The site is bound to the north by Cycle Route 72, to the south / east by open green land and to the west by Preston Street. The location of the site is illustrated indicatively at **Figure 1**.

1.1.4 The site will be accessed by all modes of transport, including deliveries, via a new priority-controlled T-junction from Preston Street. A detailed site layout plan is attached at **Appendix A**.

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

1.1.6 This TA has been prepared with reference to the Department for Communities and Local Government National Planning Policy Framework (NPPF) which was revised in July 2021, and the Planning Practice Guidance (PPG).

1.1.7 This TA will demonstrate that the site is well served by existing sustainable transport provision and is accessible to a significant residential catchment. The TA will also demonstrate that the uplift in traffic generated by the proposed relocation can be accommodated on the surrounding road network without resulting in a severe impact in accordance with the NPPF.

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

## 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 collision records and the results of the baseline junction assessments;
- **Section 4** – examines the accessibility of the site by sustainable modes of travel;
- **Section 5** – describes the relocation proposals with regard to the proposed quantum of development, means of access and parking provision;
- **Section 6** – summarises the assessment parameters and trips rates that have been adopted within this TA;
- **Section 7** – examines the impact of redistributed development traffic on the local highway network and presents the results of the future year junction assessments; 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 which were previously announced through the Housing White Paper, the planning for the right homes in the right places consultation and the draft revised NPPF consultation. This was updated in July 2021 with a further update 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:*
>
> *a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
>
> *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 3** of this report highlights the existing sustainable travel modes within the vicinity of the site and demonstrates that the relocation will be well suited to this location.

2.1.5 **Section 7** of this report assesses the redistributed traffic associated with the proposals on the surrounding road network.

## 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 site is located on land to the east of Preston Street, Whitehaven, approximately 1.3km south of Whitehaven Rail Station. The site is bound to the north by Cycle Route 72, to the south / east by open green land and to the west by Preston Street. The location of the site is illustrated indicatively in **Figure 1**.

## 3.2 LOCAL HIGHWAY NETWORK

### Preston Street

3.2.1 Within the vicinity of the site, Preston Street runs in a north – south alignment between the New Town / Cycle Route 72 priority-controlled roundabout and the B5345 / Cockpit priority-controlled T-junction. The road continues north towards Whitehaven Marina as Swingpump Lane, and south towards St Bees as the B5345. It comprises a two-way single carriageway measuring approximately 6m in width, which is subject to a 30mph speed limit.

3.2.2 Lit footways are available on both sides of the carriageway whilst an uncontrolled pedestrian refuge island is provided some 15m south of the existing pedestrian / vehicular access to Preston Street Carpark, which facilitates safe and convenient pedestrian movements across the carriageway. Double yellow line waiting restrictions are in place along both sides of the carriageway. Dropped kerbs and tactile paving are provided over local minor junctions within the vicinity of the site, including at the access road to the existing ALDI / Iceland as well as ASDA which is located adjacent to the proposed site.

### A595

3.2.3 The A595 forms part of the Strategic Road Network (SRN) and is therefore managed by Highways England (HE). The A595 forms the main route through Whitehaven and links Whitehaven to Barrow-in-Furness to the south, Workington in the north and Cockermouth in the north east.

3.2.4 The site is, therefore, considered to be well located for access to the local, regional, and strategic highway networks.

## 3.3 BASE TRAFFIC FLOWS

3.3.1 To determine the peak hours, a traffic count was undertaken on Friday 23rd June and Saturday 24th 2023 at the Preston Street / Cycle Route 72 / existing Aldi access road priority-controlled 3-arm roundabout, which was identified to experience an increase of more than thirty two-way trips in the network peak hours.

3.3.2 The flows identified through the above survey have been converted to Passenger Car Units (PCUs) for the purposes of capacity modelling, assuming the conversion factors set out below in **Table 3-1**.

Table 3-1 PCU Factors

| | Car / LGV | OGV1 | OGV2 | Bus/Coach | Motorcycle | Cycle |
|---|---|---|---|---|---|---|
| **Factor** | 1.0 | 1.5 | 2.3 | 2 | 0.4 | 0.2 |

3.3.3 The resultant 2023 peak hour flows are set out below:

- Friday network AM peak hour between 08:30 and 09:30;
- Friday network PM peak hour between 16:00 and 17:00; and
- Saturday network peak hour between 11:45 and 12:45.

3.3.4 Details of the resultant 2023 surveyed (base) traffic flows are set out at **Figure 2**. The raw traffic survey data can be provided upon request.

## 3.4 TRAFFIC GROWTH

3.4.1 In order to assess the operation of the local highway network in the future, traffic growth rates have been derived using the Department for Transport software TEMPro. The TEMPro outputs have been factored by the National Transport Model using Copeland 005 MSOA.

3.4.2 The output growth factors are shown in **Table 3-2.**

Table 3-2 Traffic Growth Factors

| Period | AM PEAK | PM PEAK | SAT PEAK |
|---|---|---|---|
| 2023-2028 | 1.0476 | 1.0459 | 1.0444 |

## 3.5 EXISTING JUNCTION CAPACITY ANALYSIS

3.5.1 To determine existing highway capacity at the surveyed junction, JUNCTIONS 9 software has been used to assess the 2023 base traffic flow scenario. 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).

3.5.2 A summary of the 2023 Base modelling results is provided in **Table 3-3**. The detailed modelling output is provided in **Appendix B**.

Table 3-3 Preston Street / Existing ALDI Access Road Mini-Roundabout – 2023 Base Scenario Results

| Arm | AM Peak | | PM Peak | | SAT Peak | |
|---|---|---|---|---|---|---|
| | RFC | Queue | RFC | Queue | RFC | Queue |
| ALDI Access | 0.26 | 0 | 0.69 | 2 | 0.58 | 1 |
| Preston Street (South) | 0.54 | 1 | 0.55 | 1 | 0.56 | 1 |
| Preston Street (North) | 0.48 | 1 | 0.84 | 5 | 0.64 | 2 |

3.5.3 **Table 3-3** identifies that all arms at the priority controlled 3-arm mini-roundabout are operating within the junction's practical capacity, with negligible queuing occurring. However, it should be noted that Preston Street (north) has an RFC of 0.84 in the PM peak hour, indicating that it is approaching practical capacity.

## 3.6 PERSONAL INJURY COLLISION (PIC) RECORDS

3.6.1 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 (2021-2017) and the area under consideration includes the length Preston Street between the Irish Street signalised T-junction and the priority-controlled T-junction of Cockpit.

3.6.2 Within the study area, a total of 5 slight collisions were recorded. The collision plot is attached at **Figure 3** whilst **Table 3-4** provides an overview of the collisions that have occurred in the vicinity of the development site.

Table 3-4 Personal Injury Collision Records

| Study Area | Number of Accidents per Year by Severity | | | | | |
|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2019 | 2020 | 2021 | Total |
| **Slight** | | | | | | |
| Preston Street / Irish Street Signalised T-Junction | 0 | 0 | 1 | 0 | 0 | 1 |
| Preston Street | 3 | 0 | 1 | 0 | 0 | 4 |
| Total | 3 | 0 | 2 | 0 | 0 | 5 |

3.6.3 The PIC data identifies that there is no pattern to the existing collision record that indicates a highway safety issue. The recorded collisions appear to be isolated, one-off events and do not involve any pedestrian casualties. On average, the level of collisions recorded over the most recent 5-year period equates to one collision per year, which is not considered to represent an existing threat to road safety in the study area.

3.6.4 Overall, based on the infrequent nature of PICs within the vicinity of the site, it is therefore considered that no further analysis of accident data is required.

# 4 EXISTING SUSTAINABLE TRANSPORT PROVISION

## 4.1 INTRODUCTION

4.1.1 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 relocation. A plan showing the 2km walking catchment from the centre of the site is attached in **Figure 4.** As can be seen, the entirety of Whitehaven town centre can be accessed within 2km, as well as Corkickle and Harras Moor. The proposed site is situated within a large residential catchment area and therefore provides a feasible means for both employees and customers to travel on foot.

4.2.3 Footways are present along both sides of Preston Street within the vicinity of the site. The footway network continues into the centre of Whitehaven. Uncontrolled pedestrian crossings are located over local minor junctions in the form of dropped kerbs and tactile paving. A signalised pedestrian crossing comprising dropped kerbs and push button facilities is available at all arms of the Preston Street / Irish Street T-junction. This facilitates safe and convenient movements towards the proposed site from Whitehaven town centre.

4.2.4 There are a number of Public Rights of Way (PRoW) within the vicinity of the site which connect to the nearby residential estates. The PRoW's located within the vicinity of the site, providing safe off-road options for pedestrians, are set out in **Figure 5**.

## 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 6** shows the 5km cycle catchment from the site. The plan identifies that the entirety of Whitehaven is situated within 5km.

4.3.3 The Whitehaven LCWIP Cycle Map shows the cycle infrastructure provision in the local area. In particular, Preston Street forms part of National Cycle Network (NCN) Route 72. It bounds the site

to the north and the east forming an off-road signed cycle route between Preston Road and Coach Road. Further afield, the route can be used to access Egremont to the south and Workington to the north.

4.3.4 The cycle routes are set out in **Figure 7**.

## 4.4 PUBLIC TRANSPORT

**Bus**

4.4.1 The closest bus stops are located on Preston Street, within 85-130m / 1-2 minutes walking distance southbound of the proposed site. Both bus stops (northbound and southbound) comprise of a flag, pole, hard copy timetable information and bus layby.

4.4.2 The stops are accessible via the existing pedestrian infrastructure and can be viewed on **Figure 8**. The buses that serve the stops are summarised in **Table 4-1**.

Table 4-1 Local Bus Services

| Service | Route | Approximate Frequency per Hour | | |
|---|---|---|---|---|
| | | Monday – Friday | Saturday | Sunday |
| 2 | Whitehaven – Kells – Woodhouse - Greenbank | 2 | 2 | Every 2 hours between 09:40 – 17:20 |
| 2A | Whitehaven – Kells – Woodhouse - Greenbank | 08:40 | - | - |
| 3A | Whitehaven - Mirehouse | 2 | 2 | 11:48 and 15:45 |

4.4.3 Given that a number of high frequency, high quality bus services are located within convenient walking distance of the site, travel by bus is likely to be an attractive option for staff and customers travelling to / from the site.

**Rail**

4.4.4 The nearest rail station to the site is Corkickle Rail Station which is located approximately 700m east of the proposed site. It can be accessed in 8 minutes on foot or 2 minutes by bike via Cycle Route 72.

4.4.5 Corkickle Rail Station provides frequent rail services to Barrow-in-Furness, Carlisle and Lancaster. Whitehaven can also be accessed from the station using northbound trains to Carlisle. Step-free access to the platform is provided. No bicycle storage is available.

## 4.5 SUMMARY

4.5.1 The site is considered to be located in a sustainable location for access by non-car modes in line with local and national planning policy for town centres.

4.5.2 There is a large residential catchment within a short walk or cycle from the site, meaning future staff and customers have the opportunity to travel sustainably, and public transport is available for those members of staff travelling over longer distances.

4.5.3 In order to facilitate and support sustainable travel options, measures to reduce the impact of car travel and manage car use are presented in the accompanying Interim Travel Plan.

# 5 DEVELOPMENT PROPOSALS

## 5.1 DEVELOPMENT PROPOSAL AND SITE LAYOUT

5.1.1 The proposals involve the relocation of Aldi Whitehaven some 165m south from its current shared location with Iceland to land east of Preston Street, at the former Preston Street Car Park, comprising an uplift in Retail Floor Area (RFA) of 375m$^2$ from 940m$^2$ to 1,315m$^2$. This equates to an uplift in Gross Internal Area of 537m$^2$ from 1337m$^2$ to 1874m$^2$.

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 west extent of the site via a proposed new simple priority-controlled T-junction with Preston Street. The access arrangements are shown on the proposed site layout plan at **Appendix A**.

5.2.2 For pedestrian access, dropped kerb and tactile paving facilities will be provided to facilitate pedestrians crossing the site access, tying into existing provision along Preston Street. The pedestrian footway bounding both access radii will not be continued into the site, ensuring no conflicting pedestrian movements with vehicles accessing / egressing the car parking area.

5.2.3 Visibility splays from the site access are in accordance with the Manual for Steets (MfS) standards for a 30mph speed limit at 2.4m x 43m. The proposed site access visibility splays are set out in drawing no. AMA-48013-SK001, attached at **Appendix C**.

5.2.4 The proposed development would be served by a dedicated servicing area located to the south east of the store. Deliveries will be required to manoeuvre through the car park; however, these will be infrequent (up to 4 per day) and can be managed to avoid peak shopping times as is the case with the majority of Aldi's. White lining will be provided to safely demarcate access to the delivery area.

5.2.5 The delivery area has been assessed to ensure suitability of servicing and accommodation of a UK maximum standard (16.5m) articulated HGV. **Appendix D** 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 continue to be managed to ensure minimal conflicts with other site users.

## 5.3 PARKING

5.3.1 A total of 98 parking spaces are provided on site, including; 9 Parent and Child (P&C) spaces, 5 disabled spaces and 4 motorcycle spaces. There are 4 active Electric Vehicle Charging Points (EVCP) of which 2 are accessible bays. It is also proposed to provide 4 Sheffield Cycle Stands which provides storage for 8 bicycles. As detailed on the site layout plan attached at **Appendix A**, the disabled parking bays, P&C parking bays and cycle storage is located within close proximity to the Aldi main building entrance.

5.3.2 It should be noted that 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.

5.3.3 The level of parking proposed is based on Aldi's operational requirements through their experience at the existing site as well as with other stores of comparable size in similar locations.

# 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 ASSESSMENT YEARS

6.2.1 The following assessment years have been considered in respect of capacity analysis of the local highway network:

- **2023 Base Year** – representing the existing situation on the local highway network.
- **2028 Future Year** – representing a horizon period of five years after the lodging of the planning application. This allows time for the store to be constructed and staff to relocate in order for it to become operational.

## 6.3 FUTURE YEAR ASSESSMENT SCENARIOS

### Do Minimum Scenario

6.3.1 The Do Minimum scenario is considered to represent a future year situation on the local highway network, without the proposed development taking place. In addition to the Base scenario, all local background traffic growth has been included. The resulting 2028 Do Minimum Traffic Flows are set out on **Figure 9** for the weekday AM, PM and Saturday peak hour, respectively.

### With Development Scenario

6.3.2 The With Development scenario is considered to represent the future situation on the local highway network with the proposed development taking place. The traffic flows have been derived by adding the net development traffic flows (which reflect the likely net change in vehicle trip generation associated with the relocation) to the Do Minimum Traffic Flows. The resulting 2028 With Development Traffic Flows are set out on **Figure 10** for the weekday AM, PM and Saturday peak hour, respectively.

## 6.4 COMMITTED DEVELOMENT

6.4.1 No consideration has been given to any specific committed development sites. The above TEMPro growth factors account for Local Plan growth as well as background traffic growth.

6.4.2 In particular, nearby residential sites have already been constructed and occupied, or are partly occupied, including Edgehill Park by Story Homes. As such, the trips associated with these developments will be accounted for within the traffic surveys.

6.4.3 Given this, it is considered that using TEMPro local growth factors to assess the future year uplift in traffic growth provides a robust assessment of traffic growth.

## 6.5 DEVELOPMENT TRAFFIC GENERATION

6.5.1 This section sets out the methodology used to estimate the number of vehicle trips that are expected to be generated by the proposed development, in the context of the existing Aldi foodstore.

6.5.2 To determine the vehicle trip generation associated with the existing Aldi foodstore, the TRICS database has been interrogated, considering discount foodstores in Edge of Town locations.

6.5.3 The time periods of 09:00 to 10:00 for the AM Peak, 17:00 to 18:00 for the PM Peak and 12:00 to 13:00 for the Saturday Peak have been considered. Although these TRICS peaks do not mirror the surveyed time periods set out in **Section 3.3**, analysis of these trip rates ensure that a worst-case peak hour is considered.

6.5.4 The vehicle trip rates have been factored per 100m$^2$ RFA and are presented in **Table 6-1**, whilst the full TRICS output is attached at **Appendix E.**

Table 6-1 Existing Aldi Foodstore – Vehicle Trip Rates and Vehicle Trip Generation

| | AM Peak | | PM Peak | | Saturday Peak | |
|---|---|---|---|---|---|---|
| | Arrivals | Departures | Arrivals | Departures | Arrivals | Departures |
| **TRICS Trip Rate** | 5.89 | 4.82 | 7.21 | 7.56 | 13.1 | 13.79 |
| **Existing Trip Generation** *(940m$^2$ RFA)* | 55 | 45 | 68 | 71 | 123 | 130 |

Note: Table subject to rounding error

6.5.5 **Table 6-1** demonstrates that the existing Aldi foodstore generates the following vehicular trips during the highway network peak hours:

- Friday AM Peak – 55 Arrivals and 45 Departures – 101 Two-Way Trips;
- Friday PM Peak - 68 Arrivals and 71 Departures – 139 Two-Way Trips; and
- Saturday Peak – 123 Arrivals and 130 Departures – 253 Two-Way Trips.

6.5.6 Based on national surveys of Aldi foodstore 'extensions' for both relocating and extended foodstores, new foodstores experience a pro-rata increase in vehicle-based trips of 7.2% based on an average 40% increase in floor area.

6.5.7 The proposed Aldi foodstore will have a floor area of 1,315m$^2$ which equates to a 40% increase in floor area over the existing 940m$^2$ Aldi foodstore. This results in an increase in vehicle-based trips of 7.1%.

6.5.8 The resultant vehicle trip generation associated with the proposed Aldi Foodstore is summarised in **Table 6-2**.

Table 6-2 Proposed Aldi Trip Rates and Vehicle Trip Generation

| | AM Peak | | PM Peak | | Saturday Peak | |
|---|---|---|---|---|---|---|
| | Arrivals | Departures | Arrivals | Departures | Arrivals | Departures |
| **Proposed Trip Generation** *(1315 m$^2$ RFA)* | 59 | 48 | 72 | 75 | 131 | 137 |

| | AM Peak | | PM Peak | | Saturday Peak | |
|---|---|---|---|---|---|---|
| | Arrivals | Departures | Arrivals | Departures | Arrivals | Departures |
| **Uplift** *(+ 375m² RFA)* | +3 | +3 | +4 | +4 | +7 | +8 |

6.5.9 **Table 6-1** demonstrates that the development proposals are forecast to generate the following additional vehicular trips during the highway network peak hours:

- Friday AM Peak – +3 Arrivals and +3 Departures – +6 Two-Way Trips
- Friday PM Peak – +4 Arrivals and +4 Departures – +8 Two-Way Trips
- Saturday Peak – +7 Arrivals and +8 Departures – +15 Two-Way Trips

## 6.6 DEVELOPMENT TRAFFIC DISTRIBUTION AND ASSIGMENT

6.6.1 The identified proportion of trips to the existing Aldi store have been distributed on the basis of the traffic survey undertaken at the Aldi Access Road / Preston Street on Friday 23rd June and Saturday 24th June 2023, as discussed in Section 3.3. Taking into account the distance travelled between the existing store and the proposed relocated store (some 130m), it is considered that the distribution of existing trips will mirror the distribution of trips once the store is relocated.

6.6.2 The distribution of vehicle trips can be viewed in **Table 6-3** below, and is presented diagrammatically on **Figure 11**.

Table 6-3 Trip Distribution

| Route | Route Choice | | |
|---|---|---|---|
| | AM | PM | SAT |
| Preston Street (North) | 48% | 62% | 55% |
| Preston Street (South) | 52% | 38% | 45% |
| ALDI – Right Turn | 35% | 33% | 37% |
| ALDI – Left Turn | 65% | 67% | 63% |

6.6.3 Both the existing and the proposed trip generation has then been applied to the trip distribution with the resultant traffic flow diagrams attached at **Figure 12** and **Figure 13.**

6.6.4 To calculate the net change in traffic associated with the relocation of the Aldi foodstore, the existing traffic flows have been taken away from the proposed traffic flows. The traffic flow diagram illustrating the net change in traffic flows for the surrounding road network is attached at **Figure 14**.

# 7 FUTURE DEVELOPMENT IMPACTS

## 7.1 INTRODUCTION

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

- 2028 Do Minimum (TEMPRO growthed from 2023)
- 2028 With Development (Do Minimum + Net Development Flows)

7.1.2 The detailed modelling outputs are provided in **Appendix B** and the modelling results are set out in this section.

7.1.3 The RFC provides the primary measure of junction performance and is reported for each entry arm. An RFC of 0.85 or lower indicates that the specific arm of the junction is operating within its practical capacity; an RFC greater than 1.0 indicates that traffic demand exceeds theoretical capacity. Queue length provides an indication of how the overall junction performance may affect adjacent junctions on the highway network.

7.1.4 As previously mentioned, the proposed site access junction has been modelled for the 2028 With Development scenario to ensure that it has sufficient capacity to accommodate the future demand during the three network peak periods.

7.1.5 JUNCTIONS 9 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).

**Preston Street / Aldi Access Road Priority Controlled 3-Arm Mini-Roundabout - JUNCTIONS9 Results**

7.1.1 **Table 7-1** sets out the operational capacity at the Preston Street / Aldi Access Road priority controlled 3-arm mini-roundabout.

