## Land at Sully Sports and Social Club Site, Vale of Glamorgan

## Transport Assessment

 Including a Transport Implementation StrategySt Modwen \& Sully Sports and Social Club
June 2015

Plan Design Enable

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## Executive Summary

This Transport Assessment (TA) has been prepared for St Modwen \& Sully Sports and Social Club in support of the proposed development on land at Sully Sports and Social Club in the Vale of Glamorgan. The development proposals concern the provision of up to 200 new homes; a 50 pitch touring caravan park; convenience food retail store and the re-provision of sports facilities and the local library on the 14.56 ha site. The application for the residential components of the development have been submitted in outline, whilst the development relating to the sports facilities are submitted in full.

This TA provides baseline information about the existing access arrangements and land use for the site; conditions on the local highway network in terms of traffic flows and safety; and, provision for sustainable travel modes. A traffic impact assessment has been undertaken of the proposed development which demonstrates that the development trips can be accommodated on the local highway network without significant impact on its efficient operation. A framework Travel Plan for the site has been submitted in support of this application, to enable sustainable development to be delivered. The key initiatives from this framework Travel Plan are summarised in the Transport Implementation Strategy in Appendix A of this TA.

This TA provides a robust assessment of the traffic and transportation impacts of the development on the local highway network, demonstrating that the development can be accommodated and that there are no highway grounds for refusal.

## 1. Introduction

### 1.1. Overview

Atkins have been appointed by St Modwen \& Sully Sports and Social Club to provide planning advice in relation to transport in support of a proposed residential development in Sully, Vale of Glamorgan. The development proposals concern the provision of up to 200 dwellings on a 6.25 ha section on the western portion of the development site. The eastern portion of the site will accommodate sports facilities which will be re-provided, in addition to a caravan park, and a retail store.

### 1.2. Approach

The Welsh Government's Technical Advice Note (TAN) 18: Transport (2007) indicates that a Transport Assessment (TA) is required in support of residential developments of the proposed scale. An initial Scoping Note, setting out our intended approach in accordance with the TAN 18 guidance was forwarded to the Local Highway Authority (LHA) on 30th June 2014.

In April 2015, the development proposals were updated to include for the provision of the caravan park and a small retail store. An amended scope was sent to the LHA on $11^{\text {th }}$ May 2015, although further comments were not received prior to the submission of the planning application. A further amendment to the proposed access arrangements was made in June 2015, with a third site access proposed from South Road to achieve an improved site layout for the residential development.

### 1.3. Report Structure

This report will comprise of six chapters as follows;

## 2. Baseline Conditions

This section comprises the existing use of the development site and an audit of existing transport provision and conditions in the vicinity of the site for all modes.

## 3. Policy Context

This will include consideration of relevant National, Regional and Local transport and land use policy guidance.

## 4. Development Proposals

This section of the report will provide a description of the development proposals including layout, access and parking arrangements.

## 5. Transport Impact Assessment

This section will provide a capacity assessment of junctions on the local highway network which will accommodate the additional development traffic, identifying any impacts and constraints.

## 6. Summary and Conclusions

A Transport Implementation Strategy (TIS) will also be prepared to demonstrate how the proposed development contributes to the objectives of the emerging Local Development Plan (LDP). The TIS is included in Appendix A.

## 2. Baseline Conditions

### 2.1. Overview

This section of the TA provides a description of the existing use of the development site and an audit of existing transport provision and conditions within its vicinity. It comprises;

- A description of the road hierarchy, layout and traffic flows in the vicinity of the site,
- A review of personal injury accident data on the local highway network,
- An audit of current provision for pedestrians, cyclists and public transport users; and,
- An audit existing local amenities in the vicinity of the site.

Where deficiencies in existing transport provision are identified, these will be addressed in the TIS in Appendix A.

### 2.2. Location \& Use of Existing Site

### 2.2.1. Site Location \& Layout

The proposed development will occupy a 14.56ha site overlooking the Bristol Channel. The site is currently used as a sports ground (D2 land use) for a variety of sports including football, rugby, bowls and snooker. In addition, many social events and activities are held throughout the year including games nights, functions such as receptions and parties, quizzes and bingo.

The site is located to the south-east of the village of Sully as shown in Figure 2.1. It is bound by South Road (B4267) to the north, the back gardens of residential properties on Clevedon Avenue to the west, and Beach Road to the east. The site overlooks Sully Bay, with the Wales Coastal Path running along the southern boundary.

Figure 2.1 - Development Site Location and Existing Layout


Residential areas are located to the north and west of the site, with the Island View Caravan Park located to the south-east.

### 2.2.2. Vehicular Access Points

The primary access point for vehicles is from South Road, via a three arm priority junction, as shown in Figure 2.1 and 2.2.

Figure 2.2 - Primary Vehicular Access to Existing Site (South Road)


This junction leads to a parking area located to the north-west of the site which serves Sully Library, the football / rugby club and the social club.

An access road extends eastwards from this parking area along the northern boundary of the site, connecting to a secondary gated vehicular access from Beach Road to the north-east, as shown in Figure 2.1 and 2.3. This access road provides links to the indoor bowls arena building and adjacent car park.

Figure 2.3 - Secondary Vehicular Access - Gated (Beach Road)


There are currently approximately 150 car parking spaces on site, comprising 72 marked spaces adjacent to the indoor bowls arena and an informal, unmarked, parking area adjacent to the site access and sports clubhouse, with an approximate capacity for c. 75 vehicles. Overspill parking is possible on the grassed areas which fall outside of the marked pitches.

### 2.2.3. Pedestrian Access

Pedestrians are able to access the site via;

- The main vehicular access on South Road (north-west of site),
- A pedestrian access to the south-east of the site connecting to Beach Road; and,
- From Clevedon Avenue / Somerset View to the south-west.

The latter two of these access points serve the Wales Coastal Path as shown in Figure 2.4. It is designated as a Public Right of Way. To the west, it provides a traffic free pedestrian link to residential areas of Smithies Avenue and Minehead Avenue. To the east, it links to Beach Road and St Mary's Well Bay Road.

Signage indicates that the playing fields which form part of the development site are not to be used by dog-walkers.

Figure 2.4 - Pedestrian Access Points \& Provision


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### 2.3. Road Layout

### 2.3.1. Overview

Vehicular access to the village of Sully is primarily provided by the B4267 which is aligned east to west, connecting to the towns of Penarth and Barry respectively. Swanbridge Road and Cog Road provide access to the settlement from the north via Sully Road which connects to Cogan, a neighbourhood of Penarth.

Eight study junctions were identified through scoping discussions with the LHA.
Three of the junctions are located to the west of the site, as identified below;

1. A4231 (Barry Docks Link Road) / B4267 (Sully Moors Road) / A4055 (Cardiff Road)

This is a four arm conventional roundabout junction formed between Cardiff Road (A4055) aligned east to west, Barry Docks Link Road - A4231 (connecting from the north) and Sully Moors Road - B4267 (connecting from the south). It is known locally as the McDonald's roundabout due to the presence of a drive-thru located to the north-west of the junction,
2. B4267 (Sully Moors Road / South Road) / Hayes Road

This is a three arm conventional roundabout junction formed between South Road - B4267 (connecting from the east), Hayes Road (connecting from the south) and Sully Moors Road B4267 (connecting from the west),

## 3. B4267 (South Road) / Cog Road

This is three arm priority junction formed between the B4267 aligned east to west and Cog Road (connecting from the north),

The location of these three junctions is shown in Figure 2.5.
Existing manual turning count data was available for the first of these junctions, based on 12 hour traffic surveys undertaken in December 2012. Additional manual turning counts were undertaken in January 2015 for the remaining two junctions. All survey data was collected during school term time.

Figure 2.5 - Local Highway Network/ Study Junctions


An additional five junctions in the immediate vicinity of the site were also identified by the LHA. The location of these is shown in Figure 2.6.

Manual Classified Count surveys were undertaken at these five junctions on Tuesday $8^{\text {th }}$ July 2014 between 07:30 and 09:30 in the AM period and 16:30 and 18:30 in the PM period. The library was open on the day of the surveys between 15:00 and 18:00 and therefore these trips will have been captured in the surveys.

## 4. B4267 (South Road) / Cleveland Avenue

This is a three arm priority junction formed between South Road (aligned east-west) and Cleveland Avenue connecting from the south. White lining is used to narrow the carriageway on South Road, to enable the give way on Cleveland Avenue to be pulled into the carriageway to improve visibility.
5. South Road / Existing Site Access

This is a three arm priority junction formed between South Road (aligned east-west) and the site access (connecting from the south). A zebra crossing is provided immediately to the west of this junction.

## 6. South Road / Highbridge Close

This is a three arm priority junction formed between South Road (aligned east-west) and Highbridge Close (connecting from the north).
7. South Road / Swanbridge Grove

This is a three arm priority junction formed between South Road (aligned east-west) and Swanbridge Grove (connecting from the north).

## 8. B4267 I Beach Road / Swanbridge Road Crossroads

This is a four arm crossroads junction formed between South Road (aligned east-west), Beach Road (connecting from the south) and Swanbridge Road (connecting from the north).

Figure 2.6 - Local Highway Network Arrangement and Study Junction Locations

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### 2.3.2. Peak Hours

Table 2.1 shows the total flows across all junctions included in the traffic surveys. It indicates that the local peak hours are 08:00-09:00 and 16:30-17:30.

Table 2.1 - Local Traffic Flows Across Study Junctions

| AM | Total Traffic Flow |
| :---: | :---: |
| $07: 30-07: 45$ | 1836 |
| $07: 45-08: 00$ | 2560 |
| $08: 00-08: 15$ | 2868 |
| $08: 15-08: 30$ | 3173 |
| $08: 30-08: 45$ | 2853 |
| $08: 45-09: 00$ | 2699 |
| $09: 00-09: 15$ | 2797 |
| $09: 15-09: 30$ | 2384 |


| PM | Total Traffic Flow |
| :---: | :---: |
| $16: 30-16: 45$ | 2681 |
| $16: 45-17: 00$ | 2668 |
| $17: 00-17: 15$ | 2962 |
| $17: 15-17: 30$ | 3028 |
| $17: 30-17: 45$ | 2494 |
| $17: 45-18: 00$ | 2587 |
| $18: 00-18: 15$ | 2248 |
| $18: 15-18: 30$ | 2239 |

### 2.4. Local Road Network

The following section provides an audit of highway provision on roads providing access to the site.

### 2.4.1. B4267

The B4267 links Cardiff to Barry via Penarth and Sully. To the east of the site, this section of carriageway is known as Lavernock Road. To the west of the crossroads junction formed with Beach Road and Swanbridge Road, it is known as South Road.

The carriageway is approximately 7.3 m width, with a single general traffic lane in each direction. The carriageway surface can be rated as good, with no significant defects in proximity to the site. To the east, the road is subject to a 40 mph limit. A gateway feature on the approach to Sully marks the start of a 30 mph restriction through the village. This 30 mph limit is applicable on the section of carriageway past the development site.

A shared use path is provided on the northern side of the carriageway. The road is lit along its entire length. The road is adjoined by residential and commercial frontages through the village.

An Automatic Traffic Count (ATC) survey was undertaken between Tuesday $8^{\text {th }}$ and Monday $14^{\text {th }}$ July 2014 on the B4267 to the east of the site access junction. The local weekday peak hours were identified as 08:00 to 09:00 (AM) and 16:00 to 17:00 (PM). The PM Peak was slightly earlier than the 17:00 to 18:00 peak hour identified by the Manual Turning Count surveys. Peak hour two way flows are summarised in Table 2.2.

As shown, a directional bias is evident with the majority of trips travelling eastbound in the AM Peak and westbound in the PM Peak. The highest recorded travel demand is 601 vehicles westbound in the PM Peak which is equivalent to 10 vehicles per minute.

Table 2.2-B4267 Surveyed Traffic Flows (Weekday Average July 2014)

| Time Period |  | Eastbound | Westbound | Two Way |
| :---: | :---: | :---: | :---: | :---: |
| AM Peak | $08: 00-09: 00$ | $561(55 \%)$ | $454(45 \%)$ | 1,015 |
| PM Peak | $16: 00-17: 00$ | $475(44 \%)$ | $601(56 \%)$ | 1,076 |

The ATC also recorded traffic speeds as summarised in Table 2.3. Average speeds were slightly above the 30 mph speed limit, although these results do not indicate a significant speeding problem on this section of carriageway.

The recorded speeds are likely to be a result of the relatively straight road alignment and lack of direct frontages on to the carriageway, creating a country road feel in this location. There are several committed developments in the vicinity of the development site, which is likely to generate additional traffic demand on the B4267 which in itself will reduce traffic speeds on this section of carriageway. The extension of the existing urban area on to the development site will create additional frontages (the retail store, etc) which is likely to reduce speeds.

Table 2.3-B4267 Surveyed Traffic Speeds (7 Day Survey)

| Measure | Eastbound | Westbound | Two Way |
| :---: | :---: | :---: | :---: |
| Average | 32.0 | 30.4 | 31.0 |
| $85^{\text {th }}$ Percentile | 35.8 | 34.7 | 35.3 |

The existing carriageway arrangement is shown in Figure 2.7.

Figure 2.7 - Existing Site Access Junction with South Road


### 2.4.2. Beach Road

Beach Road connects to the B4267 via a crossroad junction to the north-east of the development site. It provides access to Sully Island, Sully Sound and Swanbridge Bay to the south, in addition to the Caravan Parks and Public House located on the coastline.

The carriageway is tree lined for most of its length without footway provision. No street lighting is present.

Beach Road has an approximate width of $4-5 \mathrm{~m}$, with passing places present. The carriageway surface can be rated as moderate to poor with potholes present in places, as shown in Figure 2.8. It is subject to national speed limit, with 'SLOW' markings present on the carriageway on the approach to several tight bends. Several residential accesses are formed with the road in addition to the two car park accesses.

Figure 2.8 - Beach Road


Table 2.4 summarises two way flows on Beach Road in peak hours from manual traffic count surveys undertaken on Tuesday $8^{\text {th }}$ July 2014 at the junction formed with South Road and Swanbridge Road. As shown, traffic demand on this section of carriageway is relatively low with a demand of less than 1 vehicle per minute in each direction.

Table 2.4 - Beach Road Surveyed Traffic Flows (Tuesday 8 ${ }^{\text {th }}$ July 2014)

| Time Period |  | Northbound | Southbound | Two Way |
| :---: | :---: | :---: | :---: | :---: |
| AM Peak | $08: 00-09: 00$ | 24 | 17 | 41 |
| PM Peak | $17: 00-18: 00$ | 30 | 51 | 81 |

### 2.4.3. Swanbridge Road

Swanbridge Road is a rural distributor road, aligned north to south, connecting to Cog Road / Sully Road to the north and South Road / Beach Road to the south. The road also provides access to a handful of residential properties which adjoin the road.

A 4.6 m height restriction applies due to the presence of a bridge associated with a dismantled railway. Due to the arched nature of the bridge, high vehicles are required to use the centre of the road, reducing it to single lane running.

Swanbridge Road is subject to a 30 mph speed limit. The route is unlit, with no footway provision. The carriageway is approximately 7 m in width in proximity to the South Road junction, narrowing to approximately 5 m further north.

Table 2.5 summarises two way flows on Swanbridge Road in peak hours from manual traffic count surveys undertaken on Tuesday $8^{\text {th }}$ July 2014. As shown, traffic demand on this section of carriageway is relatively low with a demand of less than 1 vehicle per minute in each direction.

Table 2.5-Swanbridge Road Surveyed Traffic Flows (Tuesday $8^{\text {th }}$ July 2014)

| Time Period |  | Northbound | Southbound | Two Way |
| :---: | :---: | :---: | :---: | :---: |
| AM Peak | $08: 00-09: 00$ | 41 | 54 | 95 |
| PM Peak | $17: 00-18: 00$ | 51 | 48 | 99 |

The carriageway arrangement at the junction Swanbridge Road forms with South Road and Beach Road is shown in Figure 2.9.

Figure 2.9 - South Road / Beach Road / Swanbridge Road Crossroads Junction


### 2.4.4. Cleveland Avenue

Cleveland Avenue is a residential road, which provides access to Smithies Avenue and Somerset View to the west of the development site. The carriageway is aligned north to south, connecting with South Road at its northern end via a 3 arm priority junction.

Table 2.6 summarises two way flows on Cleveland Avenue in peak hours from manual traffic count surveys undertaken on Tuesday 8 ${ }^{\text {th }}$ July 2014.

Table 2.6-Cleveland Avenue Surveyed Traffic Flows (Tuesday 8th July 2014)

| Time Period |  | Northbound | Southbound | Two Way |
| :---: | :---: | :---: | :---: | :---: |
| AM Peak | $08: 00-09: 00$ | 27 | 15 | 42 |
| PM Peak | $17: 00-18: 00$ | 18 | 29 | 47 |

The recorded traffic flows have a directional bias, with more departures in the AM peak and arrivals in the PM peak. Traffic flows in either direction are light (up to 1 vehicle every 2 minutes).

The carriageway layout is shown in Figure 2.10. The carriageway is approximately 7.3 m wide, with a footway provided along both sides of the entire length of the road. The carriageway is lit and subject to a 30 mph speed limit.

Figure 2.10 - Cleveland Avenue Junction with South Road


### 2.4.5. Swanbridge Grove / Winsford Road / Highbridge Clsoe

Swanbridge Grove and Winsford Road are residential streets to the north of the development site;

- Swanbridge Grove is aligned north to south, providing access to residential dwellings at its northern end and forming a three arm priority junction with South Road at its southern end.
- Highbridge Close is aligned east to west. The western end connects to Winsford Road which forms a crescent, linking back to Highbridge Close via a priority junction. The eastern end forms a cul-de-sac. A southern spur of Highbridge Close connects to South Road.
- A further section of unnamed carriageway links Highbridge Close to Swanbridge Grove, aligned east-west and running parallel to South Road. This forms part of the cycle route running along the northern edge of South Road.

These roads are all lit and subject to a 30 mph speed limit. Footways are generally provided on both sides of the carriageway. The junction arrangement formed by the South Road / Highbridge Close junction is shown in Figure 2.11.

Figure 2.11 - South Road / Highbridge Close Junction


### 2.5. Personal Injury Accident Data

Personal Injury Accident (PIA) data was reviewed for the five year period from 01/10/2009 to 30/09/2014 for the highway study area identified by VoGC during scoping discussions. The full PIA data is included in Appendix B. It revealed that:

- Across this period there were 48 accidents, with 74 casualties; and
- The vast majority (43) of these accidents were identified as 'slight'. Four accidents were recorded as 'serious' and the final accident was identified as 'fatal'.

The location of these incidents is contained in Figure 2.12.
Figure 2.12 - Location of Recorded PIA Incidents


In the immediate vicinity of the site, a total of three 'slight' incidents were recorded. All of these incidents occurred on the B4267 South Road, with two occurring in 2013, and one in 2012.

Two of the three collisions were reported occurring at the crossroads junction formed by the B4267 South Road, Beach Road and Swanbridge Road;

- The first occurred on Saturday $4^{\text {th }}$ February 2012 at 00:01, involving a car and a goods vehicle ( 3.5 tonnes or under). This resulted in three casualties (all 'slight'). The records indicate that the goods vehicle was travelling north to south across the junction, travelling from Swanbridge Road to Beach Road, but failed to see a car travelling from west to east along the B4267 Sully Road and collided; and
- The second collision occurred on Monday $3^{\text {rd }}$ June 2013, on a fine and dry day at 14:03. It was reported that a car travelling west to east along the B4267 Sully Road, failed to notice a car ahead of them slowing down to turn right into Beach Road, subsequently colliding into their rear. Three casualties were reported, all recorded as 'slight'.

The third collision occurred on Wednesday $3^{\text {rd }}$ April 2013, at 16:46 on a fine day, in dry conditions, west of Clevedon Avenue. The accident was recorded as 'slight' and involved a single car travelling west to east, leaving the carriageway and colliding with a telegraph pole. One casualty was reported.

Three further 'slight' collisions were reported occurring on the B4267 South Road to the northwest of the site. The first accident was reported at 12:00 on Thursday $22^{\text {nd }}$ December 2011. The weather was reported as fine and dry, with a car pulling out of Minehead Avenue into the carriageway and colliding with a motorcycle. It was reported that the car driver's view was obstructed by roadworks. One 'slight' casualty was reported.

The second accident was reported occurring on Sunday $3^{\text {rd }}$ March 2014 at 09:06, where it was recorded that a car pulled out into the path of an oncoming pedal cyclist. The pedal cyclist was the only 'slight' causality reported.

The final collision occurred at the junction with Burnham Avenue on Wednesday 17 ${ }^{\text {th }}$ July 2013 at 16:06. It was stated that a car collided with another car, which subsequently collided with a third car. Two 'slight' casualties were noted.

A further three 'slight' accidents were reported on the B4267 South Road, near the roundabout with B4267 Sully Moors Road / Hayes Road, and five 'slight' accidents on the roundabout itself.

In respect to the four 'serious' accidents, one occurred north of the site on Sully Road, one on the A4231 (Barry Docks Link Road) / B4267 (Sully Moors Road) / A4055 (Cardiff Road) roundabout, and the remaining two located in close proximity to one another on the A4055 Cardiff Road. All of these collisions are distant from the proposed development site.

One 'fatal' accident was reported on Cardiff Road (A4055). The accident occurred on Sunday $16^{\text {th }}$ October 2011 at 09:21 on a fine and dry day. A car travelling west towards Barry collided with a retaining bridge wall on its near side before colliding with an adult pedestrian also walking on its nearside, before then colliding with another car. Four casualties were reported, comprising the fatality and three recorded as sustaining 'slight' injuries. This accident is the only recorded accident involving a pedestrian. It did not occur within the vicinity of the site. Indeed, its location is beyond convenient walking distance of the site.

Overall, the frequency, severity, spatial distribution and different causal circumstance of these collisions does not suggest that there is an existing safety issue on local roads or at local junctions. Based on the review of accident causations on the highway network in the vicinity of the development site, it is not anticipated that the development will have a detrimental impact on the local safety record.

### 2.6. Provision for Pedestrians \& Cyclists

### 2.6.1. Overview

Figure 2.13 shows the existing pedestrian provision in the vicinity of the site. Footways are provided on both sides of South Road on the northern boundary of the site (with the northern path forming a shared use route with cyclists). A zebra crossing is provided immediately to the west of the existing site access. No footways are provided on Beach Road or Swanbridge Road, although it is anticipated that there will only be limited pedestrian demand on these routes associated with the development (associated with accessing the pub and coastal walks at the southern end of Beach Road). Alternative, partially traffic free routes are available to pedestrians to reach the pub and Sully Sound.

Figure 2.13 - Existing Provision for Pedestrians and Cyclists


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### 2.6.2. Cycle Routes

The shared use path on the northern side of the B4267 extends eastwards to connect to Cosmeston Country Park and Penarth.

### 2.6.3. Access to Local Amenities

Figure 2.15 shows the location of existing village amenities which can be accessed on foot or by bike from the proposed residential development. As identified in Chapter 1, the proposed development will include for a small retail store (food convenience) which will be benefit both the new residents and existing dwellings and caravans in the local vicinity.

As identified in Chapter 3, further residential development is proposed in Sully at a site opposite to Cog Road, which will support the further development of village amenities and services. Existing amenities are summarised in Table 2.7 Distances are measured from the site access junction.

