Land at Hartnolls Farm, Tiverton

Proof of Evidence of Neil Thorne
BSc (Hons) MSc MCIHT MTPS

APPENDICES

October 2024

Appendix NT1 – Relevant TEUE SPD / Area B Masterplan & Highway Design Standards Extracts

Tiverton Eastern Urban Extension

Supplementary Planning Document

Area B Masterplan

December 2019 - consultation draft

Mid Devon District Council · Avison Young · Allies and Morrison · Hydrock · PRP

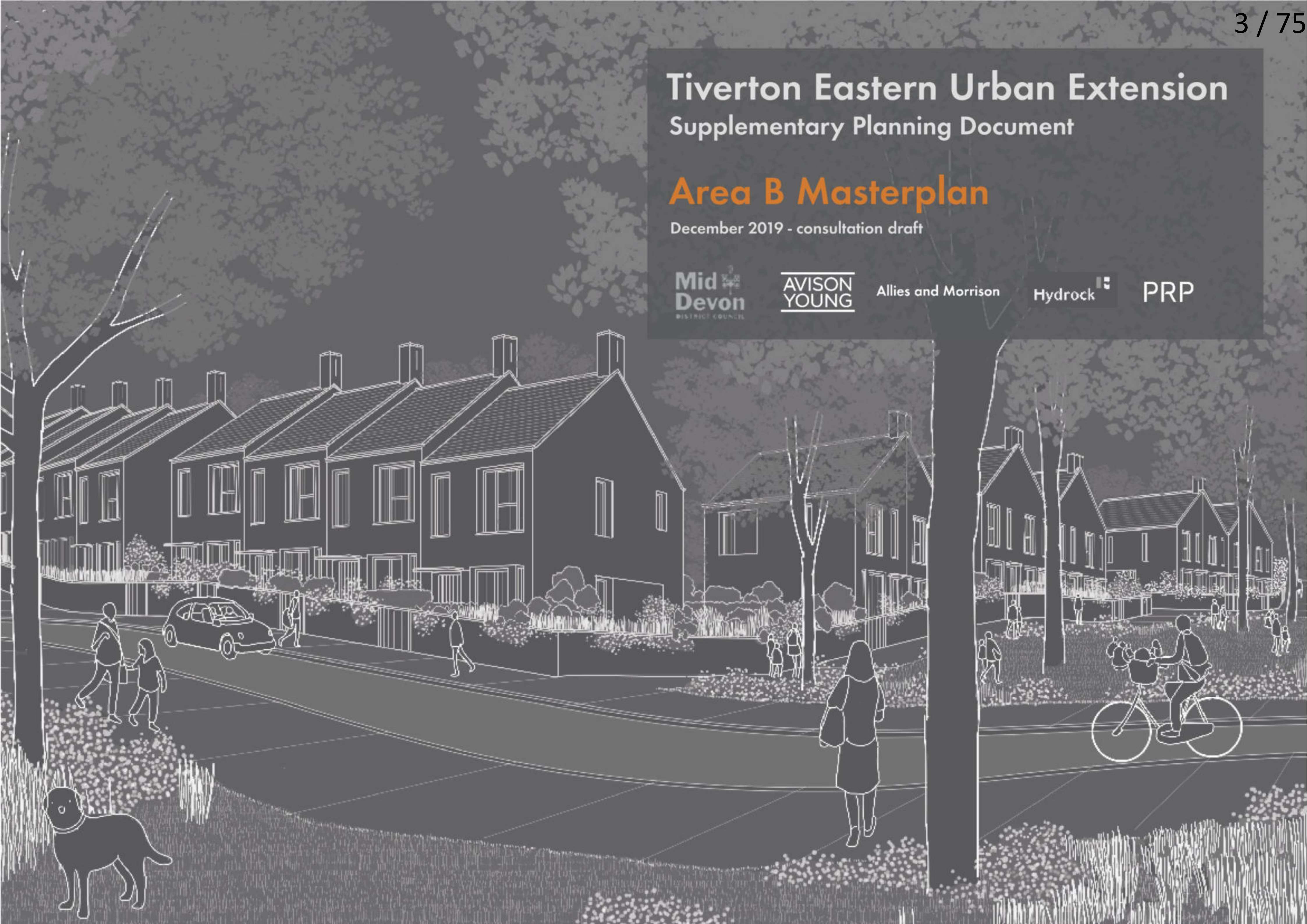

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Fig.01 Tiverton EUE Area B allocation (AAM)

Fig.02 Tiverton EUE Area A and Area B (CE/LHC)

Fig.03 Plan making and development process - cross refer to 1.6 Design process (CE/LHC)

Fig.04 Extract from key diagram Local Plan Review 2013 - 2033 (MDDC)

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Fig.06 photos from workshop event (AAM)

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Fig.09 The site in context (CE/LHC)

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Fig.16 Plan highlighting the key development concepts (AAM)

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Fig.28 Energy and resource efficiency (CE/LHC)

Fig.29 Illustrative Framework Plan (AAM)

Fig.30 Amount and use (AAM)

Fig.31 Area B land use budget table (MDDC)

Fig.32 Existing site and land use context (AAM)

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Fig.34 Illustrative land use plan (AAM)

Fig.35 Illustrative landscape and open spaces plan (AAM/PRP)

Fig.36 Street typologies and placemaking areas (AAM)

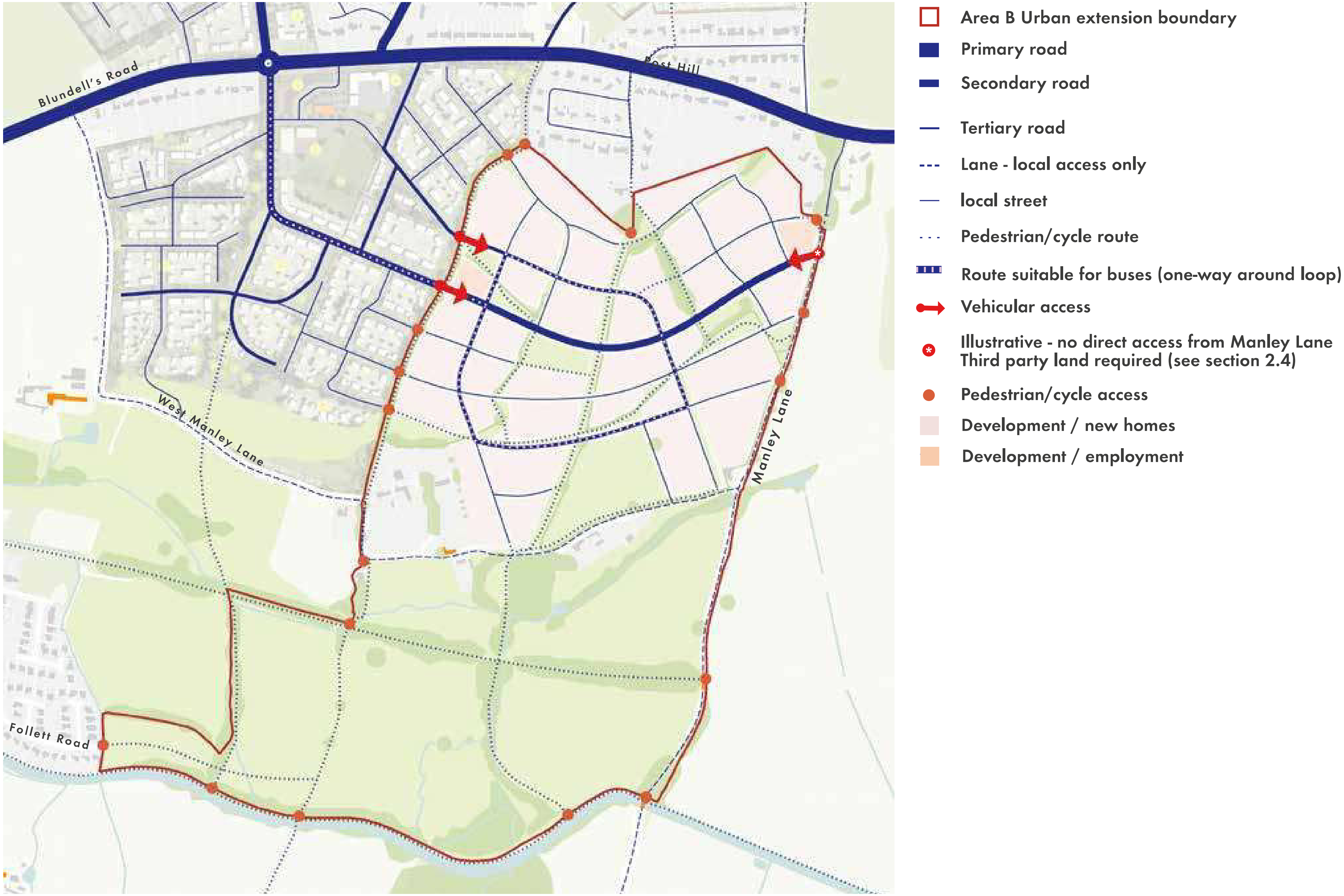


Fig.33 Movement

Design Manual for Roads and Bridges

Road Layout
Design

CD 123
Geometric design of at-grade priority and signal-controlled junctions

(formerly TD 41/95, TD 42/95, TD 40/94, and those parts of TD 50/04 and TD 70/08 relating to priority and signal-controlled junctions.)

Version 2.1.0

Summary
This document provides requirements for the geometric design of at-grade priority and signal-controlled junctions.

Application by Overseeing Organisations
Any specific requirements for Overseeing Organisations alternative or supplementary to those given in this document are given in National Application Annexes to this document.

Feedback and Enquiries
Users of this document are encouraged to raise any enquiries and/or provide feedback on the content and usage of this document to the dedicated National Highways team. The email address for all enquiries and feedback is: Standards_Enquiries@highwaysengland.co.uk

This is a controlled document.

Foreword

Publishing information

This document is published by National Highways.

This document supersedes TD 41/95 and TD 42/95. In combination with CD 122 [Ref 4.N], this document supersedes TD 40/94. In combination with CD 116 [Ref 1.I], this document supersedes TD 50/04. This document also supersedes elements of TD 70/08 that relate to priority and signal-controlled junctions.

Contractual and legal considerations

This document forms part of the works specification. It does not purport to include all the necessary provisions of a contract. Users are responsible for applying all appropriate documents applicable to their contract.

2. Junction selection

Priority junction selection

2.1 Priority junctions shall not be used on motorways or all-purpose dual three-lane carriageways.

2.1.1 Priority junctions should not be located on a sharp curve on a major road.

NOTE 1 The placement of a priority junction on the inside of a sharp curve is particularly hazardous as this can restrict visibility to a much greater degree than on the outside of a curve, and is likely to create blind spots.

NOTE 2 The placement of a priority junction on the outside of a sharp curve can result in drivers on the major road misinterpreting the minor road as the ahead direction. Equally drivers on the minor road could misinterpret the layout as drivers on the mainline as having to give way.

2.1.2 Priority junctions should only be located on level ground or where any approach that is on a downhill gradient does not exceed 2% over the applicable desirable minimum stopping sight distance (SSD).