Table 7-1 Aldi Access Road / Preston Street – 2028 Future Year Scenario Results

| Arm | AM Peak | | PM Peak | | SAT Peak | |
|---|---|---|---|---|---|---|
| | RFC | Queue | RFC | Queue | RFC | Queue |
| **2028 Do Minimum** | | | | | | |
| ALDI Access Road | 0.28 | 0 | 0.75 | 3 | 0.62 | 2 |
| Preston Street (South) | 0.57 | 1 | 0.57 | 1 | 0.58 | 1 |
| Preston Street (North) | 0.50 | 1 | 0.89 | 7 | 0.68 | 2 |
| **2028 With Development** | | | | | | |
| ALDI Access Road | 0.29 | 0 | 0.80 | 4 | 0.67 | 2 |
| Preston Street (South) | 0.62 | 2 | 0.64 | 2 | 0.64 | 2 |
| Preston Street (North) | 0.54 | 1 | 0.94 | 11 | 0.76 | 3 |

7.1.2 The assessment demonstrates that all arms operate within practical capacity for each peak hour within all modelled scenarios, except for Preston Street (north). This arm operates above practical capacity in the PM peak hour with an RFC of 0.89 in the 2028 Do Minimum scenario and 0.94 in the 2028 With Development scenario (an increase of 0.05).

7.1.3 It is noted that although the junction operates above its practical capacity, it is not predicted to operate above its theoretical capacity with RFC values on Preston Street (north) below 1.00. Queuing at the junction is not expected to increase by more than four additional vehicles as a result of the proposed development traffic.

7.1.4 It is therefore considered that the minimal uplift in trips associated with the relocation proposals will not have a material impact at this junction.

**Proposed Site Access / Preston Street T-Junction – JUNCTIONS9 Results**

7.1.1 **Table 7-2** sets out the operational capacity at the proposed site access / Preston Street T-junction.

Table 7-2 Proposed Site Access / Preston Street T-Junction – 2028 Future Year Scenario Results

| Arm | AM Peak | | PM Peak | | SAT Peak | |
|---|---|---|---|---|---|---|
| | RFC | Queue | RFC | Queue | RFC | Queue |
| **2028 With Development** | | | | | | |
| Proposed Site Access – All Arms | 0.09 | 0 | 0.13 | 0 | 0.28 | 0 |
| Cycle Route 72 South – All Arms | 0.01 | 0 | 0.02 | 0 | 0.04 | 0 |

7.1.2 The assessment demonstrates that the junction would operate with significant spare capacity in the modelled assessment scenario during the AM, PM and Saturday peak hours.

## 7.2 SUMMARY

7.2.1 In summary, it can be concluded that the junctions on the local road network work operate effectively in the base year, and will continue to do so in the future, when background growth and the proposed net development flows are considered.

7.2.2 The trips associated with the proposed development are not expected to have a material impact on any local junctions and will not lead to any severe cumulative impacts on capacity in accordance with the relevant NPPF tests.

# 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 the relocation of Aldi Whitehaven foodstore to land located to the east of Preston Street at the former Preston Street Car Park, Whitehaven.

8.1.2 Customer vehicular, walking and cycling access is provided at the north west extent of the site via a proposed new simple priority-controlled T-junction with Preston Street.

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

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

8.1.5 The development proposals are forecast to generate the following additional vehicular trips during the highway network peak hours:

- Friday AM Peak – +3 Arrivals and +3 Departures – +6 Two-Way Trips
- Friday PM Peak – +4 Arrivals and +4 Departures – +8 Two-Way Trips
- Saturday Peak – +7 Arrivals and +8 Departures – +15 Two-Way Trips

8.1.6 An articulated vehicle can satisfactorily access and egress the site in forward gear. Deliveries would continue to be managed to ensure minimal conflicts with other site users.

8.1.7 The minimal uplift in trips associated with the relocation proposals will not have a material impact at the Cycle Route 72 / Preston Street junction.

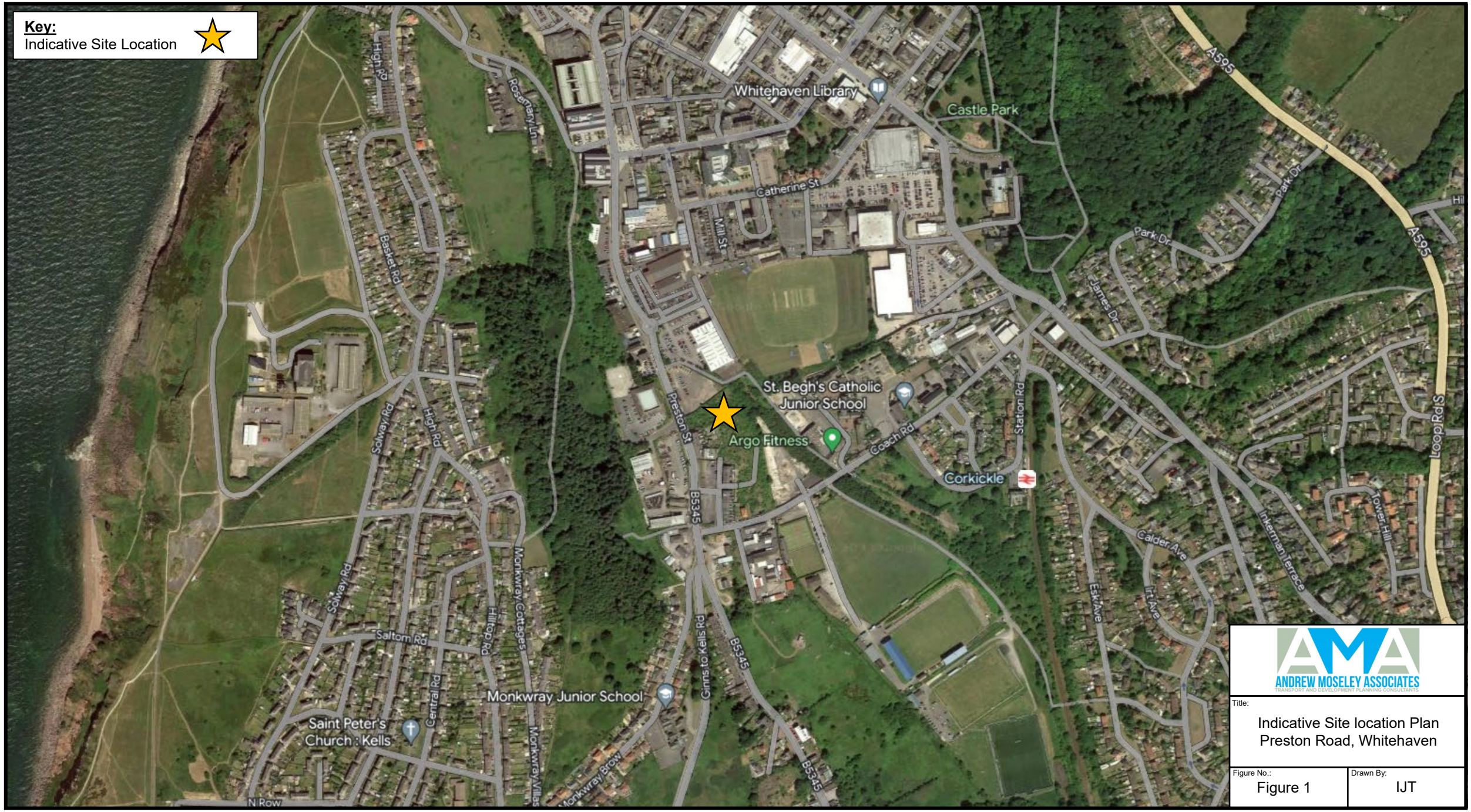
8.1.8 The proposed site access would operate with significant spare capacity in the 2028 With Development scenario, showing it is fit for purpose.

8.1.9 An ITP 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.

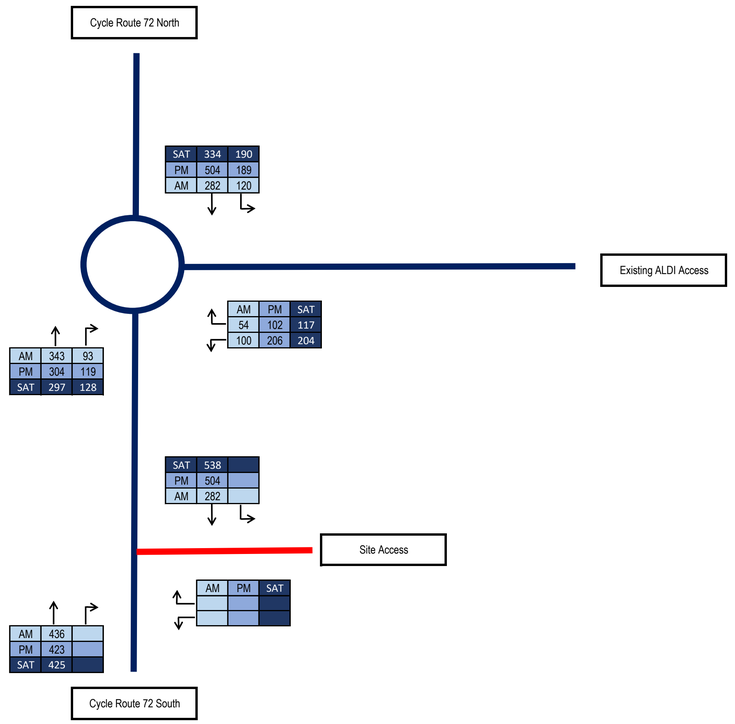
# FIGURES



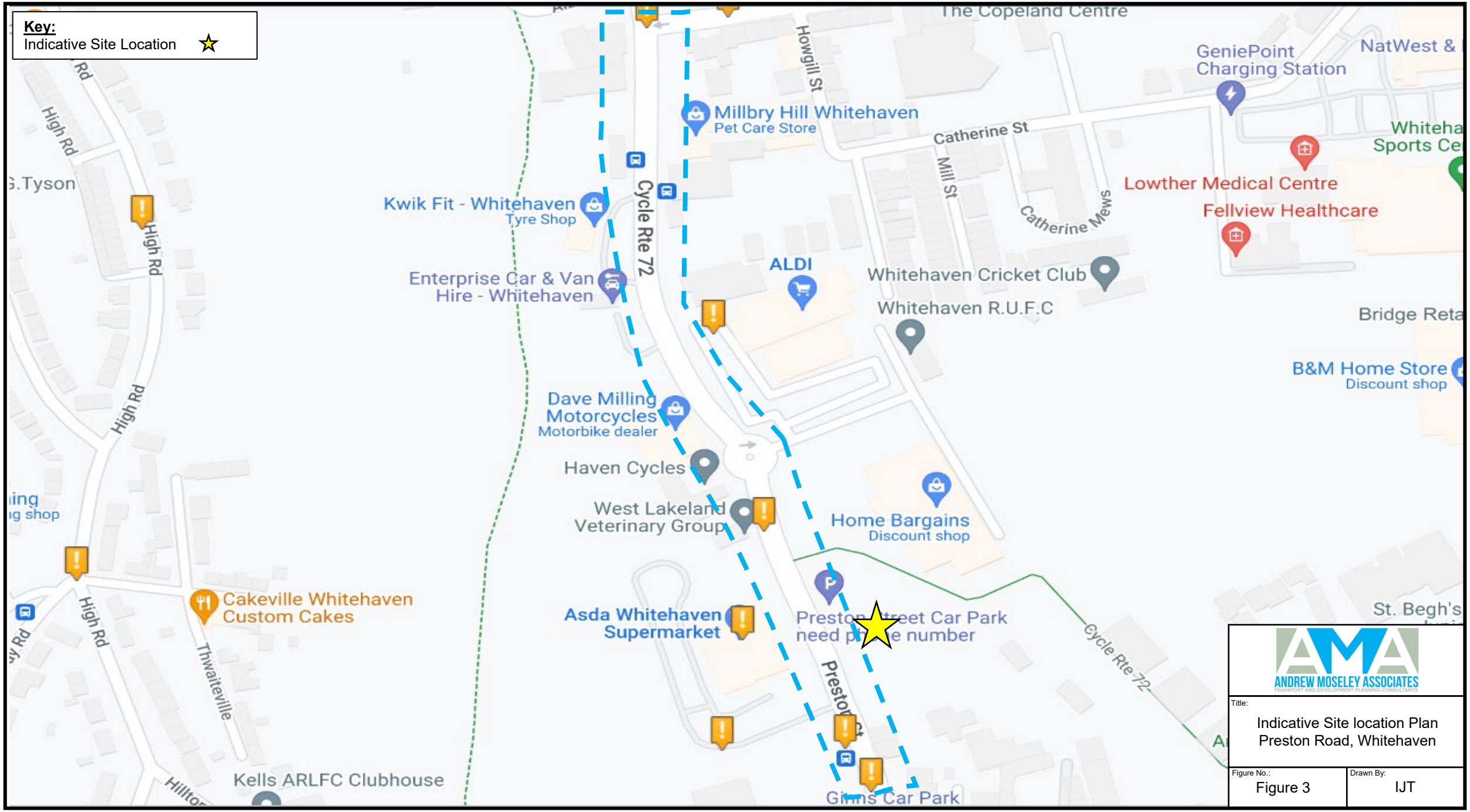

ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

Title:
Indicative Site location Plan
Preston Road, Whitehaven

| Figure No.: | Drawn By: |
|---|---|
| Figure 1 | IJT |




| | | | | |
|---|---|---|---|---|
| ANDREW MOSELEY ASSOCIATES<br>TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS | 13/10/2023 | Preston Street, Whitehaven | % | AM 09:00 - 10:00 |
| | AMA/48013 | | Drawn by: SD | PM 17:00 - 18:00 |
| | Figure 2 | 2023 Base Flows | Checked: AMM | SAT 12:00 - 13:00 |

