Land Parcel North of Langley Bottom Farm, Epsom

Transport Assessment

Client: Fairfax Properties

i-Transport Ref: ITB200788-001a

Date: 27 June 2025

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i-Transport LLP
The Square
Basing View
Basingstoke
Hampshire
RG21 4EB

Tel: 01256 898 366

www.i-transport.co.uk

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SECTION 1 Introduction

1.1 Overview

1.1.1 This Transport Assessment (TA) has been prepared on behalf of Fairfax Properties (Fairfax) in relation to the development proposal at the Land Parcel to the North of Langley Bottom Farm, located within Langley Vale, Surrey (the 'site').

1.1.2 The development description seeks:

> ***"Outline planning application for up to 110 dwellings (including affordable homes) with all matters reserved apart from access from Langley Vale Road."***

1.1.3 The site falls within the administrative boundary of Epsom and Ewell Borough Council (EEBC) who are the Local Planning Authority (LPA) with Surrey County Council (SCC) as the Local Highway Authority (LHA).

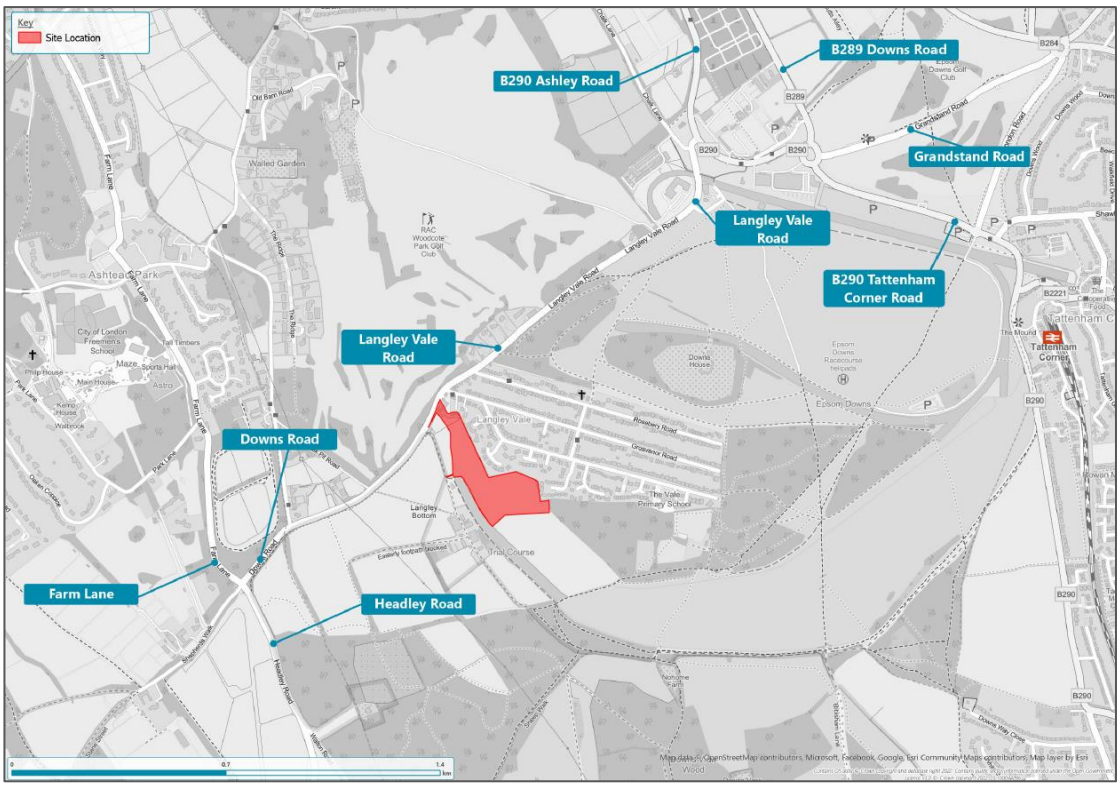
1.2 Site Location and Context

1.2.1 The site is located at Langley Bottom Farm, Langley Vale, which falls within the borough of Epsom in Surrey. It lies approximately 3.5km south of Epsom Town Centre and approximately 25km southwest of Central London. Epsom Down Racecourse is situated approximately 1.5km north of the site, with the town of Leatherhead located 4.5km to the east.

1.2.2 The site comprises agricultural fields extending to approximately 5-hectares. The site abuts the built-up area of Langley Vale to the northeast, Langley Vale Road to the west, Ancient Woodland of The Warren to the east, and arable farmland and a collection of buildings associated with Langley Bottom Farm (Planning Ref. 20/00475/FUL), which is currently under construction for 20 dwellings.

1.2.3 The location of the site in respect of the wider surrounding area is illustrated in **Image 1.1** with the full plan provided at **Figure 1.1**.

Image 1.1: Site Location



1.3 Aims and Purpose of this Report

1.3.1 In compliance with the National Planning Policy Framework (NPPF) (December 2024), this Transport Assessment (TA) accompanies the planning application for the development proposal and has been prepared in accordance with the relevant sections of the NPPF and Planning Practice Guidance (PPG) (March 2014).

1.3.2 This TA assesses the existing transport and highways conditions of the site and the impact of the development proposal on the existing safety and operation of the surrounding local transport networks. Chiefly, this TA assesses the development proposal against the key transport tests set out in Paragraph 115 of the NPPF (December 2024), as set out below:

a) "Sustainable transport modes are prioritised taking account of the vision for the site, the type of development, and its location;

b) Safe and suitable access to the site can be achieved for all users;

c) The design of streets, parking areas, other transport elements and the content of associated standards reflect current national design guidance, including the National Design Guide and the National Model Design Code; and

d) Any significant impacts from the development on the transport network (in terms of capacity and congestions), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach."

1.3.3 This TA assesses the development proposal against each of these four key tests, demonstrating that the development proposal is acceptable from a transport and highways perspective.

1.4 Report Structure

1.4.1 The remainder of this TA is structured as follows:

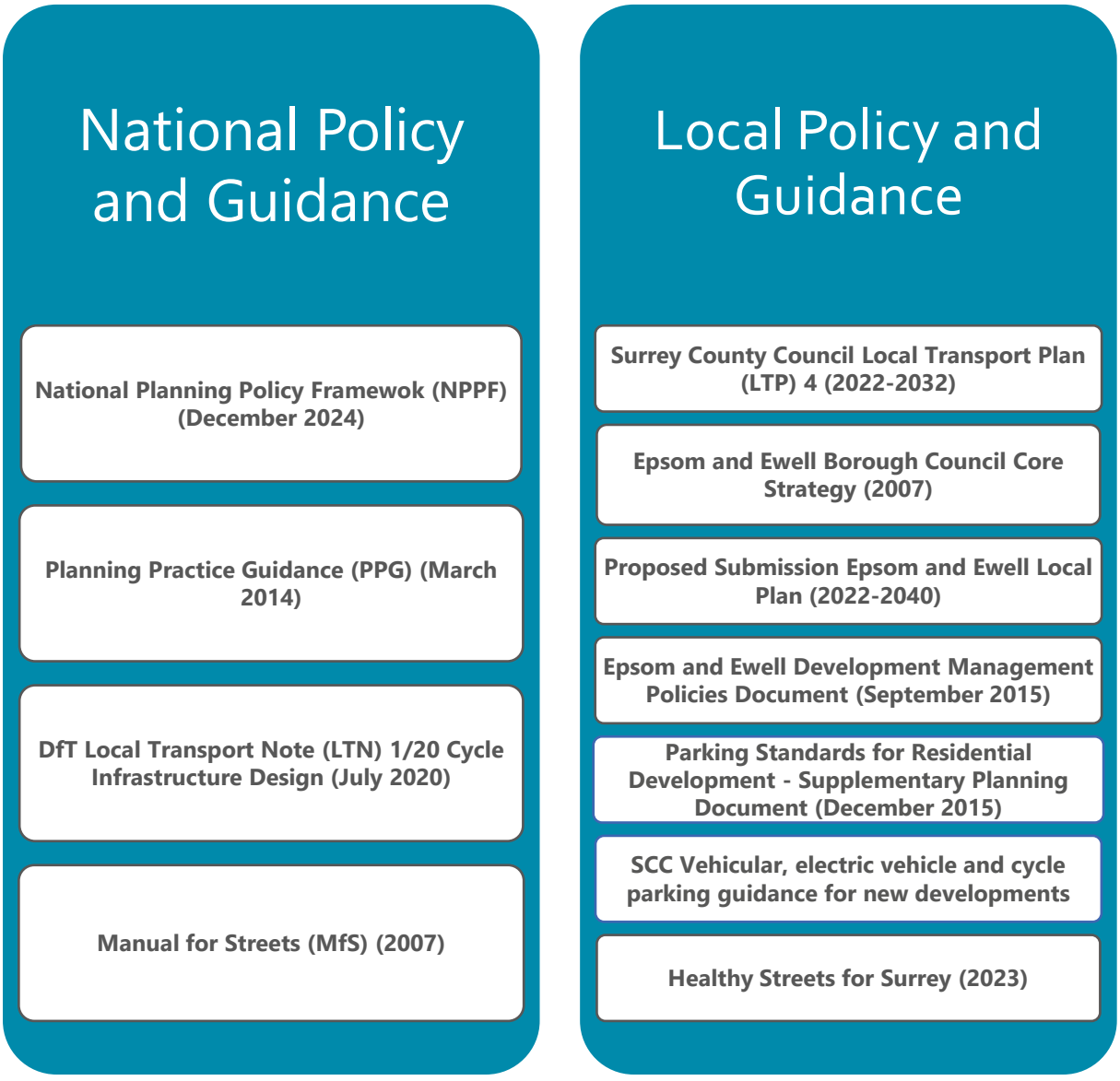
- **Section 2 – Transport Policy Context:** Provides an overview of the national, regional and local policy and guidance pertinent to transport;
- **Section 3 – Transport Vision and Approach:** Sets out the transport vision for the site, detailing the preferred future for the site which can be achieved through considerate site design and travel planning measures;
- **Section 4 – Sustainable Transport Accessibility:** Reviews the surrounding sustainable transport infrastructure and access to local amenities,
- **Section 5 – Baseline Highway Conditions**: Describes the surrounding highway network and conditions in relation to existing traffic flows and speeds and local highway safety conditions;
- **Section 6 - Development Proposals:** Sets out the development proposal;
- **Section 7 – Sustainable Transport Strategy:** Sets out the proposed transport strategy and how this seeks to realise the vision for the development proposal;
- **Section 8 – Highway Impact Assessment:** Details the trip generation and assessment methodology, and provides the results of the link impact and junction capacity assessments;
- **Section 9 – Summary and Conclusions:** Sets out the summary and conclusions to this TA.

SECTION 2 Transport Policy Context

2.1 Overview

2.1.1 To provide context for the TA, this section summarises the relevant national and local planning policy considerations pertaining to the development proposal.

Image 2.1: Relevant National and Local Policy and Guidance



2.2 National Planning Policy Framework (December 2024)

2.2.1 The National Planning Policy Framework (NPPF) sets out the Government's planning policies and how it expects these to be applied. It also constitutes guidance for local planning authorities and decision takers, both in drawing up plans and as a material consideration in determining planning applications.

2.2.2 Paragraph 115 sets out the key 'tests' for the consideration of transport aspects of development:

> ***"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:***
>
> ***a) Sustainable transport modes are prioritised taking account of the vision for the site, the type of development, and its location;***
> ***b) Safe and suitable access to the site can be achieved for all users;***
> ***c) The design of streets, parking areas, other transport elements and the content of associated standards reflects current national design guidance, including the National Design Guide and the National Model Design Code; and***
> ***d) 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 through a vision-led approach."***

2.2.3 This TA has been prepared to consider the development against these key tests.

2.2.4 Paragraph 116 sets a stringent threshold for restricting development on transport grounds:

> ***"Development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios."***

2.2.5 Regarding the location and design of development, Paragraph 117 states:

> ***"Within this context, applications for development should:***
>
> ***a) Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible - to facilitating access to high-quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;***
> ***b) Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;***
> ***c) Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter and respond to local character and design standards;***
> ***d) Allow for efficient delivery of goods, and access by service and emergency vehicles; and***
> ***e) Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."***

2.2.6 Lastly, Paragraph 118 highlights that:

> ***"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the applications should be supported by a vision-led transport statement or transport assessment so that the likely impacts of the proposal can be assessed and monitored."***

2.3 Local

Surrey County Council Local Transport Plan 4 (2022-2032)

2.3.1 The Surrey County Council Local Transport Plan 4 (LTP4) sets out the plans and aims for transforming the transport network up to 2032. Adopted in the July 2022, the local plan aims to significantly reduce carbon emissions from transport and meet the UK commitment to net zero by 2050.

2.3.2 According to the proposed timeline set out in the LTP4, we are currently in a transition period from the short term (by 2025) to medium term (by 2030) measures. This means continuing to support travellers in choosing carbon - neutral modes of transport, investing in improving places and communities, achieving the transition from traffic growth to traffic reduction, moving forward with technology and implementing harder to deliver high impact measures.

2.3.3 The LTP4 lists over 15 proposals for the 2022-2032 period, the key influencing factors being the following:

- ***"Improving safety;***
- ***Encouraging sustainable and active travel;***
- ***Improving connectivity;***
- ***Reducing emissions and improving air quality; and***
- ***Creating an accessible environment for all."***

Healthy Streets for Surrey (May 2023)

2.3.4 The Surrey County Council guide for healthy streets establishes the surrey standards for newly designed streets. The guide covers all elements of street design, but for the purpose of this TA the review will focus on general layout, pedestrian, cycling, public transport and vehicle parking sections.

2.3.5 Healthy Streets identifies the importance of walkable, mixed-use neighbourhoods. Section 4.5 states:

> ***"Residents must be able to have quick, easy, and safe access to a range of facilities and services from their home through walking, cycling or public transport. "***

2.3.6 To further this, section 4.8 describes the concept of the 20-minute neighbourhood, introduced in the LPT4. The aim is to create accessible, thriving local neighbourhoods where services and opportunities are available within 20 minutes without the access to a car.

2.3.7 The importance of active travel, utilisation of the street hierarchy and integrating public transport are key common themes throughout the healthy streets' guidance. The creation and improvement of walking and cycling networks throughout surrey should be at the forefront of new design and areas need to successfully accommodate public transport.

Epsom and Ewell Borough Council Core Strategy 2007

2.3.8 The Epsom & Ewell Core Strategy was published in July 2007, and is part of the Local Development Framework, setting out the council's core strategies and objectives for the future development of the Borough up to 2022.

2.3.9 The targets for managing transport and travel are:

- ***"All major residential and commercial developments should encourage the use of non-car modes of transport"; and***
- ***"All major residential developments should be within 30 minutes public transport time of health, education, retail and employment facilities."***

2.3.10 There are 16 strategic policies, of which sustainability is the primary driver in decision making, along with climate change, protection of biodiversity and heritage assets, and transport. In relation to transport, the strategy sets out two key policies:

- ***Policy CS14 - "Improve pedestrian and cyclist environments by creating new links and developing a street network which is designed with their needs in mind, and which reduces the adverse impact roads and traffic have on the town" (Policy CS14)***
- ***Policy CS16 - "Encouragement will be given to development proposals and management policies which foster an improved and integrated transport network and facilitate a shift of emphasis to non-car modes as a means of access to services and facilities. In particular the Council will work with the County Council and other relevant agencies in Epsom town centre to reduce the impact of roads and traffic movement, to support the development of opportunities for the use of public transport, and to enhance the pedestrian environment.***

"Development proposals will be required to be consistent with, and contribute to, the implementation of the Surrey Local Transport Plan and should:

- ***Minimise the need for travel, through measures such as travel plans or the provision or enhancement of local services and facilities;***
- ***Provide safe, convenient and attractive accesses for all, including the elderly and disabled, and others with restricted mobility, and provide links to the existing network of footways, bridleways and cycleways, so as to maximise opportunities for their use;***
- ***Be appropriate for the highways network in terms of the volume and the nature of traffic generated, and ensure that the safety, convenience and free flow of traffic using the highway are not adversely affected;***
- ***Avoid highway improvements which harm the environment and character of the area;***
- ***Provide appropriate and effective parking provision, both on and off-site, and vehicular servicing arrangements;***

- ***Ensure that vehicular traffic generated does not create new, or exacerbate existing, on street parking problems, nor materially increase other traffic problems, taking account of any contributions that have been secured to the provision of off-site works.***

- ***Provide appropriate and effective parking provision, both on and off-site, and vehicular servicing arrangements;***

- ***Ensure that vehicular traffic generated does not create new, or exacerbate existing, on street parking problems, nor materially increase other traffic problems, taking account of any contributions that have been secured to the provision of off-site works.***

All major developments should be well located for convenient access by non-car modes, including walking, cycling and high-quality public transport."

Proposed Submission Epsom and Ewell Local Plan (2022-2040)

2.3.11 The Epsom and Ewell Draft Local Plan sets out the policies and site allocations which will guide sustainable development and growth within the borough until 2040. This will supersede the 2007 core strategy once it has been adopted.

2.3.12 The vison for the local plan as described in the document is;

"To continue to provide a high quality of life and be an attractive place to live, work, study and visit" and;

"Development across the borough will have been supported by improvements in community and transport infrastructure, with active travel networks having been a core part of growth in the borough improving air quality and benefiting the health and well-being of residents".

Epsom & Ewell Development Management Policies Document (September 2015)

2.3.13 The Development Management Policies Document (DMPD) was published in September 2015 to support the strategic objectives and deliver the vision set out within the Core Strategy. The DMPD aims to promote and enable development that delivers the Spatial Strategy, setting criteria by which planning applications and site allocations will be considered and determined.

2.3.14 The following policies in the DMPD relate to transport:

POLICY DM7 – "New development affecting existing or proposed footpath, cycle and bridleway networks will not be permitted if it results in the loss of, or has harmful impact on, these networks. Where new development provides an opportunity to improve existing and proposed networks and such improvements are practical and viable we will seek their delivery as part of the development. Alternatively, we will seek financial contributions towards implementation of improvements through the appropriate mechanism;

POLICY DM35 – The impact of new development on the transport network will be assessed against other plan policies and transport standards. All planning applications for major developments should be accompanied by a Transport Assessment. Smaller developments should be accompanied by a Transport Statement where appropriate;

POLICY DM36 – In order to secure sustainable transport patterns and usage across the Borough we will:

Require all major new development, including new homes, commercial and community uses to develop and implement a proportionate, robust and effective Travel Plan in accordance with Surrey County Council's adopted Travel Plan Good Practice Guide;

Prioritise the access needs of pedestrians and cyclists in the design of new developments, protect and enhance pedestrian and cycle access routes to, and where possible, through development sites, including the protection or enhancement of the strategic cycling and walking networks; and

Require new development to provide on-site facilities for cyclists as appropriate, including showers, lockers and secure, convenient cycle parking, in accordance with standards.

POLICY DM37 – Developments, redevelopments, conversions and extensions will have to demonstrate that the new scheme provides an appropriate level of off-street parking to avoid an unacceptable impact on on-street parking conditions and local traffic conditions. Applicants will be required to demonstrate how their proposals will meet the objectives of the Epsom & Ewell Borough Parking Strategy. New development proposals will meet the car and cycle parking standards set out. We will consider exceptions to this approach if an applicant can robustly demonstrate that the level of on-site parking associated with their proposal would have no harmful impact on the surrounding area in terms of street scene or the availability of on-street parking."

2.3.15 Residential development should therefore seek to facilitate the policies set out above through appropriate design and through the promotion of sustainable transport.

2.4 Summary

2.4.1 The remainder of this TA considers the development proposal in the context of the transport policy and guidance that has been reviewed, and ultimately concludes that the development proposal will be delivered in accordance with the relevant overarching national and local policy and hence in transport terms should not be prevented from coming forward.

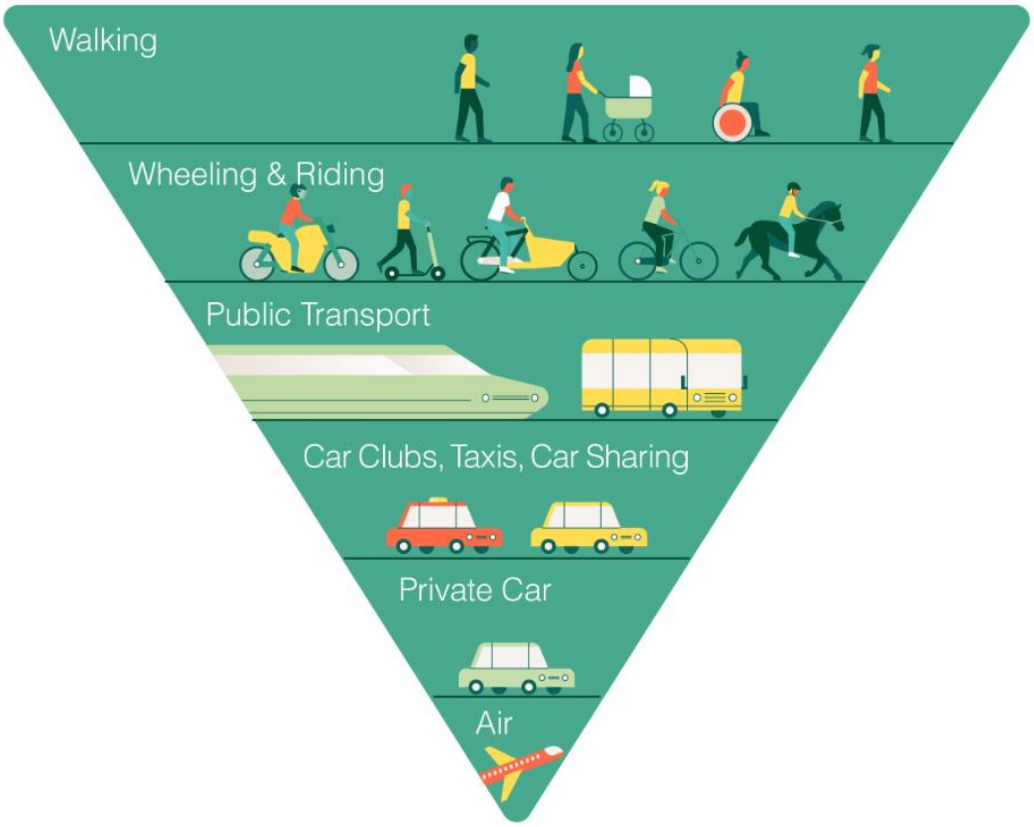
SECTION 3 Transport Vision and Approach

3.1 Setting the Vision

3.1.1 The transport vision for the site would seek to achieve a reality that accords with the wider aspirations of SCC, and what they seek to achieve with all forthcoming development.

3.1.2 Key to this would be to adopt SCC's LTP4 modal hierarchy, ensuring that the vision and wider regional and local objectives complement each other. A fundamental component of this is establishing a modal hierarchy in which sustainable travel modes are prioritised, accounting for the socio-environmental benefits that arise from adopting these modes. This hierarchy therefore prioritises active travel and public transport over private car use, as illustrated in **Image 3.1**.

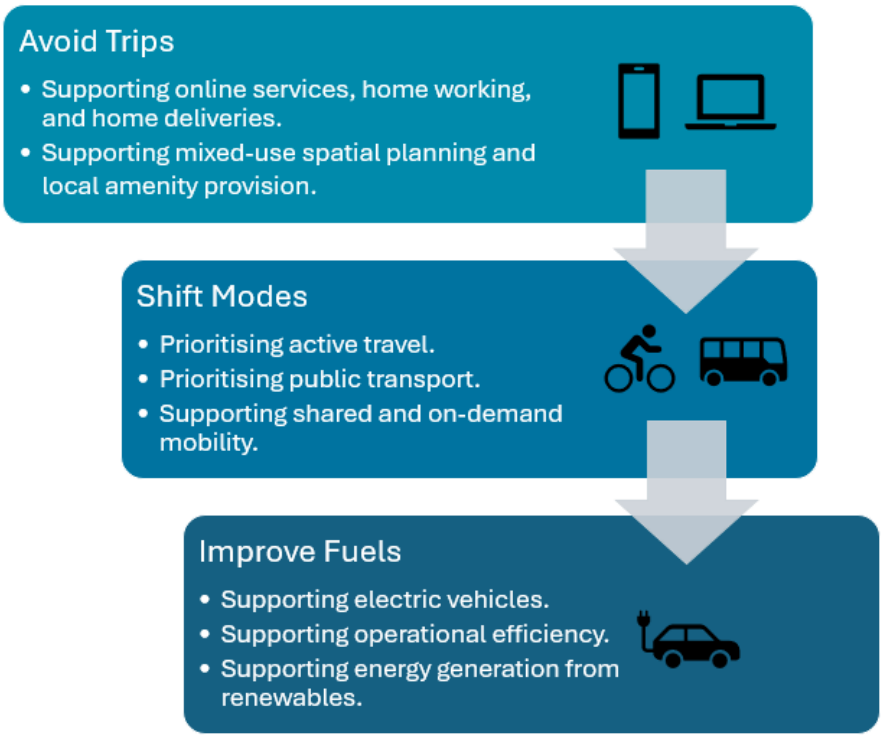
Image 3.1: Transport Vision – Modal Hierarchy



Source: Surrey County Council – Local Transport Plan 4

3.1.3 The modal hierarchy will be supported by three underpinning principles, as illustrated in **Image 3.2**.

Image 3.2: Avoid, Shift, and Improve Principles



3.2 Realising the Vision

3.2.1 To support the realisation of the vision, the development proposal will incorporate a sustainable transport strategy comprising measures delivered as part of the development design.

3.2.2 The Sustainable Transport Strategy is detailed in Section 7 of this TA, providing the design measures and supporting travel planning measures associated with the development proposal which will support the prioritisation of sustainable travel across the site.

3.3 Outcomes of the Vision

3.3.1 The outcome of the vision would be a thriving liveable community in which sustainable travel is prioritised where practicably possible, taking into consideration the location and quantum of the development.

3.4 Vision Statement

3.4.1 Based on the above, there vision for the site is therefore as follows:

"The development proposal will deliver a sustainable and holistically planned development which will prioritise sustainable transport modes where practicable. It will provide a prospering community where residents will feel happy and prosperous, whilst maintaining local character and upholding the rich equestrian history of the local area."

SECTION 4 Sustainable Transport Accessibility

4.1 Introduction

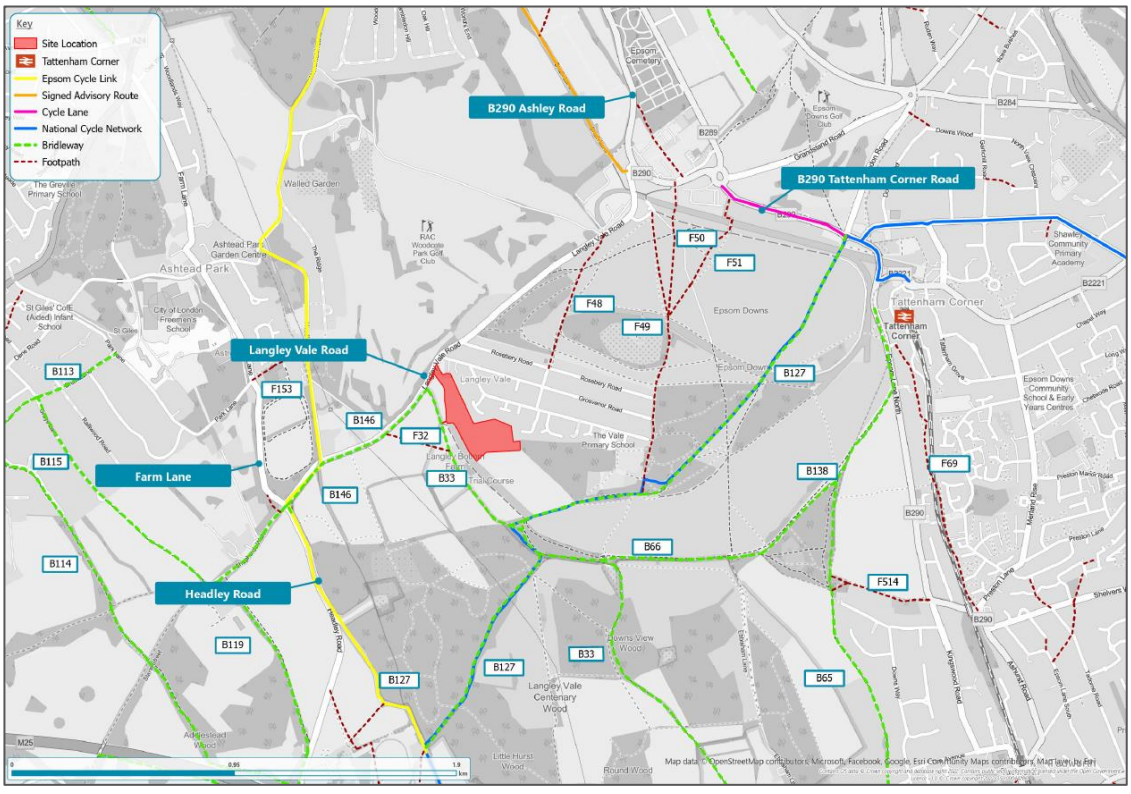
4.1.1 This section summarises the accessibility of the site to sustainable travel modes and key local facilities. The content within this section has been informed through a combination of desktop-based research in addition to observations made during a site visit conducted on 16 January 2025. This site visit included a walking audit of the nearby Public Rights of Way (PRoW) network in proximity to the site.

4.1.2 In addition to this section, a Walking and Cycling Audit Report has been produced (contained within **Appendix A**). This report assesses the conditions of existing routes between the site and key surrounding amenities/destinations.

4.2 Active Travel

4.2.1 **Image 4.1** illustrates the active travel network surrounding the site, with the full plan provided at **Figure 4.1**.

Image 4.1: Surrounding Active Travel Network



Walking

4.2.2 Within the vicinity of the site, Langley Vale Road possesses a 1.0m-1.5m wide footway on the eastern side. It is of generally good quality and is well-surfaced.

4.2.3 This footway routes northward from the site, providing pedestrian access to Langley Vale as well as connections to Beaconsfield Road, Grosvenor Road and Roseberry Road. Grosvenor Road and Roseberry Road provide walking routes through the village of Langley Vale, with both routes being lined with streetlighting. Langley Vale is naturally heavily residential, meaning that there is good natural surveillance and active frontages.

4.2.4 To the south of the site, the footway continues along Langley Vale Road until Ebbisham Lane. At this point, Bridleway 146 provides a segregated route towards the south. A Pegasus crossing is present on Langley Vale, some 350m southwest of the site, providing a controlled crossing point for equestrians and pedestrians to access towards Ashtead.

Public Rights of Way

4.2.5 Given the site's proximity to Epsom Downs Racecourse, it benefits from excellent connectivity to a PRoW network, as illustrated in **Image 4.1**. The PRoW network provides an attractive, traffic-free route with direct access to key facilities such as Langley Vale Primary School, Tattenham Corner Railway Station, and the local centres of Tattenham Corner and Tadworth.

4.2.6 It is acknowledged that the use of PRoW routes is not ideal for all scenarios when considering weather conditions and daylight during the winter months, however, it does present an additional opportunity in which active travel modes can be prioritised to and from the site.

Bridleway Route 33

4.2.7 Route 33 extends from Langley Vale Road towards Langley Bottom Farm, via Ebbisham Lane and is approximately 700m in length. To the south, BW Route 33 connects with BW Route 127 and 47.

4.2.8 Photos of Route 33 taken during the site visit are shown in **Photo 1**.

Photo 1: Bridleway Route 33

Bridleway Route 127 / National Cycle Route (NCR) 22

4.2.9 Route 127 connects with Route 33 to the south and continues northbound across Epsom Downs before connecting with Tattenham Corner Road. From this point, it is a short walk to Tattenham Corner Railway Station and the amenities present within Tattenham Corner. Route 127 also forms NCR22, meaning that a traffic-free route is provided which offers convenient cycle access to local centres such Tottenham Corner and Tadworth.

4.2.10 Photos of Route 127 / NCR22 taken during the site visit are shown in **Photo 2**.

Photo 2: Bridleway Route 127 / NCR22

Bridleway Route 65

4.2.11 Route 65 connects with the B290 Epsom Lane North and continues southbound along the eastern edge of Walton Downs. Benches are provided intermittently to offer a place to rest, and signs directing to the wider PRoW network are present.

4.2.12 Photos of Route 65 taken during the site visit are shown in **Photo 3**.

Photo 3: Bridleway Route 65

Bridleway Route 66

4.2.13 Route 66 connects with Route 65 and continues around the eastern edge of Walton Downs. To the west, it connects with Route 33 to the south of the site. Along this section, restrictions are in place which prevents equestrians from using this route before 12:00pm each day.

4.2.14 Photos of Route 66 taken during the site visit are shown in **Photo 4.**

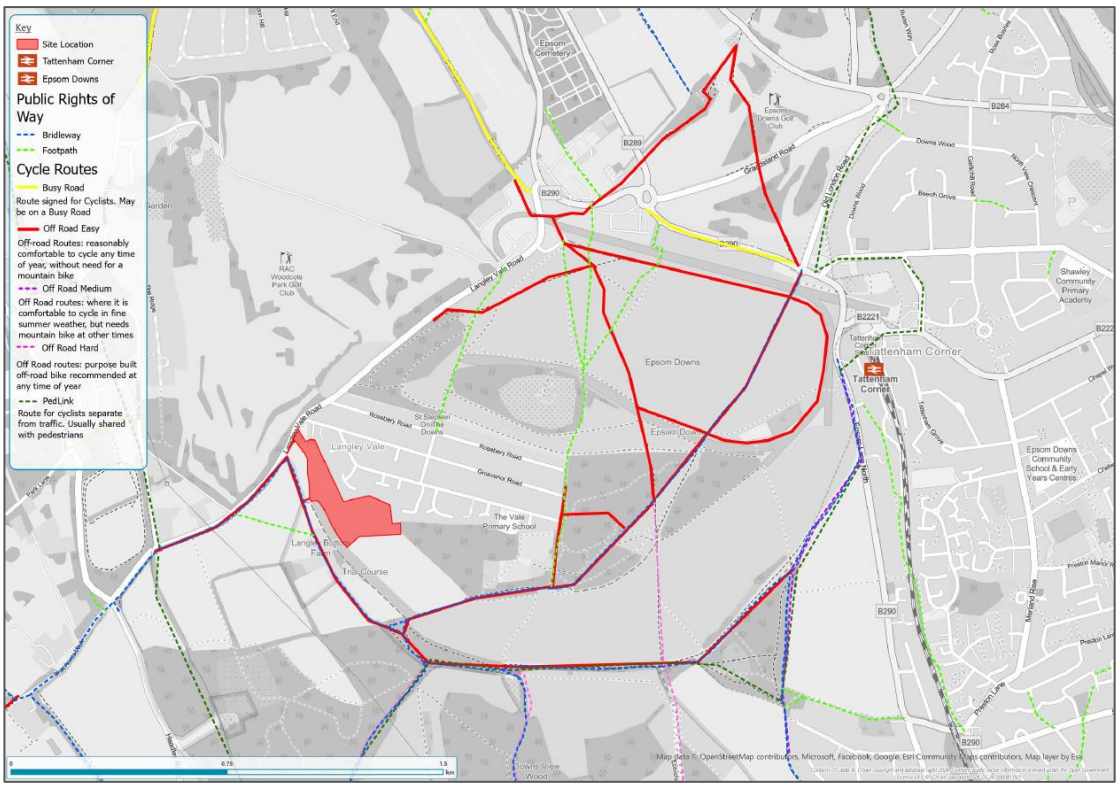
Photo 4: Bridleway Route 66

Cycling

4.2.15 Despite an absence of dedicated cycle facilities along Langley Vale Road, it is subject to 30mph speed restrictions and can therefore accommodate on-street cycling. Alternative routes are available, with National Cycle Route (NCR) 22 located approximately 500m southeast of the site, along BW Route 127. NCR22 can therefore be accessed almost immediately from the site, providing an off-carriageway route towards Tattenham Corner (and the railway station) and Tadworth, which is a 5–7-minute cycle journey.

4.2.16 **Image 4.2** provides a description of cycle routes within Epsom Down, demonstrating that routes are available for accommodating users of all abilities.

Image 4.2: Description of Cycle Routes within Epsom Downs



4.3 Public Transport

Bus

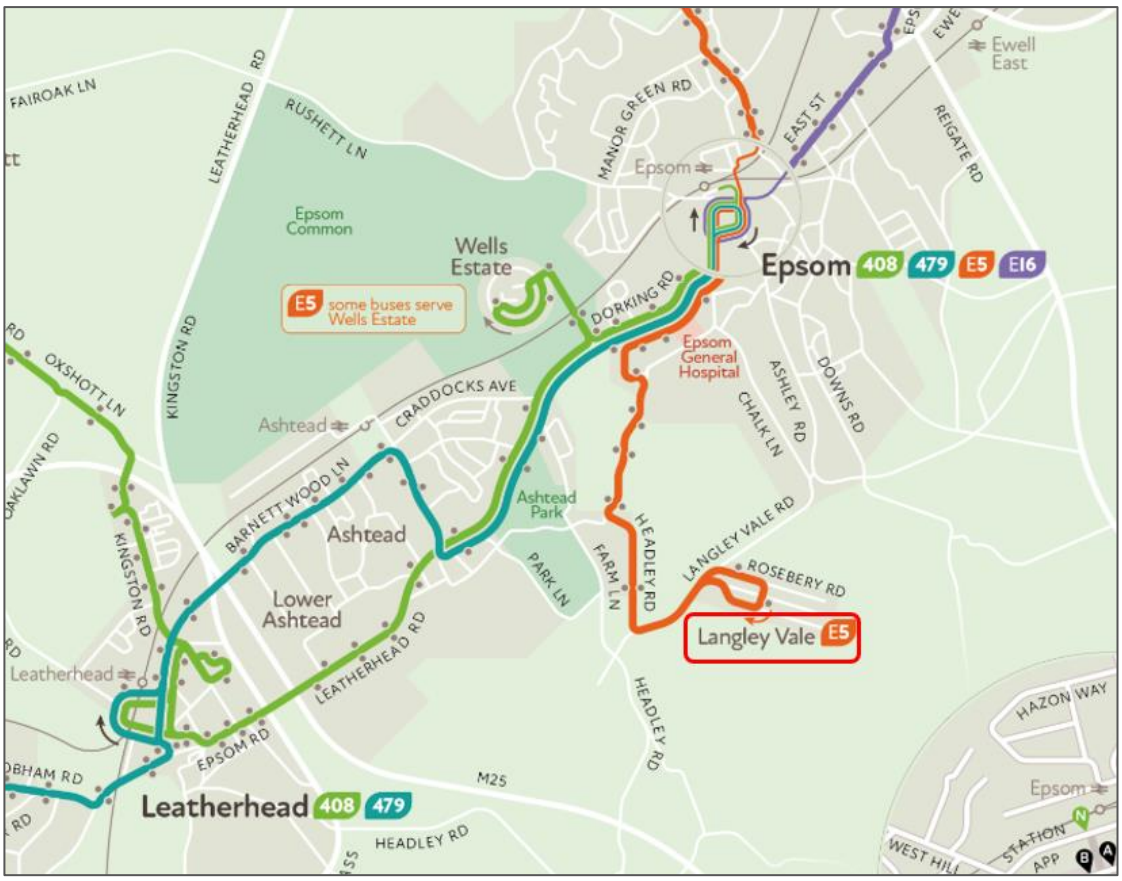
4.3.1 The closest bus stops to the site are located on Grosvenor Road, which can be accessed via a 6-minute walk (500m) from the centre of the site. An additional stop is located on Roseberry Road, which can be accessed via an 8-minute walk (700m) from the centre of the site. Both stops are equipped with a flag and pole and timetable information and are served by the E5 bus service.