Table 2.7 - Sully Village Amenities

| Map <br> Key | Amenity | Location | Distance | Walking <br> Time | Cycling <br> Time |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Sully Primary School | Burnham Ave, CF64 5SU | 800 m | 10 mins | 3 mins |
| 2 | GP Surgery | South Road. CF64 5TG | 850 m | 10 mins | 3 mins |
| 3 | Sully Library | South Road, CF64 5SP | 50 m | 1 min | 1 min |
| 4 | One-Stop <br> Convenience Store | South Road, CF64 5SL | 600 m | 7 mins | 2 mins |
| 5 | Sully Post Office | South Road. CF64 5SN | 350 m | 4 mins | 1 min |
| 6 | Sully Sports Club | South Road, CF64 5SP | 200 m | 1 min | 1 min |
| 7 | Bus Stop Provision | South Road (near Beach Rd <br> Jn) | 270 m | 3 mins | 1 min |
| 8 | Opticians | South Road, CF64 5SL | 600 m | 7 mins | 2 mins |
| 9 | Hairdresser (The <br> Salon) | Cog Road, CF64 5TD | 1.3 km | 16 mins | 4 mins |
| 10 | Public House <br> (Captain's Wife) | Beach Road, Cf64 5UG <br> (route via Coastal Path) | 800 m | 10 mins | 3 mins |

The location of these amenities is shown in Figure 2.14.
Figure 2.14 - Sully Village Amenity Locations


There are no secondary schools within the village, but provision is available in the adjacent settlements of Barry ( 6.5 km ) and Penarth ( 4.7 km ). The following school bus services operate from South Road to local primary and secondary schools providing access by local residents;

- Primary Schools
- P133 - Sully to St Joseph's Primary School, Lower Penarth,
- Secondary Schools
- S51 - Sully to Sir Richard Gwyn School, Palmerstown,
- S76A - Sully to Ysgol Bro Morgannwg, Penarth

The closest large supermarket to the development site is Waitrose in Palmerstown, Barry, which is approximately 3.5 km away. As indicated in the following section, a regular bus service also runs to Morrisons in Barry. Supermarkets (Asda) currently provide deliveries to the CF64 (Sully) postcode which new residents will be able to use to order groceries online (see Framework Travel Plan).

### 2.7. Provision for Public Transport Users

South Road is the main bus corridor through the settlement, with bus services providing links to Barry, Penarth and Cardiff. The closest bus stops to the development site are provided in either direction on South Road in proximity between the Swanbridge Road and Swanbridge Grove junctions as shown in Figure 2.15.

Figure 2.15 - Bus Stop Provision in Proximity to the Site


Both of these stops comprise a shelter and timetable information. A bus layby is present at the westbound stop. Table 2.8 summarises the existing bus schedule. In addition to those listed, there are several school buses which also serve these stops.

Table 2.8 - Existing Bus Services

| Route <br> Number | Route | Weekday <br> Service <br> Frequency | Evening <br> Services | Saturday <br> Service | Sunday <br> Service |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 86 | Barry - Sully - Dinas <br> Powys - <br> Culverhouse Cross | One service in <br> each direction - <br> Thurs only | N/A | One service in <br> each direction - <br> Sat only | N/A |
| 88 | Penarth - Sully - <br> Barry | Hourly in each <br> direction | N/A | Hourly in each <br> direction | N/A |
| $94 / 94 B$ | Cardiff - Penarth - <br> Sully - Barry <br> Morrisons | 2 per hour in <br> each direction | Until 23:25 | 2 per hour in <br> each direction | Hourly in each <br> direction |

The closest station to the site is at Cadoxton which is approximately 4 km away using local roads. This is approximately a 14 minute cycle ride.

### 2.8. Existing Mode Characteristics

Table 2.9 summarises the method of travel to work by existing residents of the Sully Ward, as recorded on the 2011 Census ${ }^{1}$. Of the 3,356 residents aged 16 to 74, 1,108 were not in employment and 142 worked mainly from home. Of the 2,106 residents who travel for work, $80 \%$ drive, with a further $5 \%$ travelling as a car / van passenger. Travel by train accounts for 3\%, indicating that some residents must travel to a local station before interchanging to this mode.

Table 2.9 - Sully Ward Method of Travel to Work (2011)

| Mode of Travel | Persons | Percentage Share |
| :---: | :---: | :---: |
| Train | 70 | $3 \%$ |
| Bus, Minibus \& Coach | 71 | $3 \%$ |
| Taxi | 3 | $0 \%$ |
| Motorcycle, Scooter \& Moped | 14 | $1 \%$ |
| Driving a Car / Van | 1,682 | $80 \%$ |
| Passenger in Car /Van | 115 | $5 \%$ |
| Bicycle | 42 | $2 \%$ |
| On Foot | 80 | $4 \%$ |
| Other Mode | 29 | $1 \%$ |
| Total | 2,106 | $100 \%$ |

[^0]It is envisaged that new residents for the proposed development will adopt similar commuting characteristics to those existing. TRICS rates will be used to determine the forecast levels of trip generation in Chapter 4. Existing 'Travel to work' mode data will be used to inform the targets in the Travel Plan. A Framework Travel Plan has been submitted in support of this application.

### 2.9. Public Consultation

A public consultation event was held in Sully on $12^{\text {th }}$ May 2015 to discuss the proposals. In terms of transport, the impact of increased traffic was the main concern, especially the cumulative impact from several developments in the area. Some participants indicated that they considered there to be an existing acute traffic problems at key nodes around Sully at peak times. Concern was also expressed about any increased traffic demand on Beach Road, although they were reassured that this would form an emergency only access.

In terms of the layout of the site, the following queries / comments were received;

- Query whether sufficient car parking would be provided for the sports facility to accommodate the tournaments / events - particularly if there were combined football, rugby, bowls and social club events (Weddings, etc),
- Requirement for demarcation between the caravan park access road and sports pitches for the safety of children,
- Concern over on-street parking related to the residential site,
- Concern regarding touring caravan traffic negotiating the sports facility car park to reach the site,
- Concern that the retail store may attract on-road parking in its vicinity.

The comments received emphasise the need to provide sufficient car parking on the development site to prevent on-street parking demand occurring on the surrounding highway which could directly impact on its operation.

A further concern related to erosion of the cliffs which could potentially impact on the coastal path running along the southern boundary in the future. A sufficient buffer will be provided to enable the path to be re-provided further back from the cliff if required by future erosion.

### 2.10. Site Usage

### 2.10.1. Sports \& Leisure

The existing site accommodates a range of sports and recreational activities. Its facilities comprise;

- 4 football pitches,
- 2 rugby pitches,
- An outdoor bowls club,
- An astro-turf training pitch,
- 8 rink indoor bowls arena,
- Changing rooms and showering facilities,
- Club facilities comprising a bar serving food, drink and snacks, with pool tables and darts; and,
- A main function room.

The site accommodates training for Sully Sports Football Club which comprises a men's team, women's team and several junior boy's and girl's teams. Training takes place on the five senior football pitches, three mini pitches and the astro-turf at the existing site. Home fixtures are played at Burham Avenue which is to the west of the settlement, rather than at the sports site. These are predominately played on a Saturday (on alternating weeks), with kick off at 14:00.

A full breakdown of the existing usage of the site can be found in Appendix C. This summarises the number of people who arrive at the site for each hourly period (from 09:00 to 21:00).

The current operations of the sports site does not impact on the local highway network during the AM peak, as the facility is operational from 10:00 onwards. Usage of the site across the evening highway peak is more significant, with the Sports Bar operating into the evening (18:00 onwards). A changeover in the private hire of the Function Suite and the continuation of sporting activities such as indoor bowls and casual AGP usage often take place during the PM peak on the highway network.

The most substantial and intensive use of the facility as a whole falls on the weekends, with high levels of usage between 10:00 and 14:00. The Function Suite has a capacity for 150 individuals, meaning there is potential for high arrival numbers associated with this site usage alone.

The figures summarised in Appendix C provide an estimation of average weekly use during the main sports seasons. There may be occasions when the club hosts a tournament or has a particularly popular local derby match when numbers may be slightly higher.

### 2.10.2. Car Boot Sale

In addition to the sports and recreational facilities, Sully Sports and Social Club host a large car boot sale every Sunday between the months of April and September (weather permitting) on the sports grounds. This event attracts large crowds and is promoted as one of the largest car boot sales in Wales.

The event caters for over 500 vehicles, with entry for sellers beginning at 06:30. Entry for buyers is permitted from 07:30. The organisers ask buyers and sellers to vacate the sports ground by 14:00. All cars access the site via the main entrance off South Road, with car park marshals onsite to direct traffic.

Unfortunately the car boot sale was cancelled on the Sunday that the ATC survey was undertaken due to bad weather, therefore it is not possible to identify traffic flows associated with this event.

Figure 2.16 shows the scale of the event, courtesy of images used on the organiser's website.
Figure 2.16 - Sully Sports and Social Club Car Boot Sale


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It is unclear whether the car boot sale will continue to operate from the site once it has been redeveloped. However, even if the event continues, there will be less site area available and therefore it will be on a much smaller scale than that which currently operates, therefore any current traffic impact associated with this event is anticipated to reduce as a result of the redevelopment of the site.

### 2.10.3. Camping

It is understood that the site is also used for camping outside of the football and rugby seasons.
The traffic generation associated with use of the site for camping is less than that associated with the sports use.

### 2.10.4. Library

Sully Library is open on Tuesday and Thursday afternoons from 15:00 to 18:00 and Saturday mornings from 09:00 to 13:00. The facility is accommodated in a prefabricated building. The car park has a barrier as shown in Figure 2.17 which is currently secured when the library is closed. Adjacent to the library site, there is a disabled parking space and sufficient space for up to two further vehicles in unmarked bays. No dedicated cycle parking is evident at the library site, although potential exists to chain bikes to posts and railing on-site.

The library building is small and is not considered to be a significant local trip attractor. The adjacent settlements of Barry and Penarth both have their own library provision and therefore the site on South Road only serves the existing community. All of the dwellings within the settlement boundary of the village are within 1.3 km which is considered reasonable walking distance.

Figure 2.17 - Sully Library Access \& Parking


### 2.11. Summary

This section of the Transport Assessment has presented an audit of existing transport provision in the vicinity of the development site. It has identified existing peak periods of demand on the local highway network; provision for sustainable modes and it has analysed recent personal injury accident data. A description of the existing site uses and associated travel demand has been presented to set a context for the development proposals.

## 3. Policy Context

### 3.1. Introduction

This section of the TA reviews national, regional and local transport policy guidance of relevance to the proposed development. It includes consideration of;

- Planning Policy Wales
- Technical Advice Note (TAN) 18: Transport
- SEWTA Regional Transport Plan
- Vale of Glamorgan Local Development Plan (LDP)


### 3.2. National Guidance

### 3.2.1. Overview

At a national level, there are several relevant high level plans and strategies which have been produced by the Welsh Government in relation to transport. These include the Wales Transport Strategy (2008) and National Transport Plan (2010) which seek to improve public transport and integration between modes. The proposed development site is located next to a local bus corridor, providing regular connections to both Cardiff and Barry. The proposed development provides opportunities for greater patronage of these existing services, making them more economically viable or to enable frequencies to be increase, thus contributing to the overarching aims of these national policy documents.

### 3.2.2. Planning Policy Wales (PPW)

PPW was updated in February 2014 and sets of the current land use policies of the Welsh Government. Chapter 8 relates to Transport and seeks to support sustainable development through minimising the need to travel and encouraging the use of more sustainable and healthy forms of transport. In relation to land use development, it indicates the Welsh Government's objective for transport is to;

- Reduce the need to travel, especially by private car, by locating development where there is good access by public transport, walking and cycling, and
- Locate development near to other related uses to encourage multi-purpose trips and reduce the length of journeys.


### 3.2.3. $\quad$ Transport Advice Note (TAN) 18: Transport

Technical Advice Notes provide detailed planning advice which should be taken into account by Local Planning Authorities when preparing Development Plans. TAN 18 describes how to integrate land use and transport planning, indicating how transport impacts should be assessed and mitigated.

It indicates that new development should;

- Be located where there is, or will be, good access by public transport, walking and cycling, thereby minimising the need for travel and fostering social inclusion,
- Include appropriate provision for pedestrians, cycling, public transport, traffic management and parking / servicing, and
- Include good quality design of street that provide a safe public realm and distinct sense of place.


### 3.2.4. Summary

The proposed development will conform to the requirements of PPW and TAN18, being located in proximity to existing bus routes through the village, enabling a frequent connection to amenities and employment opportunities in nearby urban centres. The location of the development also enables access to local village amenities on foot or by bike.

### 3.3. Regional Guidance

### 3.3.1. Overview

SEWTA was the South East Wales Transport Alliance which was a consortium of 10 local authorities who collaborated to improve regional transport. In 2010, they published a Regional Transport Plan (RTP). However SEWTA was disbanded in March 2014, with duties placed on Local Transport Authorities to produce Local Transport Plans.

### 3.3.2. SEWTA RTP

The 2010 RTP sought to;

- Improve access to services, facilities and employment, particularly by public transport, walking and cycling, and
- Ensure that land use development in south east Wales is supported by sustainable transport measures.


### 3.4. Local Guidance

### 3.4.1. Overview

The Vale of Glamorgan (VoG) UDP is the adopted land use plan, which will soon be replaced by the emerging LDP. Now that SEWTA has disbanded, the VoG is also currently preparing a Local Transport Plan, although no draft versions have been published to date.

### 3.4.2. Vale of Glamorgan Unitary Development Plan (UDP)

The adopted UDP covers the period from 1996 to 2011. The Council's transportation policy objectives of relevance to these development proposals identified in the UDP include;

- Ensuring developments are accessible by means of transport other than the private car, and
- Ensuring that adequate parking facilities are provided in accordance with the Council's approved parking guidelines.

The UDP identifies the potential for a future cycle route linking Lower Penarth to Sully via a former railway line. This railway line connects to Swanbridge Road in the close proximity of the development site.

### 3.4.3. Vale of Glamorgan Local Development Plan (LDP)

The VoG LDP sets out the vision, objectives, strategy and policies for managing development in the county between 2011 and 2026. Both the Deposit Plan and Alternative Site Plan have been consulted on. Cabinet will consider its response to the representations made in Spring 2015 before it is submitted to the Welsh Government.

The Proposals Map (Nov 2013) of the Deposit Plan allocates the whole of the development site as 'Green Wedge'. Policy MG18 indicates that "Green Wedges have been identified to prevent coalescence of settlements and to retain the openness of land." The site identifies this as the 'South Penarth to Sully Green Wedge'. However, it is noted that in relation to minor rural settlements, the LDP indicates that proposals will be favoured which "seek to protect and enhance the viability, accessibility or community value of existing village facilities and transport services." The proposals will support the viability of local amenities and services, and the residential development will be directly adjacent to the existing built up area. Furthermore, the retention of part of the site for sports and recreation will ensure that a portion of green space is retained.

In relation to new residential development, Policy MD1 indicates that development will be favoured where it "has access to or will promote the use of sustainable modes of transport." Policy MD3 stipulates that "New developments should give "priority to pedestrians, cyclists and
public transport users." The location of the site provides clear opportunities for residents to use these modes to access services, employment and amenities.

### 3.4.4. Vale of Glamorgan Local Transport Plan (LTP)

The VoG Council is required to submit a LTP by the end of December 2014, with its adoption due by the end of March 2015. The guidance issued by the Welsh Government for the preparation of the plans allows local transport authorities to update schemes or priorities identified in their adopted Regional Transport Plans.

### 3.4.5. Summary

The review of local policy has identified that the development will in part contravene the proposed green wedge status of the forthcoming LDP land allocations. However, it has been demonstrated that in terms of location, the development has potential to support existing village amenities and public transport services, supporting the overall viability of the settlement.

## 4. Development Proposals

### 4.1. Overview

This section of the report will provide a description of the development proposals including layout, access and parking arrangements.

### 4.2. Development Proposals

### 4.2.1. Extent of Development

## Western Section

The proposed development comprises the provision of up to 200 residential houses (2-4 bedrooms) on the west of the existing 14.56ha sports ground site, as shown in Figure 4.1. The existing prefabricated library will be retained to the north-west of the site and served by the existing site access. An outline planning application has been submitted for the 6.25ha western section of the site.

Figure 4.1 - Development Site Extent and Location (Proposed Access Points)


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## Eastern Section

The eastern section of the site will include the re-provided sports facilities, in addition to a 50 pitch touring caravan park and a food convenience store. A detailed application has been submitted in support of this 8.31 ha section of the site. Table 4.1 provides a summary of the proposed sports provision and provides a comparison with that existing at the site.

The extent of the proposed sports provision is largely equivalent to that which currently exists on the site (albeit it will be condensed into a smaller area). It is understood that there are currently three mini-football pitches and one $9-a$-side grass pitch which will not be re-provided. However, the existing 5 -a-side pitch will be re-provided as an enlarged 9-a-side 3G pitch.

Overall, it is felt that existing and proposed sports elements of the development are comparable and unlikely to result in any significant changes in travel demand (both in terms of volume and the times of users being on-site).

Table 4.1 - Proposed Sports Provision (compared to existing)

| Proposed Sports Provision | Existing Provision |
| :--- | :--- |
| $3 x$ full size football pitches | Equivalent to existing provision |
| $1 \times$ rugby pitch | Equivalent to existing provision |
| $1 \times 9 v 9$ football pitch (3G surface) | Improvement on existing 5-a-side football pitch |
| Bowling green \& pavilion | Equivalent to existing provision |
| Indoor bowling area | Retained in current form |
| Sports \& Social Clubhouse | Equivalent to existing provision |
| Parking Facilities for c.275 vehicles (exc <br> caravan park) | Increase on c.125 spaces existing, but will also <br> serve the retail store and there is some loss of <br> existing on-grass overspill parking |

The existing car boot sale identified in Section 2 does not form part of the formal planning application. If the event continues, it is likely to be on a reduced scale given the smaller area available to accommodate it. Accordingly, it is anticipated that traffic generation associated with the car boot sale would reduce significantly from that existing .

In addition to the sports facilities, the site will also include a caravan park with provision for 50 touring caravans and a single storey retail store ( $465 \mathrm{~m}^{2}$ ).

### 4.2.2. Vehicular Access \& Parking

## Sports Club, Caravan Site \& Retail Access

It is proposed that the sports club and retail unit will be served by a new access junction to the north-east of the site. This will form a right left staggered arrangement with Swanbridge Grove as shown in Figure 4.2.

There is currently minimal traffic demand associated with the Swanbridge Grove arm of this junction, with;

- 4 vehicles egressing this junction and 2 accessing it in the AM Peak hour; and,
- 4 vehicles egressing this junction and 6 accessing it in the PM Peak hour

A bus stop and bay is located to the east of the proposed access. Figure 4.2 shows that an adequate visibility splay can be achieved to the right (54m) even when a bus is parked in the layby. The length of this splay accords with Table 7.1 of Manual for Streets based on the recorded $85^{\text {th }}$ percentile speed of 35.8 mph , however removal of some of the tree line is likely to be required to achieve this splay.

Figure 4.2 - Visibility Splay to From New Access Junction


This access will form a new staggered four arm priority junction with Swanbridge Grove. This access leads directly to a parking area, with 215 spaces provided. Of these, 34 standard spaces and 2 disabled spaces are provided to the west of the junction immediately adjacent to the retail unit. The remaining spaces are provided to the north-east of the site, adjacent to the retained indoor bowls facility and new club house / changing rooms building. Twelve of the 215 car parking spaces are designated for mobility impaired users (c. 5.6\% of total provision).

A further 62 spaces will be provided at right angles to the access road running along the eastern boundary of the site, adjacent to the eastern hedgerow. These spaces are located in close proximity to the sports pitches. Five of these spaces are designated for disabled users. The carriageway will be of sufficient width to accommodate turning manoeuvres into and out of these spaces and tracking will be provided to demonstrate this in support of a future reserved matters application.

The proposed level of car parking represents a significant increase from the existing levels. There are currently approximately 150 spaces provided in marked and unmarked areas adjacent to the existing buildings. However, additional overspill parking can currently take place on the grass and there is evidence of this provided on Google Streetview.

The provision of c. 275 spaces represents an increase of 125 on the existing provision. Of these 24 will designated for the use of the retail store in accordance with the CSS All Wales Parking Standards (2008) ${ }^{2}$ are summarised in Table 4.2. All standards have assumed the site is classified as Zone 4-5 (Near Urban - Countryside).

Table 4.2 - CSS Parking Standards for Retail Development

| Land Use | Standards | Proposed | Parking Standard |
| :---: | :---: | :---: | :---: |
| Shops and small <br> supermarkets <br> $\left(201 \mathrm{~m}^{2}\right.$ to $\left.1000 \mathrm{~m}^{2}\right)$ | Operational: 2 commercial | vehicle spaces | 2 commercial |
|  | $465 \mathrm{~m}^{2}$ | 24 car parking spaces |  |

[^1]

Additional turning space is provided for delivery and service vehicles adjacent to the store and tracking will be provided to demonstrate manoeuvres of vehicles using this facility.

A further 12 spaces are designated for users of the existing indoor bowls centre, with further overspill parking available in the general Sports and Leisure parking to the north-east of the site.

The provision of c. 250 spaces for the Sports and Leisure Club site, seeks to ensure that all of the parking demand associated with the site is internalised to prevent this demand spilling on to the surrounding highway network.

Trip rates are identified for 'Fitness Clubs, Leisure Clubs and Sports Clubs' at;

- "1 commercial vehicle space and 1 car parking space per 2 facility users."

Additional spaces are also required for the clubhouse bar, which has provision for;

- "1 space per 3 staff and 1 space per $5 m^{2}$ of public area."

The clubhouse has 2 function rooms and 2 bars with a total GFA of $331 \mathrm{~m}^{2}$. A total of 66 parking spaces can be provided for this use within the parking standards.

Whilst the total number of sports club users is not known, the provision of c. 250 spaces for the clubhouse and sports facilities would provide for a residual 190 car parking spaces for the sports site when all of the sports club function rooms are being used. This would accommodate 374 sports club users at peak times (using the parking standards as guidance) which is considered sufficient for the site, given some activities will run concurrently (see Appendix Cor existing usage demand profile). The level of proposed parking should alleviate the concerns expressed by local residents in relation to parking at the Public consultation event held in May 2015 (see Chapter 2). A parking management strategy will be used to ensure the effective use of this provision (see the Transport Implementation Strategy in Appendix A).

Some amendments to the car parking layout will be needed to achieve efficient access and manoeuvrability of a car towing a caravan through the car parking area to reach the south of the site. It is envisaged that visitors to the caravan park will use the convenience food store located on South Road as part of the development for basic groceries.

A turning head will be located both within the caravan park and on the service road running between the all-weather sports pitches to enable refuse collections and access by emergency vehicles (i.e. fire engines).

There will be no vehicular through access from the sports site into the residential site to the west, except for an emergency access to a sports pitch as shown on the site layout plan (Figure 4.3). This access will be controlled by a gate.

The existing gated access from the site on to Beach Road will be retained for emergency vehicular access only. The existed gate will be retained to control access.

The layout of internal access roads is shown in Figure 4.3.