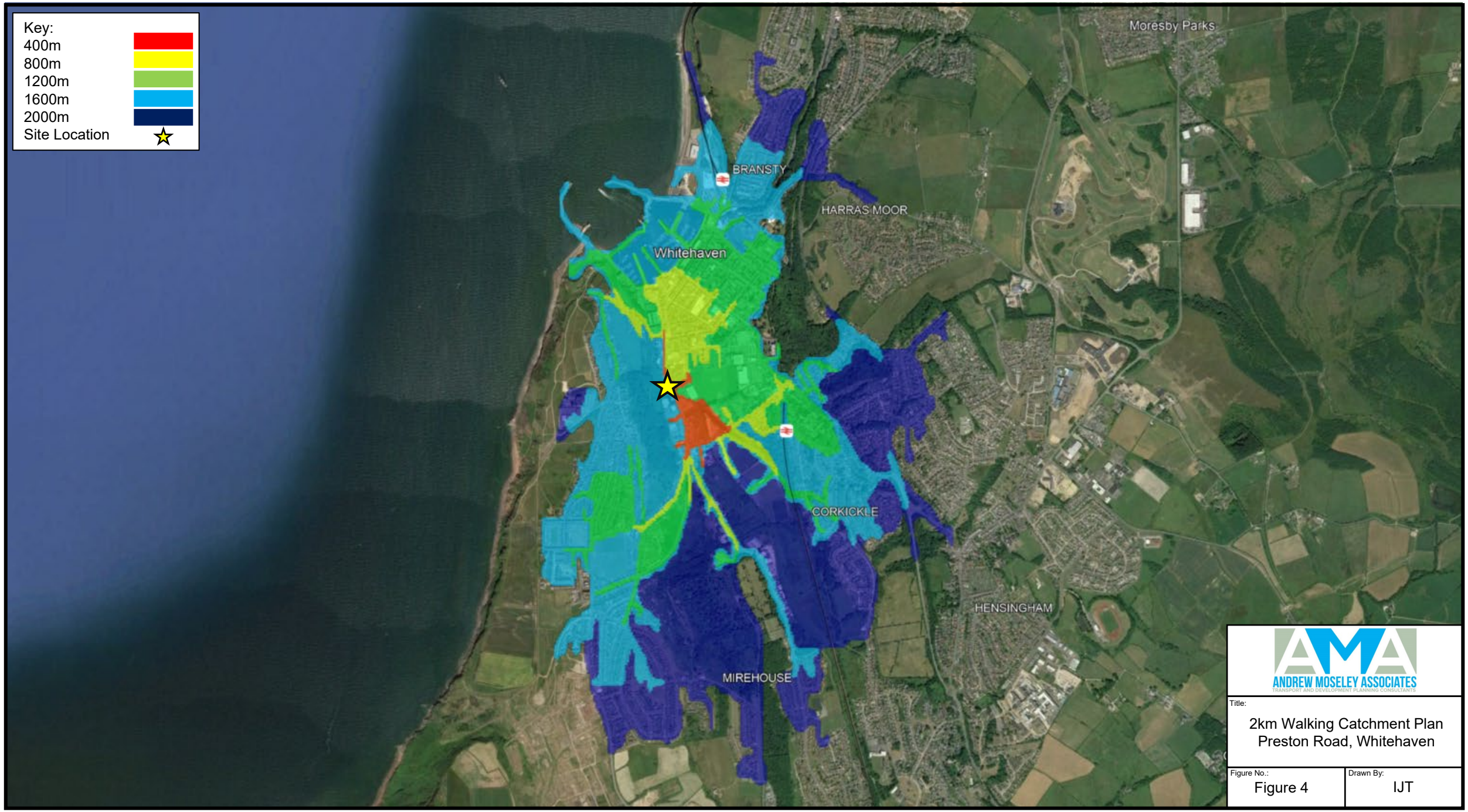


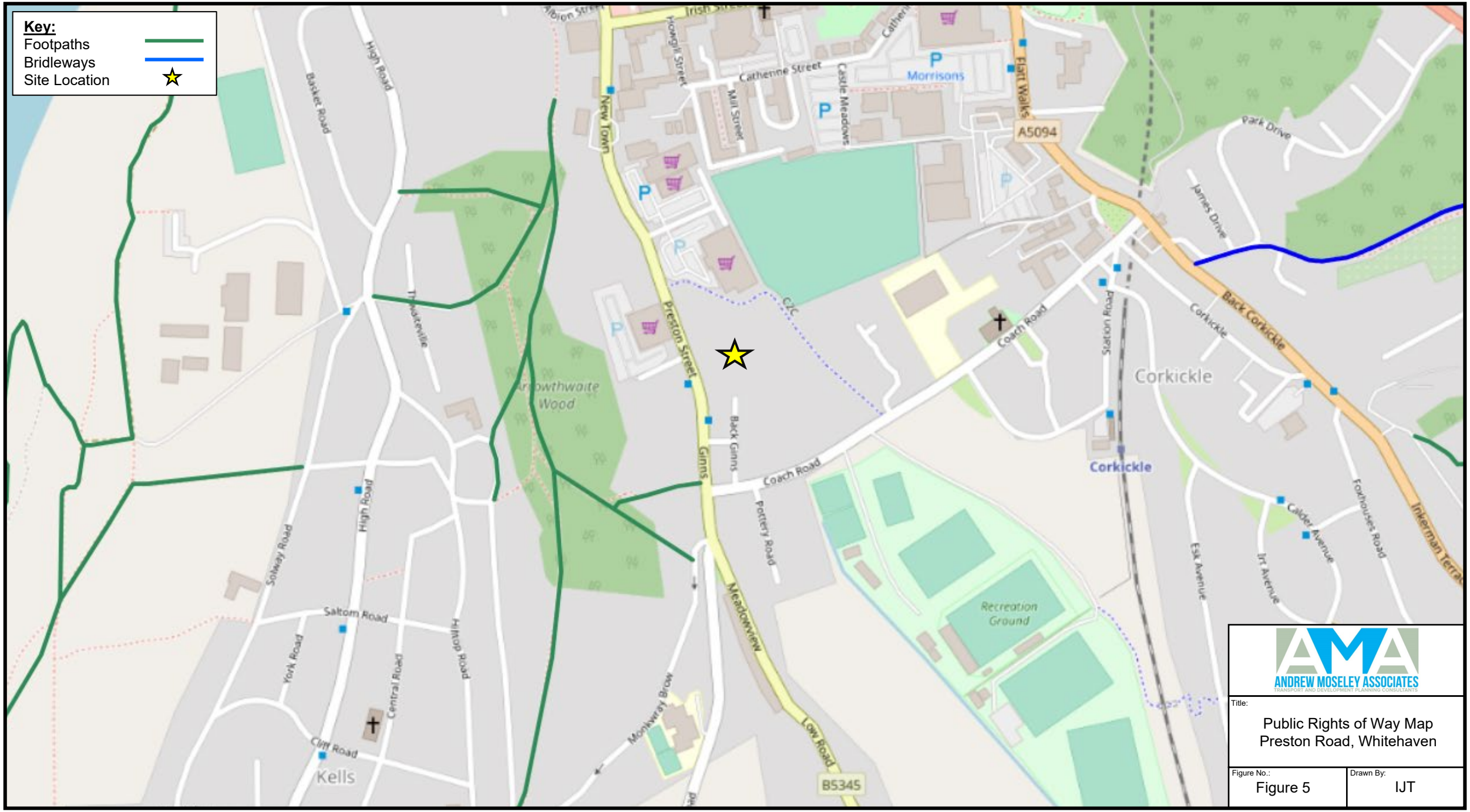

ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

Title:
Indicative Site location Plan
Preston Road, Whitehaven

Figure No.: Figure 3

Drawn By: IJT

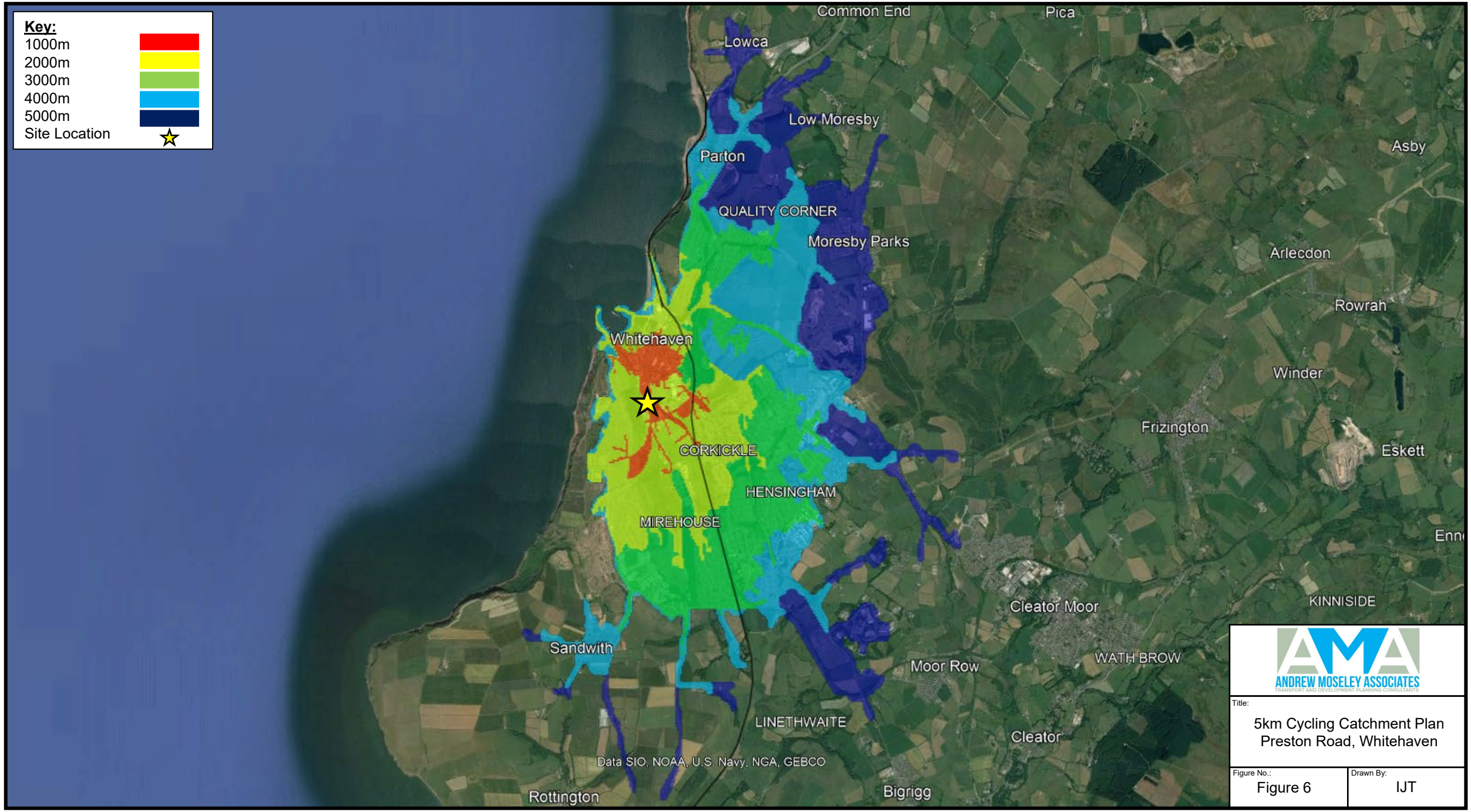

Key:
400m
800m
1200m
1600m
2000m
Site Location
Moresby Parks
BRANSTY
HARRAS MOOR
Whitehaven
CORKICKLE
HENSINGHAM
MIREHOUSE
ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS
Title:
2km Walking Catchment Plan
Preston Road, Whitehaven
Figure No.:
Figure 4
Drawn By:
IJT

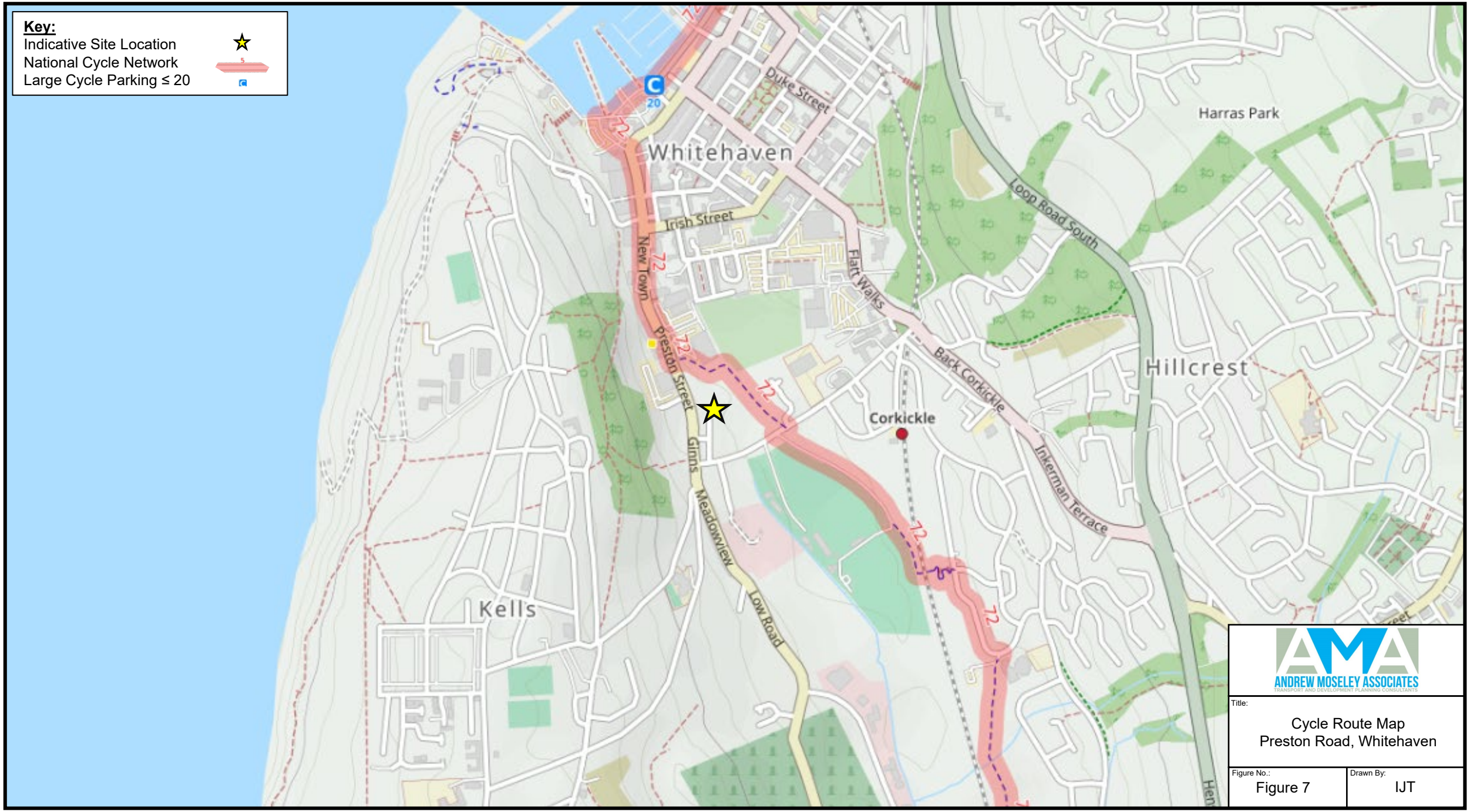



ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

Title:
Public Rights of Way Map
Preston Road, Whitehaven

| Figure No.: | Drawn By: |
|---|---|
| Figure 5 | IJT |


Key:
1000m
2000m
3000m
4000m
5000m
Site Location
Common End
Pica
Lowca
Low Moresby
Parton
Asby
QUALITY CORNER
Moresby Parks
Arlecdon
Rowrah
Whitehaven
Winder
Frizington
CORKICKLE
Eskett
HENSINGHAM
MIREHOUSE
KINNISIDE
Cleator Moor
Sandwith
WATH BROW
Moor Row
LINETHWAITE
Cleator
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Rottington
Bigrigg
ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS
Title:
5km Cycling Catchment Plan
Preston Road, Whitehaven
Figure No.:
Figure 6
Drawn By:
IJT

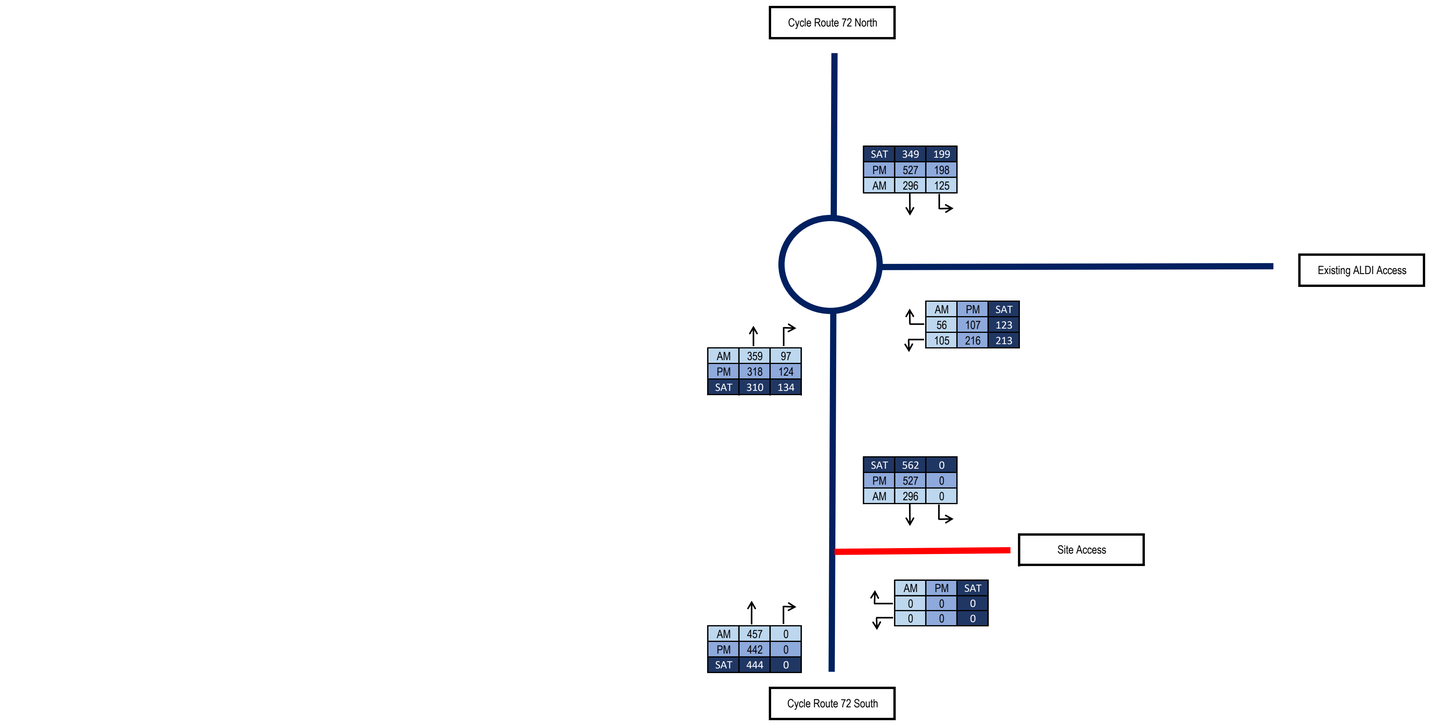

Key:
Indicative Site Location
National Cycle Network
Large Cycle Parking ≤ 20
Whitehaven
Duke Street
Irish Street
New Town
Flatt Walks
Loop Road South
Harras Park
Hillcrest
Preston Street
Ginns
Meadowview
Low Road
Back Corkickle
Inkerman Terrace
Corkickle
Kells
72
20
ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS
Title:
Cycle Route Map
Preston Road, Whitehaven
Figure No.:
Figure 7
Drawn By:
IJT


ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

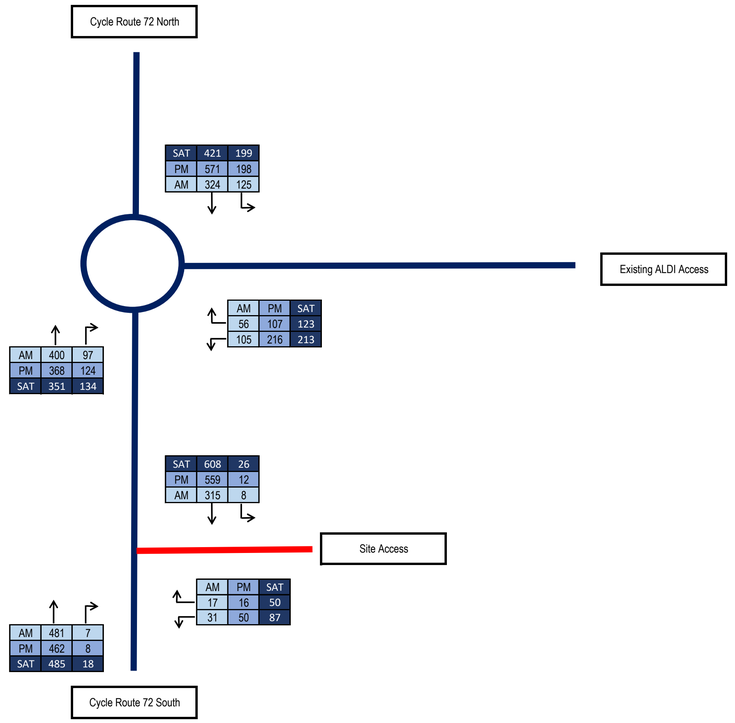
Title:

Bus Stop Locations Plan
Preston Road, Whitehaven

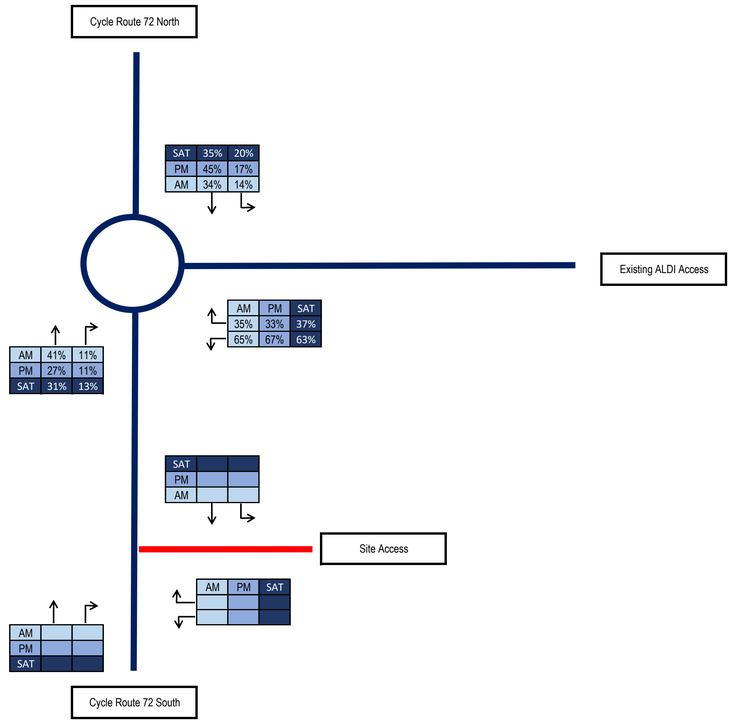
| Figure No.: | Drawn By: |
|---|---|
| Figure 8 | IJT |



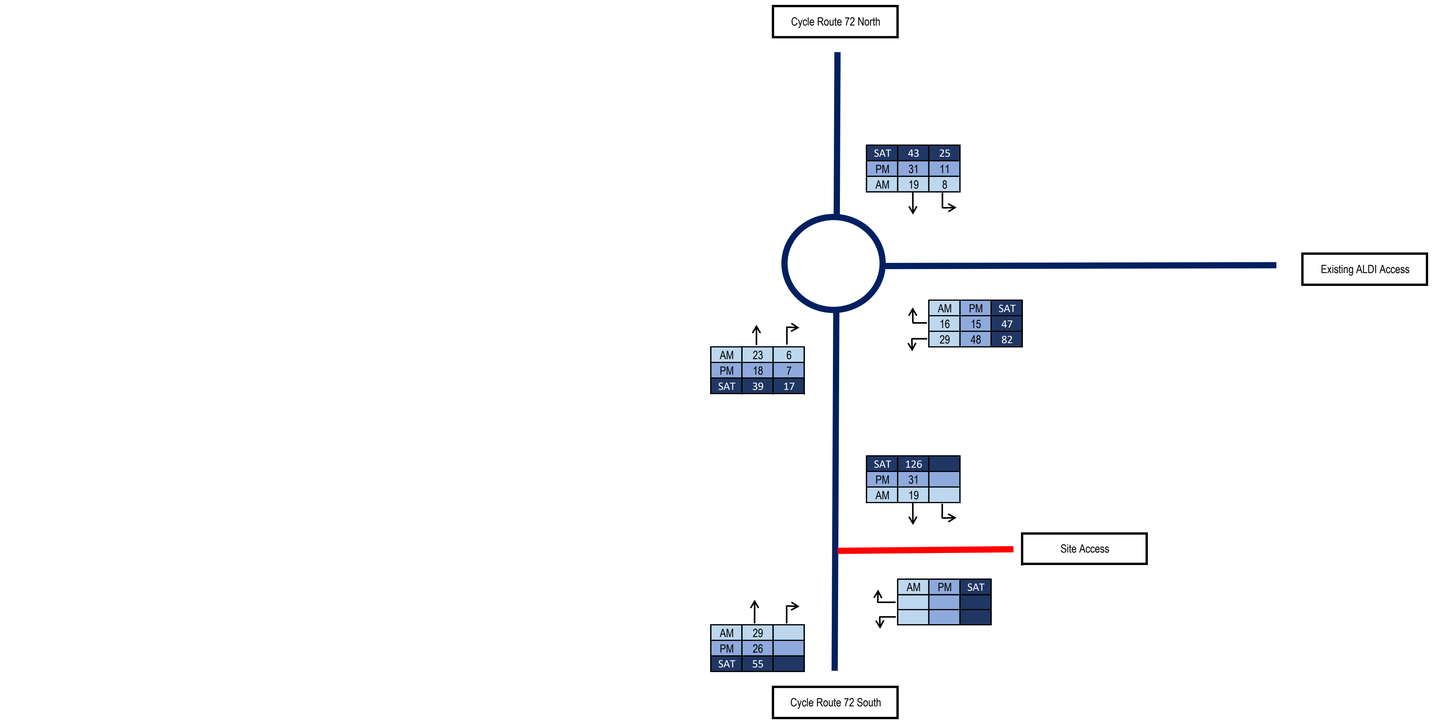

| | | | | |
|---|---|---|---|---|
| ANDREW MOSELEY ASSOCIATES<br>TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS | 13/10/2023 | Preston Street, Whitehaven | % | AM 09:00 - 10:00 |
| | AMA/48013 | | Drawn by: SD | PM 17:00 - 18:00 |
| | Figure 9 | 2028 Do Minimum Flows | Checked: AMM | SAT 12:00 - 13:00 |



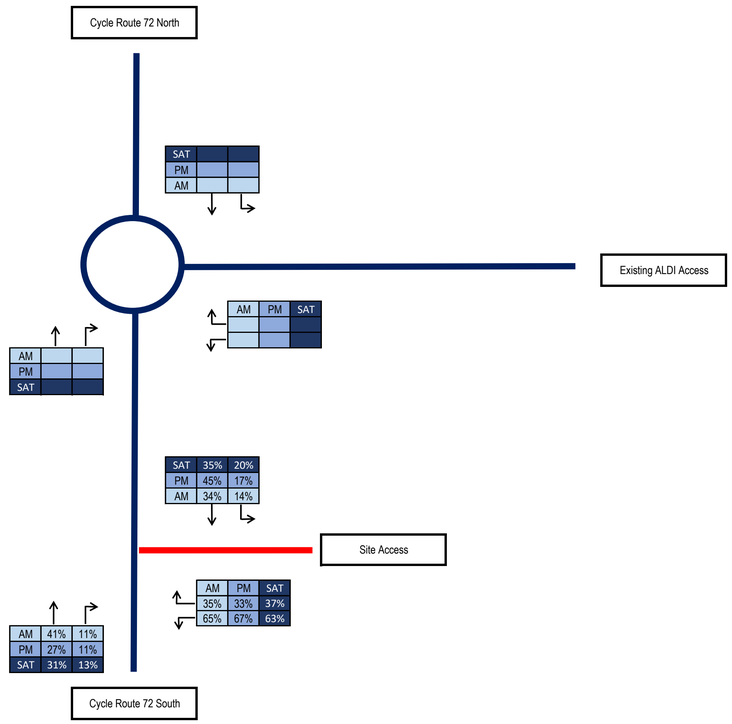

| | | | | |
|---|---|---|---|---|
| ANDREW MOSELEY ASSOCIATES<br>TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS | 13/10/2023 | Preston Street, Whitehaven | % | AM 09:00 - 10:00 |
| | AMA/48013 | | Drawn by: SD | PM 17:00 - 18:00 |
| | Figure 10 | 2028 With Development Flows | Checked: AMM | SAT 12:00 - 13:00 |



