SCP

Transportation Planning : Infrastructure Design

Transport Assessment

Proposed Residential Development

A57 Dinting Vale, Glossop

Wainhomes (North West) Limited

August 2022

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1.0 INTRODUCTION

Overview

1.1 SCP have been appointed by Wainhomes (North West) Limited to provide transport planning and engineering advice in support of a full planning application for a residential development, comprising 100 dwellings, on land to the south-west of the A57 Dinting Vale, Glossop.

1.2 This Transport Assessment (TA) has been prepared to support the planning application and has been developed in accordance with the now archived Department for Transport's (DfT's) March 2007 "Guidance on Transport Assessment" document and gives due regard to the National Planning Practice Guidance (NPPG). Furthermore, the specific scope of this report and study area has been agreed with Derbyshire County Council (DCC), as Highway Authority, through the submission of a formal scoping email and subsequent discussions / correspondence.

1.3 In addition to the above, National Highways (NH) have confirmed following a formal scoping email "*that it is unlikely there will be a significant impact on the SRN, and I am therefore content that no further assessment will be required at the junction of the A57 and the A628*".

Background

1.4 The application site is allocated for residential development of approximately 130 dwellings in the High Peak Local Plan under Policy DS 4 – Adderley Place, Glossop. In regard to the transport related aspects of the site, the High Peak Local Plan states the site will require substantial access improvements on to the A57 Dinting Vale and a TA.

1.5 This TA provides an assessment of the traffic and transport implications associated with the development proposals to inform DCC, as the local highway authority, regarding the nature and magnitude of their impact. In summary, it demonstrates that a safe and suitable scheme can be delivered on the application site and that the proposed development of this site can be readily accessed on foot, by bicycle and by local public transport services.

Structure of This Report

1.6 The structure of this report is as follows:-

- Chapter 2 - describes in detail the site location, local highway network, existing traffic conditions and road safety record;
- Chapter 3 – defines the development proposals including the proposed access, servicing and car parking arrangements;

- Chapter 4 – summarises the national, regional and local transport policies and describes how the proposed development accords with these;
- Chapter 5 – considers the location of the site with regard to the existing local sustainable transport infrastructure;
- Chapter 6 – describes the future baseline traffic conditions on the local highway network in relation traffic growth;
- Chapter 7 – estimates the number of multimodal trips generated by the development and distributes and assigns the vehicular trips on the local highway network;
- Chapter 8 – presents an assessment of the impact of the development on the operational performance of the local highway network; and,
- Chapter 9 – provides a summary and conclusion to this TA derived from the analysis presented in the above chapters.

2.0 EXISTING CONDITIONS

General

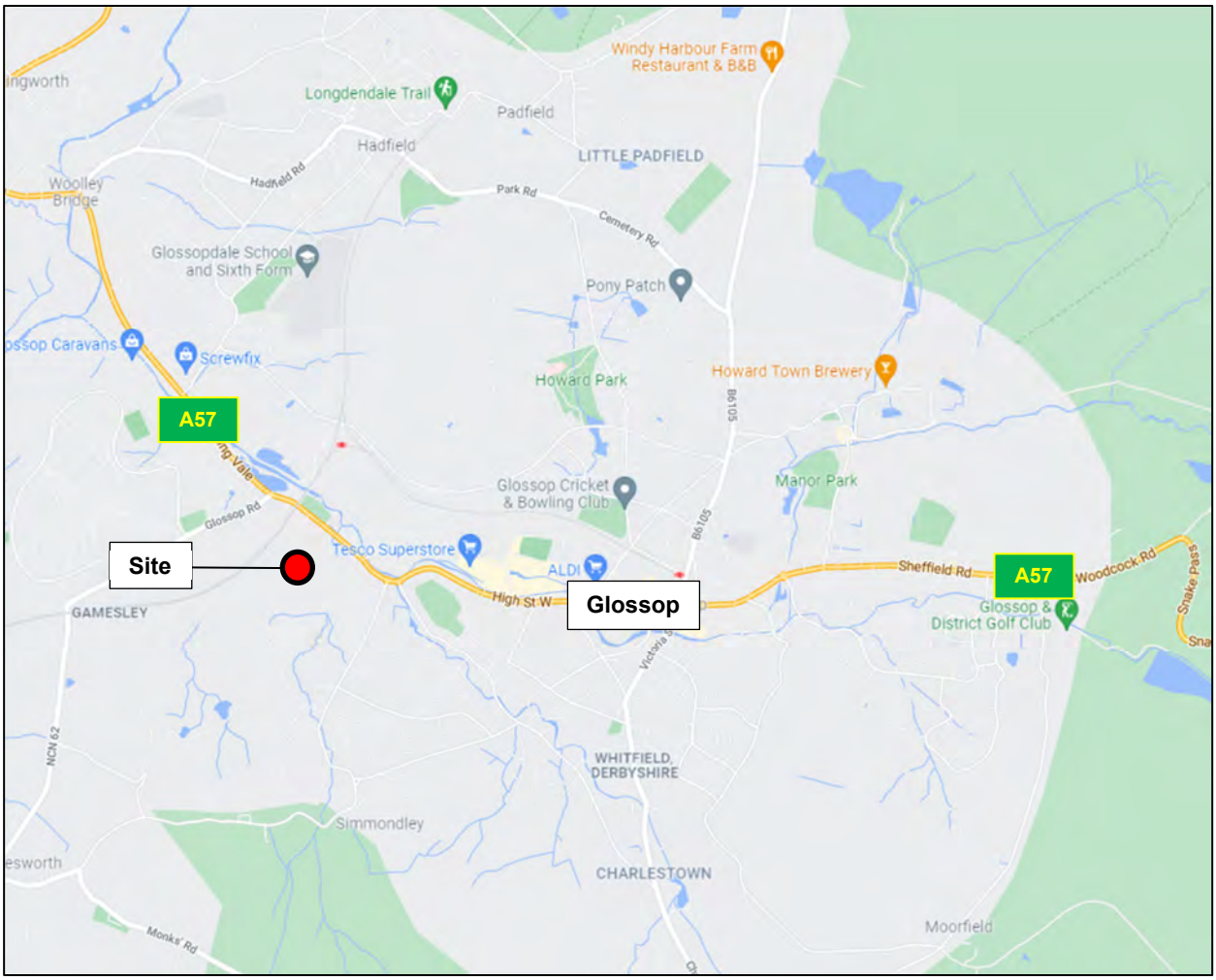
2.1 This chapter provides a detailed description of the location of the site, local highway network, existing traffic conditions and road safety record.

Site Location

2.2 The application site is located on land to the south of the A57 Dinting Vale, approximately 1.5km west of Glossop town centre, and comprises undeveloped land.

2.3 The location of the site in relation to the wider highway network is shown on **Figure 2.1** below.

Figure 2.1 – Site Location – Wider Highway Network



2.4 The site boundary is shown in relation to the local highway network in red on **Figure 2.2** below.

Figure 2.2 – Site Location – Local Highway Network

2.5 The application site is currently accessed via an unadopted road off Simmondley Lane which serves a limited number of houses, as shown on **Figure 2.2** above.

Local Highway Network

2.6 The study area for the TA has been agreed with DCC / NH and includes the following junctions, the location of which in relation to the development site are shown on **Figure 2.2** earlier:

- Proposed site access;
- A57 Dinting Vale / A626 Glossop Road signal-controlled junction; and,
- A57 Dinting Vale / Simmondley Lane / A57 High Street West / Primrose Lane double mini-roundabout

A57 Dinting Vale

2.7 The A57 is predominantly a two-way single carriageway road which runs between the M67 Junction 4, to the west, and Sheffield to the east. Locally, the A57 Dinting Vale fronts the northern site boundary and provides a connection between the A57 Dinting Vale / A57 Brookfield Road / Shaw Lane signal-controlled junction, to the north-west, and the A57 Dinting Vale / Simmondley Lane / A57 High Street West / Primrose Lane double mini-roundabout, to the east. In the vicinity of the site, the A57 Dinting Vale has a carriageway width of approximately 8m and is subject to a 30mph speed limit which is enforced with speed cameras located immediately opposite the site and circa 150m south-east of the site.

2.8 The A57 Dinting Vale benefits from regularly spaced street lighting columns as well as footways on both sides of the road which provide a continuous connection to Glossop town centre. Furthermore, there is a signalised pedestrian crossing located approximately 70m south-east of the site to assist pedestrians across the A57 Dinting Vale.

2.9 There are bus stops located on both sides the A57 Dinting Vale immediately opposite the site (south-eastbound services) and along the site frontage (north-westbound services). Further details on the accessibility of the site are provided in Chapter 5, with details on the proposed relocation of the south-westbound bus stop provided in Chapter 3.

A57 Dinting Vale / A626 Glossop Road

2.10 The A57 Dinting Vale / A626 Glossop Road junction takes the form of a three-arm signalised junction located approximately 300m north-west of the development site. The A57 forms the major arms which locally links Glossop, to the south-east, with Woolley Bridge to the north-west and the A626 Glossop Road forms the minor arm of the junction which provides a link to Gamesley to the south-west. All approaches of the junction are subject to a 30mph speed limit and are well lit. The junction also benefits from a signalised pedestrian crossing across the A57 Dinting Vale (south-east) approach to aid pedestrians crossing the road.

A57 Dinting Vale / Simmondley Lane / A57 High Street West / Primrose Lane

2.11 The A57 Dinting Vale / Simmondley Lane / A57 High Street West / Primrose Lane junction takes the form of a double mini-roundabout comprising two 3-arm mini roundabouts, located approximately 300m south-east of the development site. The A57 runs from north-west to north-east and locally links Glossop, to the east, with Woolley Bridge to the north-west. Simmondley Lane forms the south-western arm of the west mini-roundabout, which provides access to the residential estate of Simmondley, and Primpose Lane forms the south-eastern arm of the east mini-roundabout, which provides a link to Charlestown via Turnlee Road.

Traffic Flow Data

2.12 DCC confirmed in scoping correspondence, dated on 22nd November 2021, that they would accept the collection of observed traffic data post-September 2021.

2.13 Manual classified turning count traffic flow surveys were therefore undertaken on Tuesday 30th November 2021, between the hours of 07:30 - 09:30, and 16:30 - 18:30, at the A57 Dinting Vale / A626 Glossop Road signal-controlled junction and the A57 Dinting Vale / Simmondley Lane / A57 High Street West / Primrose Lane double mini-roundabout in order to establish the existing traffic flow demand on the local highway network.

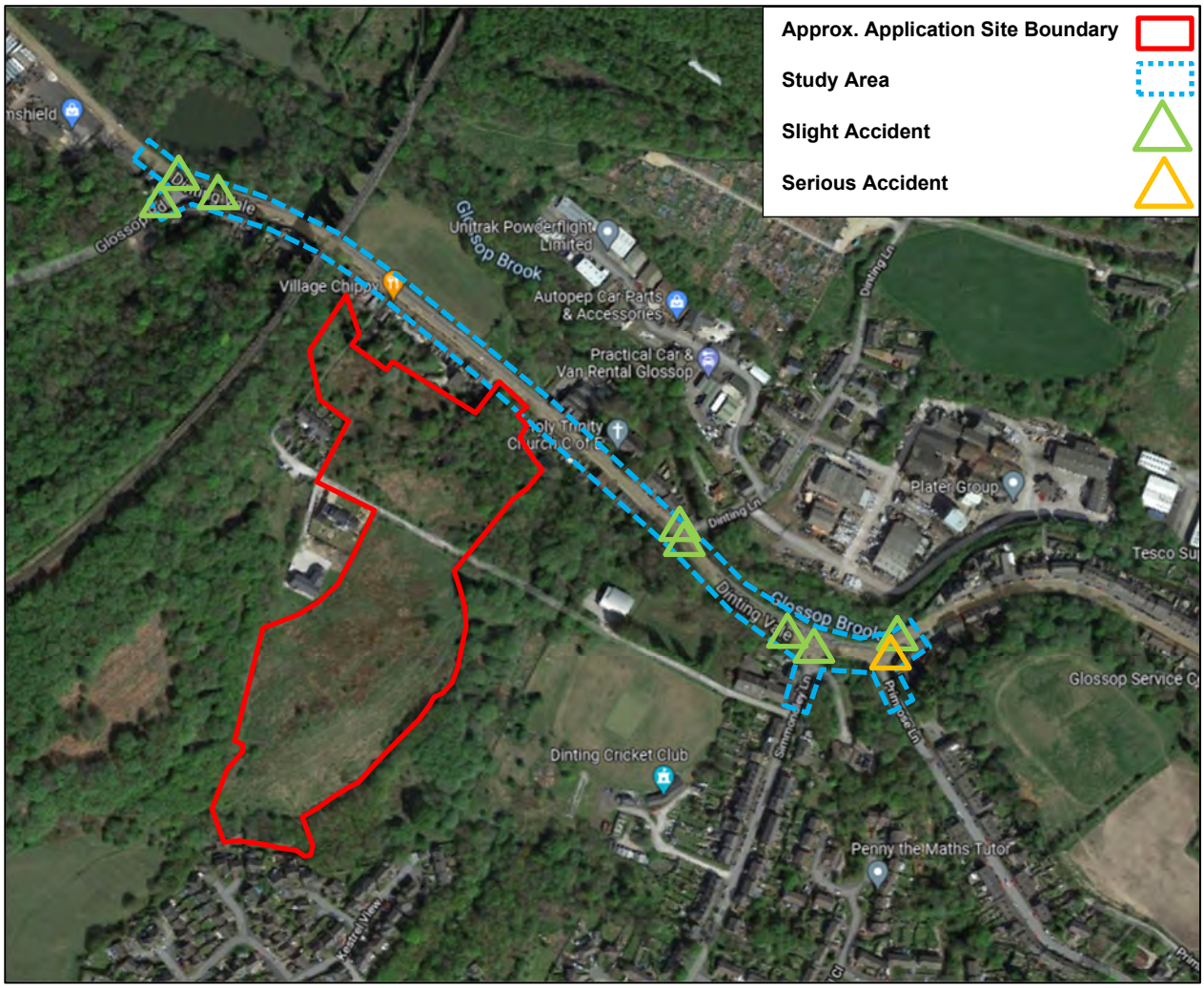
2.14 The base peak hour traffic flow data for the local highway network is shown diagrammatically on **Traffic Flow Figure 1**.

Road Safety Record

2.15 The NPPG 'Transport evidence bases in plan making and decision taking' document states that, "*Critical locations on the road network with poor accident records should be identified. This is to determine if the proposed development will exacerbate existing problems or, if proposed, whether highway mitigation works or traffic management measures will help to alleviate the problems*".

2.16 In order to identify critical locations on the network with a poor accident record, the personal injury accident data has been obtained from the online resource CrashMap for the most recent 5-year period. The location and severity of any accidents within the study area during this period are shown in **Figure 2.3**.

Figure 2.3 – Road Safety Record



2.17 The analysis demonstrates that there has been a total of nine accidents recorded in the study area during the 5-year study period, of which, eight resulted in 'slight' severity injuries and one resulted in 'serious' severity injuries.

2.18 Of the nine recorded accidents, three occurred at the A57 Dinting Vale / A626 Glossop Road signal-controlled junction and two occurred at the A57 Dinting Vale / Simmondley Lane mini-roundabout, the A57 Dinting Vale / A57 High Street West / Primrose Lane mini-roundabout and the A57 Dinting Vale / Dinting Lane junction.

2.19 Less than three accidents over a 5-year period is not considered to be an unusual frequency for these types of junctions and therefore, the evidence presented above suggests the existing accident record on the roads immediately surrounding the site does not represent a material concern in the context of the development.

3.0 PROPOSED DEVELOPMENT

General

3.1 The development proposals consist of a residential development, comprising 100 dwellings, on land to the south-west of the A57 Dinting Vale, Glossop.

3.2 The proposed site layout plan is contained in **Appendix A.**

Proposed Access Arrangements

3.3 Vehicular access to the development will be provided via a simple priority-controlled junction off the A57 Dinting Vale, as shown on drawing number SCP/210087/SK01 Rev A, presented in **Appendix B**. The access road measures 5.5m in width and benefits from 6m corner radii and 2m footways on both sides of the road which connect to the existing pedestrian infrastructure on the A57 Dinting Vale.

3.4 The required level of junction visibility from the site access has been calculated to be 2.4m x 43m based on the visibility requirements set out in the MfS for a 30mph road, which is achievable in both directions as shown on drawing number SCP/210087/SK01 Rev A, presented in **Appendix B**.

3.5 In order to accommodate the proposed site access, it is necessary to remove/relocate the north-westbound bus stop (Stop ID: dbsamdgj) along the site frontage. Discussions have taken place with DCC in relation to this matter and it was confirmed that DCC require the retention of the bus stop facility and "*The only option would be to identify a location one side or other of the proposed new junction*". Having regard to this, the bus stop is proposed to be relocated circa 15m to the south-east of its existing position which does not impact on the junction visibility splays, as shown on drawing number SCP/210087/SK01 Rev A, presented in **Appendix B**. It should be noted that the existing cantilever bus stop has recently been flipped and positioned against the wall that runs along the back of footway, as shown on **Figure 3.1** below. The proposed bus stop design will remain as existing which allows for an improved visibility envelope when compared to the previous bus stop design, located along the kerb.

Figure 3.1 – Existing Bus Stop

3.6 The main pedestrian access will be provided at the same location as the vehicular access, however, pedestrians will also be able to route directly onto Simmondley Lane via the unadopted road to the east of the site.

Internal Site Layout

3.7 The internal site layout has been designed to accommodate the movements of a refuse vehicle. Drawing number SCP/210087/ATR01, presented in **Appendix C**, shows the swept path analysis of this vehicle and demonstrates that it can turn within the site and exit in a forward gear.

Parking

3.8 High Peak Borough Council's parking standards are set out in their Local Plan which specifies the following car parking standards for residential developments:

- 1-bed dwellings – 1.5 spaces per unit;
- 2-bed dwellings – 1.5 spaces per unit;
- 3-bed dwellings – 2 spaces per unit; and,

- 4+ bedroom dwellings – 3 spaces per unit.

3.9 In addition to the above, 1 cycle parking space per unit is required if no garage or shed is provided.

3.10 As shown on the site layout plan, contained in **Appendix A**, the proposed development provides a level of parking broadly in accordance with the Council's parking standards detailed above.

4.0 PLANNING POLICY CONTEXT

Introduction

4.1 This chapter provides a summary of relevant national, regional and local transport policies and provides a brief analysis of how the proposed development will contribute towards their aims and objectives.

National Planning Policy Framework (NPPF)

4.2 NPPF was revised in July 2021 by the Ministry of Housing, Communities and Local Government. The overall theme of the document is 'achieving sustainable development' which applies to all aspects of planning, including transport. In particular:

"Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making."

4.3 In reference to supporting documentation with planning applications:

"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."

4.4 In reference to the planning of developments paragraphs 110 - 112:

4.5 In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- *appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location*
- *safe and suitable access to the site can be achieved for all users; and*
- *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.*

4.6 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.

4.7 Within this context, applications for development should:

- *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*
- *address the needs of people with disabilities and reduced mobility in relation to all modes of transport*
- *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*
- *allow for the efficient delivery of goods, and access by service and emergency vehicles*
- *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.*

4.8 Planning policies should:

- support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities
- be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned
- identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development
- provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans);
- provide for any large scale transport facilities that need to be located in the area[42], and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a nationally significant infrastructure project and any relevant national policy statements; and

- recognise the importance of maintaining a national network of general aviation airfields, and their need to adapt and change over time – taking into account their economic value in serving business, leisure, training and emergency service needs, and the Government's General Aviation Strategy.

Derbyshire County Council Local Transport Plan Three

4.9 Derbyshire Local Transport Plan Three was published in 2011 and sets out the transport vision, goals, challenges to be tacked and a strategy covering the period to 2026. The vision aims to achieve a transport system that is both fair and efficient, promotes healthier lifestyles, safer communities, safeguards and enhances the natural environment and provides better access to jobs and services. Whilst also improving choice and accessibility of transport and integrating economic, social and environmental needs.

4.10 The five transport goals are:

- Supporting a resilient local economy
- Tackling climate change.
- Contributing to better safety, security and health;
- Promoting equality of opportunity;
- Improving quality of life and promoting a healthy natural environment

4.11 The plan puts emphasis on supporting a resilient local economy, contributing to better safety, security and health, and improving quality of life and promoting a healthy natural environment.

High Peak Local Plan

4.12 The High Peak Local Plan was adopted in April 2016 and sets out the Council's vision and strategy for the borough until 2031. It identifies how and where new development and regeneration should take place and thereby promotes and manages the future development of the Borough.

4.13 As detailed earlier, the application site is allocated for residential development of approximately 130 dwellings in the High Peak Local Plan under Policy DS 4 – Adderley Place, Glossop. In regard to the transport related aspects of the site, the High Peak Local Plan states the site will require substantial access improvements on to the A57 Dinting Vale and a TA.

4.14 Policy CF 6 relates to '*Accessibility and Transport'* and states the following:

The Council will seek to ensure that development can be safely accessed in a sustainable manner. Proposals should minimise the need to travel, particularly by unsustainable modes of transport and help deliver the priorities of the Derbyshire Local Transport Plan.