4.3.2 A summary of the E5 bus service is provided in **Table 4.1**, with a route map provided in **Image 4.2.**

Table 4.1: Summary of Local Bus Services

Service	Route	Frequency	
		Weekday	Saturday
E5	Grosvenor Road > The Greenway (The Wells) > Epsom Hospital > Clock Tower, Epsom >Tomlin Close, Ewell > Cherry Way, West Ewell	06:32, 07:40, 09:50, 11:50, 13:45, 16:05, 18:05 and 19:15	06:35, 07:40, 09:40, 11:40, 13:40, 15:40, 17:45 and 19:00

Image 4.3: Local Bus Route Map



Rail

4.3.3 Several railway stations are located near the site, which can be accessed via a reasonable cycle journey or a short car-based journey. **Table 4.2** summarises the accessibility of local Railway Stations to the site.

Table 4.2: Summary of Local Railway Station Accessibility

Railway Station	Distance from Site (km)	Journey Time (mins)	Parking Provision	
			Cycle	Car
Tattenham Corner	2.0km	12-minutes	14	17 (2 accessible)
Ashtead	2.8km	15-minutes	100	240 (12 accessible and 2 EV chargers)
Epsom Downs	2.9km	16-minutes	14	21 (2 accessible and 4 EV chargers)
Epsom	3.1km	16-minutes	107	29 (2 accessible)

4.3.4 All stations are equipped with cycle parking, which is covered and monitored by CCTV. Having several local railway stations with car and cycle parking provision facilitates sustainable multimodal journeys being made to and from the site, in addition to short car-based trips in which the majority proportion of the journey will be made sustainably.

4.3.5 Epsom and Epsom Downs Railway Stations both provide relatively low levels of car parking provision, meaning that users would be encouraged to adopt sustainable travel modes.

4.3.6 **Table 4.3** provides a summary of the services available from these railway stations.

Table 4.3: Summary of Local Railway Services

Railway Station	Destination	Journey Time (mins)	Frequency
Tattenham Corner	London Bridge (via Kingswood, Chipstead and South Croydon)	26-minutes	2 per hour
Ashtead	Dorking	10-minutes	3 per hour
	Guildford	30-minutes	2 per hour
	Horsham	33-minutes	2 per hour
	London Waterloo (via Clapham Junction)	44-minutes	3 per hour
	London Victoria (via Epsom)	46-minutes	3 per hour
Epsom Downs	London Victoria (via Clapham Junction)	62-minutes	3 per hour
Epsom	Dorking	15-minutes	3 per hour
	Guildford	37-minutes	2 per hour
	London Waterloo (via Clapham Junction)	37-minutes	4 per hour
	Horsham	38-minutes	3 per hour
	London Bridge (via Sutton)	43-minutes	2 per hour
	London Victoria (via Clapham Junction)	46-minutes	3 per hour

4.4 Active Travel Accessibility

Walking Distances

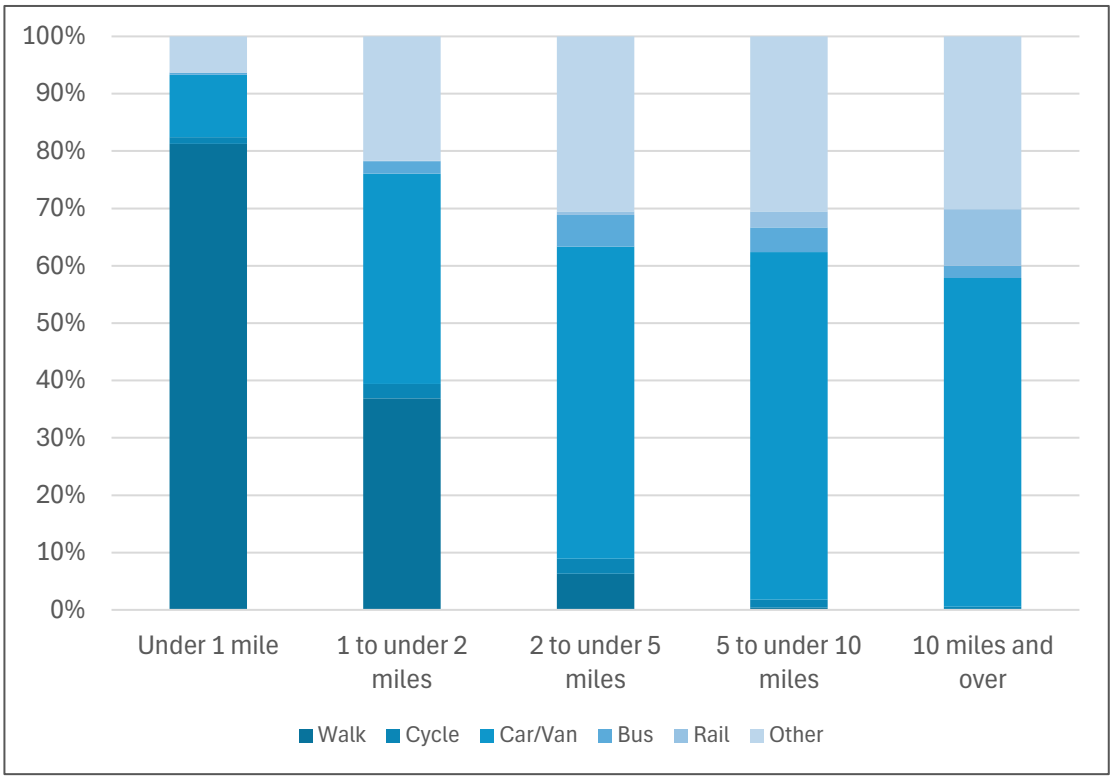
4.4.1 DfT's Manual for Streets identifies that *walkable neighbourhoods* comprise those locations where facilities and services can be accessed within an 800m (10 minute) walk, but that walking distances of up to 2km offer the greatest potential to replace car trips.

4.4.2 Paragraph 4.4.1 states that:

> ***"Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800 m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPS134 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km."***

4.4.3 The National Travel Survey (NTS) 2023 (and CIHT '*Planning for Walking*' 2015) identifies that the vast majority (80%) of trips of up to one mile (1.6km) are undertaken on foot, as well as 30% of trips between 1-2 miles. Walking is therefore a realistic and feasible option for many short trips. **Image 4.4** shows the yearly proportion of trips by mode and travel distance.

Image 4.4: Proportion of Trips per Year by Mode and Distance (All Purposes)



Source: National Travel Survey, England, 2023

4.4.4 The following distances have therefore been used for assessing the likelihood of walking journeys to and from the site:

- Up to **800m** – a 'desirable' or 'comfortable' walking distance;
- **800m** to **1,600m** – a 'reasonable' walking distance i.e. the distance where circa 80% of trips could be made on foot; and
- **1,600m** to **3,200m** (2 miles) – an 'acceptable' walking distance where circa one-third of trips could be on foot.

Cycling Distances

4.4.5 In terms of cycle distance, a 3-mile (5km) distance represents a reasonable everyday cycle distance, with 5 miles (8km) being an upper distance for many people. NTS 0303 identifies that average cycle trips are 3.3 miles/5.3km. Cycling also frequently forms part of a longer journey in combination with public transport.

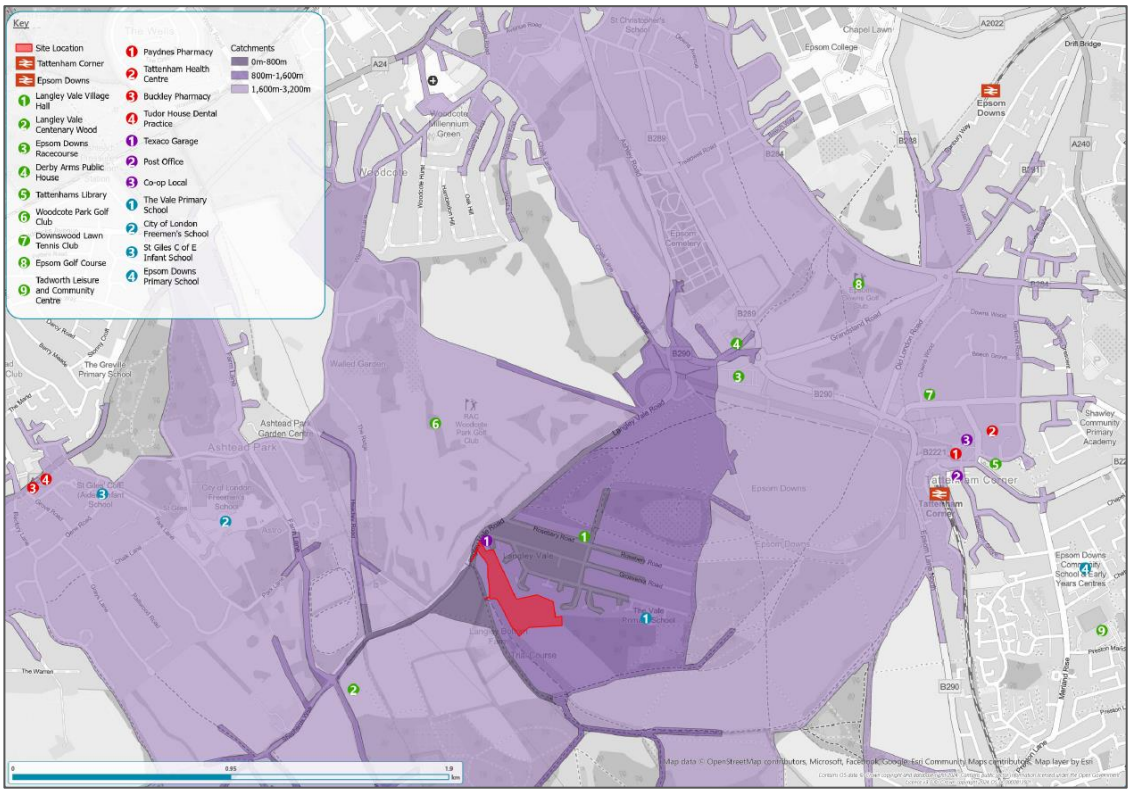
4.4.6 Paragraph 2.2.2 of the Department for Transport's (DfT) Local Transport Note (LTN) 01/20 '*Cycle Infrastructure Design*' (July 2020) also addresses typical cycle trip distances and states two out of every three personal trips are less than 5-miles (8km) in length which is an achievable cycling distance for most people.

4.4.7 On this basis, the following cycling distances have been adopted within this TA:

- Up to **5km** - a 'reasonable' everyday cycle distance; and
- Up to **8km** - the acceptable 'commuter' cycling distance for regular (non-leisure) trips.

4.4.8 **Image 4.5** illustrates the accessibility of local amenities and services based on the above active travel distances, with the full plan provided at **Figure 4.2**.

Image 4.5: Local Amenity Accessibility



4.4.9 **Table 4.4** provides the walking and cycle distances to the surrounding amenities and services. It should be noted that the assumed travel route would be along Langley Vale Road from the centre of the site. In reality, the surrounding PRoW network would provide a quicker route to a majority of surrounding amenities.

Table 4.4: Local Amenity Accessibility

Purpose	Name	Total Distance (m)	Walking Journey Time (mins)	Cycle Journey Time (mins)
Education	The Vale Primary School	1,300	15	5
	City of London Freemen's School	2,500	29	9
	St Giles C of E Infant School	3,200	37	12
	Epsom Downs Primary School	3,600	42	14
Retail	Texaco Garage	450	5	2
	Post Office	2,800	32	11
	Co-op Local	2,800	32	11
Leisure	Langley Vale Village Hall	1,000	12	4
	Langley Vale Centenary Wood	1,400	16	5
	Epsom Downs Racecourse	1,800	21	7
	Derby Arms Public House	2,100	24	8
	Woodcote Park Golf Club	2,500	29	9
	Downswood Lawn Tennis Club	2,500	29	9
	Epsom Golf Course	2,700	31	10
	Tattenhams Library	3,000	35	15
	Tadworth Leisure and Community Centre	4,000	46	11
Healthcare	Paydnes Pharmacy	2,800	32	11
	Tattenham Health Centre	3,000	35	14
	Buckley Pharmacy	3,300	38	12
	Tudor House Dental Practice	3,300	38	12
Transport	Grosvenor Road Bus Stop	450	5	2
	Tattenham Corner Railway Station	2,750	32	12
	Epson Downs Railway Station	3,400	51	16
	Ashtead Railway Station	3,900	53	15
	Epsom Railway Station	3,700	51	16

Key:

Within a desirable walking (800m) / cycling (5km) distance

Within a comfortable walking (1.6km) / cycling (8km) distance

Within an acceptable (3.2km) walking distance

4.4.10 **Table 4.4** highlights that 18 different local facilities are accessible within acceptable walking distances, with all local facilities accessible within a desirable cycling distance.

4.4.11 Furthermore, the following local facilities are located within Langley Vale itself, in close proximity to the site:

- The Texaco Garage; and
- The Vale Primary School.

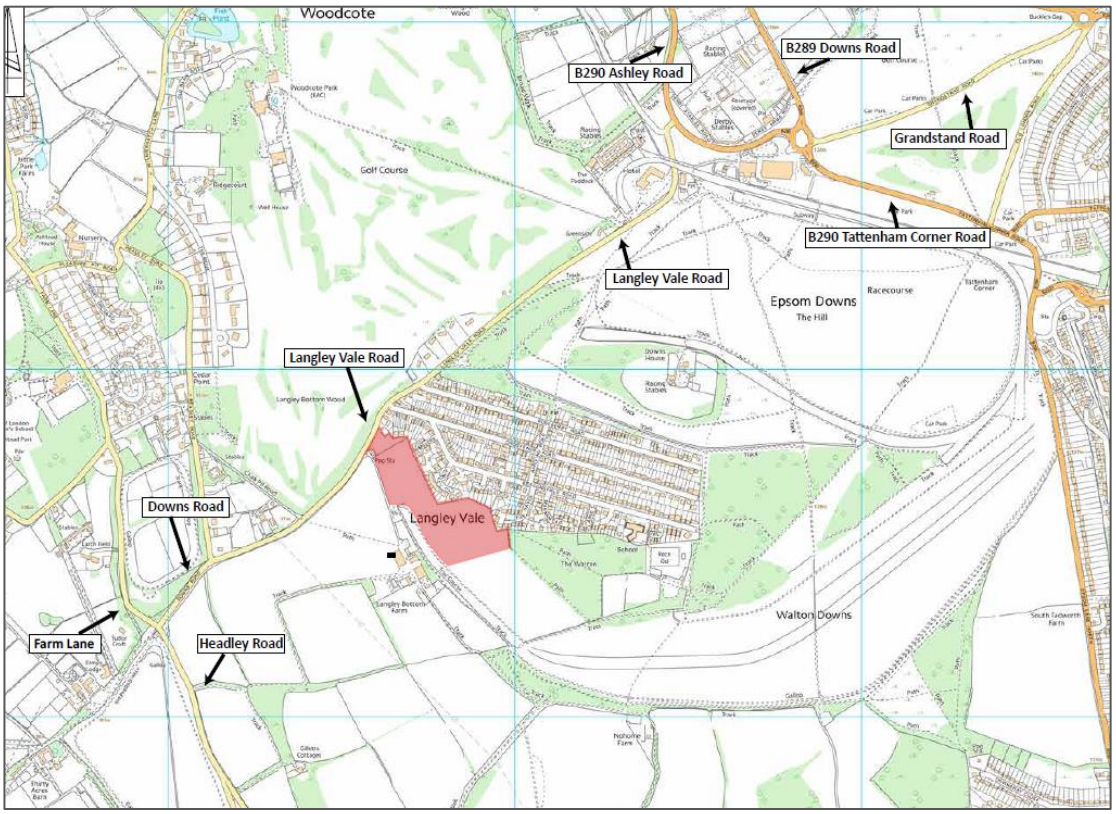
4.4.12 The above facilities would be used by many future residents on a near daily basis and the proximity of these facilities provides significant opportunities for prioritising sustainable travel choices.

SECTION 5 Baseline Highway Conditions

5.1 Local Highway Network

5.1.1 An overview of the surrounding highway network is provided in **Image 5.1**.

Image 5.1: Local Highway Network



5.1.2 Langley Vale Road is a two-way single carriageway which is governed by 30mph speed restrictions. It measures 6.0m in width and runs for approximately 1.9Km, forming a signalised junction with the B290 Ashley Road to the east, a priority-controlled junction with Hedley Road and Downs Road to the west. The speed limit increases to 40mph approximately 350m and 850m east and west of the site, respectively.

5.1.3 Adjacent the site frontage, there are speed humps in place on Langley Vale Road as a traffic calming feature, which are located intermittently in addition to 'slow' road markings. This assists in reinforcing the 30mph speed limit at this section of Langley Vale Road.

5.1.4 To the northwest of the site, the B290 Ashley Road provides routes to Epsom Town Centre. To the southeast, the B290 Ashley Road provides routes to Tattenham Corner and connects with the B289 Downs Road, Grandstand Road, B290 Tattenham Corner and Epsom Downs Racecourse via a five-arm roundabout.

5.2 Baseline Traffic Surveys

Automatic Traffic Counts

5.2.1 Automatic traffic count (ATC) surveys were installed at two locations to analyse existing vehicular flows and speeds. The ATCs ran for a continuous 7-day period between 3rd March 2025 to 9th March 2025 (a neutral period outside of school holidays) at the following locations:

- Langley Vale Road (east of proposed site access); and
- Langley Vale Road (west of proposed site access).

5.2.2 A summary of the recorded ATC data is provided in **Table 5.1**.

Table 5.1: ATC Data – Langley Vale Road (March 2025)

Location	Direction	Morning Peak Hour		Evening Peak Hour		85th Percentile Speeds (mph) (10:00-12:00 & 14:00 – 16:00)
		Light Vehicles	HGVs	Light Vehicles	HGVs	
Langley Vale Road (east of proposed access)	Northbound	728	2	817	2	27.4
	Southbound	600	0	514	0	25.1
	Two-Way	**1,328**	**2**	**1,331**	**2**	-
Langley Vale Road (west of proposed access)	Northbound	732	1	816	0	32.7
	Southbound	594	0	520	0	32.4
	Two-Way	**1,326**	**1**	**1,336**	**0**	-

Source: Nationwide Data Collection – Traffic Surveys (March 2025)

Classified Turning Counts

5.2.3 A classified turning count (CTC) survey was undertaken on Tuesday 4 March 2025, to understand turning movements at the Langley Vale Road / B290 Ashley Road junction. This survey captured data in five-minute intervals across the morning (07:00-10:00) and evening (16:00-19:00) peak periods.

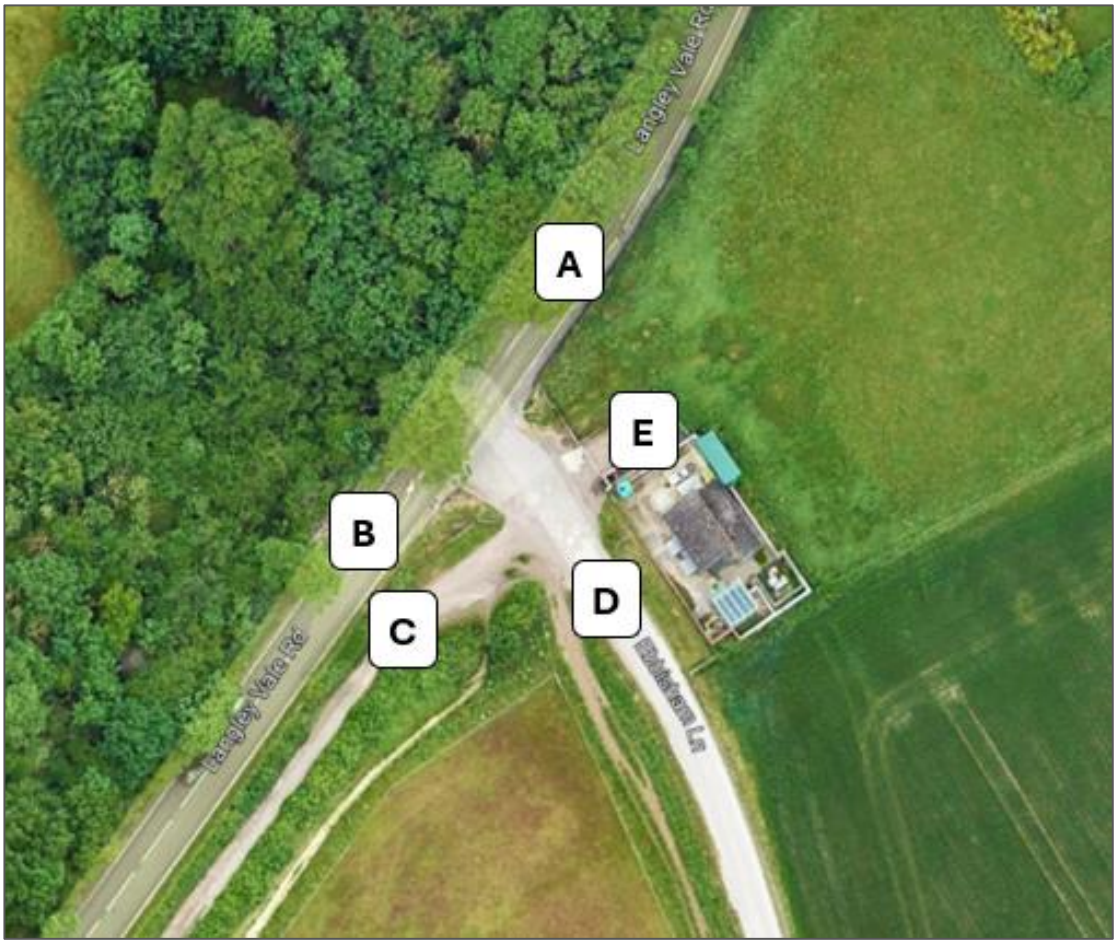
5.2.4 Turning movements have been extracted for the morning (08:00-09:00) and evening (17:00-18:00) peak hours, which have been used to inform the baseline and future year junction modelling scenarios detailed later in this TA.

5.2.5 The 2025 observed turning count movements for the morning and evening peak hours are provided within Traffic Flow Diagrams (TFD) **TFD1** and **TFD2**, respectively.

Equestrian Surveys

5.2.6 Given the location of the site and the proximity of various stables and gallops, the surrounding highway and PRoW network is heavily utilised by equestrians. To assess the level of interaction between equestrians and vehicle users, a camera survey was installed at the Langley Vale Road / Ebbisham Lane junction. Equestrian movements were captured on Tuesday 4 March 2025 for the morning peak period (07:00-10:00) and evening peak period (16:00-19:00).

Image 5.2: Langley Vale Road / Ebbisham Lane Survey Configuration



5.2.7 Equestrian data has been analysed for the morning and evening peak hours (08:00-09:00 and 17:00-18:00) in order to understand the level of equestrian traffic during the traditional highway network peak hours. This data is provided in **Table 5.2**.

Table 5.2: Equestrian Flows – Langley Vale Road / Ebbisham Lane

Morning Peak Hour (08:00-09:00)						
From/To	**A**	**B**	**C**	**D**	**E**	**Total**
A	0	0	11	0	0	**11**
B	0	0	0	0	0	**0**
C	9	0	0	4	0	**13**
D	0	0	0	0	0	**0**
E	0	0	0	0	0	**0**
Total	**9**	**0**	**11**	**4**	**0**	**24**
Evening Peak Hour (17:00-18:00)						
From/To	**A**	**B**	**C**	**D**	**E**	**Total**
A	0	0	0	0	0	0
B	0	0	0	0	0	0
C	0	0	0	0	0	0
D	0	0	0	0	0	0
E	0	0	0	0	0	0
Total	0	0	0	0	0	0

5.2.8 **Table 5.2** highlights a total of 24 equestrians are recorded during the morning peak hour (08:00-09:00. Of these 24, 11 are recorded travelling northbound from Bridleway Route 146 onto the Langley Vale Road carriageway. Given that equestrians typically travel in numbers (known as 'strings'), this means that these 11 movements are generated by a handful of strings entering the carriageway over the morning peak hour.

5.2.9 This interaction between motor vehicles and equestrians has been further analysed through a review of video footage at this location. This identifies that some localised delay does occur on Langley Vale Road whilst motor vehicles give way to equestrians entering the carriageway, however, the delay on average lasts for approximately 1-minute before conditions return to free flowing as equestrians leave the carriageway.

5.2.10 Personal Injury Collision Data

5.2.11 Personal injury collision (PIC) data has been obtained from SCC for the latest available five-year period, covering 1 November 2019 to 31 October 2024. This timeframe has been used to understand if there are any preexisting safety issues on the highway network within the vicinity of the site which could be exacerbated as a result of the development proposal. The full set of collision data is contained within **Appendix B**.

5.2.12 Collisions are classified into three separate categories based on severity: Slight, Serious and Fatal. The definitions of which are as follows:

- **Slight:** Injuries of a minor nature, such as sprains, bruises, or cuts not judged to be severe, or slight shock requiring roadside attention (medical treatment is not a prerequisite for an injury to be defined as 'slight);
- **Serious:** Injuries for which a person is detained in hospital, as an in-patient, or any of the following injuries, whether or not a person is detained in hospital; fractures, concussion, internal injuries, severe cuts and lacerations, severe general shock requiring medical treatment and injuries which result in death 30 days after the collision. The 'serious' category therefore covers a very broad range of injuries; and
- **Fatal:** Injuries which cause death either immediately or up to 30 days after the collision.

5.2.13 The data has been reviewed for each year, as detailed in **Table 5.3**.

Table 5.3: Number of Casualties – Yearly

Casualty Mode	Injury Severity	Year 1 01 Nov 2019 to 31 Oct 2020	Year 2 01 Nov 2020 to 31 Oct 2021	Year 3 01 Nov 2021 to 31 Oct 2022	Year 4 01 Nov 2022 to 31 Oct 2023	Year 5 01 Nov 2023 to 31 Oct 2024	Total
Pedestrians	Slight	1	0	0	0	0	1
	Serious	1	0	0	0	0	1
	Fatal	0	0	0	0	0	0
	Total	**2**	**0**	**0**	**0**	**0**	**2**
Equestrians	Slight	0	0	0	0	0	0
	Serious	0	0	0	0	0	0
	Fatal	0	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0**	**0**
Cyclists	Slight	0	0	0	3	0	3
	Serious	2	0	0	0	0	2
	Fatal	0	1	0	0	0	1
	Total	**2**	**1**	**0**	**3**	**0**	**6**
Mobility Scooter	Slight	0	0	0	0	0	0
	Serious	0	0	0	0	0	0
	Fatal	0	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0**	**0**
Motor Vehicles	Slight	2	1	9	5	0	17
	Serious	0	0	2	0	0	2

Casualty Mode	Injury Severity	Year 1 01 Nov 2019 to 31 Oct 2020	Year 2 01 Nov 2020 to 31 Oct 2021	Year 3 01 Nov 2021 to 31 Oct 2022	Year 4 01 Nov 2022 to 31 Oct 2023	Year 5 01 Nov 2023 to 31 Oct 2024	Total
	Fatal	0	0	0	0	0	0
	Total	**2**	**1**	**11**	**5**	**0**	**19**
Total for All Modes	Slight	3	1	9	8	0	21
	Serious	3	0	2	0	0	5
	Fatal	0	1	0	0	0	1
	Total	**6**	**2**	**11**	**8**	**0**	**27**

Source: Surrey County Council

5.2.14 **Table 5.3** demonstrates that over the five-year study period, there were a total of 27 casualties. Year 3 (01 Nov 2021 to 31 Oct 2022) had the highest recorded number of casualties with 11, comprising 9 slight and 2 serious. It also demonstrates that motor vehicles collisions made up a majority (70%) of the casualties. Notably, there were no collisions involving equestrians.

5.2.15 The following severity split was recorded over the study period:

- Slight – 78% (21);
- Serious – 18% (5); and
- Fatal – 4% (1).

5.2.16 **Table 5.4** provides a breakdown of casualty by highway link.

Table 5.4: Casualties by Road Link and Severity

Location	Mode	Slight	Serious	Fatal	Total
B290 Between Langley Vale Road and Epsom Downs Racecourse	Motor Vehicle	4	1	0	5
	Pedestrians	0	0	0	0
	Equestrians	0	0	0	0
	Cyclists	1	1	0	2
	All Modes	**5**	**2**	**0**	**7**
B290 Between Epsom Downs Racecourse and Epsom Lane North	Motor Vehicle	4	0	0	4
	Pedestrians	1	0	0	1
	Equestrians	0	0	0	0
	Cyclists	1	1	0	2
	All Modes	**6**	**1**	**0**	**7**
Langley Vale Road	Motor Vehicle	8	2	0	10
	Pedestrians	1	0	0	1
	Equestrians	0	0	0	0

Location	Mode	Slight	Serious	Fatal	Total
	Cyclists	1	0	1	2
	All Modes	**10**	**2**	**1**	**13**

Source: Surrey County Council

Langley Vale Road

5.2.17 Langley Vale Road experienced the highest number of casualties across the study period, recording a total of 13, of which 10 were slight, two serious and one fatal.

5.2.18 The fatal collision Occurred on the 11th April 2021 at 09:00. A cyclist had been travelling along Langley Vale Road. The rider has then fallen off and subsequently died at the scene. The collision report did not identify that any other vehicle was involved in this incident.

Summary

5.2.19 A review of the collisions within the study show that human-error was the primary factor of the cause of the collisions, rather than deficiencies in the local transport networks.

5.2.20 Therefore, no preexisting safety concerns are present on the surrounding transport networks and existing safety conditions would not be exacerbated as a result of the development proposal.

SECTION 6 Development Proposal

6.1 Overview

6.1.1 The development proposal seeks an:

> ***"Outline planning application for up to 110 dwellings (including affordable homes) with all matters reserved apart from access from Langley Vale Road."***

6.1.2 Parameter plans and an illustrative masterplan are included in **Appendix C**.

6.1.3 The internal layout of the site is a reserved matter, but this TA will establish how the design principles will accord with the relevant national and local guidance and policy.

6.2 Vehicular Access

6.2.1 Vehicular access to the site will be achieved via a new priority-controlled junction with Langley Vale Road. The principles of the access design are in accordance with the Healthy Streets for Surrey and the Surrey Design Guide.

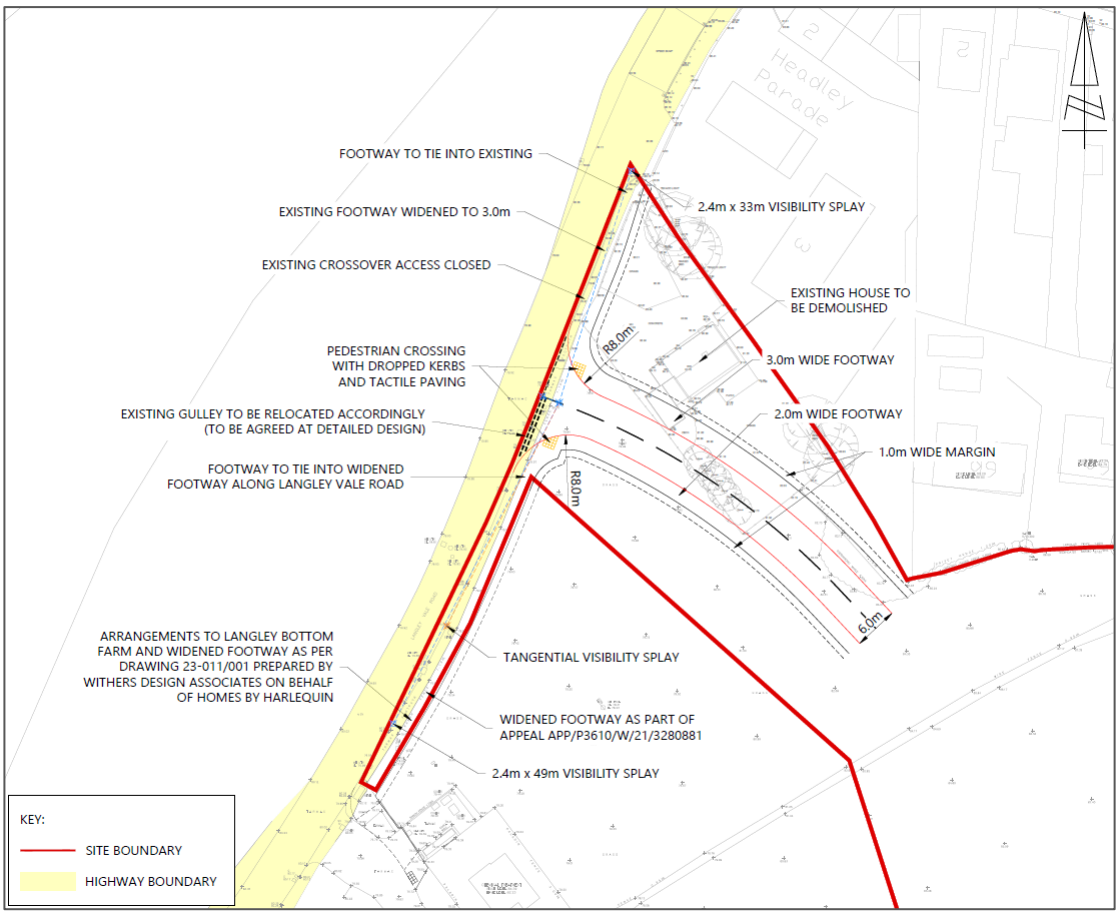
6.2.2 A 6.0m wide carriageway with 8.0m radii is proposed, providing sufficient width for two refuse vehicles to pass one another. Visibility splay requirements have been based on the 85th percentile speeds obtained from the traffic speed surveys (**Table 5.1**). This necessitates visibility splays of 2.4m x 33m to the north and 2.4m x 49m to the south, both of which are achievable within the public highway and within land controlled by Fairfax.

6.2.3 It is noted that SCC's Healthy Streets for Surrey guidance would recommend a Copenhagen crossing to be provided at the proposed site access location. This is not considered appropriate in this instance as this would likely lead to confusion for pedestrians and cyclists as this infrastructure is not present elsewhere within the local vicinity, resulting in inconsistent priority for active travel users, possible exacerbating safety.

6.2.4 In addition to this, the predicted vehicular movements generated by the development (discussed in Section 8), is relatively low during the morning and evening peak hours, further demonstrating that a Copenhagen crossing at this location is not appropriate.

6.2.5 **i-Transport Drawing ITB200788-GA-002** illustrates the proposed access design, with an extract provided in **Image 6.1**.

Image 6.1: Proposed Access Design



6.3 Pedestrian and Cycle Access

6.3.1 The proposed access with Langley Vale Road will also accommodate pedestrian and cyclists through the provision of a 2.0m footway on the southern side of the access road and a 3.0m shared foot/cycleway on the northern side. The footway/cycleway will tie into the footway on the eastern side of Langley Vale Road, which is currently subject to s278 works delivered through *Planning Ref. 20/00475/FUL*. This would increase the existing footway on the southern side of Langley Vale Road to 3.0m wide. An extract of this improvement scheme is provided in **Image 6.2**.

6.3.2 The development proposal will provide direct connectivity to the surrounding PRoW network, via a connection point located at the southwestern corner of the site. This will connect with Bridleway Route 33, which leads onto Routes 127 and 47, in addition to NCR22.

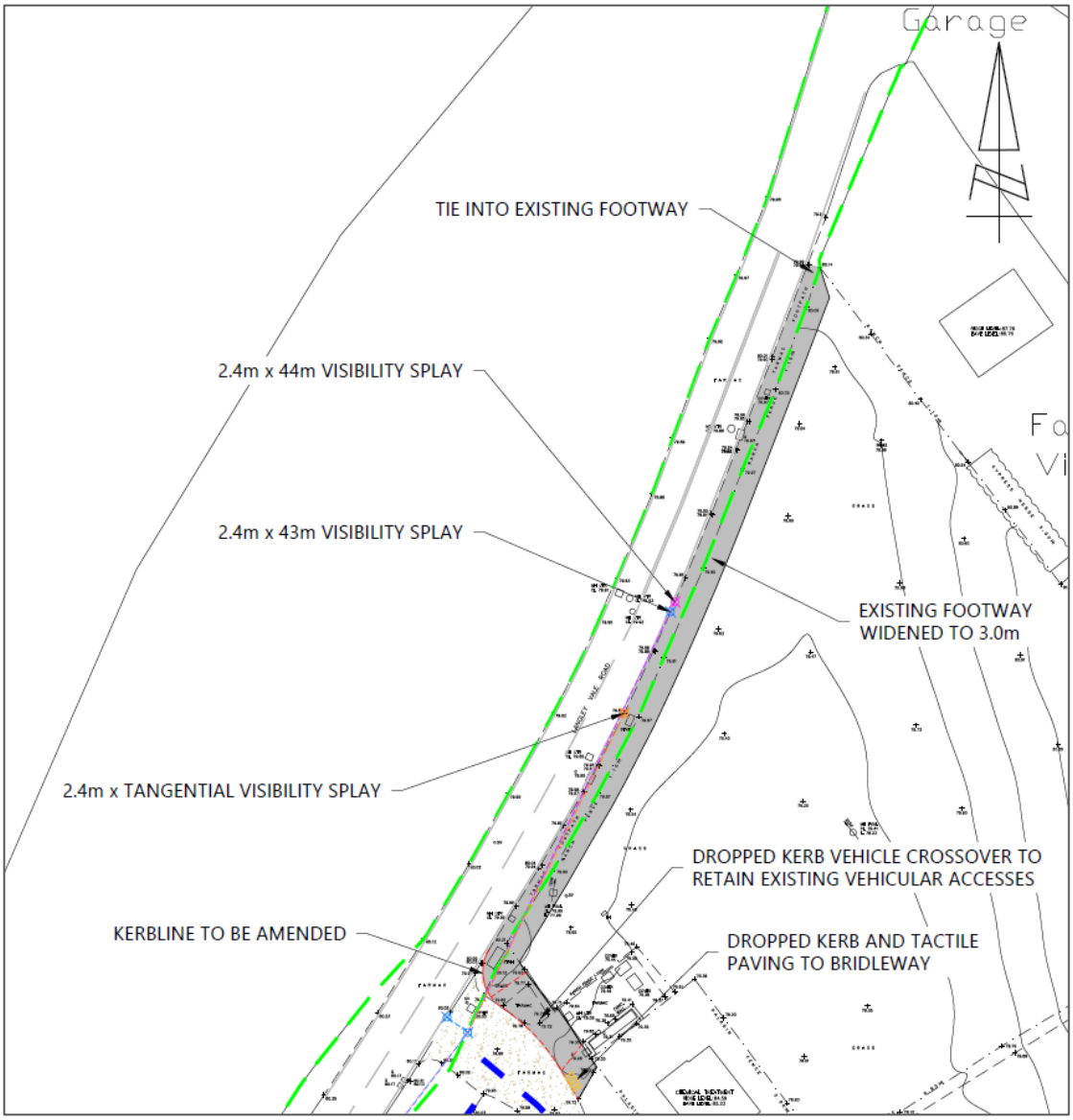
6.3.3 A further informal off-site connection will be provided to the southeast of the site, which will connect to the Warren via a network of well-tread existing paths. This route leads to the Warren Recreation Ground in addition to providing a link to The Vale Primary School.

6.3.4 The development proposal therefore provides a choice of routes in which walking and cycling trips can be made, whilst also promoting routes that are free from motorised vehicles.

Off-Site Active Travel Improvements

6.3.5 As part of the development proposals for Langley Bottom Farm (Planning Ref. 20/00475/FUL), the existing eastern footway along Langley Vale Road between Ebbisham Lane towards the Texaco Garage/Shop will be widened to 3.0m, with dropped kerbs and tactile paving provided for access to the Bridleway.

Image 6.2: Langley Vale Road Footway Improvements



6.4 Stage 1 Road Safety Audit

6.4.1 A Stage 1 Road Safety Audit (RSA) has been commissioned by an independent auditor to assess the site access proposals. The RSA did not raise any material issued with the proposed site access, with the minor comments raised to be dealt with during reserved matters.

6.4.2 The Stage 1 RSA and Designer's Response is contained within **Appendix D**.

6.5 Parking Provision

6.5.1 Parking provision is a reserved matter. At the appropriate stage the proposed level of parking will be provided in accordance with EEBC's Parking Standards for Residential Development Supplementary Planning Document (SPD) (December 2015). The relevant parking standards are provided in **Table 6.1**.