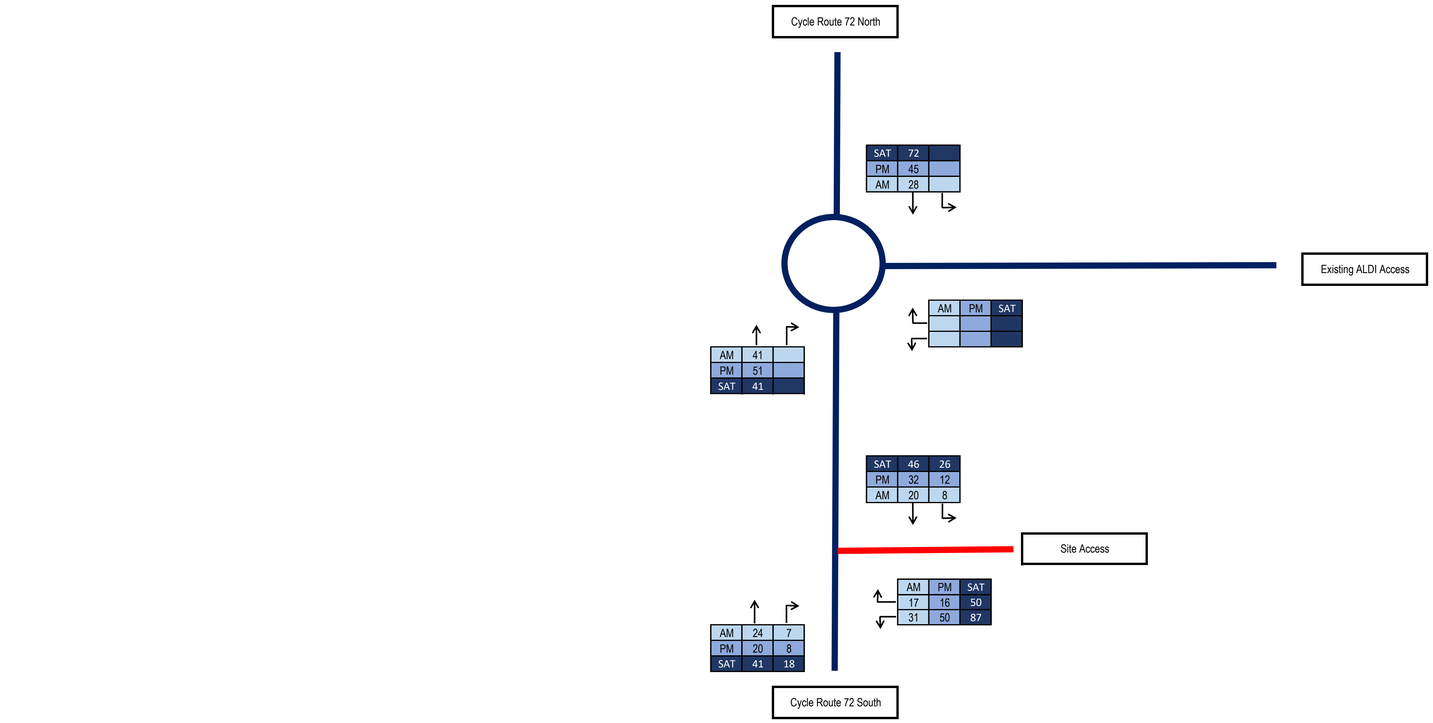

| | | | | |
|---|---|---|---|---|
| ANDREW MOSELEY ASSOCIATES<br>TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS | 13/10/2023 | Preston Street, Whitehaven | % | AM 09:00 - 10:00 |
| | AMA/48013 | | Drawn by: SD | PM 17:00 - 18:00 |
| | Figure 11 | Existing Vehicle Trip Distribution (%) | Checked: AMM | SAT 12:00 - 13:00 |



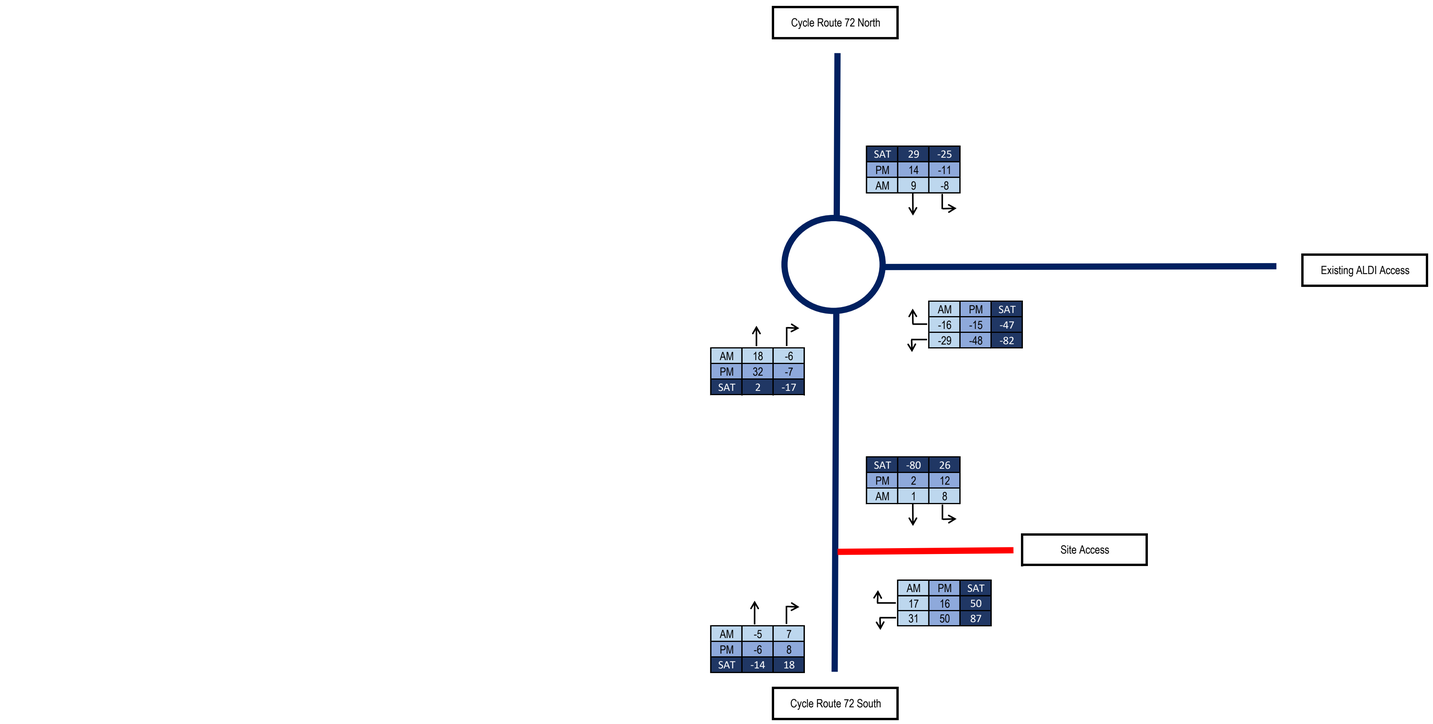

| | | | | |
|---|---|---|---|---|
| ANDREW MOSELEY ASSOCIATES<br>TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS | 13/10/2023 | Preston Street, Whitehaven | % | AM 09:00 - 10:00 |
| | AMA/48013 | | Drawn by: SD | PM 17:00 - 18:00 |
| | Figure 12 | Existing Vehicle Trip Generation | Checked: AMM | SAT 12:00 - 13:00 |




| | | | | | |
|---|---|---|---|---|---|
| ANDREW MOSELEY ASSOCIATES<br>TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS | 13/10/2023 | Preston Street, Whitehaven | % | AM | 09:00 - 10:00 |
| | AMA/48013 | | Drawn by: SD | PM | 17:00 - 18:00 |
| | Figure 13 | Proposed Vehicle Trip Distribution (%) | Checked: AMM | SAT | 12:00 - 13:00 |




| | | | | |
|---|---|---|---|---|
| ANDREW MOSELEY ASSOCIATES<br>TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS | 13/10/2023 | Preston Street, Whitehaven | % | AM 09:00 - 10:00 |
| | AMA/48013 | | Drawn by: SD | PM 17:00 - 18:00 |
| | Figure 14 | Proposed Vehicle Trip Generation | Checked: AMM | SAT 12:00 - 13:00 |




| | | | | |
|---|---|---|---|---|
| ANDREW MOSELEY ASSOCIATES<br>TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS | 13/10/2023 | Preston Street, Whitehaven | % | AM 09:00 - 10:00 |
| | AMA/48013 | | Drawn by: SD | PM 17:00 - 18:00 |
| | Figure 15 | Net Vehicle Trip Generation | Checked: AMM | SAT 12:00 - 13:00 |

# APPENDICES

Appendix A – Proposed Site Layout

Appendix B – JUNCTIONS9 Modelling Outputs

Appendix C – Site Access Visibility Splays

Appendix D – Swept Path Analysis

Appendix E – TRICS Data

# Appendix A

**PROPOSED SITE LAYOUT**

| REV | DATE | DESCRIPTION | DRW | CHK |
|---|---|---|---|---|
| P01 | 2023-10-18 | First issue | AdeL | MJ |

existing wall (repaired)
shrub planting
600mm high reclaimed stone wall
knee rail
shrub planting
9.5m
7190
M/C
shrub planting
existing wall (repaired)
shrub planting
10000
shrub planting
shrub planting
6000
POST SIGN
shrub planting
HGV ONLY
2m weldmesh fence
meadow grass to grade
600mm high reclaimed stone wall
6000
600mm high stone wall
shrub planting
2.5m acoustic fence
6500
2.5m acoustic fence
2m weldmesh fence
existing brick wall (repaired)
SM
1
3
4
2.5m acoustic fence
8000
meadow grass
2.5m acoustic fence & access gate
meadow grass
11.3m
TCB
existing walls (repaired)
2m weldmesh fence
2m weldmesh fence
10
PH
meadow grass
2.5m acoustic fence around plant
2m weldmesh fence
2m weldmesh fence
2m weldmesh fence
N
0 1 2 3 4 5 10 20m

REFER TO LANDSCAPE ARCHITECT'S DRAWING FOR DETAILS OF SOFT LANDSCAPING

| | | |
|---|---|---|
| SITE AREA (Store Plot) | 10080 sq m | 2.49 ac |
| STANDARD PARKING BAYS | 2.5 x 5.0m | 86 |
| ACCESSIBLE PARKING BAYS | 3.7 x 6.2m | 5 |
| PARENT & CHILD PARKING BAYS | 3.0 x 5.0m | 9 |
| TOTAL PARKING BAYS | | 100 |

| ALDI Building | |
|---|---|
| GROSS EXTERNAL FLOOR AREA (incl. loading bay, lobby, canopy) | 2127 sq m |
| GROSS INTERNAL AREA (incl. loading bay & lobby) | 1916 sq m |
| NET SALES AREA (incl. lobby) | 1356 sq m |

Client
**Aldi Stores Ltd.**

Project Title
**Aldi - Whitehaven**

Project Address
**Preston Street**
**Whitehaven**

Drawing Title
# Proposed Site Plan

| Job No. | Originator | Zone | Level | Type | Role |
|---|---|---|---|---|---|
| 0470 | PA | XX | 00 | DR | A |

| System Classification | Drawing No. | Suitability | Revision |
|---|---|---|---|
| PM_40_50-21 | -0002 | S4 | P01 |

| Drawn | Checked | Date | Scale | Size |
|---|---|---|---|---|
| AdeL | MJ | 2023-10-09 | 1:250 | A1 |


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

One Lochrin Square, 92 Fountainbridge, Edinburgh, EH3 9QA

t : **0191 260 5551**
e : **admin@projektarchitects.com**
w : **www.projektarchitects.com**

projekt
Architects | Construction

# Appendix B

**JUNCTIONS 9 MODELLING OUTPUTS**

# Junctions 9

## PICADY 9 - Priority Intersection 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:** Proposed Site Access_Preston Street.j9
**Path:** C:\AMA\AMA\AMA - Documents\001-03 - Aldi - Dar\48013 - Preston Street, Whitehaven\D Models and Drawings\Junctions10
**Report generation date:** 14/07/2023 07:50:33

---



### Summary of junction performance

| | AM | | | | | PM | | | | | SAT | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Set ID | Queue (PCU) | Delay (s) | RFC | LOS | Set ID | Queue (PCU) | Delay (s) | RFC | LOS | Set ID | Queue (PCU) | Delay (s) | RFC | LOS |
| | 2028 With Dev | | | | | | | | | | | | | | |
| Stream B-AC | D1 | 0.1 | 6.52 | 0.09 | A | D2 | 0.1 | 7.13 | 0.13 | A | D3 | 0.4 | 9.49 | 0.28 | A |
| Stream C-AB | | 0.0 | 6.36 | 0.01 | A | | 0.0 | 6.94 | 0.02 | A | | 0.0 | 7.27 | 0.04 | A |

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

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

### File summary

#### File Description

| | |
|---|---|
| **Title** | |
| **Location** | |
| **Site number** | |
| **Date** | 14/07/2023 |
| **Version** | |
| **Status** | (new file) |
| **Identifier** | |
| **Client** | |
| **Jobnumber** | |
| **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 |

# Junctions 9

## ARCADY 9 - Roundabout Module



**Filename:** Preston Street_Cycle Route 72 Priority Controlled Mini Roundabout.j9
**Path:** C:\AMA\AMA\AMA - Documents\001-03 - Aldi - Dar\48013 - Preston Street, Whitehaven\D Models and Drawings\Junctions10
**Report generation date:** 14/07/2023 07:35:18

---



### Summary of junction performance

| | AM | | | | | PM | | | | | Sat | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Set ID | Queue (PCU) | Delay (s) | RFC | LOS | Set ID | Queue (PCU) | Delay (s) | RFC | LOS | Set ID | Queue (PCU) | Delay (s) | RFC | LOS |
| | Base 2023 | | | | | | | | | | | | | | |
| Arm 1 | D1 | 0.4 | 7.52 | 0.26 | A | D2 | 2.1 | 23.60 | 0.69 | C | D3 | 1.3 | 13.96 | 0.58 | B |
| Arm 2 | | 1.2 | 8.83 | 0.54 | A | | 1.2 | 9.29 | 0.55 | A | | 1.2 | 9.61 | 0.56 | A |
| Arm 3 | | 0.9 | 7.52 | 0.48 | A | | 5.0 | 24.93 | 0.84 | C | | 1.8 | 11.24 | 0.64 | B |
| | Do Min 2028 | | | | | | | | | | | | | | |
| Arm 1 | D4 | 0.4 | 7.81 | 0.28 | A | D5 | 2.8 | 29.63 | 0.75 | D | D6 | 1.6 | 15.59 | 0.62 | C |
| Arm 2 | | 1.3 | 9.37 | 0.57 | A | | 1.3 | 9.91 | 0.57 | A | | 1.4 | 10.30 | 0.58 | B |
| Arm 3 | | 1.0 | 7.91 | 0.50 | A | | 6.8 | 32.86 | 0.89 | D | | 2.0 | 12.42 | 0.68 | B |
| | With Dev 2028 | | | | | | | | | | | | | | |
| Arm 1 | D7 | 0.4 | 8.17 | 0.29 | A | D8 | 3.5 | 38.09 | 0.80 | E | D9 | 2.0 | 19.99 | 0.67 | C |
| Arm 2 | | 1.6 | 10.61 | 0.62 | B | | 1.7 | 11.67 | 0.64 | B | | 1.7 | 11.82 | 0.64 | B |
| Arm 3 | | 1.2 | 8.49 | 0.54 | A | | 11.1 | 50.26 | 0.94 | F | | 3.1 | 17.01 | 0.76 | C |

*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.*

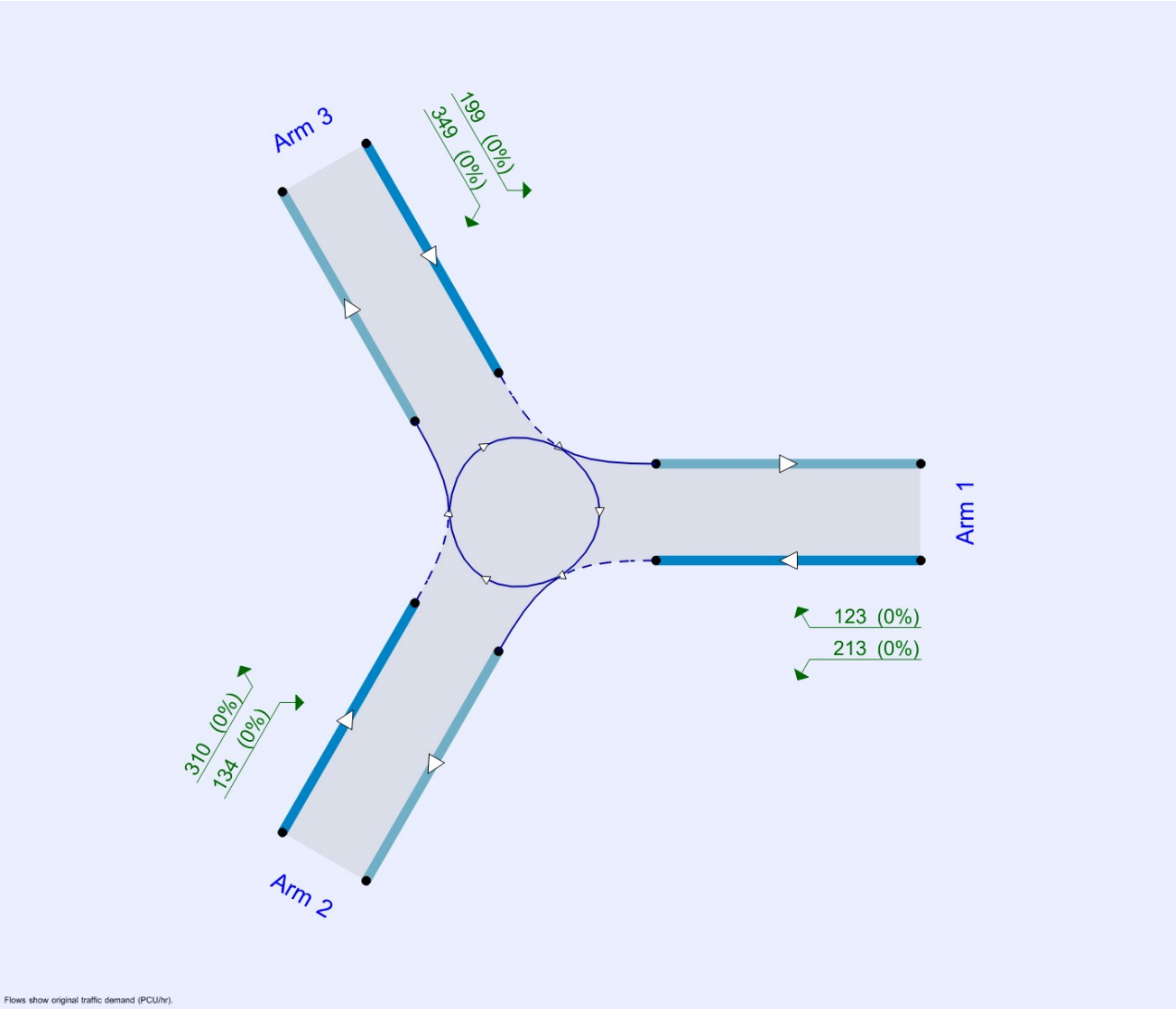
## File summary

### File Description

| | |
|---|---|
| **Title** | |
| **Location** | |
| **Site number** | |
| **Date** | 11/07/2023 |
| **Version** | |
| **Status** | (new file) |
| **Identifier** | |
| **Client** | |
| **Jobnumber** | |
| **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

| Mini-roundabout model | Vehicle length (m) | Calculate Queue Percentiles | Calculate detailed queueing delay | Calculate residual capacity | RFC Threshold | Average Delay threshold (s) | Queue threshold (PCU) |
|---|---|---|---|---|---|---|---|
| JUNCTIONS 9 | 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 | Base 2023 | AM | ONE HOUR | 00:00 | 01:30 | 15 | ✓ |
| D2 | Base 2023 | PM | ONE HOUR | 00:00 | 01:30 | 15 | ✓ |
| D3 | Base 2023 | Sat | ONE HOUR | 11:45 | 13:15 | 15 | ✓ |
| D4 | Do Min 2028 | AM | ONE HOUR | 00:00 | 01:30 | 15 | ✓ |
| D5 | Do Min 2028 | PM | ONE HOUR | 00:00 | 01:30 | 15 | ✓ |
| D6 | Do Min 2028 | Sat | ONE HOUR | 11:45 | 13:15 | 15 | ✓ |
| D7 | With Dev 2028 | AM | ONE HOUR | 00:00 | 01:30 | 15 | ✓ |
| D8 | With Dev 2028 | PM | ONE HOUR | 00:00 | 01:30 | 15 | ✓ |
| D9 | With Dev 2028 | Sat | ONE HOUR | 11:45 | 13:15 | 15 | ✓ |