Figure 4.3 - Site Layout and Internal Access Roads (Sports, Retail \& Caravan Site)


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Cycle parking will be provided throughout the site in overlooked, legible and convenient locations. The following levels of provision are proposed;

- 20 spaces adjacent to the entrance to the Clubhouse,
- 10 spaces adjacent to the Indoor Bowls Centre,
- 10 spaces adjacent to the retail unit,

Although not formal cycle parking provision, additional space is available adjacent to each of the sports pitches for players and spectators to park and lock up their bikes.

## Residential \& Library

The residential units will be served by a new site access junction to the north of the site. This junction will comprise a standard 3 arm priority junction on the B4267. Good levels of visibility can be achieved at the proposed location of this vehicular access, with no existing obstructions present on South Road.

This new junction will connect to an internal spine road, which loops back onto itself as shown in Figure 4.4. The vehicular loop road will be designed to encourage a low speed environment with priority for pedestrians and cyclists.

The highway arrangement within the site has been designed in accordance with Manual for Streets principles, with a clear user hierarchy, giving priority to pedestrians and cyclists. This has been achieved through the provision of shared surfaces and cul-de-sacs which limit through traffic of vehicles, but which have dedicated pedestrian and cycle linkages to ensure permeability.

The library will continue to be served from the existing site access junction. It is not proposed to make any geometrical alterations to this access junction. As shown by the review of PIA data in Chapter 2, this junction currently has a good safety record, with no incidents recorded in its vicinity over the last 5 years. Due to the limited size and catchment of the library, there are no proposals to increase the existing levels of library parking from the 1 standard and 1 disabled space provided. On the rare occasion that additional vehicular parking is required, it will be possible to accommodate this on-street on quiet surrounding residential roads.

As part of the redevelopment of the site, potential does however exist to provide two Sheffield bike stands in front of the library for use by staff and patrons. The developer is willing to provide these as part of the alterations to the site.

Figure 4.4 - Site Layout and Internal Access Roads (Residential \& Library Site)


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Residential parking will be provided in accordance with the 2008 CSS All Wales Parking Standards (zones 2-6). As this section of the site has only been submitted in outline, the exact number of units and mix of number of bedrooms per dwelling has not yet been confirmed. The calculation provided in Table 4.2 is for indicative purposes only and assumes $200 \times 3$ bedroom houses will be provided.

Table 4.2 - CSS Parking Standards for Residential Development

| Land Use | Standards | Units <br> Proposed | Parking Standard |
| :---: | :---: | :---: | :---: |
| Houses | $\frac{\text { Residents: } 1 \text { space per bedroom }}{\text { (max 3 spaces) }}$ | 200 <br> $(2-4$ beds $)$ | $200 \times 3=600$ <br> TOTAL $=600$ |


|  | Visitors: 1 space per 5 units |  | 40 |
| :--- | ---: | ---: | :---: |
|  | Total | 640 max |  |

This provision will take the form of private driveways, shared on-street provision for visitors and private garages. Gates will be provided to rear gardens to enable access by bicycles to sheds and garages for secure storage of bicycles. Where dwellings do not comprise a private garden or garage, alternative cycle parking provision will be provided via on-street stands or bike stores in shared parking courts

### 4.2.3. Pedestrian \& Cyclist Access

Pedestrians and cyclists will be able to access the development via all of the vehicular access points, and also via dedicated provision at the following locations;

- From the public right of way along the coastline (linking to Beach Road and Cleveldon Avenue),
- Via a footway running along the westerns site boundary, providing a more direct route to properties to the west of the site from South Road than using the internal vehicular loop road.

These accesses are shown in Figure 4.5.
Figure 4.5 - Proposed Pedestrian / Cycle Access


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Pedestrian access to the retail store will be taken directly from the footway on the southern side of South Road. Cycle parking will be provided in a convenient and overlooked location adjacent to the retail store.

Footways of 2 m width will be provided adjacent to internal access roads in both the residential and sports site.

### 4.2.4. $\quad$ Staging \& Phasing

It is proposed that work will commence on the sports site in 2016 and on the residential site in 2017. No residential units will be occupied until the sports site is completed. Assuming a build rate of $30-50$ units per annum, it is anticipated that the residential development will be completed between 2021 and 2023.

### 4.3. Committed Development

### 4.3.1. Overview

As part of the scoping discussions, the VoG Council advised on 06/08/2014 that the following committed developments should be considered;

- Barry Waterfront
- Penarth Heights
- St Cyres Penarth Learning Community, Sully Road,
- Port Road Wenvoe

The trip generation and distribution from each of the TAs in support of these developments is summarised in the following text and will be included within the traffic impact analysis. It has been assumed that all committed development trip are PCUs (equivalent to an average car).

### 4.3.2. Barry Waterfront

The Barry Waterfront development (2009/00945/OUT and 2009/00947/OUT) comprises residential, retail, educational and leisure land uses on a brownfield site of approximately 43 hectares. A TA was produced by Arup in 2009 in support of the development proposals. It indicates that the development is expected to be fully completed by 2020 . Figures 6.2 and 6.3 of their TA show the proposed trip distribution. These trips have been included in the traffic analysis as shown in Figure 4.6.

Figure 4.6 - Barry Waterfront Development Trips



Forecast trips to and from Sully Moors Road have been routed along South Road through the study junctions.

### 4.3.3. Penarth Heights

The Penarth Heights development (2007/00295/FUL) comprises 377 residential units within the existing urban area of Penarth. A TA was prepared in 2005 in support of the development proposals.

The development flow diagrams only extend as for as the Cardiff Road / Redlands Road junction. In the AM peak hour it is forecast that 3 vehicular trips to and 7 from the development will be on Cardiff Road. In the PM peak hour it is forecast that 8 vehicular trips to and 3 from the development will be on Cardiff Road. It has been assumed that all of these trips continue on Cardiff Road once they reach the roundabout junction formed with the A4231 and B4267.

### 4.3.4. St Cyres Penarth Learning Community

As part of the VoG School Investment Strategy, there is a plan to redevelop St. Cyres Comprehensive School in Penarth (2012/00367/RG3). The proposals will bring together existing educational provision based on several sites to a single site to create a 'Learning Community'. A TA was prepared in support of the proposals in April 2012. An Opening Year of 2014 is stated for the development.

The extent of the traffic modelling does not extend close to the study junctions which have been identified by the VoG for Sully Sports and Leisure development. However, some trips are assigned to Sully Road and these have been distributed to Swanbridge Road and Cog Road equally in the AM Peak, with the assumption that they originate in Sully. As the PM peak hour for the school is 15:00-16:00, no traffic has been assigned to the local highway network from this development within the 17:00-18:00 peak hour scenario. This is shown in Figure 4.7.

Figure 4.7 - Learning Community Trips


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It is likely that some trips will be routed along the A4055 connecting to Barry, through the junction formed with the A4231 and B4267. However, the traffic flows forecast included in the Arup TA in support of the Learning Community development did not extend as far as this junction suggesting that the VoG considered that the overall impact would not be significant at this junction. Many school trips may already be on the highway network at this location.

### 4.3.5. Port Road, Wenvoe

A TA was prepared in 2012 in support of the Land to the West of Port Road development (2013/00884/OUT). The development comprises approximately 140 residential dwellings comprising a mix of private and affordable homes. The TA indicates that it is expected that the development will be completed by 2015.

The TA considered movements from the site to and from the A4050, with modelling at the junctions formed with Old Port Road / Morfa Lane and St. Andrew's Road. Using average trip generation rates from TRICS, in the AM Peak it was forecast there would be 23 departures travelling southbound on the A4050 and 10 arrivals travelling northbound. In the PM Peak it was forecast that there would be 17 departures travelling southbound and 23 arrivals travelling northbound. These movements were not distributed on to the study junctions defined for this TA.

To provide a robust assessment it has been assumed that $50 \%$ continue on the A4050 to the north of Barry and 50\% use the A4231 Barry Docks Link Road. These have been distributed in accordance with the base traffic distributions at this junction, as shown in Figure 4.8. These flows have been distributed in accordance with baseline turning movements as far as the Cog Road junction and then all traffic through Sully has been assumed to use the B4267 past the site.

Figure 4.8 - Port Road Development Assumed Traffic Distribution



### 4.3.6. Land adjacent to Swanbridge Road, Sully

Taylor Wimpey have an option to purchase land to the south of Cog Road, to the north-east of Sully, from the existing landowners subject to planning permission being granted for residential development (2013/01279/OUT). An outline planning application for up to 350 dwellings was submitted in December 2013. It is understood that a portion of land to the south is also earmarked for housing, although the whole development will not exceed 500 units. The proposed development site covers an area of 50 acres and is currently in agricultural use.
A TA was submitted in support of the planning application for the residential development in December 2013. It indicated that there would be 2 site access junctions, one on Cog Road and one on Swanbridge Road. There will be amendments to the layout of Cog Road and the extension of the 30 mph speed limit.
The TA used TRICS to estimate the potential trip generation and demand from the development, validated against a neighbouring cul-de-sac (Bassett Road). For the AM peak, the calculation based on 350 properties lead to an expectation for 54 arrivals and 130 departures. For the PM peak, 134 arrivals and 72 departures were calculated.
In terms of the direction of this traffic, the TA used Census 2001 information to outline an anticipated distribution of traffic. According to this, the TA anticipated that 50\% of vehicles leaving the development site would travel via Swanbridge Road eastwards towards Lavernock Road junction. $40 \%$ of development traffic was anticipated to use Cog Road westbound towards the Cog Road / South Road junction. Finally, 10\% of development traffic was assumed to use Sully Road (north).
The flows associated with the site itself have not been provided separately to the baseline flow (2013). However, the TA formulates a percentage impact of traffic associated with the site on surrounding key junctions. In 2013, 2018 and 2026, the impact of the development was determined to be $4 \%$ maximum. The TA forecast there would be capacity issues at the Cog Road / South Road junction but argued that the assessment had been overly robust by applying both a traffic growth factor to baseline flows and also including committed development trips. The Vectos TA argued that this constituted 'double counting' and in reality the operation of this junction would not be impacted to an extent as to warrant improvement measures to mitigate for the development traffic .

The committed development flows forecast to be associated with this development are shown in Figure 4.9. These were calculated from traffic flows in the 2013 Vectos TA (Figs 6.7, 6.8, 6.13 and 6.14).

Figure 4.9 - Committed Development Flows (Cog Road Housing)


### 4.4. Trip Generation

## Residential Houses - Privately Owned

Table 4.3 summarises the average residential trip rates that were extracted for the proposed development from the TRICS database. Weekday trip rates were extracted for 'Residential Houses - Privately Owned.' All UK regions were included except for Greater London. Only 'Neighbourhood Centre' surveys were included in the first instance as the development is located within a village and not part of a larger urban area such as a town or city. However, only 3 survey sites were available.

Table 4.3 - Vehicles - Average Trip Rates (Houses Privately Owned) - Neighbourhood Centre Only [Weekday]

|  | AM Peak 08:00-09:00 |  |  | PM Peak 17:00-18:00 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Arrivals | Departures | Two Way | Arrivals | Departures | Two-Way |
| Trip Rate per Unit | 0.098 | 0.260 | 0.358 | 0.316 | 0.189 | 0.505 |
| Trips Per 200 Units | 20 | 52 | 72 | 63 | 38 | 101 |

These trip rates are lower than those used in for the COG site by Vectos (included as committed development). As a sensitivity, TRICS rates were also extracted for 'Edge of Town' survey sites in addition to 'Neighbourhood Centre.' These are summarised in Table 4.4 and are comparable to those used for other committed developments, such as those used for the COG housing site which were based on observed vehicular trips from an existing cul-de-sac in the vicinity to the development site.

Table 4.4 - Vehicles - Average Trip Rates (Houses Privately Owned) - Neighbourhood Centre I Edge of Town [Weekday]

AM Peak 08:00-09:00
PM Peak 17:00-18:00

|  | Arrivals | Departures | Two Way | Arrivals | Departures | Two-Way |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Trip Rate per Unit | 0.144 | 0.413 | 0.557 | 0.408 | 0.227 | 0.635 |
| Trips Per 200 Units | 29 | 83 | 111 | 82 | 45 | 127 |

These higher residential trip rates have been used to provide for a robust assessment. In TRICS, the PM Peak for traffic generated by residential development is 17:00-18:00. These worst-case flows have been applied to the local peak of 16:30-17:30.

## Retail

The development proposals also include a $465 \mathrm{~m}^{2}$ retail unit. The exact type of retail unit is still to be confirmed and may comprise a mix of occupiers (for example a small pharmacy and a convenience store). For the purpose of this assessment, it has been assumed that the full retail GFA will comprise a 'Convenience Store' (A1 land use) as this is likely to provide a robust trip rate for the eventual retail mix. Trip rates were derived from TRICS for 'Edge of Town,' 'Neighbourhood Centre' and 'Suburban Area’ sites, as summarised in Table 4.5. Sites in the UK, excluding greater London were used, with 11 sites forming the sample.

Table 4.5 - Average Trip Rates (Convenience Store) - Neighbourhood Centre / Edge of Town I Suburban Area [Weekday]

| Vehicles | AM Peak 08:00-09:00 |  |  | PM Peak 17:00-18:00 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Arrivals | Departures | Two Way | Arrivals | Departures | Two-Way |
| Trip Rate per $100 \mathrm{~m}^{2}$ | 7.656 | 7.215 | 14.871 | 9.269 | 8.895 | 18.164 |
| Trips Per $465 \mathrm{~m}^{2}$ | 36 | 34 | 69 | 43 | 41 | 84 |

It is envisaged that the retail food-store will attract a lot of 'pass-by trips' i.e. those trips which are already present on the road network passing the site on journeys between other origins and destinations. If it is convenient, these drivers may stop off at this retail store as part of the trips that they were already making.

New residents of the housing development or visitors to the caravan park may also make 'linked trips. These are new development trips that will have multiple destinations. For example, new residents commuting to work may stop off at the convenience store to buy lunch on their way to work; or tourists may call in to buy some teabags on the way back to their caravan after a day out visiting local tourist attractions.

The current 'TRICS Research Report 14/1: Pass-By \& Diverted Trips' guidance acknowledges that 'convenience stores are likely to produce pass-by trips'. Indeed, whilst now superseded, 'TRICS Research Report 95/2 Pass-By and Diverted Trips: A Resume' indicated that 'the proportion of trips generally accepted to be non-primary is $30 \%$ '.

The presence of a main distributor road (B4267 South Rd) adjacent to the store is likely to result in a significant amount of 'pass-by' and 'linked' vehicular trips. A convenience store is already present to the western side of Sully and so it is anticipated that this store will primarily serve the local residential catchment of residential streets on the eastern side of the settlement, in addition to patrons of the new and existing caravan parks.

To provide a robust assessment, it has been assumed that $30 \%$ of the retail store trips are 'pass by'. The current guidance does not provide guidance percentages to be associated with 'linked trips'. To provide a robust and consistent approach, it has been assumed that $30 \%$ of trips associated with the store are 'diverted trips'.

The revised primary trip rates and those for 'linked' and 'pass-by' trips are shown in Table 4.6.

Table 4.6 - Convenience Store Weekday Peak Vehicular Trips

| Vehicles | AM Peak 08:00-09:00 |  |  | PM Peak 17:00-18:00 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Arrivals | Departures | Two Way | Arrivals | Departures | Two-Way |
| Primary trips (40\%) | 14 | 14 | 28 | 17 | 16 | 34 |
| Pass-by trips (30\%) | 11 | 10 | 21 | 13 | 12 | 25 |
| Linked trips (30\%) | 11 | 10 | 21 | 13 | 12 | 25 |

Table 4.7 shows the anticipated movements to the retail store by sustainable modes based on TRICS rates. It demonstrates that the majority of trips will be made on foot. Overall, the forecast mode split in the AM and PM peak periods based on arrivals will be as follows;

- Car 39\%
- Bike $3 \%$
- Foot $58 \%$

Table 4.7-Convenience Store Weekday Peak Sustainable Trips

| Mode | AM Peak 08:00-09:00 |  |  | PM Peak 17:00-18:00 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cyclists | Arrivals | Departures | Two Way | Arrivals | Departures | Two-Way |  |
| Trip Rate per $100 \mathrm{~m}^{2}$ | 0.756 | 0.725 | 1.481 | 0.403 | 0.374 | 0.777 |  |
| Trips Per $465 \mathrm{~m}^{2}$ | 4 | 3 | 7 | 2 | 2 | 4 |  |
| Pedestrians |  |  |  |  |  |  |  |
| Trip Rate per $100 \mathrm{~m}^{2}$ | 11.752 | 11.594 | 23.346 | 13.587 | 13.472 | 27.059 |  |
| Trips Per $465 \mathrm{~m}^{2}$ | 55 | 54 | 109 | 63 | 63 | 126 |  |

## Caravan Park

The development proposals also include an allocation for up to 50 touring caravans. It is envisaged that the majority of trips associated with this aspect of the development will not occur in the weekday AM and PM peak periods. The tourists who use this site are more likely to arrive and depart on weekends, during school holidays or outside of weekday peak periods.

There are no appropriate survey sites for this aspect of the development included in the TRICS database. However, the July 2014 traffic survey data of the Beach Road / Swanbridge Road / B4267 South Road / B4267 Lavernock Road junction enables traffic forecast to be determined on a 'first principles' basis.

Beach Road is currently utilised as an access road for a few residential dwellings, a public house called 'The Captain's Table', the Spinney Park Holiday and Leisure Park, ${ }^{3}$ and Island View Caravan Park ${ }^{4}$. It is therefore envisaged that the majority of traffic utilising Beach Road would be associated with both caravan parks. Spinney Park Holiday and Leisure Park, and Island View Caravan Park each accommodate a total of 90 and 89 static caravans respectively.

For a robust assessment, the surveyed vehicles utilising Beach Road have been wholly attributed to the 179 static caravans therefore providing a trip rate associated with caravan use. This process is summarised in Table 4.8. For the purpose of capacity modelling, it has also been assumed that all of the AM Peak departures and PM Peak arrivals comprise 2 Passenger Carrying Units (PCUs) which are equivalent to a car. This is to provide a robust assessment by representing cars towing caravans.

[^2]Table 4.8 - Vehicles - Average Trip Rates (Caravan Park) [Weekday]

|  | AM Peak 08:00-09:00 |  |  | PM Peak 17:00-18:00 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Arrivals | Departures | Two Way | Arrivals | Departures | Two-Way |
| July 2014 Traffic <br> Survey (Arm C - <br> Beach Road) | 17 | 24 | 41 | 51 | 30 | 81 |
| No. of Vehicles / No. <br> of Caravans (179) <br> (Trip rate per unit) | 0.095 | 0.134 | 0.229 | 0.285 | 0.168 | 0.453 |
| Trips Per 50 Units | 5 | 7 | 11 | 14 | 8 | 23 |
| PCUs (caravan <br> towing) | 5 | 14 | 19 | 28 | 8 | 36 |

## Sports Site

It is assumed that the trips associated with the sports facilities will be unchanged from the existing situation given that the proposed provision is comparable to that existing. A localised reassignment of trips from the existing site access junction to the new access is required. The existing vehicular movements at the sports site access are summarised in Table 4.9. As identified in Chapter 2 and Appendix D there are minimal traffic movements associated with the Sports and Leisure site during the weekday peak periods and in particular during the AM Peak as sports activities do not commence until 10am.

## Table 4.9 - Existing Weekday Peak Movements at Existing Sports Site Access

|  | AM Peak 08:00-09:00 |  |  | PM Peak 17:00-18:00 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Arrivals | Departures | Two Way | Arrivals | Departures | Two-Way |
| Sports \& Leisure Site | 11 | 5 | 16 | 16 | 10 | 26 |

## Library Site

The library currently has limited opening times (Tues \& Thurs 15:00-18:00 and Sat 09:00-13:00) and provides only a limited collection of books due to the small size of the prefabricated building in which it is accommodated. The site is within reasonable walking and cycling distance of the whole of the settlement and it is proposed that it will retain its existing site access arrangements. It is anticipated that library trips associated will be unchanged from those existing as there are no changes proposed to the size of the building or provision of car parking.

## Total Vehicular Trips

Table 4.10 summarises the total vehicular trips forecast at each of the site access points.
Table 4.10 - Total Vehicular Trips [Weekday] (including Pass-By and Linked)

| Land Use | AM Peak 08:00-09:00 |  |  | PM Peak 17:00-18:00 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Arrivals | Departures | Two Way | Arrivals | Departures | Two-Way |  |
| Western Residential Site Vehicular Access |  |  |  |  |  |  |  |
| 200 Residential Units | 29 | 83 | 111 | 82 | 45 | 127 |  |
| Total | 29 | 83 | 111 | 82 | 45 | 127 |  |
| Eastern Sports, Retail and Caravan Site Access |  |  |  |  |  |  |  |
| Sports Club* | 11 | 5 | 16 | 16 | 10 | 26 |  |
| Convenience Store | 36 | 34 | 69 | 43 | 41 | 84 |  |
| Caravan Site | 5 | 7 | 11 | 14 | 8 | 23 |  |
| Total | 53 | 50 | 101 | 77 | 60 | 138 |  |

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### 4.5. Development Trip Distribution

### 4.5.1. Overview

The following text summarises the trip distribution assumptions which have been made for each land use. These resulting flows on the highway network are shown in the traffic flows diagrams included in Appendix D.

As many of the study junctions in proximity to the site serve existing dwellings, they provide a good indication of existing trip distributions for the residential component of the development. The surveyed flows to and from the existing site access junction are predominately linked to the sports and leisure club and therefore provide a good indication of distributions for these trips.

### 4.5.2. Residential Trips

Table 4.11 shows the existing baseline turning proportions at the junctions formed by Clevedon Avenue, Highbridge Close and Swanbridge Grove with South Road in the AM and PM Peak hours. These three junctions each primarily serve residential dwellings and therefore they provide a good indication of existing residential vehicular trip distributions. These distributions will be used for residential trips associated with the development.

Beyond these junctions initial junctions formed with South Road, trips will be distributed on the wider highway network in accordance with baseline turning proportions.

Table 4.11 - Residential Distributions

| Residential Road | AM Peak |  |  |  | PM Peak |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Arrivals |  | Departures |  | Arrivals |  | Departures |  |
|  | West | East | West | East | West | East | West | East |
| Clevedon Avenue | 13 | 6 | 11 | 19 | 6 | 19 | 6 | 13 |
| Highbridge Grove | 7 | 1 | 14 | 6 | 13 | 11 | 8 | 4 |
| Swanbridge Grove | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 1 |
| TOTAL | $\mathbf{2 1}$ | $\mathbf{8}$ | $\mathbf{2 6}$ | $\mathbf{2 8}$ | $\mathbf{2 2}$ | $\mathbf{3 3}$ | $\mathbf{1 7}$ | $\mathbf{1 8}$ |
| Distribution | $72 \%$ | $28 \%$ | $48 \%$ | $52 \%$ | $40 \%$ | $60 \%$ | $49 \%$ | $51 \%$ |

### 4.5.3. $\quad$ Sports \& Leisure Trips

As the sports and leisure facilities will remain on the western section of the site which currently accommodates them, it is not anticipated that there will be any change to the origins and destinations of trips associated with the use of these amenities. It is anticipated that trips generated from the adjacent residential development will be undertaken on foot or by bike.