This will be achieved by:

Delivering sustainable patterns of development

- *Ensuring that additional growth within the Market Towns and Larger Villages is managed and where possible, accompanied by accessibility improvements*
- *Promoting a balanced distribution of housing and employment*
- *Ensuring the development of social, cultural and community facilities in locations that allow for ease of access by multiple methods of transportation*
- *Requiring that all new development is located where the highway network can satisfactorily accommodate traffic generated by the development or can be improved as part of the development*
- *Requiring that new development can be integrated within existing or proposed transport infrastructure to further ensure choice of transportation method and enhance potential accessibility benefits*
- *Supporting proposals for new community assets and facilities where these are required to meet the needs of the Plan Area or lead to the provision of additional assets that improve community well-being*
- *Requiring that facilities are well related to public transport infrastructure and provide high standards of accessibility to all sectors of the community*
- *Supporting innovative schemes to secure the local delivery of public services in rural communities and other areas with poor public transport, in particular the delivery of some services through the use of mobile services and technology will be encouraged where this results in better local provision*
- *Ensuring development does not lead to an increase in on street parking to the detriment of the free and safe flow of traffic*

Supporting transport infrastructure and services

- *Supporting the implementation of the A6 Corridor Transport Strategy in Buxton and the Central Area. Specific measures are identified in the relevant Local Plan policies and Infrastructure Delivery Plan*

- *Supporting highways and junction improvements required to address the cumulative impact of development across High Peak as identified in the High Peak Local Plan Transport Study and Infrastructure Delivery Plan*

- *Promoting the maintenance and introduction of appropriate facilities to support cyclists, pedestrians and horse riders, ensuring that development supports the use of local cycleway and pathway networks to improve choice of travel and ensuring safe access to developments on foot and by bicycle*

- *Encouraging and promoting improvements to public transport networks in association with the Local Highway Authority, Network Rail and other providers*

- *Supporting the use of rail for the transportation of freight wherever feasible to do so*

- *Approving developments provided that the capacity and design of the transport network serving the site will reasonably accommodate the anticipated increase in travel without materially harming highway safety or local amenity. In addition, the traffic generated by the development will not unduly interrupt the safe and free flow of traffic on trunk or primary roads or materially affect existing conditions to an unacceptable extent*

- *Requiring applicants to submit and implement Travel Plans (or Travel Plan Statements) and Transport Assessments to support relevant proposals, as advised by the Highways Authority. Consultation with Network Rail when development may impact on the rail network, including impacts on level crossings will also be required. Where appropriate, Transport Assessments will consider the impact on the rail network and identify appropriate mitigation measures*

- *Developments that will result in a material increase or significant change in the character of traffic using a rail crossing will be refused, unless it can be demonstrated that safety will not be compromised in consultation with Network Rail*

- *Requiring applicants to submit details of parking which includes the proposed parking provision based on an assessment of the parking needs of the development and the impact on the surrounding road network. Developments which will lead to an increase in traffic or include parking provision will need to submit details. The details should be proportionate to the impact of the development. Guidance on parking is given in Appendix 1.*

Developer contributions or funding pooled through a Community Infrastructure Levy will be used to deliver transport and accessibility improvements required to accord with this policy. Further details are provided in Policy CF7 and Infrastructure Delivery Plan. In the event that a Community Infrastructure Levy is adopted, the Regulation 123 "Infrastructure List" will also specify appropriate measures to be funded."

Summary and Policy Analysis / Compliance

4.15 In general, the national and local transport planning policies set out above follow similar themes and promote common aims. These are to provide sustainable development with good access to jobs and facilities, to encourage non-car modes of transport, to ensure that the highways impact of new developments is acceptable or mitigated against and to promote good site / highway design.

4.16 The accessibility Chapter of this TA demonstrates that the site benefits from good levels of accessibility by sustainable modes. The proposed development is therefore compliant with the aspirations of relevant transport planning policies and can specifically help contribute to their objectives.

5.0 ACCESSIBILITY

General

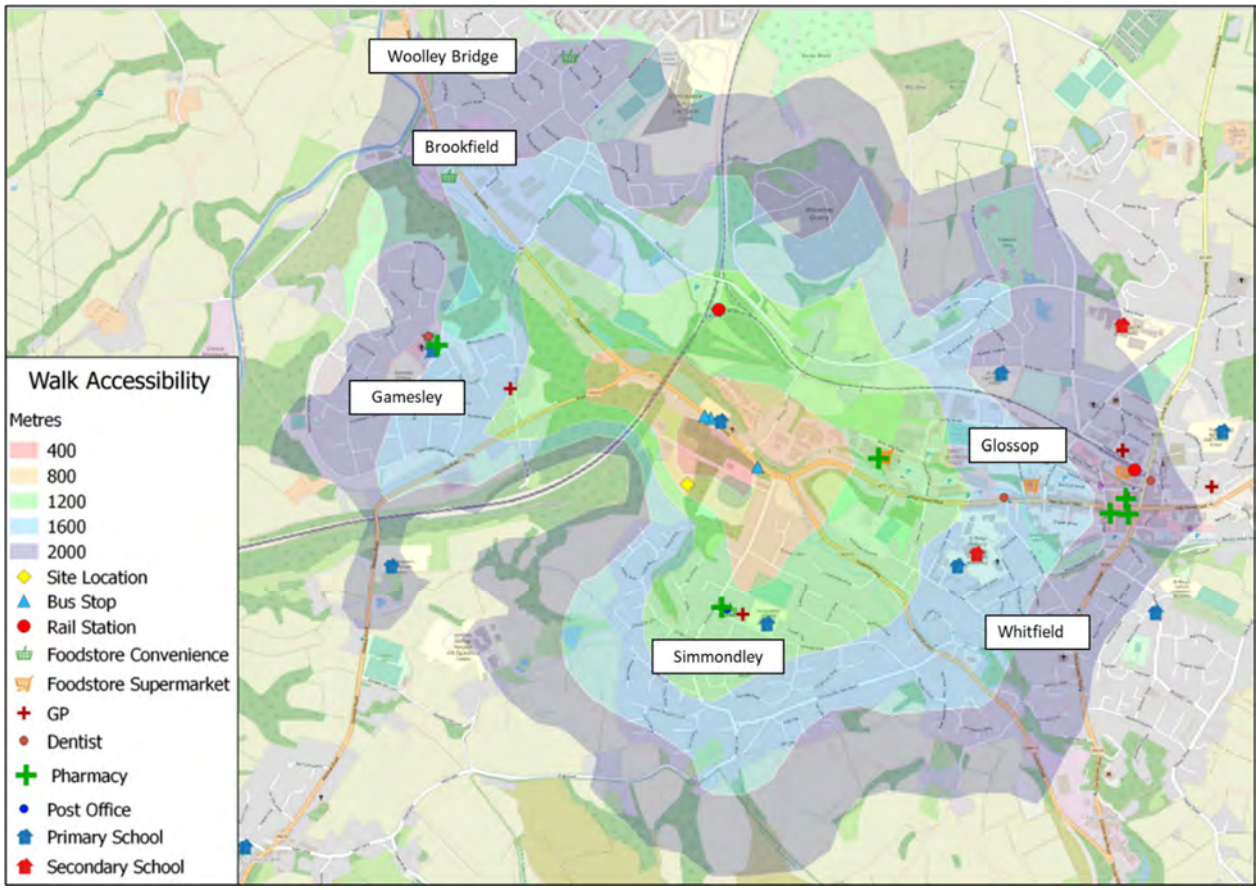
5.1 This Chapter presents a review of the accessibility of the site by walking, cycling and public transport modes.

Pedestrian Accessibility

5.2 Manual for Streets states that walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, it goes on to state that this is not an upper limit, and that walking offers the greatest potential to replace short car trips, particularly those under 2km.

5.3 GIS TRACC software has been used to assess the accessibility of the development by foot for a 2km walking distance from the site accesses, as shown on **Figure 5.1** below. The plan shows the reachable areas within 400m coloured bands from the site.

Figure 5.1 – Walk Accessibility



5.4 The main pedestrian access will be provided at the same location as the vehicular access, off the A57 Dinting Vale to the north, however, pedestrians will also be able to route directly onto Simmondley Lane via the unadopted road to the east of the site. The A57 Dinting Vale benefits from regularly spaced street lighting columns as well as footways on both sides of the road which provide a continuous connection to Glossop town centre. Furthermore, there is a signalised pedestrian crossing located approximately 70m south-east of the site to assist pedestrians across the A57 Dinting Vale.

5.5 **Figure 5.1** demonstrates that Glossop town centre, Simmondley, Gamesley and Brookfield, amongst others, are all within an acceptable walking distance from the site and prospective residents would therefore be easily able to walk to the array of amenities on offer in the local area. A selection of the key facilities located within an acceptable walk distance of the site access are summarised in **Table 5.1** below.

Table 5.1 – Local Facilities

Facility	Details	Distance from Site
Bus Stop	A57 Dinting Vale (Southbound and Westbound)	<50m
Primary School	Dinting C Of E Primary School	<50m
Convenience Store	Gamesley Convenience (Morgan's), Glossop Road	700m
Railway Station	Dinting Vale Train Station	700m
Public House	Bluebell Wood, Glossop Road	750m
Supermarket	Co-op, Pennine Road	850m
Pharmacy	Moorland Pharmacy Ltd, Pennine Road	850m
Supermarket	Tesco Superstore, Wren Nest Road	850m
Pharmacy	Tesco Pharmacy, Wren Nest Road	850m
ATM	ATM (Tesco), Wren Nest Road	850m
Doctors	Simmondley Medical Practice	900m
Retail Park	Wren Nest Retail Park	1.0km
Nursery	Gamesley Early Excellence Centre - Community Interest Company	1.2km
Convenience Store	Londis, Glossop	1.2km
Secondary School	St Philip Howard Catholic Voluntary Academy	1.2km
Supermarket	Aldi, Arundel Street	1.3km
Swimming Pool	Glossop Swimming Pool	1.4km
POS	Howard Park	1.4km
Cafe	A'bout Thyme Coffee Lounge	1.4km
Primary School	St Luke's C Of E Primary School	1.5m

Nursery	Kinder view Children's Day Nursery Glossop	1.5km
Bank	NatWest, Norfolk Square	1.5km
Health Centre	Howard Medical Practice	1.7km
Railway Station	Glossop (GLO) Station	1.7km
Post Office	Glossop Post Office, Norfolk Street	1.7km
Leisure Centre	Glossop Leisure Centre, High Street East	1.8km
College	Glossopdale School and Sixth Form	2km

5.6 As can be seen from the above, there is good public transport infrastructure located within an acceptable walk distance from the site including several bus stops, located in the immediate vicinity of the site, as well as Dinting Railway Station and Glossop Railway Station, located approximately 700m (walk distance) north of the site access and 1.7km (walk distance) east of the site access respectively.

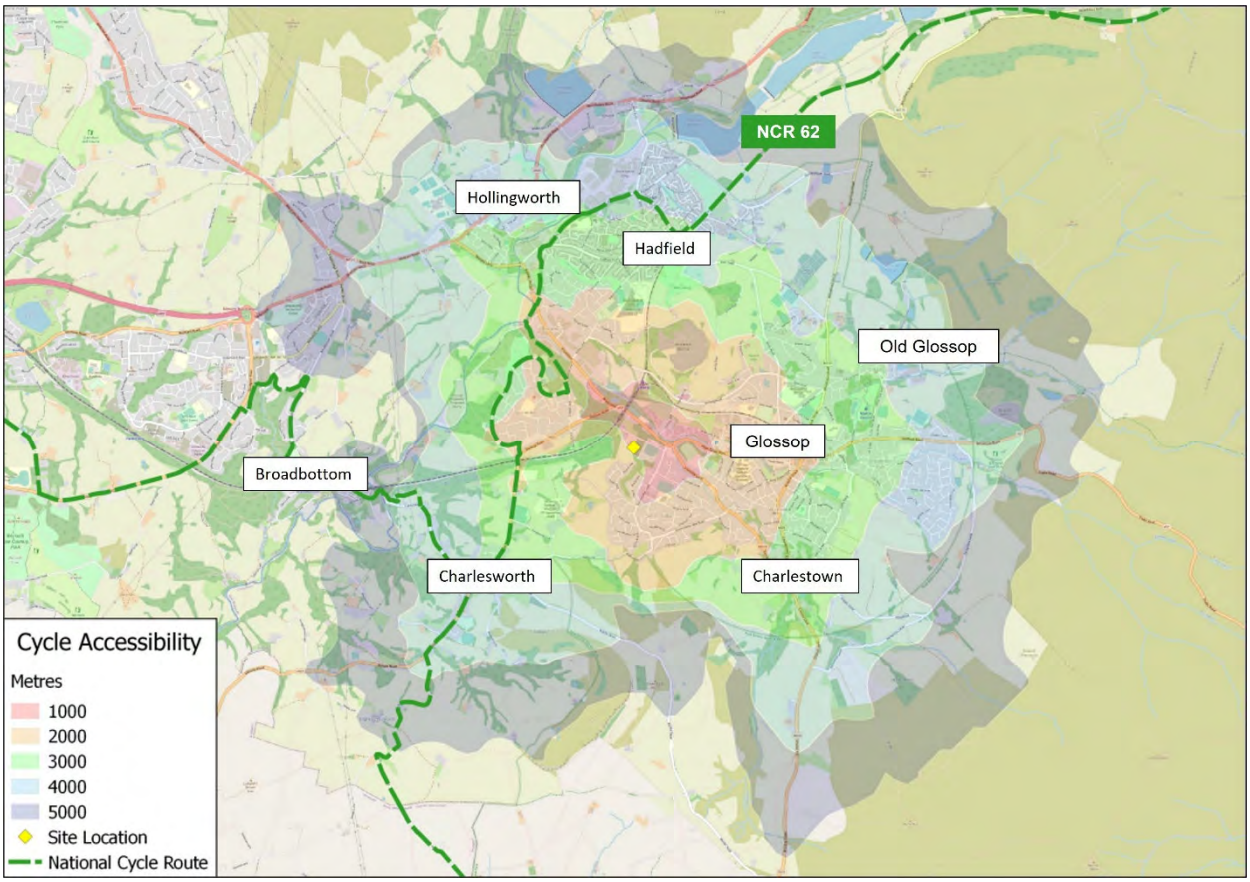
5.7 Overall, the site benefits from good levels of accessibility by foot, with Glossop town centre only a short walk from the site, allowing walking to be a viable alternative to private car use for prospective residents.

Cycle Accessibility

5.8 Transport policy identifies that cycling represents a realistic and healthy option to use of the private car for making journeys up to 5km as a whole journey or as part of a longer journey by public transport.

5.9 GIS TRACC software has again been used to assess the accessibility of the site by bicycle, for a 5km cycle distance and is shown on **Figure 5.2**.

Figure 5.2 – Cycle Accessibility



5.10 The plan demonstrates that Glossop, Charlesworth, Hadfield, Broadbottom, Hollingworth and Charlestown, amongst others, are all located within the 5km catchment area from the development site. **Figure 5.2** also shows the sites proximity to National Cycle Route 62 which forms the west and central sections of the Trans Pennine Trail and locally connects Penistone to the northeast of the site with Hyde to the west.

5.11 As the application site is within an acceptable cycle distance of a range of areas and associated facilities, cycling is considered to be a viable alternative to private car use for prospective residents of site.

Public Transport Accessibility

5.12 The development is well placed to encourage travel by bus. Guidance published by the CIHT 'Planning for Public Transport in Developments' (1999), recommends that *"Bus stops are located to minimise passengers' walking distance to their final destination. The maximum walking distance to a bus stop should not exceed 400m and preferably be no more than 300m."*

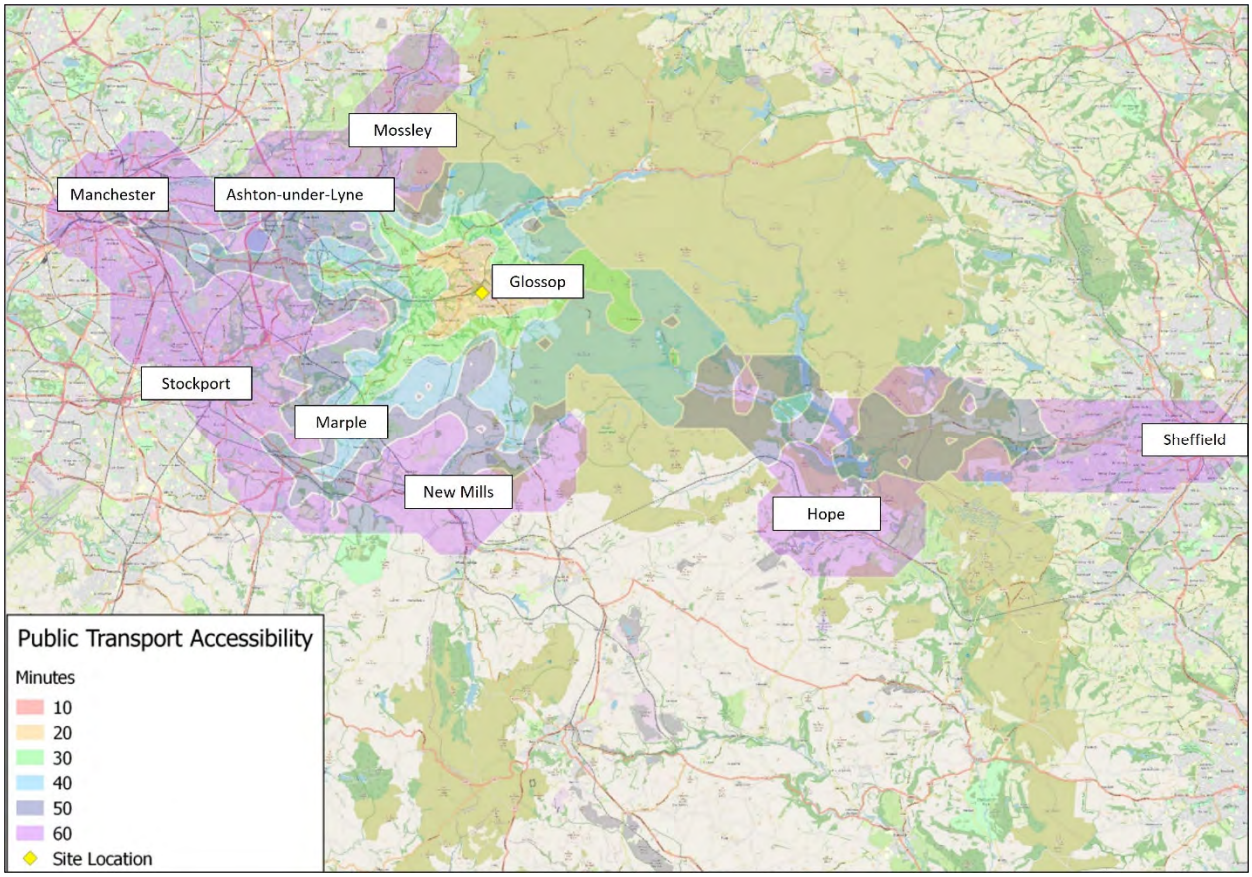
5.13 There are bus stops located on both sides of the A57 Dinting Vale, immediately opposite the proposed site access and whilst the north-westbound bus stop is proposed to be relocated as part of the development proposals, as detailed earlier, both the south-eastbound and north-westbound bus stops will be well within 400m from the centre of the site. These bus stops are served by the number 237, 341, 394 and X57 buses which provide regular services, seven days a week (in combination), to numerous locations including Ashton-under-Lyne, Stalybridge, Mottram, Hollingworth, Hyde, Hattersley, Hazel Grove, Manchester, and Sheffield, amongst others.

5.14 Having regard to the above, prospective residents of the site will have access to several bus services stopping within a reasonable walk distance from the site which provide access to key destinations at a high frequency.

5.15 In terms of rail services, Dinting Railway Station is located 700m (walk distance) north of the site access and is therefore, well within an acceptable walk and cycle distance to encourage perspective residents to travel by train. Dinting Railway Station offers regular direct services throughout the week, including services approximately every 30 minutes to Hadfield, Hattersley, Guide Bridge and Manchester Piccadilly, amongst others.

5.16 The level of accessibility by public transport has been analysed using GIS TRACC software and is shown on **Figure 5.3** below**.** The figure illustrates the distance that can be travelled within 60 minutes by public transport to and from the site, which includes the time taken to walk to the bus stops.

Figure 5.3 – Public Transport Accessibility



5.17 The above demonstrates that the site is within a close proximity to public transport links, serving both the local area and other destinations further afield. The figure shows that key areas of Sheffield, Hope, Stockport, Manchester, Marple and Ashton-under-Lyne amongst others, are all within an acceptable 60-minute commute time.

Summary

5.18 Having regard to the above, it is considered that the site benefits from good levels of accessibility by sustainable modes. These findings demonstrate that prospective residents will not be wholly reliant on the private car. Furthermore, policies to encourage travel by sustainable modes are developed further within the Travel Plan for the development that accompanies this application.

6.0 FUTURE BASELINE TRAFFIC FLOWS

Introduction

6.1 This Chapter describes the future baseline traffic conditions on the local highway network in relation to traffic growth.