## Analysis Set Details

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

# Base 2023, AM

### Data Errors and Warnings

| Severity | Area | Item | Description |
|---|---|---|---|
| Warning | Mini-roundabout | | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 84% of the total flow for the roundabout for one or more time segments] |
| 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 | Mini-roundabout | | 1, 2, 3 | 8.10 | A |

### Junction Network Options

| Driving side | Lighting | Road surface | In London |
|---|---|---|---|
| Left | Normal/unknown | Normal/unknown | |

## Arms

### Arms

| Arm | Name | Description |
|---|---|---|
| 1 | untitled | |
| 2 | untitled | |
| 3 | untitled | |

### Mini Roundabout Geometry

| Arm | Approach road half-width (m) | Minimum approach road half-width (m) | Entry width (m) | Effective flare length (m) | Distance to next arm (m) | Entry corner kerb line distance (m) | Gradient over 50m (%) | Kerbed central island |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.50 | 4.50 | 4.50 | 0.0 | 16.50 | 8.00 | 0.0 | |
| 2 | 3.50 | 3.50 | 4.00 | 10.0 | 19.70 | 15.00 | 0.0 | |
| 3 | 4.00 | 4.00 | 4.00 | 0.0 | 16.00 | 9.00 | 0.0 | |

### Slope / Intercept / Capacity

#### Arm Intercept Adjustments

| Arm | Type | Reason | Percentage intercept adjustment (%) |
|---|---|---|---|
| 1 | None | | |
| 2 | None | | |
| 3 | Percentage | Queue Length Calibration | 115.00 |

#### Roundabout Slope and Intercept used in model

| Arm | Final slope | Final intercept (PCU/hr) |
|---|---|---|
| 1 | 0.648 | 849 |
| 2 | 0.650 | 926 |
| 3 | 0.629 | 986 |

*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 | Base 2023 | AM | ONE HOUR | 00:00 | 01:30 | 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 | | ONE HOUR | ✓ | 154 | 100.000 |
| 2 | | ONE HOUR | ✓ | 436 | 100.000 |
| 3 | | ONE HOUR | ✓ | 402 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 100 | 54 |
| | 2 | 93 | 0 | 343 |
| | 3 | 120 | 282 | 0 |

# Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 0 | 0 |
| | 2 | 0 | 0 | 0 |
| | 3 | 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 | 0.26 | 7.52 | 0.4 | A | 141 | 212 |
| 2 | 0.54 | 8.83 | 1.2 | A | 400 | 600 |
| 3 | 0.48 | 7.52 | 0.9 | A | 369 | 553 |

## Main Results for each time segment

### 00:00 - 00:15

| 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 | 116 | 29 | 211 | 712 | 0.163 | 115 | 159 | 0.0 | 0.2 | 6.020 | A |
| 2 | 328 | 82 | 40 | 900 | 0.365 | 326 | 286 | 0.0 | 0.6 | 6.254 | A |
| 3 | 303 | 76 | 70 | 942 | 0.321 | 301 | 297 | 0.0 | 0.5 | 5.601 | A |

### 00:15 - 00:30

| 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 | 138 | 35 | 253 | 685 | 0.202 | 138 | 191 | 0.2 | 0.3 | 6.579 | A |
| 2 | 392 | 98 | 48 | 895 | 0.438 | 391 | 343 | 0.6 | 0.8 | 7.139 | A |
| 3 | 361 | 90 | 83 | 933 | 0.387 | 361 | 356 | 0.5 | 0.6 | 6.284 | A |

### 00:30 - 00:45

| 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 | 170 | 42 | 310 | 648 | 0.261 | 169 | 234 | 0.3 | 0.4 | 7.504 | A |
| 2 | 480 | 120 | 59 | 888 | 0.541 | 479 | 420 | 0.8 | 1.2 | 8.767 | A |
| 3 | 443 | 111 | 102 | 921 | 0.480 | 441 | 436 | 0.6 | 0.9 | 7.484 | A |

### 00:45 - 01:00

| 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 | 170 | 42 | 310 | 648 | 0.262 | 170 | 234 | 0.4 | 0.4 | 7.524 | A |
| 2 | 480 | 120 | 59 | 887 | 0.541 | 480 | 421 | 1.2 | 1.2 | 8.833 | A |
| 3 | 443 | 111 | 102 | 921 | 0.481 | 443 | 437 | 0.9 | 0.9 | 7.522 | A |

### 01:00 - 01:15

| 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 | 138 | 35 | 254 | 684 | 0.202 | 139 | 192 | 0.4 | 0.3 | 6.605 | A |
| 2 | 392 | 98 | 49 | 894 | 0.438 | 393 | 344 | 1.2 | 0.8 | 7.209 | A |
| 3 | 361 | 90 | 84 | 933 | 0.387 | 363 | 358 | 0.9 | 0.6 | 6.325 | A |

### 01:15 - 01:30

| 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 | 116 | 29 | 213 | 711 | 0.163 | 116 | 161 | 0.3 | 0.2 | 6.053 | A |
| 2 | 328 | 82 | 41 | 900 | 0.365 | 329 | 288 | 0.8 | 0.6 | 6.318 | A |
| 3 | 303 | 76 | 70 | 941 | 0.322 | 303 | 300 | 0.6 | 0.5 | 5.649 | A |

# Base 2023, 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 | Mini-roundabout | | 1, 2, 3 | 19.99 | C |

### Junction Network Options

| Driving side | Lighting | Road surface | In London |
|---|---|---|---|
| Left | Normal/unknown | 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 | Base 2023 | PM | ONE HOUR | 00:00 | 01:30 | 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 | | ONE HOUR | ✓ | 308 | 100.000 |
| 2 | | ONE HOUR | ✓ | 423 | 100.000 |
| 3 | | ONE HOUR | ✓ | 693 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 206 | 102 |
| | 2 | 119 | 0 | 304 |
| | 3 | 189 | 504 | 0 |

## Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 0 | 0 |
| | 2 | 0 | 0 | 0 |
| | 3 | 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 | 0.69 | 23.60 | 2.1 | C | 283 | 424 |
| 2 | 0.55 | 9.29 | 1.2 | A | 388 | 582 |
| 3 | 0.84 | 24.93 | 5.0 | C | 636 | 954 |

## Main Results for each time segment

### 00:00 - 00:15

| 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 | 232 | 58 | 376 | 606 | 0.383 | 229 | 230 | 0.0 | 0.6 | 9.511 | A |
| 2 | 318 | 80 | 76 | 877 | 0.363 | 316 | 529 | 0.0 | 0.6 | 6.397 | A |
| 3 | 522 | 130 | 89 | 930 | 0.561 | 517 | 303 | 0.0 | 1.3 | 8.620 | A |

### 00:15 - 00:30

| 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 | 277 | 69 | 451 | 557 | 0.497 | 275 | 276 | 0.6 | 1.0 | 12.721 | B |
| 2 | 380 | 95 | 91 | 867 | 0.439 | 379 | 635 | 0.6 | 0.8 | 7.375 | A |
| 3 | 623 | 156 | 107 | 918 | 0.678 | 620 | 364 | 1.3 | 2.0 | 11.933 | B |

### 00:30 - 00:45

| 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 | 339 | 85 | 547 | 495 | 0.686 | 335 | 336 | 1.0 | 2.0 | 21.956 | C |
| 2 | 466 | 116 | 111 | 854 | 0.545 | 464 | 771 | 0.8 | 1.2 | 9.196 | A |
| 3 | 763 | 191 | 131 | 903 | 0.845 | 752 | 444 | 2.0 | 4.7 | 22.359 | C |

### 00:45 - 01:00

| 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 | 339 | 85 | 554 | 490 | 0.692 | 339 | 339 | 2.0 | 2.1 | 23.596 | C |
| 2 | 466 | 116 | 112 | 853 | 0.546 | 466 | 781 | 1.2 | 1.2 | 9.288 | A |
| 3 | 763 | 191 | 131 | 903 | 0.845 | 762 | 447 | 4.7 | 5.0 | 24.925 | C |

### 01:00 - 01:15

| 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 | 277 | 69 | 461 | 550 | 0.503 | 281 | 280 | 2.1 | 1.0 | 13.595 | B |
| 2 | 380 | 95 | 93 | 866 | 0.439 | 382 | 649 | 1.2 | 0.8 | 7.469 | A |
| 3 | 623 | 156 | 107 | 918 | 0.679 | 634 | 368 | 5.0 | 2.2 | 13.160 | B |

**01:15 - 01:30**

| 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 | 232 | 58 | 382 | 602 | 0.385 | 233 | 233 | 1.0 | 0.6 | 9.823 | A |
| 2 | 318 | 80 | 77 | 876 | 0.364 | 319 | 538 | 0.8 | 0.6 | 6.478 | A |
| 3 | 522 | 130 | 90 | 929 | 0.562 | 525 | 307 | 2.2 | 1.3 | 8.995 | A |

# Base 2023, 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 | Mini-roundabout | | 1, 2, 3 | 11.38 | B |

### Junction Network Options

| Driving side | Lighting | Road surface | In London |
|---|---|---|---|
| Left | Normal/unknown | 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 | Base 2023 | Sat | ONE HOUR | 11:45 | 13:15 | 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 | | ONE HOUR | ✓ | 321 | 100.000 |
| 2 | | ONE HOUR | ✓ | 425 | 100.000 |
| 3 | | ONE HOUR | ✓ | 524 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 204 | 117 |
| | 2 | 128 | 0 | 297 |
| | 3 | 190 | 334 | 0 |

## Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 0 | 0 |
| | 2 | 0 | 0 | 0 |
| | 3 | 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 | 0.58 | 13.96 | 1.3 | B | 295 | 442 |
| 2 | 0.56 | 9.61 | 1.2 | A | 390 | 585 |
| 3 | 0.64 | 11.24 | 1.8 | B | 481 | 721 |

## Main Results for each time segment

### 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 | 242 | 60 | 250 | 687 | 0.352 | 240 | 238 | 0.0 | 0.5 | 7.989 | A |
| 2 | 320 | 80 | 87 | 869 | 0.368 | 318 | 402 | 0.0 | 0.6 | 6.498 | A |
| 3 | 394 | 99 | 96 | 925 | 0.426 | 392 | 309 | 0.0 | 0.7 | 6.709 | A |

### 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 | 289 | 72 | 299 | 655 | 0.441 | 288 | 285 | 0.5 | 0.8 | 9.770 | A |
| 2 | 382 | 96 | 105 | 858 | 0.445 | 381 | 482 | 0.6 | 0.8 | 7.537 | A |
| 3 | 471 | 118 | 115 | 913 | 0.516 | 470 | 371 | 0.7 | 1.0 | 8.094 | A |

### 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 | 353 | 88 | 366 | 612 | 0.578 | 351 | 349 | 0.8 | 1.3 | 13.688 | B |
| 2 | 468 | 117 | 128 | 843 | 0.555 | 466 | 589 | 0.8 | 1.2 | 9.513 | A |
| 3 | 577 | 144 | 140 | 897 | 0.643 | 574 | 454 | 1.0 | 1.7 | 11.048 | 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 | 353 | 88 | 368 | 611 | 0.579 | 353 | 350 | 1.3 | 1.3 | 13.962 | B |
| 2 | 468 | 117 | 129 | 842 | 0.556 | 468 | 592 | 1.2 | 1.2 | 9.609 | A |
| 3 | 577 | 144 | 141 | 897 | 0.643 | 577 | 456 | 1.7 | 1.8 | 11.236 | B |

### 12:45 - 13:00

| 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 | 289 | 72 | 302 | 653 | 0.442 | 291 | 287 | 1.3 | 0.8 | 9.983 | A |
| 2 | 382 | 96 | 106 | 857 | 0.446 | 384 | 487 | 1.2 | 0.8 | 7.629 | A |
| 3 | 471 | 118 | 116 | 913 | 0.516 | 474 | 374 | 1.8 | 1.1 | 8.251 | A |

**13:00 - 13:15**

| 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 | 242 | 60 | 252 | 686 | 0.352 | 243 | 240 | 0.8 | 0.6 | 8.145 | A |
| 2 | 320 | 80 | 88 | 869 | 0.368 | 321 | 407 | 0.8 | 0.6 | 6.583 | A |
| 3 | 394 | 99 | 97 | 925 | 0.427 | 396 | 313 | 1.1 | 0.8 | 6.825 | A |

# Do Min 2028, AM

### Data Errors and Warnings

| Severity | Area | Item | Description |
|---|---|---|---|
| Warning | Mini-roundabout | | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 84% of the total flow for the roundabout for one or more time segments] |
| 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 | Mini-roundabout | | 1, 2, 3 | 8.54 | A |

### Junction Network Options

| Driving side | Lighting | Road surface | In London |
|---|---|---|---|
| Left | Normal/unknown | 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 | Do Min 2028 | AM | ONE HOUR | 00:00 | 01:30 | 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 | | ONE HOUR | ✓ | 161 | 100.000 |
| 2 | | ONE HOUR | ✓ | 456 | 100.000 |
| 3 | | ONE HOUR | ✓ | 421 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 105 | 56 |
| | 2 | 97 | 0 | 359 |
| | 3 | 125 | 296 | 0 |

## Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 0 | 0 |
| | 2 | 0 | 0 | 0 |
| | 3 | 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 | 0.28 | 7.81 | 0.4 | A | 148 | 222 |
| 2 | 0.57 | 9.37 | 1.3 | A | 418 | 628 |
| 3 | 0.50 | 7.91 | 1.0 | A | 386 | 579 |

## Main Results for each time segment

### 00:00 - 00:15

| 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 | 121 | 30 | 221 | 706 | 0.172 | 120 | 166 | 0.0 | 0.2 | 6.142 | A |
| 2 | 343 | 86 | 42 | 899 | 0.382 | 341 | 300 | 0.0 | 0.6 | 6.423 | A |
| 3 | 317 | 79 | 73 | 940 | 0.337 | 315 | 310 | 0.0 | 0.5 | 5.742 | A |

### 00:15 - 00:30

| 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 | 145 | 36 | 266 | 677 | 0.214 | 144 | 199 | 0.2 | 0.3 | 6.757 | A |
| 2 | 410 | 102 | 50 | 893 | 0.459 | 409 | 360 | 0.6 | 0.8 | 7.418 | A |
| 3 | 378 | 95 | 87 | 931 | 0.407 | 378 | 372 | 0.5 | 0.7 | 6.502 | A |

### 00:30 - 00:45

| 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 | 177 | 44 | 325 | 639 | 0.278 | 177 | 244 | 0.3 | 0.4 | 7.791 | A |
| 2 | 502 | 126 | 62 | 886 | 0.567 | 500 | 440 | 0.8 | 1.3 | 9.287 | A |
| 3 | 464 | 116 | 106 | 919 | 0.505 | 462 | 455 | 0.7 | 1.0 | 7.866 | A |

### 00:45 - 01:00

| 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 | 177 | 44 | 326 | 638 | 0.278 | 177 | 244 | 0.4 | 0.4 | 7.813 | A |
| 2 | 502 | 126 | 62 | 886 | 0.567 | 502 | 441 | 1.3 | 1.3 | 9.370 | A |
| 3 | 464 | 116 | 107 | 918 | 0.505 | 463 | 457 | 1.0 | 1.0 | 7.913 | A |

### 01:00 - 01:15

| 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 | 145 | 36 | 267 | 676 | 0.214 | 145 | 200 | 0.4 | 0.3 | 6.787 | A |
| 2 | 410 | 102 | 50 | 893 | 0.459 | 412 | 362 | 1.3 | 0.9 | 7.501 | A |
| 3 | 378 | 95 | 88 | 930 | 0.407 | 380 | 375 | 1.0 | 0.7 | 6.551 | A |

**01:15 - 01:30**

| 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 | 121 | 30 | 223 | 704 | 0.172 | 121 | 168 | 0.3 | 0.2 | 6.178 | A |
| 2 | 343 | 86 | 42 | 899 | 0.382 | 344 | 303 | 0.9 | 0.6 | 6.504 | A |
| 3 | 317 | 79 | 73 | 939 | 0.337 | 318 | 313 | 0.7 | 0.5 | 5.796 | A |

# Do Min 2028, 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 | Mini-roundabout | | 1, 2, 3 | 25.35 | D |

### Junction Network Options

| Driving side | Lighting | Road surface | In London |
|---|---|---|---|
| Left | Normal/unknown | 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 | Do Min 2028 | PM | ONE HOUR | 00:00 | 01:30 | 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 | | ONE HOUR | ✓ | 323 | 100.000 |
| 2 | | ONE HOUR | ✓ | 442 | 100.000 |
| 3 | | ONE HOUR | ✓ | 725 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 216 | 107 |
| | 2 | 124 | 0 | 318 |
| | 3 | 198 | 527 | 0 |

## Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 0 | 0 |
| | 2 | 0 | 0 | 0 |
| | 3 | 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 | 0.75 | 29.63 | 2.8 | D | 296 | 445 |
| 2 | 0.57 | 9.91 | 1.3 | A | 406 | 608 |
| 3 | 0.89 | 32.86 | 6.8 | D | 665 | 998 |

## Main Results for each time segment

### 00:00 - 00:15

| 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 | 243 | 61 | 393 | 595 | 0.409 | 240 | 240 | 0.0 | 0.7 | 10.089 | B |
| 2 | 333 | 83 | 80 | 874 | 0.381 | 330 | 553 | 0.0 | 0.6 | 6.589 | A |
| 3 | 546 | 136 | 93 | 927 | 0.589 | 540 | 317 | 0.0 | 1.4 | 9.176 | A |

### 00:15 - 00:30

| 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 | 290 | 73 | 471 | 544 | 0.534 | 289 | 288 | 0.7 | 1.1 | 14.002 | B |
| 2 | 397 | 99 | 96 | 864 | 0.460 | 396 | 664 | 0.6 | 0.8 | 7.685 | A |
| 3 | 652 | 163 | 111 | 916 | 0.712 | 648 | 381 | 1.4 | 2.4 | 13.255 | B |

### 00:30 - 00:45

| 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 | 356 | 89 | 569 | 480 | 0.740 | 350 | 350 | 1.1 | 2.6 | 26.445 | D |
| 2 | 487 | 122 | 116 | 851 | 0.572 | 485 | 803 | 0.8 | 1.3 | 9.786 | A |
| 3 | 798 | 200 | 136 | 900 | 0.887 | 783 | 465 | 2.4 | 6.2 | 27.657 | D |

### 00:45 - 01:00

| 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 | 356 | 89 | 578 | 474 | 0.750 | 355 | 354 | 2.6 | 2.8 | 29.632 | D |
| 2 | 487 | 122 | 118 | 850 | 0.573 | 487 | 816 | 1.3 | 1.3 | 9.910 | A |
| 3 | 798 | 200 | 137 | 900 | 0.887 | 796 | 468 | 6.2 | 6.8 | 32.861 | D |

### 01:00 - 01:15

| 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 | 290 | 73 | 486 | 534 | 0.544 | 297 | 295 | 2.8 | 1.2 | 15.520 | C |
| 2 | 397 | 99 | 98 | 862 | 0.461 | 399 | 684 | 1.3 | 0.9 | 7.806 | A |
| 3 | 652 | 163 | 112 | 915 | 0.712 | 669 | 385 | 6.8 | 2.6 | 15.508 | C |

**01:15 - 01:30**

| 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 | 243 | 61 | 400 | 590 | 0.412 | 245 | 244 | 1.2 | 0.7 | 10.505 | B |
| 2 | 333 | 83 | 81 | 873 | 0.381 | 334 | 564 | 0.9 | 0.6 | 6.686 | A |
| 3 | 546 | 136 | 94 | 927 | 0.589 | 550 | 321 | 2.6 | 1.5 | 9.681 | A |

# Do Min 2028, 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 | Mini-roundabout | | 1, 2, 3 | 12.51 | B |

### Junction Network Options

| Driving side | Lighting | Road surface | In London |
|---|---|---|---|
| Left | Normal/unknown | 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 | Do Min 2028 | Sat | ONE HOUR | 11:45 | 13:15 | 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 | | ONE HOUR | ✓ | 336 | 100.000 |
| 2 | | ONE HOUR | ✓ | 444 | 100.000 |
| 3 | | ONE HOUR | ✓ | 548 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 213 | 123 |
| | 2 | 134 | 0 | 310 |
| | 3 | 199 | 349 | 0 |

## Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 0 | 0 |
| | 2 | 0 | 0 | 0 |
| | 3 | 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 | 0.62 | 15.59 | 1.6 | C | 308 | 462 |
| 2 | 0.58 | 10.30 | 1.4 | B | 407 | 611 |
| 3 | 0.68 | 12.42 | 2.0 | B | 503 | 754 |

## Main Results for each time segment

### 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 | 253 | 63 | 261 | 680 | 0.372 | 251 | 249 | 0.0 | 0.6 | 8.337 | A |
| 2 | 334 | 84 | 92 | 866 | 0.386 | 332 | 420 | 0.0 | 0.6 | 6.703 | A |
| 3 | 413 | 103 | 100 | 923 | 0.447 | 409 | 323 | 0.0 | 0.8 | 6.973 | A |