Table 6.1: EEBC Residential Car Parking Standards

No. of Bedrooms	Minimum Parking Standards
1- & 2-bedroom flats	1 space per unit
3+ bedroom flats	1.5 spaces per unit
1- & 2-bedroom houses	1 space per unit
3-bedroom houses	2 spaces per unit
4+bedroom houses	3 spaces per unit

Electric Vehicle Parking

6.5.2 Electric vehicle (EV) charging points will be provided in accordance with SCC's guidance, which itself, is based on *'The Building Regulation 2010 – Infrastructure for the charging of electric vehicles – Approved Document S – 2021 Edition'*. The guidance states that for residential development, *'one faster charger'* must be installed *'per unit'*.

6.5.3 Each dwelling will therefore be equipped with active EV charging provision, which will assist in the transition to cleaner fuels.

Cycle Parking

6.5.4 EEBC's Parking SPD states that cycle parking should be provided in accordance with SCC's 'Vehicular, electric vehicle and cycle parking guidance for new developments' online guidance. standards, cycle parking will be:

> *"provided for all dwellings and the location of the cycle parking should be convenient, accessible and fit for purpose for the lifetime of its use, and where possible, should be provided within the fabric of the building. Where cycle parking is provided within garages, such structures should be increased in size for both storage and the access/egress of vehicles."*

6.5.5 Should any dwellings be provided without a garden or garage, then cycle parking would be provided as follows:

- Flats or houses – 1 and 2 bedroom - 1 cycle space; and
- Flats or houses – 3+ bedroom - 2 cycle spaces.

6.5.6 In addition to the above, each dwelling will provide a e-Bike charging point and where communal cycle storage is provided, 5% of the total cycle parking will be capable accommodating adaptive and disabled cycles. This provision will encourage uptake of these cycles to promote active travel across the development for users of all abilities.

Car Club Provision

6.5.7 The development proposal will provide a car club space from the outset, reducing reliance on private car ownership whilst promoting car sharing opportunities. The vehicle associated with the car club would be an EV.

6.5.8 The car club will enable residents to have access to a car for those journeys that need them, without the need to own a car. This in turn can lower local car ownership levels and reduce the number of trips made by private car.

6.5.9 The car club will be operated by Enterprise, with residents provided with free membership for an initial period, as well as drive-time vouchers. This car club will also be made available to the future residents of the Langley Bottom Farm development to the south, in addition to existing residents within Langley Vale.

6.5.10 A utilisation model will be developed and agreed by both Enterprise and the developer, which would identify a trigger point at which a second car club space could be introduced. Additionally, annual utilisation data and reports would be produced and shared with the LHA.

6.6 Refuse, Delivery and Servicing Arrangements

6.6.1 Refuse collection and servicing is a reserved matter. At the appropriate stage this will be provided in line with the guidance detailed in EEBC's *'Guidance on the storage and collection of Household Waste'* (November 2018).

6.6.2 Swept path analysis demonstrates that a refuse vehicle can enter and exit the site safely.

SECTION 7 Sustainable Transport Strategy

7.1 The transport strategy for the development proposal aims to prioritise sustainable travel modes in place of private car trips, in order to achieve the vision set out in Section 3. This will be achieved through:

- Site & Access Design;
- Contribution towards Demand Responsive Transport (DRT) and off-site pedestrian improvements within Langley Vale;
- Active Travel; and
- A Framework Travel Plan (FTP).

7.1.1 Both the site & access design and FTP will provide measures aimed at achieving the three underpinning principles of the transport vision; Shift, Avoid, and Improve (**Image 3.2**).

7.2 Site & Access Design

7.2.1 The proposed development will adopt a 20mph speed limit throughout, with 2.0m wide footways and streetlighting provided throughout the internal layout.

7.2.2 The proposed site access will accommodate active travel modes, with a 3.0m shared foot/cycleway provided on the northern side, which will connecting with the existing infrastructure on Langley Vale Road. A 2.0m wide footway will also be provided on the southern side of the access road, connecting with existing footway on Langley Vale Road and the wider PRoW network.

7.2.3 A separate dedicated connection will also be provided at the southwest corner of the site, which will connect to Bridleway Route 33.

7.2.4 Safe, covered and accessible cycle parking will be provided in-line with SCC guidance, with each dwelling providing a charging point to accommodate e-Bikes. Where communal cycle storage is provided, 5% of the total number of communal spaces will be of a larger nature, to accommodate disabled and adaptive bikes. These measures will ensure that active travel is prioritised, and that cycling can be promoted across the development for users of all abilities.

7.2.5 Each dwelling will be provided with an active EV charging point, to promote the transition to cleaner fuels.

7.2.6 High-speed broadband connectivity will be provided for each home, enabling the opportunity for residents to work from home and engage in home delivery services where possible, minimising the potential for external trips.

7.3 Contribution Towards Demand Responsive Transport

7.3.1 SCC operate a demand responsive transport (DRT) service known as Surrey Connect. The service uses accessible minibuses, with journey bookings made on a first come first served basis. Users can book their journey based on 'arrive by' or 'leave at' times. The most relevant area in which Surrey Connect operates is the Central Surrey area, which covers the nearby Leatherhead and Ashtead, but does not currently operate in Epsom or Langley Vale.

7.3.2 To supplement existing bus service provision within the local area, it is proposed that a contribution is made towards the introduction of Surrey Connect within Langley Vale, which could act as a feeder service towards public transport hubs in the nearby Epsom.

7.4 Active Travel

7.4.1 The development proposal will provide off-site improvements in order to promote and prioritise active travel between the site and local facilities / amenities.

Walking and Cycling Audit

7.4.2 A Walking and Cycling Audit has been produced alongside this TA, which reviews five key routes connecting the site to local amenities. These routes comprised:

1. To the Texaco Garage/Shop via Langley Vale Road;
2. To The Vale Primary School via Langley Vale Road and Beaconsfield Road;
3. Towards Epsom Hospital via Langley Vale Road, Chalkpit Road and Headley Road;
4. To Tattenham Corner Railway Station via Bridleway 33 and 127 (National Cycle Coute (NCR) 22); and
5. Towards Epsom via Langley Vale Road and Chalk Lane.

7.4.3 The full report is contained within **Appendix A**, with a summary of recommendations provided below:

- Improve surfacing and crossing facilities (dropped kerbs and tactile paving) at the Texaco Garage/Shop to provide better connectivity to Grosvenor Road;
- Provide a crossing facility at the Grosvenor Road / Beaconsfield Road junction to reduce crossing distance over the mouth of the junction; and

- Provide additional dropped kerbs and tactile paving along Beaconsfield Road towards The Vale Primary School.

Equestrians

- Improve frequency and visibility of equestrian signage to make drivers more aware of equestrian presence, particularly along Langley Vale Road.

7.5 Framework Travel Plan

7.5.1 A Framework Travel Plan (FTP) has been submitted alongside this TA, which details the sustainable transport measures which will be promoted on-site to residents and visitors.

Aims

7.5.2 The overarching aim of the FTP is to influence travel behaviour change amongst future site users towards the use of sustainable modes of transport (particularly active and public transport).

7.5.3 The purpose of this FTP is to improve awareness of the opportunities for reducing car use (particularly single occupancy journeys) and promote the health and environmental benefits of sustainable transport modes.

7.5.4 This FTP will be promoted widely amongst future residents, not only to minimise the potential traffic impacts associated with the development proposal, but also to promote the health and environmental benefits of active travel and the social benefits of public transport and car sharing.

Objectives

7.5.5 This FTP aims to deliver the following objectives:

- To reduce the number of vehicle trips, including single occupancy vehicle trips, made by residents of the Proposed Development;
- To minimise the total distance travelled by residents and users of the Proposed Development through a reduction in journey lengths and frequency;
- To enable people to make informed travel choices;
- To Promote 'healthy travel' to and from the Proposed Development and increase the number of residents and visitors travelling by these modes;
- To improve the awareness and usage of alternative modes of transport to reduce reliance on the private car;

- To promote car sharing, walking, cycling and public transport as safe, efficient and affordable alternatives to the private car and to highlight the benefits of adopting sustainable travel modes;
- To sustain the FTP through sustainable and effective financial investment;
- To monitor the performance of the FTP against its targets by regularly collecting accurate and relevant travel information; and
- To reduce the impacts of car-based travel to and from the Proposed Development on the surrounding highway network, environment and local residents and businesses.

Outcomes

7.5.6 The successful delivery of the aforementioned objectives will result in the following outcomes:

- Opportunities for active and healthy travel with residents benefitting from improved health and fitness as well as social cohesion;
- Increased flexibility offered through a wider range of travel choices;
- Less congestion on local roads;
- Local environmental improvements from reduced congestion, pollution and noise;
- Individual benefits from social aspects of engaging in public transport modes and car sharing.

Targets

7.5.7 The overarching target of the FTP will be to realise a 10%-point reduction in private car use which appropriate reflects the vision for the development.

Action Plan

7.5.8 The FTP will detail the proposed travel plan measures in detail, with an Action Plan provided in **Table 7.1**.

Table 7.1: Action Plan

Action	Timescales	Responsibility
Appoint Travel Plan Coordinator	Prior to occupation	Developer
Provide TPC details to SCC	Following appointment of TPC	Developer / TPC
Construct pedestrian / cycle access and infrastructure and off-site works	During construction	Developer
Install cycle parking	During construction	Developer

Action	Timescales	Responsibility
Install car club spaces	During Construction	Developer
Install EV charging infrastructure	During construction	Developer
Provision of high-speed home broadband	During construction	Developer
Offer personalised travel planning sessions and discuss travel choices with residents	Upon first occupation and ongoing	TPC
Issue Travel Information Pack	Upon occupation	TPC
Infrastructure to support 'zero travel' options (e.g. home working and home delivery)	Upon occupation	TPC
Provide bus taster passes	Upon occupation	TPC
Encourage walking and cycling through promotional material and events	Upon occupation	TPC
Establish a community Facebook page	Upon occupation	TPC
Promote cycle training	Upon occupation	TPC
Promote car sharing	Upon occupation	TPC
Conduct baseline travel surveys	75% occupancy or six months from first occupation	TPC
Conduct subsequent travel surveys	Biennially on anniversary of baseline surveys for the lifetime of the FTP (five years)	TPC
Prepare annual monitoring report	Within three months of completion of travel surveys	TPC
Prepare action plan setting out future initiatives / measures subject to results	Action Plan set out in monitoring report	TPC / Developer

SECTION 8 Highway Impact Assessment

8.1 Overview

8.1.1 This section sets out the multimodal trip generation of the development proposal and the subsequent impact on the operation of the surrounding local highway network. This has been undertaken on a vision-led basis in line with the NPPF.

8.2 Proposed Trip Generation Methodology

Proposed Residential Trip Rates

8.2.1 To predict the level of multimodal trip generation associated with the development proposal, trips rates have been obtained from the industry-standard Trip Rate Information Computer System (TRICS) database.

8.2.2 Although the development proposal will deliver 50% affordable housing, the traffic impact assessment has considered that all 110 dwellings are privately owned, providing a robust assessment regarding traffic impacts.

8.2.3 The following parameters were entered into the TRICS database:

- **Land Use** - 03 – Residential / A – Houses Privately Owned;
- **Regions** - England (Excluding Greater London);
- **Location Type** - Edge of Town and Suburban Area;
- **No. of Units** - 90 – 160;
- **Survey Days** - Weekdays Only; and
- **Other** - Removal of Covid-19 Sites.

8.2.4 The full TRICS output is contained within **Appendix E**, with **Table 8.1** providing the multimodal trip rates.

Table 8.1: Residential Multimodal Trip Rates

Mode	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)		
	In	Out	Total	In	Out	Total
Vehicular Trip Rates	0.140	0.349	0.489	0.307	0.146	0.453
Pedestrian Trip Rates	0.044	0.114	0.158	0.046	0.036	0.082
Cyclist Trip Rates	0.006	0.016	0.022	0.006	0.003	0.009
Bus Passenger Trip Rates	0.003	0.028	0.031	0.012	0.001	0.013
Rail Passenger Trip Rates	0.000	0.008	0.008	0.004	0.000	0.004

Scenario Testing

8.2.5 The multimodal trip rates provided in **Table 8.1** have been carried forward for scenario testing based on a vision-led assessment and a sensitivity assessment, as outlined below:

- **Vision-Led Scenario** – Details that the vision (described in Section 3 and 7) has been implemented and has taken effect, with a 10% modal shift away from private car to sustainable travel modes, as per the FTP targets.
- **Sensitivity Scenario** – Provides an alternative scenario that doesn't allow for modal shift.

Vision-Led Scenario

8.2.6 The multimodal trip generation associated with the vision-led scenario is provided in **Table 8.2**. This sees a 10% reduction in vehicular trips with the residual trips assigned to sustainable modes based on the improvements delivered through the development proposal, in-line with the vision.

Table 8.2: Multimodal Trip Generation – Vision-Led Scenario (110 Homes)

Mode	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)		
	In	Out	Total	In	Out	Total
Vehicular Trips	14	35	48	30	14	45
Pedestrian Trips	6	14	20	7	6	13
Cyclist Trips	1	4	6	3	0	3
Bus Passengers	0	3	3	1	0	1
Rail Passengers	0	1	1	0	0	0
Total	**21**	**57**	**78**	**41**	**20**	**62**

8.2.7 In the vision-led scenario, there is predicted to be 48 two-way (14 in and 35 out) and 45 two-way (30 in and 14 out) vehicular trips in the morning and evening peak hour respectively. This translates to fewer than one two-way vehicular movement per minute in both peak hours, which is a negligible impact on the safety and operation of the local highway network.

Sensitivity Scenario

8.2.8 The multimodal trip generation associated with the sensitivity scenario is provided in **Table 8.3**.

Table 8.3: Multimodal Trip Generation – Sensitivity Scenario (110 Homes)

Mode	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)		
	In	Out	Total	In	Out	Total
Vehicular Trips	15	38	53	34	16	50
Pedestrian Trips	5	13	18	5	4	9
Cyclist Trips	1	2	3	1	0	1
Bus Passengers	0	3	3	1	0	1
Rail Passengers	0	1	1	0	0	0
Total	**21**	**57**	**78**	**41**	**20**	**61**

8.2.9 Regarding vehicular trips, there is predicted to be 52 (15 in and 38 out) and 50 (34 in and 16 out) two-way movements in the AM and PM peak hour, respectively. This translates to approximately one two-way vehicular movement per minute in both peak hours, which is a negligible impact on the safety and operation of the local highway network.

8.3 Traffic Distribution and Assignment

8.3.1 The vehicular trip generation during the morning and evening peak hours has been distributed using the following methods:

- For commuting and business trips, Journey to Work (JtW) within the 2011 Census dataset has been used. This identifies the location of existing residential employment locations and so demonstrates accurate commuting patterns. The 2011 Census data is more appropriate than the 2021 Census, which was subject to the impacts of Covid-19; and
- For other journey purpose trips, a P/T^2 gravity model has been undertaken using the population of key urban (from the 2011 Census) within a 45-minute drive from the site.

8.3.2 Data within the National Travel Survey (NTS) has been used to determine the proportion of trips made by journey purpose. This information is provided within Table 8.4.

Table 8.4: Proportion of Peak Hour Trips by Journey Purpose (Car Driver Only)

Trip Purpose	AM Peak Hour (08:00-09:00)	PM Peak Hour (17:00-18:00)
Commuting / Business	36.8%	43.2%
All Other Journey Purposes	63.2%	56.8%
Total	**100%**	**100%**

Source: Car driver trip start time by trip purpose (Monday to Friday only): Great Britain, 2014/18, National Travel Survey, DfT, 2019

8.3.3 For this assessment, 45% of trips occurring during the peak hours have been assigned as commuting / business trips, with the remaining 55% assigned to other purposes.

8.3.4 The two datasets have been combined to present distribution parameters used to inform the development trip assignment. This is provided in **Table 8.5**.

Table 8.5: Residential Traffic Distribution Summary

Place of Work	Work Trips (45%)	Non-Work Trips (55%)	Total (100%)
Epsom	9.7%	12.6%	22.4%
Langley Vale	-	12.9%	12.9%
Banstead	3.0%	6.3%	9.3%
Leatherhead	5.7%	3.5%	9.3%
Greater London	8.6%	-	8.6%
Ewell	2.3%	5.8%	8.1%
London	5.0%	-	5.0%
Dorking	1.1%	1.6%	2.7%
Redhill	0.6%	1.9%	2.4%
Guilford	1.4%	0.8%	2.2%
Woking	0.6%	0.9%	1.4%
Molesey	0.2%	1.1%	1.3%
Horley	0.1%	1.2%	1.3%
Other - South	1.2%	-	1.2%
Cobham	0.6%	0.5%	1.1%
Walton-on-Thames	0.5%	0.6%	1.1%
Reigate	0.4%	0.7%	1.1%
Other - West	1.1%	-	1.1%
Caterham	0.1%	0.9%	1.0%
Thames Ditton	0.2%	0.6%	0.9%
Esher	0.5%	0.3%	0.8%
Addlestone	0.3%	0.4%	0.7%
Chertsey	0.2%	0.4%	0.6%
Other - North	0.5%	-	0.5%
Other - East	0.5%	-	0.5%
Staines-upon-Thames	0.1%	0.4%	0.5%

Place of Work	Work Trips (45%)	Non-Work Trips (55%)	Total (100%)
Oxted	0.1%	0.3%	0.5%
Sunbury-on-Thames	0.1%	0.4%	0.4%
Egham	0.3%	0.2%	0.4%
Shepperton	0.0%	0.3%	0.4%
Ashford	0.1%	0.3%	0.3%
Sevenoaks	0.1%	0.2%	0.2%
Total	**45.0%**	**55.0%**	**100.0%**

8.3.5 The 'directions' facilities function within Google Maps has been utilised to assign traffic to these destinations using the most appropriate route (a journey start time of 08:00 was used to reflect route choice during peak traffic conditions). This was then refined based on knowledge of the local highway network and a review of the collected traffic data summarised at Section 5.

8.3.6 Based on the results of this journey routing assessment, the following northbound / southbound distribution would arise at the proposed site access:

- 59% Northbound; and
- 41% Southbound.

8.3.7 The traffic distribution is shown on **TFD5.**

8.3.8 The vehicular trips for all assessment scenarios have been assigned to the local highway network based on the distribution detailed on TFD5 This is shown on the following figures:

- **TFD6 – Development Assignment (Vision-Led) AM Peak Hour**
- **TFD7 – Development Assignment (Vision-Led) PM Peak Hour**
- **TFD8 – Development Assignment (Sensitivity) AM Peak Hour**
- **TFD9 – Development Assignment (Sensitivity) PM Peak Hour**

8.4 Impact Assessment

8.4.1 The traffic impact assessment has considered a set of baseline and future scenarios, both with and without the development proposal. The assessment year which will form the baseline for the traffic assessment are 2025 and 2030. The 2025 year represents the application and the year in which the traffic surveys were undertaken, while 2030 represents the application year plus five years.

8.4.2 The 2030 future baseline has been established using growth factors obtained from the Trip End Model Presentation Programme (TEMPro), using the following parameters:

- **Scenario** - Core;
- **Growth Period** - 2025 to 2030;
- **Location** - Epsom 009;
- **Mode** - Car Driver; and
- **Time Period** - Morning Period and Evening Period.

8.4.3 **Table 8.6** provides the TEMPro growth factors for the 2030 future baseline scenario for the morning and evening peak hours.

Table 8.6: TEMPro Growth Factors

2025 - 2030	
AM Peak Hour (08:00-09:00)	**PM Peak Hour (17:00-18:00)**
1.0439	1.0464

8.4.4 The application of TEMPro growth rates accounts for forthcoming committed development within the assessment, in addition to general background traffic growth.

8.4.5 Given the recent permission granted at the Langley Bottom Farm appeal (Appeal Ref. APP/P3610/W/21/3280881) for the construction of 20 residential units, this has been included as a committed development within the highway impact assessment.

8.4.6 An additional manual review of EEBC's planning portal has been undertaken, which confirms that no significant further committed development in the local area is coming forward which should be separately or specifically accounted for.

8.4.7 A summary of the assessment scenarios is provided below.

Baseline Scenarios

- 2025 Baseline (year of application and traffic surveys); and
- 2030 Without Development (applications year plus 5 years).

Development Scenario

- 2030 With Development (Vision-Led)
- 2030 With Development (Sensitivity)

8.5 Link Impact Assessment

Baseline Scenarios

8.5.1 **Table 8.7** provides the traffic flows on Langley Vale Road for the 2025 baseline and 2030 future baseline scenarios.

Table 8.7: Baseline and Future Baseline (Morning and Evening Peak Hour)

Link	Direction	2025 Baseline		2030 Baseline	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Langley Vale Road	Northbound	730	819	762	857
	Southbound	600	514	626	538
	Two-Way	**1,330**	**1,333**	**1,388**	**1,395**

8.5.2 Turning count movements for the local highway network for the 2030 future baseline scenario are provided on **TFD3** and **TFD4** for the AM and PM peak hours respectively.

Development Scenario

8.5.3 **Table 8.8** presents the with and without development traffic flows (vision-led) for the 2030 future baseline scenario.

Vision-Led Scenario

Table 8.8: Link Impact Assessment – 2030 Baseline and With Development (Vision-Led)

Link	Direction	2030 Baseline		2030 Baseline plus Development		Increase	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Langley Vale Road	Northbound	762	857	786	878	+24	+21
	Southbound	626	538	648	562	+22	+24
	Two-Way	**1,388**	**1,395**	**1,434**	**1,440**	**+46**	**+45**

8.5.4 The link impact assessment identifies that the development proposal will result in a modest increase in traffic levels on the identified links. These increases equate to fewer than one additional two-way vehicular movement per minute in both the morning and evening peak hour, which is a negligible impact in real terms and will be generally imperceptible.

8.5.5 Turning count movements for the 2030 with Development (Vision-Led) scenario are provided on **TFD10** and **TFD11** for the AM and PM peak hours respectively.

Sensitivity Scenario

8.5.6 **Table 8.9** presents the with and without development traffic flows (sensitivity) for the 2030 future baseline scenario.

Table 8.9: Link Impact Assessment – 2030 Baseline and With Development (Sensitivity)

Link	Direction	2030 Baseline		2030 Baseline plus Development		Increase	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Langley Vale Road	Northbound	762	857	790	887	+28	+30
	Southbound	626	538	651	574	+25	+36
	Two-Way	**1,388**	**1,506**	**1,441**	**1,461**	**+53**	**+66**

8.5.7 The link impact assessment identifies that the development proposal will result in a modest increase in traffic levels on the identified links. These increases equate to fewer than one additional two-way vehicular movement per minute in both the morning and evening peak hour, which is a negligible impact in real terms and will be generally imperceptible.

8.5.8 Turning count movements for the 2030 with Development (Sensitivity) scenario are provided on **TFD12** and **TFD13** for the AM and PM peak hours respectively.

8.6 Junction Capacity Assessment

Scope of Junction Assessment

8.6.1 The following junctions have been included within the capacity assessment:

- Site Access / Langley Vale Road; and
- Langley Vale Road / B290 Ashley Road.

Assessment Scenarios

8.6.2 The following scenarios have been included within the junction capacity assessment:

- 2025 Baseline;
- 2030 without Development
- 2030 with Committed Development plus Development (Vision-Led)
- 2030 with Committed Development plus Development (Sensitivity)

Assessment Results

8.6.3 The results of the junction capacity assessment are provided below, with the full junction modelling outputs contained within **Appendix F**.

Site Access / Langley Vale Road

8.6.4 The Site Access / Langley Vale Road junction has been modelled using the Priority Intersection Capacity and Delay (PICADY) module within the industry-standard Junctions 11 modelling software package.

8.6.5 The junction capacity assessment has included the scenarios set out in Paragraph 8.6.2 for the morning and evening peak hours and includes both the vision-led and sensitivity scenarios.

8.6.6 The assessment results for the vision-led and sensitivity scenario are summarised in **Table 8.10**.

Table 8.10: Site Access / Langley Vale Road Junction Assessment Results

Arm	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)		
	RFC	Queue (Veh)	Delay (s/veh)	RFC	Queue (Veh)	Delay (s/veh)
2030 Future Baseline with Committed Development plus Development (Vision-Led Scenario)						
Site Access	0.23	0.3	20.62	0.23	0.3	21.90
Langley Vale Road	0.06	0.1	4.48	0.22	0.8	4.46
2030 Future Baseline with Committed Development plus Development (Sensitivity Scenario)						
Site Access	0.26	0.4	21.59	0.27	0.4	23.66
Langley Vale Road	0.06	0.1	4.47	0.37	2.3	5.58

8.6.7 **Tabel 8.10** demonstrates that the proposed site access junction operates well within capacity for both the vision-led and sensitivity scenarios.

Langley Vale Road / B290 Ashley Road

8.6.8 The Langley Vale Road / B290 Ashley Road is a signalised junctions and has been modelled using the LinSig. Signal specification data and an as built junction drawing were obtained from SCC to ensure a robust and accurate modelling assessment. This information is contained within **Appendix F**. A summary of the LinSig modelling results is provided in **Table 8.11**.

Table 8.11: Langley Vale Road / B290 Ashley Road – LinSig Modelling Results

Arm	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)		
	DoS (%)	Delay S/PCU	MMQ (PCU)	DoS (%)	Delay S/PCU	MMQ (PCU)
2025 Baseline						
Langley Vale Road (Right)	76.2%	26.0	14.1	77.4%	22.8	14.6
B290 Ashely Road (North)	51.4%	30.9	3.4	64.7%	21.2	6.1
B290 Ashley Road (South)	75.6%	21.6	8.1	74.9%	31.0	5.8
Langley Vale Road (Left)	16.5%	7.4	1.8	9.2%	5.1	0.8
2030 Future Baseline						
Langley Vale Road (Right)	79.6%	27.8	15.8	81.0%	24.8	16.3
B290 Ashely Road (North)	53.9%	31.5	3.6	67.7%	31.5	6.5
B290 Ashley Road (South)	78.9%	22.8	8.7	78.3%	22.6	6.3
Langley Vale Road (Left)	17.2%	7.5	1.9	9.6%	5.1	0.9
2030 Future Baseline with Committed Development plus Development (Vision-Led Scenario)						
Langley Vale Road (Right)	80.5%	28.4	15.8	81.4%	25.0	16.4
B290 Ashely Road (North)	55.2%	31.9	3.6	70.7%	31.9	6.5
B290 Ashley Road (South)	78.9%	22.7	8.7	78.3%	22.3	6.3
Langley Vale Road (Left)	17.7%	7.5	1.9	9.8%	5.1	0.9
2030 Future Baseline with Committed Development plus Development (Sensitivity Scenario)						
Langley Vale Road (Right)	80.6%	28.5	15.9	81.4%	25.0	16.4
B290 Ashely Road (North)	55.8%	32.1	3.6	71.3%	31.9	6.5
B290 Ashley Road (South)	78.9%	22.7	8.7	78.3%	22.3	6.3
Langley Vale Road (Left)	17.8%	7.5	1.9	9.9%	5.1	0.9

8.6.9 **Table 8.11** identifies that across all arms in all scenarios, the junction operates within capacity, with negligible increases in DoS, delay and queuing with the addition of development traffic, both in the vision-led and sensitivity scenario.

8.6.10 The junction in its existing configuration can therefore accommodate the addition of traffic generated by the development proposal, with no physical works or signal optimisation required.

SECTION 9 Summary and Conclusions

9.1 Summary

9.1.1 This Transport Assessment (TA) has been prepared on behalf of Fairfax Properties (Fairfax) in relation to the development proposal at the Land Parcel to the North of Langley Bottom Farm, located within Langley Vale, Surrey (the 'site').

9.1.2 The development description seeks:

> ***"Outline planning application for up to 110 dwellings (including affordable homes) with all matters reserved apart from access from Langley Vale Road."***

9.1.3 The site falls within the administrative boundary of Epsom and Ewell Borough Council (EEBC) who are the Local Planning Authority (LPA) with Surrey County Council (SCC) as the Local Highway Authority (LHA).

9.2 Conclusions

9.2.1 This TA has assessed the development proposal against the key transport 'tests' set out in paragraph 115 of the NPPF, as set out below.

Will the opportunities for sustainable travel be prioritised?

9.2.2 The development proposal is located immediately south of Langley Vale, and benefits from excellent connectivity to the surrounding PRoW network, to which the site will provide direct connections. There are several railway stations that can be accessed within a reasonable cycle distance. This TA has also identified that a number of local amenities and facilities that would serve the everyday needs of future site users can be accessed within comfortable and reasonable walking and cycling distances.

9.2.3 Additionally, the development proposal will prioritise sustainable travel through:

- Site design, e.g. providing direct connectivity to the surrounding PRoW network, adopting a 20mph design speed internally, providing a multimodal site access, introduction of a car club, and the provision of policy compliant cycle parking and EV charging provision;
- Contribution towards off-site pedestrian improvements in Langley Vale, which connect the site to key local amenities and facilities; and

- Contribution towards the Surrey Connect DRT service to provide future site users and existing Langley Vale residents with an on-demand public transport service which connects with Epsom and other destinations within the existing network.

9.2.4 The development proposal therefore seeks to prioritise sustainable travel through a variety of measures which aim to improve local connectivity and increase the appeal of sustainable travel modes for future site users and existing Langley Vale residents.

Will safe and suitable access be provided to the site for all modes?

9.2.5 The access arrangements will consist of:

- A vehicular access point which has been designed in accordance with national and local design standards, with visibility splay requirements informed through up-to-date traffic surveys.
- Segregated pedestrian and cycle access in the form of a 3.0m wide foot/cycleway and a 2.0m footway on the northern and southern side of the access road, respectively. These would both connect into the existing infrastructure on Langley Vale Road.
- Direct connectivity into the PRoW network and National Cycle Network, providing immediate access onto an active travel network which is free from motorised vehicles.
- The access arrangement has been subject to an independent Stage 1 Road Safety Audit, which raised no significant issues regarding highway safety. Any comments that were raised have been appropriately addressed.

9.2.6 Safe and suitable access will be provided.

Will the traffic impacts be acceptable?

9.2.7 This TA has demonstrated that the development proposal will generate fewer than one two-way vehicular movement per minute in both the morning and evening peak hours, which is a negligible impact on the safety and operation of the local highway network.

9.2.8 Detailed junction capacity modelling has been undertaken using industry-standard software packages, demonstrating that all assessed junctions operate within capacity in the baseline and future baseline scenarios, both with and without the development proposal. This confirms that no further assessment or mitigation is required.

9.2.9 The traffic impacts will be acceptable.

9.2.10 In conclusion, this TA has demonstrated that the development proposal successfully meets all of the key transport 'tests' set out in paragraph 115 of the NPPF, with no unacceptable impact on highway safety and the traffic impacts falling well below 'severe'. As such, planning permission should not be withheld on transport or highways grounds.

FIGURES

i-Transport

Langley Bottom Farm

Figure 1.1: Site Location

ITB200788

Key

Site Location

B290 Ashley Road

B289 Downs Road

Grandstand Road

Langley Vale Road

B290 Tattenham Corner Road

Langley Vale Road

Downs Road

Farm Lane

Headley Road

Barons Hurst

Chalk Lane

Butts Alley

B284

Epsom Downs Golf Club

B289

Old Barn Road

Walled Garden

Farm Lane

The Ridge

RAC Woodcote Park Golf Club

Ashtead Park

City of London Freemen's School

Tall Timbers

Maze

Sports Hall

Philp House

Main House

Astro

Kemp House

Walbrook

Park Lane

Oaken Coppice

Langley Vale Road

B290

Downs House

Epsom Downs Racecourse helipads

Epsom Downs

Langley Vale

Rosebery Road

Grosvern Road

The Vale Primary School

Langley Bottom

Pit Road

Easterly footpath blocked

Trial Course

Shepherds Walk

Headley Road

Slane Street

Walton Rd

Sheep Walk

Nohome Farm

Downs View

Ebbisham Lane

Downs Way Close

Tattenham Corner

The Mound

B2221

The Cooperative Food

Shawley

Downs Wood

Walkfield Drive

Tattenham Grove

Rowan Me

Tadw Med Cen

0 0.7 1.4 km

i-Transport | Langley Bottom Farm

Figure 2.2: Public Rights of Way and Cycle Route Plan | ITB200788

Key
- Site Location
- Tattenham Corner
- Epsom Cycle Link
- Signed Advisory Route
- Cycle Lane
- National Cycle Network
- Bridleway
- Footpath

B290 Ashley Road

B290 Tattenham Corner Road

Langley Vale Road

Farm Lane

Headley Road

F153 F32 F48 F49 F50 F51 B146 B33 B113 B115 B114 B119 B127 B66 B65 B138 F69 F514 B127

Epsom Cemetery
Epsom Downs Golf Club
RAC Woodcote Park Golf Club
Walled Garden
Ashtead Park Garden Centre
Ashtead Park
St Giles' CofE (Aided) Infant School
City of London Freemen's School
St Giles
Langley Vale
The Vale Primary School
Langley Bottom Farm
Trial Course
Epsom Downs
Tattenham Corner
Tattenham Corner
Shawley Community Primary Academy
Epsom Downs Community School & Early Years Centres
Downs View Wood
Langley Vale Centenary Wood
Addlestead Wood
Little Hurst Wood
Round Wood
Epsom Lane North
Grandstand Road
Rosebery Road
Grosvenor Road
Chapel Way
Preston Lane
Preston Manor Road
Shelvers Way
Kingswood Road
Ashurst Road
Epsom Lane South
Tadorne Road
Downs Way
Ebbisham Lane
Merland Rise
Chetwode Road
Marldea Way
Rose Bushes
Ruden Way
Downs Wood
Garthchill Road
North View Crescent
Woodlands Way
Hambledon Hill
Oak Hill
World's End
Ralliwood Road
Park Lane
Dene Road
Glory Lane
The Ridge
Slang Street
M25
B284
B289
B290
B2221

0 0.95 1.9 km

i-Transport | Langley Bottom Farm (Field)

Figure 4.2: Cycle Routes | ITB200788

Key

- Site Location
- Tattenham Corner
- Epsom Downs

Public Rights of Way

- Bridleway
- Footpath

Cycle Routes

- Busy Road
  Route signed for Cyclists. May be on a Busy Road
- Off Road Easy
  Off-road Routes: reasonably comfortable to cycle any time of year, without need for a mountain bike
- Off Road Medium
  Off Road routes: where it is comfortable to cycle in fine summer weather, but needs mountain bike at other times
- Off Road Hard
  Off Road routes: purpose built off-road bike recommended at any time of year
- PedLink
  Route for cyclists separate from traffic. Usually shared with pedestrians

0 0.75 1.5 km

i-Transport

Langley Bottom Farm

Figure 2.1: Local Amenities Plan | ITB200788

Key

- Site Location
- Tattenham Corner
- Epsom Downs
- 1 Langley Vale Village Hall
- 2 Langley Vale Centenary Wood
- 3 Epsom Downs Racecourse
- 4 Derby Arms Public House
- 5 Tattenhams Library
- 6 Woodcote Park Golf Club
- 7 Downswood Lawn Tennis Club
- 8 Epsom Golf Course
- 9 Tadworth Leisure and Community Centre

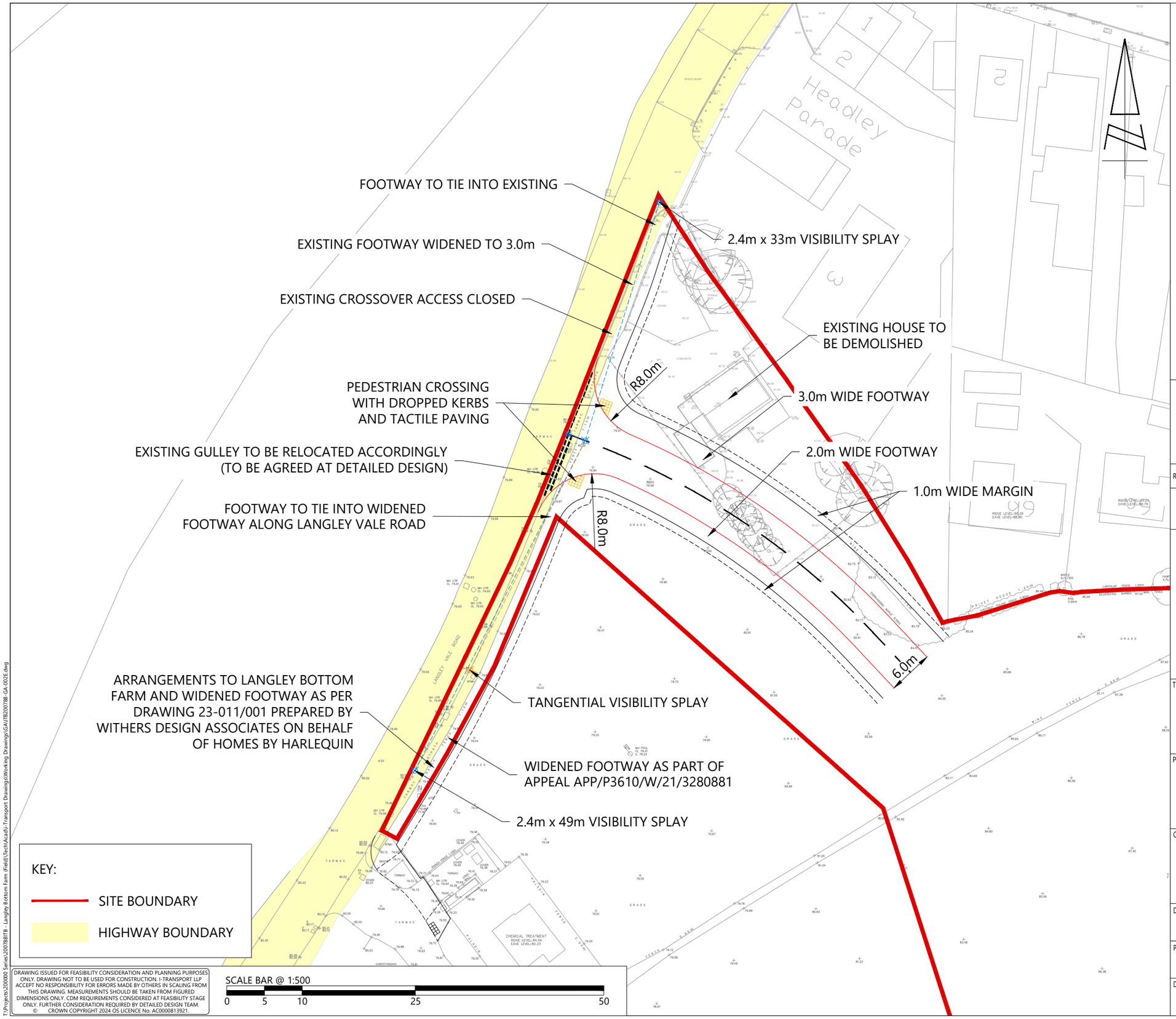
- 1 Paydnes Pharmacy
- 2 Tattenham Health Centre
- 3 Buckley Pharmacy
- 4 Tudor House Dental Practice
- 1 Texaco Garage
- 2 Post Office
- 3 Co-op Local
- 1 The Vale Primary School
- 2 City of London Freemen's School
- 3 St Giles C of E Infant School
- 4 Epsom Downs Primary School

Catchments

- 0m-800m
- 800m-1,600m
- 1,600m-3,200m

0 0.95 1.9 km

DRAWINGS



REV	DATE	BY	DESCRIPTION	CHK	APD
E	10.07.25	JD	REDLINE BOUNDARY UPDATED	MK	DF
D	14.04.25	JD	ANNOTATION ADDED	DF	DF
C	13.03.25	MM	VISIBILITY SPLAYS UPDATED	MK	DF
B	19.02.25	JD	ACCESS ARRANGEMENT AMENDED	DF	DF
A	17.01.25	JD	ANNOTATIONS AMENDED	DF	DF

STATUS: FOR INFORMATION

i-Transport

The Square, Basing View,
Basingstoke, Hampshire, RG21 4EB

Tel: 01256 898366

www.i-transport.co.uk

TITLE: PROPOSED SITE ACCESS ARRANGEMENT

PROJECT: LANGLEY BOTTOM FARM (FIELD)

CLIENT: FAIRFAX PROPERTIES

DRAWN:	CHECKED:	APPROVED:
JD	DF	DF
PROJECT No:	SCALE @ A3:	DATE:
ITB200788	1:500	15.01.25

DRAWING No: ITB200788-GA-002 REV: E

T:\Projects\200000 Series\200788\TB - Langley Bottom Farm (Field)\Tech\Acad\i-Transport Drawings\Working Drawings\GA\ITB200788-GA-002E.dwg

APPENDIX A. Walking and Cycling Audit Report

i-Transport LLP
The Square, Basing View, Basingstoke, RG21 4EB

Tel: 01256 898 366

Langley Bottom Farm: Walking and Cycling Review

Ref: PH/MK/ITB200788-003a
Date: 11 July 2025

SECTION 1 Introduction

1.1 Overview

1.1.1 Fairfax Properties (Fairfax) are proposing to develop Land Parcel to the North of Langley Bottom Farm ('the site') to provide up to 110 new homes.