Future Baseline Traffic Flows

6.2 As per typical guidance and proposed in our scoping correspondence, the capacity assessments in this TA are undertaken in the future assessment year of 2027 (i.e. based on the year of application + 5 years for developments outside of the strategic road network).

6.3 In order to quantify the level of background traffic growth that could occur on the local network between the date of the baseline traffic data (2021) and the future assessment year, National Traffic Model (NTM) growth factors, modified by TEMPRO local growth factors, have been used. The traffic growth factors are summarised in **Table 6.1** below:

Table 6.1 – Traffic Growth Factors

Period	AM Peak	PM Peak
2021 to 2027	1.0568	1.0537

6.4 The above growth factors have been applied to the surveyed traffic flows to obtain the 2027 base traffic flows, as shown in **Traffic Flow Figure 2**.

6.5 Given the current COVID-19 pandemic, travel patterns have inevitably changed with many people working from home, reducing the number of people travelling to work in peak hours. Whilst it is not possible to accurately predict future travel patterns, it is reasonable to assume that there will be a reduction in future traffic growth, making it unlikely that the growth factors presented above will be realised. Having regard to this it is likely to make the assessments presented later in this report robust.

Committed Developments

6.6 DCC have confirmed that there are no committed developments to be taken into account in the assessments within this TA, however, DCC have noted they have concerns regarding the impact of the proposed A57 Link Road scheme on the TA study area.

6.7 The A57 Link Road scheme has been proposed for over 50 years and is far from committed. Government Planning Practice Guidance contained within *Travel Plans, Transport Assessments and Statements* states that "*It is important to give appropriate consideration to the cumulative impacts arising from other committed development (ie development that is consented or allocated where there is a reasonable degree of certainty will proceed within the next 3 years)*". Having regard to the above, it is not considered appropriate to assume the proposed A57 Link Road will come forward in the next 3 years and therefore, there should be no requirement for it to be considered within this TA, particularly given that the local highway network will be considered as part of the proposed A57 Link Road TA.

7.0 TRIP GENERATION, DISTRIBUTION AND ASSIGNMENT

Overview

7.1 This Chapter provides an estimate of the trips generated by the proposed development during the weekday AM and PM peak hours and distributes and assigns the vehicular trips on the local highway network.

Trip Generation

7.2 In order to estimate the trip generating potential of the proposed residential development, average trip rates from the industry-standard TRICS Database have been obtained. The selection criteria for the TRICS based trip rates is as follows:

i) Residential;

ii) Houses – Privately-owned;

iii) Multi modal surveys;

iv) Selection by number of units (50 to 250);

v) Weekday surveys only; and

vi) Only sites in 'Edge of Town' locations have been selected.

7.3 The multi modal TRICS outputs for the proposed residential development are presented in **Appendix D** and are summarised in **Table 7.1** below.

Table 7.1 - Estimated Trip Rates (Per Unit) Associated with the Proposed Development

Mode	Weekday AM Peak Hour		Weekday PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Vehicles	0.115	0.343	0.305	0.136
Cycles	0.008	0.021	0.014	0.006
Pedestrians	0.037	0.076	0.049	0.025
Pub. Trans.	0.001	0.037	0.020	0.005

7.4 The estimated trip generation associated with the proposed 100 residential dwellings is therefore as summarised in **Table 7.2** below.

Table 7.2 - Estimated Trip Generation – 100 Residential Dwellings				
Mode	**Weekday AM Peak Hour**		**Weekday PM Peak Hour**	
	Arrivals	**Departures**	**Arrivals**	**Departures**
Vehicles	12	34	31	14
Cycles	1	2	1	1
Pedestrians	4	8	5	3
Pub. Trans.	0	4	2	1

7.5 It should be noted that the aforementioned trip rates were presented to DCC during scoping discussions, however, DCC confirmed they appear low and should be more robust, requesting the location is checked to ensure it is compatible as the assessment indicates a selection of Edge of Town locations.

7.6 The aforementioned trip rates have been obtained using TRICS Good Practice Guidelines and are considered acceptable for use in the assessments for the following reasons:

- TRICS defines 'Edge of Town' as "*At the physical edge of the town/city, where the town/city meets the countryside. The actual physical distance from the site to the beginning of the countryside can vary proportionately to the size of the town/city*". Glossop is a town with a large number of residents and amenities etc. and the site is clearly located on the physical edge of the town where the town meets the countryside. Therefore, the use of 'Edge of Town' comparator sites is considered wholly appropriate.

- Furthermore, the use of just 'Edge of Town' comparator sites allows for a robust assessment when considering research undertaken by TRICS which states "*vehicular analysis by location type did show an overall structured and consistent variation in trip rates. The ranked comparison of TRICS® location types showed the Edge of Town category ranking mostly at the top in terms of trip rates, with the Town Centre/Edge of Town Centre grouping of categories ranking mostly at the bottom*".

- Travel patterns have inevitably changed due to the current COVID-19 pandemic, with many people continuing to work from home, reducing the number of people traveling to work in the peak hours. Whilst it is not possible to accurately predict future travel patterns, it is reasonable to assume that there will be a reduction in future commuters on the network, when compared to recent years (when the majority of TRICS surveys were undertaken), as a result of workplaces providing flexibility to more employees to work from home.

- The site benefits from good levels of accessibility being within an acceptable walk distance of Glossop town centre as well as the vast array of amenities on offer in this area including retail, education, leisure and healthcare. The site is also within an acceptable walk distance of multiple bus services providing access to a range of local destinations and is also located less than 700m (10-minute walk) from Dinting Railway Station, which provides convenient access to Hadfield, Hattersley, Guide Bridge and Manchester City Centre, amongst other locations. Therefore, prospective residents will not be wholly reliant on the private car to travel to/from the site.

- Having regard to the above, the aforementioned trip rates (based on 'Edge of Town' locations only) are considered highly appropriate, particularly when considering the accessibility of the comparator sites in TRICs, as detailed below.

    i) In summary, the proposed development site is located 1.5km from Glossop town centre, has access to several bus services per hour, is located approximately 700m from the nearest railway station and has a high number of facilities within an acceptable 2km walk distance.

    ii) Following a review of the 17 comparator sites, only 2 are located closer to their nearest town centre when compared to the proposed development site, with 65% of comparator sites located over the acceptable walk distance of 2km from the town centre.

    iii) Several comparator sites are not located within 400m of a bus stop, with 100% having fewer bus services per hour when compared to the proposed development site.

    iv) 65% of comparator sites do not have a railway station within an acceptable walk distance of 2km and are likely to be significantly more car dependant than the proposed development site.

    v) Whilst it is subjective, 76% of comparator sites are considered to have less facilities within an acceptable walk distance of 2km. It should also be noted that some comparator sites are located in a village/predominantly residential area with very few facilities and will therefore be subject to more car dependent residents when compared to the proposed development.

- In addition to the above, the developer is committed to encourage travel via sustainable modes through the implementation of a Travel Plan.

7.7 Having regard to the above, the presented trip rates and trip generation estimates are considered acceptable for use in the assessments within this TA.

Trip Distribution Methodology

7.8 The methodology used to estimate the trip distribution of the development-related traffic routing through the TA study area is based on information from the 2011 Census.

7.9 Location of usual residence and place of work data from the national census for all "out-moves" from the High Peak 004 MSOA have been obtained from Nomis for the purposes of determining a suitable and localised trip distribution model.

7.10 The trip distribution percentages on the local highway network are presented in **Table 7.3** below.

Table 7.3 – Trip Distribution

Route Description	Percentage
A57 Dinting Vale (West)	56.3%
Glossop Road	14.4%
Simmondley Lane	3.8%
Primrose Lane	9.5%
A57 High Street West (East)	16.0%

7.11 Out-moves provide an indication of the numbers and destinations (on a MSOA basis) of people who reside in the High Peak 004 MSOA and who work elsewhere.

7.12 This methodology has been adopted to distribute trips for the proposed development. The percentage distribution of vehicular trips generated by the proposed residential development is also presented diagrammatically in **Traffic Flow Figure 3**.

Traffic Assignment

7.13 The traffic assignment for the proposed residential development has been obtained by applying the trip distribution proportions detailed above to the estimated traffic generation figures and are presented diagrammatically on **Traffic Flow Figure 4**.

8.0 ANTICIPATED HIGHWAY IMPACT

General

8.1 This Chapter describes the impact of the additional trips generated by the proposed development on the operation of the local highway network. As stated earlier, the study area for the TA has been agreed with DCC / NH and includes the following junctions:

- Proposed site access;
- A57 Dinting Vale / A626 Glossop Road signal-controlled junction; and,
- A57 Dinting Vale / Simmondley Lane / A57 High Street West / Primrose Lane double mini-roundabout

Assessment Methodology

8.2 Assessments of the priority controlled and roundabout junctions within the study area have been undertaken using Junctions 9 (ARCADY and PICADY) software and for the signal junctions LINSIG software.

8.3 With the Junctions 9 models the results generated provide a Ratio to Flow capacity (RFC) along with an estimate of the likely traffic queues. RFC values between 0.00 and 0.85 are generally accepted as representing stable and acceptable operating conditions. Values between 0.85 and 1 represents variable operation (i.e. possible queues building up at the junction during the period under consideration and increases in vehicular delay moving through the junction). RFC values in excess of 1 represents overloaded conditions (i.e. congested conditions).

8.4 LINSIG software presents results as a percentage Degree of Saturation (DoS) and corresponding likely traffic queues for each modelled link at the junction. For Traffic Signals it is generally accepted that DoS of 90% or less on individual links represents satisfactory signal operation. DoS of between 90% and 100% represent variable operation which warrants further investigation and values in excess of 100% represent overloaded conditions.

8.5 Capacity assessments have been undertaken in the future assessment year of 2027 in the ‘with’ and ‘without’ development scenarios. The 2027 ‘without development’ baseline traffic flows are shown on **Traffic Flow Figure 2**, as detailed earlier.

8.6 The 2027 'with development' assessment traffic flows are the sum of the 2027 'without development' baseline traffic flows and the proposed development traffic flows, as shown on **Traffic Flow Figure 5**.

Proposed Site Access – A57 Dinting Vale

8.7 PICADY software has been used in the assessment of the proposed site access off the A57 Dinting Vale. The PICADY results are presented in **Appendix E** with the results summarised in **Table 8.1** below.

Table 8.1 – Proposed Site Access PICADY Results

Approach	AM PEAK		PM PEAK	
	RFC	MMQ	RFC	MMQ
2027 With Development				
Site Access- Right / Left	0.13	0.1	0.05	0.1
A57 Dinting Vale (North-west) – Ahead Right	0.04	0.0	0.10	0.2

8.8 The above results demonstrate that the proposed site access will operate well within practical capacity in the future assessment year of 2027, without significant queuing.

A57 Dinting Vale / A626 Glossop Road

8.9 LINSIG software has been used to assess the operation of the A57 Dinting Vale / A626 Glossop Road signal-controlled junction. The results of the 'without' and 'with' development assessments are presented in **Appendix F** and summarised in **Table 8.2** below.

Table 8.2 – A57 Dinting Vale / A626 Glossop Road Signal Controlled Junction LINSIG Results – 2027 Assessment Year

Link	2027 'Without Development'				2027 'With Development'			
	AM PEAK		PM PEAK		AM PEAK		PM PEAK	
	DoS	MMQ	DoS	MMQ	DoS	MMQ	DoS	MMQ
A57 Dinting Vale (Westbound) Ahead Left	66.5%	10.8	54.1%	7.0	68.7%	11.8	55.0%	7.1
A57 Dinting Vale (Eastbound) Ahead Right	60.8%	8.0	71.7%	12.1	61.5%	8.3	73.7%	13.1
A626 Glossop Road Right Left	66.7%	5.9	70.8%	7.4	66.9%	6.0	71.6%	7.6
PRC (%):	34.9%		25.5%		31.0%		22.2%	

8.10 As can be seen from the above, the A57 Dinting Vale / A626 Glossop Road signal-controlled junction is predicted to operate within capacity in the future assessment year of 2027, with the proposed development in place. Furthermore, **Table 8.2** demonstrates that the proposed development will not have a material impact on RFC or queue lengths which is attributed to the development adding an average of only 1 additional two-way vehicle movement every 2 minutes or so through the junction in both the AM and PM peak hours.

A57 Dinting Vale / Simmondley Lane / A57 High Street West / Primrose Lane Double Mini-Roundabout

8.11 ARCADY software has been used in the assessment of the A57 Dinting Vale / Simmondley Lane / A57 High Street West / Primrose Lane double mini-roundabout. The ARCADY results are presented in **Appendix G** with the results summarised in **Table 8.3** below.

Table 8.3 – A57 Dinting Vale / Simmondley Lane / A57 High Street West / Primrose Lane Double Mini-Roundabout ARCADY Results – 2027 Assessment Year

Approach	AM PEAK		PM PEAK	
	RFC	MMQ	RFC	MMQ
2027 'Without Development'				
A57 Dinting Vale (WB Link)	0.90	6.8	0.90	6.8
Simmondley Lane	0.54	1.2	0.35	0.5
A57 Dinting Vale (West)	0.94	11.0	1.02	28.3
A57 Dinting Vale (EB Link)	0.89	6.6	0.87	5.7
A57 High Street West	1.21	53.1	0.98	10.9
Primrose Lane	0.91	5.2	0.48	0.9
2027 'With Development'				
A57 Dinting Vale (WB Link)	0.90	6.8	0.90	6.8
Simmondley Lane	0.55	1.2	0.35	0.5
A57 Dinting Vale (West)	0.95	12.5	1.03	29.8
A57 Dinting Vale (EB Link)	0.90	7.1	0.87	5.8
A57 High Street West	1.21	54.5	1.03	15.2
Primrose Lane	0.92	5.3	0.62	1.5

8.12 As can be seen from the above, in a future assessment year of 2027 a number of approaches are predicted to operate over their practical capacity during both the AM and PM peak hours, without the proposed development in place.

8.13 With the additional traffic generated by the development there will be an increase in the RFC and queue lengths when compared to the without development scenario. It should be noted that local knowledge of the area suggests the ARCADY model is over estimating queues in both the 'without' and 'with' development scenario. This is likely due to the fact both mini-roundabouts have unbalanced flows and may behave more like a priority junction. Therefore, the aforementioned results should be treated with caution, however, they do provide a comparative basis for demonstrating the impact of the development which is the main purpose of the ARCADY modelling.

8.14 The development will only have a 0.7% traffic impact at these mini-roundabout junctions in both the AM and PM peak hours, when compared to the 2027 'without' development scenario, or an average of only 1 additional two-way vehicle movement every 5 minutes or so which cannot be classed as material or 'severe' in accordance with the NPPF. Having regard to this, the impact of the development at this junction is not considered to be material and no mitigation measures are required.

9.0 SUMMARY AND CONCLUSIONS

9.1 SCP have been appointed by Wainhomes (North West) Limited to provide transport planning and engineering advice in support of a full planning application for a residential development, comprising 100 dwellings, on land to the south-west of the A57 Dinting Vale, Glossop.

9.2 Vehicular access to the development will be provided via a simple priority-controlled junction off the A57 Dinting Vale. The access road measures 5.5m in width and benefits from 6m corner radii and 2m footways on both sides of the road which connect to the existing pedestrian infrastructure on the A57 Dinting Vale. In order to accommodate the proposed site access, it is necessary to relocate the north-westbound bus stop (Stop ID: dbsamdgj) along the site frontage circa 15m to the south-east of its existing position which does not impact on the junction visibility splays.

9.3 The main pedestrian access will be provided at the same location as the vehicular access, however, pedestrians will also be able to route directly onto Simmondley Lane via the unadopted road to the east of the site.

9.4 The personal injury accident data for the most recently available five-year period has been reviewed and does not represent a material concern in the context of the proposed development.

9.5 The accessibility of the site has been assessed. Overall, the site is considered to be well located in terms of its accessibility by all the major non-car modes of transport. These findings demonstrate that prospective residents will not be wholly reliant on the private car. Furthermore, policies to encourage travel by sustainable modes are developed further within the Travel Plan for the development that accompanies this application.

9.6 The impact of the traffic arising from the scheme has been tested in detail at the proposed site access, the A57 Dinting Vale / A626 Glossop Road signal-controlled junction and the A57 Dinting Vale / Simmondley Lane / A57 High Street West / Primrose Lane double mini-roundabout. The assessments show that the proposed site access has sufficient spare capacity to accommodate the proposed development and the development will not have a material impact on the operation of the off-site junctions.

9.7 On this basis, the residual cumulative impact of the development cannot therefore be considered ‘severe’ and, in accordance with paragraph 111 of the NPPF, there is no reason to prevent or refuse this planning application on transport grounds.

9.8 The proposed development is therefore commended for approval.

S|C|P

APPENDIX A

IMPORTANT NOTE:

ALL DIMENSIONS AND LEVELS SHOWN ON THIS DRAWING ARE TO BE CHECKED BY THE CONTRACTOR, MANUFACTURER PRIOR TO THE COMMENCEMENT OF ANY WORKS ON SITE OR THE MANUFACTURE OF ANY SITE COMPONENTS.

THIS DRAWING IS NOT TO BE SCALED.

DIMENSIONS ARE INDICATED IN MILLIMETRES UNLESS CLEARLY STATED OTHERWISE.

Revision:	By:	Date:

Client: Wain HOMES

Project Title: Proposed Development

Address: Dinting Vale, Glossop

Drawing Title: BDC Colour Site Layout

Drawing No: WH/DV/CSL/01

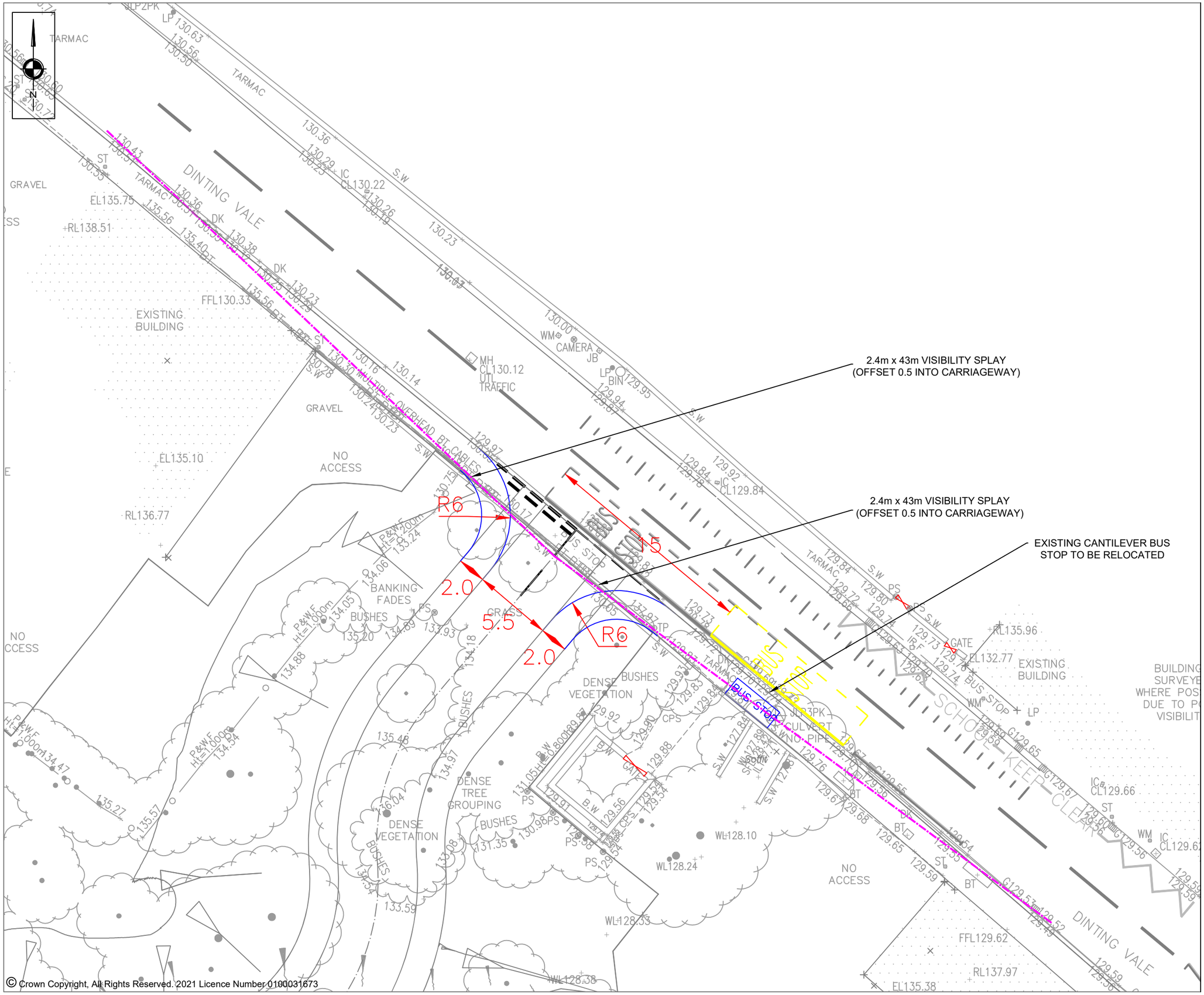
Dwn:	Chd:	Date:
MB	CC	14/06/2022

Scale: 1:500 Paper Size: A1 Rev:

Baldwin Design
e-mail: enquiries@baldwindesign.net
www.baldwindesign.net
Tel: 01925 730 610

S|C|P

APPENDIX B



NOTES

REVISIONS

REV	DESCRIPTION	DATE	BY
A	UPDATED SITE PLAN (BCD CAD LAYOUT) -	18.07.22	AM

SCP

Transportation Planning : Infrastructure Design

Colwyn Chambers, 19 York Street, Manchester, M2 3BA, Tel 0161 832 4400, www.scptransport.co.uk, Email info@scptransport.co.uk

Client Name:

WAINHOMES LIMITED

Project Title:

DINTING VALE, GLOSSOP

Drawing Title:

PROPOSED ACCESS ARRANGEMENT/ BUS STOP RELOCATION PLAN

Drawn By:	Date:
BH	22.11.2021
Checked:	Scale:
CT	1:250 @ A3
Status:	Approved/Unapproved:
PLANNING	-

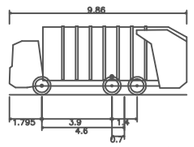
Drawing No.	Rev.
SCP/210087/SK01	A

S|C|P

APPENDIX C

NOT TO SCALE

NOTES



Large Refuse Vehicle (3 axle)

Overall Length	9.860m
Overall Width	2.450m
Overall Body Height	3.814m
Min Body Ground Clearance	0.366m
Track Width	2.450m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.500m

REVISIONS

REV	DESCRIPTION	DATE	BY
-	-	-	-

SCP

Transportation Planning : Infrastructure Design

Colwyn Chambers, 19 York Street, Manchester, M2 3BA, Tel 0161 832 4400, www.scptransport.co.uk, Email info@scptransport.co.uk

Client Name:

WAINHOMES LIMITED

Project Title:

DINTING VALE, GLOSSOP

Drawing Title:

PROPOSED ACCESS ARRANGEMENT/ BUS STOP RELOCATION PLAN (OPTION 2)

Drawn By: AM	Date: 18.07.2022
Checked: CT	Scale: 1:500 @ A3
Status: PLANNING	Approved/Unapproved: -

Drawing No.	Rev.
SCP/210087/ATR01	-

S|C|P

APPENDIX D

Calculation Reference: AUDIT-726001-211108-1134

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	ES	EAST SUSSEX	3 days
	HF	HERTFORDSHIRE	1 days
	KC	KENT	1 days
	SC	SURREY	2 days
	WS	WEST SUSSEX	5 days
04	**EAST ANGLIA**		
	NF	NORFOLK	1 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	1 days
	ST	STAFFORDSHIRE	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NY	NORTH YORKSHIRE	1 days
09	**NORTH**		
	DH	DURHAM	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 54 to 248 (units:)
Range Selected by User: 50 to 250 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 16/06/21

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

Selected survey days:

Monday	3 days
Tuesday	1 days
Wednesday	5 days
Thursday	5 days
Friday	3 days

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

Selected survey types:

Manual count	17 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town	17

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

Selected Location Sub Categories:

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

Secondary Filtering selection:

Use Class:

C3	17 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less	1 days
5,001 to 10,000	5 days
10,001 to 15,000	7 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days

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

Population within 5 miles:

5,001 to 25,000	2 days
25,001 to 50,000	2 days
75,001 to 100,000	5 days
100,001 to 125,000	1 days
125,001 to 250,000	7 days

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

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	13 days
1.6 to 2.0	2 days

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

Travel Plan:

Yes	8 days
No	9 days

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

PTAL Rating:

No PTAL Present	17 days

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

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

LIST OF SITES relevant to selection parameters

1 **DH-03-A-03** **SEMI-DETACHED & TERRACED** **DURHAM**
PILGRIMS WAY
DURHAM

Edge of Town
Residential Zone
Total No of Dwellings: 57
Survey date: FRIDAY *19/10/18* *Survey Type: MANUAL*

2 **ES-03-A-03** **MIXED HOUSES & FLATS** **EAST SUSSEX**
SHEPHAM LANE
POLEGATE

Edge of Town
Residential Zone
Total No of Dwellings: 212
Survey date: MONDAY *11/07/16* *Survey Type: MANUAL*

3 **ES-03-A-04** **MIXED HOUSES & FLATS** **EAST SUSSEX**
NEW LYDD ROAD
CAMBER

Edge of Town
Residential Zone
Total No of Dwellings: 134
Survey date: FRIDAY *15/07/16* *Survey Type: MANUAL*

4 **ES-03-A-05** **MIXED HOUSES & FLATS** **EAST SUSSEX**
RATTLE ROAD
NEAR EASTBOURNE
STONE CROSS
Edge of Town
Residential Zone
Total No of Dwellings: 99
Survey date: WEDNESDAY *05/06/19* *Survey Type: MANUAL*

5 **HF-03-A-03** **MIXED HOUSES** **HERTFORDSHIRE**
HARE STREET ROAD
BUNTINGFORD

Edge of Town
Residential Zone
Total No of Dwellings: 160
Survey date: MONDAY *08/07/19* *Survey Type: MANUAL*

6 **KC-03-A-04** **SEMI-DETACHED & TERRACED** **KENT**
KILN BARN ROAD
AYLESFORD
DITTON
Edge of Town
Residential Zone
Total No of Dwellings: 110
Survey date: FRIDAY *22/09/17* *Survey Type: MANUAL*

7 **NF-03-A-04** **MIXED HOUSES** **NORFOLK**
NORTH WALSHAM ROAD
NORTH WALSHAM

Edge of Town
Residential Zone
Total No of Dwellings: 70
Survey date: WEDNESDAY *18/09/19* *Survey Type: MANUAL*

8 **NY-03-A-10** **HOUSES AND FLATS** **NORTH YORKSHIRE**
BOROUGHBRIDGE ROAD
RIPON

Edge of Town
No Sub Category
Total No of Dwellings: 71
Survey date: TUESDAY *17/09/13* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 **SC-03-A-04** **DETACHED & TERRACED** **SURREY**
HIGH ROAD
BYFLEET

Edge of Town
Residential Zone
Total No of Dwellings: 71
Survey date: THURSDAY *23/01/14* *Survey Type: MANUAL*

10 **SC-03-A-05** **MIXED HOUSES** **SURREY**
REIGATE ROAD
HORLEY

Edge of Town
Residential Zone
Total No of Dwellings: 207
Survey date: MONDAY *01/04/19* *Survey Type: MANUAL*

11 **SH-03-A-05** **SEMI-DETACHED/TERRACED** **SHROPSHIRE**
SANDCROFT
TELFORD
SUTTON HILL
Edge of Town
Residential Zone
Total No of Dwellings: 54
Survey date: THURSDAY *24/10/13* *Survey Type: MANUAL*

12 **ST-03-A-07** **DETACHED & SEMI-DETACHED** **STAFFORDSHIRE**
BEACONSIDE
STAFFORD
MARSTON GATE
Edge of Town
Residential Zone
Total No of Dwellings: 248
Survey date: WEDNESDAY *22/11/17* *Survey Type: MANUAL*

13 **WS-03-A-04** **MIXED HOUSES** **WEST SUSSEX**
HILLS FARM LANE
HORSHAM
BROADBRIDGE HEATH
Edge of Town
Residential Zone
Total No of Dwellings: 151
Survey date: THURSDAY *11/12/14* *Survey Type: MANUAL*

14 **WS-03-A-08** **MIXED HOUSES** **WEST SUSSEX**
ROUNDSTONE LANE
ANGMERING

Edge of Town
Residential Zone
Total No of Dwellings: 180
Survey date: THURSDAY *19/04/18* *Survey Type: MANUAL*

15 **WS-03-A-09** **MIXED HOUSES & FLATS** **WEST SUSSEX**
LITTLEHAMPTON ROAD
WORTHING
WEST DURRINGTON
Edge of Town
Residential Zone
Total No of Dwellings: 197
Survey date: THURSDAY *05/07/18* *Survey Type: MANUAL*

16 **WS-03-A-10** **MIXED HOUSES** **WEST SUSSEX**
TODDINGTON LANE
LITTLEHAMPTON
WICK
Edge of Town
Residential Zone
Total No of Dwellings: 79
Survey date: WEDNESDAY *07/11/18* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

17 WS-03-A-12 MIXED HOUSES WEST SUSSEX
MADGWICK LANE
CHICHESTER
WESTHAMPNETT
Edge of Town
Village
Total No of Dwellings: 152
Survey date: WEDNESDAY *16/06/21* *Survey Type: MANUAL*

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	17	132	0.082	17	132	0.300	17	132	0.382
08:00 - 09:00	17	132	0.115	**17**	**132**	**0.343**	**17**	**132**	**0.458**
09:00 - 10:00	17	132	0.141	17	132	0.172	17	132	0.313
10:00 - 11:00	17	132	0.133	17	132	0.165	17	132	0.298
11:00 - 12:00	17	132	0.141	17	132	0.157	17	132	0.298
12:00 - 13:00	17	132	0.150	17	132	0.148	17	132	0.298
13:00 - 14:00	17	132	0.165	17	132	0.156	17	132	0.321
14:00 - 15:00	17	132	0.164	17	132	0.190	17	132	0.354
15:00 - 16:00	17	132	0.248	17	132	0.166	17	132	0.414
16:00 - 17:00	17	132	0.262	17	132	0.156	17	132	0.418
17:00 - 18:00	**17**	**132**	**0.305**	17	132	0.136	17	132	0.441
18:00 - 19:00	17	132	0.278	17	132	0.142	17	132	0.420
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.184			2.231			4.415

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

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

Parameter summary

Trip rate parameter range selected:	54 - 248 (units:)
Survey date date range:	01/01/13 - 16/06/21
Number of weekdays (Monday-Friday):	17
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	17	132	0.005	17	132	0.008	17	132	0.013
08:00 - 09:00	17	132	0.008	**17**	**132**	**0.021**	**17**	**132**	**0.029**
09:00 - 10:00	17	132	0.000	17	132	0.004	17	132	0.004
10:00 - 11:00	17	132	0.004	17	132	0.005	17	132	0.009
11:00 - 12:00	17	132	0.004	17	132	0.006	17	132	0.010
12:00 - 13:00	17	132	0.006	17	132	0.006	17	132	0.012
13:00 - 14:00	17	132	0.004	17	132	0.001	17	132	0.005
14:00 - 15:00	17	132	0.005	17	132	0.004	17	132	0.009
15:00 - 16:00	17	132	0.006	17	132	0.005	17	132	0.011
16:00 - 17:00	**17**	**132**	**0.014**	17	132	0.009	17	132	0.023
17:00 - 18:00	17	132	0.014	17	132	0.006	17	132	0.020
18:00 - 19:00	17	132	0.012	17	132	0.009	17	132	0.021
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.082			0.084			0.166

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	17	132	0.016	17	132	0.027	17	132	0.043
08:00 - 09:00	17	132	0.037	**17**	**132**	**0.076**	17	132	0.113
09:00 - 10:00	17	132	0.039	17	132	0.038	17	132	0.077
10:00 - 11:00	17	132	0.033	17	132	0.043	17	132	0.076
11:00 - 12:00	17	132	0.025	17	132	0.032	17	132	0.057
12:00 - 13:00	17	132	0.038	17	132	0.034	17	132	0.072
13:00 - 14:00	17	132	0.032	17	132	0.027	17	132	0.059
14:00 - 15:00	17	132	0.030	17	132	0.036	17	132	0.066
15:00 - 16:00	**17**	**132**	**0.076**	17	132	0.049	**17**	**132**	**0.125**
16:00 - 17:00	17	132	0.055	17	132	0.035	17	132	0.090
17:00 - 18:00	17	132	0.049	17	132	0.025	17	132	0.074
18:00 - 19:00	17	132	0.036	17	132	0.035	17	132	0.071
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.466			0.457			0.923

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	17	132	0.003	17	132	0.031	17	132	0.034
08:00 - 09:00	17	132	0.001	**17**	**132**	**0.037**	**17**	**132**	**0.038**
09:00 - 10:00	17	132	0.004	17	132	0.013	17	132	0.017
10:00 - 11:00	17	132	0.007	17	132	0.010	17	132	0.017
11:00 - 12:00	17	132	0.004	17	132	0.007	17	132	0.011
12:00 - 13:00	17	132	0.007	17	132	0.008	17	132	0.015
13:00 - 14:00	17	132	0.004	17	132	0.006	17	132	0.010
14:00 - 15:00	17	132	0.008	17	132	0.004	17	132	0.012
15:00 - 16:00	**17**	**132**	**0.028**	17	132	0.008	17	132	0.036
16:00 - 17:00	17	132	0.022	17	132	0.004	17	132	0.026
17:00 - 18:00	17	132	0.020	17	132	0.005	17	132	0.025
18:00 - 19:00	17	132	0.017	17	132	0.003	17	132	0.020
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.125			0.136			0.261

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

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

S|C|P

APPENDIX E

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Site Access - Dinting Vale.j9
Path: Z:\Job Library\2021\210087 - A57 Dinting Vale, Glossop\Traffic Data
Report generation date: 25/07/2022 14:08:39

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2027 Assessment									
Stream B-AC	D1	0.1	14.28	0.13	B	D2	0.1	11.96	0.05	B
Stream C-AB		0.0	3.84	0.04	A		0.2	3.72	0.10	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	Proposed Site Access / A57 Dinting Vale
Location	
Site number	
Date	15/12/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\craig.thomson
Description	

Units

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

Analysis Options

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	2027 Assessment	AM	ONE HOUR	07:45	09:15	15
D2	2027 Assessment	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2027 Assessment, 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	Proposed Site Access / A57 Dinting Vale	T-Junction	Two-way		0.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A57 Dinting Vale (South-east)		Major
B	Site Access		Minor
C	A57 Dinting Vale (North-west)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.17			250.0	✓	0.00

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	2.75	19	18

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	480	0.079	0.200	0.126	0.286
B-C	619	0.086	0.217	-	-
C-B	719	0.252	0.252	-	-

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	2027 Assessment	AM	ONE HOUR	07:45	09:15	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		✓	901	100.000
B		✓	34	100.000
C		✓	781	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	3	898
	B	10	0	24
	C	773	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	14.28	0.1	B
C-AB	0.04	3.84	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	387	0.066	25	0.1	9.957	A
C-AB	15	953	0.016	15	0.0	3.841	A
C-A	572			572			
A-B	2			2			
A-C	676			676			

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	31	347	0.088	30	0.1	11.351	B
C-AB	23	1011	0.023	23	0.0	3.643	A
C-A	679			679			
A-B	3			3			
A-C	807			807			

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	37	289	0.129	37	0.1	14.262	B
C-AB	39	1098	0.036	39	0.0	3.398	A
C-A	821			821			
A-B	3			3			
A-C	989			989			

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	37	289	0.129	37	0.1	14.285	B
C-AB	39	1098	0.036	39	0.0	3.399	A
C-A	821			821			
A-B	3			3			
A-C	989			989			

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	31	347	0.088	31	0.1	11.375	B
C-AB	23	1011	0.023	23	0.0	3.647	A
C-A	679			679			
A-B	3			3			
A-C	807			807			

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	26	387	0.066	26	0.1	9.977	A
C-AB	16	953	0.016	16	0.0	3.843	A
C-A	572			572			
A-B	2			2			
A-C	676			676			

2027 Assessment, 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	Proposed Site Access / A57 Dinting Vale	T-Junction	Two-way		0.29	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	2027 Assessment	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	763	100.000
B		✓	14	100.000
C		✓	882	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	9	754
	B	4	0	10
	C	860	22	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	0.05	11.96	0.1	B
C-AB	0.10	3.72	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	406	0.026	10	0.0	9.103	A
C-AB	46	1015	0.045	45	0.1	3.713	A
C-A	618			618			
A-B	7			7			
A-C	568			568			

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	370	0.034	13	0.0	10.073	B
C-AB	69	1085	0.064	69	0.1	3.544	A
C-A	724			724			
A-B	8			8			
A-C	678			678			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	316	0.049	15	0.1	11.952	B
C-AB	120	1187	0.101	120	0.2	3.372	A
C-A	851			851			
A-B	10			10			
A-C	830			830			

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	15	316	0.049	15	0.1	11.959	B
C-AB	120	1188	0.101	120	0.2	3.377	A
C-A	851			851			
A-B	10			10			
A-C	830			830			

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	13	370	0.034	13	0.0	10.078	B
C-AB	69	1085	0.064	70	0.1	3.547	A
C-A	724			724			
A-B	8			8			
A-C	678			678			

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	11	406	0.026	11	0.0	9.111	A
C-AB	46	1015	0.045	46	0.1	3.718	A
C-A	618			618			
A-B	7			7			
A-C	568			568			

S|C|P

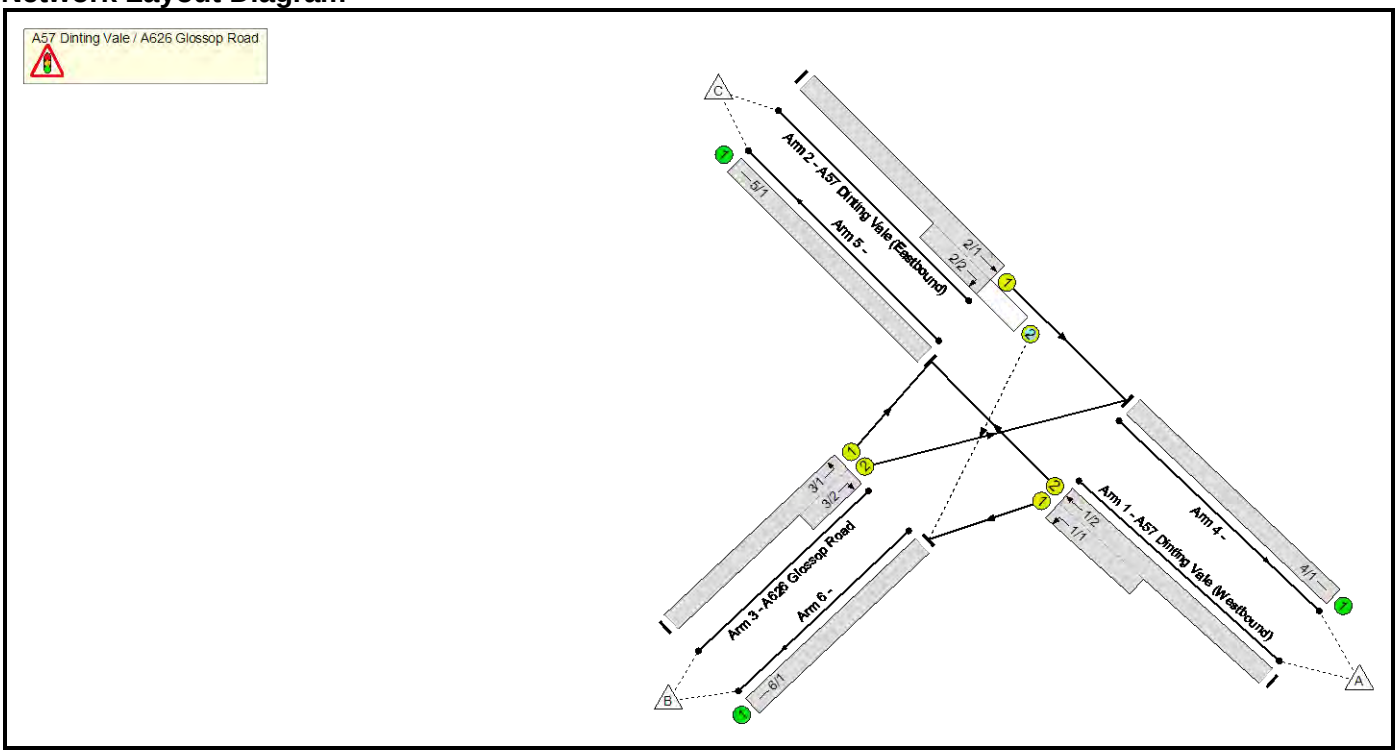
APPENDIX F

Full Input Data And Results

User and Project Details

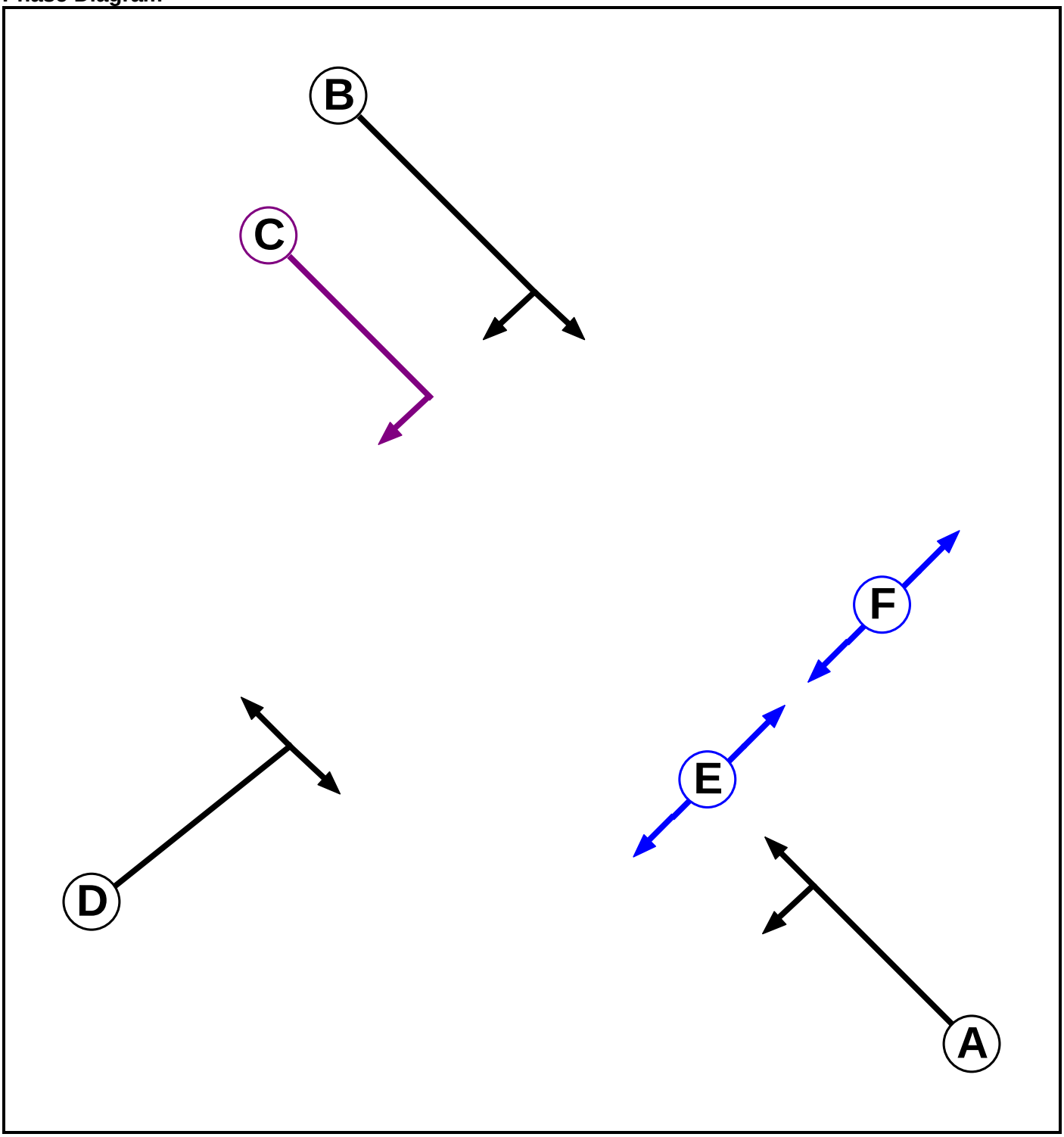
Project:	
Title:	
Location:	
Additional detail:	
File name:	A57 Dinting Vale_A626 Glossop Road_July 2022.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Ind. Arrow	B	4	4
D	Traffic		7	7
E	Pedestrian		5	5
F	Pedestrian		5	5