### 4.5.4. Retail Trips

The retail trips are made up of Primary, Linked and Pass-By Trips. It is assumed that all of these will pass through the new vehicular access junction formed with South Road which will connect to the parking area adjacent to the store. However, only the primary trips are distributed on the wider network as the linked and pass-by trips are already present at other junctions. The retail trips are confined to the junctions formed by Clevedon Avenue and Beach Road with South Road as the store will only serve a local 'convenience' catchment and it is not envisaged that vehicular traffic will be attracted from the wider highway network (there is already a convenience store serving the west of the settlement).

### 4.5.5. Caravan Park Trips

As Beach Road currently serves existing caravan sites, it has been assumed that the same turning proportions that were observed at this junction in the traffic surveys provides a good indication of likely movements by tourists using the new caravan park. The vehicular trips associated with this site have therefore been distributed to and from the west, north and east in accordance with the surveyed flows at the South Road / Beach Road / Swanbridge Road
junction. These movements and turning proportions are summarised in Table 4.12. Any trips to and from the west have then been distributed in accordance with baseline turning proportions once they reach the Cog Road junction.

Table 4.12 - Trip Distribution, Caravan Park Site

|  | AM |  |  |  |  |  | PM |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Arrivals |  |  | Departures |  |  | Arrivals |  |  | Departures |  |  |
|  | West | North | East | West | North | East | West | North | East | West | North | East |
| Baseline Flows | 12 | 2 | 4 | 16 | 0 | 8 | 21 | 1 | 24 | 13 | 1 | 14 |
| Turning Proportions | 67\% | 11\% | 22\% | 67\% | 0\% | 33\% | 46\% | 2\% | 52\% | 46\% | 4\% | 50\% |
| Development Flows | 3 | 1 | 1 | 5 | 0 | 2 | 6 | 0 | 7 | 4 | 0 | 4 |
| TOTAL | 5 |  |  | 7 |  |  | 14 |  |  | 8 |  |  |

### 4.6. Traffic Growth

The traffic survey at the Cardiff Road / Sully Moors Road was undertaken in 2012, with the surveys at the remaining junctions were undertaken in 2014 and 2015. The Tempro adjusted NTM growth factors identified in Table 4.13 have been applied to the survey data to equalise baseline flows to 2015. The growth rates were derived for an average day, for car drivers using The Vale of Glamorgan local growth figure.

Table 4.13 - Tempro I NTM Growth Factors Applied

| Junction |  | Year of Survey | Growth Factor <br> Applied |
| :---: | :---: | :---: | :---: |
| 1 | Sully Moors Road / Cardiff Road | 2012 | 1.0187 |
| 2 | Sully Moors Road / Hayes Road | 2015 | - |
| 3 | Cog Road / South Road333 | 2015 | - |
| 4 | Clevedon Ave / South Road | 2014 | 1.0048 |
| 5 | Existing Site Access / South Road | 2014 | 1.0048 |
| 6 | Highbridge Close / South Road | 2014 | 1.0048 |
| 7 | Swanbridge Grove / South Road | 2014 | 1.0048 |
| 8 | Swanbridge Road / South Road / Beach Road | 2014 | 1.0048 |

The Sports and Leisure facilities will be completed before work commences on the residential development. It is envisaged that the residential development will be completed between 2021 and 2023. The caravan park is not anticipated to open before the sports and leisure facilities are operational.

The traffic impact modelling will consider the residential Opening Year of 2023 and also a Design Year of 2028 (5 years). The following scenarios will be tested, initially to show percentage impact;

- 2023 (Opening Year): No Development (Base + Committed traffic flows)
- 2023 (Opening Year): With Development (Base + Committed + Development traffic flows)
- 2028 (Design Year): No Development (Base + Committed traffic flows)
- 2023 (Design Year): With Development (Base + Committed + Development traffic flows)

Where a percentage impact of $3 \%$ is forecast, full capacity modelling of the junction will be undertaken in accordance with the Scoping comments received from the VoGC.

Table 4.14 summarises the Tempro adjusted NTM growth rates that have been used to factor base traffic to the Opening (2023) and Design (2028) Years. Applying both traffic growth factors

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and adding committed development introduces an element of double counting as part of the growth will come from future development comprising both this development and other committed developments. The forecast traffic flows in the Opening and Design Year therefore represent a 'worst case scenario' as they overestimate traffic demand and can be assumed to be very robust.

Table 4.14 - Opening and Design Year Traffic Growth Factors

| Period of Growth | Factor Used |
| :---: | :---: |
| $2015-2023$ | 1.1168 |
| $2015-2028$ | 1.1974 |
| $2023-2028$ | 1.0721 |

## 5. Traffic Impact Assessment

### 5.1. Overview

This section of the TA presents an assessment of the likely impact of the development proposals on the local highway network. Modelling has been undertaken for the weekday AM and PM peak periods. No weekend modelling has been undertaken as trip generation associated with the new land uses on the site will be of a lower magnitude than on weekdays. Whilst the Sports and Social Club is likely to have the highest trip demand on a weekend, this is an existing use and these trips are already accommodated on the local highway network.

### 5.2. Traffic Impact

Table 5.1 sets out the calculated traffic impact at each of the study junctions. Where traffic increases more than $3 \%$, the Vale of Glamorgan have requested that a full capacity assessment is undertaken. Modelling is therefore required for all junctions, except for the McDonald's Roundabout (Junction 1 - A4231 (Barry Docks Link Road) / B4267 (Sully Moors Road) / A4055 (Cardiff Road)) where the traffic impact is forecast to be just $1 \%$.

Table 5.1 - Study Junctions Total Flow Through Junction (PCUs)

| Junction | AM Peak Hour (08:00-09:00) |  |  |  |  |  | PM Peak Hour (16:30-17:30) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2023 |  |  | 2028 |  |  | 2023 |  |  | 2028 |  |  |
|  | $\begin{aligned} & \text { ® } \\ & \text { ó } \\ & \text { o } \end{aligned}$ | $\begin{aligned} & \text { D } \\ & \stackrel{\rightharpoonup}{5} \\ & \vdots \end{aligned}$ |  | $\begin{aligned} & \text { D } \\ & \text { O} \\ & \text { ¿ } \end{aligned}$ |  |  | $\begin{aligned} & \text { ® } \\ & \text { ò } \\ & \text { ¿ } \end{aligned}$ |  |  | $\begin{aligned} & \text { ® } \\ & \text { ò } \\ & \text { ¿ } \end{aligned}$ | $\begin{aligned} & \text { D } \\ & \vdots \\ & \vdots \\ & \vdots \end{aligned}$ |  |
| Jct 1 - A4231 (Barry Docks Link Rd) / B4267 (Sully Moors Rd) / A4055 (Cardiff Rd) | 4559 | 4612 | 1\% | 4847 | 4901 | 1\% | 4320 | 4369 | 1\% | 4591 | 4640 | 1\% |
| Jct 2-B4267 (Sully Moors Rd / South Rd) / Hayes Rd | 2118 | 2187 | 3\% | 2258 | 2327 | 3\% | 1697 | 1763 | 4\% | 1809 | 1875 | 3\% |
| Jct 3 - B4267 (South Rd) / Cog Rd | 1945 | 2018 | 4\% | 2072 | 2145 | 3\% | 1452 | 1523 | 5\% | 1547 | 1617 | 4\% |
| Jct 4 - B4267 (South Rd) / Cleveland Av | 1401 | 1487 | 6\% | 1498 | 1583 | 5\% | 1344 | 1434 | 6\% | 1437 | 1527 | 6\% |
| Jct 5 - South Rd / Existing Site Access Junction | 1390 | 1518 | 9\% | 1486 | 1614 | 8\% | 1336 | 1490 | 11\% | 1429 | 1583 | 10\% |
| Jct 6 - South Rd / Highbridge Cl | 1389 | 1464 | 5\% | 1485 | 1560 | 5\% | 1333 | 1450 | 8\% | 1425 | 1542 | 8\% |
| Jct 7 - South Rd / Swanbridge Grove | 1366 | 1514 | 11\% | 1461 | 1608 | 10\% | 1308 | 1519 | 16\% | 1398 | 1609 | 15\% |
| Jct 8 - B4267 / Beach Rd / Swanbridge Rd Crossroads | 1505 | 1578 | 5\% | 1605 | 1678 | 4\% | 1499 | 1605 | 7\% | 1595 | 1702 | 6\% |

### 5.3. Junction Capacity Modelling

### 5.3.1. Overview

Capacity modelling has been undertaken using TRL Junctions software (all junctions have been modelled utilising PICADY, with the exception of Junction 2 (roundabout) which has been modelled using ARCADY.

### 5.3.2. Modelling Assumptions

At the time of writing, the geometrical parameters of Junction 7 (South Road / Swanbridge Grove / Sports and Leisure Proposed Access) has not been finalised. It has been modelled as a RightLeft stagger incorporating Swanbridge Grove, assuming it will comprise a single lane.
All junctions were modelled in the AM and PM peak periods for the 'Opening' and 'Design Years'. The 'One Hour' flow profile has been used to provide a robust assessment, as this creates a 'peak within a peak' during the modelled hour, rather than assuming a flat profile of arrivals at the junction.

### 5.3.3. Capacity Modelling Results

The results are summarised in Tables 5.2 and 5.3. The Ratio of Flow (RFC) value is used to determine whether traffic demand can be accommodated by the capacity of a junction. It is industry standard to use an RFC value of 0.85 as the threshold for indicating when delays are likely to start to be manifest due to demand approaching the theoretical capacity of the junction. The Level of Service (LOS) rating has also been included from the Highway Capacity Manual. This rates the performance of the junction from $A$ (being the best - free flow) to $F$ (congested). The maximum queue length is also shown (PCU).

Table 5.2 - Junction Capacity Modelling 2023 Opening Year

| Junction | AM Peak Hour (08:00-09:00) |  |  |  |  |  | PM Peak Hour (16:30-17:30) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No Dev |  |  | With Dev |  |  | No Dev |  |  | With Dev |  |  |
|  | $\begin{aligned} & \text { U } \\ & \text { X } \end{aligned}$ | O | $\stackrel{\times}{\stackrel{0}{0}}$ | $\begin{aligned} & \text { U } \\ & \underset{\sim}{u} \end{aligned}$ | $0$ |  | $\frac{u}{\frac{u}{x}}$ | $0$ |  | $\begin{aligned} & \frac{u}{\sim} \\ & \hline \end{aligned}$ | $0$ | $\stackrel{\text { x }}{\times}$ |
| Jct 2 - B4267 (Sully Moors Rd / South Rd) / Hayes Rd | 0.52 | A | 1.07 | 0.53 | A | 1.12 | 0.39 | A | 0.65 | 0.41 | A | 0.70 |
| Jct 3 - B4267 (South Rd) / Cog Rd | 0.99 | F | 4.65 | 1.07 | F | 5.98 | 0.40 | C | 0.66 | 0.43 | C | 0.73 |
| Jct 4 - B4267 (South Rd) / Cleveland Av | 0.11 | B | 0.13 | 0.12 | B | 0.14 | 0.08 | B | 0.09 | 0.09 | B | 0.09 |
| Jct 5 - South Rd / Existing Site Access Junction | 0.02 | A | 0.03 | 0.20 | C | 0.25 | 0.04 | A | 0.06 | 0.15 | A | 0.41 |
| Jct 6 - South Rd / Highbridge Cl | 0.07 | C | 0.08 | 0.08 | C | 0.09 | 0.05 | A | 0.07 | 0.05 | A | 0.08 |
| Jct 7 - South Rd / Swanbridge Grove / Sports \& Leisure Proposed Access | 0.00 | A | 0.00 | 0.17 | B | 0.21 | 0.01 | A | 0.01 | 0.20 | B | 0.25 |
| Jct 8 - B4267 / Beach Rd / Swanbridge Rd Crossroads | 0.22 | A | 0.28 | 0.23 | B | 0.30 | 0.23 | A | 0.30 | 0.24 | B | 0.31 |

For each junction the arm with the worst RFC and corresponding LOS and Max Queue are shown in Tables 5.2 and 5.3. Where capacity issues are forecast, further analysis is provided in
the following text on the arms and movements which are over capacity at these junctions. The junction modelling output can be found in Appendix E.

The only junction that is forecast to exceed its theoretical capacity ( $\mathrm{RFC}>0.85$ ) in 2023 and 2028 is Junction 3, (B4267 South Road / Cog Road priority junction). This junction is forecast to exceed capacity in all AM Peak scenarios;

No capacity issues were forecast to occur in the PM Peak hour (16:30-17:30).
The results of the capacity modelling at this junction are similar to those presented by Vectos in their COG Housing TA (Table 7.8, December 2013). They assumed that $40 \%$ of the trips generated by the COG site would be distributed on to Cog Road to the junction formed with South Road. Overall the trips associated with the COG site account for $6.4 \%$ of the forecast traffic through this junction, compared to the $3.5 \%$ forecast to be associated with the Sully Sports and Leisure site development.

Table 5.3 - Junction Capacity Modelling 2028 Design Year

| Junction | AM Peak Hour (08:00-09:00) |  |  |  |  |  | PM Peak Hour (16:30-17:30) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No Dev |  |  | With Dev |  |  | No Dev |  |  | With Dev |  |  |
|  | $\frac{u}{\underline{u}}$ | 0 |  | $\begin{aligned} & \text { U } \\ & \underset{\sim}{u} \end{aligned}$ | - |  | $\frac{U}{\underline{X}}$ | $0$ |  | $\begin{aligned} & \text { u } \\ & \underset{\sim}{x} \end{aligned}$ | $0$ |  |
| Jct 2-B4267 (Sully Moors Rd / South Rd) / Hayes Rd | 0.56 | A | 1.26 | 0.57 | A | 1.31 | 0.42 | A | 0.72 | 0.44 | A | 0.78 |
| Jct 3 - B4267 (South $\mathrm{Rd}) / \mathrm{Cog} \mathrm{Rd}$ | 1.17 | F | 8.18 | 1.27 | F | 10.42 | 0.45 | C | 0.81 | 0.48 | D | 0.91 |
| Jct 4 - B4267 (South Rd) / Cleveland Av | 0.13 | B | 0.15 | 0.15 | C | 0.17 | 0.09 | B | 0.10 | 0.10 | C | 0.11 |
| Jct 5 - South Rd / Existing Site Access Junction | 0.02 | A | 0.03 | 0.22 | C | 0.28 | 0.05 | A | 0.08 | 0.16 | A | 0.48 |
| Jct 6 - South Rd / Highbridge Cl | 0.09 | C | 0.09 | 0.09 | C | 0.10 | 0.05 | A | 0.08 | 0.06 | A | 0.09 |
| Jct 7 - South Rd/ Swanbridge Grove / Sports \& Leisure Proposed Access | 0.01 | C | 0.01 | 0.18 | B | 0.22 | 0.02 | C | 0.02 | 0.22 | C | 0.27 |
| Jct 8 - B4267 / Beach Rd / Swanbridge Rd Crossroads | 0.24 | B | 0.31 | 0.25 | B | 0.32 | 0.24 | B | 0.32 | 0.25 | B | 0.32 |

### 5.3.4. Junction 3 - B4267 (South Road) / Cog Road Priority Junction

The modelling presented in the preceding tables includes both committed development and a traffic growth factor (applied to the baseline flows). As identified in Chapter 4, this is a robust approach which includes an element of 'double counting' which serves to overestimate future traffic demand, representing a 'worst case' scenario.

Furthermore, the modelling has only considered movements at the 3 arm priority formed between Cog Road and South Road. However, as shown in Figure 5.1, a second priority junction is present immediately to the east via a section of carriageway in front of a church graveyard which effectively forms a bypass of the junction.

Figure 5.1 - South Road / Cog Road Junction Arrangement


Imagery © 2014 The Geolnformation Group. Map data © 2014 Google
Table 5.4 presents the results of a sensitivity test which omits the traffic growth factor, but retains the other committed development trips. The results indicate that when the double counting is omitted, the RFC for the AM scenarios is restored to within the 0.85 threshold of theoretical capacity with more manageable maximum queue lengths.

Table 5.4 - Junction 3 Capacity Modelling Opening \& Design Year

| Junction | AM Peak Hour (08:00-09:00) |  |  |  |  |  | PM Peak Hour (16:30-17:30) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No Dev / No Growth |  |  | With Dev I No Growth |  |  | No Dev / No Growth |  |  | With Dev / No Growth |  |  |
|  | U u ¢ | O) |  | $\begin{aligned} & u \\ & \frac{u}{\square} \end{aligned}$ | $0$ |  | $\begin{aligned} & \text { U } \\ & \frac{u}{\square} \end{aligned}$ | $0$ |  | $\begin{aligned} & \text { u } \\ & \text { ur } \end{aligned}$ | $0$ |  |
| Jct 3-B4267 (South Rd) / Cog Rd | 0.78 | F | 3.17 | 0.84 | F | 4.05 | 0.34 | C | 0.51 | 0.36 | C | 0.55 |
| Summary of Capacity for each arm |  |  |  |  |  |  |  |  |  |  |  |  |
| Cog Road left turn | 0.28 | C | 0.37 | 0.38 | D | 0.58 | 0.07 | A | 0.08 | 0.08 | A | 0.09 |
| Cog Road right turn | 0.78 | F | 3.17 | 0.84 | F | 4.05 | 0.34 | C | 0.51 | 0.36 | C | 0.55 |
| South Road (east) ahead | 0.12 | A | 0.28 | 0.13 | A | 0.34 | 0.18 | A | 0.50 | 0.20 | A | 0.57 |

The results shown in Table 5.4 are felt to represent a more realistic scenario of future traffic demand. The highest RFCs in the AM Peak were forecast for movement B-A which is the opposed right turn from Cog Road to the B4267 South Road west. Approximately half of the
vehicles making this movement are baseline traffic flows and half are committed trips associated with the Cog Road residential development.

If capacity issues begin to be manifest at this junction, it is likely that traffic travelling between Cog Road and South Road (east) will reassign to the alternative route past the church, hence freeing up capacity at the main priority junction.

It is noted that whilst the provision of 350 units has been applied for through the planning application process on the Cog Road site, the proposed allocation for the site is 500 dwellings. Should future applications come forward for additional residential development, effective mitigation could be achieved at this junction using the available land within the highway boundary. For example, there is sufficient highway land available to increase the flare length for turning movements from Cog Road, or to formalise the use of the alternative route running past the church.

Based on the committed development proposals to date, it is not considered that any mitigation measures are required and the Sully Sport and Leisure development traffic can be accommodated without significant impact on the operation of this junction.

## 6. Summary \& Recommendations

### 6.1. Overview

This TA has been prepared in support of the proposed redevelopment of the Sully Sports and Leisure site to provide up to 200 houses, a 50 pitch caravan park, local convenience store and reprovided sports facilities including a clubhouse with a function room and changing facilities. The development is expected to be completed between 2021 and 2023.

The report included;

- An audit of existing transport provision and conditions in the vicinity of the site and has demonstrated that the site is highly accessible by sustainable modes being located adjacent to the key bus corridor through the settlement and a shared use path linking to the wider footway and cycleway network in the village and connecting to surrounding settlements,
- A review of relevant planning policy which seeks to integrate transport and land use and to maximise the use of sustainable travel modes. The development will comprise a mixed use of complimentary uses. The new residential units will support existing bus services on South Road. Whilst the new retail provision will provide amenity to new residents, the caravan park and existing residents in the local neighbourhood and users of the existing caravan parks.
- Details of the engagement that has been undertaken with the local community through the Public Consultation exercise. The concerns relating to parking demand, highway capacity and continuing access to the coastal path have been alleviated through; the provision of adequate on-site parking; a robust traffic impact assessment; and, reassurance that sufficient land will be reserved to maintain the coastal path is coastal erosion occurs.


### 6.2. Key Findings and Recommendations

The TA has included a detailed and robust traffic impact assessment encompassing 8 study junctions which were identified as part of the scoping discussions with VoGC.

In accordance with the agreed scope, junction capacity modelling has been undertaken using industry standard software at 7 of the 8 junctions where the percentage impact of the development traffic was forecast to be $3 \%$ or greater. This modelling was undertaken for the 2023 Opening and 2028 Design Years using a 'worst case' approach which provides for a robust assessment. It showed that all junctions have sufficient spare capacity to accommodate the forecast levels of development traffic, with the exception of the priority junction formed between Cog Road and South Road.

A sensitivity test was undertaken which removed the 'double counting' which was inherent in the worst case methodology used which forecast junction operation within its theoretical capacity, with manageable queue lengths. Furthermore, the modelling undertaken focused solely on the main priority junction formed between Cog Road and South Road. A secondary junction is present 50 m from the main junction, which will provide additional capacity.

No junction improvements are therefore considered necessary at the Cog Road / South Road junction.

Several measures have been identified in the Transport Implementation Strategy in Appendix A to effectively mitigate the impacts of the proposed development on the surrounding highway network, comprising;

- Travel Plans for each of the 3 main land uses on site,
- A Construction Traffic Management Plan to limit disruption during works on-site,
- A Parking Management Strategy to avoid queues blocking back on to the surrounding highway,
- Application for a TRO for parking restrictions on South Road along the site frontage to prevent any parking demand over spilling on to surrounding streets (eg. parking linked to convenience store customers).

Overall, it is felt that this package of mitigation measures are both proportionate and adequate to enable the proposed development to proceed, without causing any undue impacts to the surrounding highway network. There are therefore no considered to be any highway grounds to recommend refusal for this application.

Appendices

# Appendix A. Transport Implementation Strategy 

## A.1. Introduction

Technical Advice Note (TAN) 18: Transport, indicates that the transport assessment process should include the production of a Transport Implementation Strategy (TIS). The TIS should set objectives and targets relating to managing travel demand for the development and set out the infrastructure, demand management measures and financial contributions necessary to achieve them.

## A.2. Framework Travel Plan

For the proposed development, the primary mechanism for managing travel demand is via a Travel Plan. A framework plan has been produced which will inform the production of full plans for each of the three main land use once the site becomes operational. The residential, sports and caravan sites will each have very different travel demand profiles and will therefore need to be covered by individual travel plans. However, given the proximity of these land uses and the shared access in the case of the latter two, it is important that there is coordination and cooperation to effectively manage periods of peak demand and to collaborate on initiatives which have wider benefits.
An overarching Framework Travel Plan has been produced and is accompanies this application. This includes the following overarching aims;

- Mitigate against potential traffic and transportation impacts from the proposed development,
- Ensure integration of the proposed developments within their local context; and,
- Influence the travel behaviour of all users of the site away from use of the private car, particularly for single occupancy use.

The following initiatives are proposed for each of the land uses;

- Sports and Leisure Site
- Promote the use of minibuses for use by visiting sports teams and their supporters,
- Ensure changing and locker facilities are made available to staff to encourage them to cycle to work,
- Provide travel information on their website and in literature which also provides details of provision for bike parking on site, etc,
- A travel information board for sports club users,
- Staggered events which spread traffic demand and avoids generating movements during peak hours on the surrounding highway network.
- Residential Site
- Provision of a travel information pack for new residents, including details of local bus services, car sharing schemes, grocery delivery options, high speed broadband providers, etc,
- Provide a map showing local cycle and pedestrian provision and how this links to local amenities such as shops and schools,
- Promotion of opportunities to use sustainable modes by sales staff in the on-site showhome and in sales literature, with the opportunity to provide personalised travel planning to new residents using existing web-based tools.
- Caravan Site
- Provide signposting within the site to key destinations on-site (e.g. fingerpost signs to local pub, local shop, etc),
- Include a welcome pack which provides information of sustainable travel options to key local tourist destinations,

Funding will be provided (via a S106 agreement as part of the planning permission) for the delivery of the residential travel plan from first occupation.
The sports and caravan park land uses will be responsible for managing the implementation of their own travel plans as part of their overall operation of activities.