2.1.3 The number of priority junctions providing access to the all-purpose trunk roads should be minimised.

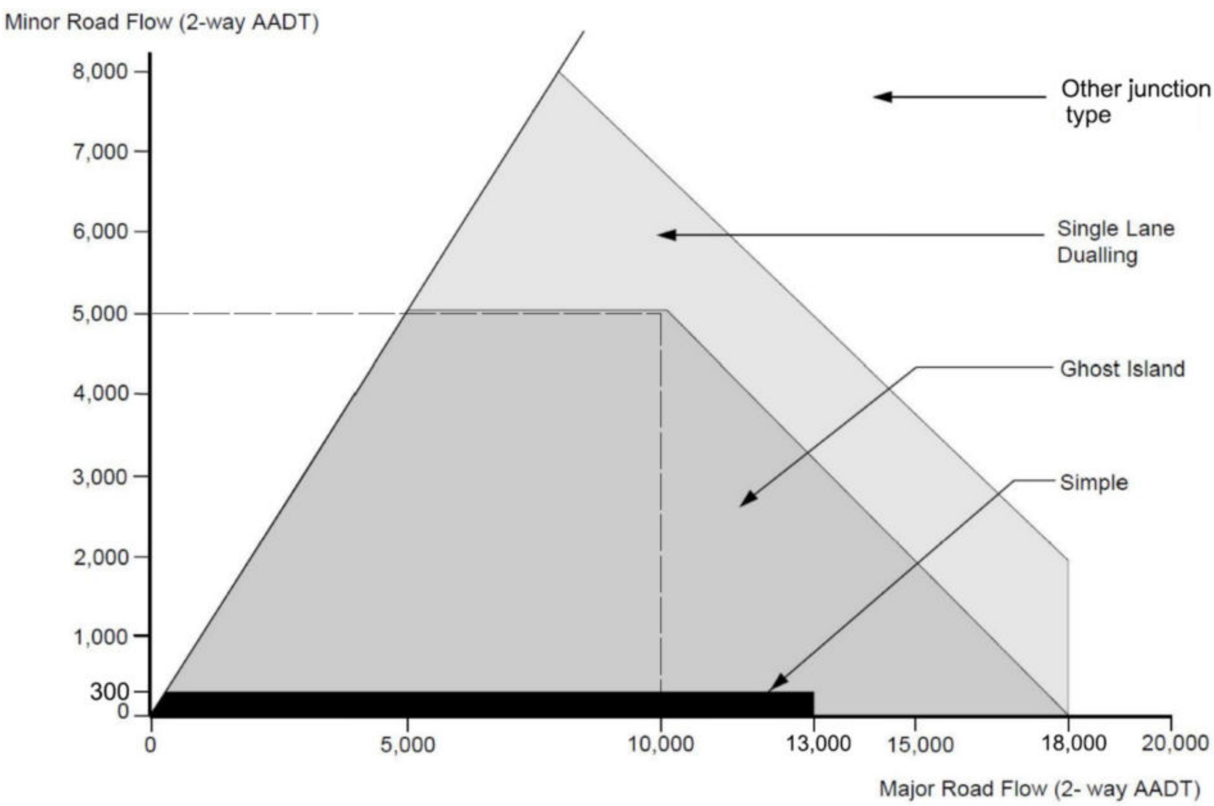
NOTE Minimising the number of junctions on a road can be achieved by connecting side roads and accesses to a collector road running parallel to the main road.

2.2 Priority junctions that do not form a through route shall not be provided on overtaking sections.

2.3 Simple priority junctions shall only be used on single-carriageway roads without a climbing lane.

2.3.1 The selection of priority junction and major road central treatment for single carriageway roads should be determined based on the standard of major road and traffic flows on both the major and minor roads. Figure 2.3.1 illustrates approximate levels of provision for varying traffic flows.

Figure 2.3.1 Approximate priority junction provision on single carriageway roads based on flows only



NOTE The 2-way AADT design year flows are used to determine the approximate level of junction provision prior to more detailed traffic modelling to check capacity.

2.3.2 At junctions where there are high seasonal variations, or short intense peaks in the traffic flows, then the appropriate seasonal or peak flows should be used.

NOTE 1 Figure 2.3.1 takes into account traffic delays, entry and turning traffic flows and collision costs.

NOTE 2 Seasonal or peak flows need to be extrapolated to determine revised 2-way AADT flows for use in Figure 2.3.1.

2.4 New priority junctions shall not be sited where they encroach on the visibility requirements of adjacent priority junctions on major roads with:

1) a speed limit of greater than 40 mph; or,
2) a speed limit of 40 mph or less, where the minor road forms part of a through route.

NOTE 1 In England and Wales, on major roads with a speed limit of 40 mph or less, decisions on priority junctions where the minor road does not form part of a through route, and direct accesses, are first dealt with by the local planning authority.

NOTE 2 The placement of priority junctions in relation to lay-bys is covered in CD 169 [Ref 3.I].

WS2+1 roads

2.5 On WS2+1 roads, priority junctions shall only be;

1) located at changeovers;
2) located at WS2+1 to S2 interfaces; or,
3) on the adjoining S2 road, at least 500 metres from the point where the road cross-section changes from a WS2+1 cross section.

NOTE 1 Priority junctions can be used to facilitate a changeover of overtaking lanes on WS2+1 roads. This is shown diagrammatically in Figures 2.5N1a to 2.5N1d.

Figure 2.5N1a Priority junction layouts at changeovers - conflicting layout

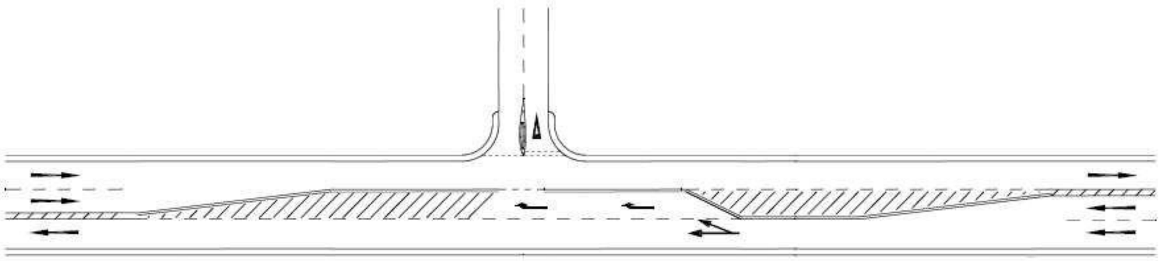


Figure 2.5N1b Priority junction layouts at changeovers - non-conflicting layout

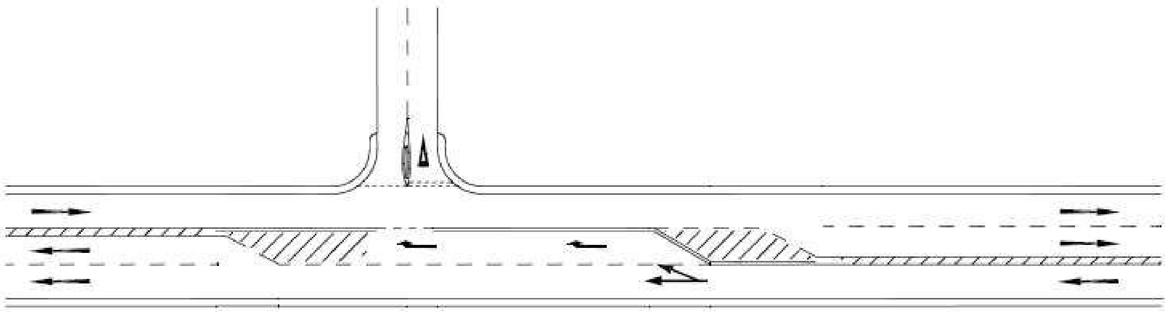


Table 5.22 Diverge taper, auxiliary lane and right turn lane lengths for deceleration

Design speed (kph)	Diverge taper or auxiliary lane deceleration lengths (metres)					Direct taper (metres)
	On 'up' gradient		On 'down' gradient			
	0 - 4 %	over 4 %	0 - 4 %	over 4%		
				Dual carriageways	Single carriageway (including ghost islands and SLD locations)	
50	25	25	25	25	25	5
60	25	25	25	40	25	5
70	40	25	40	55	40	15
85	55	40	55	80	55	15
100	80	55	80	110	80	25
120	110	80	110	150	110	30

NOTE *The gradient is the average for a 500 metre length before the minor road.*

5.22.1 For design speeds of 100 kph or less, auxiliary lane lengths should be a minimum of 80 metres, and sufficient to allow for the speed change from the major road to the turn into the minor road.

NOTE *The auxiliary lane length can also be influenced by any need for reservoir space for turning traffic.*

Merging tapers

General

5.23 Merging tapers shall only be used where the major road is a dual carriageway.

5.24 Where the major road is a dual carriageway with a design speed of 85 kph or above, merging tapers shall be provided where:

1) the volume of left turning traffic in the design year exceeds 600 vehicles AADT;
2) the volume of left turning traffic in the design year exceeds 450 vehicles AADT and the percentage of HGVs exceeds 20%; or,
3) the volume of left turning traffic in the design year exceeds 450 vehicles AADT and the merging taper is for an up-gradient of greater than 4%.

5.24.1 Merge tapers may be provided at dual carriageway priority junctions with lesser flows and/or lesser HGV percentages.

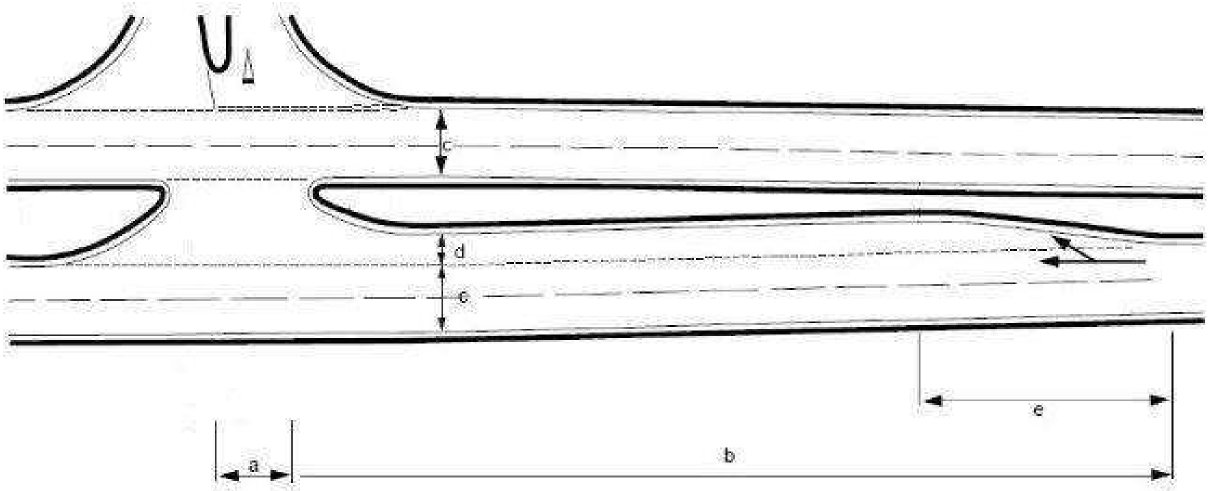
NOTE *Merge tapers can be particularly useful where there is expected to be a high seasonal use by large or slow moving vehicles.*

Merging tapers widths and length

5.25 Merging tapers shall be formed by a decrease in width from 3.5 metres at the end of the corner radii out of the minor road.

5.25.1 A traffic island should be provided to segregate the turning traffic from the major road prior to the commencement of the merging taper.

Figure 6.3e Dual carriageway major / minor priority junction



NOTE *In Figures 6.3a to 6.3e the labelled dimensions are as indicated below:*

1) *a is the turning length (plus the queuing length, if required);*
2) *b is the deceleration length;*
3) *c is the through lane width;*
4) *d is the turning lane width; and,*
5) *e is the direct taper length.*

6.3.1 The deceleration lengths at left/right staggered junctions on an SLD or dual carriageway may lie side by side.

6.4 The turning length shall be a minimum of 10 metres.

NOTE *The turning length is provided to allow long vehicles to position themselves correctly for the right turn.*

6.5 Where capacity calculations indicate that for significant periods of time there can be vehicles queuing to turn right from the major road, the turning length shall be increased to accommodate the forecast maximum queue length.

6.5.1 Where the turning length has been increased to the forecast queue length at a ghost island, physical islands should be provided within the hatched areas to provide greater protection to turning traffic.

6.6 For right turning lanes, the direct taper length and the minimum deceleration length shall be provided in accordance with Table 5.22.