1.1.2 The site is located at Langley Bottom Farm, Langley Vale, which falls within the borough of Epsom in Surrey. It lies approximately 3.5km south of Epsom Town Centre and approximately 25km southwest of Central London. Epsom Down Racecourse is situated approximately 1.5km north of the site, with the town of Leatherhead located 4.5km to the east.

1.2 Scope and Report Structure

1.2.1 This report provides a review of the existing walking and cycling facilities in the vicinity of the site and sets out any identified improvements, i.e. because any works/proposal will need to meet the relevant Community Infrastructure Levy (CIL) tests including necessity and being proportionate to the scale of the proposed development.

SECTION 2 Walking and Cycling Routes Overview

2.1.1 The routes have been selected based on their potential to connect the site and wider amenities and facilities which would serve everyday needs of future site users. On this basis, the following routes have been assessed:

1 To the Texaco garage via Langley Vale Road;

2 To Langley Vale Primary School via Langley Vale Road and Beaconsfield Road;

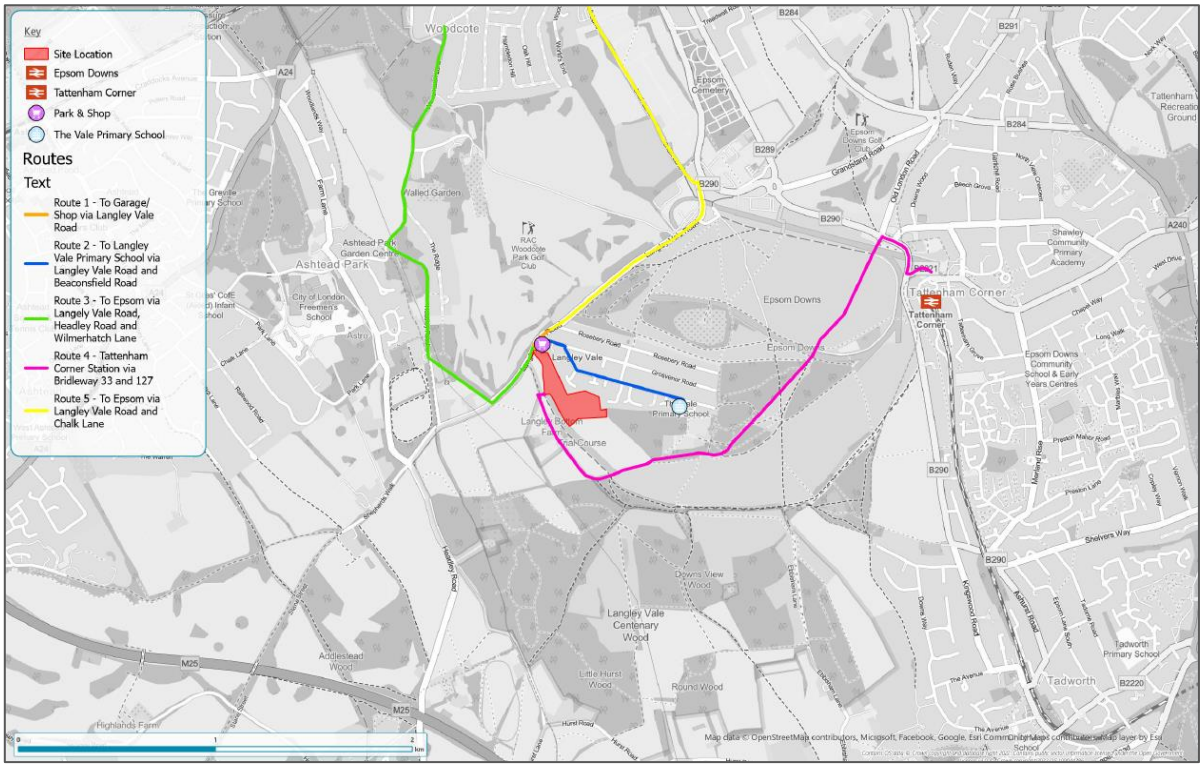
3 Towards Epsom Hospital via Langley Vale Road, Chalkpit Road and Headley Road;

4 To Tattenham Corner Railway Station via Bridleway 33 and 127 (National Cycle Route (NCR) 22); and

5 Towards Epsom via Langley Vale Road and Chalk Lane.

2.1.2 The location of these routes in respect of the Site are illustrated in **Image 2.1**. A full plan is provided at **Figure 2.1**.

Image 2.1: Walking and Cycling Audit Routes



SECTION 3 Review Criteria

3.1.1 The assessment of each of the routes has bene informed by two separate site visits, undertaken on 16 January 2025 and 12 June 2025, allowing for a thorough review of conditions during different times of the year.

3.1.2 Each route has been assessed on a red, amber or green (RAG) basis, which denotes:

- **Red** - Poor condition (improvements are likely to be needed);
- **Amber** - Reasonable conditions (improvements could be considered); and
- **Green** - Good conditions (no improvements required).

3.1.3 The RAG score has been assessed against the following criteria:

1. **Surfacing** – The quality of the surfacing on the route and its suitability for accommodating active travel users of all abilities and catering for those with visual and mobility impairments.
2. **Directness** – How straight is the link and how legible is it, e.g. are there way finding points as your traverse along the route.
3. **Environment** – How attractive is the environment in terms of architecture, vehicle volumes and speeds, surfacing, viewpoints etc? On links with higher traffic flows / speeds, the provision of wide footways or segregation from the carriageway by a verge enables a more positive score.
4. **Gradient** – How steep is the link? Whilst none of the routes reviewed have insurmountable gradients for most users, there are a few that will not be readily accessible for less mobile people.
5. **Lighting** – is the route well lit?
6. **Surveillance** – is the route well overlooked by adjacent buildings and/or other link users (e.g. vehicles)?
7. **Width** – How wide the provision for pedestrians on the link? Again, the local context for the link is important – a quiet lane will have good width for pedestrians, as will a wide footway in a built-up. For all links, it is possible for pedestrians to pass each other (or walk side by side) without stepping into the path of vehicles?

3.1.4 These criteria reflect the guidance set out in the following Chartered Institution of Highways and Transportation (CIHT) guidance:

- Guidelines for Providing Journeys on Foot (2000);
- Designing for Walking (2015); and
- Planning for Walking (2015).

SECTION 4 Route 1 – To the Texaco Garage/Shop via Langley Vale Road

4.1.1 Route 1 comprises the link between the site towards the Texaco Garage/Shop on Langley Vale Road, as shown via the orange line in **Image 2.1**.

Image 4.1: Route 4 Photos

Table 4.1: Review of Route 1

Review Factor	RAG Score	Comments
Surfacing		The initial part of the footway between the proposed site access location and the Texaco Garage is of moderate quality. The quality of surfacing worsens at the dropped kerbs near the access and egress of the garage. It should be noted that a section of this footway will be upgraded as part of the development proposal.
Directness		The Texaco Garage can be accessed within a 450m walk from the centre of the Site with the internal access road connecting onto Langley Vale Road in close proximity to the garage.
Environment		Langley Vale Road is a busy road but the presence of traffic calming in the vicinity means that vehicular speeds are not excessive, with 85th percentile speeds lower than 30mph. The existing footway is relatively narrow meaning that pedestrians could feel slightly uneasy.
Gradient		The route does not experience steep gradient changes in the vicinity of the Site.
Lighting		A streetlight is present on the northern side of Langley Vale Road between the proposed site access and the garage. The garage itself also provides lighting within the forecourt.
Surveillance		Langley Vale Road is a popular road and the short distance to the garage from the Site is unlikely to make users feel unsafe.
Width		The existing footway on the southern side of Langley Vale Road is narrow, circa 1.0m wide. As discussed above, the width of the footway will be increased to 3.0m as part of the development proposal.

SECTION 5 Route 2 – To Langley Vale Primary School via Langley Vale Road, Grosvenor Road, and Beaconsfield Road

5.1.1 Route 2 comprises the link between the site and the Vale Primary School, via Langley Vale Road, Grosvenor Road, and Beaconsfield Road.

Image 5.1: Route 2 Photos

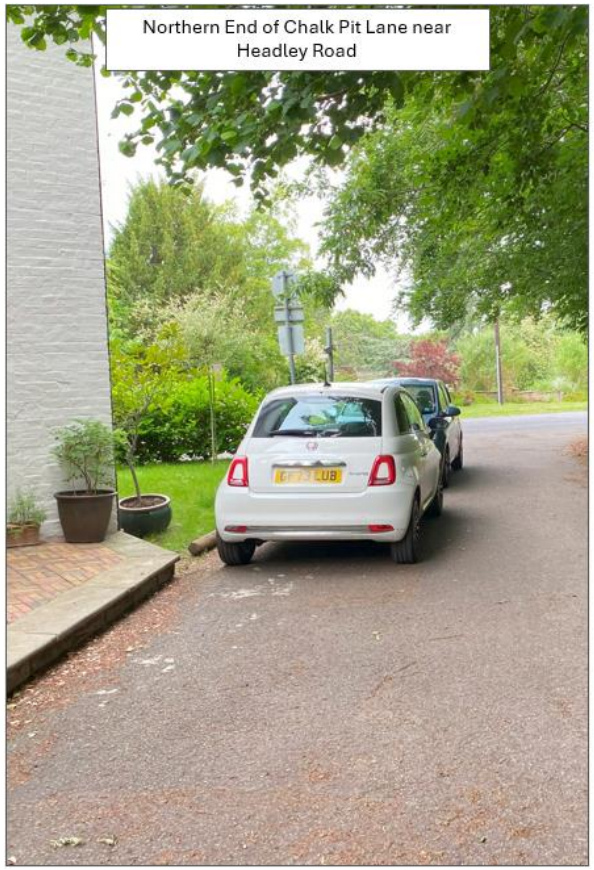
Table 5.1: Review of Route 2

Review Factor	RAG Score	Comments
Surfacing		Generally, the surfacing is of a good quality along the majority of this route. There are however some locations where resurfacing would be required to ensure consistency ad safe use, particularly given that this route would be well utilised by schoolkids.
Directness		The setting of Langley Vale means that users would have to travel via Langley Vale Road before accessing Grosvenor Road and Beaconsfield Road.
Environment		A short section of the route is along Langley Vale Road, with the majority comprising Grosvenor Road and Beaconsfield Road. The nature of these roads means that traffic volumes and vehicular speeds are low, with a heavy residential presence providing active frontages and good natural surveillance.
Gradient		There is an incline present on Grosvenor Road which gradually flattens along Beaconsfield Road.
Lighting		Streetlighting is present on Langley Vale Road, Grosvenor Road, and Beaconsfield Road.
Surveillance		The residential nature of Langley Vale means that this route passes active frontages with good natural surveillance.
Width		The footway width Langley Vale Road will be widened as part of the development proposals. Footway widths along Grosvenor Road and Beaconsfield Road are approximately 1.5m-2.0m wide.

SECTION 6 Route 3 – Towards Epsom Hospital via Langley Vale Road, Chalk Pit Road, Headley Road, and Wilmerhatch Lane

6.1.1 Route 3 comprises the link between the site and towards Epsom, via Langley Vale Road, Chalk Pit Lane, Headley Road, and Wilmerhatch Lane.

Image 6.1: Route 3 Photos



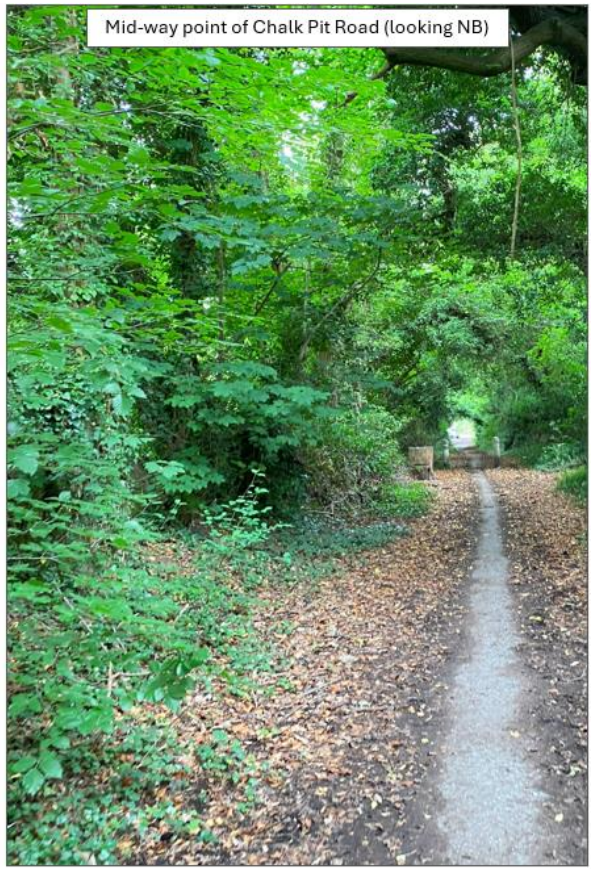


Image 6.2: Route 3 Photos (Continued)

Table 6.1: Review of Route 3

Review Factor	RAG Score	Comments
Surfacing		The entire route is generally well surface although there are some areas where localised resurfacing is advisable.
Directness		The routes provide a relatively direct northbound link towards Epsom.
Environment		The section on Langley Vale Road and Chalk Pit Lane is segregated from motor vehicles, although Headley Road and Wilmerhatch Lane accommodate moderate levels of traffic. No footways are present on Headley Road but are present on Wilmerhatch Lane, meaning this route would be more appropriate for cyclists.
Gradient		A slight, gradual incline is present on the section of Langley Vale Road and Chalk Pit Lane. Headley Road and Wilmerhatch Lane are generally level, with some small areas of incline and decline.
Lighting		No streetlighting is present on the section of Langley Vale Road, Chalk Pit Lane, or Headley Road. Streetlighting becomes present once on Wilmerhatch Lane.
Surveillance		There is an absence of natural surveillance along the section of Langley Vale Road and Chalk Pit Lane. Headley Road provides some natural surveillance from the residential properties present and the more urban setting of Wilmerhatch Lane towards Epsom provides good natural surveillance.
Width		The section of Langley Vale Road and Chalk Pit Lane route via a Bridleway and footpath respectively, meaning there is limited width. Headley Road is a relatively wide carriageway, allowing for on-carriageway cycling. On carriageway cycle lanes are provided on Wilmerhatch Lane with footways also present.

SECTION 7 Route 4 – To Tattenham Corner Railway Station via Bridleway 33 and 127 (NCR 22)

7.1.1 Route 4 comprises the link between the site and Tattenham Corner Railway Station, via Bridleway Route 33 (National Cycle Route 22).

Image 7.1: Route 4 Photos

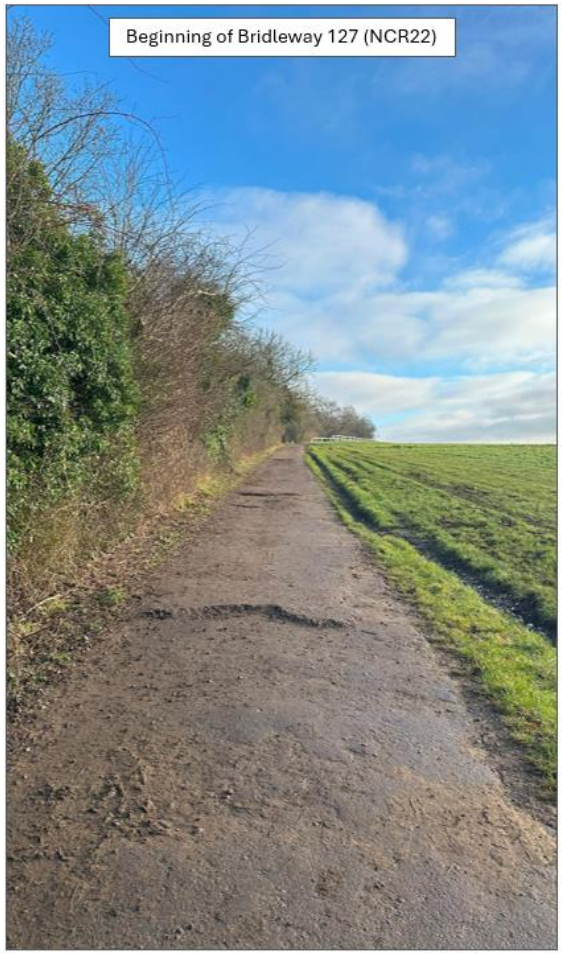


Table 7.1: Review of Route 4

Review Factor	RAG Score	Comments
Surfacing		The route uses the bridleway network which generally comprises of paved surfacing. There are small sections where there is no paved surfacing, but this is minimal.
Directness		This route provides a direct link between the site and Tattenham Corner Railway Station across Epsom Downs.
Environment		As this route utilised the PRoW network, the route is free from motorised vehicle traffic, with the exception of a small number of operational / agricultural traffic, which is minimal.
Gradient		A small incline is present at the beginning of NCR22, although the remainder of the route towards Tattenham Corner Railway Station is relatively flat.
Lighting		There is an absence of streetlighting for a majority of the route, until one reaches the Tattenham Corner Road junction.
Surveillance		The nature of the route via Epsom Downs means there is no built-up environment, resulting in limited natural surveillance.
Width		The PRoW network provides good width allowing for a mix of users to safely pass one another.

SECTION 8 Route 5 – Towards Epsom via Langley Vale Road and Chalk Lane

8.1.1 Route 5 comprises the link between the site and towards Epsom, via Langley Vale Road and Chalk Lane.

Image 8.1: Route 5 Photos

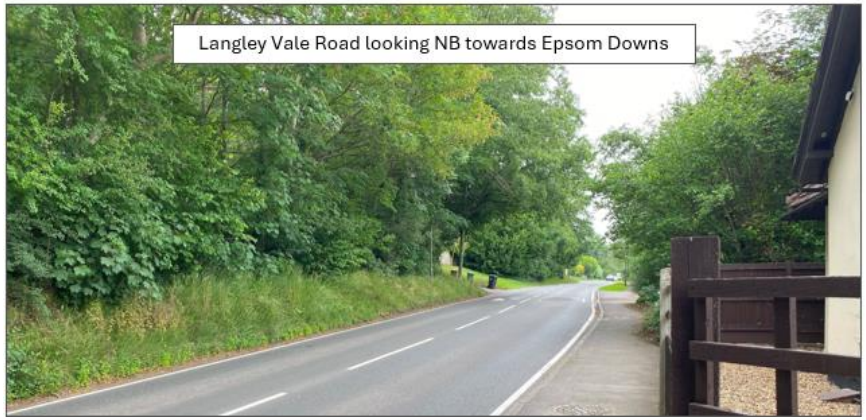
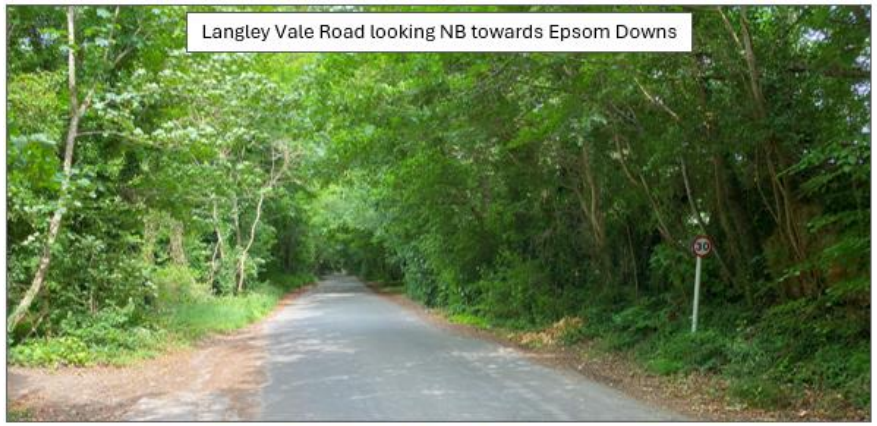


Image 8.2: Route 5 Photos (Continued)



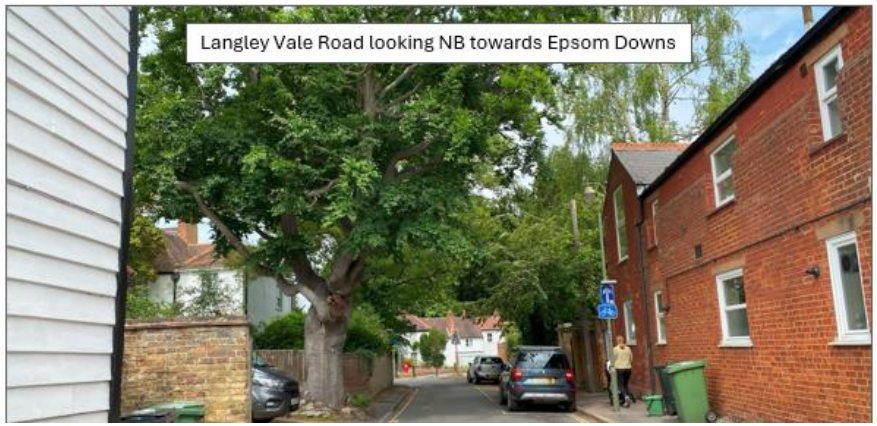


Table 8.1: Review of Route 5

Review Factor	RAG Score	Comments
Surfacing		Langley Vale Road and Chalk Lane are paved and well-surfaced, with no identified areas of damaged surfacing.
Directness		The route travels in a northbound direction, leading directly towards the centre of Epsom, and is not convoluted.
Environment		Although a footway is present on the eastern side of the carriageway, Langley Vale Road does accommodate high levels of traffic. Once on Chalk Lane, motorised vehicles are limited to access only and it is a one-way arrangement for northbound vehicles only, meaning traffic levels are low.
Gradient		An incline is present on the initial section of Langley Vale Road. Other than this location, the route is relatively flat.
Lighting		Streetlighting is present along Langley Vale Road but is not present on Chalk Lane.
Surveillance		Langley Vale Road benefits from good natural surveillance given its urban setting. Chalk Lane possess lower levels of natural surveillance due to its more rural nature.
Width		Langley Vale Road is a relatively wide carriageway which can accommodate on-street cycling. A footway is also present on the eastern side of the carriageway. Chalk Lane possesses no footways but due to being access only and a one-way arrangement for northbound traffic only, the level of motorised vehicles will be low, meaning active travel users can safely utilise the carriageway.

i-Transport LLP
The Square, Basing View, Basingstoke, RG21 4EB

Tel: 01256 898 366

FIGURES

i-Transport

Langley Bottom Farm

Walking and Cycling Audit

ITB200788

Key

- Site Location
- Epsom Downs
- Tattenham Corner
- Park & Shop
- The Vale Primary School

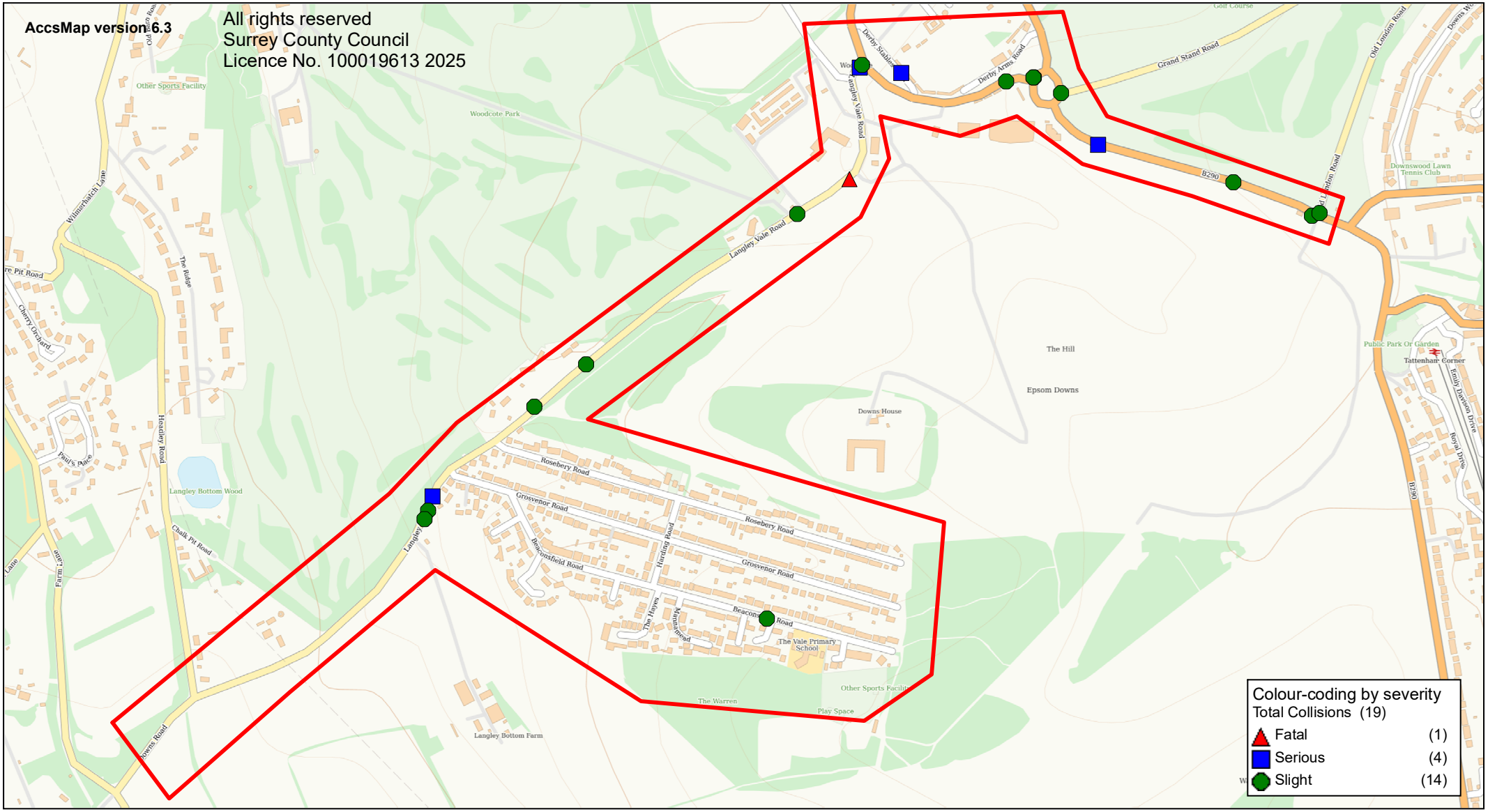
Routes

Text

- Route 1 - To Garage/ Shop via Langley Vale Road
- Route 2 - To Langley Vale Primary School via Langley Vale Road and Beaconsfield Road
- Route 3 - To Epsom via Langely Vale Road, Headley Road and Wilmerhatch Lane
- Route 4 - Tattenham Corner Station via Bridleway 33 and 127
- Route 5 - To Epsom via Langley Vale Road and Chalk Lane

0 1 2 km

APPENDIX B. PIC Data



Surrey RoadSafe

Langley Vale Road Epsom
Collision Dates 01/11/2019 - 31/10/2024
i-Transport

SCALE	1 : 10500
DATE	16/01/2025
DRAWING No.	
DRAWN BY	

Accidents between dates **01/11/2019** **and** **31/10/2024** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -sussex all consultant requests 2025 ("Langley Vale Road Epsom (iTransport)")

Notes:

Selected Polygon:Langley Vale Road Epsom (iTransport)

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
19/12/2019	1615	Snowing without high winds	EP12360/19	1	Give way or Uncontrolled	T & Stag Jct

Location: LANGLEY VALE ROAD NEAR JUNCTION WITH ASHLEY ROAD (B290)

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Going ahead other	Front	Jct Approach

Casualties:

Class	Severity
Pedestrian	Serious

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
25/01/2020	1000	Fine without high winds	0929735	1	Not applicable	Not within 20M

Location: DERBY STABLES ROAD - 56 METRES FROM JUNCTION WITH ASHLEY ROAD (B290)

Vehicles:

Type	Manvres	Impact	Junct_loc
Pedal Cycle	Going ahead other	Front	Not at, or within 20M of Jct

Casualties:

Class	Severity
Driver / Rider	Serious

Accidents between dates **01/11/2019** **and** **31/10/2024** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -sussex all consultant requests 2025 ("Langley Vale Road Epsom (iTransport)")

Notes:

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
16/03/2020	1550	Fine without high winds	0940400	2	Not applicable	Not within 20M

Location: WOODCOTE VIEWLANGLEY VALE ROAD

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Going ahead other	Front	Not at, or within 20M of Jct
Car	Going ahead other	Back	Not at, or within 20M of Jct

Casualties:

Class	Severity
Driver / Rider	Slight
Driver / Rider	Slight

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
20/03/2020	2313	Fine without high winds	0941783	1	Give way or Uncontrolled	T & Stag Jct

Location: OUTSIDE HOLIDAY INN, LANGLEY VALE ROAD NEAR JUNCTION WITH UNCLASSIFIED ROAD

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Going ahead other	Front	Cleared junction or waiting/parked at junction exit

Casualties:

Class	Severity
Pedestrian	Slight

Accidents between dates **01/11/2019** **and** **31/10/2024** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -sussex all consultant requests 2025 ("Langley Vale Road Epsom (iTransport)")

Notes:

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
24/05/2020	2105	Fine without high winds	0954258	1	Not applicable	Not within 20M

Location: TATTENHAM CORNER ROAD (B290)

Vehicles:

Type	Manvres	Impact	Junct_loc
Pedal Cycle	Going ahead other	Front	Not at, or within 20M of Jct
Car	U-turn	Offside	Not at, or within 20M of Jct

Casualties:

Class	Severity
Driver / Rider	Serious

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
02/12/2020	0530	Fine without high winds	1003878	1	Automatic traffic signal	T & Stag Jct

Location: LANGLEY VALE ROAD NEAR JUNCTION WITH ASHLEY ROAD (B290)

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Going ahead other	Offside	Mid Junction - on roundabout or main road
Car	Turning right	Front	Mid Junction - on roundabout or main road

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/11/2019** **and** **31/10/2024** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -sussex all consultant requests 2025 ("Langley Vale Road Epsom (iTransport)")

Notes:

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
11/04/2021	0900	Fine without high winds	1034418	1	Not applicable	Not within 20M

Location: NEAR ENTRANCE TO RUBBING HOUSE LANGLEY VALE ROAD

Vehicles:

Type	Manvres	Impact	Junct_loc
Pedal Cycle	Going ahead other	Did not impact	Not at, or within 20M of Jct

Casualties:

Class	Severity
Driver / Rider	Fatal

Accidents between dates **01/11/2019** **and** **31/10/2024** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -sussex all consultant requests 2025 ("Langley Vale Road Epsom (iTransport)")

Notes:

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
23/01/2022	0955	Fine without high winds	1135427	5	Not applicable	Not within 20M

Location: LANGLEY VALE ROAD - 64 METRES FROM JUNCTION WITH GROSVENOR ROAD

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Going ahead other	Front	Not at, or within 20M of Jct
Car	Going ahead but held up	Back	Not at, or within 20M of Jct
Car	Going ahead other	Back	Not at, or within 20M of Jct
Car	Going ahead other	Back	Not at, or within 20M of Jct
Car	Going ahead other	Front	Not at, or within 20M of Jct

Casualties:

Class	Severity
Driver / Rider	Serious
Driver / Rider	Serious
Vehicle Passenger	Slight
Driver / Rider	Slight
Driver / Rider	Slight

Accidents between dates **01/11/2019** **and** **31/10/2024** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -sussex all consultant requests 2025 ("Langley Vale Road Epsom (iTransport)")

Notes:

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
02/04/2022	1630	Fine without high winds	1162027	3	Give way or Uncontrolled	Roundabout

Location: TATTENHAM CORNER ROAD (B290)

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Going ahead other	Offside	Entering main road
Car	Turning right	Front	Entering roundabout

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight
Driver / Rider	Slight

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
03/06/2022	1825	Fine without high winds	1184175	1	Not applicable	Not within 20M

Location: TATTENHAM CORNER ROAD (B290)

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Stopping	Back	Not at, or within 20M of Jct
Car	Stopping	Back	Not at, or within 20M of Jct

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/11/2019** **and** **31/10/2024** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -sussex all consultant requests 2025 ("Langley Vale Road Epsom (iTransport)")

Notes:

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
09/10/2022	1425	Fine without high winds	1228301	1	Give way or Uncontrolled	Other junction

Location: BEACONSFIELD ROAD NEAR JUNCTION WITH SPENCER CLOSE, EPSOM, SURREY

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Reversing	Front	Jct Approach

Casualties:

Class	Severity
Driver / Rider	Slight

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
20/11/2022	2100	Fine without high winds	1244540	1	Not applicable	Not within 20M

Location: TATTENHAM CORNER ROAD (B290), EPSOM, SURREY

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Turning right	Front	Not at, or within 20M of Jct
Motor Cycle over 50 cc and up to 125cc	Going ahead other	Front	Not at, or within 20M of Jct

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/11/2019** **and** **31/10/2024** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -sussex all consultant requests 2025 ("Langley Vale Road Epsom (iTransport)")

Notes:

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
07/12/2022	1300	Fine without high winds	1250908	2	Not applicable	Not within 20M

Location: ASHLEY ROAD (B290)

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Going ahead other	Front	Not at, or within 20M of Jct
Car	Waiting to turn left	Offside	Not at, or within 20M of Jct

Casualties:

Class	Severity
Driver / Rider	Slight
Driver / Rider	Slight

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
09/01/2023	1840	Fine without high winds	1261277	1	Give way or Uncontrolled	Roundabout

Location: ASHLEY ROAD (B290) AT JUNCTION WITH TATTENHAM CORNER ROAD (B290), EPSOM, SURREY

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Going ahead other	Offside	Mid Junction - on roundabout or main road
Motor Cycle over 50 cc and up to 125cc	Going ahead other	Nearside	Mid Junction - on roundabout or main road

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/11/2019** **and** **31/10/2024** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -sussex all consultant requests 2025 ("Langley Vale Road Epsom (iTransport)")

Notes:

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
24/02/2023	1550	Fine without high winds	1280226	1	Give way or Uncontrolled	Roundabout

Location: TATTENHAM CORNER ROAD (B290) AT JUNCTION WITH DOWNS ROAD (B289)

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Stopping	Offside	Entering roundabout
Pedal Cycle	Going ahead other	Back	Mid Junction - on roundabout or main road

Casualties:

Class	Severity
Driver / Rider	Slight

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
27/05/2023	1505	Fine without high winds	1312167	1	Not applicable	Not within 20M

Location: LANGLEY VALE ROAD

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Going ahead other	Offside	Not at, or within 20M of Jct
Car	Going ahead other	Offside	Not at, or within 20M of Jct

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/11/2019** **and** **31/10/2024** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -sussex all consultant requests 2025 ("Langley Vale Road Epsom (iTransport)")

Notes:

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
28/07/2023	1710	Fine without high winds	1334525	1	Not applicable	Not within 20M

Location: LANGLEY VALE ROAD, EPSOM DOWNS, SURREY

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Going ahead other	Front	Not at, or within 20M of Jct
Car	Going ahead other	Offside	Not at, or within 20M of Jct

Casualties:

Class	Severity
Driver / Rider	Slight

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
06/08/2023	1020	Fine without high winds	1338654	1	Give way or Uncontrolled	Roundabout

Location: TATTENHAM CORNER ROAD (B290) AT JUNCTION WITH OLD LONDON ROAD, EPSOM, SURREY

Vehicles:

Type	Manvres	Impact	Junct_loc
Car	Turning left	Nearside	Mid Junction - on roundabout or main road
Pedal Cycle	Going ahead other	Front	Jct Approach

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/11/2019** **and** **31/10/2024** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -sussex all consultant requests 2025 ("Langley Vale Road Epsom (iTransport)")

Notes:

Date	Time	Weather	Police_ref	Casualties	Junct_ctrl	Junct_det
20/10/2023	1619	Unknown	1365248	1	Not applicable	Not within 20M

Location: LANGLEY VALE ROAD, EPSOM DOWNS, SURREY

Vehicles:

Type	Manvres	Impact	Junct_loc
Pedal Cycle	Going ahead other	Offside	Not at, or within 20M of Jct
Car	Overtaking nearside	Nearside	Not at, or within 20M of Jct

Casualties:

Class	Severity
Driver / Rider	Slight

Number of records in selection: **19**

APPENDIX C. Illustrative Masterplan

0m 5m 10m 20m 40m 80m 130m

LEGEND

- The Site area circa. 5.21 hectares
- Existing Trees / Screens
- Enhanced Areas of Landscaping and Bio-diversity Net Gain
- Access Point
- Public Open Space
- Developable Area circa. 3.35 hectares
- Attenuation Features
- Public Open Spaces / Play Areas - Indicative Locations / Alignment
- Suggested amendment to Settlement Boundary
- Primary Street
- Secondary Street
- Link Roads
- Informal Access Drives

} Final alignment subject to detailed design.

- Footpath links
- Pedestrian / Cycle links
- Informal Footpaths

} Indicative locations / alignments.

Fairfax

FAIRFAX AQUISITIONS LTD

project:

LANGLEY BOTTOM FARM FIELD
EPSOM

title:

PARAMETERS PLAN

date: Jul '25 **scale:** 1:1250 @ A1

drawing number:	Rev.
2503/PL.03	C

Paul Hewett R.I.B.A.
CHARTERED ARCHITECT

Paul Hewett BA(Hons) DipArch(Hons) R.I.B.A.
CHARTERED ARCHITECT
51 Foxdale Drive : Angmering : West Sussex
BN16 4HF
Tel: 01903 778701
email: hewett439@btinternet.com

APPENDIX D. Stage 1 RSA

Road Safety Audit Report

Incorporating
Stage 1 Completion of Preliminary Design.

Proposed Simple Priority Access off Langley Vale Road Epsom

Client:
i-Transport

Client reference:
ITB19977-GA-002

Fenley
2 Blaenant
Emmer Green
READING
RG4 8PH

E: office@fenley.co.uk
www.fenley.co.uk

Report Status 1

Job no	RSA-25-014	**Issue no**	1	**Date**	April 2025
Prepared by	JJF	**Verified by**	ZB	**Approved by**	JJF
Filename and Path	Fenley/Road Safety Audits/RSA-25/RSA-25-014-1				

1.0 PROJECT DETAILS

Report Title:	Stage 1 Road Safety Audit
Date:	April 2025
Document reference and revision:	RSA-25-014-1
Prepared by:	Fenley Road Safety Limited
County Highway Authority:	Surrey County Council
Design Organisation:	i-Transport
Project Sponsor:	SDP Developers

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Stage 1 Road Safety Audit drafted for Audit Team discussions	JJF			14th April 2025
1	Stage 1 Road Safety Audit finalised and issued to the Design Organisation	JJF	ZB	JJF	28th April 2025

Contents:

Appendices:

2.0 INTRODUCTION

2.1 This report has been prepared by Fenley Road Safety Limited and results from a Stage 1 Road Safety Audit of a proposed simple priority junction along Langley Vale Road in Epsom. The proposed access is to be taken off the eastern side of the carriageway, formed with 8 metre corner radii and serve a 6.0 metre spine road. A 2.0 metre wide footway is to be accommodated on the southern side of the proposed access road and a 3.0 metre wide footway is to be accommodated on the northern side. The proposed footways are to wrap around the corner radius to meet the existing footway network. An uncontrolled crossing is to be provided that is marginally off-line, offset from the proposed give-way line by circa 2.5 metres. As part of the works, the existing footway along the site frontage is to be increased to 3.0 metres to match the proposed footway immediately to the south, that is to be widened as part of an extant development of Langley Bottom Farm which is currently under construction. The scheme is to facilitate access to a proposed development of circa 100 homes.