## A.3. Construction Traffic Management Plan

Further traffic management measures required for the site will include a Construction Traffic Management Plan (CTMP) which it is expected will form a planning condition. This will be prepared in collaboration with the appointed contractor and will cover the following;

- Proposed routing for construction traffic and delivery vehicles,
- Any temporary access arrangements,
- Details of wheel cleaning / washing facilities (to prevent mud and other material from migrating on to the adjacent highway),
- Use of appropriately trained, qualified and certificated banksmen for managing movements of HGVs,
- Proposed compound arrangements for construction worker parking,
- Before work commencement highway condition survey,
- Strategy for liaising with local residents throughout the construction process,
- Details of times for construction traffic and delivery vehicles (which will be kept outside of network peak and school peak periods).

All construction traffic will be routed to the site via South Road, with no HGVs using Beach Road.

## A.4. Parking Management Strategy

The Sports and Leisure site has c. 275 car parking spaces. The magnitude of provision has been determined to prevent any demand over-spilling on to the surrounding highway network, thus internalising all of this parking on-site. The existing site has c. 150 car parking spaces, so the proposed increase in provision is c.125. This reflects opportunities at the existing site for over-spill parking to use some of the grassed areas which are not part of the marked pitches at present, which will no longer be possible for the new site layout.

It also includes provision for the retail unit. Approximately 24 spaces are provided adjacent to the retail building. Seventeen of the proposed spaces on site will be designated for disabled users. Ample cycle parking will also be provided in convenient and secure locations throughout the site.

The following measures are proposed to manage car parking;

- Retail parking provision is to be appropriately signed and legible. Approximately 24 spaces will be provided for use by customers and staff. Potential controls may need to be introduced, such as limits on periods of parking to prevent use by other site users. For example a 2 hour limited waiting period could be used and this can be managed by a private company. The occupier of the retail unit will be responsible for arranging appropriate management in accordance with their needs,
- Retail deliveries will be timed where possible to avoid peak periods on the local highway network and to avoid any peak periods of demand for the retail store, particularly by HGVs. Deliveries will also be scheduled to avoid being on-site at the same time as refuse collections are scheduled,
- The sports site, through the Travel Plan, will schedule sporting events in order to distribute travel demand over the course of the day where possible and to try to avoid vehicle movements being generated during local peak periods. When large events are being hosted (for example a summer open day), parking wardens will be used to direct cars to areas of the site with available
provision to prevent queues of vehicles looking for spaces from queuing back on to South Road. In these instances, the one-way system which is currently used to manage the car boot sale traffic may be used (access via South Road and egress via Beach Road gated access).
- During periods of high traffic demand at the Sports and Leisure site, management measures will need to be put into place to ensure that parking only occurs in designated marked spaces and no ad-hoc parking occurs in other areas. This is especially important as access to the caravan park will be via the car park and therefore the access road needs to be kept clear at all times to enable vehicles towing caravans to manoeuvre safely. Furthermore refuse vehicle collections where possible should be scheduled to occur outside of peak times of movement associated with the sports site or caravan site.


## A.5. Mitigation Measures \& Obligations

The TA has demonstrated that all of the junctions in the vicinity of the site are able to accommodate the additional traffic associated with the proposed development site. The South Road / Cog Road junction which is shown to be operating close to capacity in the AM Peak, although the proposed development is forecast to add minimal trips on to this junction (circa 3\%), with other committed developments significantly increasing traffic demand at this junction. It is therefore considered that no junction improvements are required as a result of traffic generated by the proposed development at the Sports and Leisure club site.

The developer of the Sports and Leisure site is prepared to implement the following package of mitigation measures associated with potential impacts from the development;

- Provision of parking restrictions on the southern side of South Road (through a TRO) to prevent any on-street parking which could impact on visibility splays,
- Provision of a new uncontrolled pedestrian crossing point in proximity to the retail store / Sports and Leisure site access to facilitate access to and from the footway on the northern side of the site (arrangement and alignment to be agreed in discussion with the Local Highway Authority),
- Provision of cycle parking at the existing library site as part of the works to stop up the existing access road to the existing Sports and Leisure facilities.
It is envisaged that provision of these measures will form planning conditions and be delivered via S278 and S106 obligations.


## Appendix B. Personal Injury Accident Data





Other Details






Veh registration no.
Drivers age yo
? Sex Not knov Breath test Driver not contacted Driving Lic
Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle
Journey purpose Other

## Manoeuvre $\quad$ Going ahead other

Veh. direction from South to North Towing? No tow or articulation
Skidded No skidding, jack-knifing or overturning
Veh location at impact (restricted lane) On main carriageway not in restricted lane
Junct. location of veh. at 1st impact Not at or within 20 m of junction
Veh left carriageway? Did not leave carriageway
Hit object in c'way? None
Hit object off c'way? None
First point of impact Fron
Veh registration no.
Drivers age 23 yrs
Left Hand Drive
Journey purpose

Other veh.hit (ref.no) Breath test Not requested Foreign veh. Not foreign registered vehicle


Make
Model
Manoeuvre Waiting to go ahead but held up
Veh. direction from East to West Towing? Other tow
Skidded No skidding, jack-knifing or overturning
Veh location at impact (restricted lane) On main carriageway not in restricted lane
Junct. location of veh. at 1st impact Not at or within 20m of junction
Veh left carriageway? Did not leave carriageway
Hit object in c'way? None
Hit object off c'way? None
First point of impact Back
Veh registration no Drivers age 54 yrs Sex Mal Left Hand Drive Unknown Journey purpose Other



Veh. direction from Northeast to Southwest
Towing? No tow or articulation
Skidded No skidding, jack-knifing or overturning
Veh location at impact (restricted lane) On main carriageway not in restricted lane
Junct. location of veh. at 1st impact Approaching junction or waiting
Veh left carriageway? Did not leave carriageway
Hit object in c'way? None
Hit object off c'way? None
First point of impact Back
Feh registration Drivers age 48 yrs Sex Mal Left Hand Drive Unknown Other veh.hit (ref.no)

Hit and run Not hit and run Breath test Negative Driving Lic

Journey purpose Other


Veh. direction from East to West

Veh location at impact (restricted lane) On main carriageway not in restricted lane
Junct. location of veh. at 1st impact Approaching junction or waiting
Veh left carriageway? Did not leave carriageway
Hit object in c'way? None
Hit object off c'way? None
First point of impact Back
Veh registration Drivers age 67 yrs Left Hand Drive Sex Female Other veh.hit (ref.no) 2

Hit and run Not hit and run Breath test Not requested Driving Lic

Journey purpose Unknown






## Veh. direction from West to East

Towing? No tow or articulation
Skidded No skidding, jack-knifing or overturning
Veh location at impact (restricted lane) On main carriageway not in restricted lane
Junct. location of veh. at 1st impact Not at or within 20m of junction
Veh left carriageway? Did not leave carriageway
Hit object in c'way? None
Hit object off c'way? None
First point of impact Back
Veh registration no Drivers age 49 yrs Sex Mal Left Hand Drive Unknown

Other veh.hit (ref.no) 1

Hit and run Not hit and run Breath test Negative Driving Lic

Journey purpose Other




Ped Movement Not applicable
Ped Location Not applicable
Ped Direction to Not applicable
School Pupil Other
Roadworker injured
Other Details




# Veh. direction from West to East 

Towing? No tow or articulation
Skidded No skidding, jack-knifing or overturning
Veh location at impact (restricted lane) On main carriageway not in restricted lane
Junct. location of veh. at 1st impact Approaching junction or waiting
Veh left carriageway? Did not leave carriageway
Hit object in c'way? None
Hit object off c'way? None
First point of impact Front
Veh registration no.
Drivers age 54 yrs Sex Mal
Left Hand Drive Unknown
Journey purpose Other


Veh location at impact (restricted lane) On main carriageway not in restricted lane
Roadworker injured
Junct. location of veh. at 1st impact Entering roundabout
Other Details
Veh left carriageway? Did not leave carriageway
Hit object in c'way? Non
Hit object off c'way? None
First point of impact Back
Veh registration no.
Drivers age 64 yrs Sex Mal
Other veh.hit (ref.no) 1 Hit and run Not hit and run Breath test Not requested Driving Lic
Left Hand Drive Unknown Foreign veh. Not foreign registered vehicle
Journey purpose Other



Veh location at impact (restricted lane) On main carriageway not in restricted lane
Junct. location of veh. at 1st impact Approaching junction or waiting

Other veh.hit (ref.no)
Breath test Negative
1
Hit and run Not hit and run
Foreign veh. Not foreign registered vehicle

Hit object in c'way? None
Hit object off c'way? None
First point of impact Nearside
Drivers age 42 yrs Sex Male
Left Hand Drive Unknown
Journey purpose Other

Car Passenger? Not a passenger PSV Passenger? Not a passenger Cycle Helme

Roadworker injured

Car Passenger? Not a passenger PSV Passenger? Not a passenger Cycle Helmet

Roadworker injured
Other Details
Ped Location Not applicable
Ped Direction to Not applicable




No skidding, jack-knifing or overturning
Junct. location of veh. at 1st impact Approaching junction or waiting
Veh left carriageway? Did not leave carriageway
Hit object in c'way? Non
Hit object off c'way? None
First point of impact Fron
Veh registration no. Sex Mal
Left Hand Drive Unknown

Other veh.hit (ref.no)
Breath test Negative
-
Hit and run Not hit and run Foreign veh. Not foreign registered vehicle

| Left Hand Drive | Unkno |
| :--- | :--- |
| Journey purpose | Other |









Veh location at impact (restricted lane) On main carriageway not in restricted lane
Roadworker injured
Junct. location of veh. at 1st impact Approaching junction or waiting
Other Details

Hit object in c'way? None
Hit object off c'way? None
First point of impact Fron
Veh registration no. 6 Sex Male
Left Hand Drive Unknown
Journey purpose Other

Other veh.hit (ref.no) $1 \quad$ Hit and run Not hit and run Breath test Negative Foreign veh. Not foreign registered vehicle

## Skidded No skidding, jack-knifing or

Hit object off c'way? None
First point of impact Back
Feh registration no Drivers age 39 yr Left Hand Drive Sex Female Other veh.hit (ref.no) 2 Breath test Negative2

Hit and run Not hit and run Driving Lic

Journey purpose Unknown Other














## Appendix C. Sully Sports \& Social Club Existing Site Usage



## Assumptions

AGP users generally are dropped off for an hour then picked back up
It is assumed that lounge bar users stay for an hour whilst function room users stay for the duration of the event.
Staff assumed to be included

## Appendix D. Traffic Flow Diagrams




| AM | 2023 |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $08: 00$ | $-09: 00$ | With Development | pcus |

Key -..-. -. -. Link not applicable to all scenarios



| AM | 2028 |
| :---: | :---: |
| $08: 00$ | $-09: 00$ |

## No Development

pcus
Key -..-.-.-. Link not applicable to all scenarios



| AM | 2028 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $08: 00$ | $-09: 00$ | With Development | pcus |  |

Key -..-. -. -. Link not applicable to all scenarios



| AM | 2023 | With Development (no growth) | pcus |
| :---: | :---: | :---: | :---: | :---: |
| 08:00 | $-09: 00$ |  |  |

Key -..-. -. -. Link not applicable to all scenarios




| PM | 2023 |  |  | With Development |
| :---: | :---: | :---: | :---: | :---: |
| $16: 30$ | $-17: 30$ |  | pcus |  |

Key -. . . . . . . Link not applicable to all scenarios




| PM | 2028 |  |  | With Development |
| :---: | :---: | :---: | :---: | :---: |
| $16: 30$ | - | $17: 30$ |  | pcus |

Key -..-. -. -. Link not applicable to all scenarios



## Appendix E. Junction Modelling

## Junctions 8

## PICADY 8 - Priority Intersection Module

## Version: 8.0.4.487 [15039,24/03/2014]

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Filename: Jn8 - B4267 Beach Road - Swanbridge Rd Crossroads.arc8
Path: P:IGBCFAITPIHB\Projects\5133321 - Sully Sport \& Social Club - TAYL3270104 - Analysis\Junction Modelling Report generation date: 25/06/2015 13:13:13
" (Default Analysis Set) - 2023 With Development, AM
" (Default Analysis Set) - 2023 With Development, PM
" (Default Analysis Set) - 2028 With Development, AM
" (Default Analysis Set) - 2028 With Development, PM
" (Default Analysis Set) - 2023 No Development, AM
" (Default Analysis Set) - 2023 No Development, PM
" (Default Analysis Set) - 2028 No Development, AM
» (Default Analysis Set) - 2028 No Development, PM

## Summary of junction performance

|  | AM |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Queue (PCU) | Delay (s) | RFC | LOS |
|  | A1 - 2023 With Development |  |  |  |
| Stream B-ACD | 0.09 | 10.41 | 0.08 | B |
| Stream A-B | - | - | - | - |
| Stream A-C | - | - | - | - |
| Stream A-D | 0.12 | 9.67 | 0.11 | A |
| Stream D-AB | 0.30 | 10.29 | 0.23 | B |
| Stream D-BC | 0.08 | 19.59 | 0.07 | C |
| Stream C-ABD | 0.09 | 4.00 | 0.06 | A |
| Stream C-D | - | - | - | - |
| Stream C-A | - | - | - | - |

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.
"D5-2023 With Development, AM " model duration: 07:45-09:15 "D6 - 2023 With Development, PM" model duration: 16:45-18:15 "D7-2028 With Development, AM" model duration: 07:45-09:15 "D8 - 2028 With Development, PM" model duration: 16:45-18:15 "D9-2023 No Development, AM" model duration: 07:45-09:15 "D10-2023 No Development, PM" model duration: 16:45-18:15 "D11-2028 No Development, AM" model duration: 07:45-09:15 "D12-2028 No Development, PM" model duration: 16:45-18:15

Run using Junctions 8.0.4.487 at 25/06/2015 13:13:09

File summary

| Title | (untitled) |
| :--- | :---: |
| Location |  |
| Site Number |  |
| Date | $09 / 10 / 2014$ |
| Version |  |
| Status | (new file) |
| Identifier |  |
| Client |  |
| Jobnumber |  |
| Enumerator | TAYL3270 |
| Description |  |

Analysis Options

| Vehicle Length <br> $(\mathbf{m})$ | Do Queue <br> Variations | Calculate Residual <br> Capacity | Residual Capacity Criteria <br> Type | RFC <br> Threshold | Average Delay Threshold <br> $(\mathbf{s})$ | Queue Threshold <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5.75 |  |  | N/A | 0.85 | 36.00 |  |

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 |

## (Default Analysis Set) - 2023 With Development, AM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(\mathbf{H H : m m})$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, <br> AM | 2023 With <br> Development | AM |  | ONE | HOUR | $07: 45$ | $09: 15$ | 90 | 15 |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 Beach Road / Swanbridge Road | Crossroads | Two-way | A,B,C,D | 9.45 | $A$ |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B427 Lavernock Rd |  | Major |
| B | B | Beach Road |  | Minor |
| C | C | B4267 South Rd |  | Major |
| D | D | Swanbridge Rd |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway ( $\mathbf{m}$ ) | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 7.75 |  | 0.00 |  | 2.20 | 82.40 |  |  |
| C | 7.75 |  | 0.00 |  | 2.20 | 101.00 | $\checkmark$ |  |

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) | Lane Width $($ Left $)(\mathrm{m})$ | Lane Width (Right) $(\mathrm{m})$ | Width at give-way (m) | Width at 5m (m) | Width at 10 m (m) | Width at <br> 15m (m) | Width at <br> 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.10 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 16 |
| D | One lane plus flare |  |  |  | 10.00 | 4.94 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 10 | 14 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-C | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-A | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 621.682 | - | - | - | - | - | - | 0.223 | 0.318 | 0.223 | - | - | - |
| $\mathbf{1}$ | B-A | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | - | 0.230 | 0.230 | 0.115 |
| $\mathbf{1}$ | B-C | 703.832 | 0.100 | 0.252 | - | - | - | - | - | - | - | - | - | - |
| $\mathbf{1}$ | B-D, nearside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| $\mathbf{1}$ | B-D, offside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| $\mathbf{1}$ | C-B | 632.453 | 0.226 | 0.226 | 0.323 | - | - | - | - | - | - | - | - | - |
| $\mathbf{1}$ | D-A | 685.379 | - | - | - | - | - | - | 0.245 | - | 0.097 | - | - | - |
| $\mathbf{1}$ | D-B, nearside lane | 528.369 | 0.141 | 0.141 | 0.321 | - | - | - | 0.225 | 0.225 | 0.089 | - | - | - |
| $\mathbf{1}$ | D-B, offside lane | 480.132 | 0.128 | 0.128 | 0.292 | - | - | - | 0.204 | 0.204 | 0.081 | - | - | - |
| $\mathbf{1}$ | D-C | 480.132 | - | 0.128 | 0.292 | 0.102 | 0.204 | 0.204 | 0.204 | 0.204 | 0.081 | - | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 614.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 27.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 828.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 108.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 4.000 | 569.000 | 41.000 |  |
|  | B | 9.000 | 0.000 | 18.000 | 0.000 |  |
|  | C | 776.000 | 14.000 | 0.000 | 38.000 |  |
|  | D | 93.000 | 3.000 | 12.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.01 | 0.93 | 0.07 |  |
|  | B | 0.33 | 0.00 | 0.67 | 0.00 |  |
|  | C | 0.94 | 0.02 | 0.00 | 0.05 |  |
|  | D | 0.86 | 0.03 | 0.11 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.08 | 10.41 | 0.09 | B |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| A-D | 0.11 | 9.67 | 0.12 | A |
| D-AB | 0.23 | 10.29 | 0.30 | B |
| D-BC | 0.07 | 19.59 | 0.08 | C |
| C-ABD | 0.06 | 4.00 | 0.09 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 20.33 | 20.15 | 0.00 | 469.39 | 0.043 | 0.04 | 8.007 | A |
| A-B | 3.01 | 3.01 | 0.00 | - | - | - | - | - |
| A-C | 428.37 | 428.37 | 0.00 | - | - | - | - | - |
| A-D | 30.87 | 30.60 | 0.00 | 481.96 | 0.064 | 0.07 | 7.970 | A |
| D-AB | 71.18 | 70.56 | 0.00 | 528.61 | 0.135 | 0.15 | 7.849 | A |
| D-BC | 10.13 | 24.98 | 0.00 | 288.58 | 0.035 | 0.04 | 12.915 | B |
| C-ABD | 27.89 | 0.00 | 924.40 | 0.027 | 0.03 | 4.001 | A |  |
| C-D | 27.94 | 570.54 | 570.54 | 0.00 | - | - | - | - |
| C-A |  |  | - | - | - |  |  |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 24.27 | 24.22 | 0.00 | 431.70 | 0.056 | 0.06 | 8.833 | A |
| A-B | 3.60 | 3.60 | 0.00 | - | - | - | - | - |
| A-C | 511.52 | 511.52 | 0.00 | - | - | - | - | - |
| A-D | 36.86 | 36.78 | 0.00 | 454.80 | 0.081 | 0.09 | 8.612 | A |
| D-AB | 85.01 | 84.81 | 12.02 | 0.00 | 497.76 | 0.171 | 0.20 | 8.713 |
| D-BC | 12.08 | 39.67 | 0.00 | 250.90 | 0.048 | 0.05 | 15.067 | C |
| C-ABD | 39.75 | 32.89 | 0.00 | 1009.22 | 0.039 | 0.06 | 3.712 | A |
| C-D | 32.89 | 0.00 | - | - | - | - | - |  |
| C-A | 671.71 |  | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 29.73 | 29.62 | 0.00 | 375.55 | 0.079 | 0.08 | 10.403 | B |
| A-B | 4.40 | 4.40 | 0.00 | - | - | - | - | - |
| A-C | 626.48 | 626.48 | 0.00 | - | - | - | - |  |
| A-D | 45.14 | 45.01 | 103.80 | 0.00 | 417.28 | 0.108 | 0.12 | 9.667 |
| D-AB | 104.16 | 14.64 | 0.00 | 453.95 | 0.229 | 0.29 | 10.271 | B |
| D-BC | 14.75 | 62.04 | 0.00 | 198.55 | 0.074 | 0.08 | 19.563 | C |
| C-ABD | 69.66 | 0.00 | 1091.20 | 0.057 | 0.09 | 3.497 | A |  |
| C-D | 39.94 | 0.00 | - | - | - | - | - |  |
| C-A | 809.94 |  | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 29.73 | 29.73 | 0.00 | 375.42 | 0.079 | 0.09 | 10.413 | B |
| A-B | 4.40 | 4.40 | 0.00 | - | - | - | - | - |
| A-C | 626.48 | 626.48 | 0.00 | - | - | - | - |  |
| A-D | 45.14 | 45.14 | 0.00 | 417.25 | 0.108 | 0.12 | 9.674 | A |
| D-AB | 104.16 | 104.15 | 0.00 | 453.81 | 0.230 | 0.30 | 10.295 | B |
| D-BC | 14.75 | 14.75 | 0.00 | 198.46 | 0.074 | 0.08 | 19.595 | C |
| C-ABD | 62.11 | 0.00 | 1091.25 | 0.057 | 0.09 | 3.498 | A |  |
| C-D | 39.66 | 0.00 | - | - | - | - | - |  |
| C-A | 809.88 | 809.88 | 0.00 | - | - | - | - | - |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 24.27 | 24.37 | 0.00 | 431.52 | 0.056 | 0.06 | 8.843 | A |
| A-B | 3.60 | 3.60 | 0.00 | - | - | - | - | - |
| A-C | 511.52 | 511.52 | 0.00 | - | - | - | - | - |
| A-D | 36.86 | 36.98 | 0.00 | 454.75 | 0.081 | 0.09 | 8.621 | A |
| D-AB | 85.01 | 85.36 | 0.00 | 497.57 | 0.171 | 0.21 | 8.742 | A |
| D-BC | 12.08 | 12.19 | 0.00 | 250.80 | 0.048 | 0.05 | 15.093 | C |
| C-ABD | 39.83 | 39.96 | 0.00 | 1009.30 | 0.039 | 0.06 | 3.713 | A |
| C-D | 32.89 | 671.64 | 671.64 | 0.00 | - | - | - | - |
| C-A |  |  | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 20.33 | 20.39 | 0.00 | 469.16 | 0.043 | 0.05 | 8.022 | A |
| A-B | 3.01 | 3.01 | 0.00 | - | - | - | - | - |
| A-C | 428.37 | 428.37 | 0.00 | - | - | - | - | - |
| A-D | 30.87 | 30.95 | 0.00 | 481.90 | 0.064 | 0.07 | 7.985 | A |
| D-AB | 71.18 | 10.39 | 0.00 | 528.42 | 0.135 | 0.16 | 7.881 | A |
| D-BC | 10.13 | 24.99 | 0.00 | 288.43 | 0.035 | 0.04 | 12.940 | B |
| C-ABD | 27.93 | 0.00 | 924.41 | 0.027 | 0.03 | 4.003 | A |  |
| C-D | 570.44 | 570.44 | 0.00 | - | - | - | - | - |
| C-A |  |  | - | - | - | - | - |  |