6.6.1 The radii associated with the opening of the central reserve island for both SLD junctions (Figure 6.3d) and dual carriageway priority junctions (Figure 6.3e) should accommodate the turning movements of the largest vehicle type permitted to use the junction, such that overrunning of the physical islands are prevented.

Ghost islands

Through lane widths

6.7 At ghost island junctions on WS2+1 roads, the through lane widths in each direction shall be 3.5 metres, exclusive of hard strips.

6.8 At ghost island junctions on roads other than WS2+1 roads, the through lane widths in each direction shall be a minimum of 3.0 metres and a maximum of 3.65 metres wide, exclusive of hard strips.

6.8.1 At ghost island junctions on climbing lanes, the through lane widths in each direction should be 3.5 metres, exclusive of hard strips.

Communities and Local Government

Department for Transport

Manual for Streets

Published by Thomas Telford Publishing, Thomas Telford Ltd, 1 Heron Quay, London E14 4JD. www.thomastelford.com

Distributors for Thomas Telford books are
USA: ASCE Press, 1801 Alexander Bell Drive, Reston, VA 20191-4400, USA
Japan: Maruzen Co. Ltd, Book Department, 3–10 Nihonbashi 2-chome, Chuo-ku, Tokyo 103
Australia: DA Books and Journals, 648 Whitehorse Road, Mitcham 3132, Victoria

First published 2007

Published for the Department for Transport under licence from the Controller of Her Majesty's Stationery Office

A catalogue record for this book is available from the British Library

ISBN: 978-0-7277-3501-0

Table 7.1 Derived SSDs for streets (figures rounded).

Speed	Kilometres per hour	16	20	24	25	30	32	40	45	48	50	60
	Miles per hour	10	12	15	16	19	20	25	28	30	31	37
SSD (metres)		9	12	15	16	20	22	31	36	40	43	56
SSD adjusted for bonnet length. See 7.6.4		11	14	17	18	23	25	33	39	43	45	59
		Additional features will be needed to achieve low speeds										

7.5.7 The SSD values used in MfS are based on a perception–reaction time of 1.5 seconds and a deceleration rate of 0.45*g* (4.41 m/s²). Table 7.1 uses these values to show the effect of speed on SSD.

7.5.8 Below around 20 m, shorter SSDs themselves will not achieve low vehicle speeds: speed-reducing features will be needed. For higher speed roads, i.e. with an 85th percentile speed over 60 km/h, it may be appropriate to use longer SSDs, as set out in the *Design Manual for Roads and Bridges*.

7.5.9 Gradients affect stopping distances. The deceleration rate of 0.45g used to calculate the figures in Table 7.1 is for a level road. A 10% gradient will increase (or decrease) the rate by around 0.1g.

7.6 Visibility requirements

7.6.1 Visibility should be checked at junctions and along the street. Visibility is measured horizontally and vertically.

7.6.2 Using plan views of proposed layouts, checks for visibility in the horizontal plane ensure that views are not obscured by vertical obstructions.

7.6.3 Checking visibility in the vertical plane is then carried out to ensure that views in the horizontal plane are not compromised by obstructions such as the crest of a hill, or a bridge at a dip in the road ahead. It also takes into account the variation in driver eye height and the height range of obstructions. Eye height is assumed to range from 1.05 m (for car drivers) to 2 m (for lorry drivers). Drivers need to be able to see obstructions 2 m high down to a point 600 mm above the carriageway. The latter dimension is used to ensure small children can be seen (Fig. 7.17).

7.6.4 The SSD figure relates to the position of the driver. However, the distance between the driver and the front of the vehicle is typically up to 2.4 m, which is a significant proportion of shorter stopping distances. It is therefore recommended that an allowance is made by adding 2.4 m to the SSD.

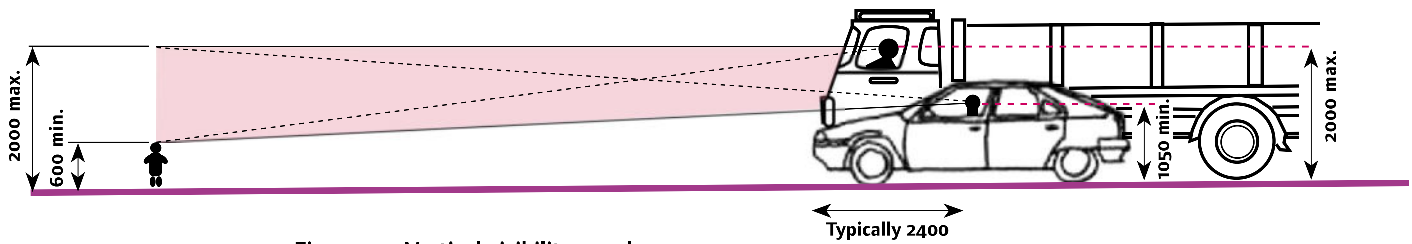


Figure 7.17 Vertical visibility envelope.

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Manual for Streets 2

Wider Application of the Principles

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Published by the Chartered Institution of Highways & Transportation

Published September 2010

ISBN 978-0-902933-43-9

Acknowledgements

The Chartered Institution of Highways & Transportation would like to thank the following people without whom the document would not have been possible.

Managing Editors:

Alan Young	WSP
Phil Jones	Phil Jones Associates

Steering Group:

Peter Dickinson	
Louise Duggan	CABE
Wayne Duerden	Department for Transport
Andrew Pearson	Homes and Communities Agency
Daniel Bridger	Communities and Local Government
Anne Locke	English Heritage
Edward Chorlton	ADEPT
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Anne Locke	English Heritage
Tim Cuell WSP	
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movement unless there are overriding reasons for accepting higher speeds.

- **Using the minimum of highway design features** necessary to make the streets work properly. The starting point for any well designed street is to begin with nothing and then add only what is necessary in practice.

1.3_ Scope of MfS

1.3.1 The following key areas of advice, derived from principles contained in MfS, can be applied based on speed limits, subject to a more detailed assessment of local context, as shown below in **Table 1.1**.

1.3.2 It is clear from **Table 1.1** that most MfS advice can be applied to a highway regardless of speed limit. **It is therefore recommended that as a starting point for any scheme affecting non-trunk roads, designers should start with MfS.**

1.3.3 Where designers do refer to DMRB for detailed technical guidance on specific aspects, for example on strategic inter-urban non-trunk roads, it is recommended that they bear in mind the key principles of MfS, and apply DMRB in a way that respects local context. It is further recommended that DMRB or other standards and guidance is only used where the guidance contained in MfS is not sufficient or where particular evidence leads a designer to conclude that MfS is not applicable.

1.3.4 The application of MfS advice to all 30mph speed limits as a starting point is in keeping with MfS1.

1.3.5 Much of the research behind MfS1 for stopping sight distance (SSD) is limited to locations with traffic speeds of less than 40mph and there is some concern that driver behaviour may change above this level as the character of the highway changes. However, 40mph speed limits in built-up areas cover a wide range of contexts, from simple urban streets with on-street parking and direct frontage access to 2/3 lane dual carriageways. Furthermore, local context varies not only from street to street but also along the length of a street.
(See Figure 1.1.)

1.3.6 Where a single carriageway street with on-street parking and direct frontage access is subject to a 40mph speed limit, its place characteristics are more of a residential street or high street, with higher traffic flows, and may result in actual speeds below the limit. It is only where actual speeds are above 40mph for significant periods of the day that DMRB parameters for SSD are recommended. Where speeds are lower, MfS parameters are recommended. Where there may be some doubt as to which guidance to adopt, actual speed measurements should be undertaken to determine which is most appropriate. (See **Chapter 10** for SSD guidance.)

Speed Limit	20mph	30mph	40mph	50+mph
User Hierarchy	yes	yes	yes	yes
Team Working	yes	yes	yes	yes
Community Function	yes	yes	yes	subject to local context
Inclusive Design	yes	yes	yes	yes
Ped/Cycle Support	yes	yes	yes	yes
Master Plans/Design Codes	yes	yes	yes	yes
Stopping Sight Distance	yes	yes	subject to local context	subject to local context
Frontage Access	yes	yes	yes	subject to local context
Minimise Signs and Street Furniture	yes	yes	yes	yes
Quality Audits	yes	yes	yes	yes
Connectivity/Permeability	yes	yes	yes	subject to local context

Table 1.1 Application of key areas of MfS advice

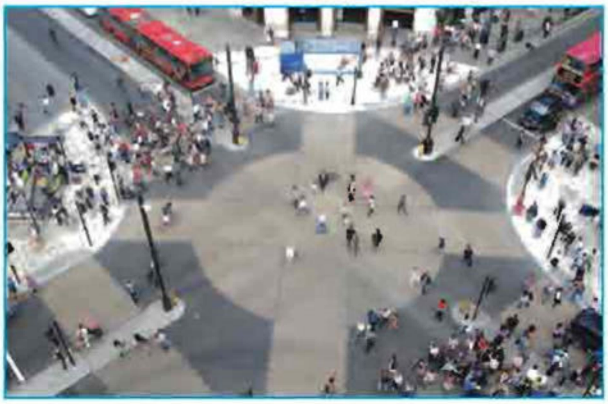
Note: ● yes ● subject to local context

1.3.7 Similarly, in rural areas many parts of the highway network are subject to the national speed limit but have traffic speeds significantly below 60mph. (See **Figure 1.2**) Again in these situations where speeds are lower than 40mph, MfS SSD parameters are recommended.

1.3.8 Direct frontage access is common in all urban areas, including where 40mph speed limits apply, without evidence to suggest that this practice is unsafe. This is confirmed in TD41/95[3] (Annex 2 paragraph A2.10) which states that *'in the urban situation there is no direct relationship between access provision and collision occurrence'*. However, this is not true of rural roads (A2.5) where the research identified a *'statistically significant relationship for collisions on rural single carriageways with traffic flow, link length and farm accesses. On rural dual carriageways, the significant relationship extended to laybys, residential accesses and other types of access including petrol filling stations'* (See **Chapter 9** for further advice on direct frontage access.)

9.3.20 Pedestrian crossings at traffic signals are typically across each arm of the junction, but when an all-red (to traffic) phase is provided, consideration can be given to providing diagonal crossing facilities. These enable pedestrians to cross to the opposite corner of the junction in one movement instead of two, which is much quicker and more convenient. A high-profile scheme has recently been installed at Oxford Circus in London, but there are long-standing examples elsewhere, such as in Balham, at the junction of Bramford Road and Yarmouth Road in Ipswich, and in Wellingborough at the junction of Croyland Road, Doddington Road and Broadway near a school.

Diagonal crossing, Balham



Diagonal crossing, Oxford Circus

9.4_ Priority and Uncontrolled Junctions

9.4.1 The simplest junctions are where two or more streets meet at a point. These junctions may have marked priority so that there is a major route through the junction, or the junction may have no marked priority and is therefore uncontrolled. Uncontrolled junctions tend to increase driver uncertainty and lead to reduced speeds and are therefore appropriate to low volume and low speed environments, including in urban centres.

9.4.2 Detailed guidance on the design of priority junctions is given in TD42/95[54] but (as with all sections of DMRB) this is written specifically for trunk roads and, where used in other situations, should not be applied uncritically.

9.4.3 T and Y junctions have the fewest conflicting traffic movements. Where there is a straight or nearly straight through route drivers will tend to regard this as the major movement, and so even without road markings or signs, a natural priority will tend to develop.

9.4.4 Crossroads and multi-armed junctions have much higher numbers of conflicting traffic movements and therefore tend to perform worse in terms of road safety. However, grid-type networks with crossroads junctions are extremely legible and therefore encourage walking and cycling, and it is therefore important to strike the right balance. Well-connected street grids can also disperse traffic flows, which will tend to reduce the level of conflict at any particular point.

9.4.5 Reducing traffic speed will also improve safety, and one way of achieving this at the conflict point is to raise the junction onto a speed table.