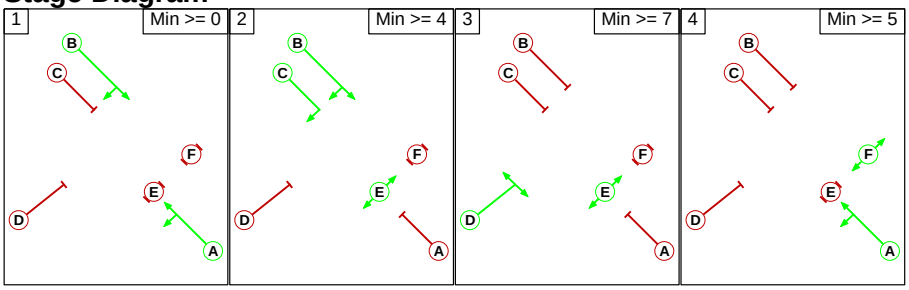
Phase Intergreens Matrix

		Starting Phase					
		A	B	C	D	E	F
Terminating Phase	A		-	4	7	4	-
	B	-		-	7	-	8
	C	6	-		7	-	-
	D	7	7	7		-	8
	E	7	-	-	-		-
	F	-	2	-	2	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

From Stage	To Stage				
		1	2	3	4
	1		4	7	8
	2	7		7	8
	3	7	7		8
	4	2	4	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A57 Dinting Vale / A626 Glossop Road											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
2/2 (A57 Dinting Vale (Eastbound))	6/1 (Right)	1439	0	1/1	1.09	All	4.00	-	0.50	4	4.00
				1/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: A57 Dinting Vale / A626 Glossop Road												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (A57 Dinting Vale (Westbound))	U	A	2	3	8.5	Geom	-	2.65	0.00	Y	Arm 6 Left	36.00
1/2 (A57 Dinting Vale (Westbound))	U	A	2	3	60.0	Geom	-	2.65	0.00	N	Arm 5 Ahead	Inf
2/1 (A57 Dinting Vale (Eastbound))	U	B	2	3	60.0	Geom	-	2.50	0.00	Y	Arm 4 Ahead	Inf
2/2 (A57 Dinting Vale (Eastbound))	O	B C	2	3	6.0	Geom	-	2.85	0.00	N	Arm 6 Right	12.50
3/1 (A626 Glossop Road)	U	D	2	3	60.0	Geom	-	2.85	0.00	Y	Arm 5 Left	6.00
3/2 (A626 Glossop Road)	U	D	2	3	5.0	Geom	-	3.00	0.00	N	Arm 4 Right	36.00
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2027 Base AM'	08:00	09:00	01:00	
2: '2027 Base PM'	16:30	17:30	01:00	
3: '2027 Assessment AM'	08:00	09:00	01:00	
4: '2027 Assessment PM'	16:30	17:30	01:00	

Scenario 1: '2027 Base AM' (FG1: '2027 Base AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	212	557	769
	B	237	0	204	441
	C	421	229	0	650
	Tot.	658	441	761	1860

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2027 Base AM
Junction: A57 Dinting Vale / A626 Glossop Road	
1/1 (short)	212
1/2 (with short)	769(In) 557(Out)
2/1 (with short)	650(In) 421(Out)
2/2 (short)	229
3/1 (with short)	441(In) 204(Out)
3/2 (short)	237
4/1	658
5/1	761
6/1	441

Lane Saturation Flows

Junction: A57 Dinting Vale / A626 Glossop Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A57 Dinting Vale (Westbound))	2.65	0.00	Y	Arm 6 Left	36.00	100.0 %	1805	1805
1/2 (A57 Dinting Vale (Westbound))	2.65	0.00	N	Arm 5 Ahead	Inf	100.0 %	2020	2020
2/1 (A57 Dinting Vale (Eastbound))	2.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1865	1865
2/2 (A57 Dinting Vale (Eastbound))	2.85	0.00	N	Arm 6 Right	12.50	100.0 %	1821	1821
3/1 (A626 Glossop Road)	2.85	0.00	Y	Arm 5 Left	6.00	100.0 %	1520	1520
3/2 (A626 Glossop Road)	3.00	0.00	N	Arm 4 Right	36.00	100.0 %	1973	1973
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2027 Base PM' (FG2: '2027 Base PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	234	421	655
	B	267	0	176	443
	C	519	231	0	750
	Tot.	786	465	597	1848

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2027 Base PM
Junction: A57 Dinting Vale / A626 Glossop Road	
1/1 (short)	234
1/2 (with short)	655(In) 421(Out)
2/1 (with short)	750(In) 519(Out)
2/2 (short)	231
3/1 (with short)	443(In) 176(Out)
3/2 (short)	267
4/1	786
5/1	597
6/1	465

Lane Saturation Flows

Junction: A57 Dinting Vale / A626 Glossop Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A57 Dinting Vale (Westbound))	2.65	0.00	Y	Arm 6 Left	36.00	100.0 %	1805	1805
1/2 (A57 Dinting Vale (Westbound))	2.65	0.00	N	Arm 5 Ahead	Inf	100.0 %	2020	2020
2/1 (A57 Dinting Vale (Eastbound))	2.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1865	1865
2/2 (A57 Dinting Vale (Eastbound))	2.85	0.00	N	Arm 6 Right	12.50	100.0 %	1821	1821
3/1 (A626 Glossop Road)	2.85	0.00	Y	Arm 5 Left	6.00	100.0 %	1520	1520
3/2 (A626 Glossop Road)	3.00	0.00	N	Arm 4 Right	36.00	100.0 %	1973	1973
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2027 Assessment AM' (FG3: '2027 Assessment AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	217	576	793
	B	238	0	204	442
	C	427	229	0	656
	Tot.	665	446	780	1891

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2027 Assessment AM
Junction: A57 Dinting Vale / A626 Glossop Road	
1/1 (short)	217
1/2 (with short)	793(In) 576(Out)
2/1 (with short)	656(In) 427(Out)
2/2 (short)	229
3/1 (with short)	442(In) 204(Out)
3/2 (short)	238
4/1	665
5/1	780
6/1	446

Lane Saturation Flows

Junction: A57 Dinting Vale / A626 Glossop Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A57 Dinting Vale (Westbound))	2.65	0.00	Y	Arm 6 Left	36.00	100.0 %	1805	1805
1/2 (A57 Dinting Vale (Westbound))	2.65	0.00	N	Arm 5 Ahead	Inf	100.0 %	2020	2020
2/1 (A57 Dinting Vale (Eastbound))	2.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1865	1865
2/2 (A57 Dinting Vale (Eastbound))	2.85	0.00	N	Arm 6 Right	12.50	100.0 %	1821	1821
3/1 (A626 Glossop Road)	2.85	0.00	Y	Arm 5 Left	6.00	100.0 %	1520	1520
3/2 (A626 Glossop Road)	3.00	0.00	N	Arm 4 Right	36.00	100.0 %	1973	1973
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2027 Assessment PM' (FG4: '2027 Assessment PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	236	428	664
	B	271	0	176	447
	C	537	231	0	768
	Tot.	808	467	604	1879

Full Input Data And Results

Traffic Lane Flows

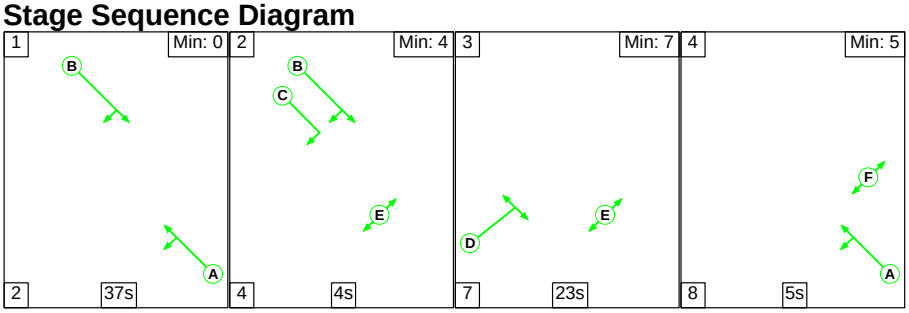
Lane	Scenario 4: 2027 Assessment PM
Junction: A57 Dinting Vale / A626 Glossop Road	
1/1 (short)	236
1/2 (with short)	664(In) 428(Out)
2/1 (with short)	768(In) 537(Out)
2/2 (short)	231
3/1 (with short)	447(In) 176(Out)
3/2 (short)	271
4/1	808
5/1	604
6/1	467

Lane Saturation Flows

Junction: A57 Dinting Vale / A626 Glossop Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A57 Dinting Vale (Westbound))	2.65	0.00	Y	Arm 6 Left	36.00	100.0 %	1805	1805
1/2 (A57 Dinting Vale (Westbound))	2.65	0.00	N	Arm 5 Ahead	Inf	100.0 %	2020	2020
2/1 (A57 Dinting Vale (Eastbound))	2.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1865	1865
2/2 (A57 Dinting Vale (Eastbound))	2.85	0.00	N	Arm 6 Right	12.50	100.0 %	1821	1821
3/1 (A626 Glossop Road)	2.85	0.00	Y	Arm 5 Left	6.00	100.0 %	1520	1520
3/2 (A626 Glossop Road)	3.00	0.00	N	Arm 4 Right	36.00	100.0 %	1973	1973
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2027 Base AM' (FG1: '2027 Base AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

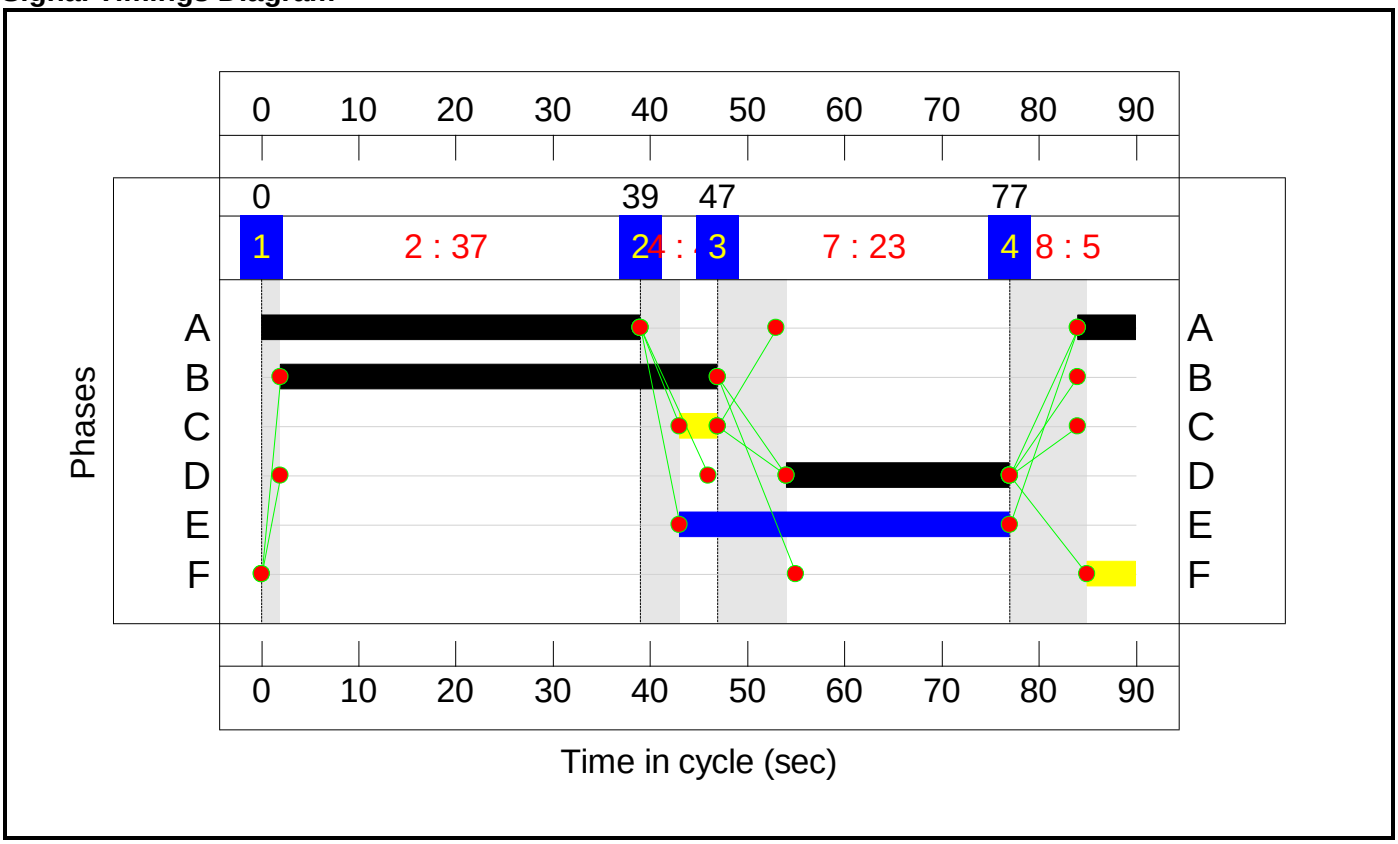


Full Input Data And Results

Stage Timings

Stage	1	2	3	4
Duration	37	4	23	5
Change Point	0	39	47	77

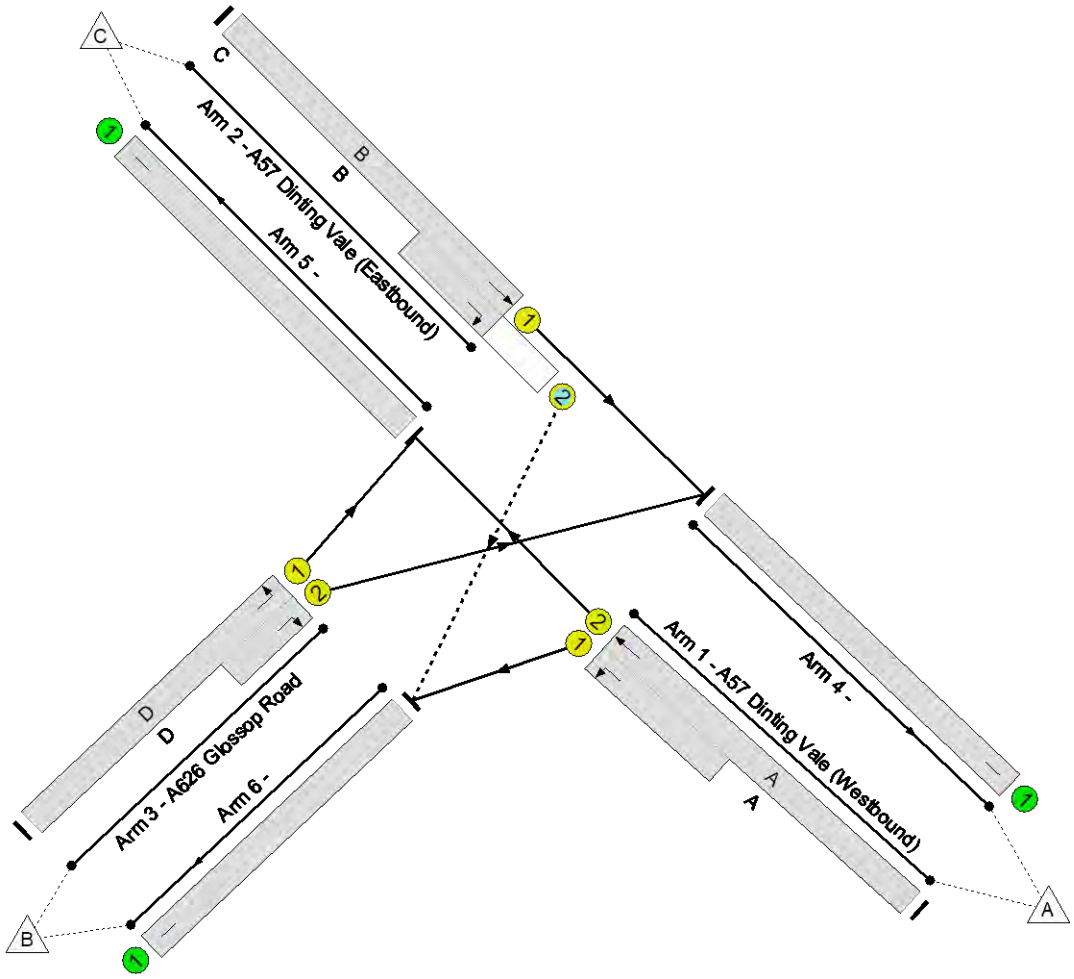
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

A57 Dinting Vale / A626 Glossop Road
PRC: 34.9 %
Total Traffic Delay: 12.3 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.7%**
A57 Dinting Vale / A626 Glossop Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**66.7%**
1/2+1/1	A57 Dinting Vale (Westbound) Ahead Left	U	N/A	N/A	A		1	45	-	769	2020:1805	1156	66.5%
2/1+2/2	A57 Dinting Vale (Eastbound) Ahead Right	U+O	N/A	N/A	B	C	1	45	4	650	1865:1821	1069	60.8%
3/1+3/2	A626 Glossop Road Right Left	U	N/A	N/A	D		1	23	-	441	1520:1973	661	66.7%
4/1		U	N/A	N/A	-		-	-	-	658	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	761	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	441	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**187**	**32**	**10**	**8.8**	**2.8**	**0.7**	**12.3**	**-**	**-**	**-**	**-**
A57 Dinting Vale / A626 Glossop Road	**-**	**-**	**187**	**32**	**10**	**8.8**	**2.8**	**0.7**	**12.3**	**-**	**-**	**-**	**-**
1/2+1/1	769	769	-	-	-	3.0	1.0	-	4.0	18.8	9.8	1.0	10.8
2/1+2/2	650	650	187	32	10	2.4	0.8	0.7	3.9	21.8	7.3	0.8	8.0
3/1+3/2	441	441	-	-	-	3.4	1.0	-	4.4	35.8	4.9	1.0	5.9
4/1	658	658	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	761	761	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	441	441	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