## (Default Analysis Set) - 2023 With Development, PM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, PM | 2023 With <br> Development | PM |  | ONE <br> HOUR | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 Beach Road / Swanbridge Road | Crossroads | Two-way | A,B,C,D | 9.45 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B427 Lavernock Rd |  | Major |
| B | B | Beach Road |  | Minor |
| C | C | B4267 South Rd |  | Major |
| D | D | Swanbridge Rd |  | Minor |

Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 7.75 |  | 0.00 |  | 2.20 | 82.40 |  |  |
| C | 7.75 |  | 0.00 |  | 2.20 | 101.00 | $\checkmark$ |  |

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) | Lane Width (Left) (m) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5 m (m) | Width at 10 m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.10 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 16 |
| D | One lane plus flare |  |  |  | 10.00 | 4.94 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 10 | 14 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-C | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-A | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 621.682 | - | - | - | - | - | - | 0.223 | 0.318 | 0.223 | - | - | - |
| $\mathbf{1}$ | B-A | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | - | 0.230 | 0.230 | 0.115 |
| $\mathbf{1}$ | B-C | 703.832 | 0.100 | 0.252 | - | - | - | - | - | - | - | - | - | - |
| $\mathbf{1}$ | B-D, nearside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| $\mathbf{1}$ | B-D, offside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| $\mathbf{1}$ | C-B | 632.453 | 0.226 | 0.226 | 0.323 | - | - | - | - | - | - | - | - | - |
| $\mathbf{1}$ | D-A | 679.885 | - | - | - | - | - | - | 0.243 | - | 0.096 | - | - | - |
| $\mathbf{1}$ | D-B, nearside lane | 524.134 | 0.140 | 0.140 | 0.318 | - | - | - | 0.223 | 0.223 | 0.088 | - | - | - |
| $\mathbf{1}$ | D-B, offside lane | 490.720 | 0.131 | 0.131 | 0.298 | - | - | - | 0.209 | 0.209 | 0.083 | - | - | - |
| $\mathbf{1}$ | D-C | 490.720 | - | 0.131 | 0.298 | 0.104 | 0.209 | 0.209 | 0.209 | 0.209 | 0.083 | - | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

## Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\checkmark$ | $\checkmark$ | HV | Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 878.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 33.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 619.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 75.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 27.000 | 751.000 | 100.000 |  |
|  | B | 16.000 | 0.000 | 16.000 | 1.000 |  |
|  | C | 581.000 | 25.000 | 0.000 | 13.000 |  |
|  | D | 58.000 | 1.000 | 16.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 0.00 | 0.03 | 0.86 | 0.11 |
|  | B | 0.48 | 0.00 | 0.48 | 0.03 |
|  | C | 0.94 | 0.04 | 0.00 | 0.02 |
|  | D | 0.77 | 0.01 | 0.21 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |  |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |  |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |  |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |  |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max Los |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.13 | 14.45 | 0.14 | B |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| A-D | 0.24 | 10.08 | 0.31 | B |
| D-AB | 0.13 | 8.20 | 0.15 | A |
| D-BC | 0.09 | 19.55 | 0.10 | C |
| C-ABD | 0.10 | 4.81 | 0.22 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 24.84 | 24.58 | 0.00 | 396.74 | 0.063 | 0.07 | 9.666 | A |
| A-B | 20.33 | 20.33 | 0.00 | - | - | - | - | - |
| A-C | 565.39 | 565.39 | 0.00 | - | - | - | - | - |
| A-D | 75.29 | 74.61 | 0.00 | 516.18 | 0.146 | 0.17 | 8.140 | A |
| D-AB | 44.06 | 43.72 | 0.00 | 562.31 | 0.078 | 0.08 | 6.937 | A |
| D-BC | 12.41 | 12.23 | 0.00 | 293.98 | 0.042 | 0.04 | 12.769 | B |
| C-ABD | 38.99 | 98.69 | 0.00 | 789.06 | 0.049 | 0.07 | 4.797 | A |
| C-D | 9.35 | 417.68 | 417.68 | 0.00 | - | - | - | - |
| C-A | 417 |  | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 29.67 | 29.57 | 0.00 | 351.45 | 0.084 | 0.09 | 11.180 | B |
| A-B | 24.27 | 24.27 | 0.00 | - | - | - | - | - |
| A-C | 675.13 | 675.13 | 0.00 | - | - | - | - | - |
| A-D | 89.90 | 89.70 | 0.00 | 495.63 | 0.181 | 0.22 | 8.863 | A |
| D-AB | 52.62 | 0.00 | 538.41 | 0.098 | 0.11 | 7.409 | A |  |
| D-BC | 14.81 | 14.74 | 0.00 | 255.48 | 0.058 | 0.06 | 14.951 | B |
| C-ABD | 58.96 | 0.00 | 839.52 | 0.070 | 0.12 | 4.611 | A |  |
| C-D | 10.89 | 10.89 | 0.00 | - | - | - | - | - |
| C-A | 486.62 | 0.00 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 36.33 | 36.12 | 0.00 | 285.60 | 0.127 | 0.14 | 14.418 | B |
| A-B | 29.73 | 29.73 | 0.00 | - | - | - | - | - |
| A-C | 826.87 | 826.87 | 0.00 | - | - | - | - | - |
| A-D | 110.10 | 109.76 | 0.00 | 467.27 | 0.236 | 0.30 | 10.062 | B |
| D-AB | 64.46 | 64.31 | 17.98 | 0.00 | 503.83 | 0.128 | 0.15 | 8.188 |
| D-BC | 18.12 | 91.51 | 0.00 | 202.40 | 0.090 | 0.10 | 19.489 | C |
| C-ABD | 91.89 | 12.90 | 0.00 | 894.78 | 0.103 | 0.22 | 4.483 | A |
| C-D | 12.90 | 0.00 | - | - | - | - | - |  |
| C-A | 576.74 |  | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 36.33 | 36.33 | 0.00 | 285.41 | 0.127 | 0.14 | 14.452 | B |
| A-B | 29.73 | 29.73 | 0.00 | - | - | - | - | - |
| A-C | 826.87 | 826.87 | 0.00 | - | - | - | - |  |
| A-D | 110.10 | 110.09 | 0.00 | 467.18 | 0.236 | 0.31 | 10.081 | B |
| D-AB | 64.46 | 0.00 | 503.59 | 0.128 | 0.15 | 8.197 | A |  |
| D-BC | 18.12 | 18.11 | 0.00 | 202.23 | 0.090 | 0.10 | 19.552 | C |
| C-ABD | 92.09 | 0.00 | 894.92 | 0.103 | 0.22 | 4.488 | A |  |
| C-D | 12.90 | 12.90 | 0.00 | - | - | - | - | - |
| C-A | 576.54 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 29.67 | 29.87 | 0.00 | 351.18 | 0.084 | 0.09 | 11.212 | B |
| A-B | 24.27 | 24.27 | 0.00 | - | - | - | - | - |
| A-C | 675.13 | 675.13 | 0.00 | - | - | - | - |  |
| A-D | 89.90 | 90.23 | 0.00 | 495.49 | 0.181 | 0.22 | 8.891 | A |
| D-AB | 52.62 | 52.76 | 0.00 | 538.08 | 0.098 | 0.11 | 7.422 | A |
| D-BC | 14.81 | 14.95 | 0.00 | 255.24 | 0.058 | 0.06 | 14.988 | B |
| C-ABD | 59.17 | 0.00 | 839.72 | 0.070 | 0.13 | 4.620 | A |  |
| C-D | 10.88 | 10.88 | 0.00 | - | - | - | - | - |
| C-A | 486.41 | 486.41 |  | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 24.84 | 24.95 | 0.00 | 396.38 | 0.063 | 0.07 | 9.694 | A |
| A-B | 20.33 | 20.33 | 0.00 | - | - | - | - | - |
| A-C | 565.39 | 565.39 | 0.00 | - | - | - | - | - |
| A-D | 75.29 | 75.49 | 0.00 | 516.05 | 0.146 | 0.17 | 8.175 | A |
| D-AB | 44.06 | 44.15 | 0.00 | 562.00 | 0.078 | 0.09 | 6.955 | A |
| D-BC | 12.41 | 12.48 | 0.00 | 293.68 | 0.042 | 0.04 | 12.804 | B |
| C-ABD | 39.21 | 9.41 | 0.00 | 789.04 | 0.050 | 0.08 | 4.806 | A |
| C-D | 9.34 | 417.46 | 0.00 | - | - | - | - | - |
| C-A | 417.46 |  | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 With Development, AM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, <br> AM | 2028 With <br> Development | AM |  | ONE <br> HOUR | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 Beach Road / Swanbridge Road | Crossroads | Two-way | A,B,C,D | 9.84 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B427 Lavernock Rd |  | Major |
| B | B | Beach Road |  | Minor |
| C | C | B4267 South Rd |  | Major |
| D | D | Swanbridge Rd |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(m)$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(m)$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(m)$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 7.75 |  | 0.00 |  | 2.20 | 82.40 |  |  |
| C | 7.75 |  | 0.00 |  | 2.20 | 101.00 | $\checkmark$ |  |

[^3]Minor Arm Geometry

| Arm | Minor Arm Type | Lane Width (m) |  | Lane Width (Right) $(m)$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | $\begin{aligned} & \text { Estimate } \\ & \text { Flare } \\ & \text { Length } \end{aligned}$ | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.10 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 16 |
| D | One lane plus flare |  |  |  | 10.00 | 4.94 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 10 | 14 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept (PCU/hr) | Slope for A-B | Slope for A-C | $\begin{aligned} & \hline \text { Slope } \\ & \text { for } \\ & \text { A-D } \end{aligned}$ | Slope for B-A | $\begin{aligned} & \text { Slope } \\ & \text { for } \\ & \text { B-C } \end{aligned}$ | Slope for B-D | Slope for C-A | Slope for C-B | Slope for C-D | Slope for D-A | Slope for D-B | Slope for D-C |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | A-D | 621.682 | - | - | - | - | - | - | 0.223 | 0.318 | 0.223 | - | - | - |
| 1 | B-A | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | - | 0.230 | 0.230 | 0.115 |
| 1 | B-C | 703.832 | 0.100 | 0.252 | - | - | - | - | - | - | - | - | - |  |
| 1 | $B-D$, nearside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| 1 | $B-D$, offside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| 1 | C-B | 632.453 | 0.226 | 0.226 | 0.323 | - | - | - | - | - | - | - | - | - |
| 1 | D-A | 685.131 | - | - | - | - | - | - | 0.245 | - | 0.097 | - | - | - |
| 1 | D-B, nearside lane | 528.178 | 0.141 | 0.141 | 0.321 | - | - | - | 0.225 | 0.225 | 0.089 | - | - | - |
| 1 | D-B, offside lane | 480.611 | 0.129 | 0.129 | 0.292 | - | - | - | 0.204 | 0.204 | 0.081 | - | - | - |
| 1 | D-C | 480.611 | - | 0.129 | 0.292 | 0.102 | 0.204 | 0.204 | 0.204 | 0.204 | 0.081 | - | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\checkmark$ | $\checkmark$ | HV | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 655.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 30.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 881.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 112.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 5.000 | 607.000 | 43.000 |  |
|  | B | 10.000 | 0.000 | 20.000 | 0.000 |  |
|  | C | 826.000 | 15.000 | 0.000 | 40.000 |  |
|  | D | 96.000 | 3.000 | 13.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.01 | 0.93 | 0.07 |  |
|  | B | 0.33 | 0.00 | 0.67 | 0.00 |  |
|  | C | 0.94 | 0.02 | 0.00 | 0.05 |  |
|  | D | 0.86 | 0.03 | 0.12 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOs |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.09 | 11.20 | 0.10 | B |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| A-D | 0.12 | 10.09 | 0.13 | B |
| D-AB | 0.25 | 10.90 | 0.32 | B |
| D-BC | 0.09 | 21.91 | 0.10 | C |
| C-ABD | 0.07 | 3.94 | 0.12 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 22.59 | 22.38 | 0.00 | 457.29 | 0.049 | 0.05 | 8.274 | A |
| A-B | 3.76 | 3.76 | 0.00 | - | - | - | - | - |
| A-C | 456.98 | 456.98 | 0.00 | - | - | - | - | - |
| A-D | 32.37 | 32.08 | 0.00 | 473.01 | 0.068 | 0.07 | 8.160 | A |
| D-AB | 73.44 | 72.79 | 0.00 | 518.45 | 0.142 | 0.16 | 8.067 | A |
| D-BC | 10.88 | 10.72 | 0.00 | 276.32 | 0.039 | 0.04 | 13.545 | B |
| C-ABD | 27.97 | 29.82 | 0.00 | 941.34 | 0.030 | 0.04 | 3.941 | A |
| C-D | 29.34 | 605.95 | 605.95 | 0.00 | - | - | - | - |
| C-A | 605 | - | - | - | - | - |  |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 26.97 | 26.90 | 0.00 | 416.35 | 0.065 | 0.07 | 9.243 | A |
| A-B | 4.49 | 4.49 | 0.00 | - | - | - | - | - |
| A-C | 545.68 | 545.68 | 0.00 | - | - | - | - | - |
| A-D | 38.66 | 38.57 | 0.00 | 444.11 | 0.087 | 0.09 | 8.875 | A |
| D-AB | 87.72 | 07.50 | 0.00 | 485.40 | 0.181 | 0.22 | 9.043 | A |
| D-BC | 12.97 | 45.90 | 0.00 | 236.12 | 0.055 | 0.06 | 16.122 | C |
| C-ABD | 45.69 | 0.00 | 1032.80 | 0.044 | 0.06 | 3.646 | A |  |
| C-D | 34.47 | 711.84 | 711.84 | 0.00 | - | - | - | - |
| C-A | 74.47 | - | - | - | - | - |  |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 33.03 | 32.90 | 0.00 | 354.65 | 0.093 | 0.10 | 11.184 | B |
| A-B | 5.51 | 5.51 | 0.00 | - | - | - | - | - |
| A-C | 668.32 | 668.32 | 0.00 | - | - | - | - | - |
| A-D | 47.34 | 47.20 | 0.00 | 404.19 | 0.117 | 0.13 | 10.080 | B |
| D-AB | 107.48 | 107.07 | 15.69 | 0.00 | 438.03 | 0.245 | 0.32 | 10.865 |
| D-BC | 15.83 | 79.79 | 0.00 | 180.24 | 0.088 | 0.09 | 21.858 | C |
| C-ABD | 80.02 | 41.11 | 0.00 | 1144.70 | 0.070 | 0.12 | 3.380 | A |
| C-D | 41.11 | 848.87 |  | - | - | - | - | - |
| C-A | 848 |  | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 33.03 | 33.03 | 0.00 | 354.48 | 0.093 | 0.10 | 11.198 | B |
| A-B | 5.51 | 5.51 | 0.00 | - | - | - | - | - |
| A-C | 668.32 | 668.32 | 0.00 | - | - | - | - |  |
| A-D | 47.34 | 47.34 | 0.00 | 404.13 | 0.117 | 0.13 | 10.089 | B |
| D-AB | 107.48 | 107.47 | 0.00 | 437.83 | 0.245 | 0.32 | 10.897 | B |
| D-BC | 15.83 | 0.00 | 180.12 | 0.088 | 0.10 | 21.909 | C |  |
| C-ABD | 80.13 | 80.13 | 0.00 | 1144.80 | 0.070 | 0.12 | 3.381 | A |
| C-D | 41.10 | 0.10 | 0.00 | - | - | - | - | - |
| C-A | 848.76 | 848.76 |  | - | - | - | - | - |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 26.97 | 27.10 | 0.00 | 416.13 | 0.065 | 0.07 | 9.258 | A |
| A-B | 4.49 | 4.49 | 0.00 | - | - | - | - | - |
| A-C | 545.68 | 545.68 | 0.00 | - | - | - | - |  |
| A-D | 38.66 | 38.80 | 0.00 | 444.03 | 0.087 | 0.10 | 8.886 | A |
| D-AB | 87.72 | 0.00 | 485.14 | 0.181 | 0.22 | 9.077 | A |  |
| D-BC | 12.97 | 13.11 | 0.00 | 235.98 | 0.055 | 0.06 | 16.162 | C |
| C-ABD | 45.79 | 0.00 | 1032.94 | 0.044 | 0.07 | 3.651 | A |  |
| C-D | 34.47 | 34.47 | 0.00 | - | - | - | - | - |
| C-A | 711.75 | 711.75 | 0.00 | - | - | - | - | - |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 22.59 | 22.66 | 0.00 | 457.02 | 0.049 | 0.05 | 8.288 | A |
| A-B | 3.76 | 3.76 | 0.00 | - | - | - | - | - |
| A-C | 456.98 | 456.98 | 0.00 | - | - | - | - | - |
| A-D | 32.37 | 32.46 | 0.00 | 472.94 | 0.068 | 0.07 | 8.174 | A |
| D-AB | 73.44 | 73.67 | 0.00 | 518.22 | 0.142 | 0.17 | 8.101 | A |
| D-BC | 10.88 | 10.95 | 0.00 | 276.16 | 0.039 | 0.04 | 13.579 | B |
| C-ABD | 28.09 | 29.20 | 0.00 | 941.36 | 0.030 | 0.04 | 3.942 | A |
| C-D | 29.34 | 605.83 | 0.00 | - | - | - | - | - |
| C-A | 6053 |  | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 With Development, PM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length $(\mathbf{m i n})$ | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, PM | 2028 With <br> Development | PM |  | ONE <br> HOUR | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LoS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 Beach Road / Swanbridge Road | Crossroads | Two-way | A,B,C,D | 9.76 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B427 Lavernock Rd |  | Major |
| B | B | Beach Road |  | Minor |
| C | C | B4267 South Rd |  | Major |
| D | D | Swanbridge Rd |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathrm{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 7.75 |  | 0.00 |  | 2.20 | 82.40 |  |  |
| C | 7.75 |  | 0.00 |  | 2.20 | 101.00 | $\checkmark$ |  |

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) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Left) }(\mathrm{m}) \end{gathered}$ | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20 m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.10 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 16 |
| D | One lane plus flare |  |  |  | 10.00 | 4.94 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 10 | 14 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> $($ PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-C | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-A | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 621.682 | - | - | - | - | - | - | 0.223 | 0.318 | 0.223 | - | - | - |
| $\mathbf{1}$ | B-A | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | - | 0.230 | 0.230 | 0.115 |
| $\mathbf{1}$ | B-C | 703.832 | 0.100 | 0.252 | - | - | - | - | - | - | - | - | - | - |
| $\mathbf{1}$ | B-D, nearside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| $\mathbf{1}$ | B-D, offside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| $\mathbf{1}$ | C-B | 632.453 | 0.226 | 0.226 | 0.323 | - | - | - | - | - | - | - | - | - |
| $\mathbf{1}$ | D-A | 679.628 | - | - | - | - | - | - | 0.243 | - | 0.096 | - | - | - |
| $\mathbf{1}$ | D-B, nearside lane | 523.936 | 0.140 | 0.140 | 0.318 | - | - | - | 0.223 | 0.223 | 0.088 | - | - | - |
| $\mathbf{1}$ | D-B, offside lane | 491.215 | 0.131 | 0.131 | 0.298 | - | - | - | 0.209 | 0.209 | 0.083 | - | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entrylexit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 930.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 35.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 659.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 78.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 29.000 | 799.000 | 102.000 |  |
|  | B | 17.000 | 0.000 | 17.000 | 1.000 |  |
|  | C | 618.000 | 27.000 | 0.000 | 14.000 |  |
|  | D | 60.000 | 1.000 | 17.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 0.00 | 0.03 | 0.86 | 0.11 |
|  | B | 0.49 | 0.00 | 0.49 | 0.03 |
|  | C | 0.94 | 0.04 | 0.00 | 0.02 |
|  | D | 0.77 | 0.01 | 0.22 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.15 | 16.05 | 0.17 | C |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| A-D | 0.25 | 10.44 | 0.32 | B |
| D-AB | 0.14 | 8.48 | 0.16 | A |
| D-BC | 0.10 | 21.67 | 0.11 | C |
| C-ABD | 0.12 | 4.70 | 0.29 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 26.35 | 26.06 | 0.00 | 383.09 | 0.069 | 0.07 | 10.075 | B |
| A-B | 21.83 | 21.83 | 0.00 | - | - | - | - | - |
| A-C | 601.53 | 601.53 | 0.00 | - | - | - | - | - |
| A-D | 76.79 | 76.09 | 0.00 | 509.34 | 0.151 | 0.18 | 8.296 | A |
| D-AB | 45.56 | 45.21 | 0.00 | 554.61 | 0.082 | 0.09 | 7.062 | A |
| D-BC | 13.16 | 0.00 | 282.63 | 0.047 | 0.05 | 13.340 | B |  |
| C-ABD | 47.33 | 46.96 | 0.00 | 814.17 | 0.058 | 0.09 | 4.692 | A |
| C-D | 9.94 | 0.94 | 0.00 | - | - | - | - | - |
| C-A | 438.85 | 438.85 |  | - | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 31.46 | 31.35 | 0.00 | 334.40 | 0.094 | 0.10 | 11.870 | B |
| A-B | 26.07 | 26.07 | 0.00 | - | - | - | - | - |
| A-C | 718.28 | 718.28 | 0.00 | - | - | - | - |  |
| A-D | 91.70 | 91.48 | 0.00 | 487.43 | 0.188 | 0.23 | 9.087 | A |
| D-AB | 54.42 | 54.32 | 0.00 | 528.94 | 0.103 | 0.11 | 7.582 | A |
| D-BC | 15.70 | 15.62 | 0.00 | 241.79 | 0.065 | 0.07 | 15.911 | C |
| C-ABD | 68.02 | 0.00 | 855.98 | 0.079 | 0.15 | 4.570 | A |  |
| C-D | 11.62 | 11.62 | 0.00 | - | - | - | - | - |
| C-A | 512.79 | 512.79 | 0.00 | - | - | - | - | - |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 38.54 | 38.27 | 0.00 | 263.02 | 0.147 | 0.17 | 15.998 | C |
| A-B | 31.93 | 31.93 | 0.00 | - | - | - | - | - |
| A-C | 879.72 | 879.72 | 0.00 | - | - | - | - |  |
| A-D | 112.30 | 111.94 | 66.50 | 0.00 | 457.23 | 0.246 | 0.32 | 10.414 |
| D-AB | 66.67 | 19.03 | 0.00 | 491.32 | 0.136 | 0.16 | 8.468 | A |
| D-BC | 19.21 | 112.84 | 13.56 | 0.00 | 185.50 | 0.104 | 0.11 | 21.600 |
| C-ABD | 113.41 | 13.56 | 0.00 | 927.48 | 0.122 | 0.29 | 4.423 | A |
| C-D | 598.61 |  | - | - | - | - | - |  |
| C-A |  |  | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 38.54 | 38.53 | 0.00 | 262.77 | 0.147 | 0.17 | 16.052 | C |
| A-B | 31.93 | 31.93 | 0.00 | - | - | - | - | - |
| A-C | 879.72 | 879.72 | 0.00 | - | - | - | - | - |
| A-D | 112.30 | 112.29 | 0.00 | 457.10 | 0.246 | 0.32 | 10.440 | B |
| D-AB | 66.67 | 66.66 | 0.00 | 490.99 | 0.136 | 0.16 | 8.483 | A |
| D-BC | 19.21 | 19.21 | 0.00 | 185.28 | 0.104 | 0.11 | 21.674 | C |
| C-ABD | 113.72 | 113.71 | 0.00 | 927.76 | 0.123 | 0.29 | 4.430 | A |
| C-D | 13.55 | 13.55 | 0.00 | - | - | - | - | - |
| C-A | 598.30 | 598.30 |  | - | - | - | - | - |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 31.46 | 31.72 | 0.00 | 334.07 | 0.094 | 0.11 | 11.916 | B |
| A-B | 26.07 | 26.07 | 0.00 | - | - | - | - | - |
| A-C | 718.28 | 718.28 | 0.00 | - | - | - | - | - |
| A-D | 91.70 | 92.05 | 0.00 | 487.24 | 0.188 | 0.23 | 9.119 | A |
| D-AB | 54.42 | 54.58 | 0.00 | 528.51 | 0.103 | 0.12 | 7.597 | A |
| D-BC | 15.70 | 15.88 | 0.00 | 241.50 | 0.065 | 0.07 | 15.967 | C |
| C-ABD | 68.32 | 68.88 | 0.00 | 856.30 | 0.080 | 0.15 | 4.579 | A |
| C-D | 11.61 | 11.61 | 0.00 | - | - | - | - | - |
| C-A | 512.50 | 512.50 | 0.00 | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 26.35 | 26.47 | 0.00 | 382.68 | 0.069 | 0.07 | 10.111 | B |
| A-B | 21.83 | 21.83 | 0.00 | - | - | - | - | - |
| A-C | 601.53 | 601.53 | 0.00 | - | - | - | - |  |
| A-D | 76.79 | 77.01 | 0.00 | 509.18 | 0.151 | 0.18 | - |  |
| D-AB | 45.57 | 45.67 | 13.24 | 0.00 | 554.25 | 0.082 | 0.09 | 7.079 |
| D-BC | 13.16 | 47.86 | 0.00 | 282.29 | 0.047 | 0.05 | 13.383 | B |
| C-ABD | 47.64 | 9.93 | 0.00 | 814.22 | 0.059 | 0.10 | 4.701 | A |
| C-D | 9.93 |  |  | - | - | - | - | - |
| C-A | 438.55 |  |  | - | - | - | - | - |