### 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 | 302 | 76 | 313 | 646 | 0.467 | 301 | 299 | 0.6 | 0.9 | 10.386 | B |
| 2 | 399 | 100 | 110 | 854 | 0.467 | 398 | 504 | 0.6 | 0.9 | 7.872 | A |
| 3 | 493 | 123 | 120 | 910 | 0.541 | 491 | 388 | 0.8 | 1.2 | 8.568 | A |

### 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 | 370 | 92 | 382 | 602 | 0.615 | 367 | 365 | 0.9 | 1.5 | 15.188 | C |
| 2 | 489 | 122 | 134 | 839 | 0.583 | 487 | 615 | 0.9 | 1.4 | 10.174 | B |
| 3 | 603 | 151 | 147 | 893 | 0.676 | 600 | 474 | 1.2 | 2.0 | 12.142 | 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 | 370 | 92 | 384 | 600 | 0.616 | 370 | 367 | 1.5 | 1.6 | 15.591 | C |
| 2 | 489 | 122 | 135 | 838 | 0.583 | 489 | 619 | 1.4 | 1.4 | 10.300 | B |
| 3 | 603 | 151 | 148 | 893 | 0.676 | 603 | 477 | 2.0 | 2.0 | 12.417 | B |

### 12:45 - 13:00

| 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 | 302 | 76 | 316 | 644 | 0.469 | 305 | 301 | 1.6 | 0.9 | 10.680 | B |
| 2 | 399 | 100 | 112 | 854 | 0.468 | 401 | 509 | 1.4 | 0.9 | 7.990 | A |
| 3 | 493 | 123 | 121 | 909 | 0.542 | 496 | 392 | 2.0 | 1.2 | 8.779 | A |

**13:00 - 13:15**

| 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 | 253 | 63 | 264 | 678 | 0.373 | 254 | 252 | 0.9 | 0.6 | 8.514 | A |
| 2 | 334 | 84 | 93 | 866 | 0.386 | 335 | 425 | 0.9 | 0.6 | 6.803 | A |
| 3 | 413 | 103 | 101 | 922 | 0.448 | 414 | 327 | 1.2 | 0.8 | 7.113 | A |

# With Dev 2028, AM

### Data Errors and Warnings

| Severity | Area | Item | Description |
|---|---|---|---|
| Warning | Mini-roundabout | | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 85% of the total flow for the roundabout for one or more time segments] |
| 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 | Mini-roundabout | | 1, 2, 3 | 9.40 | A |

### Junction Network Options

| Driving side | Lighting | Road surface | In London |
|---|---|---|---|
| Left | Normal/unknown | 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 |
|---|---|---|---|---|---|---|---|
| D7 | With Dev 2028 | AM | ONE HOUR | 00:00 | 01:30 | 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 | | ONE HOUR | ✓ | 161 | 100.000 |
| 2 | | ONE HOUR | ✓ | 497 | 100.000 |
| 3 | | ONE HOUR | ✓ | 449 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 105 | 56 |
| | 2 | 97 | 0 | 400 |
| | 3 | 125 | 324 | 0 |

## Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 0 | 0 |
| | 2 | 0 | 0 | 0 |
| | 3 | 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 | 0.29 | 8.17 | 0.4 | A | 148 | 222 |
| 2 | 0.62 | 10.61 | 1.6 | B | 456 | 684 |
| 3 | 0.54 | 8.49 | 1.2 | A | 412 | 618 |

## Main Results for each time segment

### 00:00 - 00:15

| 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 | 121 | 30 | 242 | 692 | 0.175 | 120 | 166 | 0.0 | 0.2 | 6.288 | A |
| 2 | 374 | 94 | 42 | 899 | 0.416 | 371 | 321 | 0.0 | 0.7 | 6.790 | A |
| 3 | 338 | 85 | 72 | 940 | 0.360 | 336 | 341 | 0.0 | 0.6 | 5.938 | A |

### 00:15 - 00:30

| 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 | 145 | 36 | 291 | 661 | 0.219 | 144 | 199 | 0.2 | 0.3 | 6.970 | A |
| 2 | 447 | 112 | 50 | 893 | 0.500 | 446 | 385 | 0.7 | 1.0 | 8.019 | A |
| 3 | 404 | 101 | 87 | 931 | 0.434 | 403 | 409 | 0.6 | 0.8 | 6.809 | A |

### 00:30 - 00:45

| 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 | 177 | 44 | 356 | 619 | 0.287 | 177 | 244 | 0.3 | 0.4 | 8.137 | A |
| 2 | 547 | 137 | 61 | 886 | 0.618 | 545 | 471 | 1.0 | 1.6 | 10.476 | B |
| 3 | 494 | 124 | 106 | 919 | 0.538 | 493 | 500 | 0.8 | 1.1 | 8.423 | A |

### 00:45 - 01:00

| 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 | 177 | 44 | 357 | 618 | 0.287 | 177 | 244 | 0.4 | 0.4 | 8.167 | A |
| 2 | 547 | 137 | 62 | 886 | 0.618 | 547 | 472 | 1.6 | 1.6 | 10.615 | B |
| 3 | 494 | 124 | 107 | 918 | 0.538 | 494 | 502 | 1.1 | 1.2 | 8.487 | A |

### 01:00 - 01:15

| 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 | 145 | 36 | 292 | 660 | 0.219 | 145 | 200 | 0.4 | 0.3 | 7.002 | A |
| 2 | 447 | 112 | 51 | 893 | 0.500 | 449 | 387 | 1.6 | 1.0 | 8.146 | A |
| 3 | 404 | 101 | 88 | 930 | 0.434 | 405 | 412 | 1.2 | 0.8 | 6.875 | A |

**01:15 - 01:30**

| 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 | 121 | 30 | 245 | 691 | 0.176 | 121 | 168 | 0.3 | 0.2 | 6.327 | A |
| 2 | 374 | 94 | 42 | 899 | 0.416 | 375 | 324 | 1.0 | 0.7 | 6.897 | A |
| 3 | 338 | 85 | 73 | 939 | 0.360 | 339 | 344 | 0.8 | 0.6 | 6.004 | A |

# With Dev 2028, 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 | Mini-roundabout | | 1, 2, 3 | 35.79 | E |

### Junction Network Options

| Driving side | Lighting | Road surface | In London |
|---|---|---|---|
| Left | Normal/unknown | 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 |
|---|---|---|---|---|---|---|---|
| D8 | With Dev 2028 | PM | ONE HOUR | 00:00 | 01:30 | 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 | | ONE HOUR | ✓ | 323 | 100.000 |
| 2 | | ONE HOUR | ✓ | 492 | 100.000 |
| 3 | | ONE HOUR | ✓ | 769 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 216 | 107 |
| | 2 | 124 | 0 | 368 |
| | 3 | 198 | 571 | 0 |

## Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 0 | 0 |
| | 2 | 0 | 0 | 0 |
| | 3 | 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 | 0.80 | 38.09 | 3.5 | E | 296 | 445 |
| 2 | 0.64 | 11.67 | 1.7 | B | 451 | 677 |
| 3 | 0.94 | 50.26 | 11.1 | F | 706 | 1058 |

## Main Results for each time segment

### 00:00 - 00:15

| 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 | 243 | 61 | 425 | 574 | 0.424 | 240 | 240 | 0.0 | 0.7 | 10.708 | B |
| 2 | 370 | 93 | 80 | 874 | 0.424 | 368 | 586 | 0.0 | 0.7 | 7.064 | A |
| 3 | 579 | 145 | 93 | 927 | 0.624 | 572 | 354 | 0.0 | 1.6 | 9.976 | A |

### 00:15 - 00:30

| 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 | 290 | 73 | 510 | 519 | 0.559 | 288 | 288 | 0.7 | 1.2 | 15.470 | C |
| 2 | 442 | 111 | 96 | 864 | 0.512 | 441 | 702 | 0.7 | 1.0 | 8.487 | A |
| 3 | 691 | 173 | 111 | 916 | 0.755 | 686 | 425 | 1.6 | 2.9 | 15.347 | C |

### 00:30 - 00:45

| 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 | 356 | 89 | 610 | 454 | 0.783 | 348 | 347 | 1.2 | 3.1 | 31.918 | D |
| 2 | 542 | 135 | 115 | 851 | 0.636 | 539 | 843 | 1.0 | 1.7 | 11.436 | B |
| 3 | 847 | 212 | 136 | 900 | 0.941 | 821 | 518 | 2.9 | 9.2 | 37.235 | E |

### 00:45 - 01:00

| 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 | 356 | 89 | 623 | 445 | 0.799 | 354 | 353 | 3.1 | 3.5 | 38.091 | E |
| 2 | 542 | 135 | 117 | 850 | 0.637 | 542 | 860 | 1.7 | 1.7 | 11.666 | B |
| 3 | 847 | 212 | 136 | 900 | 0.941 | 839 | 522 | 9.2 | 11.1 | 50.261 | F |

### 01:00 - 01:15

| 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 | 290 | 73 | 536 | 502 | 0.579 | 299 | 298 | 3.5 | 1.4 | 18.414 | C |
| 2 | 442 | 111 | 99 | 862 | 0.513 | 445 | 736 | 1.7 | 1.1 | 8.691 | A |
| 3 | 691 | 173 | 112 | 915 | 0.756 | 722 | 432 | 11.1 | 3.3 | 21.166 | C |

**01:15 - 01:30**

| 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 | 243 | 61 | 435 | 568 | 0.428 | 246 | 244 | 1.4 | 0.8 | 11.283 | B |
| 2 | 370 | 93 | 81 | 873 | 0.424 | 372 | 599 | 1.1 | 0.7 | 7.197 | A |
| 3 | 579 | 145 | 94 | 927 | 0.625 | 585 | 359 | 3.3 | 1.7 | 10.741 | B |

# With Dev 2028, 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 | Mini-roundabout | | 1, 2, 3 | 15.96 | C |

### Junction Network Options

| Driving side | Lighting | Road surface | In London |
|---|---|---|---|
| Left | Normal/unknown | 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 |
|---|---|---|---|---|---|---|---|
| D9 | With Dev 2028 | Sat | ONE HOUR | 11:45 | 13:15 | 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 | | ONE HOUR | ✓ | 336 | 100.000 |
| 2 | | ONE HOUR | ✓ | 485 | 100.000 |
| 3 | | ONE HOUR | ✓ | 620 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 213 | 123 |
| | 2 | 134 | 0 | 351 |
| | 3 | 199 | 421 | 0 |

## Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| From | 1 | 0 | 0 | 0 |
| | 2 | 0 | 0 | 0 |
| | 3 | 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 | 0.67 | 19.99 | 2.0 | C | 308 | 462 |
| 2 | 0.64 | 11.82 | 1.7 | B | 445 | 668 |
| 3 | 0.76 | 17.01 | 3.1 | C | 569 | 853 |

## Main Results for each time segment

### 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 | 253 | 63 | 314 | 646 | 0.392 | 250 | 249 | 0.0 | 0.6 | 9.055 | A |
| 2 | 365 | 91 | 92 | 866 | 0.421 | 362 | 473 | 0.0 | 0.7 | 7.101 | A |
| 3 | 467 | 117 | 100 | 923 | 0.506 | 463 | 354 | 0.0 | 1.0 | 7.764 | A |

### 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 | 302 | 76 | 377 | 605 | 0.499 | 301 | 298 | 0.6 | 1.0 | 11.782 | B |
| 2 | 436 | 109 | 110 | 855 | 0.510 | 435 | 568 | 0.7 | 1.0 | 8.551 | A |
| 3 | 557 | 139 | 120 | 910 | 0.613 | 555 | 425 | 1.0 | 1.5 | 10.086 | B |

### 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 | 370 | 92 | 460 | 551 | 0.671 | 366 | 364 | 1.0 | 1.9 | 19.045 | C |
| 2 | 534 | 133 | 134 | 839 | 0.637 | 531 | 692 | 1.0 | 1.7 | 11.600 | B |
| 3 | 683 | 171 | 147 | 893 | 0.764 | 677 | 519 | 1.5 | 3.0 | 16.191 | C |

### 12:30 - 12:45

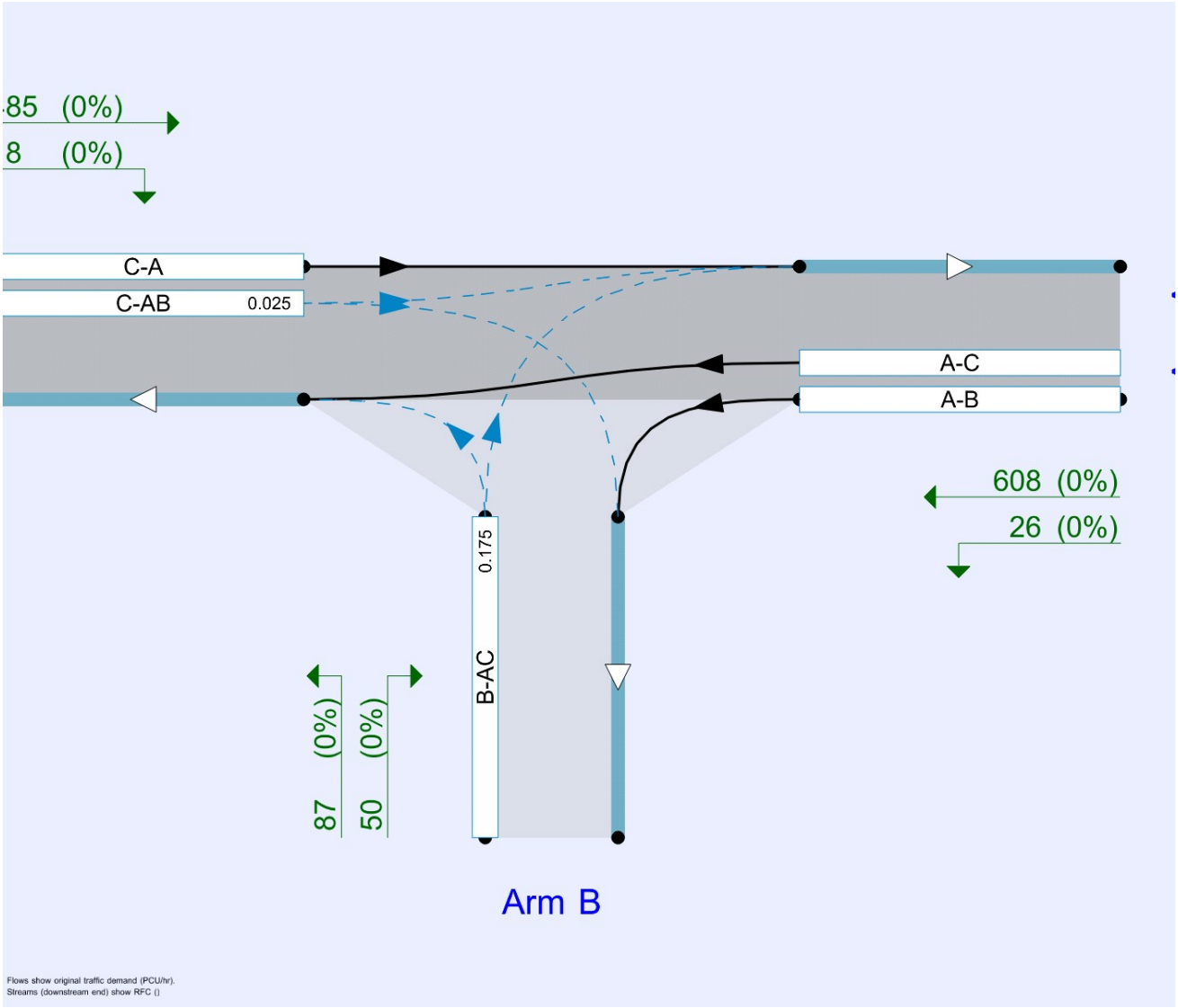
| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 370 | 92 | 463 | 549 | 0.674 | 370 | 366 | 1.9 | 2.0 | 19.992 | C |
| 2 | 534 | 133 | 135 | 838 | 0.637 | 534 | 698 | 1.7 | 1.7 | 11.821 | B |
| 3 | 683 | 171 | 148 | 893 | 0.765 | 682 | 522 | 3.0 | 3.1 | 17.009 | C |

### 12:45 - 13:00

| 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 | 302 | 76 | 383 | 601 | 0.502 | 306 | 302 | 2.0 | 1.0 | 12.339 | B |
| 2 | 436 | 109 | 112 | 853 | 0.511 | 439 | 576 | 1.7 | 1.1 | 8.736 | A |
| 3 | 557 | 139 | 121 | 909 | 0.613 | 563 | 429 | 3.1 | 1.6 | 10.581 | B |

**13:00 - 13:15**

| 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 | 253 | 63 | 319 | 643 | 0.394 | 254 | 252 | 1.0 | 0.7 | 9.309 | A |
| 2 | 365 | 91 | 93 | 866 | 0.422 | 366 | 480 | 1.1 | 0.7 | 7.231 | A |
| 3 | 467 | 117 | 101 | 922 | 0.506 | 469 | 358 | 1.6 | 1.0 | 7.994 | A |




*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 | 2028 With Dev | AM | ONE HOUR | 08:00 | 09:30 | 15 |
| D2 | 2028 With Dev | PM | ONE HOUR | 17:00 | 18:30 | 15 |
| D3 | 2028 With Dev | SAT | ONE HOUR | 12:00 | 13:30 | 15 |

## Analysis Set Details

| ID | Network flow scaling factor (%) |
|---|---|
| A1 | 100.000 |

# 2028 With Dev, AM

## Data Errors and Warnings

| Severity | Area | Item | Description |
|---|---|---|---|
| Warning | Vehicle Mix | | HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning. |

# Junction Network

## Junctions

| Junction | Name | Junction type | Major road direction | Use circulating lanes | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| 1 | untitled | T-Junction | Two-way | | 0.42 | A |

## Junction Network Options

| Driving side | Lighting |
|---|---|
| Left | Normal/unknown |

# Arms

## Arms

| Arm | Name | Description | Arm type |
|---|---|---|---|
| A | Preston St / Cycle Route 72 North | | Major |
| B | Proposed Site Access | | Minor |
| C | Preston St / Cycle Route 72 South | | Major |

## Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Has right turn bay | Width for right turn (m) | Visibility for right turn (m) | Blocks? | Blocking queue (PCU) |
|---|---|---|---|---|---|---|---|
| C | 13.00 | | ✓ | 2.50 | 70.0 | ✓ | 4.00 |

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

## Minor Arm Geometry

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

## 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 | 615 | 0.078 | 0.197 | 0.124 | 0.281 |
| B-C | 781 | 0.083 | 0.211 | - | - |
| C-B | 635 | 0.171 | 0.171 | - | - |

*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 | 2028 With Dev | AM | ONE HOUR | 08:00 | 09:30 | 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 | | ✓ | 323 | 100.000 |
| B | | ✓ | 48 | 100.000 |
| C | | ✓ | 488 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | A | B | C |
| From | A | 0 | 8 | 315 |
| | B | 17 | 0 | 31 |
| | C | 481 | 7 | 0 |

# Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | A | B | C |
| From | A | 0 | 0 | 0 |
| | B | 0 | 0 | 0 |
| | C | 0 | 0 | 0 |

# Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-AC | 0.09 | 6.52 | 0.1 | A |
| C-AB | 0.01 | 6.36 | 0.0 | A |
| C-A | | | | |
| A-B | | | | |
| A-C | | | | |

## Main Results for each time segment

### 08:00 - 08:15

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 36 | 640 | 0.056 | 36 | 0.1 | 5.958 | A |
| C-AB | 5 | 593 | 0.009 | 5 | 0.0 | 6.124 | A |
| C-A | 362 | | | 362 | | | |
| A-B | 6 | | | 6 | | | |
| A-C | 237 | | | 237 | | | |

### 08:15 - 08:30

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 43 | 625 | 0.069 | 43 | 0.1 | 6.181 | A |
| C-AB | 6 | 585 | 0.011 | 6 | 0.0 | 6.220 | A |
| C-A | 432 | | | 432 | | | |
| A-B | 7 | | | 7 | | | |
| A-C | 283 | | | 283 | | | |

### 08:30 - 08:45

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 53 | 605 | 0.087 | 53 | 0.1 | 6.518 | A |
| C-AB | 8 | 574 | 0.013 | 8 | 0.0 | 6.359 | A |
| C-A | 530 | | | 530 | | | |
| A-B | 9 | | | 9 | | | |
| A-C | 347 | | | 347 | | | |

### 08:45 - 09:00

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 53 | 605 | 0.087 | 53 | 0.1 | 6.518 | A |
| C-AB | 8 | 574 | 0.013 | 8 | 0.0 | 6.359 | A |
| C-A | 530 | | | 530 | | | |
| A-B | 9 | | | 9 | | | |
| A-C | 347 | | | 347 | | | |

### 09:00 - 09:15

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 43 | 625 | 0.069 | 43 | 0.1 | 6.185 | A |
| C-AB | 6 | 585 | 0.011 | 6 | 0.0 | 6.223 | A |
| C-A | 432 | | | 432 | | | |
| A-B | 7 | | | 7 | | | |
| A-C | 283 | | | 283 | | | |

### 09:15 - 09:30

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 36 | 640 | 0.056 | 36 | 0.1 | 5.963 | A |
| C-AB | 5 | 593 | 0.009 | 5 | 0.0 | 6.124 | A |
| C-A | 362 | | | 362 | | | |
| A-B | 6 | | | 6 | | | |
| A-C | 237 | | | 237 | | | |