Tabled crossroads

9.4.6 Keeping the number of approach lanes to the minimum will make the junction safer and easier to negotiate for pedestrians and cyclists. Research into cycle safety at T-junctions found that higher cycle collision rates are associated with two lane minor road approaches[55].

9.4.7 TD 42/95[54] recommends that consideration should be given to providing a right turning lane at priority junctions where the side road flow exceeds 500 vehicles per day, but this advice relates to trunk roads, where there is an emphasis on providing an unimpeded route for through traffic. It is a relatively low flow, and junctions without right turn lanes will often be able to cater for higher levels of turning traffic without resulting in significant congestion.

9.4.8 Right turning lanes make it more difficult for pedestrians to cross major roads and lead to higher traffic speeds and authorities should therefore consider carefully

Mid Devon DISTRICT COUNCIL

Tiverton Eastern Urban Extension (EUE)

Residential Amenity Assessment

A095750

July 2016

Mid Devon DISTRICT COUNCIL

Tiverton Eastern Urban Extension (EUE)

Residential Amenity Assessment

July 2016

Document verification

Client:	Mid Devon District Council (MDDC)
Project:	Tiverton Eastern Urban Extension: Evidence Base
Job number:	A095750
Document title:	Residential Amenity Assessment
Status:	Final Issue
Date:	July 2016
Document reference:	A095750 Tiverton EUE RAA 160226 v5.docx

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A factor that has the potential to cause road user conflict which cannot be designed out of the scheme.

3.4.8 A summary of the pros and cons of each access option is supplied as follows:

Two Way Access from Mayfair Only

Pros	*Cons*
Capacity available within the Mayfair / Posthill priority junction for at least 500 dwellings	*Footway access below desirable minimum when considered within the context of relevant design criteria.*
Footway provided into Area B as part of highway access solution	*Traffic calming measures required to ensure adequate visibility splays can be achieved along Mayfair*
Access focused on a single point of access thereby minimising the number of adjacent properties who will experience a change to traffic volumes.	*Road Hump Regulation Order required in order to permit construction of road humps along Mayfair.*
Can be designed to meet the requirements of relevant design criteria for vehicular access including appropriate visibility splays and forward visibility.	

Two Way Access from Manley Lane Only

Pros	*Cons*
Capacity available within the Manley Lane / Posthill priority junction for at least 500 dwellings	*Road narrowing on Manley Lane, some 80m in length without passing place. Insufficient forward visibility, in part due to adjacent third party bank and vegetation, is such that the lack of a passing place is further compounded.*
	Footway cannot be delivered along Manley Lane.
	Gradient on approach to give way from Manley Lane is more significant than would be provided if a new arrangement and inappropriate for volume of traffic that would use the junction.

Two Way Access from Mayfair and Manley Lane

Pros	*Cons*
Provides opportunity to lessen the total volume of traffic on either route if site design ensures that a through route is not provided.	*Road narrowing on Manley Lane, some 80m in length without passing place. Insufficient forward visibility, in part due to adjacent third party bank and vegetation, is such that the lack of a passing place is further compounded. Without control over the volume of traffic that would utilise Manley Lane this narrowing would discount access to Area B*
Footway provided south of Mayfair East as part of highway access solution, minimum 2m.	*Gradient on approach to give way from Manley Lane is more significant than would be provided if a new arrangement and inappropriate for volume of traffic that would use the junction.*
Shared foot /cycleway possible south of Mayfair East, minimum 3m.	*Traffic calming measures required to ensure adequate visibility splays can be achieved along Mayfair*
Capacity available within the Mayfair / Posthill priority junction and Manley Lane / Posthill priority junction for at least 500 dwellings.	*Road Hump Regulation Order required in order to permit construction of road humps along Mayfair.*

One Way Working – In via Manley Lane / out via Mayfair

Pros	*Cons*
Splits the total traffic volume, largely 50:50 across the two routes thereby lessening overall impact on any one property.	*Potential for drivers who are seeking to access Area B being mislead by residents of existing properties turning into Mayfair despite signage to advise otherwise. Consequence is that vehicles may turn within Mayfair to return and enter via Manley Lane or ignore one way working and proceed down Mayfair against the flow of oncoming traffic.*
Enables use of Manley Lane and removes restriction of pinch point.	*Current northbound traffic on Manley Lane (other than properties 55, 57, Woodleigh House and Barns Close) would need to be*

Tiverton's Eastern Urban Extension

Masterplan Supplementary Planning Document

Adopted June 2018.

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Mid Devon District Council Planning Team
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PCL Transport
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PFA Consulting
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Paul Carpenter Associates
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3.3 Guiding Principles

C. Movement - transport

Policy AL/TIV/2 sets out requirements for transport provision to support the proposed EUE. The policy includes provision of a new junction onto the A361 along with other enhancements. Appendix 1 identifies where the masterplan deviates from policy.

Trigger levels for the provision of highway infrastructure and routes have been reappraised based upon greater understanding of the likely highway impacts of the development. The revised triggers have set out in 6.1 Implementation and Phasing.

One major change is the lack of provision for a second strategic highway connection (to Heathcoat Way) within this masterplan. DCC Highway Authority has confirmed that with the expected traffic generation and highway mitigation works proposed, this second link is not needed until 2000 houses are completed. This is beyond the amount of development now proposed. A northern route from Gornhay Cross has been investigated, but is not suitable nor deliverable.

With the exception of identified areas of deviation, MDDC expects that policy and the following guiding principles will be met.

C1. The new garden neighbourhood will have a network of movement corridors and connections with the existing town that ensures the promotion of sustainable modes of transport and the reduction of the need to travel by private motor car.

C2. The structure of the development should create a well connected and walkable neighbourhood focused around a mixed use neighbourhood centre. This should include good pedestrian and cycle connections throughout the area and provision for public transport.

C3. The new neighbourhood should have a clear and legible hierarchy of streets and spaces to respond to different travel and movement needs.

C4. There should be strong links and connections between the existing community, adjacent neighbourhoods, Tiverton town centre and the new community.

C5. Where appropriate streets should be designed to provide pedestrian priority.

C6: Provision should be made to enhance connections and the ability to travel by cycle.

C7. Environmental enhancements and traffic calming should be introduced on Blundell's Road at the neighbourhood centre. This should include a village green focused on local facilities and give consideration to Tidcombe Lane.

Refer to AIDPD Policy AL/TIV/2

4.1 Masterplan

surrounding residential areas and in turn, to the parkland that forms an integral and defining part of the new community.

The principal street in the area hierarchy would be Blundell's Road with a secondary vehicular 'loop' in the vicinity of the neighbourhood centre providing access to the residential areas in the southern part of the site. An access from Blundell's Road

to the north connects through the employment area to a new junction onto the A361. A series of streets radiate out from the neighbourhood centre to the parkland area in the southern section of the site and there is also a connection from the centre to new housing in the northern area along Putson Lane and through the former NHS site. This framework of streets provides the structure for the new place - a network of inter-connected residential streets forms the finer grain of the residential community.

Clarity in the hierarchy of street types is important as it establishes a richer townscape and landscape that is easier for people to orientate within (find their way around). The resulting plan is permeable; providing lots of choices for pedestrians, and legible; creating memorable and recognisable public spaces.

Changes in density

Changes in density are an important structuring element that contributes to the sustainability of the settlement, reinforces the sense of place of character areas across the neighbourhood, and ensures that there is a variety and balance of housing types throughout.

In general, the neighbourhood is designed so that the highest density residential areas area closest to local facilities, the school, employment opportunities and public transport services, and the lowest density areas are furthest away. In response to this simple strategy, the neighbourhood has been designed assuming that densities in the neighbourhood centre would be about 40 - 50dph and that densities would reduce outward towards the parkland to densities of around 15 - 20dph in some edge of neighbourhood areas in the southern section of the site. Many of the intermediate housing areas would comprise residential streets with densities of between 25 and 40dph.

The proposed densities would enable a townscape and landscape to be structured with a strong parkland character.

A new parkland

The new parkland open space will provide a defining characteristic of the garden neighbourhood and for this reason the masterplan has been designed so that the residential communities feather into it and are intertwined with it.

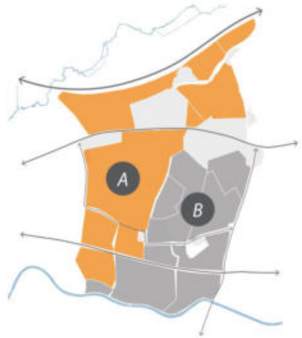
The parkland would have the character of a country park providing a landscape resource comprising: wetland areas; woodland areas; areas of pasture; retained veteran trees; new tree planting in streets, open spaces and in the parkland; flat landscaped areas and steeper areas such as the landscaped spine that cuts through from south west around Tidcombe Fen to the north east towards Manley Lane; attenuation ponds and other SUDS features; allotments and orchards throughout the parkland providing easy access from all parts of the community; informal areas for play and recreation; enhanced biodiversity; and retained ecology and enhanced hedgerows.

Above: An extract of the masterplan with development densities identified

A Around 40 - 50dph towards the centre

B Intermediate areas 25 - 40dph

C Parkland edge areas around 15 - 20dph



Above: Amount and use

1. New junction to A361
2. Neighbourhood centre potential 20mph zone.
3. Blundell's School potential shared surface 20mph zone
4. Grand Western Canal tow path
5. SUSTRANS cycle route
6. Environmental enhancement and traffic calming on Blundell's Road & Tidcombe Lane
7. Link to employment area from Blundell's Road
8. Enhancement to Blundell's Road roundabout
9. Enhancement of Uplowman Road & Putson Lane
10. Preferred vehicular link through the NHS site
11. Proposed non-vehicular link through Fairway to north eastern site*
12. Secondary connection onto Blundell's Road via the end of West Manley Lane

- Primary route (existing)
- Secondary route (existing)
- Secondary route (proposed)
- Tertiary route
- Green route
- Footpaths
- Cycle routes

Above: Movement

* Not required once the NHS link is provided

Appendix NT2 – Hartnolls Anaerobic Digester Application, Post Hill ATC, w/c 8th June 2023

GHWAY MAINTENANCE
ZVD

11373	HALBERTON		Site No: 12373002 Channel: Eastbound		Location	Site 2 - Post Hill, Halberton (W of Crown Hill)			
TIME PERIOD	**Thu 08/06/23**	**Fri 09/06/23**	**Sat 10/06/23**	**Sun 11/06/23**	**Mon 12/06/23**	**Tue 13/06/23**	**Wed 14/06/23**	**5-Day Av**	**7-Day Av**
Week Begin: 08-Jun-23									
00:00	**5**	6	12	12	5	8	0	5	7
01:00	**3**	4	7	5	1	2	2	2	3
02:00	**4**	3	6	4	1	1	0	2	3
03:00	**8**	8	10	7	6	5	6	7	7
04:00	**38**	41	29	6	44	43	37	41	34
05:00	**37**	36	9	12	36	36	46	38	30
06:00	**84**	84	34	17	68	74	73	77	62
07:00	**172**	137	64	32	179	178	203	174	138
08:00	**233**	242	101	53	227	245	272	244	196
09:00	**142**	192	137	107	158	189	172	171	157
10:00	**185**	232	223	152	173	183	205	196	193
11:00	**185**	234	228	204	192	200	200	202	206
12:00	**175**	203	247	230	219	189	188	195	207
13:00	**203**	229	209	200	189	172	201	199	200
14:00	**204**	239	180	179	180	175	163	192	189
15:00	**231**	250	185	159	206	216	218	224	209
16:00	**265**	238	177	150	252	234	284	255	229
17:00	**265**	240	141	125	275	246	250	255	220
18:00	**148**	209	153	88	141	164	177	168	154
19:00	**116**	113	94	76	116	131	94	114	106
20:00	**90**	97	67	50	77	83	72	84	77
21:00	**68**	77	49	22	51	75	102	75	63
22:00	**31**	40	46	14	21	34	33	32	31
23:00	**12**	21	24	9	12	13	21	16	16
12H,7-19	**2408**	**2645**	**2045**	**1679**	**2391**	**2391**	**2533**	**2474**	**2299**
16H,6-22	**2766**	**3016**	**2289**	**1844**	**2703**	**2754**	**2874**	**2823**	**2607**
18H,6-24	**2809**	**3077**	**2359**	**1867**	**2736**	**2801**	**2928**	**2870**	**2654**
24H,0-24	**2904**	**3175**	**2432**	**1913**	**2829**	**2896**	**3019**	**2965**	**2738**
Am	**07:45**	**10:30**	**11:00**	**11:00**	**07:45**	**07:45**	**08:00**		
Peak	**234**	**251**	**228**	**204**	**237**	**251**	**272**		
Pm	**17:00**	**15:15**	**12:00**	**12:15**	**16:30**	**16:45**	**16:30**		
Peak	**265**	**264**	**247**	**236**	**280**	**247**	**304**		