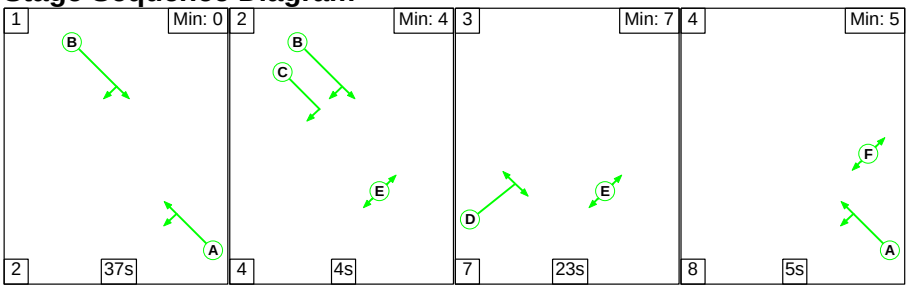
C1 PRC for Signalled Lanes (%): 34.9 Total Delay for Signalled Lanes (pcuHr): 12.34 Cycle Time (s): 90
PRC Over All Lanes (%): 34.9 Total Delay Over All Lanes(pcuHr): 12.34

Full Input Data And Results

Full Input Data And Results

Scenario 2: '2027 Base PM' (FG2: '2027 Base PM', Plan 1: 'Network Control Plan 1')

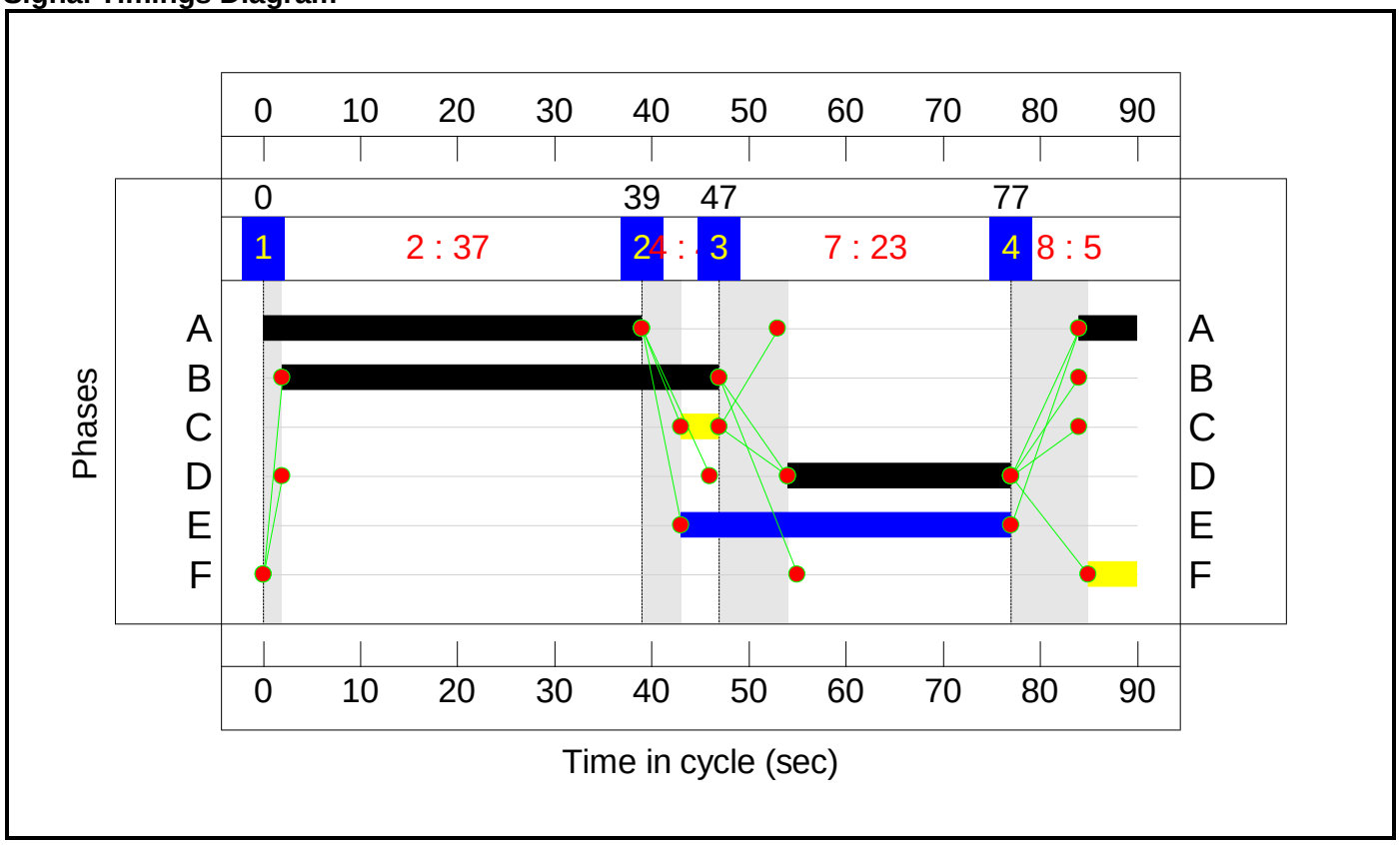
Stage Sequence Diagram



Stage Timings

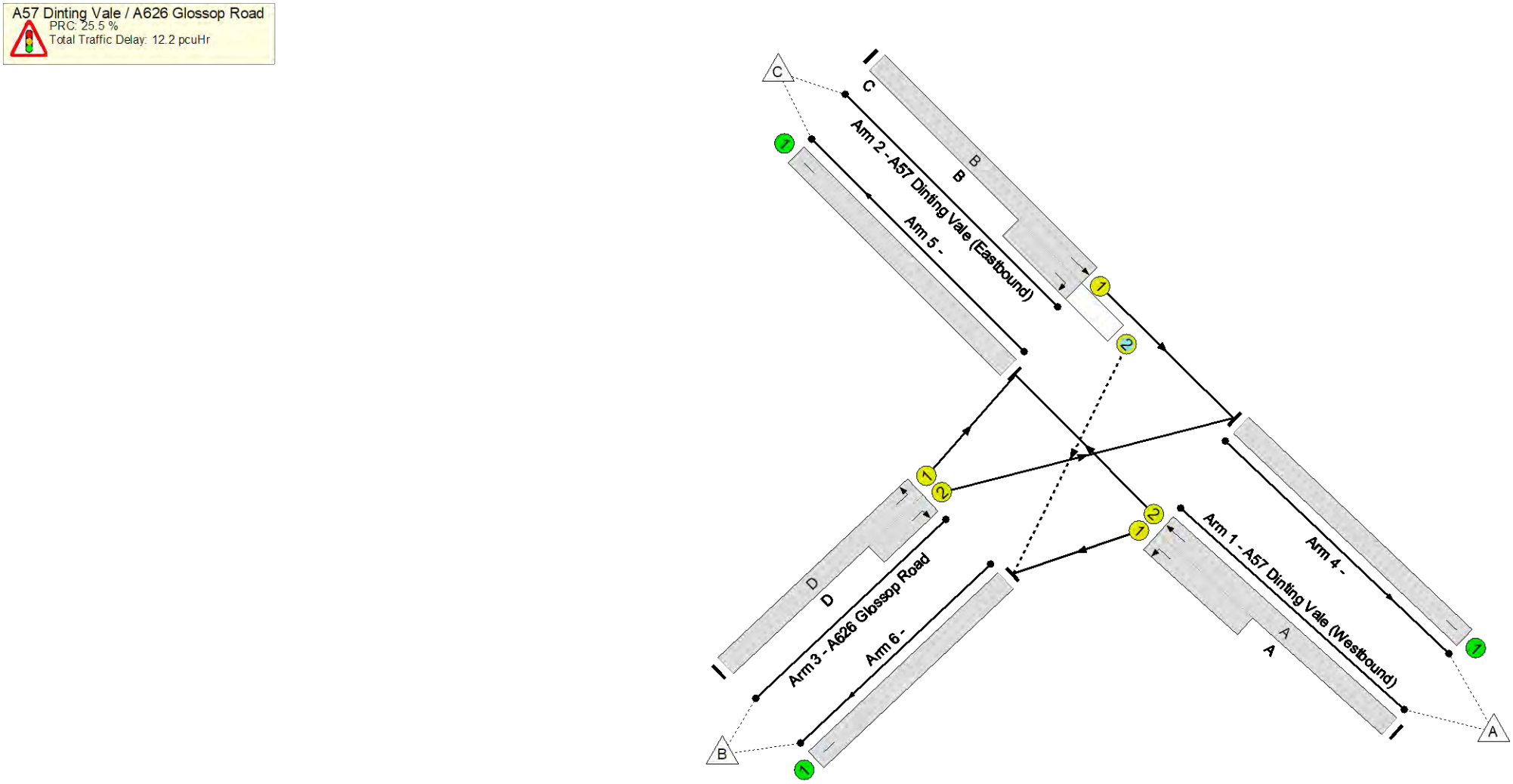
Stage	1	2	3	4
Duration	37	4	23	5
Change Point	0	39	47	77

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**71.7%**
A57 Dinting Vale / A626 Glossop Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**71.7%**
1/2+1/1	A57 Dinting Vale (Westbound) Ahead Left	U	N/A	N/A	A		1	45	-	655	2020:1805	1210	54.1%
2/1+2/2	A57 Dinting Vale (Eastbound) Ahead Right	U+O	N/A	N/A	B	C	1	45	4	750	1865:1821	1046	71.7%
3/1+3/2	A626 Glossop Road Right Left	U	N/A	N/A	D		1	23	-	443	1520:1973	626	70.8%
4/1		U	N/A	N/A	-		-	-	-	786	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	597	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	465	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**205**	**15**	**10**	**8.9**	**3.0**	**0.2**	**12.2**	**-**	**-**	**-**	**-**
A57 Dinting Vale / A626 Glossop Road	**-**	**-**	**205**	**15**	**10**	**8.9**	**3.0**	**0.2**	**12.2**	**-**	**-**	**-**	**-**
1/2+1/1	655	655	-	-	-	2.4	0.6	-	3.0	16.4	6.4	0.6	7.0
2/1+2/2	750	750	205	15	10	3.1	1.3	0.2	4.6	22.0	10.9	1.3	12.1
3/1+3/2	443	443	-	-	-	3.4	1.2	-	4.6	37.6	6.2	1.2	7.4
4/1	786	786	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	597	597	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	465	465	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

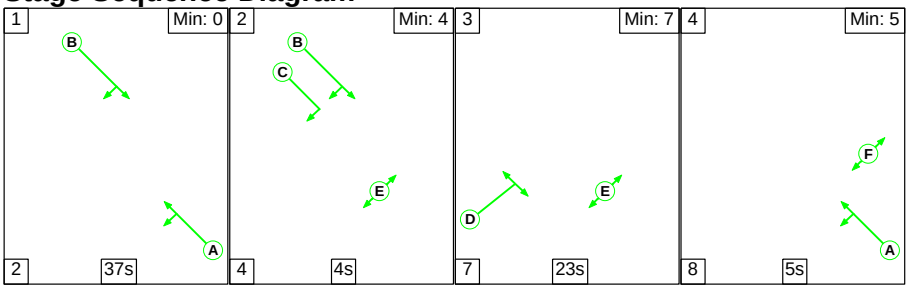
C1 PRC for Signalled Lanes (%): 25.5 Total Delay for Signalled Lanes (pcuHr): 12.19 Cycle Time (s): 90
PRC Over All Lanes (%): 25.5 Total Delay Over All Lanes(pcuHr): 12.19

Full Input Data And Results

Full Input Data And Results

Scenario 3: '2027 Assessment AM' (FG3: '2027 Assessment AM', Plan 1: 'Network Control Plan 1')

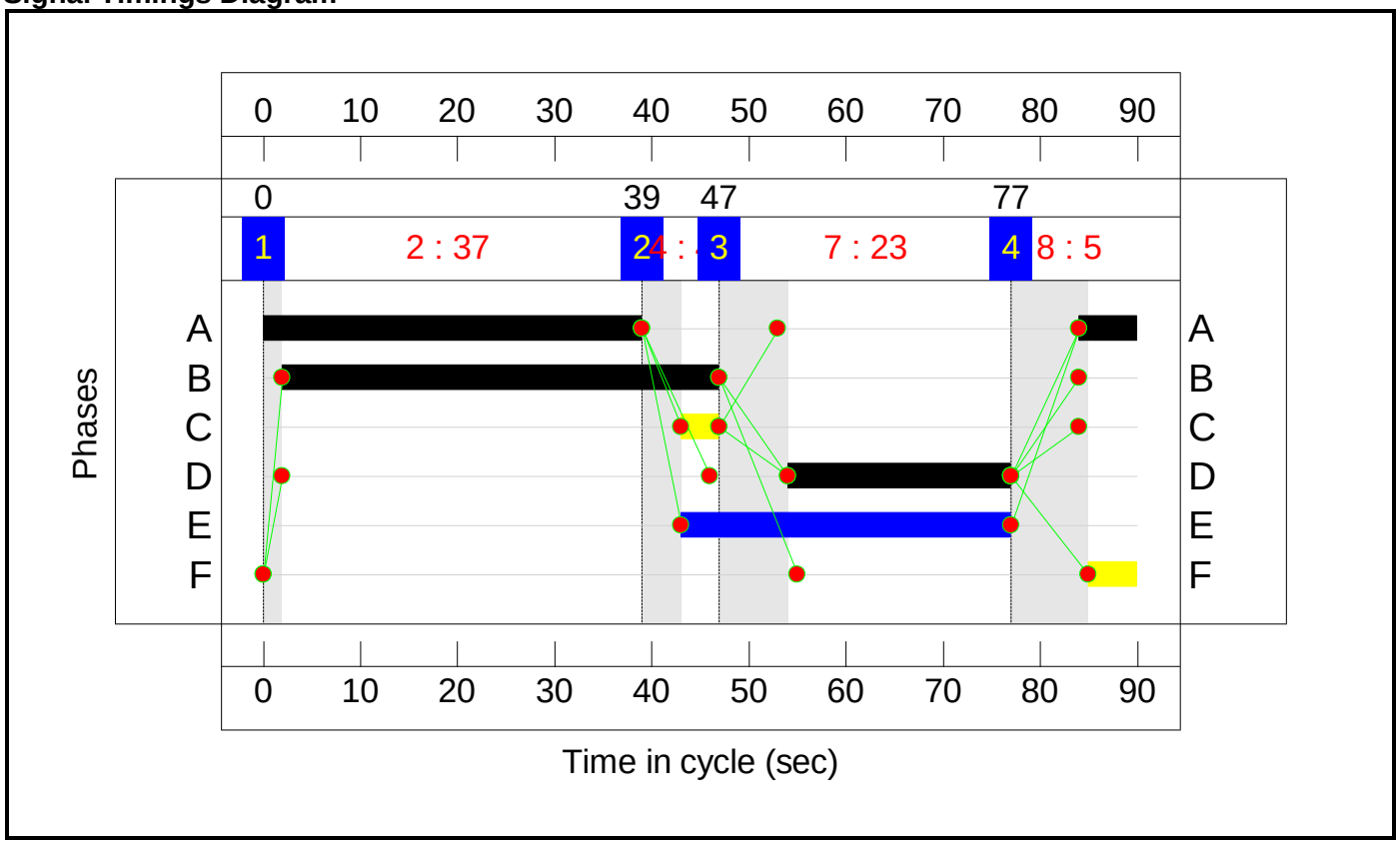
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	37	4	23	5
Change Point	0	39	47	77

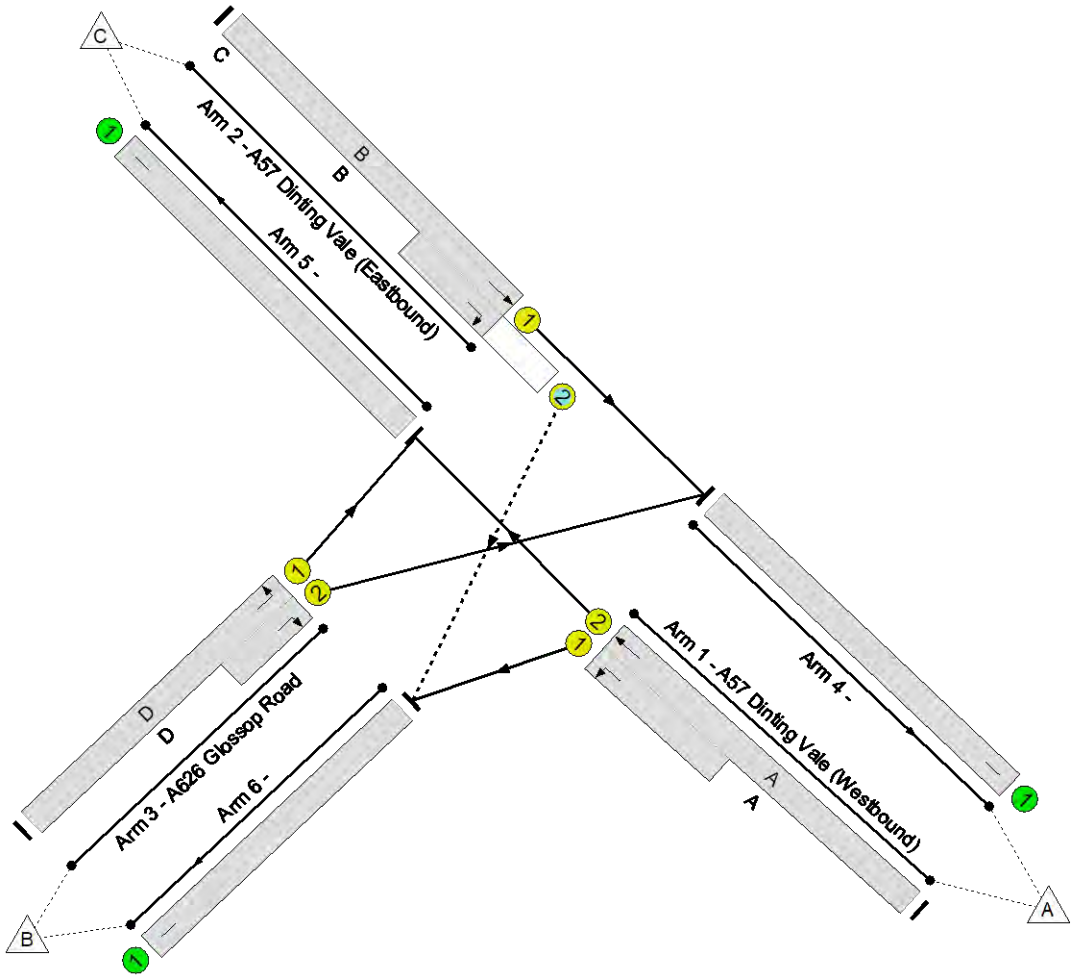
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

A57 Dinting Vale / A626 Glossop Road
PRC: 31.0 %
Total Traffic Delay: 12.7 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.7%**
A57 Dinting Vale / A626 Glossop Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.7%**
1/2+1/1	A57 Dinting Vale (Westbound) Ahead Left	U	N/A	N/A	A		1	45	-	793	2020:1805	1155	68.7%
2/1+2/2	A57 Dinting Vale (Eastbound) Ahead Right	U+O	N/A	N/A	B	C	1	45	4	656	1865:1821	1067	61.5%
3/1+3/2	A626 Glossop Road Right Left	U	N/A	N/A	D		1	23	-	442	1520:1973	660	66.9%
4/1		U	N/A	N/A	-		-	-	-	665	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	780	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	446	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**171**	**48**	**10**	**9.0**	**2.9**	**0.8**	**12.7**	**-**	**-**	**-**	**-**
A57 Dinting Vale / A626 Glossop Road	**-**	**-**	**171**	**48**	**10**	**9.0**	**2.9**	**0.8**	**12.7**	**-**	**-**	**-**	**-**
1/2+1/1	793	793	-	-	-	3.2	1.1	-	4.3	19.3	10.7	1.1	11.8
2/1+2/2	656	656	171	48	10	2.5	0.8	0.8	4.1	22.5	7.5	0.8	8.3
3/1+3/2	442	442	-	-	-	3.4	1.0	-	4.4	35.9	5.0	1.0	6.0
4/1	665	665	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	780	780	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	446	446	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

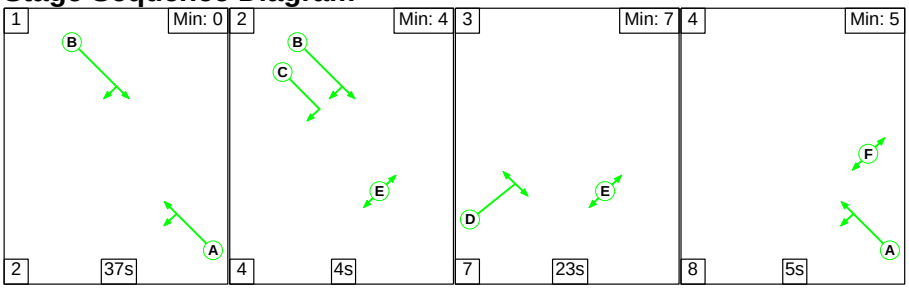
C1 PRC for Signalled Lanes (%): 31.0 Total Delay for Signalled Lanes (pcuHr): 12.75 Cycle Time (s): 90
PRC Over All Lanes (%): 31.0 Total Delay Over All Lanes(pcuHr): 12.75

Full Input Data And Results

Full Input Data And Results

Scenario 4: '2027 Assessment PM' (FG4: '2027 Assessment PM', Plan 1: 'Network Control Plan 1')