2.2 The Audit Brief identifies that the proposals do not include any Departures from Standard, whether related to strategic decisions or otherwise.

2.3 This Road Safety Audit was undertaken during March and April 2025 in accordance with the Road Safety Audit Brief as well as revised scheme drawings provided on the 13th March 2025 by the Design Organisation, i-Transport, on behalf of the Project Sponsor, SDP Developers. The Road Safety Audit comprised of an examination of the documents provided, detailed at **Appendix A1,** as well as a site visit to put the scheme into context with the existing infrastructure. The Audit Team were satisfied that the Audit Brief was sufficient for the purpose of the Audit instructed. It has been confirmed that items such as surface water drainage, existing and proposed signage as well as utilities and street lighting are to be assessed during the detail design stage of the scheme and therefore any associated road safety concerns are only raised if fundamental. Moreover, it is understood that all vegetation within the visibility splays illustrated, is to be removed.

2.4 The Road Safety Audit has been undertaken by an Audit Team whose qualifications as well as experience accord with the requirements of GG119. The Audit Team consists of the following members:

Audit Team Leader
Jamie Fenning *BSc(Hons), MIHE, MCIHT, MSoRSA, National Highway RSA Certificate of Competency*
Road Safety / Highway Engineer

Audit Team Member
Zane Beswick *MCIHT, MSoRSA*
Road Safety / Highway Engineer

2.5 The site visit associated with this Audit was undertaken during the afternoon of Tuesday 1st April 2025 between the hours of 10:00 and 10:30. The site visit involved walking and driving around the local highway network for a 30-minute period whilst observing local infrastructure and current traffic conditions. The weather during the site visit was clear with scattered clouds, the road surface was dry and visibility was good. A number of pedestrians and a cyclist were observed during the site visit. Vehicular traffic was also observed to include a motorcycle, cars and light goods vehicles to include a supermarket delivery vehicle. The traffic flow was light and free flowing with motorists observed to slow over the vertical traffic calming features. It was noted during the site visit, that the flag type directional sign associated with The Vale School, situated on Langley Vale Road at the with Grosvenor Road, appears to have been struck and is not horizontal.

2.6 The terms of reference of this Road Safety Audit are as described in GG119. The scheme has been examined and this report compiled, only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. All comments and recommendations are referenced to the design drawings supplied with the Audit Brief and the location of road safety concerns raised have been illustrated beneath the items along with relevant photographs for clarity, where appropriate, as well as on the Location Plan attached at **Appendix A2**.

3.0 ITEMS RAISED IN ANY PREVIOUS ROAD SAFETY AUDITS

3.1 Fenley Road Safety Limited have not been made aware of any previous Road Safety Audit associated with the current scheme.

4.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

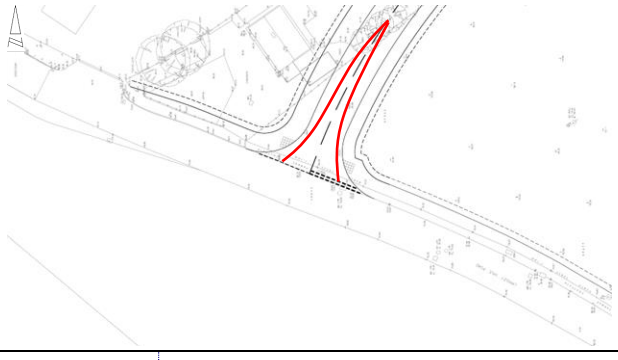
A.1	**LOCAL ALIGNMENT**
A.1.1	**PROBLEM**
Location:	Proposed access road
Summary:	Access road may fall towards Langley Bottom Road at an inappropriate gradient
Acc Type:	Vehicle overshoot type collision

The land to the east of Langley Vale Road rises away from the carriageway gradually before rising at a steeper gradient. The proposals include the provision of a bellmouth simple priority access off the eastern side of Langley Vale Road at a location where visibility to and from the proposed access as well as to the rear of a stationary vehicle waiting to turn into the proposed access, accords with the stopping sight distance associated with 85th percentile approach speeds. The scheme drawing is based upon topographical survey data which indicates that the proposed access road will fall towards Langley Vale Road at a gradient of 1 in 20. Whilst this gradient does not exceed the maximum recommended, the land rises steeply following circa 50 metres. The Audit Team have concerns that the existing topography of the land may need to be reprofiled forming a steeper gradient on approach to Langley Vale Road which could lead to loss of control type collisions, particularly during freezing conditions.

RECOMMENDATION:

It is recommended that the proposed access is set at a suitable gradient.

Location Plan:



A.2	**GENERAL**
A.2.1	**PROBLEM**
Location:	Langley Vale Road
Summary:	An existing large double gully is situated immediately adjacent to the access
Acc Type:	Vehicle loss of control type collision

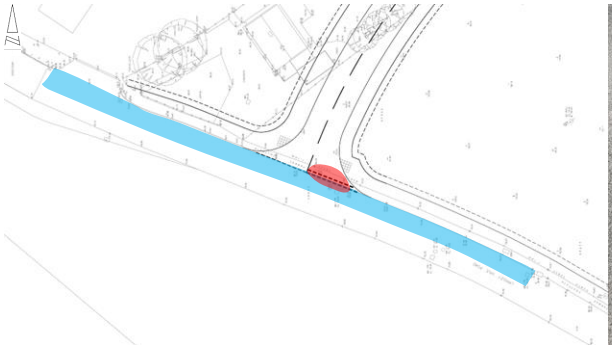
Langley Vale Road falls from south to north before rising again through the village of Langley Vale. The single carriageway road is set with a camber forcing surface water to flow to the channels where it drains through a soft verge where no kerbing is present and into a large double gully that is situated to the east at the low point. It is noted, that the existing kerbing along the eastern side of the carriageway is broken at the location of the large double gully. The proposals include the

provision of a bellmouth simple priority access off the eastern side of Langley Vale Road at the low point. The Audit Brief identifies that surface water drainage is to be assessed through the detail design stage of the scheme, nevertheless, the Audit Team have concerns that a significant amount of surface water will flow down Langley Vale Road to and along the proposed access which result in ponding and lead to loss of control type collisions, particularly during inclement and freezing conditions.

RECOMMENDATION:

It is recommended that measures are provided to ensure the efficient drainage of surface water.

Location Plan:



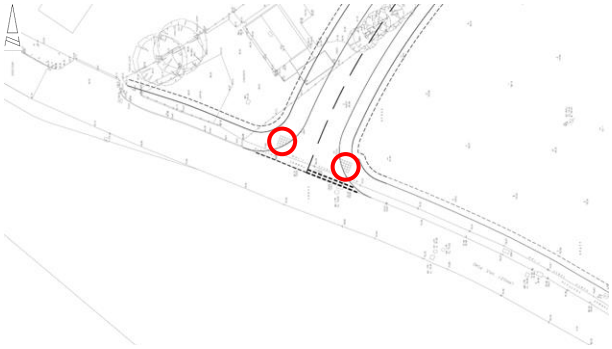
A.3	**JUNCTIONS**
	No Road Safety Concerns regarding WALKING, CYCLING AND HORSE RIDING have been raised at this stage
A.4	**WALKING, CYCLING AND HORSE RIDING**
A.4.1	**PROBLEM**
Location:	Langley Vale Road
Summary:	Pedestrians could overstep the proposed tactile paving into the live carriageway
Acc Type:	Vehicle to pedestrian type collision

Langley Vale Road benefits from a footway, albeit narrow, along the eastern side of the carriageway that is due to be partially widened to 3.0 metres as part of an extant residential development of Langley Bottom Farm. The proposals include the provision of a bellmouth simple priority access off the eastern side of Langley Vale Road that is to sever the existing footway. As part of the works, an uncontrolled crossing point is to be installed that is to be offset from the give-way line by circa 2.5 metres. Whilst tactile paving is proposed at the uncontrolled crossing, a minimum of just two rows are to be provided. The Audit Team have concerns that a large paced pedestrian could overstep the 800mm depth of tactile paving and unknowingly enter the live carriageway into the path of an approaching vehicle.

RECOMMENDATION:

It is recommended that the minimum depth of tactile paving is increased to 1200mm.

Location Plan:



A.5	**ROAD SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING**
	No Road Safety Concerns regarding ROAD SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING have been raised at this stage

5.0 STAGE 1 ROAD SAFETY AUDIT TEAM STATEMENT

5.1 We certify that this Road Safety Audit has been carried out in accordance with GG119.

Audit Team Leader

Name: **Jamie Fenning** *BSc (Hons), MIHE, MCIHT, MSoRSA, NH RSA Certificate of Competency*

Signed: 

Position: Road Safety / Highway Engineer
Organisation: Fenley Road Safety Limited
Date: 28th April 2025

Audit Team Member

Name: **Zane Beswick** *MCIHT, MSoRSA*

Signed: 

Position: Road Safety / Highway Engineer
Organisation: Fenley Road Safety Limited
Date: 28th April 2025

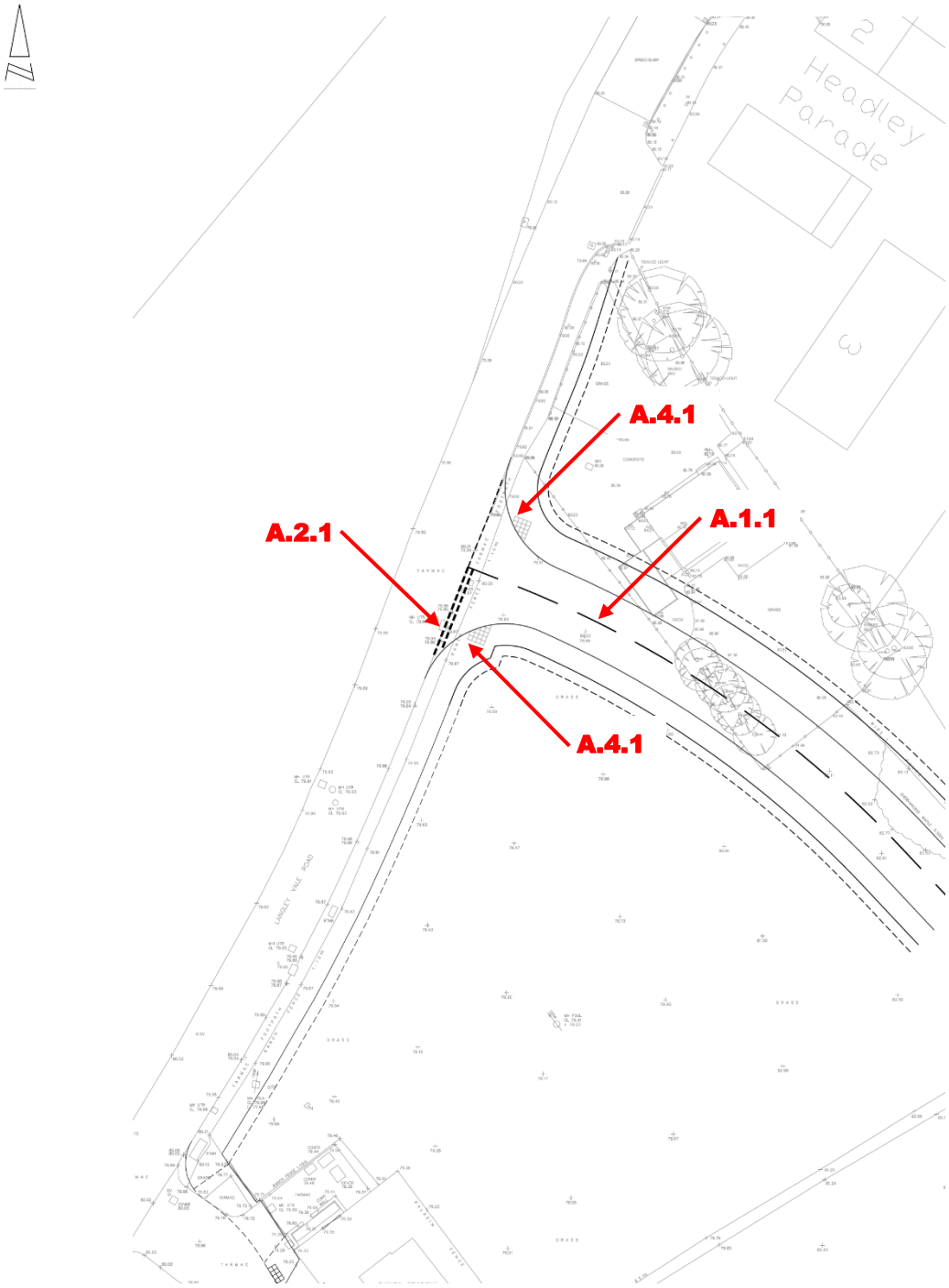
Appendix A1

Documents and Drawings provided for this Stage 1 Road Safety Audit

Audit Stage	Doc. No.	Rev	Title
Stage 1	ITB200788-002	-	Road Safety Audit Brief
	Dwg No.	Rev	Title
	ITB200788-GA-002	C	Potential Site Access Arrangements

Appendix A2

Item Location Plan


A.4.1
A.2.1
A.1.1
A.4.1
Headley Parade
2
3

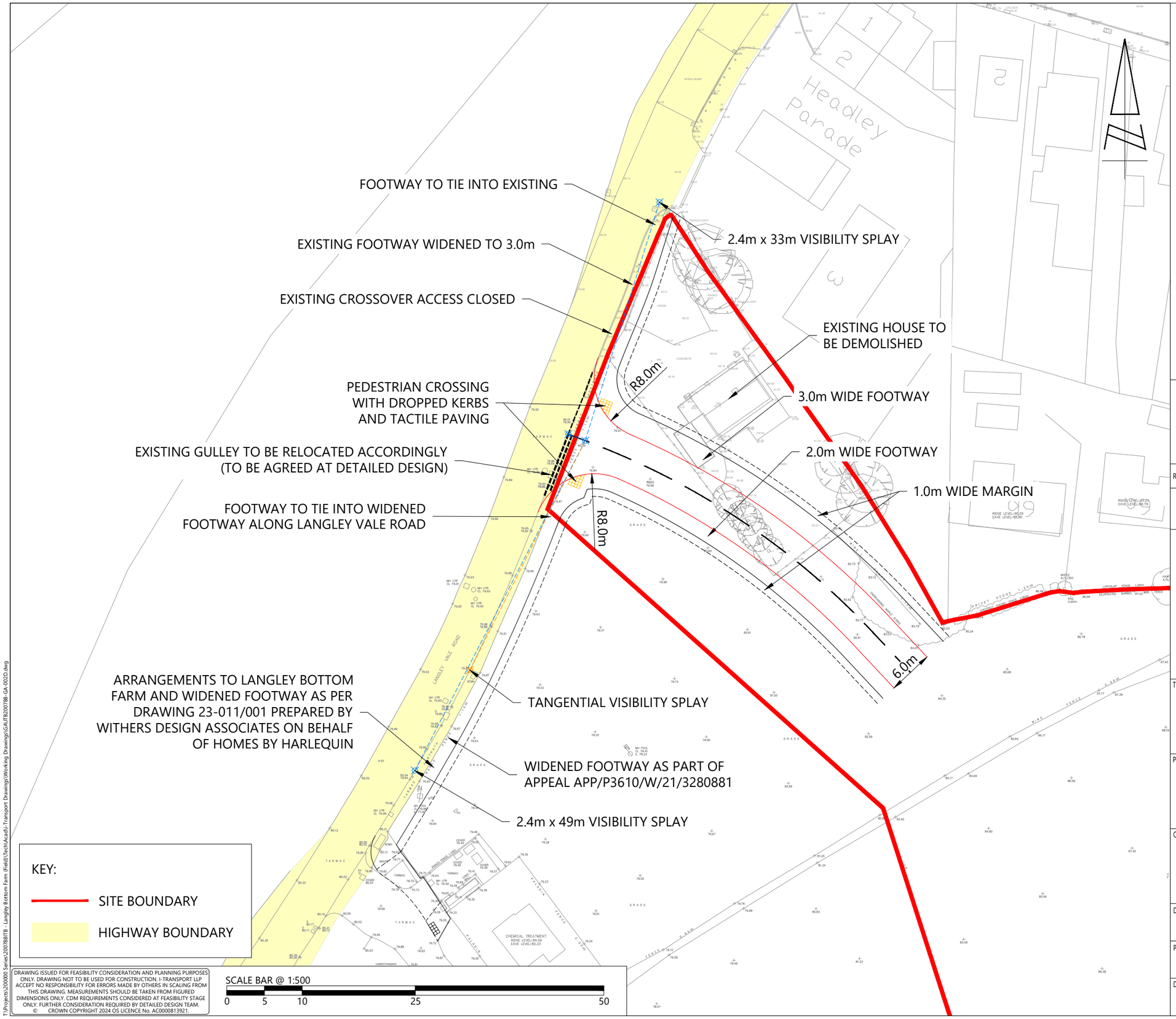

fenley

Access Arrangements at Land Parcel to the North of Langley Bottom Farm, Epsom				
	Location	**Problem**	**Recommendation**	**Design Team Response**
A.1.1	Proposed Site Access	Summary: Access road may fall towards Langley Bottom Road at an inappropriate gradient. The land to the east of Langley Vale Road rises away from the carriageway gradually before rising at a steeper gradient. The proposals include the provision of a bellmouth simple priority access off the eastern side of Langley Vale Road at a location where visibility to and from the proposed access as well as to the rear of a stationary vehicle waiting to turn into the proposed access, accords with the stopping sight distance associated with 85th percentile approach speeds. The scheme drawing is based upon topographical survey data which indicates that the proposed access road will fall towards Langley Vale Road at a gradient of 1 in 20. Whilst this gradient does not exceed the maximum recommended, the land rises steeply following circa 50 metres. The Audit Team have concerns that the existing topography of the land may need to be reprofiled forming a steeper gradient on approach to Langley Vale Road which could lead to loss of control type collisions, particularly during freezing conditions.	It is recommended that the proposed access is set at a suitable gradient.	Recommendation accepted. The details of the access road will be provided at the detailed design stage.

Access Arrangements at Land Parcel to the North of Langley Bottom Farm, Epsom				
A.2.1	Langley Vale Road	Summary: An existing large double gully is situated immediately adjacent to the access. The Langley Vale Road falls from south to north before rising again through the Village of Langley Vale. The single carriageway road is set with a camber forcing surface water to flow to the channels where it drains through a soft verge where no kerbing is present and into a large double gully that is situated to the east at the low point. It is noted that the existing kerbing along the eastern side of the carriageway is broken at the location of the large double gully. The proposals include the provision of a bellmouth simple priority access off the eastern side of Langley Vale Road at the low point. The Audit Brief identifies that surface water drainage is to be assessed through the detailed design stage of the scheme, nevertheless, the Audit Team have concerns that a significant amount of surface water will flow down Langley Vale Road to and along the proposed site access which result in ponding and lead to loss of control type collision, particularly during inclement and freezing conditions.	It is recommended that measures are provided to ensure the efficient drainage of surface water.	Recommendation accepted. The updated site accessing drawing shows that the existing gully will be relocated, with the exact location and other supportive measures determined at the detailed design stage.

Access Arrangements at Land Parcel to the North of Langley Bottom Farm, Epsom				
A.4.1	Langley Vale Road	Summary: Pedestrians could overstep the proposed tactile paving into the live carriageway. Langley Vale Road benefits from a footway, albeit narrow, along the eastern side of the carriageway that is due to be partially widened to 3.0 metres as part of an extant residential development of Langley Bottom Farm. The proposals include the provision of a bellmouth simple priority access off the eastern side of Langley Vale Road that is to sever the existing footway. As part of the works, an uncontrolled crossing point is to be installed that is to be offset from the give-way line by circa 2.5 metres. Whilst tactile paving is proposed at the uncontrolled crossing, a minimum of just two rows are to be provided. The Audit Team have concerns that a large-paced pedestrian could overstep the 800mm depth of tactile paving and unknowingly enter the live carriageway into the path of an approaching vehicle.	It is recommended that the minimum of tactile paving is increased to 1200m.	Recommendation accepted. The tactile paving depth will be increased to 1200m at the detailed design stage.

DRAWINGS



REV	DATE	BY	DESCRIPTION	CHK	APD
D	14.04.25	JD	ANNOTATION ADDED	DF	DF
C	13.03.25	MM	VISIBILITY SPLAYS UPDATED	MK	DF
B	19.02.25	JD	ACCESS ARRANGEMENT AMENDED	DF	DF
A	17.01.25	JD	ANNOTATIONS AMENDED	DF	DF

STATUS: FOR INFORMATION

i-Transport
The Square, Basing View,
Basingstoke, Hampshire, RG21 4EB
Tel: 01256 898366
www.i-transport.co.uk

TITLE: PROPOSED SITE ACCESS ARRANGEMENT

PROJECT: LANGLEY BOTTOM FARM (FIELD)

CLIENT: FAIRFAX PROPERTIES

DRAWN:	CHECKED:	APPROVED:
JD	DF	DF
PROJECT No:	SCALE @ A3:	DATE:
ITB200788	1:500	15.01.25
DRAWING No: ITB200788-GA-002		REV: D

T:\Projects\200000 Series\200788\TB - Langley Bottom Farm (Field)\Tech\Acad\i-Transport Drawings\Working Drawings\GA\ITB200788-GA-002D.dwg

APPENDIX E. Residential TRICS Output

Filtering Summary

Land Use	03/A	RESIDENTIAL/HOUSES PRIVATELY OWNED
Selected Trip Rate Calculation Parameter Range	90-160 DWELLS	
Actual Trip Rate Calculation Parameter Range	91-160 DWELLS	
Date Range	Minimum: 01/01/16	Maximum: 28/06/24
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	
Days of the week selected	Monday	7
	Tuesday	11
	Wednesday	4
	Thursday	7
	Friday	3
Main Location Types selected	Suburban Area (PPS6 Out of Centre)	2
	Edge of Town	19
	Neighbourhood Centre (PPS6 Local Centre)	11
Inclusion of Servicing Vehicles Counts	Servicing vehicles Included	5 - Selected
	Servicing vehicles Excluded	31 - Selected
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	1,001 to 5,000	9
	5,001 to 10,000	8
	10,001 to 15,000	5
	15,001 to 20,000	6
	20,001 to 25,000	4
Population <5 Mile ranges selected	5,001 to 25,000	5
	25,001 to 50,000	6
	50,001 to 75,000	4
	75,001 to 100,000	3
	100,001 to 125,000	3
	125,001 to 250,000	10
	250,001 to 500,000	1
Car Ownership <5 Mile ranges selected	0.6 to 1.0	5
	1.1 to 1.5	22
	1.6 to 2.0	5
PTAL Rating	No PTAL Present	32

Calculation Reference: AUDIT-236601-250120-0138

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	6 days
	EX	ESSEX	1 days
	HC	HAMPSHIRE	3 days
	HF	HERTFORDSHIRE	2 days
	KC	KENT	3 days
	SC	SURREY	2 days
	WB	WEST BERKSHIRE	1 days
	WS	WEST SUSSEX	4 days
03	SOUTH WEST		
	DC	DORSET	1 days
04	EAST ANGLIA		
	NF	NORFOLK	5 days
08	NORTH WEST		
	AC	CHESHIRE WEST & CHESTER	1 days
09	NORTH		
	DH	DURHAM	1 days
	IM	ISLE OF MAN	2 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: 91 to 160 (units:)
Range Selected by User: 90 to 160 (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: 01/01/16 to 28/06/24

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

Selected survey days:

Monday	7 days
Tuesday	11 days
Wednesday	4 days
Thursday	7 days
Friday	3 days

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

Selected survey types:

Manual count	32 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	19
Neighbourhood Centre (PPS6 Local Centre)	11

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:

Residential Zone	22
Village	9
No Sub Category	1

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	5 days - Selected
Servicing vehicles Excluded	31 days - Selected

Secondary Filtering selection:

Use Class:

C3	32 days

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

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	9 days
5,001 to 10,000	8 days
10,001 to 15,000	5 days
15,001 to 20,000	6 days
20,001 to 25,000	4 days

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

Population within 5 miles:

5,001 to 25,000	5 days
25,001 to 50,000	6 days
50,001 to 75,000	4 days
75,001 to 100,000	3 days
100,001 to 125,000	3 days
125,001 to 250,000	10 days
250,001 to 500,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	22 days
1.6 to 2.0	5 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	24 days
No	8 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	32 days

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

LIST OF SITES relevant to selection parameters

1 AC-03-A-06 DETACHED HOUSES CHESHIRE WEST & CHESTER
COMMON LANE
NEAR CHESTER
WAVERTON
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 99
Survey date: FRIDAY *29/04/22* *Survey Type: MANUAL*

2 DC-03-A-11 MIXED HOUSES DORSET
A350
SHAFTESBURY

Edge of Town
No Sub Category
Total No of Dwellings: 141
Survey date: TUESDAY *31/10/23* *Survey Type: MANUAL*

3 DH-03-A-02 MIXED HOUSES DURHAM
LEAZES LANE
BISHOP AUCKLAND
ST HELEN AUCKLAND
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 125
Survey date: MONDAY *27/03/17* *Survey Type: MANUAL*

4 ES-03-A-07 MIXED HOUSES & FLATS EAST SUSSEX
NEW ROAD
HAILSHAM
HELLINGLY
Edge of Town
Residential Zone
Total No of Dwellings: 91
Survey date: THURSDAY *07/11/19* *Survey Type: MANUAL*

5 ES-03-A-08 MIXED HOUSES & FLATS EAST SUSSEX
WRESTWOOD ROAD
BEXHILL

Edge of Town
Residential Zone
Total No of Dwellings: 110
Survey date: WEDNESDAY *12/10/22* *Survey Type: MANUAL*

6 ES-03-A-10 MIXED HOUSES & FLATS EAST SUSSEX
WATERGATE
BEXHILL-ON-SEA

Edge of Town
Residential Zone
Total No of Dwellings: 139
Survey date: THURSDAY *28/09/23* *Survey Type: MANUAL*

7 ES-03-A-11 MIXED HOUSES EAST SUSSEX
BISHOPS LANE
RINGMER

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 105
Survey date: THURSDAY *28/09/23* *Survey Type: MANUAL*

8 ES-03-A-12 MIXED HOUSES & FLATS EAST SUSSEX
HOREBEECH LANE
HORAM

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 123
Survey date: TUESDAY *03/10/23* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 ES-03-A-14 MIXED HOUSES & FLATS EAST SUSSEX
RATTLE ROAD
NEAR EASTBOURNE
STONE CROSS
Edge of Town
Residential Zone
Total No of Dwellings: 120
Survey date: TUESDAY *30/04/24* *Survey Type: MANUAL*

10 EX-03-A-03 MIXED HOUSES ESSEX
KESTREL GROVE
RAYLEIGH

Edge of Town
Residential Zone
Total No of Dwellings: 123
Survey date: MONDAY *27/09/21* *Survey Type: MANUAL*

11 HC-03-A-28 MIXED HOUSES & FLATS HAMPSHIRE
EAGLE AVENUE
WATERLOOVILLE
LOVEDEAN
Edge of Town
Residential Zone
Total No of Dwellings: 125
Survey date: MONDAY *08/11/21* *Survey Type: MANUAL*

12 HC-03-A-32 MIXED HOUSES & FLATS HAMPSHIRE
GREEN LANE
FARNHAM
WEYBOURNE
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 105
Survey date: THURSDAY *29/06/23* *Survey Type: MANUAL*

13 HC-03-A-36 MIXED HOUSES & FLATS HAMPSHIRE
HAVANT ROAD
EMSWORTH

Edge of Town
Residential Zone
Total No of Dwellings: 145
Survey date: TUESDAY *12/09/23* *Survey Type: MANUAL*

14 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*

15 HF-03-A-07 MIXED HOUSES & BUNGALOWS HERTFORDSHIRE
BAKER STREET
POTTERS BAR

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 92
Survey date: MONDAY *25/03/24* *Survey Type: MANUAL*

16 IM-03-A-03 MIXED HOUSES ISLE OF MAN
MAIN ROAD
COLBY

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 111
Survey date: TUESDAY *21/05/24* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

17 IM-03-A-06 MIXED HOUSES ISLE OF MAN
MOORAGH PROMENADE
RAMSEY

Edge of Town
Residential Zone
Total No of Dwellings: 129
Survey date: THURSDAY *23/05/24* *Survey Type: MANUAL*

18 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*

19 KC-03-A-08 MIXED HOUSES KENT
MAIDSTONE ROAD
CHARING

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 159
Survey date: TUESDAY *22/05/18* *Survey Type: MANUAL*

20 KC-03-A-10 MIXED HOUSES KENT
HEADCORN ROAD
STAPLEHURST

Edge of Town
Residential Zone
Total No of Dwellings: 106
Survey date: TUESDAY *09/05/23* *Survey Type: MANUAL*

21 NF-03-A-27 MIXED HOUSES & FLATS NORFOLK
YARMOUTH ROAD
NEAR NORWICH
BLOFIELD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 93
Survey date: THURSDAY *16/09/21* *Survey Type: MANUAL*

22 NF-03-A-33 MIXED HOUSES NORFOLK
LONDON ROAD
ATTLEBOROUGH

Edge of Town
Residential Zone
Total No of Dwellings: 143
Survey date: THURSDAY *29/09/22* *Survey Type: MANUAL*

23 NF-03-A-35 MIXED HOUSES & FLATS NORFOLK
REPTON AVENUE
NORWICH

Edge of Town
Residential Zone
Total No of Dwellings: 116
Survey date: WEDNESDAY *28/09/22* *Survey Type: MANUAL*

24 NF-03-A-43 MIXED HOUSES NORFOLK
MILL LANE
NEAR NORWICH
HORSFORD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 125
Survey date: WEDNESDAY *15/09/21* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

25 NF-03-A-52 MIXED HOUSES NORFOLK
LYNNSPORT WAY
KING'S LYNN

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 130
Survey date: TUESDAY *07/11/23* *Survey Type: MANUAL*

26 SC-03-A-09 MIXED HOUSES & FLATS SURREY
AMLETS LANE
CRANLEIGH

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 136
Survey date: TUESDAY *24/05/22* *Survey Type: MANUAL*

27 SC-03-A-11 MIXED HOUSES SURREY
FOLLY HILL
FARNHAM

Edge of Town
Residential Zone
Total No of Dwellings: 96
Survey date: TUESDAY *14/05/24* *Survey Type: MANUAL*

28 WB-03-A-03 MIXED HOUSES WEST BERKSHIRE
DORKING WAY
READING
CALCOT
Edge of Town
Residential Zone
Total No of Dwellings: 108
Survey date: FRIDAY *09/09/22* *Survey Type: MANUAL*

29 WS-03-A-14 MIXED HOUSES WEST SUSSEX
TODDINGTON LANE
LITTLEHAMPTON
WICK
Edge of Town
Residential Zone
Total No of Dwellings: 117
Survey date: WEDNESDAY *20/10/21* *Survey Type: MANUAL*

30 WS-03-A-18 MIXED HOUSES & FLATS WEST SUSSEX
LONDON ROAD
HASSOCKS

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 156
Survey date: MONDAY *15/05/23* *Survey Type: MANUAL*

31 WS-03-A-19 MIXED HOUSES & FLATS WEST SUSSEX
TURNERS HILL ROAD
EAST GRINSTEAD

Edge of Town
Residential Zone
Total No of Dwellings: 92
Survey date: MONDAY *15/05/23* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

32 WS-03-A-22 MIXED HOUSES & FLATS WEST SUSSEX
SHOPWHYKE ROAD
CHICHESTER

Edge of Town
Residential Zone
Total No of Dwellings: 129
Survey date: TUESDAY *19/03/24* *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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
SF-03-A-10	Covid-19

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
Total People to Total Vehicles ratio (all time periods and directions): 1.75

	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	32	121	0.073	32	121	0.280	32	121	0.353
08:00 - 09:00	32	121	0.140	32	121	0.349	32	121	0.489
09:00 - 10:00	32	121	0.122	32	121	0.155	32	121	0.277
10:00 - 11:00	32	121	0.119	32	121	0.148	32	121	0.267
11:00 - 12:00	32	121	0.121	32	121	0.126	32	121	0.247
12:00 - 13:00	32	121	0.144	32	121	0.136	32	121	0.280
13:00 - 14:00	32	121	0.143	32	121	0.141	32	121	0.284
14:00 - 15:00	32	121	0.145	32	121	0.173	32	121	0.318
15:00 - 16:00	32	121	0.247	32	121	0.164	32	121	0.411
16:00 - 17:00	32	121	0.245	32	121	0.152	32	121	0.397
17:00 - 18:00	32	121	0.307	32	121	0.146	32	121	0.453
18:00 - 19:00	32	121	0.263	32	121	0.132	32	121	0.395
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.069			2.102			4.171

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:	91 - 160 (units:)
Survey date date range:	01/01/16 - 28/06/24
Number of weekdays (Monday-Friday):	32
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	1

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 TAXIS
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	32	121	0.002	32	121	0.003	32	121	0.005
08:00 - 09:00	32	121	0.006	32	121	0.006	32	121	0.012
09:00 - 10:00	32	121	0.001	32	121	0.001	32	121	0.002
10:00 - 11:00	32	121	0.003	32	121	0.003	32	121	0.006
11:00 - 12:00	32	121	0.002	32	121	0.002	32	121	0.004
12:00 - 13:00	32	121	0.003	32	121	0.002	32	121	0.005
13:00 - 14:00	32	121	0.003	32	121	0.003	32	121	0.006
14:00 - 15:00	32	121	0.002	32	121	0.002	32	121	0.004
15:00 - 16:00	32	121	0.005	32	121	0.005	32	121	0.010
16:00 - 17:00	32	121	0.004	32	121	0.003	32	121	0.007
17:00 - 18:00	32	121	0.003	32	121	0.003	32	121	0.006
18:00 - 19:00	32	121	0.003	32	121	0.002	32	121	0.005
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.037			0.035			0.072

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 OGVS
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	32	121	0.002	32	121	0.001	32	121	0.003
08:00 - 09:00	32	121	0.002	32	121	0.001	32	121	0.003
09:00 - 10:00	32	121	0.002	32	121	0.002	32	121	0.004
10:00 - 11:00	32	121	0.004	32	121	0.003	32	121	0.007
11:00 - 12:00	32	121	0.002	32	121	0.003	32	121	0.005
12:00 - 13:00	32	121	0.003	32	121	0.002	32	121	0.005
13:00 - 14:00	32	121	0.001	32	121	0.002	32	121	0.003
14:00 - 15:00	32	121	0.002	32	121	0.001	32	121	0.003
15:00 - 16:00	32	121	0.001	32	121	0.002	32	121	0.003
16:00 - 17:00	32	121	0.000	32	121	0.000	32	121	0.000
17:00 - 18:00	32	121	0.001	32	121	0.000	32	121	0.001
18:00 - 19:00	32	121	0.000	32	121	0.001	32	121	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.020			0.018			0.038

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PSVS
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	32	121	0.001	32	121	0.001	32	121	0.002
08:00 - 09:00	32	121	0.000	32	121	0.000	32	121	0.000
09:00 - 10:00	32	121	0.001	32	121	0.001	32	121	0.002
10:00 - 11:00	32	121	0.001	32	121	0.001	32	121	0.002
11:00 - 12:00	32	121	0.001	32	121	0.001	32	121	0.002
12:00 - 13:00	32	121	0.001	32	121	0.001	32	121	0.002
13:00 - 14:00	32	121	0.001	32	121	0.001	32	121	0.002
14:00 - 15:00	32	121	0.001	32	121	0.001	32	121	0.002
15:00 - 16:00	32	121	0.000	32	121	0.000	32	121	0.000
16:00 - 17:00	32	121	0.001	32	121	0.001	32	121	0.002
17:00 - 18:00	32	121	0.001	32	121	0.001	32	121	0.002
18:00 - 19:00	32	121	0.000	32	121	0.000	32	121	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.009			0.009			0.018

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 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	32	121	0.003	32	121	0.008	32	121	0.011
08:00 - 09:00	32	121	0.006	32	121	0.016	32	121	0.022
09:00 - 10:00	32	121	0.002	32	121	0.004	32	121	0.006
10:00 - 11:00	32	121	0.004	32	121	0.003	32	121	0.007
11:00 - 12:00	32	121	0.002	32	121	0.002	32	121	0.004
12:00 - 13:00	32	121	0.003	32	121	0.002	32	121	0.005
13:00 - 14:00	32	121	0.002	32	121	0.003	32	121	0.005
14:00 - 15:00	32	121	0.003	32	121	0.004	32	121	0.007
15:00 - 16:00	32	121	0.015	32	121	0.008	32	121	0.023
16:00 - 17:00	32	121	0.009	32	121	0.008	32	121	0.017
17:00 - 18:00	32	121	0.006	32	121	0.003	32	121	0.009
18:00 - 19:00	32	121	0.006	32	121	0.003	32	121	0.009
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.061			0.064			0.125

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 VEHICLE OCCUPANTS
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	32	121	0.081	32	121	0.393	32	121	0.474
08:00 - 09:00	32	121	0.164	32	121	0.580	32	121	0.744
09:00 - 10:00	32	121	0.147	32	121	0.207	32	121	0.354
10:00 - 11:00	32	121	0.153	32	121	0.197	32	121	0.350
11:00 - 12:00	32	121	0.155	32	121	0.167	32	121	0.322
12:00 - 13:00	32	121	0.189	32	121	0.176	32	121	0.365
13:00 - 14:00	32	121	0.189	32	121	0.179	32	121	0.368
14:00 - 15:00	32	121	0.194	32	121	0.228	32	121	0.422
15:00 - 16:00	32	121	0.434	32	121	0.219	32	121	0.653
16:00 - 17:00	32	121	0.381	32	121	0.209	32	121	0.590
17:00 - 18:00	32	121	0.447	32	121	0.200	32	121	0.647
18:00 - 19:00	32	121	0.378	32	121	0.185	32	121	0.563
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.912			2.940			5.852

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	32	121	0.022	32	121	0.049	32	121	0.071
08:00 - 09:00	32	121	0.044	32	121	0.114	32	121	0.158
09:00 - 10:00	32	121	0.044	32	121	0.045	32	121	0.089
10:00 - 11:00	32	121	0.026	32	121	0.030	32	121	0.056
11:00 - 12:00	32	121	0.035	32	121	0.036	32	121	0.071
12:00 - 13:00	32	121	0.032	32	121	0.032	32	121	0.064
13:00 - 14:00	32	121	0.032	32	121	0.035	32	121	0.067
14:00 - 15:00	32	121	0.036	32	121	0.039	32	121	0.075
15:00 - 16:00	32	121	0.108	32	121	0.054	32	121	0.162
16:00 - 17:00	32	121	0.060	32	121	0.041	32	121	0.101
17:00 - 18:00	32	121	0.046	32	121	0.036	32	121	0.082
18:00 - 19:00	32	121	0.045	32	121	0.027	32	121	0.072
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.530			0.538			1.068

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 BUS/TRAM PASSENGERS
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	32	121	0.001	32	121	0.019	32	121	0.020
08:00 - 09:00	32	121	0.003	32	121	0.028	32	121	0.031
09:00 - 10:00	32	121	0.002	32	121	0.011	32	121	0.013
10:00 - 11:00	32	121	0.004	32	121	0.005	32	121	0.009
11:00 - 12:00	32	121	0.006	32	121	0.006	32	121	0.012
12:00 - 13:00	32	121	0.005	32	121	0.005	32	121	0.010
13:00 - 14:00	32	121	0.008	32	121	0.004	32	121	0.012
14:00 - 15:00	32	121	0.007	32	121	0.007	32	121	0.014
15:00 - 16:00	32	121	0.030	32	121	0.005	32	121	0.035
16:00 - 17:00	32	121	0.013	32	121	0.004	32	121	0.017
17:00 - 18:00	32	121	0.012	32	121	0.001	32	121	0.013
18:00 - 19:00	32	121	0.008	32	121	0.002	32	121	0.010
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.099			0.097			0.196