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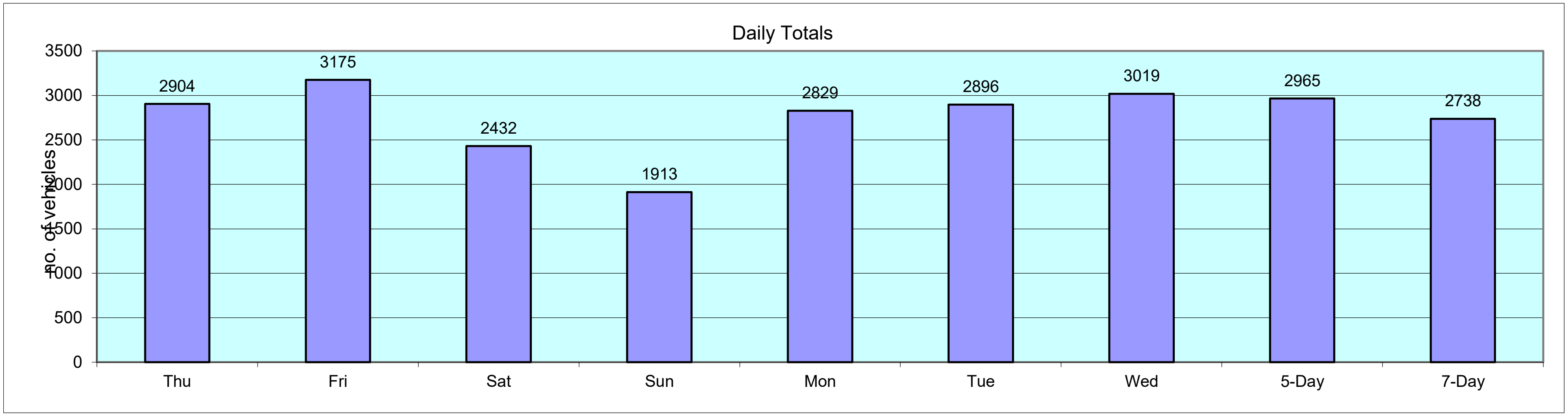
11373	HALBERTON		Site No: 12373002		Location	Site 2 - Post Hill, Halberton (W of Crown Hill)			
			Channel: Eastbound						
	Thu	Fri	Sat	Sun	Mon	Tue	Wed	5-Day	7-Day
TIME PERIOD	08/06/23	09/06/23	10/06/23	11/06/23	12/06/23	13/06/23	14/06/23	Av	Av



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11373	HALBERTON		Site No: 12373002		Location	Site 2 - Post Hill, Halberton (W of Crown Hill)			
			Channel: Westbound						
TIME PERIOD	**Thu 08/06/23**	**Fri 09/06/23**	**Sat 10/06/23**	**Sun 11/06/23**	**Mon 12/06/23**	**Tue 13/06/23**	**Wed 14/06/23**	**5-Day Av**	**7-Day Av**
Week Begin: 08-Jun-23									
00:00	**21**	12	17	19	3	21	23	16	17
01:00	**1**	3	6	3	3	1	0	2	2
02:00	**2**	6	4	3	1	0	2	2	3
03:00	**5**	4	4	7	7	4	3	5	5
04:00	**21**	16	8	3	8	17	16	16	13
05:00	**28**	27	25	13	26	25	26	26	24
06:00	**35**	41	27	8	43	37	41	39	33
07:00	**134**	146	51	34	149	153	156	148	118
08:00	**223**	265	123	54	248	255	267	252	205
09:00	**211**	246	181	106	197	225	240	224	201
10:00	**190**	226	236	167	177	213	192	200	200
11:00	**180**	224	237	162	206	235	226	214	210
12:00	**187**	234	220	184	186	169	184	192	195
13:00	**188**	217	210	185	207	200	169	196	197
14:00	**180**	232	193	207	199	167	203	196	197
15:00	**250**	297	179	171	241	234	248	254	231
16:00	**294**	293	153	149	288	260	282	283	246
17:00	**278**	271	172	132	278	284	278	278	242
18:00	**198**	169	128	121	161	199	193	184	167
19:00	**103**	140	82	83	108	113	102	113	104
20:00	**91**	85	76	68	83	77	94	86	82
21:00	**64**	98	43	34	57	61	60	68	60
22:00	**44**	36	43	19	30	39	64	43	39
23:00	**26**	26	22	10	21	16	19	22	20
12H,7-19	**2513**	**2820**	**2083**	**1672**	**2537**	**2594**	**2638**	**2620**	**2408**
16H,6-22	**2806**	**3184**	**2311**	**1865**	**2828**	**2882**	**2935**	**2927**	**2687**
18H,6-24	**2876**	**3246**	**2376**	**1894**	**2879**	**2937**	**3018**	**2991**	**2747**
24H,0-24	**2954**	**3314**	**2440**	**1942**	**2927**	**3005**	**3088**	**3058**	**2810**
Am	**08:45**	**08:00**	**11:00**	**09:45**	**07:45**	**07:45**	**08:15**		
Peak	**235**	**265**	**237**	**168**	**258**	**268**	**275**		
Pm	**16:15**	**15:30**	**12:00**	**14:15**	**15:45**	**17:00**	**16:15**		
Peak	**316**	**349**	**220**	**212**	**295**	**284**	**293**		

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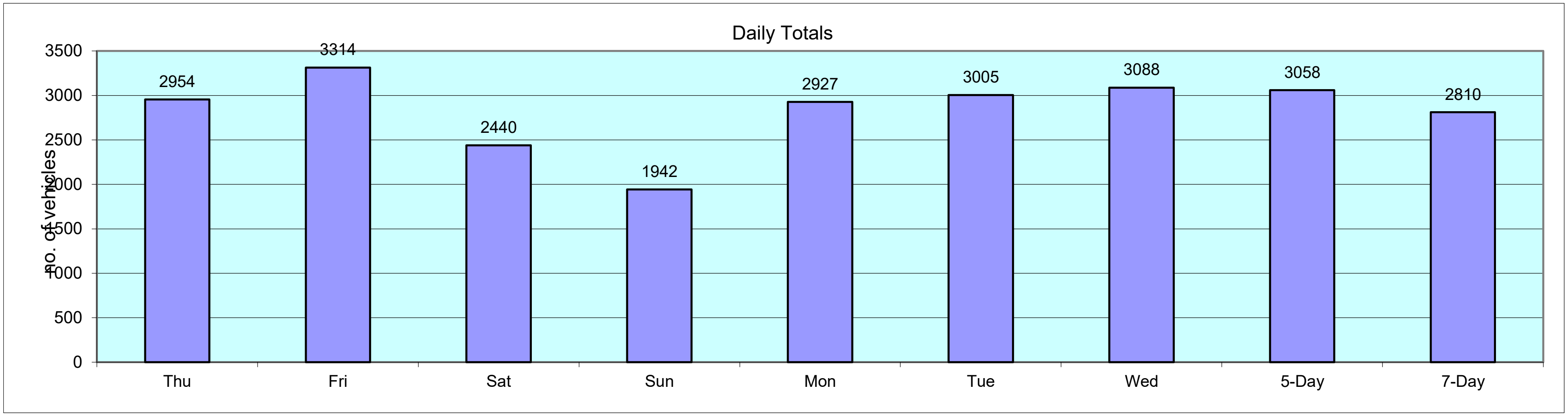
11373	HALBERTON	Site No: 12373002	Location	Site 2 - Post Hill, Halberton (W of Crown Hill)
		Channel: Westbound		

TIME PERIOD	Thu 08/06/23	Fri 09/06/23	Sat 10/06/23	Sun 11/06/23	Mon 12/06/23	Tue 13/06/23	Wed 14/06/23	5-Day Av	7-Day Av



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Appendix NT3 – Westcountry Land Access Junction Capacity Assessment Technical Note

Land at Hartnolls Farm, Tiverton

Local Planning Authority Reference – 21/01576/MOUT
Planning Inspectorate Reference – APP/Y11138/W/3313401

Westcountry Land Access Junction Capacity Assessment Technical Note

October 2024

Document Control

Job No.	23-0585	
Project Name	Land at Hartnolls Farm, Tiverton	
Document Title	Westcountry Land Access Junction Capacity Assessment Technical Note	
Status	Final	
Client	Waddeton Park Ltd.	
	Name	Date
Prepared By	Jack Harris	October 2024
Checked By	Neil Thorne	October 2024
Approved By	Neil Thorne	October 2024

Record of Revisions

Revision	Date	Details	Made By

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Appendices

1 Introduction

Context

1.1 The Technical Note has been produced by Rappor on behalf of Waddeton Park Ltd and comprises a capacity assessment of a proposed access junction arrangement to the eastern part of the Tiverton Eastern Urban Extension (TEUE) (Area B) allocation. The junction design for which this assessment has been undertaken has been proposed by Westcountry Land (WCL), the promoters of land that falls within 'Area B'.

1.2 The proposed junction arrangement is shown by drawing C23172-TP001 Rev B, dated 5th September 2024 and is included at **Appendix A**.

1.3 The arrangement shows the creation of a new road heading south from Post Hill with this road located between Manley Lane on the south side of Post Hill and the unnamed road which provides access to Tiverton Golf Club on the north side of Post Hill.

1.4 The drawing shows a change in priority such that the new road would form the major arm with Post Hill east, while Post Hill west would become the minor arm. The arrangement shows a right turn lane provided on the major arm to facilitate the dominant east-west movement along Post Hill.

Purpose of Technical Note

1.5 The purpose of this technical note is to assess the WCL proposed access junction arrangement in terms of operational capacity. Based on information available as well as professional judgement, an indicative assessment has been undertaken for a range of potential future traffic flow scenarios, which look to demonstrate the ability of the junction to accommodate forecast future traffic movements.

1.6 Full details of the methodology and resulting capacity assessment are set out in the remainder of this TN.

2 Traffic Analysis

Introduction

2.1 No information on the vehicular capacity of the junction has been provided by Westcountry Land. On this basis, and to assess the suitability, or otherwise, of the junction arrangement proposed, an indicative capacity assessment has been completed to provide an understanding of the potential operational implications of the new junction on the highway network. To do so, reasonable traffic flow assumptions have been applied based on information available in the public domain.

Traffic Flow Assessment

2.2 A range of traffic flows have been developed to support this assessment. All can be found at **Appendix B** and are referred to where relevant in this section.

2.3 Baseline traffic flows on Post Hill have been extracted from the Land at Hartnolls Farm, Tiverton, Transport Assessment (Stantec, Rev B, July 2021). Specifically, Traffic flows have been extracted for the '2029 Base' (Figure 7.7 and 7.8 within the TA) and 'Committed Development' (Figures 7.9 and 7.10), which informed Devon County Council (DCC, the Local Highway Authority) agreed scenarios used in the original Transport Assessment modelling.

2.4 Three scenarios have been generated for the purposes of this assessment. As well as a future baseline, these include a scenario that reflects a situation where Area B comes forward ahead of Area A, and also a scenario where Area A and B have both progressed.