# 2028 With Dev, 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 | | 0.48 | 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 | 2028 With Dev | PM | ONE HOUR | 17:00 | 18:30 | 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 | | ✓ | 571 | 100.000 |
| B | | ✓ | 66 | 100.000 |
| C | | ✓ | 470 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | A | B | C |
| From | A | 0 | 12 | 559 |
| | B | 16 | 0 | 50 |
| | C | 462 | 8 | 0 |

## Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | A | B | C |
| From | A | 0 | 0 | 0 |
| | B | 0 | 0 | 0 |
| | C | 0 | 0 | 0 |

# Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-AC | 0.13 | 7.13 | 0.1 | A |
| C-AB | 0.02 | 6.94 | 0.0 | A |
| C-A | | | | |
| A-B | | | | |
| A-C | | | | |

## Main Results for each time segment

### 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 | 50 | 628 | 0.079 | 49 | 0.1 | 6.220 | A |
| C-AB | 6 | 561 | 0.011 | 6 | 0.0 | 6.485 | A |
| C-A | 348 | | | 348 | | | |
| A-B | 9 | | | 9 | | | |
| A-C | 421 | | | 421 | | | |

### 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 | 59 | 607 | 0.098 | 59 | 0.1 | 6.573 | A |
| C-AB | 7 | 547 | 0.013 | 7 | 0.0 | 6.670 | A |
| C-A | 415 | | | 415 | | | |
| A-B | 11 | | | 11 | | | |
| A-C | 503 | | | 503 | | | |

### 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 | 73 | 578 | 0.126 | 73 | 0.1 | 7.126 | A |
| C-AB | 9 | 527 | 0.017 | 9 | 0.0 | 6.945 | A |
| C-A | 509 | | | 509 | | | |
| A-B | 13 | | | 13 | | | |
| A-C | 615 | | | 615 | | | |

### 17:45 - 18:00

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 73 | 578 | 0.126 | 73 | 0.1 | 7.128 | A |
| C-AB | 9 | 527 | 0.017 | 9 | 0.0 | 6.945 | A |
| C-A | 509 | | | 509 | | | |
| A-B | 13 | | | 13 | | | |
| A-C | 615 | | | 615 | | | |

### 18:00 - 18:15

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 59 | 607 | 0.098 | 59 | 0.1 | 6.579 | A |
| C-AB | 7 | 547 | 0.013 | 7 | 0.0 | 6.673 | A |
| C-A | 415 | | | 415 | | | |
| A-B | 11 | | | 11 | | | |
| A-C | 503 | | | 503 | | | |

### 18:15 - 18:30

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 50 | 628 | 0.079 | 50 | 0.1 | 6.229 | A |
| C-AB | 6 | 561 | 0.011 | 6 | 0.0 | 6.485 | A |
| C-A | 348 | | | 348 | | | |
| A-B | 9 | | | 9 | | | |
| A-C | 421 | | | 421 | | | |

# 2028 With Dev, 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 | | 1.12 | 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 | 2028 With Dev | SAT | ONE HOUR | 12:00 | 13:30 | 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 | | ✓ | 634 | 100.000 |
| B | | ✓ | 137 | 100.000 |
| C | | ✓ | 503 | 100.000 |

## Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | A | B | C |
| From | A | 0 | 26 | 608 |
| | B | 50 | 0 | 87 |
| | C | 485 | 18 | 0 |

## Vehicle Mix

### Heavy Vehicle Percentages

| | | To | | |
|---|---|---|---|---|
| | | A | B | C |
| From | A | 0 | 0 | 0 |
| | B | 0 | 0 | 0 |
| | C | 0 | 0 | 0 |

# Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-AC | 0.28 | 9.49 | 0.4 | A |
| C-AB | 0.04 | 7.27 | 0.0 | A |
| C-A | | | | |
| A-B | | | | |
| A-C | | | | |

## Main Results for each time segment

### 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 | 103 | 589 | 0.175 | 102 | 0.2 | 7.388 | A |
| C-AB | 14 | 553 | 0.025 | 13 | 0.0 | 6.673 | A |
| C-A | 365 | | | 365 | | | |
| A-B | 20 | | | 20 | | | |
| A-C | 458 | | | 458 | | | |

### 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 | 123 | 564 | 0.218 | 123 | 0.3 | 8.149 | A |
| C-AB | 16 | 537 | 0.030 | 16 | 0.0 | 6.909 | A |
| C-A | 436 | | | 436 | | | |
| A-B | 23 | | | 23 | | | |
| A-C | 547 | | | 547 | | | |

### 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 | 151 | 530 | 0.285 | 150 | 0.4 | 9.470 | A |
| C-AB | 20 | 515 | 0.038 | 20 | 0.0 | 7.266 | A |
| C-A | 534 | | | 534 | | | |
| A-B | 29 | | | 29 | | | |
| A-C | 669 | | | 669 | | | |

### 12:45 - 13:00

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 151 | 530 | 0.285 | 151 | 0.4 | 9.493 | A |
| C-AB | 20 | 515 | 0.038 | 20 | 0.0 | 7.266 | A |
| C-A | 534 | | | 534 | | | |
| A-B | 29 | | | 29 | | | |
| A-C | 669 | | | 669 | | | |

### 13:00 - 13:15

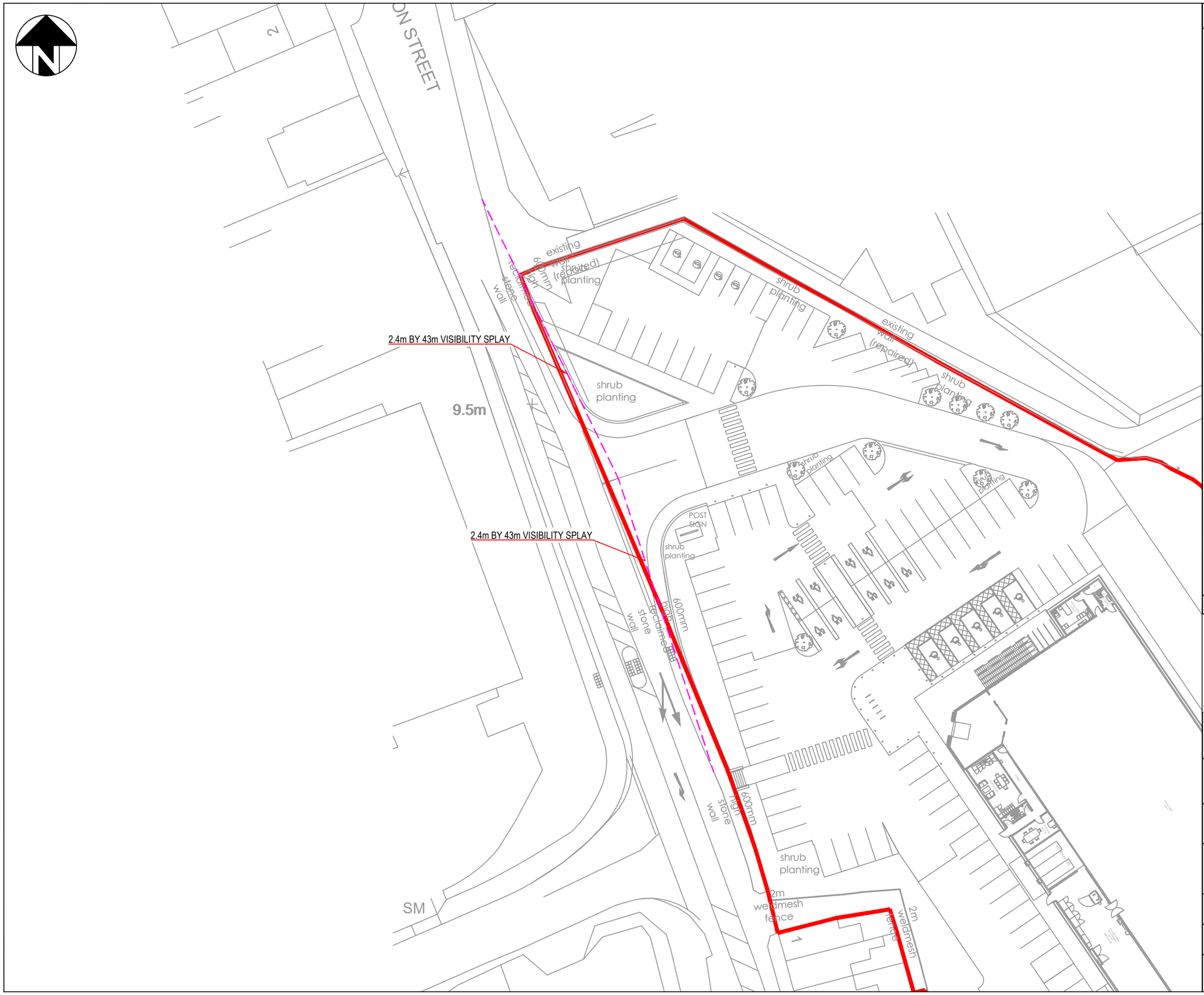
| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 123 | 564 | 0.218 | 124 | 0.3 | 8.176 | A |
| C-AB | 16 | 537 | 0.030 | 16 | 0.0 | 6.910 | A |
| C-A | 436 | | | 436 | | | |
| A-B | 23 | | | 23 | | | |
| A-C | 547 | | | 547 | | | |

### 13:15 - 13:30

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|---|---|---|---|---|---|---|---|
| B-AC | 103 | 589 | 0.175 | 103 | 0.2 | 7.419 | A |
| C-AB | 14 | 553 | 0.025 | 14 | 0.0 | 6.676 | A |
| C-A | 365 | | | 365 | | | |
| A-B | 20 | | | 20 | | | |
| A-C | 458 | | | 458 | | | |

# Appendix C

**SITE ACCESS VISIBILITY SPLAYS**




VEHICLE PROFILE

| | | | |
|---|---|---|---|
| P1 | Preliminary - Initial Issue | - | - |

ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

Project:
PRESTON STREET
WHITEHAVEN

Client:
ALDI STORES LTD

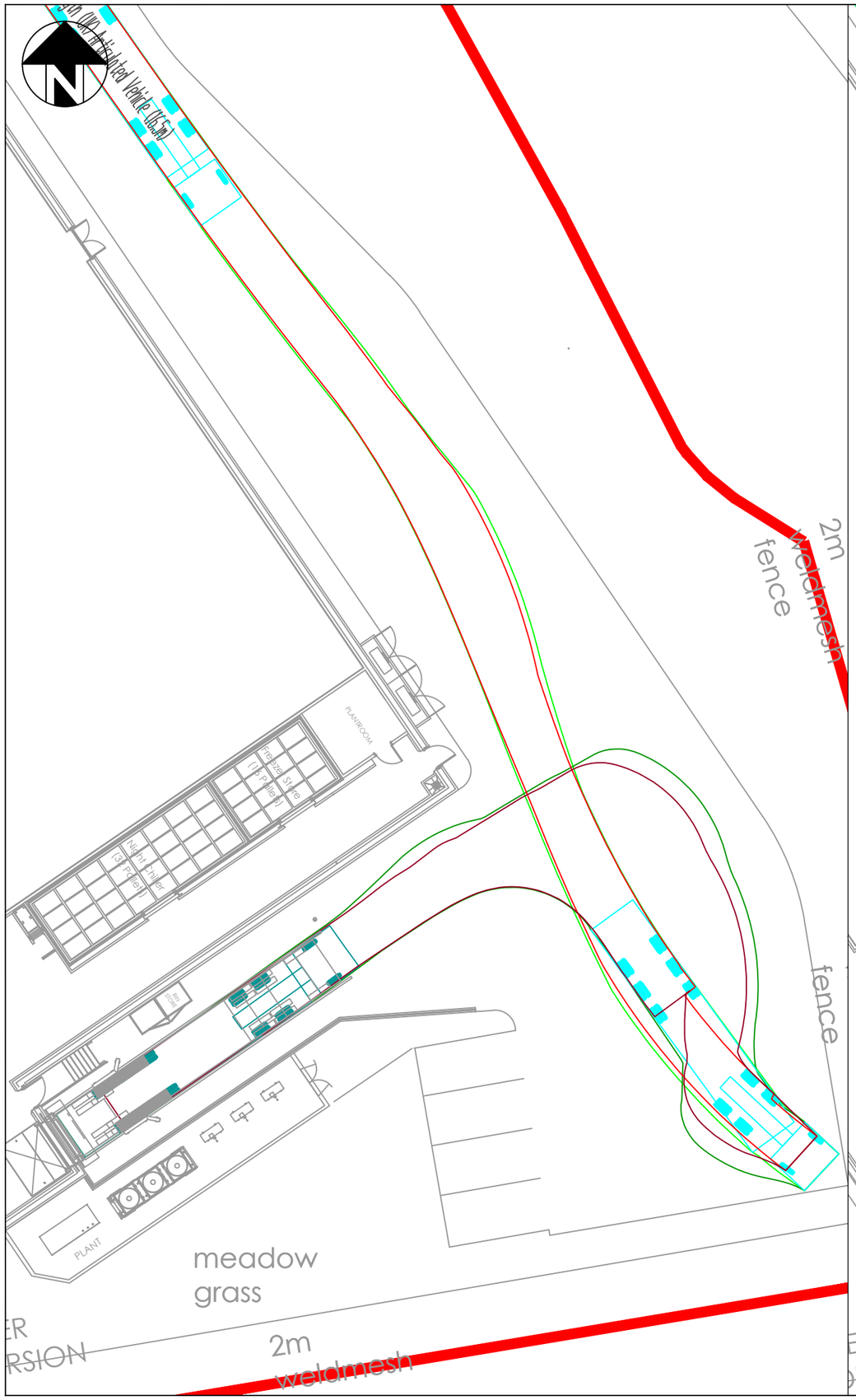
Site Layout:
0470-PA-XX-00-DR-A-PM_00_10_00-0002
REV P03

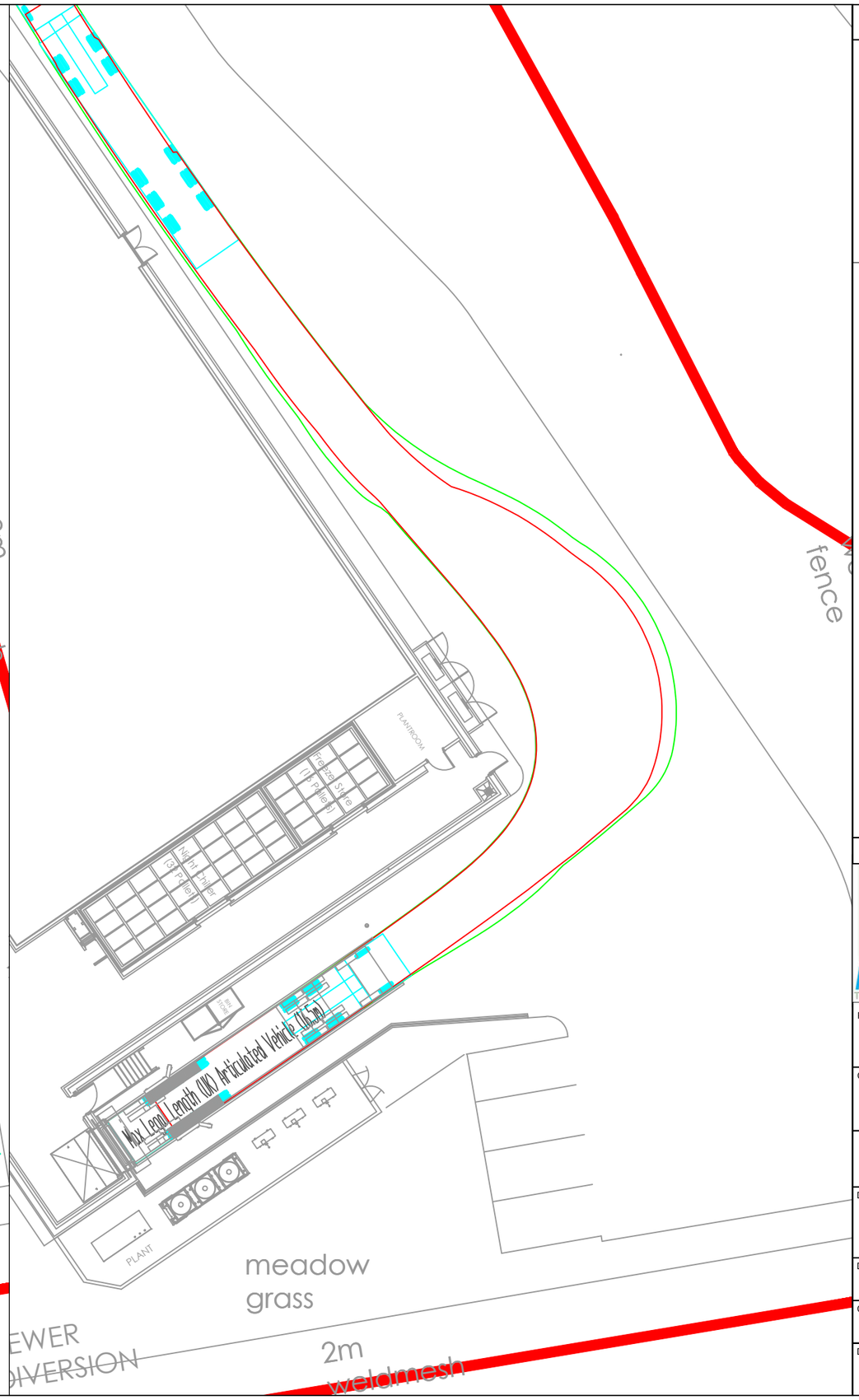
Drawing:
VISIBILITY SPLAY ANALYSIS

| Drawn By: | Date: | |
|---|---|---|
| MSF | 05/10/2023 | |
| Checked: SD | Scale: 1:500 | A3 |
| Drawing No. AMA/48013/SK001 | | Rev. - |

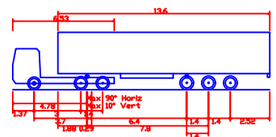
# Appendix D

**SWEPT PATH ANALYSIS**




VEHICLE PROFILE




Max Legal Length (UK) Articulated Vehicle (16.5m)

| | |
|---|---|
| Overall Length | 16.580m |
| Overall Width | 2.550m |
| Overall Body Height | 3.681m |
| Min Body Ground Clearance | 0.411m |
| Max Track Width | 2.500m |
| Lock to lock time | 7.00s |
| Kerb to Kerb Turning Radius | 6.530m |

| | | | |
|---|---|---|---|
| P1 | Preliminary - Initial Issue | - | - |

ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

Project:
PRESTON STREET
WHITEHAVEN

Client:
ALDI STORES LTD

Site Layout:
0470-PA-XX-00-DR-A-PM_00_10_00-0002
REV P03

Drawing:
16.5m - ACCESSING & EGRESSING

| | | |
|---|---|---|
| Drawn By: MSF | Date: 05/10/2023 | |
| Checked: SD | Scale: 1:250 | A3 |
| Drawing No. AMA/48013/ATR004 | | Rev. - |

# Appendix E

**TRICS DATA**

Calculation Reference: AUDIT-710001-230711-0757

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

*Selected regions and areas:*

| | | | |
|---|---|---|---|
| 05 | EAST MIDLANDS | | |
| | LN | LINCOLNSHIRE | 1 days |
| | NN | NORTH NORTHAMPTONSHIRE | 2 days |
| 06 | WEST MIDLANDS | | |
| | WO | WORCESTERSHIRE | 2 days |
| 07 | YORKSHIRE & NORTH LINCOLNSHIRE | | |
| | NY | NORTH YORKSHIRE | 1 days |
| 08 | NORTH WEST | | |
| | GT | WARRINGTON | 1 days |
| 11 | SCOTLAND | | |
| | SR | STIRLING | 1 days |

Primary Filtering selection:

Parameter: Retail floor area
Actual Range: 900 to 1424 (units: sqm)
Range Selected by User: 800 to 4500 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 19/11/22

*Selected survey days:*

| | |
|---|---|
| Monday | 2 days |
| Tuesday | 3 days |
| Thursday | 2 days |
| Friday | 1 days |

*Selected survey types:*

| | |
|---|---|
| Manual count | 8 days |
| Directional ATC Count | 0 days |

*Selected Locations:*

| | |
|---|---|
| Town Centre | 1 |
| Edge of Town Centre | 7 |

*Selected Location Sub Categories:*

| | |
|---|---|
| Residential Zone | 3 |
| Retail Zone | 2 |
| Built-Up Zone | 3 |

*Inclusion of Servicing Vehicles Counts:*

| | |
|---|---|
| Servicing vehicles Included | 3 days - Selected |
| Servicing vehicles Excluded | 7 days - Selected |

Secondary Filtering selection:

*Use Class:*

| | |
|---|---|
| E(a) | 8 days |

*Population within 500m Range:*
All Surveys Included

Secondary Filtering selection (Cont.):

*Population within 1 mile:*

| | |
|---|---|
| 1,001 to 5,000 | 1 days |
| 10,001 to 15,000 | 2 days |
| 15,001 to 20,000 | 2 days |
| 20,001 to 25,000 | 1 days |
| 25,001 to 50,000 | 2 days |

*Population within 5 miles:*

| | |
|---|---|
| 5,001 to 25,000 | 1 days |
| 25,001 to 50,000 | 1 days |
| 50,001 to 75,000 | 1 days |
| 75,001 to 100,000 | 3 days |
| 100,001 to 125,000 | 1 days |
| 125,001 to 250,000 | 1 days |