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL RAIL PASSENGERS
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	32	121	0.000	32	121	0.010	32	121	0.010
08:00 - 09:00	32	121	0.000	32	121	0.008	32	121	0.008
09:00 - 10:00	32	121	0.000	32	121	0.001	32	121	0.001
10:00 - 11:00	32	121	0.001	32	121	0.001	32	121	0.002
11:00 - 12:00	32	121	0.000	32	121	0.000	32	121	0.000
12:00 - 13:00	32	121	0.000	32	121	0.001	32	121	0.001
13:00 - 14:00	32	121	0.002	32	121	0.000	32	121	0.002
14:00 - 15:00	32	121	0.001	32	121	0.001	32	121	0.002
15:00 - 16:00	32	121	0.001	32	121	0.000	32	121	0.001
16:00 - 17:00	32	121	0.004	32	121	0.000	32	121	0.004
17:00 - 18:00	32	121	0.004	32	121	0.000	32	121	0.004
18:00 - 19:00	32	121	0.009	32	121	0.000	32	121	0.009
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.022			0.022			0.044

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 COACH PASSENGERS
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	32	121	0.000	32	121	0.001	32	121	0.001
08:00 - 09:00	32	121	0.000	32	121	0.001	32	121	0.001
09:00 - 10:00	32	121	0.000	32	121	0.000	32	121	0.000
10:00 - 11:00	32	121	0.000	32	121	0.000	32	121	0.000
11:00 - 12:00	32	121	0.000	32	121	0.000	32	121	0.000
12:00 - 13:00	32	121	0.000	32	121	0.000	32	121	0.000
13:00 - 14:00	32	121	0.000	32	121	0.000	32	121	0.000
14:00 - 15:00	32	121	0.000	32	121	0.000	32	121	0.000
15:00 - 16:00	32	121	0.001	32	121	0.000	32	121	0.001
16:00 - 17:00	32	121	0.001	32	121	0.000	32	121	0.001
17:00 - 18:00	32	121	0.000	32	121	0.000	32	121	0.000
18:00 - 19:00	32	121	0.000	32	121	0.000	32	121	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

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	32	121	0.001	32	121	0.030	32	121	0.031
08:00 - 09:00	32	121	0.003	32	121	0.037	32	121	0.040
09:00 - 10:00	32	121	0.002	32	121	0.013	32	121	0.015
10:00 - 11:00	32	121	0.005	32	121	0.005	32	121	0.010
11:00 - 12:00	32	121	0.006	32	121	0.006	32	121	0.012
12:00 - 13:00	32	121	0.005	32	121	0.006	32	121	0.011
13:00 - 14:00	32	121	0.009	32	121	0.004	32	121	0.013
14:00 - 15:00	32	121	0.008	32	121	0.007	32	121	0.015
15:00 - 16:00	32	121	0.031	32	121	0.005	32	121	0.036
16:00 - 17:00	32	121	0.019	32	121	0.004	32	121	0.023
17:00 - 18:00	32	121	0.016	32	121	0.001	32	121	0.017
18:00 - 19:00	32	121	0.017	32	121	0.002	32	121	0.019
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.122			0.120			0.242

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 TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 1.75

	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	32	121	0.106	32	121	0.479	32	121	0.585
08:00 - 09:00	32	121	0.218	32	121	0.747	32	121	0.965
09:00 - 10:00	32	121	0.196	32	121	0.269	32	121	0.465
10:00 - 11:00	32	121	0.187	32	121	0.235	32	121	0.422
11:00 - 12:00	32	121	0.197	32	121	0.211	32	121	0.408
12:00 - 13:00	32	121	0.229	32	121	0.216	32	121	0.445
13:00 - 14:00	32	121	0.233	32	121	0.221	32	121	0.454
14:00 - 15:00	32	121	0.242	32	121	0.278	32	121	0.520
15:00 - 16:00	32	121	0.587	32	121	0.287	32	121	0.874
16:00 - 17:00	32	121	0.469	32	121	0.261	32	121	0.730
17:00 - 18:00	32	121	0.515	32	121	0.241	32	121	0.756
18:00 - 19:00	32	121	0.446	32	121	0.217	32	121	0.663
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.625			3.662			7.287

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 CARS
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	32	121	0.058	32	121	0.231	32	121	0.289
08:00 - 09:00	32	121	0.113	32	121	0.307	32	121	0.420
09:00 - 10:00	32	121	0.099	32	121	0.136	32	121	0.235
10:00 - 11:00	32	121	0.089	32	121	0.116	32	121	0.205
11:00 - 12:00	32	121	0.091	32	121	0.098	32	121	0.189
12:00 - 13:00	32	121	0.110	32	121	0.106	32	121	0.216
13:00 - 14:00	32	121	0.112	32	121	0.108	32	121	0.220
14:00 - 15:00	32	121	0.119	32	121	0.144	32	121	0.263
15:00 - 16:00	32	121	0.216	32	121	0.138	32	121	0.354
16:00 - 17:00	32	121	0.211	32	121	0.132	32	121	0.343
17:00 - 18:00	32	121	0.266	32	121	0.128	32	121	0.394
18:00 - 19:00	32	121	0.236	32	121	0.114	32	121	0.350
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.720			1.758			3.478

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 LGVS
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	32	121	0.010	32	121	0.042	32	121	0.052
08:00 - 09:00	32	121	0.019	32	121	0.033	32	121	0.052
09:00 - 10:00	32	121	0.018	32	121	0.016	32	121	0.034
10:00 - 11:00	32	121	0.023	32	121	0.025	32	121	0.048
11:00 - 12:00	32	121	0.024	32	121	0.022	32	121	0.046
12:00 - 13:00	32	121	0.026	32	121	0.023	32	121	0.049
13:00 - 14:00	32	121	0.024	32	121	0.026	32	121	0.050
14:00 - 15:00	32	121	0.021	32	121	0.023	32	121	0.044
15:00 - 16:00	32	121	0.023	32	121	0.017	32	121	0.040
16:00 - 17:00	32	121	0.026	32	121	0.013	32	121	0.039
17:00 - 18:00	32	121	0.035	32	121	0.014	32	121	0.049
18:00 - 19:00	32	121	0.022	32	121	0.014	32	121	0.036
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.271			0.268			0.539

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 MOTOR CYCLES
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	32	121	0.000	32	121	0.002	32	121	0.002
08:00 - 09:00	32	121	0.001	32	121	0.001	32	121	0.002
09:00 - 10:00	32	121	0.001	32	121	0.001	32	121	0.002
10:00 - 11:00	32	121	0.001	32	121	0.001	32	121	0.002
11:00 - 12:00	32	121	0.001	32	121	0.001	32	121	0.002
12:00 - 13:00	32	121	0.001	32	121	0.002	32	121	0.003
13:00 - 14:00	32	121	0.002	32	121	0.001	32	121	0.003
14:00 - 15:00	32	121	0.002	32	121	0.002	32	121	0.004
15:00 - 16:00	32	121	0.002	32	121	0.002	32	121	0.004
16:00 - 17:00	32	121	0.003	32	121	0.002	32	121	0.005
17:00 - 18:00	32	121	0.002	32	121	0.001	32	121	0.003
18:00 - 19:00	32	121	0.002	32	121	0.001	32	121	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.018			0.017			0.035

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.*

APPENDIX F. Junction Assessment Outputs

Junctions 11

PICADY 11 - Priority Intersection Module

Filename: Langley Vale Road_Site Access.j11
Path: T:\Projects\200000 Series\200788ITB - Langley Bottom Farm (Field)\Tech\Junction Assessments\Picady
Report generation date: 27/06/2025 11:28:20

»2030 | with Committed Development + Development (Vision) | AM
»2030 | with Committed Development + Development (Vision) | PM
»2030 Future Baseline + Committed Development + Development (Sensitivity) | | AM
»2030 Future Baseline + Committed Development + Development (Sensitivity) | | PM

Summary of junction performance

	AM				PM			
	Set ID	Queue (Veh)	Delay (s)	RFC	Set ID	Queue (Veh)	Delay (s)	RFC
	2030 - with Committed Development + Development (Vision)							
Stream B-AC	D5	0.3	20.62	0.23	D6	0.3	21.90	0.23
Stream C-AB		0.1	4.48	0.06		0.8	4.46	0.22
	2030 Future Baseline + Committed Development + Development (Sensitivity)							
Stream B-AC	D7	0.4	21.59	0.26	D8	0.4	23.66	0.27
Stream C-AB		0.1	4.47	0.06		2.3	5.58	0.37

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

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

File summary

File Description

Title	
Location	
Site number	
Date	12/03/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	I-TRANSPORT\basingstoke.hotdesk
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D1	2025 Baseline		AM	ONE HOUR	07:45	09:15	15	✓	✓
D2	2025 Baseline		PM	ONE HOUR	16:45	18:15	15	✓	✓
D3	2030 Future Baseline		AM	ONE HOUR	07:45	09:15	15	✓	✓
D4	2030 Future Baseline		PM	ONE HOUR	16:45	18:15	15	✓	✓
D5	2030	with Committed Development + Development (Vision)	AM	ONE HOUR	07:45	09:15	15	✓	✓
D6	2030	with Committed Development + Development (Vision)	PM	ONE HOUR	16:45	18:15	15	✓	✓
D7	2030 Future Baseline + Committed Development + Development (Sensitivity)		AM	ONE HOUR	07:45	09:15	15	✓	✓
D8	2030 Future Baseline + Committed Development + Development (Sensitivity)		PM	ONE HOUR	16:45	18:15	15	✓	✓

Analysis Set Details

ID	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	✓	D5,D6,D7,D8	100.000	100.000

2030 | with Committed Development + Development (Vision) | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D5 - 2030 | with Committed Development + Development (Vision) | AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.68	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.68	A

Arms

Arms

Arm	Name	Description	Arm type
A	Langley Vale Road (N)		Major
B	Site Access		Minor
C	Langley Vale Road (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Langley Vale Road (S)	6.00			0.0	✓	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 - Site Access	One lane	3.00	49	33

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	510	0.093	0.235	0.148	0.335
B-C	645	0.099	0.250	-	-
C-B	574	0.222	0.222	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D5	2030	with Committed Development + Development (Vision)	AM	ONE HOUR	07:45	09:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Langley Vale Road (N)		ONE HOUR	✓	405	100.000
B - Site Access		ONE HOUR	✓	48	100.000
C - Langley Vale Road (S)		ONE HOUR	✓	744	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Langley Vale Road (N)	B - Site Access	C - Langley Vale Road (S)
From	A - Langley Vale Road (N)	0	8	397
	B - Site Access	28	0	20
	C - Langley Vale Road (S)	738	6	0

Vehicle Mix

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

Heavy Vehicle %

		To		
		A - Langley Vale Road (N)	B - Site Access	C - Langley Vale Road (S)
From	A - Langley Vale Road (N)	0	0	46
	B - Site Access	0	0	0
	C - Langley Vale Road (S)	60	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.23	20.62	0.3	C	48	48
C-AB	0.06	4.48	0.1	A	38	38
C-A					706	706
A-B					8	8
A-C					397	397

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	43	11	0.00	297	0.145	43	0.1	0.2	14.157	B
C-AB	25	6	0.00	851	0.029	25	0.0	0.0	4.301	A
C-A	644	161	0.00			644				
A-B	7	2	0.00			7				
A-C	357	89	0.00			357				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	53	13	0.00	227	0.232	52	0.2	0.3	20.497	C
C-AB	52	13	0.00	932	0.056	52	0.0	0.1	4.039	A
C-A	767	192	0.00			767				
A-B	9	2	0.00			9				
A-C	437	109	0.00			437				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	53	13	0.00	227	0.232	53	0.3	0.3	20.616	C
C-AB	52	13	0.00	932	0.056	52	0.1	0.1	4.091	A
C-A	767	192	0.00			767				
A-B	9	2	0.00			9				
A-C	437	109	0.00			437				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	43	11	0.00	297	0.145	44	0.3	0.2	14.241	B
C-AB	25	6	0.00	850	0.029	25	0.1	0.0	4.477	A
C-A	644	161	0.00			644				
A-B	7	2	0.00			7				
A-C	357	89	0.00			357				

2030 | with Committed Development + Development (Vision) | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D6 - 2030 | with Committed Development + Development (Vision) | PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.03	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.03	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D6	2030	with Committed Development + Development (Vision)	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Langley Vale Road (N)		ONE HOUR	✓	361	100.000
B - Site Access		ONE HOUR	✓	45	100.000
C - Langley Vale Road (S)		ONE HOUR	✓	894	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Langley Vale Road (N)	B - Site Access	C - Langley Vale Road (S)
From	A - Langley Vale Road (N)	0	18	343
	B - Site Access	26	0	19
	C - Langley Vale Road (S)	881	13	0

Vehicle Mix

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

Heavy Vehicle %

		To		
		A - Langley Vale Road (N)	B - Site Access	C - Langley Vale Road (S)
From	A - Langley Vale Road (N)	0	0	42
	B - Site Access	0	0	0
	C - Langley Vale Road (S)	58	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.23	21.90	0.3	C	45	45
C-AB	0.22	4.46	0.8	A	152	152
C-A					742	742
A-B					18	18
A-C					343	343

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	10	0.00	289	0.140	40	0.1	0.2	14.444	B
C-AB	76	19	0.00	936	0.082	76	0.1	0.1	4.135	A
C-A	727	182	0.00			727				
A-B	16	4	0.00			16				
A-C	308	77	0.00			308				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	50	12	0.00	215	0.231	49	0.2	0.3	21.675	C
C-AB	224	56	0.00	1037	0.216	221	0.1	0.8	4.373	A
C-A	760	190	0.00			760				
A-B	20	5	0.00			20				
A-C	378	94	0.00			378				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	50	12	0.00	214	0.232	50	0.3	0.3	21.897	C
C-AB	228	57	0.00	1038	0.220	228	0.8	0.8	4.464	A
C-A	756	189	0.00			756				
A-B	20	5	0.00			20				
A-C	378	94	0.00			378				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	10	0.00	289	0.140	41	0.3	0.2	14.570	B
C-AB	78	19	0.00	936	0.083	80	0.8	0.2	4.335	A
C-A	726	182	0.00			726				
A-B	16	4	0.00			16				
A-C	308	77	0.00			308				

2030 Future Baseline + Committed Development + Development (Sensitivity) | | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D7 - 2030 Future Baseline + Committed Development + Development (Sensitivity) | | AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.78	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.78	A

Traffic Demand

Demand Set Details

ID	Year	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D7	2030 Future Baseline + Committed Development + Development (Sensitivity)	AM	ONE HOUR	07:45	09:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Langley Vale Road (N)		ONE HOUR	✓	400	100.000
B - Site Access		ONE HOUR	✓	54	100.000
C - Langley Vale Road (S)		ONE HOUR	✓	744	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Langley Vale Road (N)	B - Site Access	C - Langley Vale Road (S)
From	A - Langley Vale Road (N)	0	3	397
	B - Site Access	32	0	22
	C - Langley Vale Road (S)	738	6	0

Vehicle Mix

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

Heavy Vehicle %

		To		
		A - Langley Vale Road (N)	B - Site Access	C - Langley Vale Road (S)
From	A - Langley Vale Road (N)	0	0	46
	B - Site Access	0	0	0
	C - Langley Vale Road (S)	60	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.26	21.59	0.4	C	54	54
C-AB	0.06	4.47	0.1	A	38	38
C-A					706	706
A-B					3	3
A-C					397	397

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	49	12	0.00	296	0.164	48	0.1	0.2	14.546	B
C-AB	25	6	0.00	851	0.029	24	0.0	0.0	4.298	A
C-A	644	161	0.00			644				
A-B	3	0.67	0.00			3				
A-C	357	89	0.00			357				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	59	15	0.00	226	0.263	59	0.2	0.3	21.435	C
C-AB	52	13	0.00	932	0.055	51	0.0	0.1	4.037	A
C-A	768	192	0.00			768				
A-B	3	0.83	0.00			3				
A-C	437	109	0.00			437				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	59	15	0.00	226	0.263	59	0.3	0.4	21.587	C
C-AB	52	13	0.00	932	0.056	52	0.1	0.1	4.089	A
C-A	767	192	0.00			767				
A-B	3	0.83	0.00			3				
A-C	437	109	0.00			437				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	49	12	0.00	295	0.164	49	0.4	0.2	14.649	B
C-AB	25	6	0.00	850	0.029	25	0.1	0.0	4.474	A
C-A	644	161	0.00			644				
A-B	3	0.67	0.00			3				
A-C	357	89	0.00			357				

2030 Future Baseline + Committed Development + Development (Sensitivity) | | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D8 - 2030 Future Baseline + Committed Development + Development (Sensitivity) | | PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.68	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.68	A

Traffic Demand

Demand Set Details

ID	Year	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D8	2030 Future Baseline + Committed Development + Development (Sensitivity)	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Langley Vale Road (N)		ONE HOUR	✓	372	100.000
B - Site Access		ONE HOUR	✓	50	100.000
C - Langley Vale Road (S)		ONE HOUR	✓	902	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - Langley Vale Road (N)	B - Site Access	C - Langley Vale Road (S)
From	A - Langley Vale Road (N)	0	29	343
	B - Site Access	29	0	21
	C - Langley Vale Road (S)	881	21	0

Vehicle Mix

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

Heavy Vehicle %

		To		
		A - Langley Vale Road (N)	B - Site Access	C - Langley Vale Road (S)
From	A - Langley Vale Road (N)	0	0	42
	B - Site Access	0	0	0
	C - Langley Vale Road (S)	58	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.27	23.66	0.4	C	50	50
C-AB	0.37	5.58	2.3	A	251	251
C-A					651	651
A-B					29	29
A-C					343	343

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	11	0.00	285	0.158	45	0.1	0.2	14.957	B
C-AB	124	31	0.00	936	0.132	123	0.1	0.3	4.378	A
C-A	687	172	0.00			687				
A-B	26	7	0.00			26				
A-C	308	77	0.00			308				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	14	0.00	209	0.263	54	0.2	0.3	23.185	C
C-AB	365	91	0.00	1037	0.352	359	0.3	2.1	5.278	A
C-A	628	157	0.00			628				
A-B	32	8	0.00			32				
A-C	378	94	0.00			378				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	14	0.00	207	0.266	55	0.3	0.4	23.662	C
C-AB	385	96	0.00	1041	0.369	384	2.1	2.3	5.579	A
C-A	609	152	0.00			609				
A-B	32	8	0.00			32				
A-C	378	94	0.00			378				

17:45 - 18:00

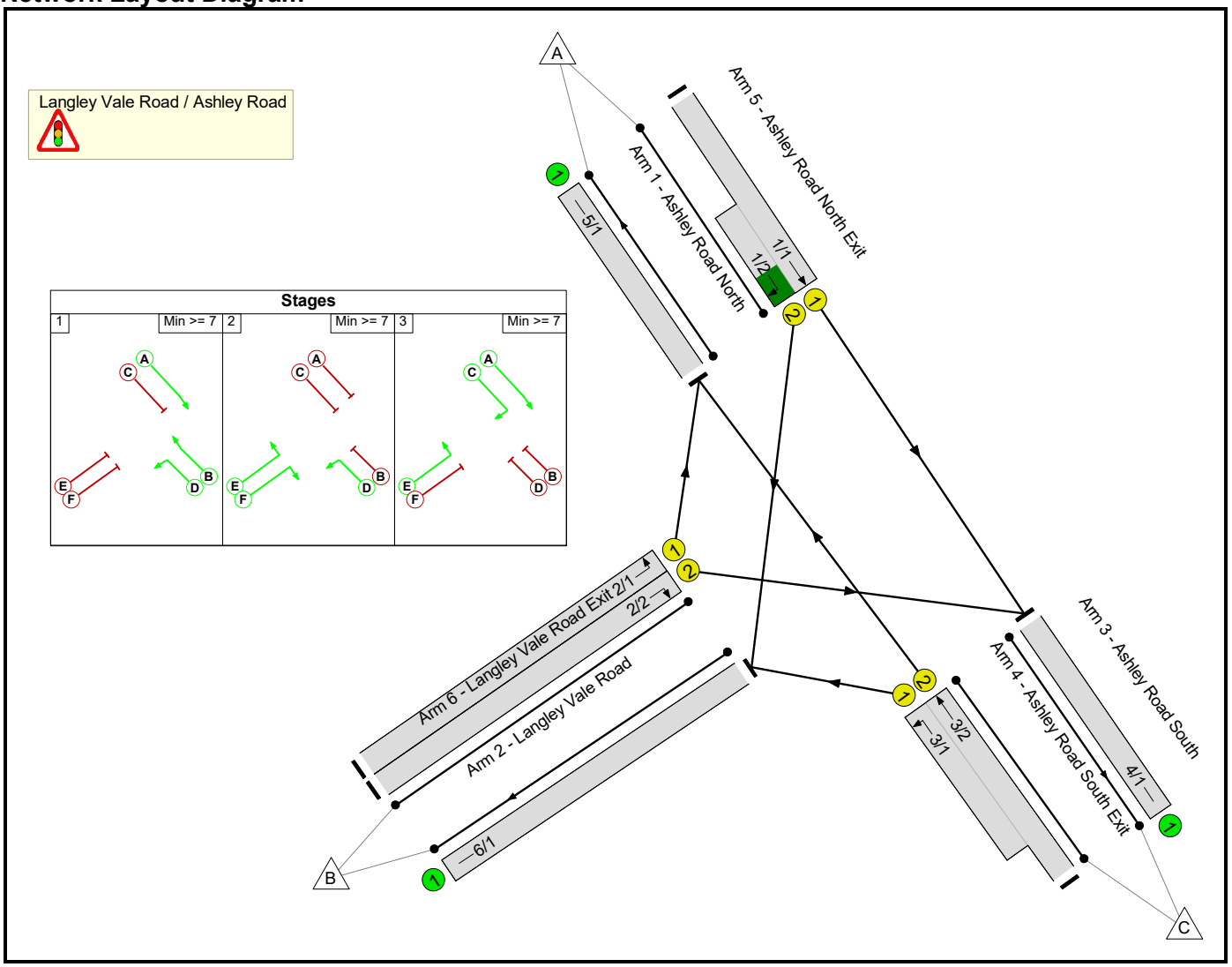
Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	11	0.00	283	0.159	46	0.4	0.2	15.199	C
C-AB	129	32	0.00	938	0.137	136	2.3	0.4	4.668	A
C-A	682	171	0.00			682				
A-B	26	7	0.00			26				
A-C	308	77	0.00			308				

Full Input Data And Results

User and Project Details

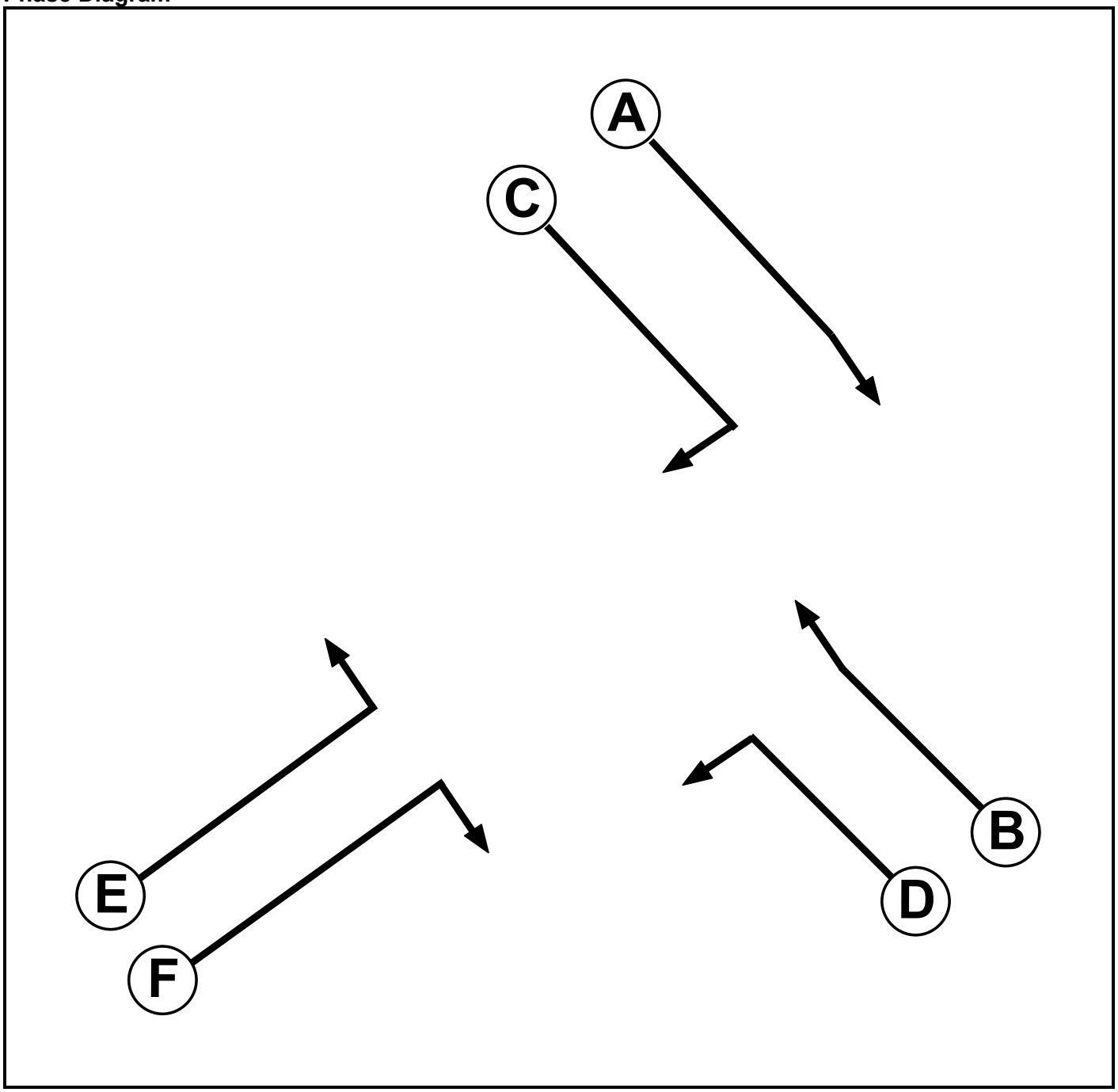
Project:	
Title:	
Location:	
Additional detail:	
File name:	Langley Vale Road - Ashlery Road Junction.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7

Full Input Data And Results

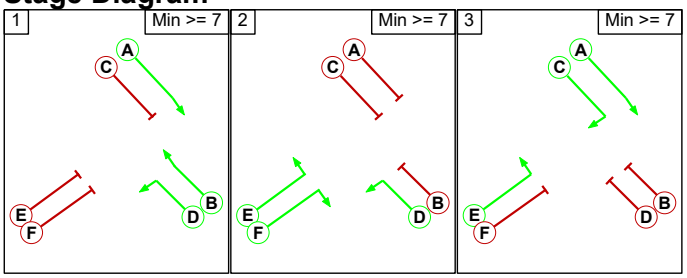
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F
A		-	-	-	-	5
B	-		7	-	7	7
C	-	7		7	-	7
D	-	-	7		-	-
E	-	7	-	-		-
F	7	6	7	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	A	Losing	2	2

Prohibited Stage Change

From Stage \ To Stage	1	2	3
1		7	7
2	7		7
3	7	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Langley Vale Road / Ashley Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Langley Vale Road / Ashley 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 (Ashley Road North)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Ahead	Inf
1/2 (Ashley Road North)	U	C	2	3	6.3	Geom	-	3.00	0.00	Y	Arm 6 Right	Inf
2/1 (Langley Vale Road)	U	E	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	15.00
2/2 (Langley Vale Road)	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Right	17.00
3/1 (Ashley Road South)	U	D	2	3	12.2	Geom	-	3.50	0.00	Y	Arm 6 Left	12.00
3/2 (Ashley Road South)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Ahead	Inf
4/1 (Ashley Road South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Ashley Road North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Langley Vale Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2025 Baseline AM'	08:00	09:00	01:00	
2: '2025 Baseline PM'	17:00	18:00	01:00	
3: '2030 Future Baseline AM'	08:00	09:00	01:00	
4: '2030 Future Baseline PM'	17:00	18:00	01:00	
5: '2030 With Dev + CD (Vision-Led) AM'	08:00	09:00	01:00	
6: '2030 With Dev + CD (Vision-Led) PM'	17:00	18:00	01:00	
7: '2030 With Dev + CD (Sensitivity) AM'	08:00	09:00	01:00	
8: '2030 With Dev + CD (Sensitivity) PM'	17:00	18:00	01:00	

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

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	132	72	204
	B	812	0	202	1014
	C	355	617	0	972
	Tot.	1167	749	274	2190

Traffic Lane Flows

Lane	Scenario 1: 2025 Baseline AM
Junction: Langley Vale Road / Ashley Road	
1/1 (with short)	262(In) 181(Out)
1/2 (short)	81
2/1	189
2/2	663
3/1 (short)	468
3/2 (with short)	765(In) 297(Out)
4/1	844
5/1	486
6/1	549

Full Input Data And Results

Lane Saturation Flows

Junction: Langley Vale Road / Ashley 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 (Ashley Road North)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
1/2 (Ashley Road North)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
2/1 (Langley Vale Road)	3.00	0.00	Y	Arm 5 Left	15.00	100.0 %	1741	1741
2/2 (Langley Vale Road)	3.00	0.00	Y	Arm 4 Right	17.00	100.0 %	1760	1760
3/1 (Ashley Road South)	3.50	0.00	Y	Arm 6 Left	12.00	100.0 %	1747	1747
3/2 (Ashley Road South)	3.50	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1965	1965
4/1 (Ashley Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Ashley Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Langley Vale Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2025 Baseline PM' (FG2: '2025 Baseline PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	125	351	476
	B	885	0	133	1018
	C	224	386	0	610
	Tot.	1109	511	484	2104

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2025 Baseline PM
Junction: Langley Vale Road / Ashley Road	
1/1 (with short)	415(In) 308(Out)
1/2 (short)	107
2/1	115
2/2	740
3/1 (short)	435
3/2 (with short)	635(In) 200(Out)
4/1	1048
5/1	315
6/1	542

Lane Saturation Flows

Junction: Langley Vale Road / Ashley 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 (Ashley Road North)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
1/2 (Ashley Road North)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
2/1 (Langley Vale Road)	3.00	0.00	Y	Arm 5 Left	15.00	100.0 %	1741	1741
2/2 (Langley Vale Road)	3.00	0.00	Y	Arm 4 Right	17.00	100.0 %	1760	1760
3/1 (Ashley Road South)	3.50	0.00	Y	Arm 6 Left	12.00	100.0 %	1747	1747
3/2 (Ashley Road South)	3.50	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1965	1965
4/1 (Ashley Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Ashley Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Langley Vale Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2030 Future Baseline AM' (FG3: '2030 Future Baseline AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	85	128	213
	B	847	0	215	1062
	C	370	645	0	1015
	Tot.	1217	730	343	2290

Traffic Lane Flows

Lane	Scenario 3: 2030 Future Baseline AM
Junction: Langley Vale Road / Ashley Road	
1/1 (with short)	274(In) 189(Out)
1/2 (short)	85
2/1	197
2/2	692
3/1 (short)	489
3/2 (with short)	799(In) 310(Out)
4/1	881
5/1	507
6/1	574

Full Input Data And Results

Lane Saturation Flows

Junction: Langley Vale Road / Ashley 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 (Ashley Road North)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
1/2 (Ashley Road North)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
2/1 (Langley Vale Road)	3.00	0.00	Y	Arm 5 Left	15.00	100.0 %	1741	1741
2/2 (Langley Vale Road)	3.00	0.00	Y	Arm 4 Right	17.00	100.0 %	1760	1760
3/1 (Ashley Road South)	3.50	0.00	Y	Arm 6 Left	12.00	100.0 %	1747	1747
3/2 (Ashley Road South)	3.50	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1965	1965
4/1 (Ashley Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Ashley Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Langley Vale Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2030 Future Baseline PM' (FG4: '2030 Future Baseline PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	110	367	477
	B	1041	0	138	1179
	C	234	528	0	762
	Tot.	1275	638	505	2418

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2030 Future Baseline PM
Junction: Langley Vale Road / Ashley Road	
1/1 (with short)	434(In) 322(Out)
1/2 (short)	112
2/1	120
2/2	774
3/1 (short)	455
3/2 (with short)	664(In) 209(Out)
4/1	1096
5/1	329
6/1	567

Lane Saturation Flows

Junction: Langley Vale Road / Ashley 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 (Ashley Road North)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
1/2 (Ashley Road North)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
2/1 (Langley Vale Road)	3.00	0.00	Y	Arm 5 Left	15.00	100.0 %	1741	1741
2/2 (Langley Vale Road)	3.00	0.00	Y	Arm 4 Right	17.00	100.0 %	1760	1760
3/1 (Ashley Road South)	3.50	0.00	Y	Arm 6 Left	12.00	100.0 %	1747	1747
3/2 (Ashley Road South)	3.50	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1965	1965
4/1 (Ashley Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Ashley Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Langley Vale Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: '2030 With Dev (Vision-Led) AM' (FG5: '2030 With Dev + Comm (Vision-Led) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	88	140	228
	B	865	0	229	1094
	C	370	652	0	1022
	Tot.	1235	740	369	2344

Traffic Lane Flows

Lane	Scenario 5: 2030 With Dev (Vision-Led) AM
Junction: Langley Vale Road / Ashley Road	
1/1 (with short)	276(In) 189(Out)
1/2 (short)	87
2/1	203
2/2	700
3/1 (short)	493
3/2 (with short)	803(In) 310(Out)
4/1	889
5/1	513
6/1	580

Full Input Data And Results

Lane Saturation Flows

Junction: Langley Vale Road / Ashley 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 (Ashley Road North)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
1/2 (Ashley Road North)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
2/1 (Langley Vale Road)	3.00	0.00	Y	Arm 5 Left	15.00	100.0 %	1741	1741
2/2 (Langley Vale Road)	3.00	0.00	Y	Arm 4 Right	17.00	100.0 %	1760	1760
3/1 (Ashley Road South)	3.50	0.00	Y	Arm 6 Left	12.00	100.0 %	1747	1747
3/2 (Ashley Road South)	3.50	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1965	1965
4/1 (Ashley Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Ashley Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Langley Vale Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2030 With Dev (Vision-Led) PM' (FG6: '2030 With Dev + Comm (Vision-Led) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	138	374	512
	B	122	0	140	262
	C	234	846	0	1080
	Tot.	356	984	514	1854

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2030 With Dev (Vision-Led) PM
Junction: Langley Vale Road / Ashley Road	
1/1 (with short)	439(In) 322(Out)
1/2 (short)	117
2/1	122
2/2	778
3/1 (short)	463
3/2 (with short)	672(In) 209(Out)
4/1	1100
5/1	331
6/1	580

Lane Saturation Flows

Junction: Langley Vale Road / Ashley 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 (Ashley Road North)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
1/2 (Ashley Road North)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
2/1 (Langley Vale Road)	3.00	0.00	Y	Arm 5 Left	15.00	100.0 %	1741	1741
2/2 (Langley Vale Road)	3.00	0.00	Y	Arm 4 Right	17.00	100.0 %	1760	1760
3/1 (Ashley Road South)	3.50	0.00	Y	Arm 6 Left	12.00	100.0 %	1747	1747
3/2 (Ashley Road South)	3.50	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1965	1965
4/1 (Ashley Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Ashley Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Langley Vale Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 7: '2030 With Dev (Sensitivity) AM' (FG7: '2030 With Dev + Comm (Sensitivity) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	88	140	228
	B	865	0	229	1094
	C	370	653	0	1023
	Tot.	1235	741	369	2345

Traffic Lane Flows

Lane	Scenario 7: 2030 With Dev (Sensitivity) AM
Junction: Langley Vale Road / Ashley Road	
1/1 (with short)	277(In) 189(Out)
1/2 (short)	88
2/1	204
2/2	701
3/1 (short)	493
3/2 (with short)	803(In) 310(Out)
4/1	890
5/1	514
6/1	581

Full Input Data And Results

Lane Saturation Flows

Junction: Langley Vale Road / Ashley 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 (Ashley Road North)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
1/2 (Ashley Road North)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
2/1 (Langley Vale Road)	3.00	0.00	Y	Arm 5 Left	15.00	100.0 %	1741	1741
2/2 (Langley Vale Road)	3.00	0.00	Y	Arm 4 Right	17.00	100.0 %	1760	1760
3/1 (Ashley Road South)	3.50	0.00	Y	Arm 6 Left	12.00	100.0 %	1747	1747
3/2 (Ashley Road South)	3.50	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1965	1965
4/1 (Ashley Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Ashley Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Langley Vale Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2030 With Dev (Sensitivity) PM' (FG8: '2030 With Dev + Comm (Sensitivity) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	140	364	504
	B	931	0	141	1072
	C	234	551	0	785
	Tot.	1165	691	505	2361

Full Input Data And Results

Traffic Lane Flows

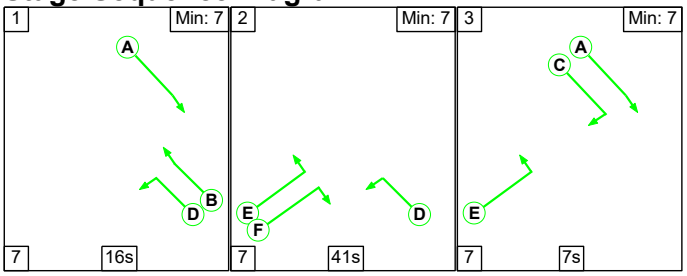
Lane	Scenario 8: 2030 With Dev (Sensitivity) PM
Junction: Langley Vale Road / Ashley Road	
1/1 (with short)	440(In) 322(Out)
1/2 (short)	118
2/1	123
2/2	778
3/1 (short)	463
3/2 (with short)	672(In) 209(Out)
4/1	1100
5/1	332
6/1	581

Lane Saturation Flows

Junction: Langley Vale Road / Ashley 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 (Ashley Road North)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915
1/2 (Ashley Road North)	3.00	0.00	Y	Arm 6 Right	Inf	100.0 %	1915	1915
2/1 (Langley Vale Road)	3.00	0.00	Y	Arm 5 Left	15.00	100.0 %	1741	1741
2/2 (Langley Vale Road)	3.00	0.00	Y	Arm 4 Right	17.00	100.0 %	1760	1760
3/1 (Ashley Road South)	3.50	0.00	Y	Arm 6 Left	12.00	100.0 %	1747	1747
3/2 (Ashley Road South)	3.50	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1965	1965
4/1 (Ashley Road South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Ashley Road North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Langley Vale Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