2.5 For this indicative assessment, no allowance has been made for additional traffic as a result of the proposed TEUE employment uses.

'Area B' EUE Traffic Flows

2.6 To provide an indication of the likely level of traffic generated by Area B, the DCC agreed trip generation approach utilised in the Hartnolls Farm Transport Assessment has been repeated. The vehicle trip rates used have been extracted and are shown in **Table 2.1** alongside the resulting trip movements.

Scenario	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrive	Dep	Total	Arrive	Dep	Total
Trip Rates	0.140	0.389	0.529	0.364	0.152	0.516
Area B: 600 Dwellings	84	233	317	218	91	310

Table 2.1: TEUE Area B Trip Generation Scenarios

2.7 The above trip generation scenario has been incorporated into the traffic flow model to assess the impact on junction capacity. The distribution of traffic to the west or east has been applied in line with that set out in the Hartnolls Farm Transport Assessment. The distribution analysis has been accepted by DCC and so is considered appropriate to use here.

2.8 The distribution is summarised in **Table 2.2** below for reference:

Traffic Distribution on Post Hill to the West	Traffic Distribution on Post Hill to the East
77%	23%

Table 2.2: TEUE Traffic Distribution Assumptions

2.9 This assessment does not include any traffic flows associated with the Appeal site, and solely looks to demonstrate the capacity of the Area B junction arrangement in isolation.

Area A (Committed Development)

2.10 For the scenario that includes traffic associated with Area A, traffic flows have again been extracted from the Hartnolls Farm Transport Assessment, which assumed a quantum of around 700 dwellings. This was based on the development permitted to date at Area A (14/00881/MOUT). Whilst it is noted that this development has now commenced and dwellings have been completed, at the time of the TA no occupations had occurred.

Therefore, including the Area A traffic as committed development does not double count any flows already on the network given the base flows were also calculated before any occupations occurred. These traffic flows have been extracted and incorporated into the model.

Traffic Analysis

2.11 The above traffic flows have been combined to create scenarios for modelling. Each has been assessed in the AM (0800 – 0900) and PM (1700 – 1800) Peak period:

2.12 The list of scenarios tested, with relevant development quantum's is set out below:

- Scenario 1: Reference Case – 2029 Base
- Scenario 2: Test Case – 2029 Base + Area B
- Scenario 3: Test Case – 2029 Base + Area A + Area B

2.13 The following Chapter sets out details of the capacity assessment.

3 Capacity Assessment

3.1 With reference to the Westcountry Land drawing, a junction capacity model has been developed to test the traffic flow scenarios described above. The operation of this junction can therefore be tested using industry standard modelling software, JUNCTIONS 10.

3.2 For clarity, the capacity assessment results generated by the modelling are presented as Ratio of Flow to Capacity (RFC) and Mean Queue (passenger car units, PCU). RFC is a measure that demonstrates the operational performance and capacity at a junction. Generally, results below 0.85 indicate that the junction is operating with space capacity, and limited queues would occur. For results above 0.85, the junction is operating at capacity and queueing would be expected, with increased delays for drivers as the RFC increases.

3.3 The results are presented in the **Table 3.1** below.

Movement	AM Peak			PM Peak		
	Queue (PCUs)	Delay (Seconds)	RFC	Queue (PCUs)	Delay (Seconds)	RFC
Scenario 1: Reference Case - 2029 Base						
Minor Arm	1.0	10.25	0.51	0.8	9.18	0.45
Right Turn	1.1	10.71	0.52	1.6	13.64	0.63
Scenario 2: 2029 Base + Area B						
Minor Arm	2.3	19.39	0.70	**7.4**	**56.32**	**0.91**
Right Turn	1.3	13.06	0.57	1.8	14.90	0.65
Scenario 3: 2029 Base + Area A + Area B						
Minor Arm	4.2	31.47	0.82	**28.2**	**161.92**	**1.06**
Right Turn	2.4	19.40	0.71	2.8	20.42	0.75

Table 3.1: Westcountry Land Access Capacity Assessment Results

3.4 Table 3.1 suggests that the proposed Westcountry Land access junction is forecast to operate at capacity in future, with just Area B occupied. With Area A also occupied, the junction is predicted to operate over capacity, with a maximum RFC of 1.07, and the maximum queue length of 29 PCUs on the minor arm (Post Hill West).

3.5 The results indicate that the junction arrangement is forecast to operate above capacity in future with the full build out of the TEUE, resulting in significant queueing and delay on the Primary Route of the identified road hierarchy, where there is currently none.

3.6 Full capacity output reports are included at **Appendix C**.

4 Summary and Conclusions

Summary

4.1 This Technical Note comprises an assessment of the operational performance of the Westcountry Land proposed Area B access junction arrangement.

4.2 Traffic flow scenarios have been developed based on information in the public domain and those agreed as part of the Hartnolls Farm Transport Assessment.

4.3 A capacity assessment has been undertaken using industry standard software in order to establish the operational performance of the proposed junction in future year scenarios.

Conclusions

4.4 The results of the modelling assessment indicate that the junction is forecast to operate above capacity in future year scenarios. It also demonstrates that there are forecast to be queues occurring on the major arm, where vehicles are waiting to turn right into the minor arm, and on the minor arm itself.

4.5 Based on this assessment, the Westcountry Land proposed junction arrangement is unable to accommodate future traffic associated with both Area A and Area B traffic and would therefore have severe detrimental impacts on the operational performance of the local road network.

Appendix A – WCL Proposed Junction Arrangement: Drawing C23172-TP001 Rev B

KEY PLAN

- Limit of HMPE (Highway Maintainable at Public Expense)
- Bitmac Carriageway
- Highway Verge
- Footways
- Proposed Kerb Line
- Proposed Edging
- MfS Visibility Splay (2.4m x 43.0m)
- Red Line Boundary

NOTES

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.
2. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications. This drawing is copyright.
3. All levels are shown in metres above ordnance datum.
4. Use figured dimensions only. No liability is accepted for errors incurred through scaling from this drawing.
5. HMPE Plan supplied by DCC Highways on the 6th of August 2024.
6. Red line boundary provided by the client team (subject to definitive confirmation).
7. General Arrangement agreed in principle with DCC Highways and is subject to a post-planning S278 Detailed Design and a Traffic Regulation Order (TRO).
8. General Arrangement subject to arboricultural & ecological review, and is subject to a utility survey to understand the impact on any existing utilities / equipment.

NOTES *(CONTINUED)*

NOTES *(CONTINUED)*

NOTES *(CONTINUED)*

NOTES *(CONTINUED)*

REVISIONS *(CONTINUED)*

REVISIONS

REV	REVISION NOTES/COMMENTS			
	DRAWN BY	DATE	APPROVED BY	DATE
B	ADDITION OF 3.0m SHARED CYCLEWAYS, CROSSING POINT & HIGH FRICTION SURFACING			
	H. SKINNER	05/09/24	M. ROWE	05/09/24
A	FIRST ISSUE			
	H. SKINNER	05/08/24	M. ROWE	05/08/24

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Westcountry Land & Homes

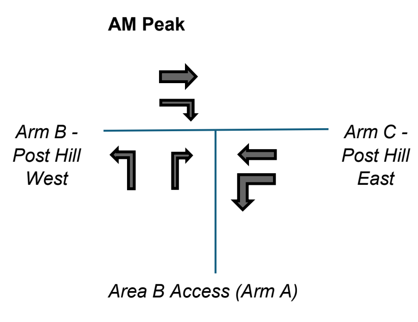
PROJECT
POST HILL, TIVERTON, DEVON

DRAWING TITLE
GENERAL ARRANGEMENT PLAN - PROPOSED CHANGE OF ALIGNMENT AND PRIORITY UPON POST HILL

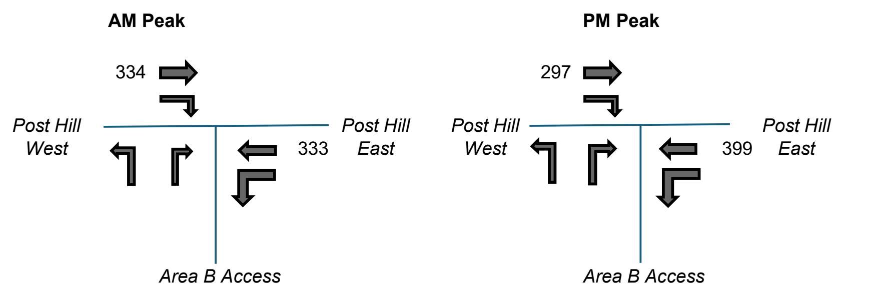
PROJECT NO. C23172
SCALE @ A0 1:200
DRAWING STATUS PRELIMINARY
DRAWING NO. C23172-TP001
REV B

Appendix B – Traffic Flow Analysis

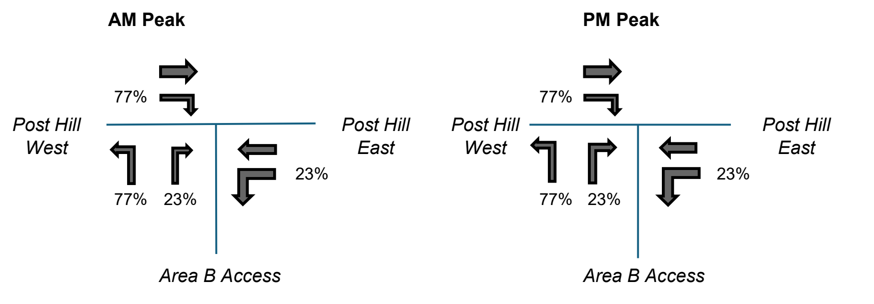
Junction Layout within Model



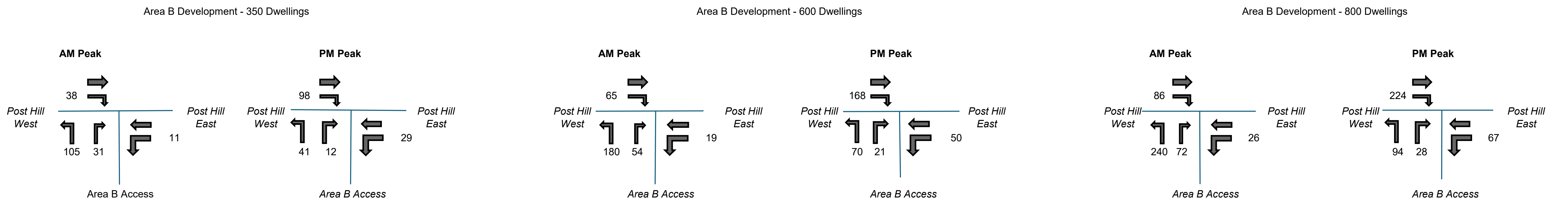
2029 Base Traffic (Extracted from TA)



Development Traffic Distribution (Based on Distribution used in TA)



Area B Development Traffic Flow Scenarios



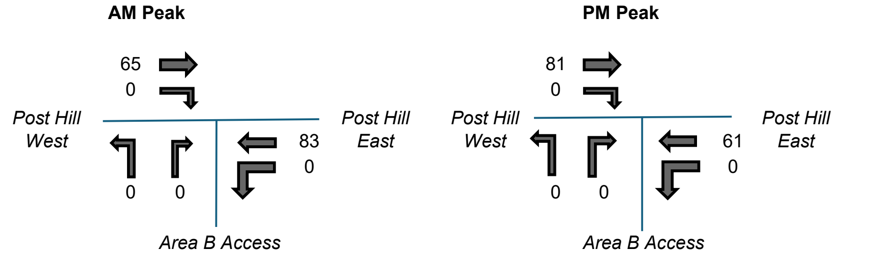
Test Case Modelling Scenarios

2029 Base + EUE 350 Dwellings

2029 Base + EUE 600 Dwellings

2029 Base + EUE 800 Dwellings

Committed Development Traffic (Area A) - Extracted from TA



Test Case Modelling Scenarios

2029 Base + Area A + Area B 350 Dwellings

2029 Base + Area A + Area B 600 Dwellings

Appendix C – Capacity Assessment Output Reports

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.4.1693

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

Filename: Area B Junction - Capacity Assessment_for Issue.j10
Path: C:\Users\JackHarris\OneDrive - Cotswold Transport Planning Ltd\23-0585 - Hartnolls Farm, Tiverton\06 Calculations\Junction Modelling
Report generation date: 22/10/2024 10:19:04

Summary of junction performance

	AM				PM			
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC
	2029 Base - Reference Case							
Stream B-AC	1.0	2.5	10.25	0.51	0.8	2.6	9.18	0.45
Stream C-AB	1.1	2.5	10.71	0.52	1.6	4.6	13.64	0.63
	2029 Base + Area B							
Stream B-AC	2.3	10.7	19.39	0.70	7.4	38.6	56.32	0.91
Stream C-AB	1.3	3.1	13.06	0.57	1.8	6.3	14.90	0.65
	2029 Base + Area A + Area B							
Stream B-AC	4.2	21.8	31.47	0.82	28.2	69.3	162.92	1.06
Stream C-AB	2.4	11.5	19.40	0.71	2.8	14.3	20.42	0.75

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.