*Car ownership within 5 miles:*

| | |
|---|---|
| 0.6 to 1.0 | 3 days |
| 1.1 to 1.5 | 5 days |

*Petrol filling station:*

| | |
|---|---|
| Included in the survey count | 0 days |
| Excluded from count or no filling station | 8 days |

*Travel Plan:*

| | |
|---|---|
| No | 8 days |

*PTAL Rating:*

| | |
|---|---|
| No PTAL Present | 8 days |

| | | |
|---|---|---|
| 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 GT-01-C-01 LIDL WARRINGTON
FENNEL STREET
WARRINGTON

Edge of Town Centre
Retail Zone
Total Retail floor area: 1000 sqm
*Survey date: THURSDAY* *15/04/21* *Survey Type: MANUAL*

2 LN-01-C-01 LIDL LINCOLNSHIRE
RICHMOND DRIVE
SKEGNESS

Edge of Town Centre
Built-Up Zone
Total Retail floor area: 1424 sqm
*Survey date: TUESDAY* *19/07/16* *Survey Type: MANUAL*

3 NN-01-C-02 LIDL NORTH NORTHAMPTONSHIRE
MARINERS WAY
KETTERING

Edge of Town Centre
Retail Zone
Total Retail floor area: 1375 sqm
*Survey date: MONDAY* *27/06/22* *Survey Type: MANUAL*

4 NN-01-C-04 LIDL NORTH NORTHAMPTONSHIRE
NEWTON ROAD
RUSHDEN

Edge of Town Centre
Residential Zone
Total Retail floor area: 1424 sqm
*Survey date: TUESDAY* *19/07/16* *Survey Type: MANUAL*

5 NY-01-C-03 ALDI NORTH YORKSHIRE
STONEBRIDGEGATE
RIPON

Edge of Town Centre
Residential Zone
Total Retail floor area: 1068 sqm
*Survey date: FRIDAY* *20/05/22* *Survey Type: MANUAL*

6 SR-01-C-01 LIDL STIRLING
PLAYERS ROAD
STIRLING

Edge of Town Centre
Built-Up Zone
Total Retail floor area: 1424 sqm
*Survey date: THURSDAY* *01/06/17* *Survey Type: MANUAL*

7 WO-01-C-02 LIDL WORCESTERSHIRE
WORCESTER ROAD
MALVERN

Edge of Town Centre
Residential Zone
Total Retail floor area: 900 sqm
*Survey date: TUESDAY* *26/06/18* *Survey Type: MANUAL*

8 WO-01-C-03 ALDI WORCESTERSHIRE
GREEN STREET
KIDDERMINSTER

Town Centre
Built-Up Zone
Total Retail floor area: 1000 sqm
*Survey date: MONDAY* *12/10/20* *Survey Type: MANUAL*

*MANUALLY DESELECTED SITES*

| Site Ref | Reason for Deselection |
|---|---|
| MG-01-C-01 | Ire |

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 | 2 | 1424 | 0.281 | 2 | 1424 | 0.070 | 2 | 1424 | 0.351 |
| 07:00 - 08:00 | 8 | 1202 | 0.988 | 8 | 1202 | 0.343 | 8 | 1202 | 1.331 |
| 08:00 - 09:00 | 8 | 1202 | 4.233 | 8 | 1202 | 2.767 | 8 | 1202 | 7.000 |
| 09:00 - 10:00 | 8 | 1202 | 5.887 | 8 | 1202 | 4.815 | 8 | 1202 | 10.702 |
| 10:00 - 11:00 | 8 | 1202 | 6.396 | 8 | 1202 | 5.481 | 8 | 1202 | 11.877 |
| 11:00 - 12:00 | 8 | 1202 | 6.989 | 8 | 1202 | 6.854 | 8 | 1202 | 13.843 |
| 12:00 - 13:00 | 8 | 1202 | 6.604 | 8 | 1202 | 6.729 | 8 | 1202 | 13.333 |
| 13:00 - 14:00 | 8 | 1202 | 6.760 | 8 | 1202 | 7.020 | 8 | 1202 | 13.780 |
| 14:00 - 15:00 | 8 | 1202 | 7.436 | 8 | 1202 | 6.843 | 8 | 1202 | 14.279 |
| 15:00 - 16:00 | 8 | 1202 | 6.958 | 8 | 1202 | 6.739 | 8 | 1202 | 13.697 |
| 16:00 - 17:00 | 8 | 1202 | 7.207 | 8 | 1202 | 7.561 | 8 | 1202 | 14.768 |
| 17:00 - 18:00 | 8 | 1202 | 6.292 | 8 | 1202 | 7.426 | 8 | 1202 | 13.718 |
| 18:00 - 19:00 | 8 | 1202 | 5.023 | 8 | 1202 | 5.647 | 8 | 1202 | 10.670 |
| 19:00 - 20:00 | 8 | 1202 | 3.609 | 8 | 1202 | 4.431 | 8 | 1202 | 8.040 |
| 20:00 - 21:00 | 8 | 1202 | 2.475 | 8 | 1202 | 3.463 | 8 | 1202 | 5.938 |
| 21:00 - 22:00 | 8 | 1202 | 1.269 | 8 | 1202 | 1.893 | 8 | 1202 | 3.162 |
| 22:00 - 23:00 | 6 | 1286 | 0.091 | 6 | 1286 | 0.544 | 6 | 1286 | 0.635 |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 78.498 | | | 78.626 | | | 157.124 |

Parameter summary

| | |
|---|---|
| Trip rate parameter range selected: | 900 - 1424 (units: sqm) |
| Survey date date range: | 01/01/15 - 19/11/22 |
| Number of weekdays (Monday-Friday): | 8 |
| Number of Saturdays: | 0 |
| Number of Sundays: | 0 |
| Surveys automatically removed from selection: | 0 |
| Surveys manually removed from selection: | 1 |

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
OGVS
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 | 2 | 1424 | 0.035 | 2 | 1424 | 0.000 | 2 | 1424 | 0.035 |
| 07:00 - 08:00 | 8 | 1202 | 0.031 | 8 | 1202 | 0.010 | 8 | 1202 | 0.041 |
| 08:00 - 09:00 | 8 | 1202 | 0.031 | 8 | 1202 | 0.021 | 8 | 1202 | 0.052 |
| 09:00 - 10:00 | 8 | 1202 | 0.094 | 8 | 1202 | 0.073 | 8 | 1202 | 0.167 |
| 10:00 - 11:00 | 8 | 1202 | 0.000 | 8 | 1202 | 0.042 | 8 | 1202 | 0.042 |
| 11:00 - 12:00 | 8 | 1202 | 0.010 | 8 | 1202 | 0.010 | 8 | 1202 | 0.020 |
| 12:00 - 13:00 | 8 | 1202 | 0.021 | 8 | 1202 | 0.021 | 8 | 1202 | 0.042 |
| 13:00 - 14:00 | 8 | 1202 | 0.021 | 8 | 1202 | 0.021 | 8 | 1202 | 0.042 |
| 14:00 - 15:00 | 8 | 1202 | 0.021 | 8 | 1202 | 0.010 | 8 | 1202 | 0.031 |
| 15:00 - 16:00 | 8 | 1202 | 0.042 | 8 | 1202 | 0.021 | 8 | 1202 | 0.063 |
| 16:00 - 17:00 | 8 | 1202 | 0.010 | 8 | 1202 | 0.052 | 8 | 1202 | 0.062 |
| 17:00 - 18:00 | 8 | 1202 | 0.042 | 8 | 1202 | 0.010 | 8 | 1202 | 0.052 |
| 18:00 - 19:00 | 8 | 1202 | 0.010 | 8 | 1202 | 0.010 | 8 | 1202 | 0.020 |
| 19:00 - 20:00 | 8 | 1202 | 0.010 | 8 | 1202 | 0.021 | 8 | 1202 | 0.031 |
| 20:00 - 21:00 | 8 | 1202 | 0.000 | 8 | 1202 | 0.000 | 8 | 1202 | 0.000 |
| 21:00 - 22:00 | 8 | 1202 | 0.000 | 8 | 1202 | 0.010 | 8 | 1202 | 0.010 |
| 22:00 - 23:00 | 6 | 1286 | 0.000 | 6 | 1286 | 0.013 | 6 | 1286 | 0.013 |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 0.378 | | | 0.345 | | | 0.723 |

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
CARS
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 | 2 | 1424 | 0.246 | 2 | 1424 | 0.035 | 2 | 1424 | 0.281 |
| 07:00 - 08:00 | 8 | 1202 | 0.894 | 8 | 1202 | 0.322 | 8 | 1202 | 1.216 |
| 08:00 - 09:00 | 8 | 1202 | 3.973 | 8 | 1202 | 2.579 | 8 | 1202 | 6.552 |
| 09:00 - 10:00 | 8 | 1202 | 5.419 | 8 | 1202 | 4.472 | 8 | 1202 | 9.891 |
| 10:00 - 11:00 | 8 | 1202 | 6.136 | 8 | 1202 | 5.138 | 8 | 1202 | 11.274 |
| 11:00 - 12:00 | 8 | 1202 | 6.656 | 8 | 1202 | 6.511 | 8 | 1202 | 13.167 |
| 12:00 - 13:00 | 8 | 1202 | 6.219 | 8 | 1202 | 6.292 | 8 | 1202 | 12.511 |
| 13:00 - 14:00 | 8 | 1202 | 6.323 | 8 | 1202 | 6.646 | 8 | 1202 | 12.969 |
| 14:00 - 15:00 | 8 | 1202 | 7.062 | 8 | 1202 | 6.427 | 8 | 1202 | 13.489 |
| 15:00 - 16:00 | 8 | 1202 | 6.583 | 8 | 1202 | 6.500 | 8 | 1202 | 13.083 |
| 16:00 - 17:00 | 8 | 1202 | 6.864 | 8 | 1202 | 7.155 | 8 | 1202 | 14.019 |
| 17:00 - 18:00 | 8 | 1202 | 5.918 | 8 | 1202 | 6.947 | 8 | 1202 | 12.865 |
| 18:00 - 19:00 | 8 | 1202 | 4.763 | 8 | 1202 | 5.346 | 8 | 1202 | 10.109 |
| 19:00 - 20:00 | 8 | 1202 | 3.380 | 8 | 1202 | 4.160 | 8 | 1202 | 7.540 |
| 20:00 - 21:00 | 8 | 1202 | 2.309 | 8 | 1202 | 3.235 | 8 | 1202 | 5.544 |
| 21:00 - 22:00 | 8 | 1202 | 1.175 | 8 | 1202 | 1.716 | 8 | 1202 | 2.891 |
| 22:00 - 23:00 | 6 | 1286 | 0.091 | 6 | 1286 | 0.493 | 6 | 1286 | 0.584 |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 74.011 | | | 73.974 | | | 147.985 |

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
LGVS
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 | 2 | 1424 | 0.000 | 2 | 1424 | 0.035 | 2 | 1424 | 0.035 |
| 07:00 - 08:00 | 8 | 1202 | 0.052 | 8 | 1202 | 0.000 | 8 | 1202 | 0.052 |
| 08:00 - 09:00 | 8 | 1202 | 0.177 | 8 | 1202 | 0.125 | 8 | 1202 | 0.302 |
| 09:00 - 10:00 | 8 | 1202 | 0.270 | 8 | 1202 | 0.187 | 8 | 1202 | 0.457 |
| 10:00 - 11:00 | 8 | 1202 | 0.208 | 8 | 1202 | 0.250 | 8 | 1202 | 0.458 |
| 11:00 - 12:00 | 8 | 1202 | 0.250 | 8 | 1202 | 0.260 | 8 | 1202 | 0.510 |
| 12:00 - 13:00 | 8 | 1202 | 0.229 | 8 | 1202 | 0.302 | 8 | 1202 | 0.531 |
| 13:00 - 14:00 | 8 | 1202 | 0.333 | 8 | 1202 | 0.239 | 8 | 1202 | 0.572 |
| 14:00 - 15:00 | 8 | 1202 | 0.239 | 8 | 1202 | 0.270 | 8 | 1202 | 0.509 |
| 15:00 - 16:00 | 8 | 1202 | 0.260 | 8 | 1202 | 0.166 | 8 | 1202 | 0.426 |
| 16:00 - 17:00 | 8 | 1202 | 0.260 | 8 | 1202 | 0.312 | 8 | 1202 | 0.572 |
| 17:00 - 18:00 | 8 | 1202 | 0.229 | 8 | 1202 | 0.333 | 8 | 1202 | 0.562 |
| 18:00 - 19:00 | 8 | 1202 | 0.229 | 8 | 1202 | 0.270 | 8 | 1202 | 0.499 |
| 19:00 - 20:00 | 8 | 1202 | 0.177 | 8 | 1202 | 0.208 | 8 | 1202 | 0.385 |
| 20:00 - 21:00 | 8 | 1202 | 0.146 | 8 | 1202 | 0.208 | 8 | 1202 | 0.354 |
| 21:00 - 22:00 | 8 | 1202 | 0.073 | 8 | 1202 | 0.135 | 8 | 1202 | 0.208 |
| 22:00 - 23:00 | 6 | 1286 | 0.000 | 6 | 1286 | 0.026 | 6 | 1286 | 0.026 |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 3.132 | | | 3.326 | | | 6.458 |

Calculation Reference: AUDIT-710001-230711-0738

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

*Selected regions and areas:*

| | | | |
|---|---|---|---|
| 05 | EAST MIDLANDS | | |
| | LN | LINCOLNSHIRE | 1 days |
| | NN | NORTH NORTHAMPTONSHIRE | 2 days |
| 06 | WEST MIDLANDS | | |
| | WO | WORCESTERSHIRE | 2 days |
| 07 | YORKSHIRE & NORTH LINCOLNSHIRE | | |
| | NY | NORTH YORKSHIRE | 1 days |
| 08 | NORTH WEST | | |
| | GT | WARRINGTON | 1 days |
| 11 | SCOTLAND | | |
| | SR | STIRLING | 1 days |

Primary Filtering selection:

Parameter: Gross floor area
Actual Range: 1450 to 2624 (units: sqm)
Range Selected by User: 800 to 4500 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 19/11/22

*Selected survey days:*

| | |
|---|---|
| Monday | 2 days |
| Tuesday | 3 days |
| Thursday | 2 days |
| Friday | 1 days |

*Selected survey types:*

| | |
|---|---|
| Manual count | 8 days |
| Directional ATC Count | 0 days |

*Selected Locations:*

| | |
|---|---|
| Town Centre | 1 |
| Edge of Town Centre | 7 |

*Selected Location Sub Categories:*

| | |
|---|---|
| Residential Zone | 3 |
| Retail Zone | 2 |
| Built-Up Zone | 3 |

*Inclusion of Servicing Vehicles Counts:*

| | |
|---|---|
| Servicing vehicles Included | 5 days - Selected |
| Servicing vehicles Excluded | 6 days - Selected |

Secondary Filtering selection:

*Use Class:*

| | |
|---|---|
| E(a) | 8 days |

*Population within 500m Range:*
All Surveys Included

Secondary Filtering selection (Cont.):

*Population within 1 mile:*

| | |
|---|---|
| 1,001 to 5,000 | 1 days |
| 10,001 to 15,000 | 2 days |
| 15,001 to 20,000 | 2 days |
| 20,001 to 25,000 | 1 days |
| 25,001 to 50,000 | 2 days |

*Population within 5 miles:*

| | |
|---|---|
| 5,001 to 25,000 | 1 days |
| 25,001 to 50,000 | 1 days |
| 50,001 to 75,000 | 1 days |
| 75,001 to 100,000 | 3 days |
| 100,001 to 125,000 | 1 days |
| 125,001 to 250,000 | 1 days |

*Car ownership within 5 miles:*

| | |
|---|---|
| 0.6 to 1.0 | 3 days |
| 1.1 to 1.5 | 5 days |

*Petrol filling station:*

| | |
|---|---|
| Included in the survey count | 0 days |
| Excluded from count or no filling station | 8 days |

*Travel Plan:*

| | |
|---|---|
| No | 8 days |

*PTAL Rating:*

| | |
|---|---|
| No PTAL Present | 8 days |

| | | |
|---|---|---|
| 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 GT-01-C-01 LIDL WARRINGTON
FENNEL STREET
WARRINGTON

Edge of Town Centre
Retail Zone
Total Gross floor area: 1450 sqm
*Survey date: THURSDAY* *15/04/21* *Survey Type: MANUAL*

2 LN-01-C-01 LIDL LINCOLNSHIRE
RICHMOND DRIVE
SKEGNESS

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 2398 sqm
*Survey date: TUESDAY* *19/07/16* *Survey Type: MANUAL*

3 NN-01-C-02 LIDL NORTH NORTHAMPTONSHIRE
MARINERS WAY
KETTERING

Edge of Town Centre
Retail Zone
Total Gross floor area: 1850 sqm
*Survey date: MONDAY* *27/06/22* *Survey Type: MANUAL*

4 NN-01-C-04 LIDL NORTH NORTHAMPTONSHIRE
NEWTON ROAD
RUSHDEN

Edge of Town Centre
Residential Zone
Total Gross floor area: 2624 sqm
*Survey date: TUESDAY* *19/07/16* *Survey Type: MANUAL*

5 NY-01-C-03 ALDI NORTH YORKSHIRE
STONEBRIDGEGATE
RIPON

Edge of Town Centre
Residential Zone
Total Gross floor area: 1551 sqm
*Survey date: FRIDAY* *20/05/22* *Survey Type: MANUAL*

6 SR-01-C-01 LIDL STIRLING
PLAYERS ROAD
STIRLING

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 2442 sqm
*Survey date: THURSDAY* *01/06/17* *Survey Type: MANUAL*

7 WO-01-C-02 LIDL WORCESTERSHIRE
WORCESTER ROAD
MALVERN

Edge of Town Centre
Residential Zone
Total Gross floor area: 1471 sqm
*Survey date: TUESDAY* *26/06/18* *Survey Type: MANUAL*

8 WO-01-C-03 ALDI WORCESTERSHIRE
GREEN STREET
KIDDERMINSTER

Town Centre
Built-Up Zone
Total Gross floor area: 1510 sqm
*Survey date: MONDAY* *12/10/20* *Survey Type: MANUAL*

*MANUALLY DESELECTED SITES*

| Site Ref | Reason for Deselection |
|---|---|
| AN-01-C-03 | Ire |

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. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate | No. Days | Ave. GFA | 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 | 2 | 2511 | 0.159 | 2 | 2511 | 0.040 | 2 | 2511 | 0.199 |
| 07:00 - 08:00 | 8 | 1912 | 0.621 | 8 | 1912 | 0.216 | 8 | 1912 | 0.837 |
| 08:00 - 09:00 | 8 | 1912 | 2.661 | 8 | 1912 | 1.739 | 8 | 1912 | 4.400 |
| 09:00 - 10:00 | 8 | 1912 | 3.700 | 8 | 1912 | 3.027 | 8 | 1912 | 6.727 |
| 10:00 - 11:00 | 8 | 1912 | 4.021 | 8 | 1912 | 3.445 | 8 | 1912 | 7.466 |
| 11:00 - 12:00 | 8 | 1912 | 4.393 | 8 | 1912 | 4.308 | 8 | 1912 | 8.701 |
| 12:00 - 13:00 | 8 | 1912 | 4.151 | 8 | 1912 | 4.230 | 8 | 1912 | 8.381 |
| 13:00 - 14:00 | 8 | 1912 | 4.249 | 8 | 1912 | 4.413 | 8 | 1912 | 8.662 |
| 14:00 - 15:00 | 8 | 1912 | 4.674 | 8 | 1912 | 4.302 | 8 | 1912 | 8.976 |
| 15:00 - 16:00 | 8 | 1912 | 4.374 | 8 | 1912 | 4.236 | 8 | 1912 | 8.610 |
| 16:00 - 17:00 | 8 | 1912 | 4.531 | 8 | 1912 | 4.753 | 8 | 1912 | 9.284 |
| 17:00 - 18:00 | 8 | 1912 | 3.955 | 8 | 1912 | 4.668 | 8 | 1912 | 8.623 |
| 18:00 - 19:00 | 8 | 1912 | 3.158 | 8 | 1912 | 3.550 | 8 | 1912 | 6.708 |
| 19:00 - 20:00 | 8 | 1912 | 2.269 | 8 | 1912 | 2.785 | 8 | 1912 | 5.054 |
| 20:00 - 21:00 | 8 | 1912 | 1.556 | 8 | 1912 | 2.177 | 8 | 1912 | 3.733 |
| 21:00 - 22:00 | 8 | 1912 | 0.798 | 8 | 1912 | 1.190 | 8 | 1912 | 1.988 |
| 22:00 - 23:00 | 6 | 2053 | 0.057 | 6 | 2053 | 0.341 | 6 | 2053 | 0.398 |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 49.327 | | | 49.420 | | | 98.747 |

Parameter summary

| | |
|---|---|
| Trip rate parameter range selected: | 1450 - 2624 (units: sqm) |
| Survey date date range: | 01/01/15 - 19/11/22 |
| Number of weekdays (Monday-Friday): | 8 |
| Number of Saturdays: | 0 |
| Number of Sundays: | 0 |
| Surveys automatically removed from selection: | 0 |
| Surveys manually removed from selection: | 1 |

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