## (Default Analysis Set) - 2023 No Development, AM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Locked |  |  |  |  |  |  |  |  |  |
| Levelopment, <br> AM | 2023 No <br> Development | AM | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |  |

## Junction Network

Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 Beach Road / Swanbridge Road | Crossroads | Two-way | A,B,C,D | 9.21 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B427 Lavernock Rd |  | Major |
| B | B | Beach Road |  | Minor |
| C | C | B4267 South Rd |  | Major |
| D | D | Swanbridge Rd |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 7.75 |  | 0.00 |  | 2.20 | 82.40 |  |  |
| C | 7.75 |  | 0.00 |  | 2.20 | 101.00 | $\checkmark$ |  |

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) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Left) }(\mathrm{m}) \end{gathered}$ | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.10 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 16 |
| D | One lane plus flare |  |  |  | 10.00 | 4.94 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 10 | 14 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept (PCU/hr) | Slope for A-B | Slope for A-C | Slope for A-D | Slope for B-A | Slope for B-C | Slope for B-D | Slope for C-A | Slope for C-B | Slope for C-D | Slope for D-A | Slope for D-B | Slope for D-C |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | A-D | 621.682 | - | - | - | - | - | - | 0.223 | 0.318 | 0.223 | - | - | - |
| 1 | B-A | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | - | 0.230 | 0.230 | 0.115 |
| 1 | B-C | 703.832 | 0.100 | 0.252 | - | - | - | - | - | - | - | - | - | - |
| 1 | $B-D$, nearside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| 1 | $B-D$, offside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| 1 | C-B | 632.453 | 0.226 | 0.226 | 0.323 | - | - | - | - | - | - | - | - | - |
| 1 | D-A | 685.883 | - | - | - | - | - | - | 0.246 | - | 0.097 | - | - | - |
| 1 | D-B, nearside lane | 528.758 | 0.141 | 0.141 | 0.321 | - | - | - | 0.225 | 0.225 | 0.089 | - | - | - |
| 1 | D-B, offside lane | 479.161 | 0.128 | 0.128 | 0.291 | - | - | - | 0.204 | 0.204 | 0.081 | - | - | - |
| 1 | D-C | 479.161 | - | 0.128 | 0.291 | 0.102 | 0.204 | 0.204 | 0.204 | 0.204 | 0.081 | - | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 597.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 27.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 772.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 107.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 4.000 | 552.000 | 41.000 |  |
|  | B | 9.000 | 0.000 | 18.000 | 0.000 |  |
|  | C | 723.000 | 13.000 | 0.000 | 36.000 |  |
|  | D | 93.000 | 3.000 | 11.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.01 | 0.92 | 0.07 |  |
|  | B | 0.33 | 0.00 | 0.67 | 0.00 |  |
|  | C | 0.94 | 0.02 | 0.00 | 0.05 |  |
|  | D | 0.87 | 0.03 | 0.10 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.08 | 10.04 | 0.08 | B |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| A-D | 0.10 | 9.33 | 0.12 | A |
| D-AB | 0.22 | 9.83 | 0.28 | A |
| D-BC | 0.06 | 18.07 | 0.07 | C |
| C-ABD | 0.05 | 4.09 | 0.08 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 20.33 | 20.15 | 0.00 | 476.80 | 0.043 | 0.04 | 7.884 | A |
| A-B | 3.01 | 3.01 | 0.00 | - | - | - | - | - |
| A-C | 415.57 | 415.57 | 0.00 | - | - | - | - | - |
| A-D | 30.87 | 30.60 | 0.00 | 491.41 | 0.063 | 0.07 | 7.808 | A |
| D-AB | 71.18 | 70.57 | 0.00 | 539.50 | 0.132 | 0.15 | 7.667 | A |
| D-BC | 9.38 | 0.25 | 0.00 | 298.08 | 0.031 | 0.03 | 12.459 | B |
| C-ABD | 22.06 | 26.52 | 0.00 | 902.90 | 0.024 | 0.03 | 4.086 | A |
| C-D | 26.52 | 0.00 | - | - | - | - | - |  |
| C-A | 532.62 | 532.62 |  | - | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 24.27 | 24.22 | 0.00 | 441.14 | 0.055 | 0.06 | 8.633 | A |
| A-B | 3.60 | 3.60 | 0.00 | - | - | - | - | - |
| A-C | 496.24 | 496.24 | 0.00 | - | - | - | - | - |
| A-D | 36.86 | 36.78 | 0.00 | 466.09 | 0.079 | 0.09 | 8.385 | A |
| D-AB | 85.00 | 84.82 | 11.14 | 0.00 | 510.84 | 0.166 | 0.20 | 8.447 |
| D-BC | 11.19 | 30.25 | 0.00 | 262.46 | 0.043 | 0.04 | 14.324 | B |
| C-ABD | 30.30 | 31.48 | 0.00 | 951.11 | 0.032 | 0.04 | 3.909 | A |
| C-D | 31.48 | 032.23 | - | - | - | - | - |  |
| C-A | 632.23 |  | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 29.73 | 29.63 | 0.00 | 388.49 | 0.077 | 0.08 | 10.030 | B |
| A-B | 4.40 | 4.40 | 0.00 | - | - | - | - | - |
| A-C | 607.76 | 607.76 | 0.00 | - | - | - | - |  |
| A-D | 45.14 | 45.02 | 0.00 | 431.12 | 0.105 | 0.12 | 9.321 | A |
| D-AB | 104.14 | 103.81 | 13.57 | 0.00 | 470.34 | 0.221 | 0.28 | 9.812 |
| D-BC | 13.67 | 0.00 | 212.97 | 0.064 | 0.07 | 18.046 | C |  |
| C-ABD | 53.26 | 0.00 | 1057.96 | 0.050 | 0.08 | 3.582 | A |  |
| C-D | 37.79 | 758.94 | 0.00 | - | - | - | - | - |
| C-A | 758.94 |  |  | - | - | - | - | - |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 29.73 | 29.73 | 0.00 | 388.37 | 0.077 | 0.08 | 10.037 | B |
| A-B | 4.40 | 4.40 | 0.00 | - | - | - | - | - |
| A-C | 607.76 | 607.76 | 0.00 | - | - | - | - |  |
| A-D | 45.14 | 45.14 | 0.00 | 431.09 | 0.105 | 0.12 | 9.327 | A |
| D-AB | 104.14 | 104.13 | 0.00 | 470.23 | 0.221 | 0.28 | 9.833 | A |
| D-BC | 13.67 | 13.66 | 0.00 | 212.89 | 0.064 | 0.07 | 18.069 | C |
| C-ABD | 53.31 | 0.00 | 1058.01 | 0.050 | 0.08 | 3.585 | A |  |
| C-D | 37.79 | 75.79 | 0.00 | - | - | - | - | - |
| C-A | 758.89 | 758.89 |  | - | - | - | - | - |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 24.27 | 24.37 | 0.00 | 440.99 | 0.055 | 0.06 | 8.644 | A |
| A-B | 3.60 | 3.60 | 0.00 | - | - | - | - | - |
| A-C | 496.24 | 496.24 | 0.00 | - | - | - | - | - |
| A-D | 36.86 | 36.98 | 0.00 | 466.05 | 0.079 | 0.09 | 8.393 | A |
| D-AB | 85.01 | 05.33 | 0.00 | 510.68 | 0.166 | 0.20 | 8.471 | A |
| D-BC | 11.19 | 11.28 | 0.00 | 262.37 | 0.043 | 0.05 | 14.341 | B |
| C-ABD | 30.35 | 0.00 | 951.16 | 0.032 | 0.04 | 3.912 | A |  |
| C-D | 31.48 | 0.00 | - | - | - | - | - |  |
| C-A | 632.18 | 632.18 | 0.00 | - | - | - | - | - |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 20.33 | 20.38 | 0.00 | 476.58 | 0.043 | 0.04 | 7.893 | A |
| A-B | 3.01 | 3.01 | 0.00 | - | - | - | - | - |
| A-C | 415.57 | 415.57 | 0.00 | - | - | - | - | - |
| A-D | 30.87 | 30.94 | 0.00 | 491.37 | 0.063 | 0.07 | 7.821 | A |
| D-AB | 71.18 | 9.37 | 0.00 | 539.34 | 0.132 | 0.15 | 7.697 | A |
| D-BC | 9.38 | 22.15 | 0.00 | 297.95 | 0.031 | 0.03 | 12.481 | B |
| C-ABD | 26.52 | 0.00 | 902.88 | 0.025 | 0.03 | 4.089 | A |  |
| C-D | 532.54 | 532.54 |  | - | - | - | - | - |
| C-A |  |  | - | - | - | - | - |  |

## (Default Analysis Set) - 2023 No Development, PM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No <br> Development, <br> PM | 2023 No <br> Development | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 Beach Road / Swanbridge Road | Crossroads | Two-way | A,B,C,D | 9.14 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B427 Lavernock Rd |  | Major |
| B | B | Beach Road |  | Minor |
| C | C | B4267 South Rd |  | Major |
| D | D | Swanbridge Rd |  | Minor |

Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 7.75 |  | 0.00 |  | 2.20 | 82.40 |  |  |
| C | 7.75 |  | 0.00 |  | 2.20 | 101.00 | $\checkmark$ |  |

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) | Lane Width (Left) (m) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5 m (m) | Width at 10 m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.10 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 16 |
| D | One lane plus flare |  |  |  | 10.00 | 4.94 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 10 | 14 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-C | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-A | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 621.682 | - | - | - | - | - | - | 0.223 | 0.318 | 0.223 | - | - | - |
| $\mathbf{1}$ | B-A | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | - | 0.230 | 0.230 | 0.115 |
| $\mathbf{1}$ | B-C | 703.832 | 0.100 | 0.252 | - | - | - | - | - | - | - | - | - | - |
| $\mathbf{1}$ | B-D, nearside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| $\mathbf{1}$ | B-D, offside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| $\mathbf{1}$ | C-B | 632.453 | 0.226 | 0.226 | 0.323 | - | - | - | - | - | - | - | - | - |
| $\mathbf{1}$ | D-A | 680.539 | - | - | - | - | - | - | 0.244 | - | 0.096 | - | - | - |
| $\mathbf{1}$ | D-B, nearside lane | 524.638 | 0.140 | 0.140 | 0.319 | - | - | - | 0.223 | 0.223 | 0.088 | - | - | - |
| $\mathbf{1}$ | D-B, offside lane | 489.460 | 0.131 | 0.131 | 0.297 | - | - | - | 0.208 | 0.208 | 0.082 | - | - | - |
| $\mathbf{1}$ | D-C | 489.460 | - | 0.131 | 0.297 | 0.104 | 0.208 | 0.208 | 0.208 | 0.208 | 0.082 | - | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

## Demand Set Data Options

| Default <br> Vhicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entrylexit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 809.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 32.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 584.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 74.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 27.000 | 682.000 | 100.000 |  |
|  | B | 16.000 | 0.000 | 15.000 | 1.000 |  |
|  | C | 548.000 | 24.000 | 0.000 | 12.000 |  |
|  | D | 58.000 | 1.000 | 15.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 0.00 | 0.03 | 0.84 | 0.12 |
|  | B | 0.50 | 0.00 | 0.47 | 0.03 |
|  | C | 0.94 | 0.04 | 0.00 | 0.02 |
|  | D | 0.78 | 0.01 | 0.20 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |  |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |  |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |  |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |  |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOs |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.11 | 13.20 | 0.13 | B |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| A-D | 0.23 | 9.84 | 0.30 | A |
| D-AB | 0.13 | 7.98 | 0.14 | A |
| D-BC | 0.08 | 17.75 | 0.08 | C |
| C-ABD | 0.09 | 4.83 | 0.19 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 24.09 | 23.84 | 0.00 | 409.59 | 0.059 | 0.06 | 9.327 | A |
| A-B | 20.33 | 20.33 | 0.00 | - | - | - | - | - |
| A-C | 513.45 | 513.45 | 0.00 | - | - | - | - | - |
| A-D | 75.29 | 74.62 | 0.00 | 522.12 | 0.144 | 0.17 | 8.032 | A |
| D-AB | 44.06 | 43.72 | 0.00 | 569.75 | 0.077 | 0.08 | 6.839 | A |
| D-BC | 11.66 | 11.50 | 0.00 | 305.58 | 0.038 | 0.04 | 12.235 | B |
| C-ABD | 35.77 | 0.00 | 781.65 | 0.046 | 0.07 | 4.824 | A |  |
| C-D | 8.65 | 0.65 | 0.00 | - | - | - | - | - |
| C-A | 395.24 | 395.24 |  | - | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 28.77 | 28.68 | 0.00 | 367.97 | 0.078 | 0.08 | 10.608 | B |
| A-B | 24.27 | 24.27 | 0.00 | - | - | - | - | - |
| A-C | 613.10 | 613.10 | 0.00 | - | - | - | - | - |
| A-D | 89.90 | 09.70 | 0.00 | 502.72 | 0.179 | 0.22 | 8.713 | A |
| D-AB | 52.61 | 13.52 | 0.00 | 547.45 | 0.096 | 0.11 | 7.274 | A |
| D-BC | 13.91 | 52.91 | 0.00 | 269.58 | 0.052 | 0.05 | 14.074 | B |
| C-ABD | 53.06 | 10.11 | 0.00 | 828.11 | 0.064 | 0.11 | 4.644 | A |
| C-D | 10.11 | 461.83 | 0.00 | - | - | - | - | - |
| C-A | 461.83 |  | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 35.23 | 35.06 | 0.00 | 308.01 | 0.114 | 0.13 | 13.181 | B |
| A-B | 29.73 | 29.73 | 0.00 | - | - | - | - | - |
| A-C | 750.90 | 750.90 | 0.00 | - | - | - | - | - |
| A-D | 110.10 | 109.78 | 0.00 | 475.96 | 0.231 | 0.30 | 9.822 | A |
| D-AB | 64.45 | 64.31 | 16.91 | 0.00 | 515.53 | 0.125 | 0.14 | 7.975 |
| D-BC | 17.02 | 0.91 | 0.00 | 219.97 | 0.077 | 0.08 | 17.719 | C |
| C-ABD | 81.22 | 12.04 | 0.00 | 880.11 | 0.092 | 0.18 | 4.507 | A |
| C-D | 12.04 | 0.00 | - | - | - | - | - |  |
| C-A | 549.74 |  |  | - | - | - | - | - |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 35.23 | 35.23 | 0.00 | 307.84 | 0.114 | 0.13 | 13.205 | B |
| A-B | 29.73 | 29.73 | 0.00 | - | - | - | - | - |
| A-C | 750.90 | 750.90 | 0.00 | - | - | - | - |  |
| A-D | 110.10 | 110.09 | 0.00 | 475.89 | 0.231 | 0.30 | 9.841 | A |
| D-AB | 64.45 | 0.00 | 515.35 | 0.125 | 0.14 | 7.983 | A |  |
| D-BC | 17.02 | 17.02 | 0.00 | 219.82 | 0.077 | 0.08 | 17.751 | C |
| C-ABD | 81.37 | 0.36 | 0.00 | 880.21 | 0.092 | 0.19 | 4.509 | A |
| C-D | 12.03 | 12.03 | 0.00 | - | - | - | - | - |
| C-A | 549.59 |  | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 28.77 | 28.94 | 0.00 | 367.72 | 0.078 | 0.09 | 10.630 | B |
| A-B | 24.27 | 24.27 | 0.00 | - | - | - | - | - |
| A-C | 613.10 | 613.10 | 0.00 | - | - | - | - |  |
| A-D | 89.90 | 90.21 | 52.75 | 0.00 | 502.61 | 0.179 | 0.22 | 8.737 |
| D-AB | 52.61 | 14.02 | 53.54 | 0.00 | 547.18 | 0.096 | 0.11 | 7.285 |
| D-BC | 13.91 | 10.11 | 0.00 | 269.37 | 0.052 | 0.06 | 14.103 | B |
| C-ABD | 53.24 | 461.66 | 0.00 | 828.24 | 0.064 | 0.11 | 4.650 | A |
| C-D | 10.11 |  |  | - | - | - | - | - |
| C-A | 461.66 |  | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 24.09 | 24.18 | 0.00 | 409.25 | 0.059 | 0.06 | 9.350 | A |
| A-B | 20.33 | 20.33 | 0.00 | - | - | - | - | - |
| A-C | 513.45 | 513.45 | 0.00 | - | - | - | - | - |
| A-D | 75.29 | 75.49 | 0.00 | 522.00 | 0.144 | 0.17 | 8.065 | A |
| D-AB | 44.06 | 44.15 | 0.00 | 569.48 | 0.077 | 0.08 | 6.855 | A |
| D-BC | 11.66 | 11.72 | 0.00 | 305.28 | 0.038 | 0.04 | 12.267 | B |
| C-ABD | 35.96 | 0.00 | 781.60 | 0.046 | 0.07 | 4.830 | A |  |
| C-D | 8.65 | 36.12 | 0.00 | - | - | - | - | - |
| C-A | 395.06 | 395.06 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2028 No Development, AM

## Data Errors and Warnings

No errors or warnings

Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 No <br> Development, <br> AM | 202 No <br> Levelopment | AM |  | ONE <br> LOUR | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 Beach Road / Swanbridge Road | Crossroads | Two-way | A,B,C,D | 9.60 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B427 Lavernock Rd |  | Major |
| B | B | Beach Road |  | Minor |
| C | C | B4267 South Rd |  | Major |
| D | D | Swanbridge Rd |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\boldsymbol{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn (m) | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 7.75 |  | 0.00 |  | 2.20 | 82.40 |  |  |
| C | 7.75 |  | 0.00 |  | 2.20 | 101.00 | $\checkmark$ |  |