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

Stage Sequence Diagram

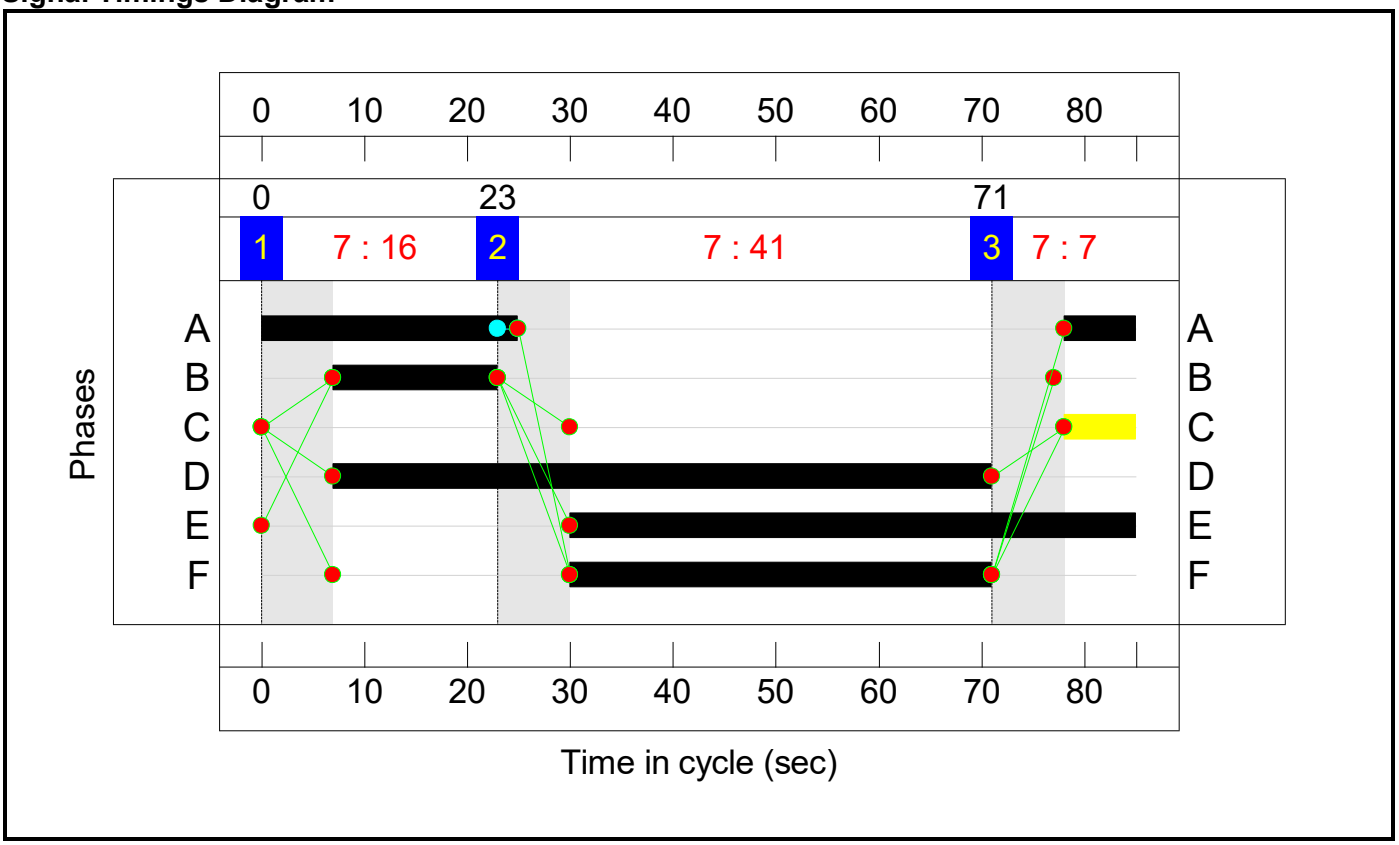


Full Input Data And Results

Stage Timings

Stage	1	2	3
Duration	16	41	7
Change Point	0	23	71

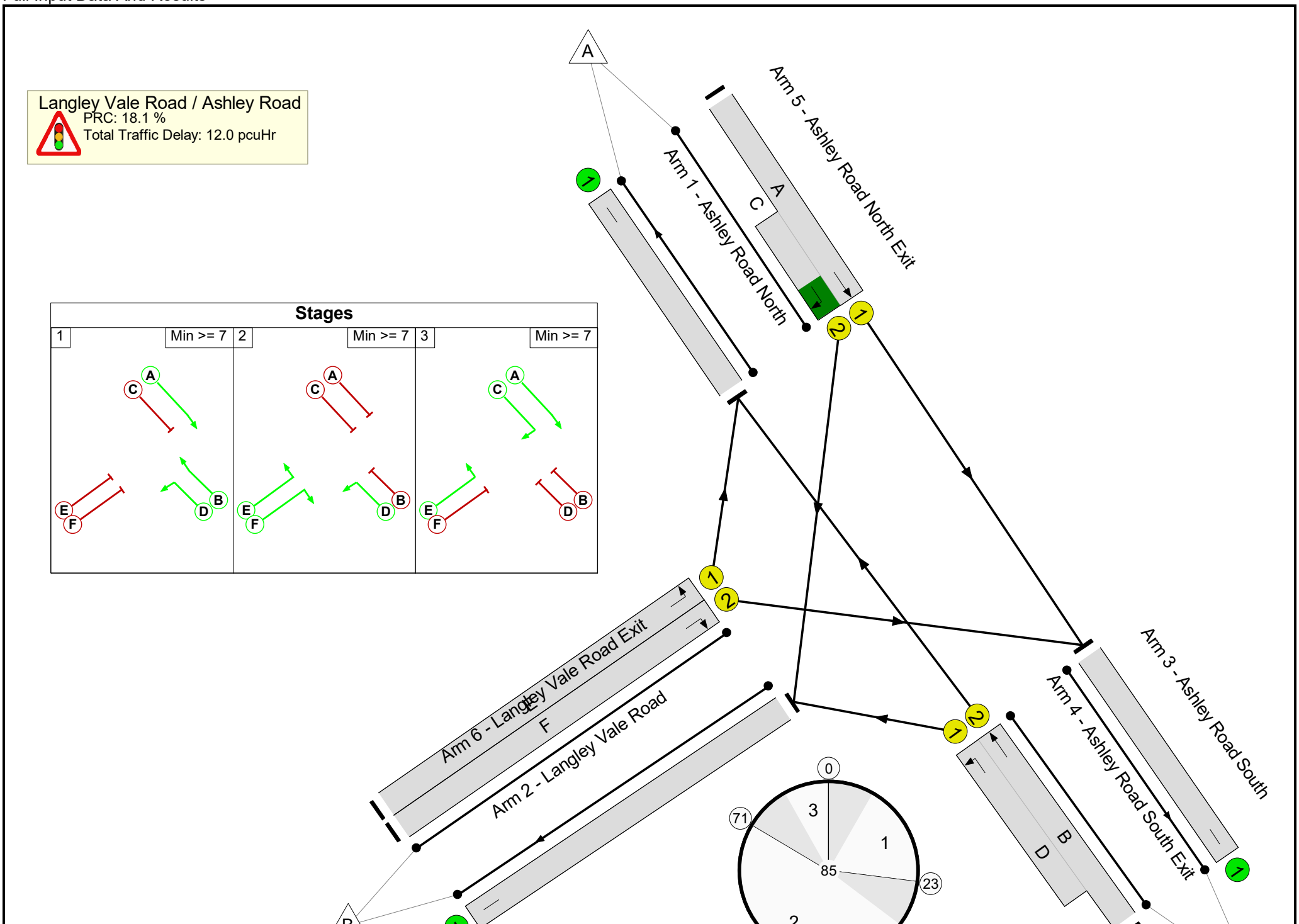
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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**	-	-		-	-	-	-	-	-	**76.2%**
Langley Vale Road / Ashley Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**76.2%**
1/1+1/2	Ashley Road North Ahead Right	U	N/A	N/A	A C		1	32:7	-	262	1915:1915	352+158	51.4 : 51.4%
2/1	Langley Vale Road Left	U	N/A	N/A	E		1	55	-	189	1741	1147	16.5%
2/2	Langley Vale Road Right	U	N/A	N/A	F		1	41	-	663	1760	870	76.2%
3/2+3/1	Ashley Road South Ahead Left	U	N/A	N/A	B D		1	16:64	-	765	1965:1747	393+619	75.6 : 75.6%
4/1	Ashley Road South Exit	U	N/A	N/A	-		-	-	-	844	Inf	Inf	0.0%
5/1	Ashley Road North Exit	U	N/A	N/A	-		-	-	-	486	Inf	Inf	0.0%
6/1	Langley Vale Road Exit	U	N/A	N/A	-		-	-	-	549	Inf	Inf	0.0%

Full Input Data And Results

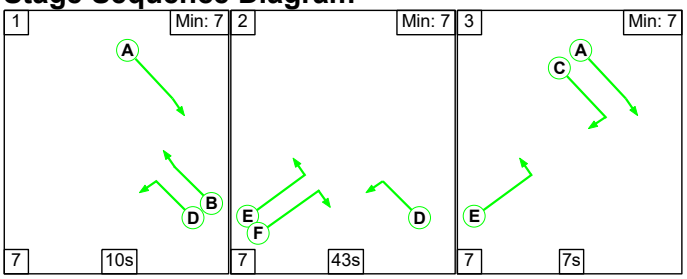
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**8.3**	**3.7**	**0.0**	**12.0**	**-**	**-**	**-**	**-**
Langley Vale Road / Ashley Road	**-**	**-**	**0**	**0**	**0**	**8.3**	**3.7**	**0.0**	**12.0**	**-**	**-**	**-**	**-**
1/1+1/2	262	262	-	-	-	1.7	0.5	-	2.3	30.9	2.9	0.5	3.4
2/1	189	189	-	-	-	0.3	0.1	-	0.4	7.4	1.7	0.1	1.8
2/2	663	663	-	-	-	3.2	1.6	-	4.8	26.0	12.5	1.6	14.1
3/2+3/1	765	765	-	-	-	3.1	1.5	-	4.6	21.6	6.6	1.5	8.1
4/1	844	844	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	486	486	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	549	549	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 18.1 Total Delay for Signalled Lanes (pcuHr): 12.03 Cycle Time (s): 85
PRC Over All Lanes (%): 18.1 Total Delay Over All Lanes(pcuHr): 12.03

Full Input Data And Results

Scenario 2: '2025 Baseline PM' (FG2: '2025 Baseline PM', Plan 1: 'Network Control Plan 1')

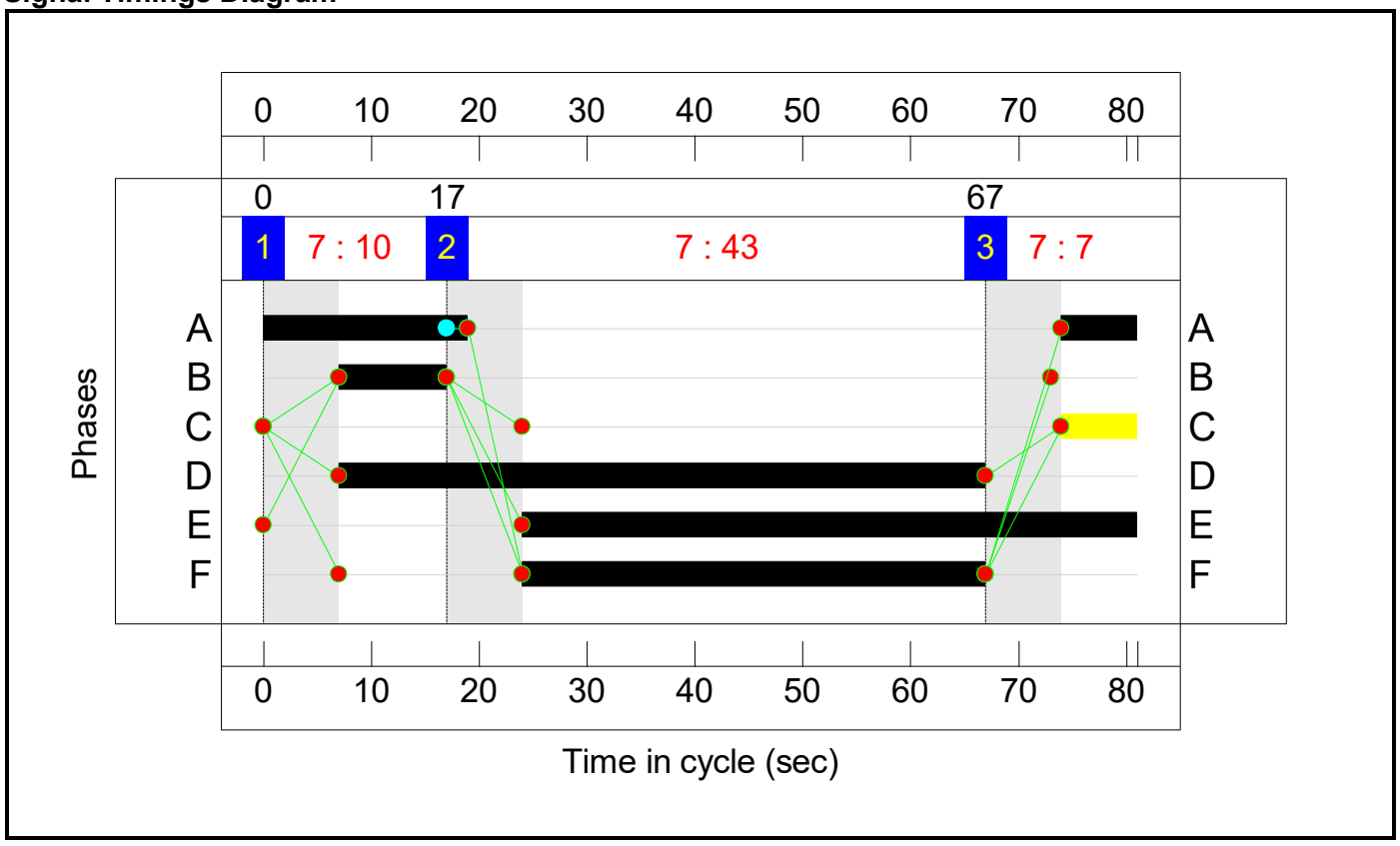
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	10	43	7
Change Point	0	17	67

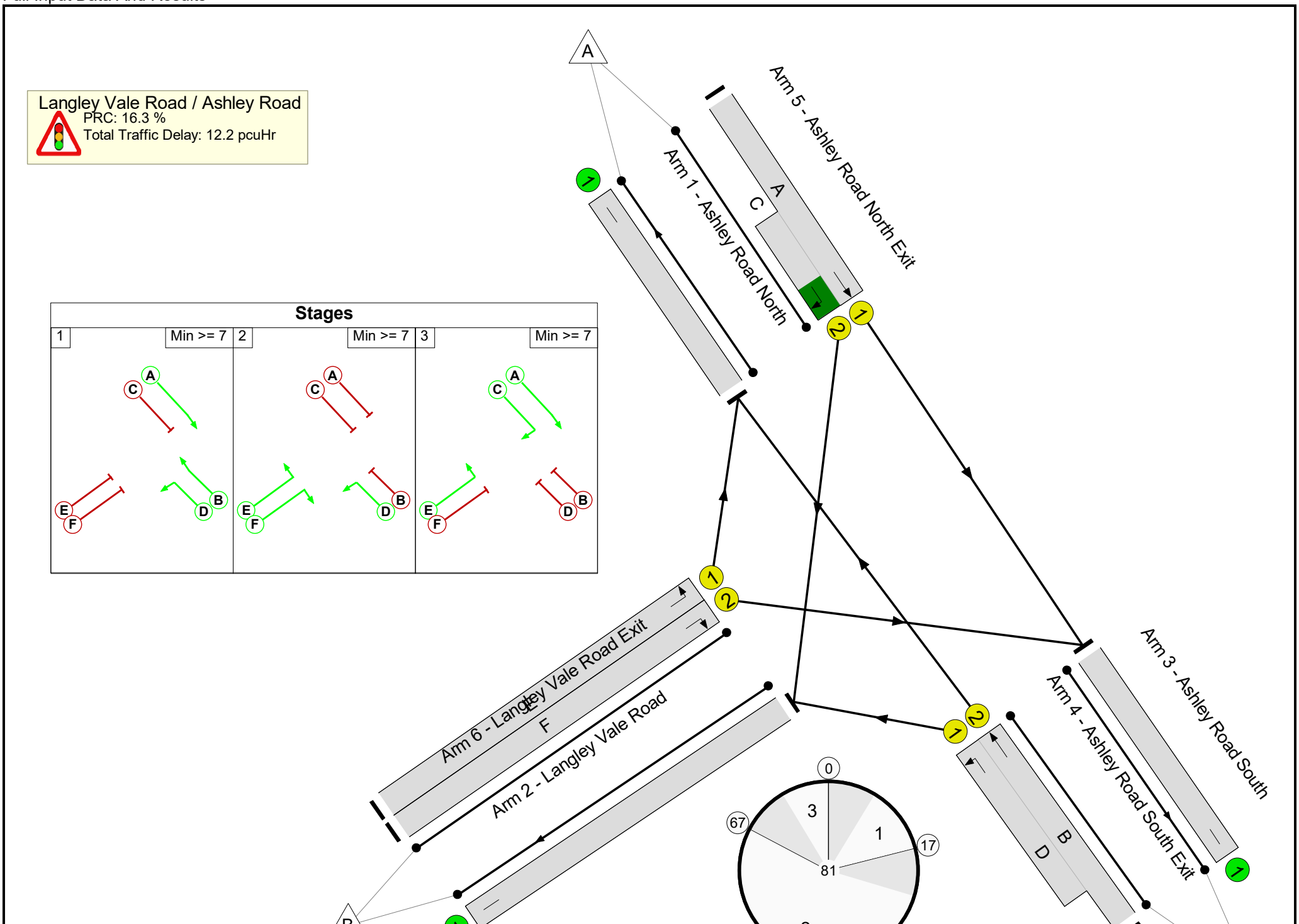
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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**	-	-		-	-	-	-	-	-	**77.4%**
Langley Vale Road / Ashley Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**77.4%**
1/1+1/2	Ashley Road North Ahead Right	U	N/A	N/A	A C		1	26:7	-	415	1915:1915	557+165	55.3 : 64.7%
2/1	Langley Vale Road Left	U	N/A	N/A	E		1	57	-	115	1741	1247	9.2%
2/2	Langley Vale Road Right	U	N/A	N/A	F		1	43	-	740	1760	956	77.4%
3/2+3/1	Ashley Road South Ahead Left	U	N/A	N/A	B D		1	10:60	-	635	1965:1747	267+580	74.9 : 74.9%
4/1	Ashley Road South Exit	U	N/A	N/A	-		-	-	-	1048	Inf	Inf	0.0%
5/1	Ashley Road North Exit	U	N/A	N/A	-		-	-	-	315	Inf	Inf	0.0%
6/1	Langley Vale Road Exit	U	N/A	N/A	-		-	-	-	542	Inf	Inf	0.0%

Full Input Data And Results

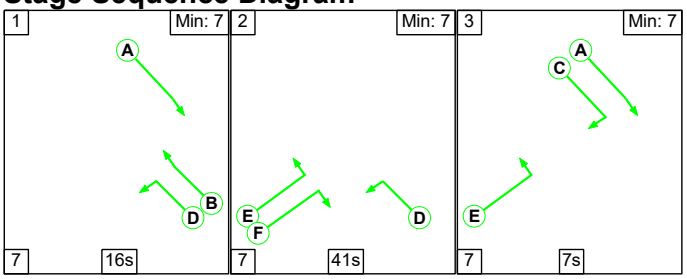
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**8.3**	**3.9**	**0.0**	**12.2**	**-**	**-**	**-**	**-**
Langley Vale Road / Ashley Road	**-**	**-**	**0**	**0**	**0**	**8.3**	**3.9**	**0.0**	**12.2**	**-**	**-**	**-**	**-**
1/1+1/2	415	415	-	-	-	2.9	0.7	-	3.6	31.0	5.5	0.7	6.1
2/1	115	115	-	-	-	0.1	0.1	-	0.2	5.1	0.8	0.1	0.8
2/2	740	740	-	-	-	3.0	1.7	-	4.7	22.8	13.0	1.7	14.6
3/2+3/1	635	635	-	-	-	2.3	1.5	-	3.7	21.2	4.3	1.5	5.8
4/1	1048	1048	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	315	315	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	542	542	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 16.3 Total Delay for Signalled Lanes (pcuHr): 12.16 Cycle Time (s): 81
PRC Over All Lanes (%): 16.3 Total Delay Over All Lanes(pcuHr): 12.16

Full Input Data And Results

Scenario 3: '2030 Future Baseline AM' (FG3: '2030 Future Baseline AM', Plan 1: 'Network Control Plan 1')

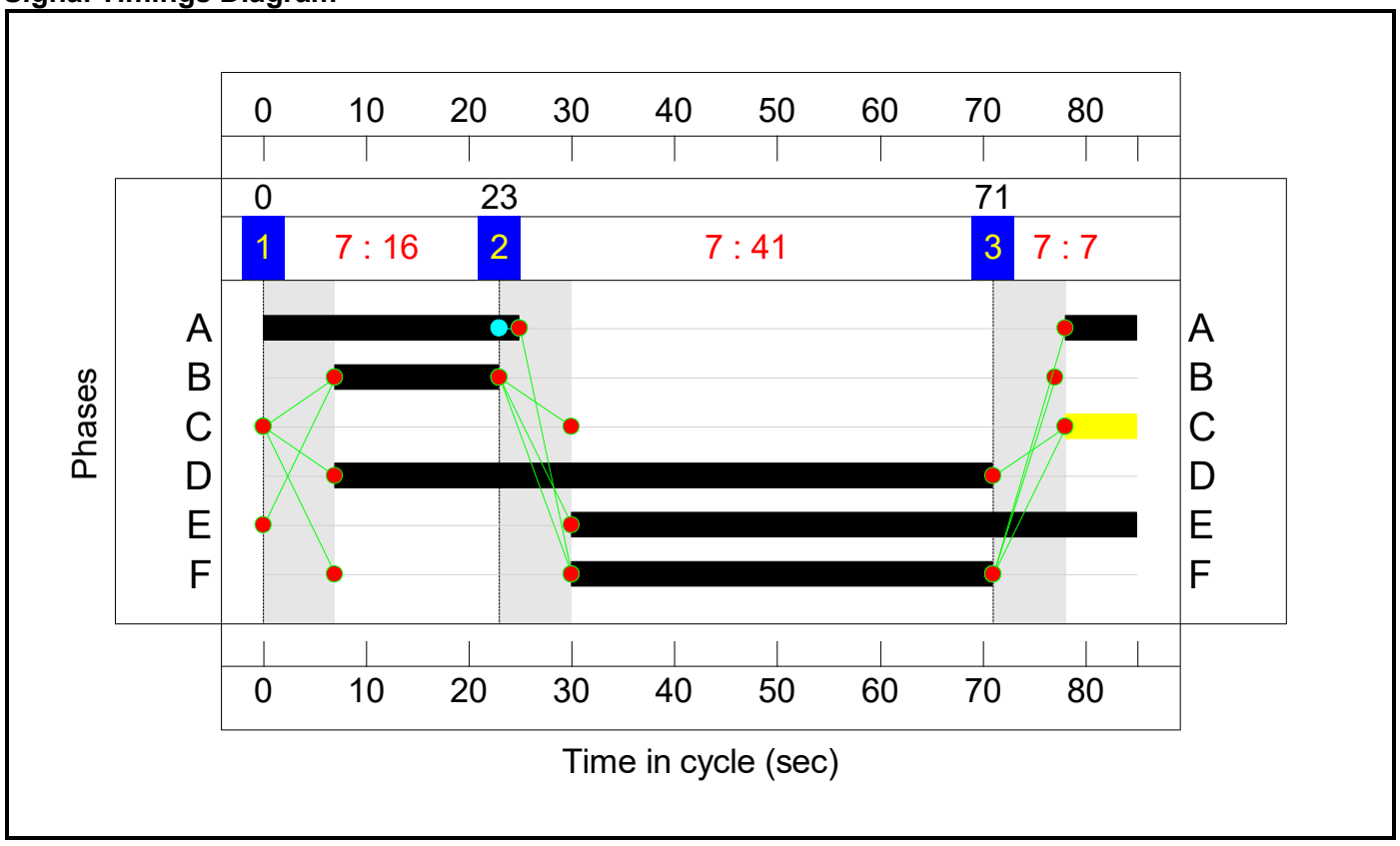
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	16	41	7
Change Point	0	23	71

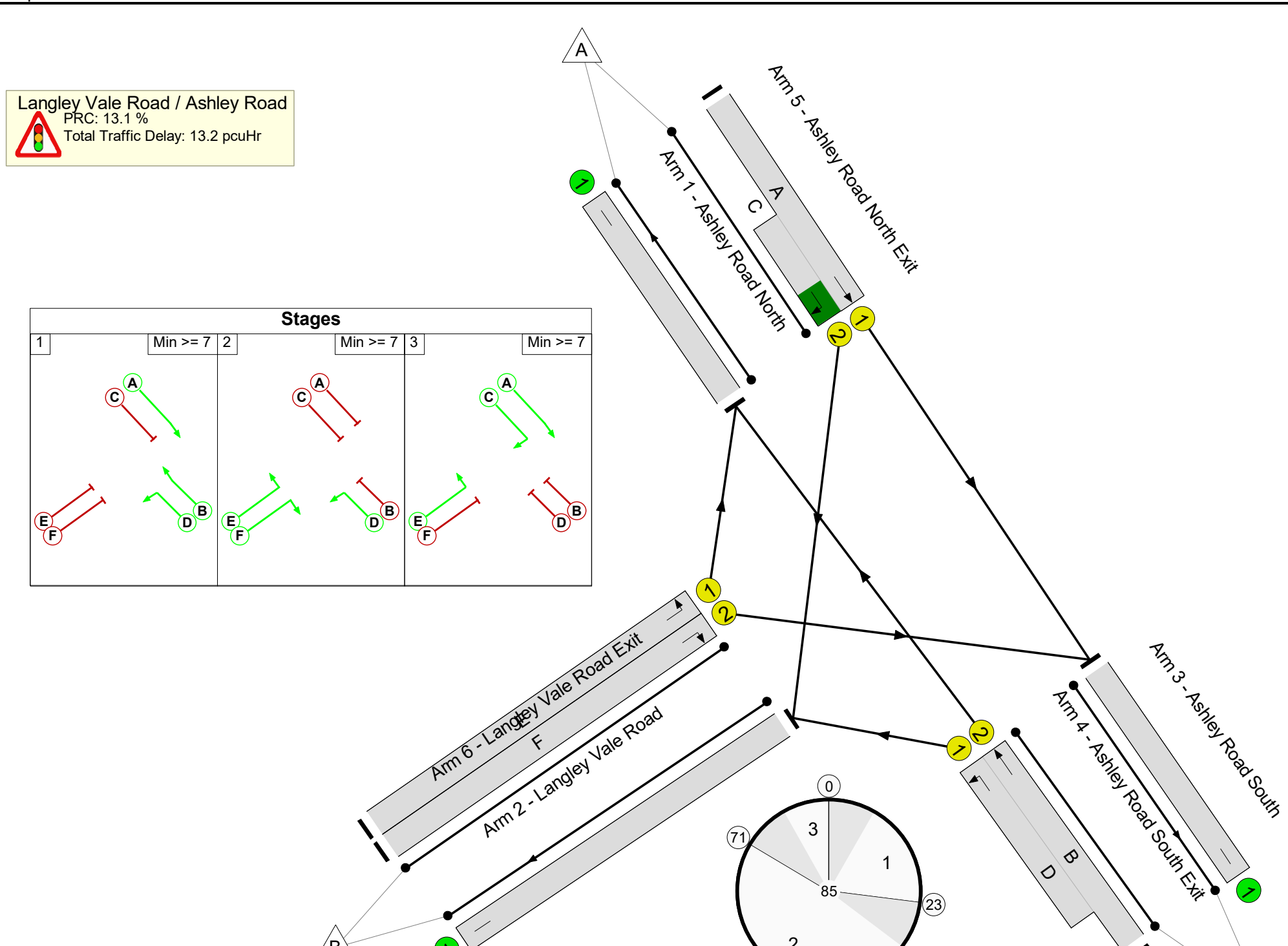
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.6%**
Langley Vale Road / Ashley Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.6%**
1/1+1/2	Ashley Road North Ahead Right	U	N/A	N/A	A C		1	32:7	-	274	1915:1915	351+158	53.9 : 53.9%
2/1	Langley Vale Road Left	U	N/A	N/A	E		1	55	-	197	1741	1147	17.2%
2/2	Langley Vale Road Right	U	N/A	N/A	F		1	41	-	692	1760	870	79.6%
3/2+3/1	Ashley Road South Ahead Left	U	N/A	N/A	B D		1	16:64	-	799	1965:1747	393+620	78.9 : 78.9%
4/1	Ashley Road South Exit	U	N/A	N/A	-		-	-	-	881	Inf	Inf	0.0%
5/1	Ashley Road North Exit	U	N/A	N/A	-		-	-	-	507	Inf	Inf	0.0%
6/1	Langley Vale Road Exit	U	N/A	N/A	-		-	-	-	574	Inf	Inf	0.0%

Full Input Data And Results

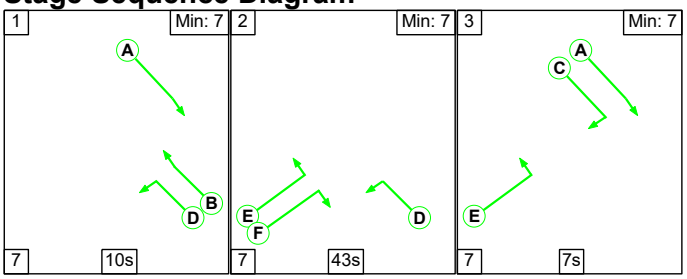
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**8.8**	**4.4**	**0.0**	**13.2**	**-**	**-**	**-**	**-**
Langley Vale Road / Ashley Road	**-**	**-**	**0**	**0**	**0**	**8.8**	**4.4**	**0.0**	**13.2**	**-**	**-**	**-**	**-**
1/1+1/2	274	274	-	-	-	1.8	0.6	-	2.4	31.5	3.0	0.6	3.6
2/1	197	197	-	-	-	0.3	0.1	-	0.4	7.5	1.8	0.1	1.9
2/2	692	692	-	-	-	3.4	1.9	-	5.4	27.8	13.5	1.9	15.4
3/2+3/1	799	799	-	-	-	3.2	1.8	-	5.1	22.8	6.9	1.8	8.7
4/1	881	881	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	507	507	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	574	574	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 13.1 Total Delay for Signalled Lanes (pcuHr): 13.22 Cycle Time (s): 85
PRC Over All Lanes (%): 13.1 Total Delay Over All Lanes(pcuHr): 13.22

Full Input Data And Results

Scenario 4: '2030 Future Baseline PM' (FG4: '2030 Future Baseline PM', Plan 1: 'Network Control Plan 1')

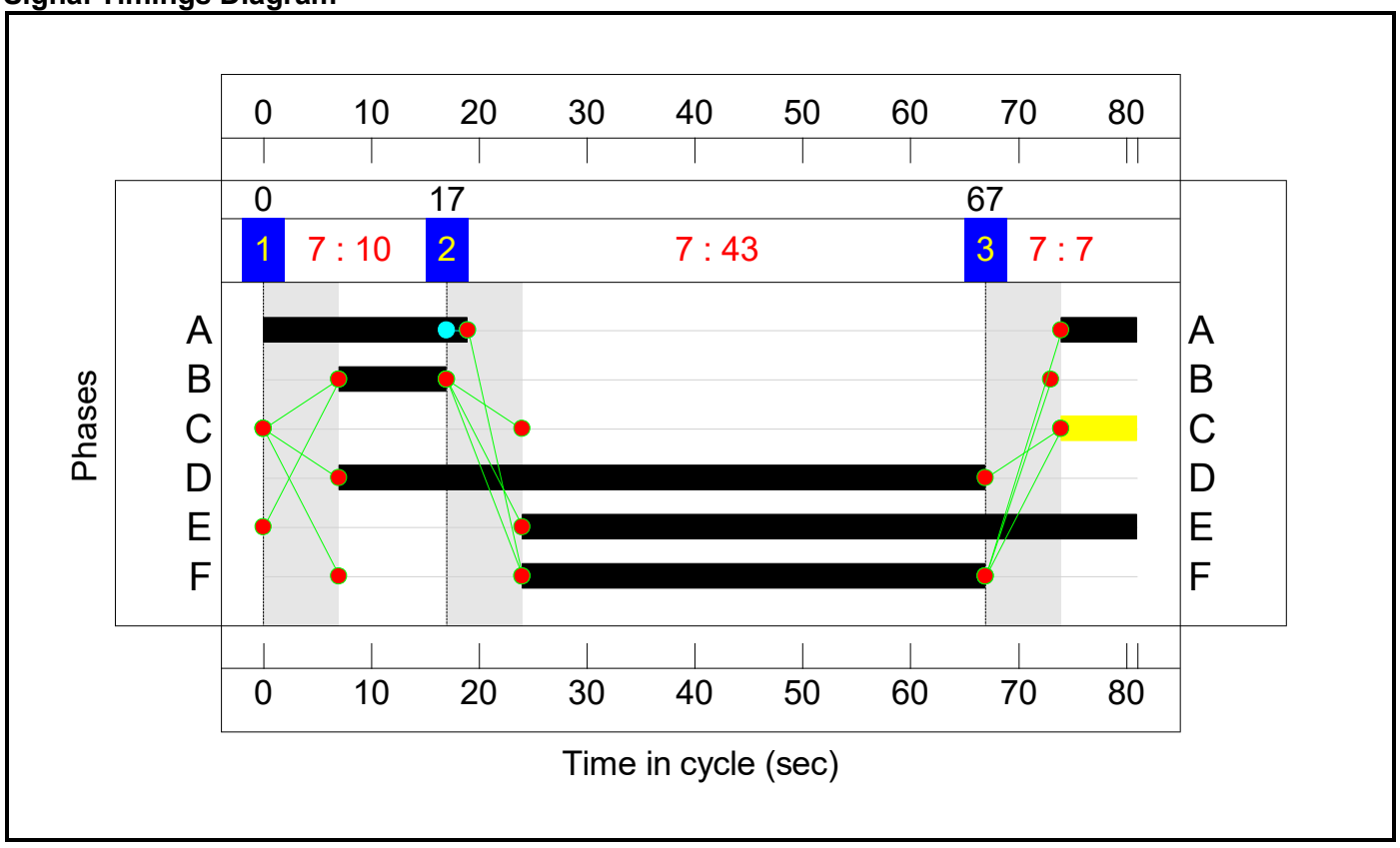
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	10	43	7
Change Point	0	17	67

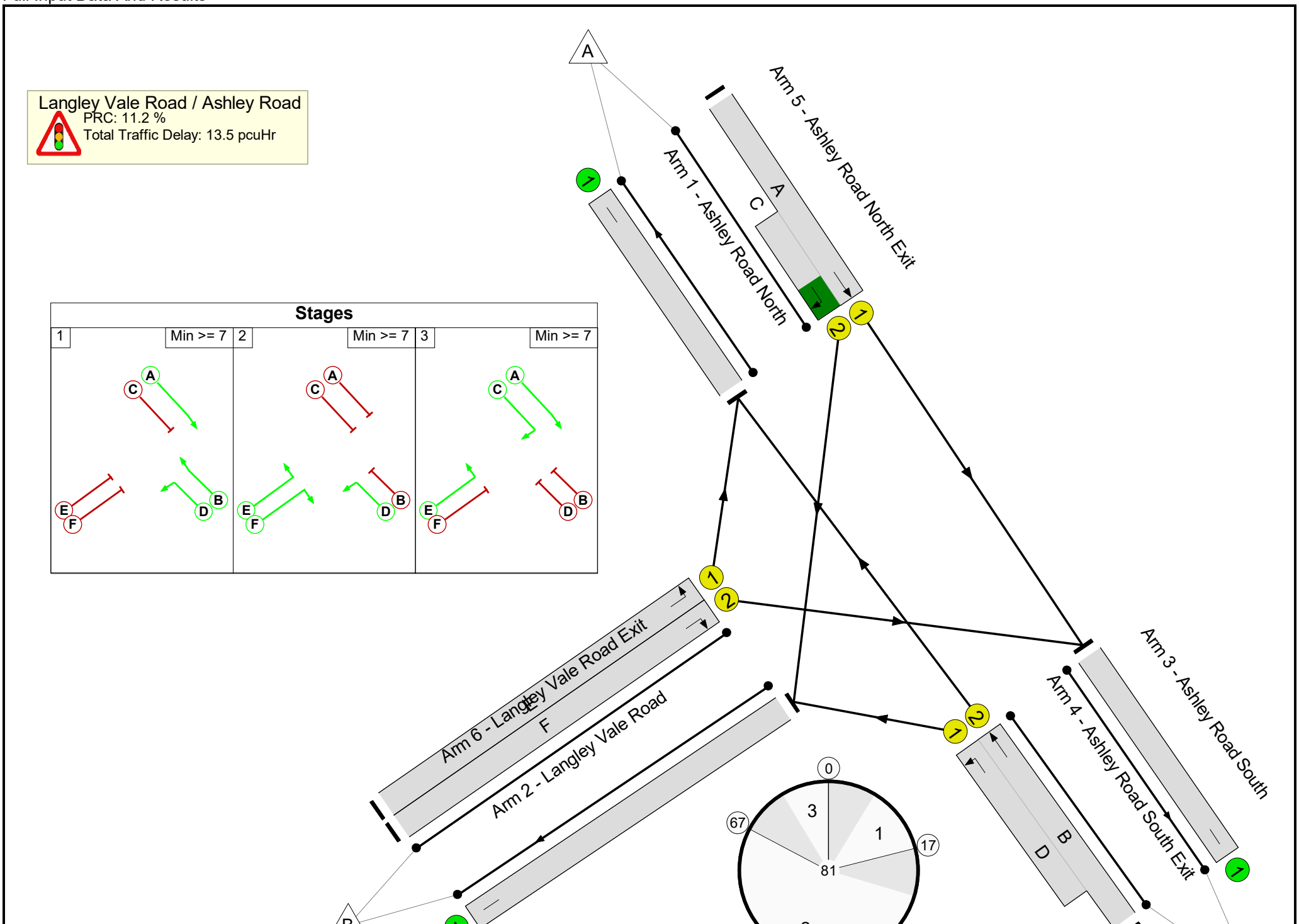
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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**	-	-		-	-	-	-	-	-	**81.0%**
Langley Vale Road / Ashley Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**81.0%**
1/1+1/2	Ashley Road North Ahead Right	U	N/A	N/A	A C		1	26:7	-	434	1915:1915	556+165	57.9 : 67.7%
2/1	Langley Vale Road Left	U	N/A	N/A	E		1	57	-	120	1741	1247	9.6%
2/2	Langley Vale Road Right	U	N/A	N/A	F		1	43	-	774	1760	956	81.0%
3/2+3/1	Ashley Road South Ahead Left	U	N/A	N/A	B D		1	10:60	-	664	1965:1747	267+581	78.3 : 78.3%
4/1	Ashley Road South Exit	U	N/A	N/A	-		-	-	-	1096	Inf	Inf	0.0%
5/1	Ashley Road North Exit	U	N/A	N/A	-		-	-	-	329	Inf	Inf	0.0%
6/1	Langley Vale Road Exit	U	N/A	N/A	-		-	-	-	567	Inf	Inf	0.0%

Full Input Data And Results

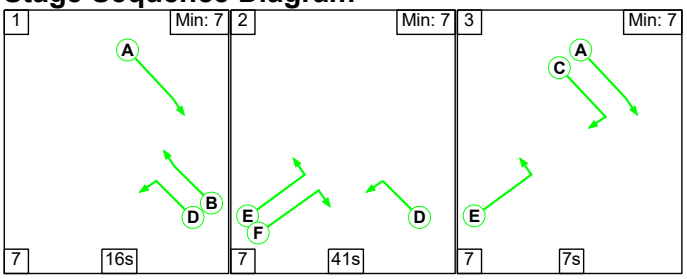
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**8.8**	**4.7**	**0.0**	**13.5**	**-**	**-**	**-**	**-**
Langley Vale Road / Ashley Road	**-**	**-**	**0**	**0**	**0**	**8.8**	**4.7**	**0.0**	**13.5**	**-**	**-**	**-**	**-**
1/1+1/2	434	434	-	-	-	3.1	0.7	-	3.8	31.5	5.7	0.7	6.5
2/1	120	120	-	-	-	0.1	0.1	-	0.2	5.1	0.8	0.1	0.9
2/2	774	774	-	-	-	3.2	2.1	-	5.3	24.8	14.2	2.1	16.3
3/2+3/1	664	664	-	-	-	2.4	1.8	-	4.2	22.6	4.5	1.8	6.3
4/1	1096	1096	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	329	329	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	567	567	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 11.2 Total Delay for Signalled Lanes (pcuHr): 13.46 Cycle Time (s): 81
PRC Over All Lanes (%): 11.2 Total Delay Over All Lanes(pcuHr): 13.46

Full Input Data And Results

Scenario 5: '2030 With Dev (Vision-Led) AM' (FG5: '2030 With Dev + Comm (Vision-Led) AM', Plan 1: 'Network Control Plan 1')