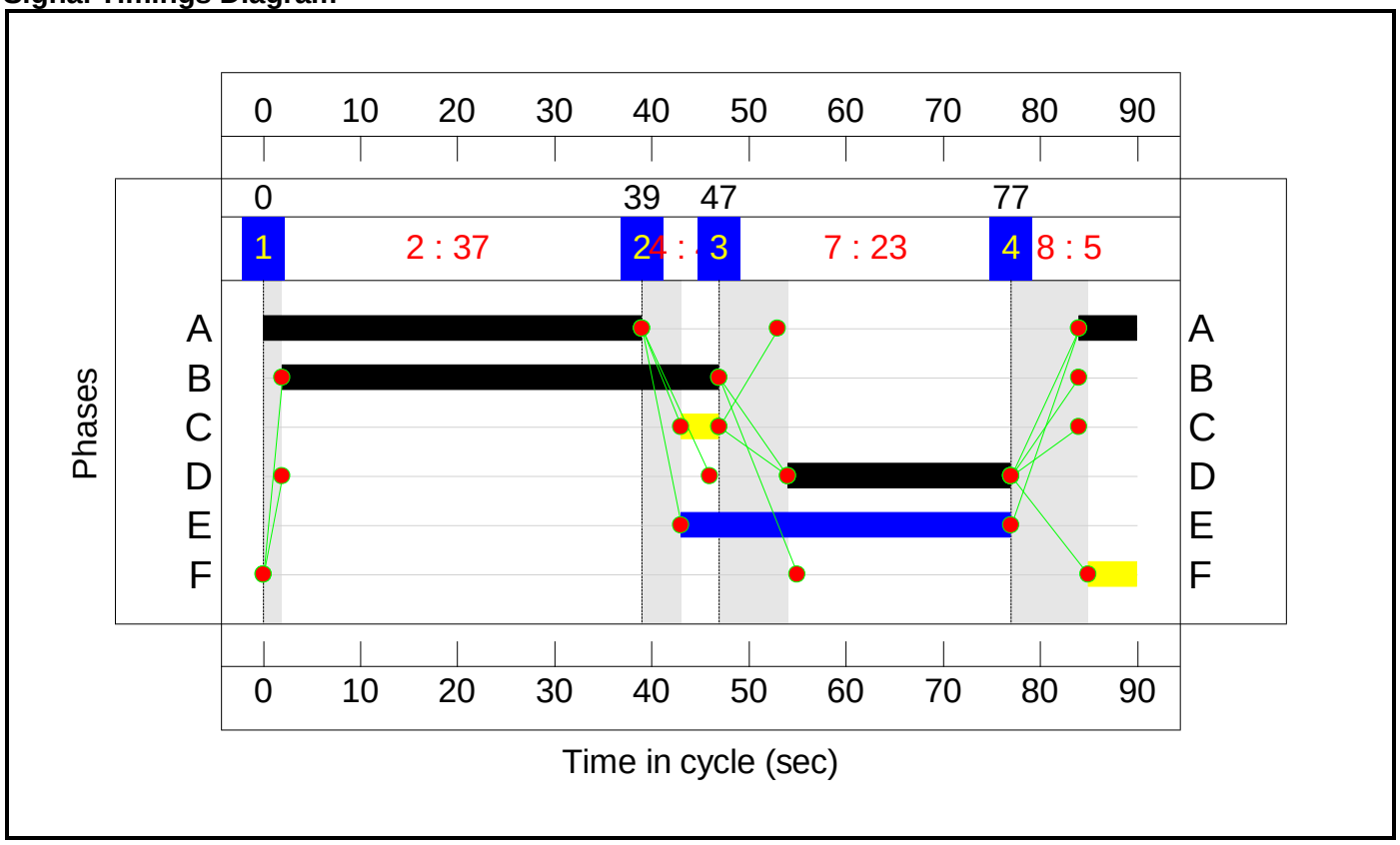
Stage Sequence Diagram



Stage Timings

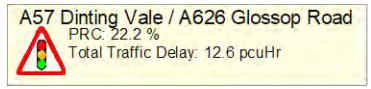
Stage	1	2	3	4
Duration	37	4	23	5
Change Point	0	39	47	77

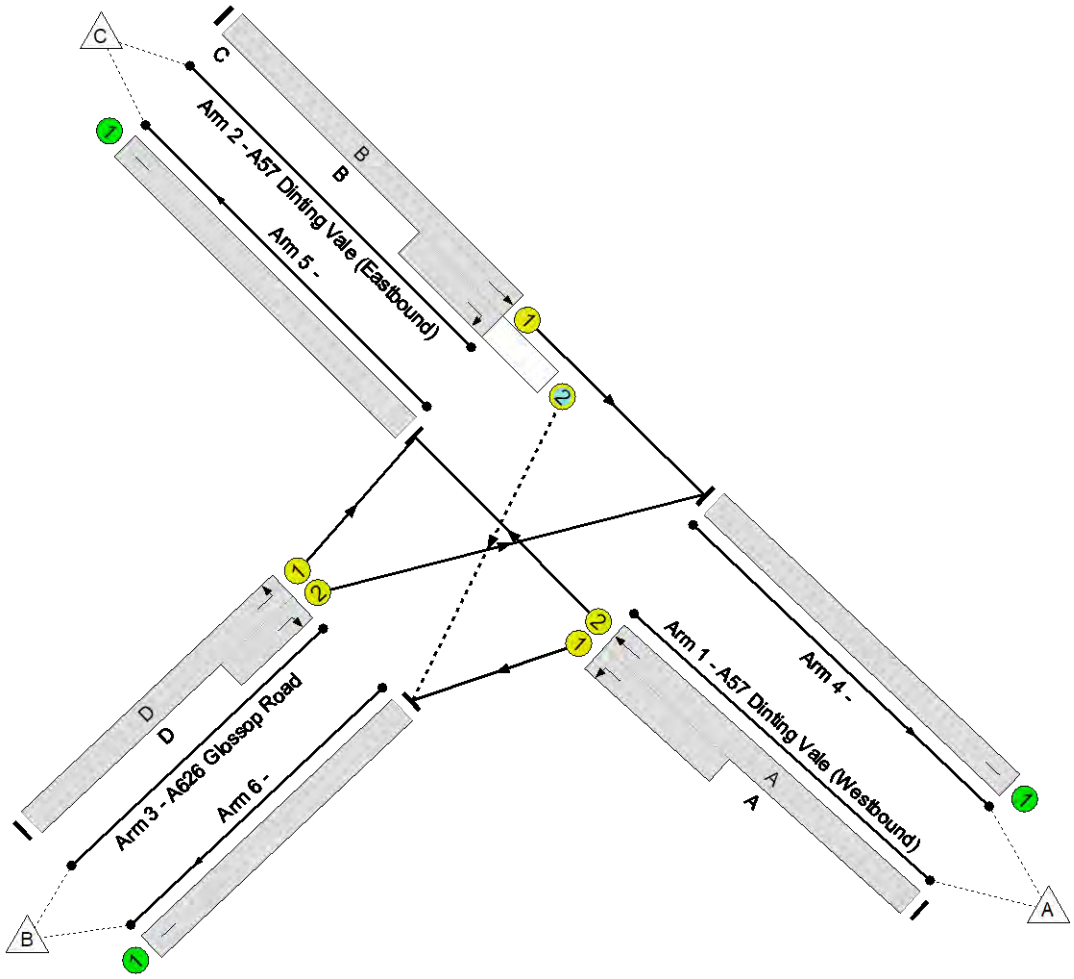
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram





Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.7%**
A57 Dinting Vale / A626 Glossop Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.7%**
1/2+1/1	A57 Dinting Vale (Westbound) Ahead Left	U	N/A	N/A	A		1	45	-	664	2020:1805	1208	55.0%
2/1+2/2	A57 Dinting Vale (Eastbound) Ahead Right	U+O	N/A	N/A	B	C	1	45	4	768	1865:1821	1043	73.7%
3/1+3/2	A626 Glossop Road Right Left	U	N/A	N/A	D		1	23	-	447	1520:1973	624	71.6%
4/1		U	N/A	N/A	-		-	-	-	808	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	467	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**205**	**15**	**10**	**9.2**	**3.2**	**0.2**	**12.6**	**-**	**-**	**-**	**-**
A57 Dinting Vale / A626 Glossop Road	**-**	**-**	**205**	**15**	**10**	**9.2**	**3.2**	**0.2**	**12.6**	**-**	**-**	**-**	**-**
1/2+1/1	664	664	-	-	-	2.4	0.6	-	3.0	16.5	6.5	0.6	7.1
2/1+2/2	768	768	205	15	10	3.2	1.4	0.2	4.8	22.6	11.7	1.4	13.1
3/1+3/2	447	447	-	-	-	3.5	1.2	-	4.7	38.0	6.3	1.2	7.6
4/1	808	808	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	467	467	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 22.2 Total Delay for Signalled Lanes (pcuHr): 12.59 Cycle Time (s): 90
PRC Over All Lanes (%): 22.2 Total Delay Over All Lanes(pcuHr): 12.59

Full Input Data And Results

S|C|P

APPENDIX G

Junctions 9

ARCADY 9 - Roundabout Module

Filename: A57_Simmondley Lane_Primrose Lane Double Mini-Roundabout_July 2022.j9
Path: M:\Job Library\2021\210087 - A57 Dinting Vale, Glossop\Traffic Data
Report generation date: 25/07/2022 14:01:52

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2027 Base									
Junction 1 - Arm 1	D3	6.8	30.33	0.90	D	D4	6.8	30.76	0.90	D
Junction 1 - Arm 2		1.2	14.11	0.54	B		0.5	9.69	0.35	A
Junction 1 - Arm 3		11.0	49.83	0.94	E		28.3	105.01	1.02	F
Junction 2 - Arm 1		6.6	30.09	0.89	D		5.7	25.96	0.87	D
Junction 2 - Arm 2		53.1	231.80	1.21	F		10.9	54.52	0.98	F
Junction 2 - Arm 3		5.2	65.48	0.91	F		0.9	12.74	0.48	B
	2027 Assessment									
Junction 1 - Arm 1	D5	6.8	30.34	0.90	D	D6	6.8	30.77	0.90	D
Junction 1 - Arm 2		1.2	14.18	0.55	B		0.5	9.76	0.35	A
Junction 1 - Arm 3		12.5	55.43	0.95	F		29.8	109.43	1.03	F
Junction 2 - Arm 1		7.1	31.86	0.90	D		5.8	26.11	0.87	D
Junction 2 - Arm 2		54.5	240.62	1.21	F		15.2	73.71	1.03	F
Junction 2 - Arm 3		5.3	66.66	0.92	F		1.5	21.23	0.62	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	A57 Dinting Vale / Simmondley Lane / A57 High Street West / Primrose Lane Double Mini-Roundabout
Location	
Site number	
Date	03/12/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\craig.thomson
Description	

Units

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

Analysis Options

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			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)
D3	2027 Base	AM	ONE HOUR	07:45	09:15	15
D4	2027 Base	PM	ONE HOUR	16:15	17:45	15
D5	2027 Assessment	AM	ONE HOUR	07:45	09:15	15
D6	2027 Assessment	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2027 Base , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	Junction 1	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 85% of the total flow for the roundabout for one or more time segments]
Warning	Mini-roundabout	Junction 2	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 85% of the total flow for the roundabout for one or more time segments]
Warning	Vehicle Mix	Junction 1	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.
Warning	Vehicle Mix	Junction 2	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	A57 Dinting Vale / Simmondley Lane	Mini-roundabout		1, 2, 3	36.02	E
2	A57 High Street West / Primrose Lane	Mini-roundabout		1, 2, 3	116.54	F

Junction Network Options

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

Arms

Arms

Junction	Arm	Name	Description
1	1	A57 Dinting Vale (WB Link)	
	2	Simmondley Lane	
	3	A57 Dinting Vale (West)	
2	1	A57 Dinting Vale (EB Link)	
	2	A57 High Street West	
	3	Primrose Lane	

Mini Roundabout Geometry

Junction	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	1	3.35	3.35	4.10	7.2	10.20	6.50	0.0	✓
	2	3.45	3.45	6.15	5.1	11.90	8.60	0.0	
	3	3.15	3.15	3.65	1.4	14.70	14.60	0.0	✓
2	1	3.60	3.60	4.00	2.5	14.40	13.20	0.0	✓
	2	3.00	3.00	6.00	5.7	11.50	8.30	0.0	✓
	3	3.50	3.50	4.00	10.9	11.20	8.90	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
1	1	0.514	983
	2	0.646	1018
	3	0.514	967
2	1	0.522	984
	2	0.522	1060
	3	0.627	923

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)
D3	2027 Base	AM	ONE HOUR	07:45	09:15	15

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	1	2	1	Queue limited	Normal	0	100.00	6.75
2	1	1	1	Queue limited	Normal	0	100.00	7.25

Demand overview (Traffic)

Junction	Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1	✓			
	2		✓	273	100.000
	3		✓	773	100.000
2	1	✓			
	2		✓	682	100.000
	3		✓	238	100.000

Origin-Destination Data

Demand (PCU/hr)

Junction 1

		To		
		1	2	3
From	1	0	94	734
	2	109	0	164
	3	661	112	0

Demand (PCU/hr)

Junction 2

		To		
		1	2	3
From	1	0	577	194
	2	647	0	35
	3	181	57	0

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

Junction 2

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

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1	0.90	30.33	6.8	D
	2	0.54	14.11	1.2	B
	3	0.94	49.83	11.0	E
2	1	0.89	30.09	6.6	D
	2	1.21	231.80	53.1	F
	3	0.91	65.48	5.2	F

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	618	83	940	0.658	611	1.9	10.712	B
	2	206	541	668	0.308	204	0.4	7.727	A
	3	582	81	925	0.629	575	1.6	10.125	B
2	1	573	43	962	0.596	568	1.4	9.005	A
	2	513	143	986	0.521	509	1.1	7.493	A
	3	179	483	620	0.289	178	0.4	8.109	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	741	100	931	0.796	735	3.6	17.683	C
	2	245	651	597	0.411	244	0.7	10.183	B
	3	695	98	916	0.758	690	2.9	15.525	C
2	1	687	51	957	0.718	683	2.4	12.949	B
	2	613	172	970	0.632	611	1.7	9.941	A
	3	214	579	560	0.382	213	0.6	10.366	B

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	826	120	921	0.897	813	6.8	30.026	D
	2	301	721	552	0.545	299	1.2	14.115	B
	3	851	119	905	0.940	826	9.2	37.057	E
2	1	826	58	954	0.866	814	5.4	23.828	C
	2	751	205	703	1.068	675	20.5	75.783	F
	3	262	641	288	0.910	244	5.2	65.482	F

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	801	122	920	0.871	801	6.7	30.330	D
	2	301	710	559	0.538	301	1.2	13.938	B
	3	851	120	905	0.941	844	11.0	49.832	E
2	1	842	67	949	0.887	837	6.6	30.086	D
	2	751	211	623	1.205	621	53.1	223.318	F
	3	262	589	554	0.473	279	0.9	13.894	B

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	809	105	929	0.871	809	6.8	30.075	D
	2	245	717	554	0.443	247	0.8	11.761	B
	3	695	99	916	0.759	726	3.4	21.400	C
2	1	719	51	957	0.751	733	3.2	16.878	C
	2	613	184	693	0.884	681	36.2	231.801	F
	3	214	646	518	0.413	215	0.7	11.903	B

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	757	85	939	0.806	766	4.6	21.800	C
	2	206	679	579	0.355	207	0.6	9.691	A
	3	582	82	924	0.630	588	1.8	10.923	B
2	1	586	43	962	0.609	592	1.6	9.907	A
	2	513	149	982	0.523	654	1.1	17.244	C
	3	179	620	534	0.336	180	0.5	10.194	B

2027 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	Junction 1	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 89% of the total flow for the roundabout for one or more time segments]
Warning	Mini-roundabout	Junction 2	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 85% of the total flow for the roundabout for one or more time segments]
Warning	Vehicle Mix	Junction 1	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.
Warning	Vehicle Mix	Junction 2	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	A57 Dinting Vale / Simmondley Lane	Mini-roundabout		1, 2, 3	64.35	F
2	A57 High Street West / Primrose Lane	Mini-roundabout		1, 2, 3	34.18	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)
D4	2027 Base	PM	ONE HOUR	16:15	17:45	15

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	1	2	1	Queue limited	Normal	0	100.00	6.75
2	1	1	1	Queue limited	Normal	0	100.00	7.25

Demand overview (Traffic)

Junction	Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1	✓			
	2		✓	181	100.000
	3		✓	860	100.000
2	1	✓			
	2		✓	568	100.000
	3		✓	234	100.000

Origin-Destination Data

Junction 1

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	99	648
	2	75	0	106
	3	721	139	0

Junction 2

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	616	180
	2	530	0	38
	3	217	17	0

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

Junction 2

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

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1	0.90	30.76	6.8	D
	2	0.35	9.69	0.5	A
	3	1.02	105.01	28.3	F
2	1	0.87	25.96	5.7	D
	2	0.98	54.52	10.9	F
	3	0.48	12.74	0.9	B

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	558	103	930	0.601	552	1.5	9.407	A
	2	136	479	708	0.192	135	0.2	6.275	A
	3	647	56	938	0.690	639	2.1	11.739	B
2	1	592	13	977	0.605	586	1.5	9.059	A
	2	428	132	991	0.432	425	0.7	6.324	A
	3	176	396	674	0.261	175	0.3	7.185	A

16:30 - 16:45

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	670	124	919	0.729	665	2.5	13.946	B
	2	163	577	645	0.252	162	0.3	7.455	A
	3	773	67	932	0.830	764	4.3	20.449	C
2	1	708	15	976	0.725	704	2.5	13.030	B
	2	511	159	977	0.523	509	1.1	7.675	A
	3	210	475	625	0.337	210	0.5	8.659	A

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	817	144	909	0.899	800	6.8	29.336	D
	2	199	694	569	0.350	199	0.5	9.690	A
	3	947	82	924	1.025	889	18.8	60.658	F
2	1	827	19	974	0.849	818	4.9	21.709	C
	2	625	185	904	0.692	621	2.2	12.541	B
	3	258	580	537	0.480	256	0.9	12.737	B

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	790	147	907	0.871	790	6.7	30.756	D
	2	199	685	575	0.347	199	0.5	9.584	A
	3	947	83	924	1.025	909	28.3	105.007	F
2	1	845	19	974	0.867	841	5.7	25.958	D
	2	625	190	637	0.981	590	10.9	54.519	F
	3	258	551	577	0.446	258	0.8	11.283	B

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	709	139	911	0.778	721	3.8	19.954	C
	2	163	625	614	0.265	163	0.4	8.007	A
	3	773	68	932	0.830	863	6.0	63.918	F
2	1	791	15	976	0.810	795	4.6	20.489	C
	2	511	180	966	0.528	550	1.1	9.455	A
	3	210	513	601	0.350	211	0.5	9.262	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	564	107	928	0.608	573	1.6	10.394	B
	2	136	497	696	0.196	137	0.2	6.439	A
	3	647	57	937	0.691	662	2.3	13.703	B
2	1	612	13	977	0.626	623	1.7	10.482	B
	2	428	141	987	0.433	429	0.8	6.477	A
	3	176	400	672	0.262	177	0.4	7.287	A

2027 Assessment, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	Junction 1	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 85% of the total flow for the roundabout for one or more time segments]
Warning	Mini-roundabout	Junction 2	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 85% of the total flow for the roundabout for one or more time segments]
Warning	Vehicle Mix	Junction 1	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.
Warning	Vehicle Mix	Junction 2	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	A57 Dinting Vale / Simmondley Lane	Mini-roundabout		1, 2, 3	38.41	E
2	A57 High Street West / Primrose Lane	Mini-roundabout		1, 2, 3	120.64	F

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)
D5	2027 Assessment	AM	ONE HOUR	07:45	09:15	15

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	1	2	1	Queue limited	Normal	0	100.00	6.75
2	1	1	1	Queue limited	Normal	0	100.00	7.25

Demand overview (Traffic)

Junction	Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1	✓			
	2		✓	274	100.000
	3		✓	783	100.000
2	1	✓			
	2		✓	683	100.000
	3		✓	239	100.000

Origin-Destination Data

Junction 1

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	94	737
	2	109	0	165
	3	670	113	0

Junction 2

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	582	197
	2	648	0	35
	3	182	57	0

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

Junction 2

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

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1	0.90	30.34	6.8	D
	2	0.55	14.18	1.2	B
	3	0.95	55.43	12.5	F
2	1	0.90	31.86	7.1	D
	2	1.21	240.62	54.5	F
	3	0.92	66.66	5.3	F

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	620	84	939	0.660	612	1.9	10.767	B
	2	206	543	667	0.309	205	0.4	7.755	A
	3	589	81	925	0.637	583	1.7	10.332	B
2	1	580	43	962	0.603	574	1.5	9.149	A
	2	514	145	984	0.522	510	1.1	7.521	A
	3	180	484	620	0.290	178	0.4	8.131	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	743	101	931	0.798	736	3.6	17.856	C
	2	246	653	596	0.413	245	0.7	10.240	B
	3	704	98	916	0.768	698	3.1	16.101	C
2	1	695	51	957	0.726	691	2.5	13.300	B
	2	614	175	969	0.634	612	1.7	10.005	B
	3	215	580	559	0.384	214	0.6	10.407	B