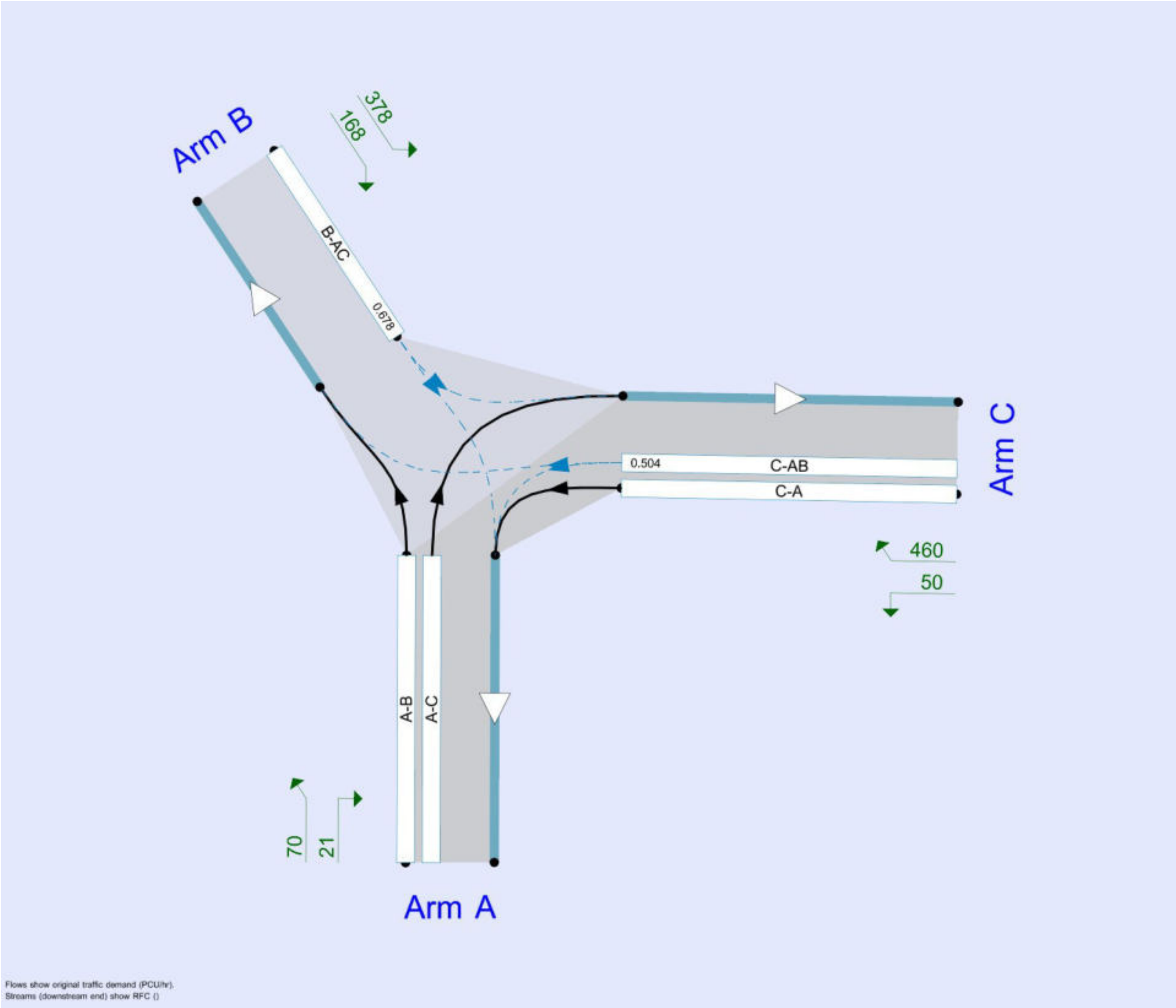
File summary

File Description

Title	
Location	Post Hill, Tiverton
Site number	
Date	25/09/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\JackHarris
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75	✓					0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2029 Base - Reference Case	AM	ONE HOUR	07:45	09:15	15	✓
D2	2029 Base - Reference Case	PM	ONE HOUR	16:45	18:15	15	✓
D5	2029 Base + Area B	AM	ONE HOUR	07:45	09:15	15	✓
D6	2029 Base + Area B	PM	ONE HOUR	16:45	18:15	15	✓
D11	2029 Base + Area A + Area B	AM	ONE HOUR	07:45	09:15	15	✓
D12	2029 Base + Area A + Area B	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2029 Base - Reference Case, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

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		10.48	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.48	B

Arms

Arms

Arm	Name	Description	Arm type
A	Area B Access Road		Major
B	Post Hill West		Minor
C	Post Hill East		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	9.00		✓	3.50	72.0	✓	6.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.75	101	71

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	587	0.093	0.235	0.148	0.336
B-C	719	0.096	0.242	-	-
C-B	703	0.237	0.237	-	-

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	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2029 Base - Reference Case	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	0	100.000
B		ONE HOUR	✓	334	100.000
C		ONE HOUR	✓	333	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	0
	B	0	0	334
	C	0	333	0

Proportions

		To		
		A	B	C
From	A	0.33	0.33	0.33
	B	0.00	0.00	1.00
	C	0.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	A	0	0
	B	251	251
	C	251	251
08:00-08:15	A	0	0
	B	300	300
	C	299	299
08:15-08:30	A	0	0
	B	368	368
	C	367	367
08:30-08:45	A	0	0
	B	368	368
	C	367	367
08:45-09:00	A	0	0
	B	300	300
	C	299	299
09:00-09:15	A	0	0
	B	251	251
	C	251	251

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.51	10.25	1.0	2.5	B	306	460
C-AB	0.52	10.71	1.1	2.5	B	306	458
C-A						0	0
A-B						0	0
A-C						0	0

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	251	63	719	0.350	249	0.0	0.5	7.634	A
C-AB	251	63	703	0.357	249	0.0	0.5	7.888	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	300	75	719	0.418	300	0.5	0.7	8.571	A
C-AB	299	75	703	0.426	299	0.5	0.7	8.890	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	368	92	719	0.512	366	0.7	1.0	10.178	B
C-AB	367	92	703	0.522	365	0.7	1.1	10.623	B
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	368	92	719	0.512	368	1.0	1.0	10.249	B
C-AB	367	92	703	0.522	367	1.1	1.1	10.705	B
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	300	75	719	0.418	301	1.0	0.7	8.651	A
C-AB	299	75	703	0.426	301	1.1	0.8	8.983	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	251	63	719	0.350	252	0.7	0.5	7.726	A
C-AB	251	63	703	0.357	251	0.8	0.6	7.992	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.53	0.53	1.00	1.40	1.45			N/A	N/A
C-AB	0.55	0.55	1.00	1.40	1.45			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.71	0.21	0.93	1.39	1.44			N/A	N/A
C-AB	0.73	0.21	0.93	1.39	1.44			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.02	0.03	0.26	1.02	1.02			N/A	N/A

C-AB	1.07	0.03	0.26	1.07	1.07			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.04	0.03	0.27	1.04	2.46			N/A	N/A
C-AB	1.08	0.03	0.27	1.08	2.50			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.73	0.10	0.84	1.39	1.46			N/A	N/A
C-AB	0.75	0.10	0.84	1.41	1.48			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.54	0.05	0.50	1.31	1.41			N/A	N/A
C-AB	0.56	0.05	0.52	1.32	1.42			N/A	N/A

2029 Base - Reference Case, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

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		11.74	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.74	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2029 Base - Reference Case	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	0	100.000
B		ONE HOUR	✓	297	100.000
C		ONE HOUR	✓	399	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	0
	B	0	0	297
	C	0	399	0

Proportions

		To		
		A	B	C
From	A	0.33	0.33	0.33
	B	0.00	0.00	1.00
	C	0.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	0	0
	B	224	224

	C	300	300
17:00-17:15	A	0	0
	B	267	267
	C	359	359
17:15-17:30	A	0	0
	B	327	327
	C	439	439
17:30-17:45	A	0	0
	B	327	327
	C	439	439
17:45-18:00	A	0	0
	B	267	267
	C	359	359
18:00-18:15	A	0	0
	B	224	224
	C	300	300

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.45	9.18	0.8	2.6	A	273	409
C-AB	0.63	13.64	1.6	4.6	B	366	549
C-A						0	0
A-B						0	0
A-C						0	0

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	224	56	719	0.311	222	0.0	0.4	7.217	A
C-AB	300	75	703	0.427	297	0.0	0.7	8.820	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	267	67	719	0.371	266	0.4	0.6	7.948	A
C-AB	359	90	703	0.510	358	0.7	1.0	10.392	B
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	327	82	719	0.455	326	0.6	0.8	9.142	A
C-AB	439	110	703	0.625	437	1.0	1.6	13.420	B
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	327	82	719	0.455	327	0.8	0.8	9.185	A
C-AB	439	110	703	0.625	439	1.6	1.6	13.642	B
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	267	67	719	0.371	268	0.8	0.6	7.999	A
C-AB	359	90	703	0.510	361	1.6	1.1	10.601	B
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	224	56	719	0.311	224	0.6	0.5	7.285	A
C-AB	300	75	703	0.427	302	1.1	0.8	9.001	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.45	0.00	0.00	0.45	0.45			N/A	N/A
C-AB	0.73	0.55	1.00	1.40	1.45			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.58	0.55	1.00	1.40	1.45			N/A	N/A
C-AB	1.02	0.13	1.00	1.53	1.84			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.82	0.03	0.26	0.82	0.82			N/A	N/A
C-AB	1.61	0.03	0.28	1.61	4.62			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.83	0.03	0.28	0.83	2.63			N/A	N/A
C-AB	1.64	0.03	0.27	1.64	3.35			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.60	0.09	0.80	1.36	1.43			N/A	N/A
C-AB	1.07	0.07	0.86	1.94	2.71			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.46	0.04	0.38	1.21	1.35			N/A	N/A
C-AB	0.76	0.05	0.48	1.48	1.98			N/A	N/A

2029 Base + Area B, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

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		12.27	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	12.27	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2029 Base + Area B	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	234	100.000
B		ONE HOUR	✓	399	100.000
C		ONE HOUR	✓	352	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	180	54
	B	65	0	334
	C	19	333	0

Proportions

		To		
		A	B	C
From	A	0.00	0.77	0.23
	B	0.16	0.00	0.84
	C	0.05	0.95	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	A	176	176
	B	300	300

	C	265	265
08:00-08:15	A	210	210
	B	359	359
	C	316	316
08:15-08:30	A	258	258
	B	439	439
	C	388	388
08:30-08:45	A	258	258
	B	439	439
	C	388	388
08:45-09:00	A	210	210
	B	359	359
	C	316	316
09:00-09:15	A	176	176
	B	300	300
	C	265	265