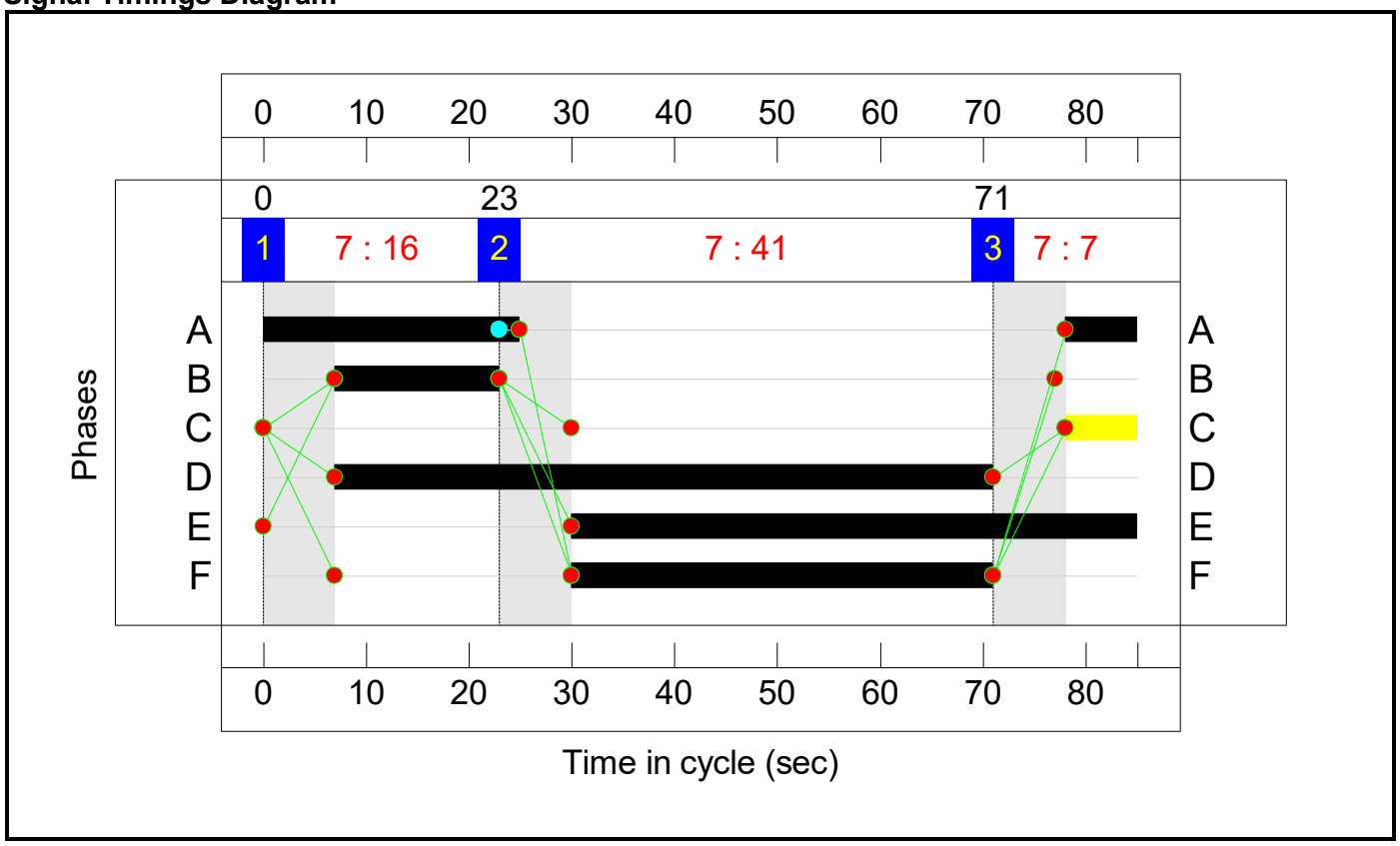
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	16	41	7
Change Point	0	23	71

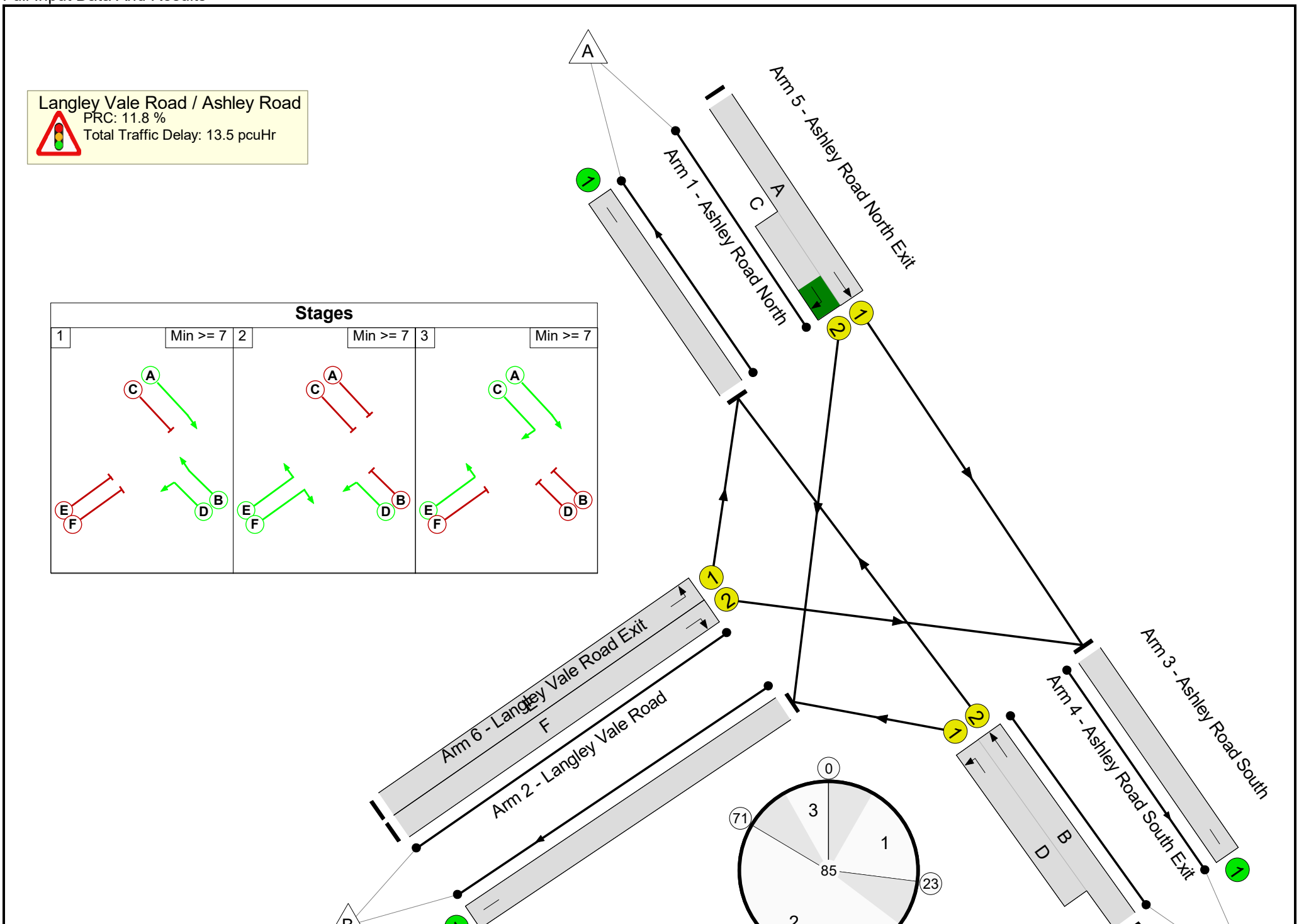
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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**	-	-		-	-	-	-	-	-	**80.5%**
Langley Vale Road / Ashley Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.5%**
1/1+1/2	Ashley Road North Ahead Right	U	N/A	N/A	A C		1	32:7	-	276	1915:1915	343+158	55.2 : 55.2%
2/1	Langley Vale Road Left	U	N/A	N/A	E		1	55	-	203	1741	1147	17.7%
2/2	Langley Vale Road Right	U	N/A	N/A	F		1	41	-	700	1760	870	80.5%
3/2+3/1	Ashley Road South Ahead Left	U	N/A	N/A	B D		1	16:64	-	803	1965:1747	393+625	78.9 : 78.9%
4/1	Ashley Road South Exit	U	N/A	N/A	-		-	-	-	889	Inf	Inf	0.0%
5/1	Ashley Road North Exit	U	N/A	N/A	-		-	-	-	513	Inf	Inf	0.0%
6/1	Langley Vale Road Exit	U	N/A	N/A	-		-	-	-	580	Inf	Inf	0.0%

Full Input Data And Results

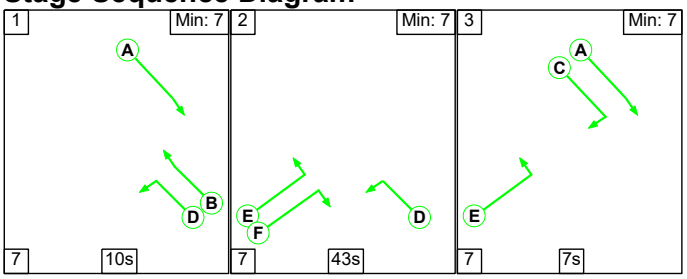
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**8.9**	**4.6**	**0.0**	**13.5**	**-**	**-**	**-**	**-**
Langley Vale Road / Ashley Road	**-**	**-**	**0**	**0**	**0**	**8.9**	**4.6**	**0.0**	**13.5**	**-**	**-**	**-**	**-**
1/1+1/2	276	276	-	-	-	1.8	0.6	-	2.4	31.9	3.0	0.6	3.6
2/1	203	203	-	-	-	0.3	0.1	-	0.4	7.5	1.8	0.1	1.9
2/2	700	700	-	-	-	3.5	2.0	-	5.5	28.4	13.8	2.0	15.8
3/2+3/1	803	803	-	-	-	3.2	1.8	-	5.1	22.7	6.9	1.8	8.7
4/1	889	889	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	513	513	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	580	580	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 11.8 Total Delay for Signalled Lanes (pcuHr): 13.46 Cycle Time (s): 85
PRC Over All Lanes (%): 11.8 Total Delay Over All Lanes(pcuHr): 13.46

Full Input Data And Results

Scenario 6: '2030 With Dev (Vision-Led) PM' (FG6: '2030 With Dev + Comm (Vision-Led) PM', Plan 1: 'Network Control Plan 1')

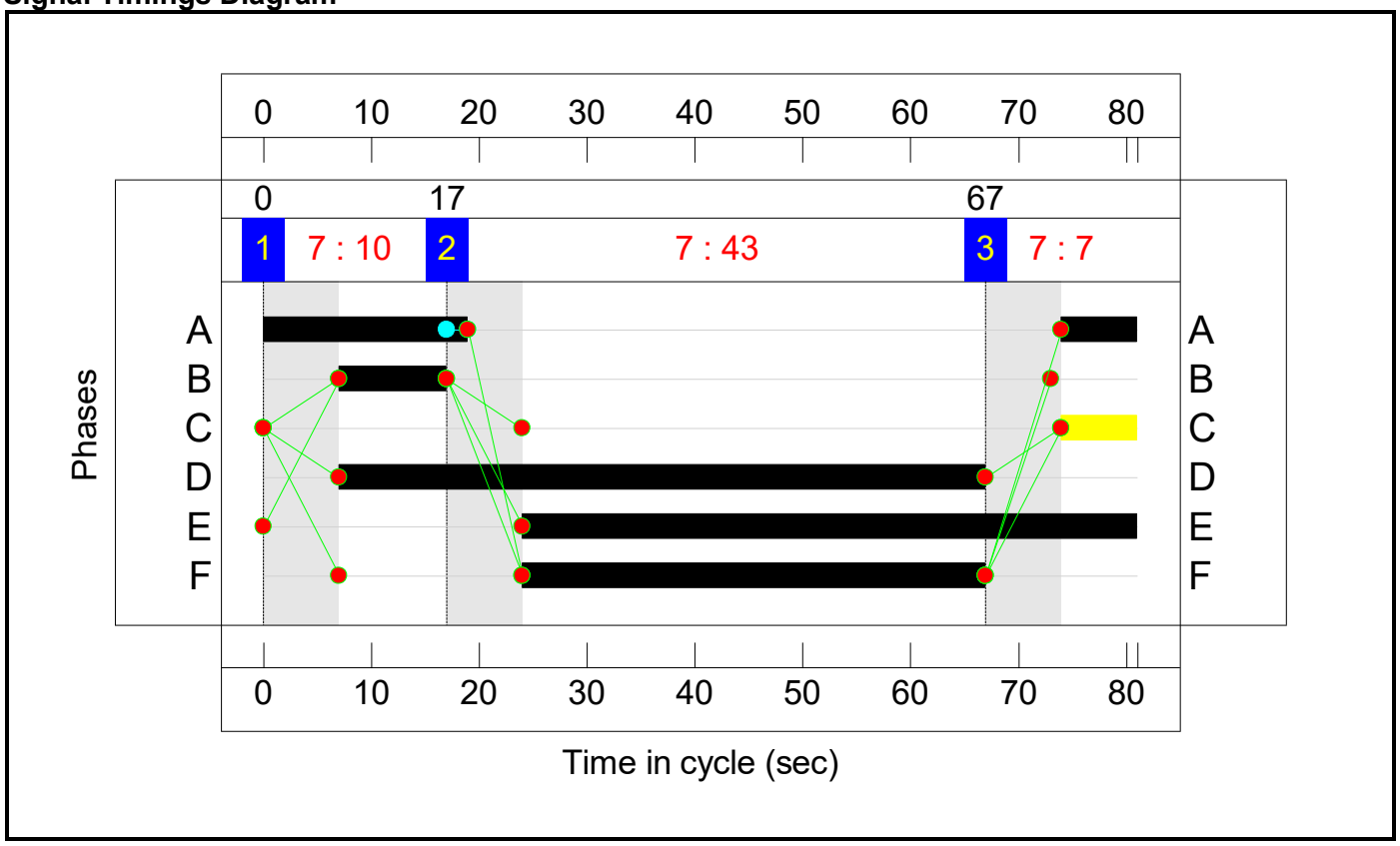
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	10	43	7
Change Point	0	17	67

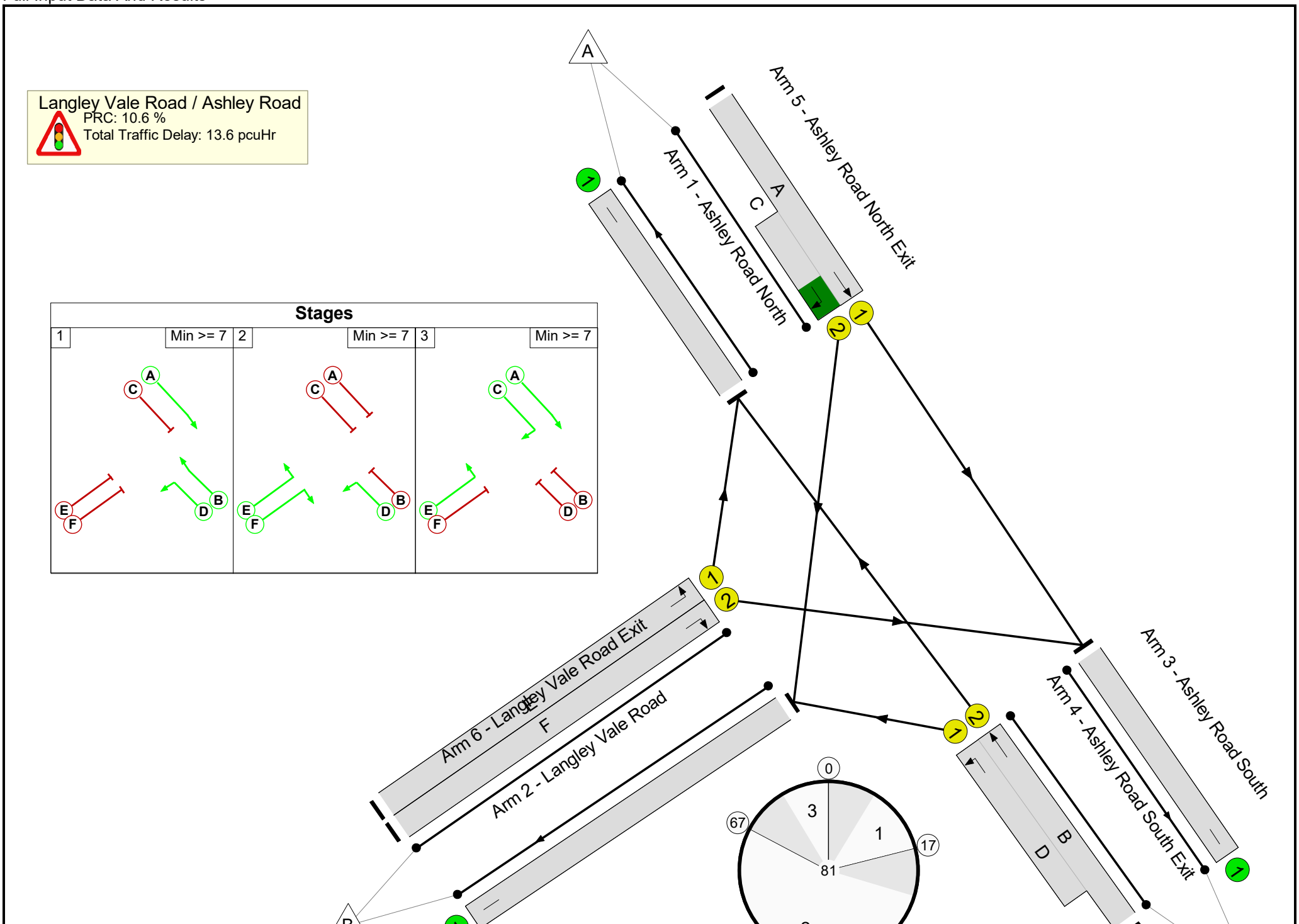
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.4%**
Langley Vale Road / Ashley Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.4%**
1/1+1/2	Ashley Road North Ahead Right	U	N/A	N/A	A C		1	26:7	-	439	1915:1915	553+165	58.2 : 70.7%
2/1	Langley Vale Road Left	U	N/A	N/A	E		1	57	-	122	1741	1247	9.8%
2/2	Langley Vale Road Right	U	N/A	N/A	F		1	43	-	778	1760	956	81.4%
3/2+3/1	Ashley Road South Ahead Left	U	N/A	N/A	B D		1	10:60	-	672	1965:1747	267+591	78.3 : 78.3%
4/1	Ashley Road South Exit	U	N/A	N/A	-		-	-	-	1100	Inf	Inf	0.0%
5/1	Ashley Road North Exit	U	N/A	N/A	-		-	-	-	331	Inf	Inf	0.0%
6/1	Langley Vale Road Exit	U	N/A	N/A	-		-	-	-	580	Inf	Inf	0.0%

Full Input Data And Results

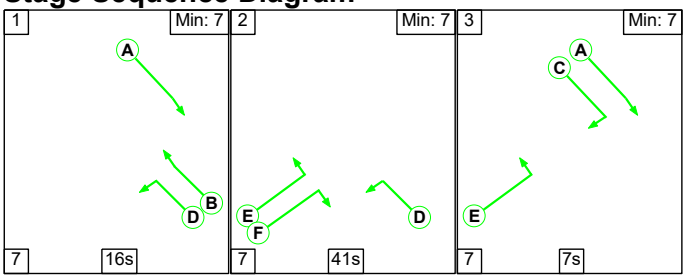
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**8.9**	**4.7**	**0.0**	**13.6**	**-**	**-**	**-**	**-**
Langley Vale Road / Ashley Road	**-**	**-**	**0**	**0**	**0**	**8.9**	**4.7**	**0.0**	**13.6**	**-**	**-**	**-**	**-**
1/1+1/2	439	439	-	-	-	3.1	0.8	-	3.9	31.9	5.7	0.8	6.5
2/1	122	122	-	-	-	0.1	0.1	-	0.2	5.1	0.8	0.1	0.9
2/2	778	778	-	-	-	3.3	2.1	-	5.4	25.0	14.3	2.1	16.4
3/2+3/1	672	672	-	-	-	2.4	1.8	-	4.2	22.3	4.5	1.8	6.3
4/1	1100	1100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	331	331	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	580	580	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 10.6 Total Delay for Signalled Lanes (pcuHr): 13.64 Cycle Time (s): 81
PRC Over All Lanes (%): 10.6 Total Delay Over All Lanes(pcuHr): 13.64

Full Input Data And Results

Scenario 7: '2030 With Dev (Sensitivity) AM' (FG7: '2030 With Dev + Comm (Sensitivity) AM', Plan 1: 'Network Control Plan 1')

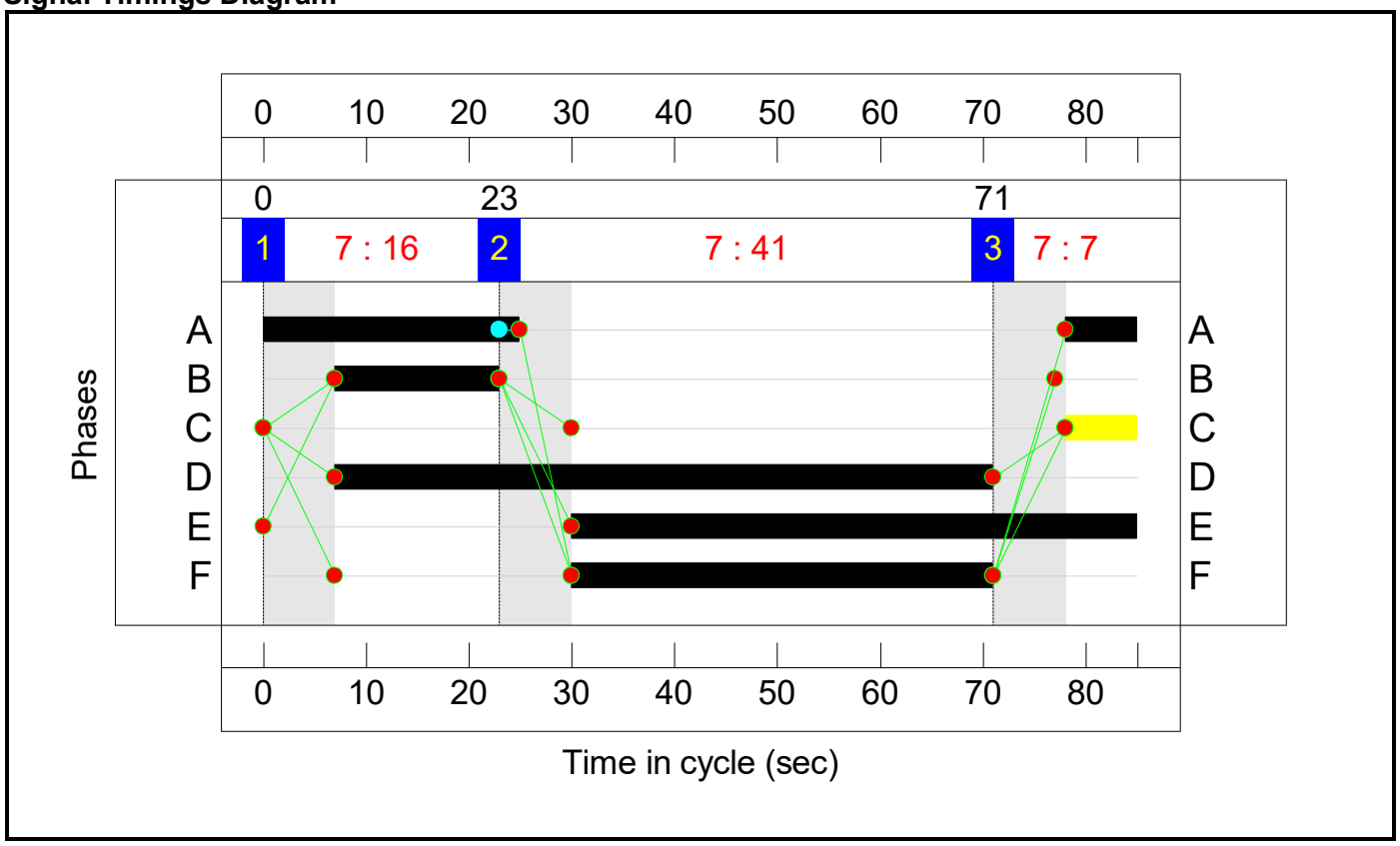
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	16	41	7
Change Point	0	23	71

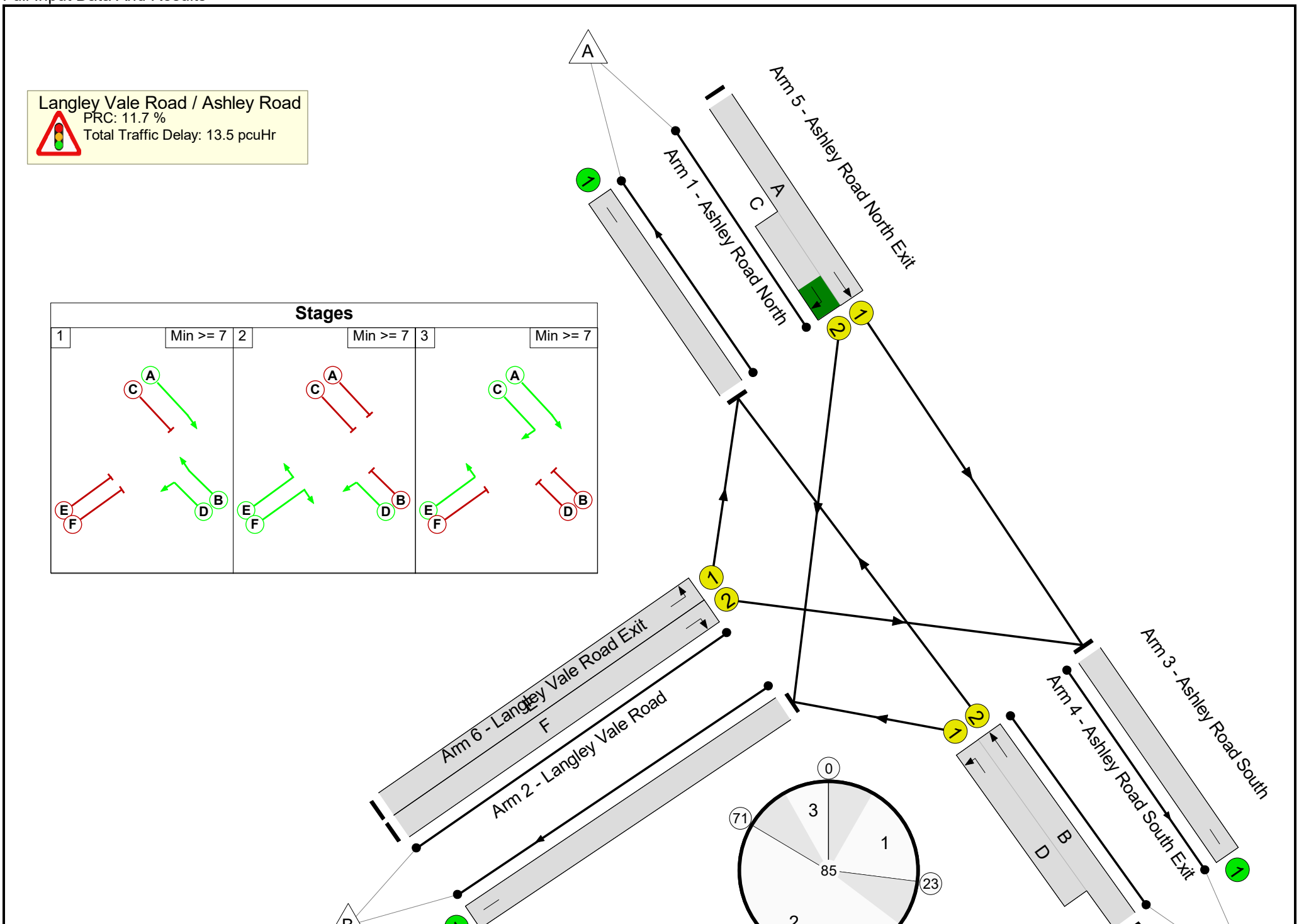
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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**	-	-		-	-	-	-	-	-	**80.6%**
Langley Vale Road / Ashley Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.6%**
1/1+1/2	Ashley Road North Ahead Right	U	N/A	N/A	A C		1	32:7	-	277	1915:1915	339+158	55.8 : 55.8%
2/1	Langley Vale Road Left	U	N/A	N/A	E		1	55	-	204	1741	1147	17.8%
2/2	Langley Vale Road Right	U	N/A	N/A	F		1	41	-	701	1760	870	80.6%
3/2+3/1	Ashley Road South Ahead Left	U	N/A	N/A	B D		1	16:64	-	803	1965:1747	393+625	78.9 : 78.9%
4/1	Ashley Road South Exit	U	N/A	N/A	-		-	-	-	890	Inf	Inf	0.0%
5/1	Ashley Road North Exit	U	N/A	N/A	-		-	-	-	514	Inf	Inf	0.0%
6/1	Langley Vale Road Exit	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%

Full Input Data And Results

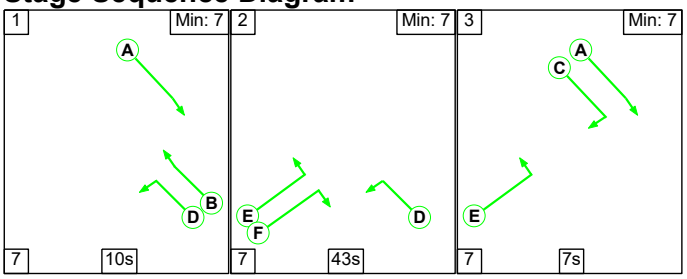
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**8.9**	**4.6**	**0.0**	**13.5**	**-**	**-**	**-**	**-**
Langley Vale Road / Ashley Road	**-**	**-**	**0**	**0**	**0**	**8.9**	**4.6**	**0.0**	**13.5**	**-**	**-**	**-**	**-**
1/1+1/2	277	277	-	-	-	1.8	0.6	-	2.5	32.1	3.0	0.6	3.6
2/1	204	204	-	-	-	0.3	0.1	-	0.4	7.5	1.8	0.1	1.9
2/2	701	701	-	-	-	3.5	2.0	-	5.5	28.5	13.8	2.0	15.9
3/2+3/1	803	803	-	-	-	3.2	1.8	-	5.1	22.7	6.9	1.8	8.7
4/1	890	890	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	514	514	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 11.7 Total Delay for Signalled Lanes (pcuHr): 13.51 Cycle Time (s): 85
PRC Over All Lanes (%): 11.7 Total Delay Over All Lanes(pcuHr): 13.51

Full Input Data And Results

Scenario 8: '2030 With Dev (Sensitivity) PM' (FG8: '2030 With Dev + Comm (Sensitivity) PM', Plan 1: 'Network Control Plan 1')

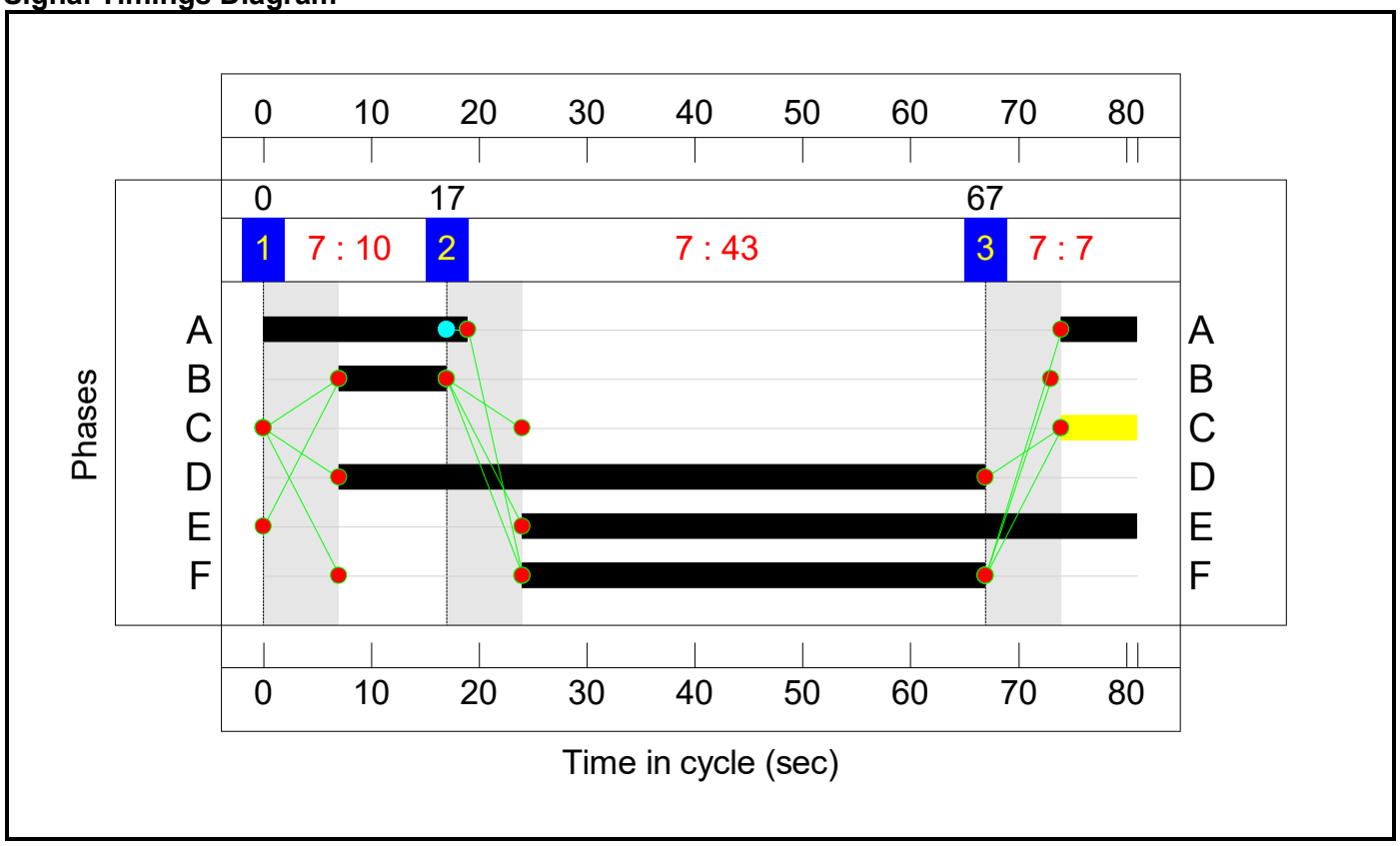
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	10	43	7
Change Point	0	17	67

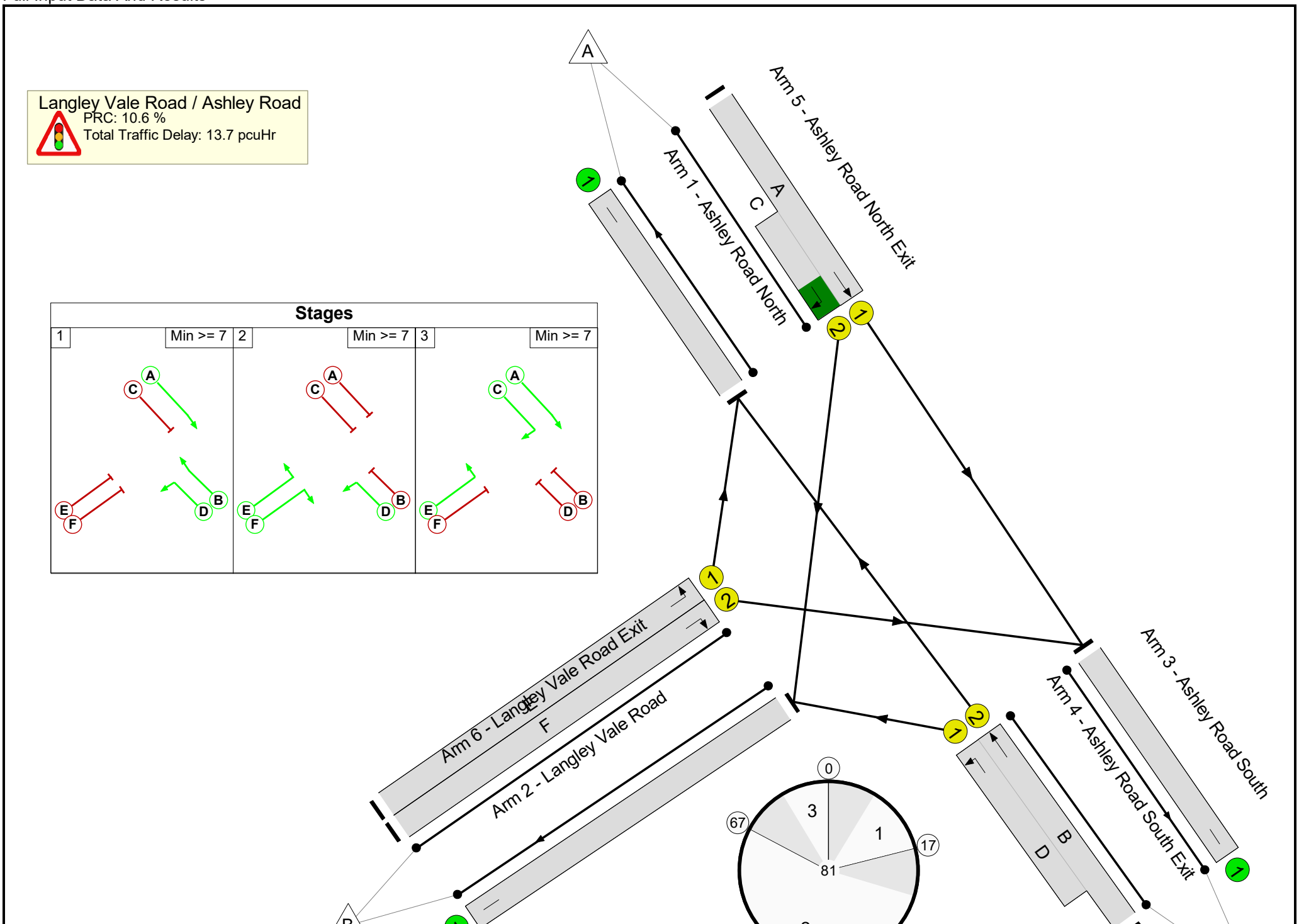
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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**	-	-		-	-	-	-	-	-	**81.4%**
Langley Vale Road / Ashley Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**81.4%**
1/1+1/2	Ashley Road North Ahead Right	U	N/A	N/A	A C		1	26:7	-	440	1915:1915	553+165	58.3 : 71.3%
2/1	Langley Vale Road Left	U	N/A	N/A	E		1	57	-	123	1741	1247	9.9%
2/2	Langley Vale Road Right	U	N/A	N/A	F		1	43	-	778	1760	956	81.4%
3/2+3/1	Ashley Road South Ahead Left	U	N/A	N/A	B D		1	10:60	-	672	1965:1747	267+591	78.3 : 78.3%
4/1	Ashley Road South Exit	U	N/A	N/A	-		-	-	-	1100	Inf	Inf	0.0%
5/1	Ashley Road North Exit	U	N/A	N/A	-		-	-	-	332	Inf	Inf	0.0%
6/1	Langley Vale Road Exit	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**8.9**	**4.7**	**0.0**	**13.7**	**-**	**-**	**-**	**-**
Langley Vale Road / Ashley Road	**-**	**-**	**0**	**0**	**0**	**8.9**	**4.7**	**0.0**	**13.7**	**-**	**-**	**-**	**-**
1/1+1/2	440	440	-	-	-	3.1	0.8	-	3.9	31.9	5.7	0.8	6.5
2/1	123	123	-	-	-	0.1	0.1	-	0.2	5.1	0.8	0.1	0.9
2/2	778	778	-	-	-	3.3	2.1	-	5.4	25.0	14.3	2.1	16.4
3/2+3/1	672	672	-	-	-	2.4	1.8	-	4.2	22.3	4.5	1.8	6.3
4/1	1100	1100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	332	332	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 10.6 Total Delay for Signalled Lanes (pcuHr): 13.66 Cycle Time (s): 81
PRC Over All Lanes (%): 10.6 Total Delay Over All Lanes(pcuHr): 13.66

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