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	826	120	921	0.897	813	6.8	30.079	D
	2	302	721	552	0.547	300	1.2	14.180	B
	3	862	119	905	0.952	834	10.2	39.797	E
2	1	833	58	954	0.873	820	5.7	24.782	C
	2	752	207	701	1.073	674	21.1	77.522	F
	3	263	640	287	0.915	244	5.3	66.664	F

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	801	123	919	0.871	801	6.8	30.343	D
	2	302	710	559	0.540	302	1.2	13.998	B
	3	862	120	905	0.953	853	12.5	55.428	F
2	1	850	67	949	0.895	844	7.1	31.861	D
	2	752	213	621	1.211	619	54.5	229.324	F
	3	263	587	555	0.474	281	0.9	13.946	B

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	808	107	928	0.871	808	6.8	30.072	D
	2	246	717	555	0.444	248	0.8	11.783	B
	3	704	99	916	0.769	740	3.6	23.668	C
2	1	731	51	957	0.764	746	3.5	18.026	C
	2	614	189	691	0.888	679	38.3	240.618	F
	3	215	644	519	0.414	216	0.7	11.897	B

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	767	86	938	0.817	774	4.9	22.853	C
	2	206	686	574	0.359	207	0.6	9.838	A
	3	589	82	924	0.638	597	1.8	11.218	B
2	1	593	43	962	0.617	600	1.7	10.150	B
	2	514	152	981	0.524	663	1.1	18.657	C
	3	180	629	529	0.340	181	0.5	10.373	B

2027 Assessment, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout	Junction 1	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 89% of the total flow for the roundabout for one or more time segments]
Warning	Mini-roundabout	Junction 2	Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 2 have 85% of the total flow for the roundabout for one or more time segments]
Warning	Vehicle Mix	Junction 1	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.
Warning	Vehicle Mix	Junction 2	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	A57 Dinting Vale / Simmondley Lane	Mini-roundabout		1, 2, 3	66.38	F
2	A57 High Street West / Primrose Lane	Mini-roundabout		1, 2, 3	42.34	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)
D6	2027 Assessment	PM	ONE HOUR	16:15	17:45	15

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	1	2	1	Queue limited	Normal	0	100.00	6.75
2	1	1	1	Queue limited	Normal	0	100.00	7.25

Demand overview (Traffic)

Junction	Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	1	✓			
	2		✓	183	100.000
	3		✓	864	100.000
2	1	✓			
	2		✓	572	100.000
	3		✓	237	100.000

Origin-Destination Data

Junction 1

Demand (PCU/hr)

From \ To	1	2	3
1	0	99	655
2	75	0	108
3	724	140	0

Junction 2

Demand (PCU/hr)

From \ To	1	2	3
1	0	618	181
2	534	0	38
3	220	17	0

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

From \ To	1	2	3
1	0	0	0
2	0	0	0
3	0	0	0

Junction 2

Heavy Vehicle Percentages

From \ To	1	2	3
1	0	0	0
2	0	0	0
3	0	0	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1	0.90	30.77	6.8	D
	2	0.35	9.76	0.5	A
	3	1.03	109.43	29.8	F
2	1	0.87	26.11	5.8	D
	2	1.03	73.71	15.2	F
	3	0.62	21.23	1.5	C

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	563	104	929	0.606	557	1.5	9.539	A
	2	138	484	705	0.195	137	0.2	6.328	A
	3	650	56	938	0.694	642	2.2	11.845	B
2	1	594	13	977	0.608	588	1.5	9.106	A
	2	431	133	991	0.435	428	0.8	6.360	A
	3	178	399	673	0.265	177	0.4	7.245	A

16:30 - 16:45

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	676	124	919	0.736	671	2.6	14.292	B
	2	165	583	641	0.257	164	0.3	7.545	A
	3	777	67	932	0.833	768	4.4	20.814	C
2	1	711	15	976	0.728	706	2.5	13.140	B
	2	514	160	977	0.527	513	1.1	7.742	A
	3	213	479	623	0.342	212	0.5	8.763	A

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	817	144	908	0.899	800	6.8	29.442	D
	2	201	695	569	0.354	201	0.5	9.763	A
	3	951	82	924	1.029	891	19.6	62.389	F
2	1	829	18	974	0.850	819	4.9	21.842	C
	2	630	186	780	0.807	619	3.7	21.163	C
	3	261	578	423	0.617	257	1.5	21.229	C

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	790	148	907	0.871	790	6.7	30.765	D
	2	201	686	574	0.351	201	0.5	9.653	A
	3	951	83	924	1.029	910	29.8	109.426	F
2	1	845	19	974	0.868	842	5.8	26.113	D
	2	630	191	612	1.029	584	15.2	73.706	F
	3	261	545	581	0.449	264	0.8	11.436	B

17:15 - 17:30

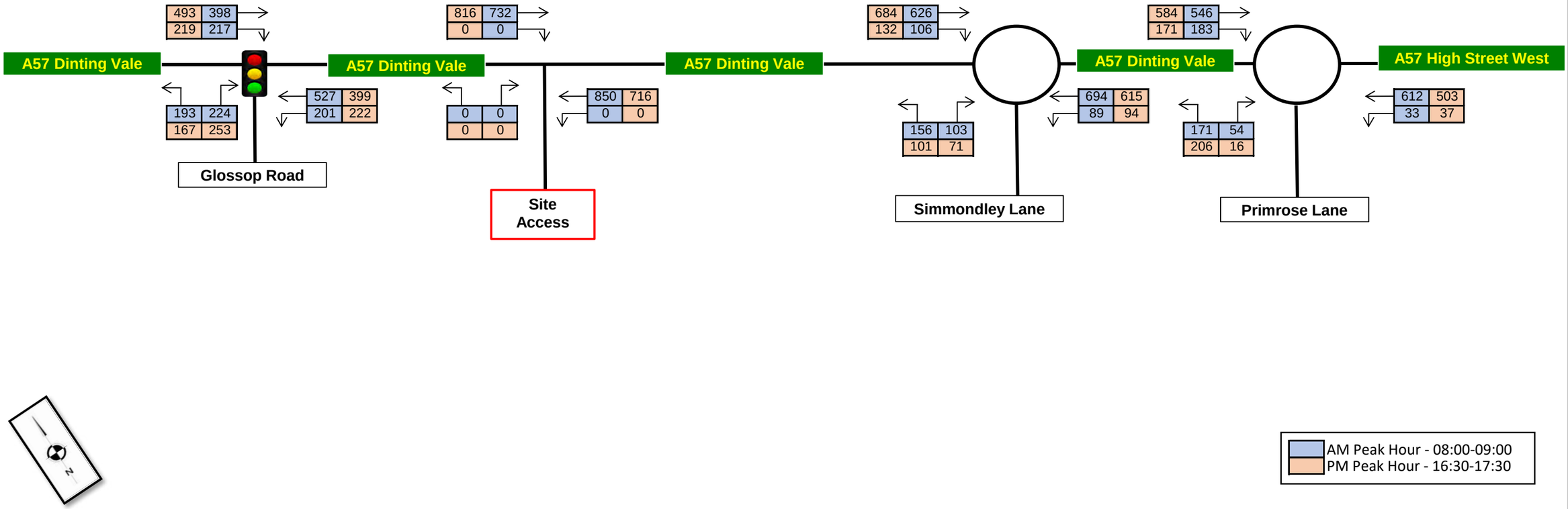
Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	731	141	910	0.803	740	4.5	22.245	C
	2	165	643	602	0.273	165	0.4	8.251	A
	3	777	68	932	0.834	871	6.3	69.361	F
2	1	798	15	976	0.817	801	4.8	21.160	C
	2	514	182	965	0.533	570	1.2	10.471	B
	3	213	533	589	0.362	214	0.6	9.631	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1	570	108	927	0.615	581	1.6	10.723	B
	2	138	505	692	0.199	138	0.3	6.514	A
	3	650	57	937	0.694	666	2.4	13.964	B
2	1	615	13	977	0.629	627	1.7	10.627	B
	2	431	142	986	0.437	432	0.8	6.517	A
	3	178	403	670	0.266	179	0.4	7.349	A

S|C|P

FIGURES



S C P

Transportation Planning : Infrastructure Design

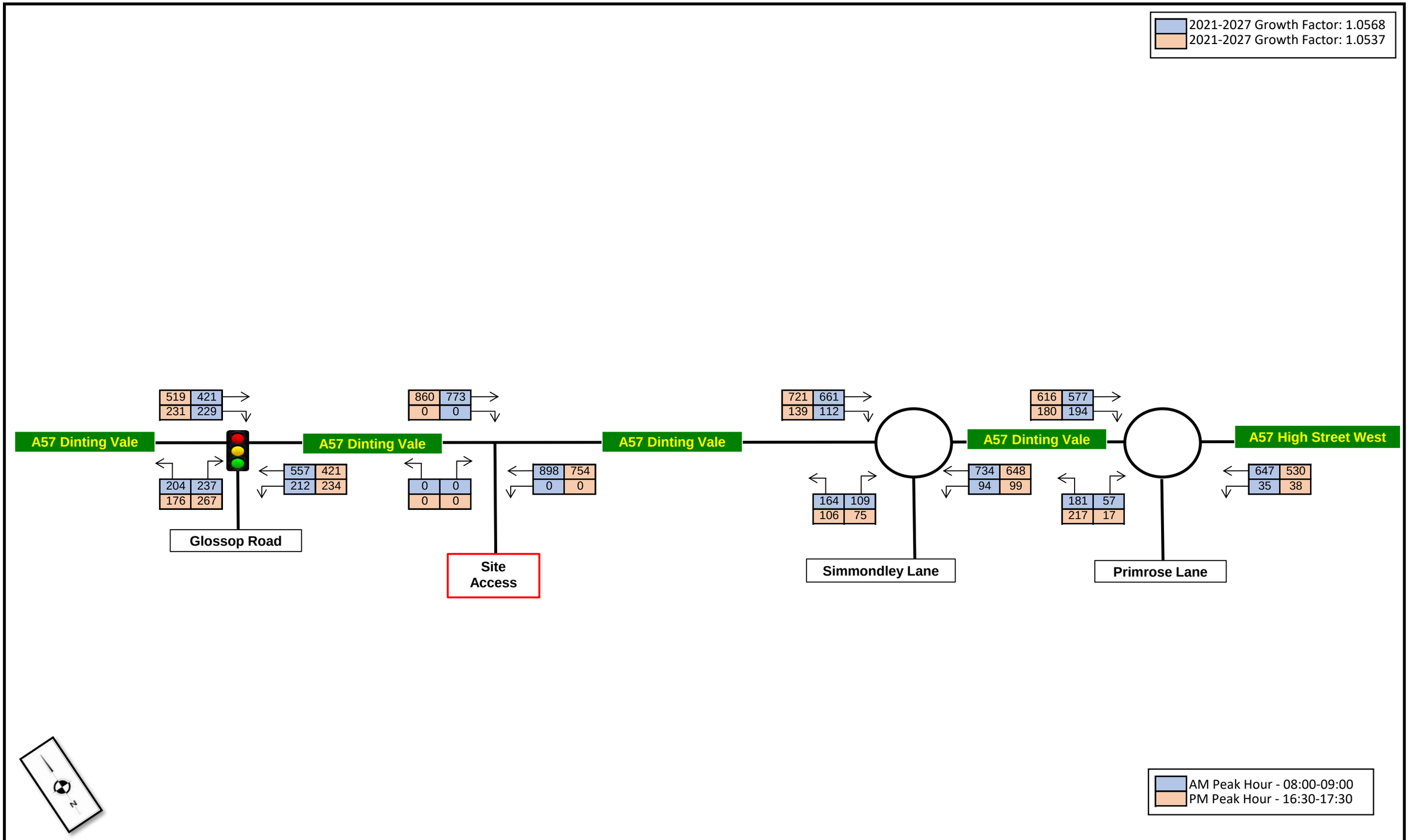
2021 Surveyed Traffic Flows

Proposed Residential Development, A57 Dinting Vale, Glossop

25 July 2022

Job Number - SCP/210087

Traffic Figure 1



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Transportation Planning : Infrastructure Design

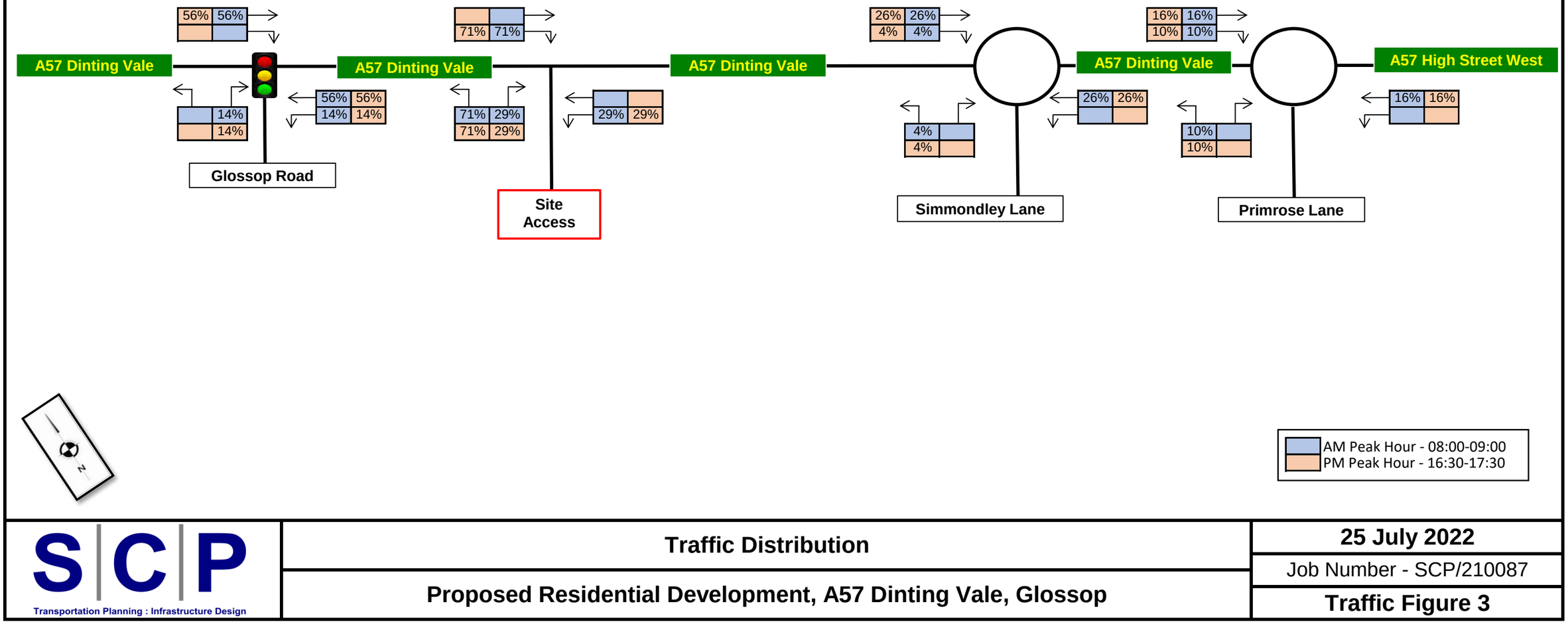
2027 Baseline Traffic Flows

Proposed Residential Development, A57 Dinting Vale, Glossop

25 July 2022

Job Number - SCP/210087

Traffic Figure 2



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Transportation Planning : Infrastructure Design

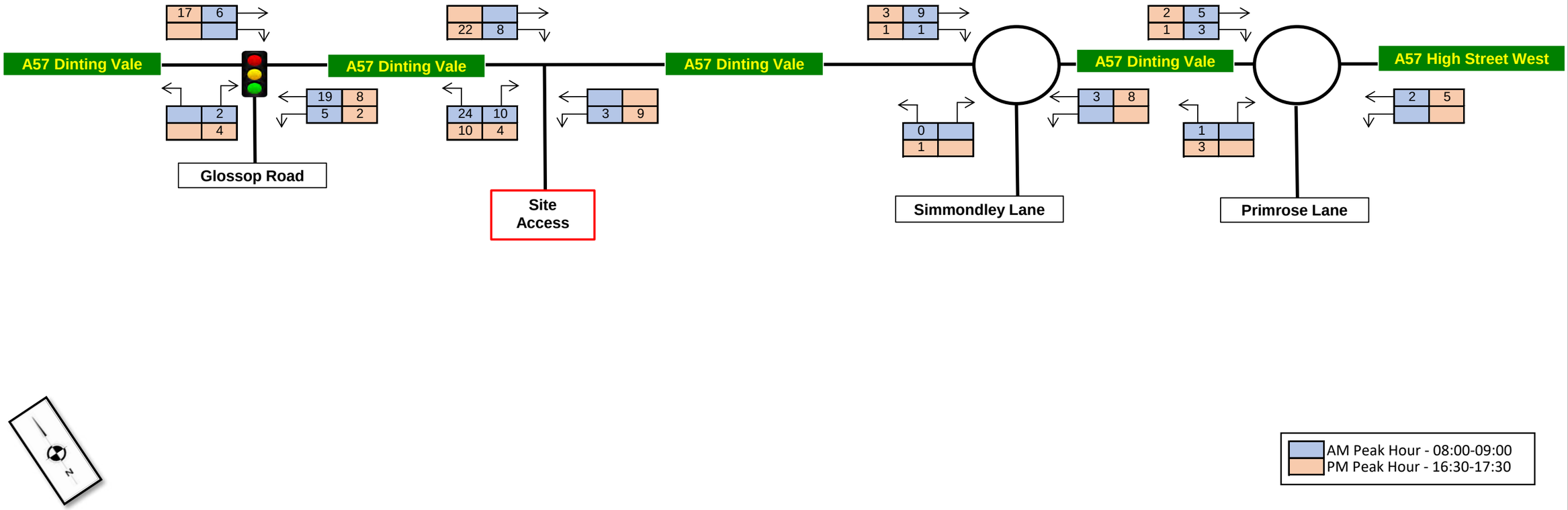
Traffic Distribution

Proposed Residential Development, A57 Dinting Vale, Glossop

25 July 2022

Job Number - SCP/210087

Traffic Figure 3



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Transportation Planning : Infrastructure Design

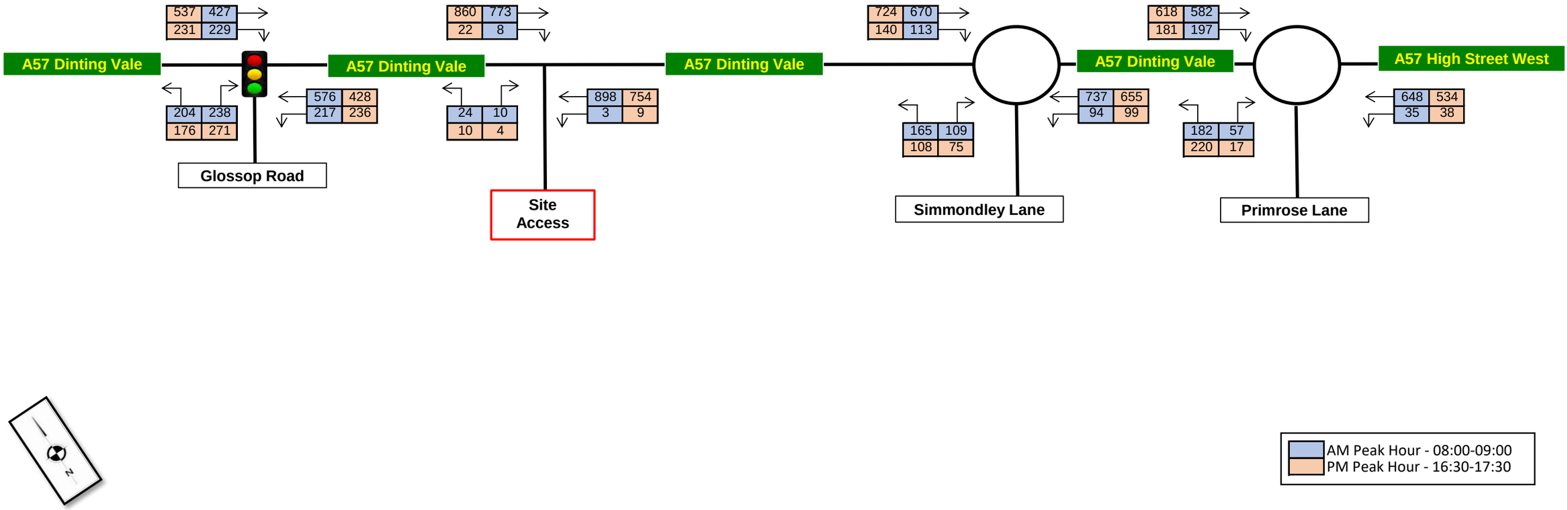
Traffic Generation

Proposed Residential Development, A57 Dinting Vale, Glossop

25 July 2022

Job Number - SCP/210087

Traffic Figure 4



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Transportation Planning : Infrastructure Design

2027 Assessment Traffic Flows

Proposed Residential Development, A57 Dinting Vale, Glossop

25 July 2022

Job Number - SCP/210087

Traffic Figure 5