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.70	19.39	2.3	10.7	C	366	549
C-AB	0.57	13.06	1.3	3.1	B	306	459
C-A						17	26
A-B						165	248
A-C						50	74

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	300	75	648	0.463	297	0.0	0.8	10.160	B
C-AB	251	63	661	0.379	248	0.0	0.6	8.672	A
C-A	14	4			14				
A-B	136	34			136				
A-C	41	10			41				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	359	90	638	0.562	357	0.8	1.2	12.731	B
C-AB	299	75	653	0.458	299	0.6	0.8	10.124	B
C-A	17	4			17				
A-B	162	40			162				
A-C	49	12			49				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	439	110	624	0.704	435	1.2	2.2	18.681	C
C-AB	367	92	642	0.571	365	0.8	1.3	12.893	B
C-A	21	5			21				
A-B	198	50			198				
A-C	59	15			59				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	439	110	624	0.704	439	2.2	2.3	19.392	C
C-AB	367	92	642	0.571	367	1.3	1.3	13.056	B
C-A	21	5			21				
A-B	198	50			198				
A-C	59	15			59				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	359	90	638	0.562	363	2.3	1.3	13.257	B
C-AB	299	75	653	0.458	301	1.3	0.9	10.283	B
C-A	17	4			17				
A-B	162	40			162				
A-C	49	12			49				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	300	75	648	0.464	302	1.3	0.9	10.471	B
C-AB	251	63	661	0.379	252	0.9	0.6	8.815	A
C-A	14	4			14				
A-B	136	34			136				
A-C	41	10			41				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.85	0.55	1.00	1.40	1.45			N/A	N/A
C-AB	0.60	0.55	1.00	1.40	1.45			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.25	0.10	1.07	2.12	2.81			N/A	N/A
C-AB	0.83	0.17	0.93	1.42	1.48			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.23	0.03	0.30	2.80	10.69			N/A	N/A
C-AB	1.29	0.03	0.27	1.29	2.21			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.30	0.03	0.28	2.30	7.58			N/A	N/A
C-AB	1.31	0.03	0.28	1.31	3.15			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.32	0.05	0.62	3.12	4.68			N/A	N/A
C-AB	0.86	0.08	0.83	1.33	1.75			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.88	0.04	0.40	2.06	3.44			N/A	N/A
C-AB	0.62	0.05	0.49	1.30	1.30			N/A	N/A

2029 Base + Area B, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

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		31.99	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	31.99	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2029 Base + Area B	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	91	100.000
B		ONE HOUR	✓	465	100.000
C		ONE HOUR	✓	449	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	70	21
	B	168	0	297
	C	50	399	0

Proportions

		To		
		A	B	C
From	A	0.00	0.77	0.23
	B	0.36	0.00	0.64
	C	0.11	0.89	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	69	69
	B	350	350

	C	338	338
17:00-17:15	A	82	82
	B	418	418
	C	404	404
17:15-17:30	A	100	100
	B	512	512
	C	494	494
17:30-17:45	A	100	100
	B	512	512
	C	494	494
17:45-18:00	A	82	82
	B	418	418
	C	404	404
18:00-18:15	A	69	69
	B	350	350
	C	338	338

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.91	56.32	7.4	38.6	F	427	640
C-AB	0.65	14.90	1.8	6.3	B	367	551
C-A						45	67
A-B						64	96
A-C						19	29

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	350	88	601	0.583	345	0.0	1.3	13.793	B
C-AB	301	75	687	0.438	297	0.0	0.8	9.176	A
C-A	38	9			38				
A-B	53	13			53				
A-C	16	4			16				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	418	105	586	0.714	414	1.3	2.3	20.483	C
C-AB	359	90	684	0.525	358	0.8	1.1	10.984	B
C-A	44	11			44				
A-B	63	16			63				
A-C	19	5			19				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	512	128	565	0.906	496	2.3	6.4	44.068	E
C-AB	442	110	683	0.647	439	1.1	1.8	14.594	B
C-A	52	13			52				
A-B	77	19			77				
A-C	23	6			23				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	512	128	564	0.907	508	6.4	7.4	56.324	F
C-AB	442	110	683	0.647	442	1.8	1.8	14.897	B
C-A	52	13			52				
A-B	77	19			77				
A-C	23	6			23				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	418	105	585	0.715	437	7.4	2.7	26.810	D
C-AB	359	90	684	0.525	362	1.8	1.1	11.256	B
C-A	44	11			44				
A-B	63	16			63				
A-C	19	5			19				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	350	88	600	0.584	355	2.7	1.5	14.996	B
C-AB	301	75	687	0.438	302	1.1	0.8	9.385	A
C-A	38	9			38				
A-B	53	13			53				
A-C	16	4			16				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.35	0.57	1.19	1.64	1.82			N/A	N/A
C-AB	0.76	0.55	1.00	1.40	1.45			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.32	0.09	1.35	5.44	7.59			N/A	N/A
C-AB	1.08	0.12	1.02	1.70	1.97			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	6.38	0.07	1.12	18.08	28.06			N/A	N/A
C-AB	1.76	0.03	0.28	1.76	6.30			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	7.45	0.05	0.48	21.23	38.63			N/A	N/A
C-AB	1.80	0.03	0.28	1.80	4.23			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.71	0.04	0.41	7.40	13.60			N/A	N/A
C-AB	1.13	0.06	0.82	2.29	3.13			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.45	0.03	0.32	2.84	7.54			N/A	N/A
C-AB	0.79	0.05	0.46	1.67	2.44			N/A	N/A

2029 Base + Area A + Area B, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

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		20.03	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.03	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2029 Base + Area A + Area B	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	234	100.000
B		ONE HOUR	✓	464	100.000
C		ONE HOUR	✓	435	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	180	54
	B	65	0	399
	C	19	416	0

Proportions

		To		
		A	B	C
From	A	0.00	0.77	0.23
	B	0.14	0.00	0.86
	C	0.04	0.96	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:45-08:00	A	176	176
	B	349	349

	C	327	327
08:00-08:15	A	210	210
	B	417	417
	C	391	391
08:15-08:30	A	258	258
	B	511	511
	C	479	479
08:30-08:45	A	258	258
	B	511	511
	C	479	479
08:45-09:00	A	210	210
	B	417	417
	C	391	391
09:00-09:15	A	176	176
	B	349	349
	C	327	327

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.82	31.47	4.2	21.8	D	426	639
C-AB	0.71	19.40	2.4	11.5	C	383	574
C-A						17	25
A-B						165	248
A-C						50	74

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	349	87	649	0.538	345	0.0	1.1	11.680	B
C-AB	313	78	661	0.474	310	0.0	0.9	10.145	B
C-A	14	4			14				
A-B	136	34			136				
A-C	41	10			41				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	417	104	638	0.654	414	1.1	1.8	15.923	C
C-AB	374	94	654	0.573	373	0.9	1.3	12.735	B
C-A	17	4			17				
A-B	162	40			162				
A-C	49	12			49				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	511	128	622	0.822	502	1.8	3.9	28.226	D
C-AB	460	115	645	0.714	456	1.3	2.3	18.665	C
C-A	19	5			19				
A-B	198	50			198				
A-C	59	15			59				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	511	128	621	0.822	510	3.9	4.2	31.472	D
C-AB	460	115	645	0.714	460	2.3	2.4	19.397	C
C-A	19	5			19				
A-B	198	50			198				
A-C	59	15			59				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	417	104	637	0.655	426	4.2	2.0	17.716	C
C-AB	374	94	654	0.573	378	2.4	1.4	13.273	B
C-A	17	4			17				
A-B	162	40			162				
A-C	49	12			49				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	349	87	648	0.539	352	2.0	1.2	12.302	B
C-AB	313	78	661	0.474	315	1.4	0.9	10.459	B
C-A	14	4			14				
A-B	136	34			136				
A-C	41	10			41				

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.13	0.55	1.00	1.40	1.45			N/A	N/A
C-AB	0.88	0.55	1.00	1.40	1.45			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.80	0.08	1.19	3.93	5.46			N/A	N/A
C-AB	1.30	0.10	1.09	2.35	2.98			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	3.94	0.04	0.40	10.49	20.96			N/A	N/A
C-AB	2.34	0.03	0.31	3.16	11.46			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	4.23	0.03	0.32	6.83	21.77			N/A	N/A
C-AB	2.42	0.03	0.28	2.42	8.04			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.99	0.04	0.43	5.41	9.22			N/A	N/A
C-AB	1.38	0.05	0.60	3.35	4.98			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.20	0.03	0.34	2.86	5.98			N/A	N/A
C-AB	0.92	0.04	0.40	2.21	3.68			N/A	N/A

2029 Base + Area A + Area B, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

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		85.80	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	85.80	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2029 Base + Area A + Area B	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	91	100.000
B		ONE HOUR	✓	546	100.000
C		ONE HOUR	✓	510	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	70	21
	B	168	0	378
	C	50	460	0

Proportions

		To		
		A	B	C
From	A	0.00	0.77	0.23
	B	0.31	0.00	0.69
	C	0.10	0.90	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	69	69
	B	411	411

	C	384	384
17:00-17:15	A	82	82
	B	491	491
	C	458	458
17:15-17:30	A	100	100
	B	601	601
	C	562	562
17:30-17:45	A	100	100
	B	601	601
	C	562	562
17:45-18:00	A	82	82
	B	491	491
	C	458	458
18:00-18:15	A	69	69
	B	411	411
	C	384	384

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	1.06	162.92	28.2	69.3	F	501	752
C-AB	0.75	20.42	2.8	14.3	C	425	638
C-A						43	64
A-B						64	96
A-C						19	29

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	411	103	606	0.678	403	0.0	2.0	17.103	C
C-AB	347	87	687	0.504	343	0.0	1.0	10.335	B
C-A	37	9			37				
A-B	53	13			53				
A-C	16	4			16				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	491	123	591	0.831	482	2.0	4.1	30.892	D
C-AB	415	104	686	0.605	413	1.0	1.5	13.103	B
C-A	44	11			44				
A-B	63	16			63				
A-C	19	5			19				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	601	150	568	1.059	547	4.1	17.7	90.456	F
C-AB	514	128	689	0.746	509	1.5	2.7	19.471	C
C-A	48	12			48				
A-B	77	19			77				
A-C	23	6			23				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	601	150	567	1.061	559	17.7	28.2	162.916	F
C-AB	514	128	689	0.746	513	2.7	2.8	20.422	C
C-A	48	12			48				
A-B	77	19			77				
A-C	23	6			23				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	491	123	589	0.833	571	28.2	8.1	125.082	F
C-AB	415	104	686	0.605	420	2.8	1.6	13.796	B
C-A	44	11			44				
A-B	63	16			63				
A-C	19	5			19				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	411	103	605	0.679	435	8.1	2.3	23.538	C
C-AB	347	87	687	0.504	349	1.6	1.0	10.710	B
C-A	37	9			37				
A-B	53	13			53				
A-C	16	4			16				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	1.98	0.55	1.34	2.96	3.66			N/A	N/A
C-AB	1.00	0.55	1.00	1.40	1.45			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	4.13	0.12	1.84	10.01	13.87			N/A	N/A
C-AB	1.48	0.09	1.13	2.91	3.90			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	17.73	1.95	13.85	35.53	44.13			N/A	N/A
C-AB	2.74	0.03	0.32	4.77	14.29			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	28.19	3.70	22.57	56.07	69.26			N/A	N/A
C-AB	2.85	0.03	0.29	2.85	10.46			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	8.12	0.09	2.12	22.71	34.13			N/A	N/A
C-AB	1.59	0.05	0.50	4.04	6.31			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	2.25	0.03	0.31	3.19	11.15			N/A	N/A
C-AB	1.04	0.04	0.39	2.62	4.53			N/A	N/A

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