[^4]Minor Arm Geometry

| Arm | Minor Arm Type | Lane Width (m) |  | Lane Width (Right) $(m)$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | $\begin{aligned} & \text { Estimate } \\ & \text { Flare } \\ & \text { Length } \end{aligned}$ | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.10 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 16 |
| D | One lane plus flare |  |  |  | 10.00 | 4.94 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 10 | 14 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept (PCU/hr) | Slope for A-B | Slope for A-C | $\begin{aligned} & \hline \text { Slope } \\ & \text { for } \\ & \text { A-D } \end{aligned}$ | Slope for B-A | $\begin{aligned} & \text { Slope } \\ & \text { for } \\ & \text { B-C } \end{aligned}$ | Slope for B-D | Slope for C-A | Slope for C-B | Slope for C-D | Slope for D-A | Slope for D-B | Slope for D-C |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | A-D | 621.682 | - | - | - | - | - | - | 0.223 | 0.318 | 0.223 | - | - | - |
| 1 | B-A | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | - | 0.230 | 0.230 | 0.115 |
| 1 | B-C | 703.832 | 0.100 | 0.252 | - | - | - | - | - | - | - | - | - |  |
| 1 | $B-D$, nearside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| 1 | $B-D$, offside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| 1 | C-B | 632.453 | 0.226 | 0.226 | 0.323 | - | - | - | - | - | - | - | - | - |
| 1 | D-A | 685.614 | - | - | - | - | - | - | 0.245 | - | 0.097 | - | - | - |
| 1 | D-B, nearside lane | 528.550 | 0.141 | 0.141 | 0.321 | - | - | - | 0.225 | 0.225 | 0.089 | - | - | - |
| 1 | D-B, offside lane | 479.679 | 0.128 | 0.128 | 0.291 | - | - | - | 0.204 | 0.204 | 0.081 | - | - | - |
| 1 | D-C | 479.679 | - | 0.128 | 0.291 | 0.102 | 0.204 | 0.204 | 0.204 | 0.204 | 0.081 | - | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\checkmark$ | $\checkmark$ | HV | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 639.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 29.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 826.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 111.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 5.000 | 591.000 | 43.000 |  |
|  | B | 10.000 | 0.000 | 19.000 | 0.000 |  |
|  | C | 774.000 | 14.000 | 0.000 | 38.000 |  |
|  | D | 96.000 | 3.000 | 12.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.01 | 0.92 | 0.07 |  |
|  | B | 0.34 | 0.00 | 0.66 | 0.00 |  |
|  | C | 0.94 | 0.02 | 0.00 | 0.05 |  |
|  | D | 0.86 | 0.03 | 0.11 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOs |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.09 | 10.85 | 0.10 | B |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| A-D | 0.11 | 9.72 | 0.13 | A |
| D-AB | 0.24 | 10.38 | 0.31 | B |
| D-BC | 0.08 | 20.03 | 0.08 | C |
| C-ABD | 0.06 | 4.02 | 0.09 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 21.83 | 21.64 | 0.00 | 461.16 | 0.047 | 0.05 | 8.187 | A |
| A-B | 3.76 | 3.76 | 0.00 | - | - | - | - | - |
| A-C | 444.94 | 444.94 | 0.00 | - | - | - | - | - |
| A-D | 32.37 | 32.09 | 0.00 | 482.29 | 0.067 | 0.07 | 7.991 | A |
| D-AB | 73.44 | 72.80 | 0.00 | 529.16 | 0.139 | 0.16 | 7.877 | A |
| D-BC | 10.13 | 24.98 | 0.00 | 285.78 | 0.035 | 0.04 | 13.046 | B |
| C-ABD | 27.93 | 0.00 | 920.53 | 0.027 | 0.03 | 4.019 | A |  |
| C-D | 568.95 | 568.95 | 0.00 | - | - | - | - | - |
| C-A |  |  | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 26.07 | 26.01 | 0.00 | 422.05 | 0.062 | 0.07 | 9.089 | A |
| A-B | 4.49 | 4.49 | 0.00 | - | - | - | - | - |
| A-C | 531.30 | 531.30 | 0.00 | - | - | - | - | - |
| A-D | 38.66 | 38.57 | 0.00 | 455.20 | 0.085 | 0.09 | 8.637 | A |
| D-AB | 87.71 | 0.00 | 498.30 | 0.176 | 0.21 | 8.758 | A |  |
| D-BC | 12.08 | 12.02 | 0.00 | 247.61 | 0.049 | 0.05 | 15.277 | C |
| C-ABD | 39.95 | 39.87 | 0.00 | 1004.89 | 0.040 | 0.06 | 3.729 | A |
| C-D | 32.88 | 0.00 | - | - | - | - | - |  |
| C-A | 669.72 | 669.72 | 0.00 | - | - | - | - | - |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 31.93 | 31.81 | 0.00 | 363.74 | 0.088 | 0.10 | 10.842 | B |
| A-B | 5.51 | 5.51 | 0.00 | - | - | - | - | - |
| A-C | 650.70 | 650.70 | 0.00 | - | - | - | - | - |
| A-D | 47.34 | 47.21 | 0.00 | 417.77 | 0.113 | 0.13 | 9.712 | A |
| D-AB | 107.46 | 107.09 | 14.63 | 0.00 | 454.38 | 0.237 | 0.31 | 10.354 |
| D-BC | 14.75 | 62.39 | 0.00 | 194.57 | 0.076 | 0.08 | 19.994 | C |
| C-ABD | 62.54 | 39.63 | 0.00 | 1086.47 | 0.058 | 0.09 | 3.514 | A |
| C-D | 39.63 | 807.27 |  | - | - | - | - | - |
| C-A | 807.27 |  | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 31.93 | 31.93 | 0.00 | 363.60 | 0.088 | 0.10 | 10.853 | B |
| A-B | 5.51 | 5.51 | 0.00 | - | - | - | - | - |
| A-C | 650.70 | 650.70 | 0.00 | - | - | - | - |  |
| A-D | 47.34 | 47.34 | 0.00 | 417.74 | 0.113 | 0.13 | 9.718 | A |
| D-AB | 107.46 | 107.45 | 0.00 | 454.24 | 0.237 | 0.31 | 10.380 | B |
| D-BC | 14.75 | 0.00 | 194.48 | 0.076 | 0.08 | 20.029 | C |  |
| C-ABD | 62.61 | 62.60 | 0.00 | 1086.52 | 0.058 | 0.09 | 3.515 | A |
| C-D | 39.63 | 807.63 | 0.00 | - | - | - | - | - |
| C-A | 807.21 |  | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 26.07 | 26.19 | 0.00 | 421.86 | 0.062 | 0.07 | 9.100 | A |
| A-B | 4.49 | 4.49 | 0.00 | - | - | - | - | - |
| A-C | 531.30 | 531.30 | 0.00 | - | - | - | - |  |
| A-D | 38.66 | 38.79 | 0.00 | 455.15 | 0.085 | 0.09 | 8.648 | A |
| D-AB | 87.71 | 0.00 | 498.10 | 0.176 | 0.22 | 8.787 | A |  |
| D-BC | 12.08 | 12.19 | 0.00 | 247.50 | 0.049 | 0.05 | 15.305 | C |
| C-ABD | 40.03 | 0.00 | 1004.97 | 0.040 | 0.06 | 3.731 | A |  |
| C-D | 32.88 | 32.88 | 0.00 | - | - | - | - | - |
| C-A | 669.65 | 0.00 | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 21.83 | 21.90 | 0.00 | 460.91 | 0.047 | 0.05 | 8.201 | A |
| A-B | 3.76 | 3.76 | 0.00 | - | - | - | - | - |
| A-C | 444.94 | 444.94 | 0.00 | - | - | - | - | - |
| A-D | 32.37 | 32.46 | 0.00 | 482.24 | 0.067 | 0.07 | 8.006 | A |
| D-AB | 73.44 | 73.65 | 0.00 | 528.96 | 0.139 | 0.16 | 7.911 | A |
| D-BC | 10.13 | 10.19 | 0.00 | 285.62 | 0.035 | 0.04 | 13.072 | B |
| C-ABD | 25.08 | 27.16 | 0.00 | 920.53 | 0.027 | 0.04 | 4.022 | A |
| C-D | 27.93 | 568.85 | 568.85 | 0.00 | - | - | - | - |
| C-A | 560 | - | - | - | - | - |  |  |

## (Default Analysis Set) - 2028 No Development, PM

## Data Errors and Warnings

No errors or warnings

Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 No <br> Development, <br> RM | Locked |  |  |  |  |  |  |  |  |
| Development No | PM |  | ONE <br> HOUR | $16: 45$ | $18: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 Beach Road / Swanbridge Road | Crossroads | Two-way | A,B,C,D | 9.50 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B427 Lavernock Rd |  | Major |
| B | B | Beach Road |  | Minor |
| C | C | B4267 South Rd |  | Major |
| D | D | Swanbridge Rd |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\boldsymbol{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\boldsymbol{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 7.75 |  | 0.00 |  | 2.20 | 82.40 |  |  |
| C | 7.75 |  | 0.00 |  | 2.20 | 101.00 | $\checkmark$ |  |

[^5]Minor Arm Geometry

| Arm | Minor Arm Type | Lane Width (m) |  | Lane Width (Right) $(m)$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.10 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 16 |
| D | One lane plus flare |  |  |  | 10.00 | 4.94 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 10 | 14 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept (PCU/hr) | Slope for A-B | Slope for A-C | $\begin{aligned} & \hline \text { Slope } \\ & \text { for } \\ & \text { A-D } \end{aligned}$ | Slope for B-A | $\begin{aligned} & \text { Slope } \\ & \text { for } \\ & \text { B-C } \end{aligned}$ | Slope for B-D | Slope for C-A | Slope for C-B | Slope for C-D | Slope for D-A | Slope for D-B | Slope for D-C |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | A-D | 621.682 | - | - | - | - | - | - | 0.223 | 0.318 | 0.223 | - | - | - |
| 1 | B-A | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | - | 0.230 | 0.230 | 0.115 |
| 1 | B-C | 703.832 | 0.100 | 0.252 | - | - | - | - | - | - | - | - | - |  |
| 1 | $B-D$, nearside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| 1 | $B-D$, offside lane | 541.529 | 0.091 | 0.230 | 0.230 | - | - | - | 0.145 | 0.329 | 0.145 | - | - | - |
| 1 | C-B | 632.453 | 0.226 | 0.226 | 0.323 | - | - | - | - | - | - | - | - | - |
| 1 | D-A | 680.254 | - | - | - | - | - | - | 0.244 | - | 0.096 | - | - | - |
| 1 | D-B, nearside lane | 524.418 | 0.140 | 0.140 | 0.319 | - | - | - | 0.223 | 0.223 | 0.088 | - | - | - |
| 1 | D-B, offside lane | 490.010 | 0.131 | 0.131 | 0.298 | - | - | - | 0.208 | 0.208 | 0.082 | - | - | - |
| 1 | D-C | 490.010 | - | 0.131 | 0.298 | 0.104 | 0.208 | 0.208 | 0.208 | 0.208 | 0.082 | - | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\checkmark$ | $\checkmark$ | HV | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 861.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 34.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 624.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 77.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 29.000 | 730.000 | 102.000 |  |
|  | B | 17.000 | 0.000 | 16.000 | 1.000 |  |
|  | C | 586.000 | 25.000 | 0.000 | 13.000 |  |
|  | D | 60.000 | 1.000 | 16.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.03 | 0.85 | 0.12 |  |
|  | B | 0.50 | 0.00 | 0.47 | 0.03 |  |
|  | C | 0.94 | 0.04 | 0.00 | 0.02 |  |
|  | D | 0.78 | 0.01 | 0.21 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOs |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.13 | 14.46 | 0.15 | B |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| A-D | 0.24 | 10.18 | 0.32 | B |
| D-AB | 0.13 | 8.25 | 0.15 | A |
| D-BC | 0.09 | 19.47 | 0.10 | C |
| C-ABD | 0.10 | 4.78 | 0.22 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 25.60 | 25.32 | 0.00 | 396.37 | 0.065 | 0.07 | 9.695 | A |
| A-B | 21.83 | 21.83 | 0.00 | - | - | - | - | - |
| A-C | 549.58 | 549.58 | 0.00 | - | - | - | - | - |
| A-D | 76.79 | 76.10 | 0.00 | 515.35 | 0.149 | 0.17 | 8.196 | A |
| D-AB | 45.56 | 45.21 | 0.00 | 561.88 | 0.081 | 0.09 | 6.963 | A |
| D-BC | 12.41 | 12.23 | 0.00 | 294.30 | 0.042 | 0.04 | 12.754 | B |
| C-ABD | 39.05 | 0.00 | 793.57 | 0.049 | 0.07 | 4.768 | A |  |
| C-D | 9.35 | 9.35 | 0.00 | - | - | - | - | - |
| C-A | 421.38 | 421.38 |  |  | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 30.57 | 30.46 | 0.00 | 351.54 | 0.087 | 0.09 | 11.208 | B |
| A-B | 26.07 | 26.07 | 0.00 | - | - | - | - | - |
| A-C | 656.26 | 656.26 | 0.00 | - | - | - | - | - |
| A-D | 91.70 | 91.49 | 0.00 | 494.63 | 0.185 | 0.22 | 8.925 | A |
| D-AB | 54.41 | 54.32 | 0.00 | 537.86 | 0.101 | 0.11 | 7.442 | A |
| D-BC | 14.81 | 14.74 | 0.00 | 255.98 | 0.058 | 0.06 | 14.920 | B |
| C-ABD | 59.08 | 10.89 | 0.00 | 844.99 | 0.070 | 0.12 | 4.580 | A |
| C-D | 10.89 | 0.00 | - | - | - | - | - |  |
| C-A | 490.99 | 0.00 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 37.43 | 37.22 | 0.00 | 286.49 | 0.131 | 0.15 | 14.430 | B |
| A-B | 31.93 | 31.93 | 0.00 | - | - | - | - | - |
| A-C | 803.74 | 803.74 | 0.00 | - | - | - | - | - |
| A-D | 112.30 | 111.95 | 0.00 | 466.04 | 0.241 | 0.31 | 10.156 | B |
| D-AB | 66.66 | 66.50 | 17.98 | 0.00 | 503.14 | 0.132 | 0.15 | 8.242 |
| D-BC | 18.12 | 91.58 | 0.00 | 203.17 | 0.089 | 0.10 | 19.439 | C |
| C-ABD | 91.95 | 12.92 | 0.00 | 901.17 | 0.102 | 0.21 | 4.448 | A |
| C-D | 12.92 | 0.00 | - | - | - | - | - |  |
| C-A | 582.17 |  |  | - | - | - | - | - |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 37.43 | 37.43 | 0.00 | 286.29 | 0.131 | 0.15 | 14.465 | B |
| A-B | 31.93 | 31.93 | 0.00 | - | - | - | - | - |
| A-C | 803.74 | 803.74 | 0.00 | - | - | - | - | - |
| A-D | 112.30 | 112.30 | 0.00 | 465.95 | 0.241 | 0.32 | 10.179 | B |
| D-AB | 66.66 | 66.66 | 0.00 | 502.91 | 0.133 | 0.15 | 8.251 | A |
| D-BC | 18.12 | 18.11 | 0.00 | 202.99 | 0.089 | 0.10 | 19.472 | C |
| C-ABD | 92.15 | 92.14 | 0.00 | 901.31 | 0.102 | 0.22 | 4.454 | A |
| C-D | 12.91 | 12.91 | 0.00 | - | - | - | - | - |
| C-A | 581.97 | 581.97 | 0.00 | - | - | - | - | - |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 30.57 | 30.78 | 0.00 | 351.25 | 0.087 | 0.10 | 11.242 | B |
| A-B | 26.07 | 26.07 | 0.00 | - | - | - | - | - |
| A-C | 656.26 | 656.26 | 0.00 | - | - | - | - |  |
| A-D | 91.70 | 92.04 | 0.00 | 494.49 | 0.185 | 0.23 | 8.952 | A |
| D-AB | 54.41 | 54.57 | 0.00 | 537.53 | 0.101 | 0.11 | 7.458 | A |
| D-BC | 14.81 | 14.94 | 0.00 | 255.74 | 0.058 | 0.06 | 14.960 | B |
| C-ABD | 59.29 | 0.00 | 845.18 | 0.070 | 0.12 | 4.588 | A |  |
| C-D | 10.89 | 10.89 | 0.00 | - | - | - | - | - |
| C-A | 490.78 | 490.78 |  | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 25.60 | 25.70 | 0.00 | 395.99 | 0.065 | 0.07 | 9.724 | A |
| A-B | 21.83 | 21.83 | 0.00 | - | - | - | - | - |
| A-C | 549.58 | 549.58 | 0.00 | - | - | - | - | - |
| A-D | 76.79 | 77.00 | 0.00 | 515.22 | 0.149 | 0.18 | 8.220 | A |
| D-AB | 45.56 | 45.66 | 0.00 | 561.58 | 0.081 | 0.09 | 6.981 | A |
| D-BC | 12.41 | 12.48 | 0.00 | 293.98 | 0.042 | 0.04 | 12.793 | B |
| C-ABD | 39.27 | 39.47 | 0.00 | 793.54 | 0.049 | 0.08 | 4.777 | A |
| C-D | 9.34 | 0.34 | 0.00 | - | - | - | - | - |
| C-A | 421.16 | 421.16 |  | - | - | - | - | - |

## Junctions 8

## PICADY 8 - Priority Intersection Module

## Version: 8.0.4.487 [15039,24/03/2014]

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Filename: Jn7 - South Road - Swanbridge Grove - Sports and Leisure Club Proposed Access.arc8
Path: P:IGBCFAITP\HB\Projects\5133321 - Sully Sport \& Social Club - TAYL3270104 - Analysis\Junction Modelling
Report generation date: 25/06/2015 12:54:46
" (Default Analysis Set) - 2023 With Development, AM
» (Default Analysis Set) - 2023 With Development, PM
" (Default Analysis Set) - 2028 With Development, AM
" (Default Analysis Set) - 2028 With Development, PM
" (Default Analysis Set) - 2023 No Development, AM
" (Default Analysis Set) - 2023 No Development, PM
" (Default Analysis Set) - 2028 No Development, AM
» (Default Analysis Set) - 2028 No Development, PM

## Summary of junction performance

|  | AM |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Queue (PCU) | Delay (s) | RFC | LOS |
|  | A1 - 2023 With Development |  |  |  |
| Stream B-ACD | 0.21 | 12.76 | 0.17 | B |
| Stream A-BCD | 0.00 | 4.45 | 0.00 | A |
| Stream A-B | - | - | - | - |
| Stream A-C | - | - | - | - |
| Stream D-A | 0.00 | 0.00 | 0.00 | A |
| Stream D-BC | 0.00 | 0.00 | 0.00 | A |
| Stream C-ABD | 0.23 | 4.02 | 0.11 | A |
| Stream C-D | - | - | - | - |
| Stream C-A | - | - | - | - |

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.
"D5-2023 With Development, AM " model duration: 07:45-09:15 "D6 - 2023 With Development, PM" model duration: 16:45-18:15 "D7-2028 With Development, AM" model duration: 07:45-09:15 "D8 - 2028 With Development, PM" model duration: 16:45-18:15 "D9-2023 No Development, AM" model duration: 07:45-09:15 "D10-2023 No Development, PM" model duration: 16:45-18:15 "D11 - 2028 No Development, AM" model duration: 07:45-09:15 "D12-2028 No Development, PM" model duration: 16:45-18:15

Run using Junctions 8.0.4.487 at 25/06/2015 12:54:42

## File summary

| Title | (untitled) |
| :--- | :---: |
| Location |  |
| Site Number |  |
| Date | $09 / 10 / 2014$ |
| Version |  |
| Status | (new file) |
| Identifier |  |
| Client |  |
| Jobnumber |  |
| Enumerator | TAYL3270 |
| Description |  |

Analysis Options

| Vehicle Length <br> $(\mathbf{m})$ | Do Queue <br> Variations | Calculate Residual <br> Capacity | Residual Capacity Criteria <br> Type | RFC <br> Threshold | Average Delay Threshold <br> (s) | Queue Threshold <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5.75 |  |  | N/A | 0.85 | 36.00 |  |

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 |

## (Default Analysis Set) - 2023 With Development, AM

Data Errors and Warnings

| Severity | Area | Item | Description |
| :---: | :---: | :---: | :---: |
| Warning | Minor arm flare | Arm D - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, <br> AM | 2023 With <br> Development | AM |  | ONE <br> HOUR | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road <br> Direction | Arm <br> Order | Junction <br> Delay (s) | Junction <br> LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Swanbridge Grove / Sports \& Leisure Club <br> Development Site Proposed Access | OS-NS Stagger (UK <br> RL Stagger) | Two-way | A,B,C,D | 7.32 | A |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Sports \& Leisure Club Development Site Proposed Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |
| D | D | Swanbridge Grove |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 6.90 |  | 0.00 |  | 2.20 | 119.00 | $\checkmark$ | 0.00 |
| C | 6.85 |  | 0.00 |  | 2.20 | 94.00 | $\checkmark$ | 0.00 |

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

## Minor Arm Geometry

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5m (m) | Width at <br> 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 9 | 11 |
| D | One lane plus flare |  |  |  | 8.70 | 3.30 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 19 | 27 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 642.877 | - | - | - | 0.239 | 0.239 | 0.239 | - | 0.239 | - | - |
| $\mathbf{1}$ | B-AD | 556.578 | 0.098 | 0.247 | - | - | - | 0.155 | 0.353 | 0.155 | 0.098 | 0.247 |
| $\mathbf{1}$ | B-C | 722.444 | 0.107 | 0.270 | - | - | - | - | - | - | 0.107 | 0.270 |
| $\mathbf{1}$ | C-B | 628.400 | 0.234 | 0.234 | - | - | - | - | - | - | 0.234 | 0.234 |
| $\mathbf{1}$ | D-A | 727.561 | - | - | - | 0.271 | 0.107 | 0.271 | - | 0.107 | - | - |
| $\mathbf{1}$ | D-BC | 522.362 | 0.145 | 0.145 | 0.330 | 0.231 | 0.091 | 0.231 | - | 0.091 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 617.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 53.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 839.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 4.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 28.000 | 588.000 | 1.000 |  |
|  | B | 26.000 | 0.000 | 27.000 | 0.000 |  |
|  | C | 814.000 | 24.000 | 0.000 | 1.000 |  |
|  | D | 3.000 | 0.000 | 1.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.05 | 0.95 | 0.00 |  |
|  | B | 0.49 | 0.00 | 0.51 | 0.00 |  |
|  | C | 0.97 | 0.03 | 0.00 | 0.00 |  |
|  | D | 0.75 | 0.00 | 0.25 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max Los |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.17 | 12.76 | 0.21 | B |
| A-BCD | 0.00 | 4.45 | 0.00 | A |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | A |
| D-BC | 0.00 | 0.00 | 0.00 | A |
| C-ABD | 0.11 | 4.02 | 0.23 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 39.90 | 39.51 | 0.00 | 439.51 | 0.091 | 0.10 | 8.993 | A |
| A-BCD | 1.56 | 1.56 | 0.00 | 811.61 | 0.002 | 0.00 | 4.443 | A |
| A-B | 21.04 | 21.04 | 0.00 | - | - | - | - | - |
| A-C | 441.90 | 441.90 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 556.19 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 308.51 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 47.85 | 0.72 | 0.00 | 944.55 | 0.051 | 0.08 | 4.012 | A |
| C-D | 0.72 | 0.00 | - | - | - | - | - |  |
| C-A | 583.07 |  |  | - | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 47.65 | 47.51 | 0.00 | 399.13 | 0.119 | 0.13 | 10.233 | B |
| A-BCD | 2.16 | 2.16 | 0.00 | 845.74 | 0.003 | 0.00 | 4.267 | A |
| A-B | 25.11 | 25.11 | 0.00 | - | - | - | - | - |
| A-C | 527.40 | 527.40 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 522.82 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 266.91 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 68.76 | 0.84 | 0.84 | 0.00 | 1006.63 | 0.068 | 0.12 | 3.840 |
| C-D | 684.64 |  |  | - | - | - | - | - |
| C-A |  |  | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 58.35 | 58.08 | 0.00 | 340.50 | 0.171 | 0.20 | 12.733 | B |
| A-BCD | 3.22 | 3.22 | 0.00 | 892.11 | 0.004 | 0.00 | 4.049 | A |
| A-B | 30.73 | 30.73 | 0.00 | - | - | - | - | - |
| A-C | 645.38 | 645.38 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 476.78 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 117.16 | 0.99 | 0.00 | 209.47 | 0.000 | 0.00 |
| C-ABD | 117.60 | 0.99 | 805.17 |  | 0.00 | 1111.72 | 0.106 | 0.23 |
| C-D |  |  | - | - | - | 3.620 | A |  |
| C-A | 805.17 |  | - | - | - | - |  |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 58.35 | 58.35 | 0.00 | 340.42 | 0.171 | 0.21 | 12.762 | B |
| A-BCD | 3.22 | 3.22 | 0.00 | 892.03 | 0.004 | 0.00 | 4.050 | A |
| A-B | 30.73 | 30.73 | 0.00 | - | - | - | - | - |
| A-C | 645.38 | 645.38 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 476.64 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 209.35 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 117.82 | 0.99 | 0.99 | 0.00 | 1111.97 | 0.106 | 0.23 | 3.626 |
| C-D | 804.95 |  | - | - | - | - | - |  |
| C-A |  |  | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 47.65 | 47.92 | 0.00 | 399.03 | 0.119 | 0.14 | 10.262 | B |
| A-BCD | 2.16 | 2.16 | 0.00 | 845.62 | 0.003 | 0.00 | 4.267 | A |
| A-B | 25.11 | 25.11 | 0.00 | - | - | - | - | - |
| A-C | 527.40 | 527.40 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 522.63 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 266.74 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 68.97 | 69.41 | 0.00 | 1006.95 | 0.068 | 0.12 | 3.844 | A |
| C-D | 0.84 | 0.84 | 0.00 | - | - | - | - | - |
| C-A | 684.43 | 684.43 | 0.00 | - | - | - | - | - |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 39.90 | 40.05 | 0.00 | 439.42 | 0.091 | 0.10 | 9.018 | A |
| A-BCD | 1.57 | 1.57 | 0.00 | 811.50 | 0.002 | 0.00 | 4.446 | A |
| A-B | 21.04 | 21.04 | 0.00 | - | - | - | - | - |
| A-C | 441.90 | 441.90 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 0.00 | 556.03 | 0.000 | 0.00 | 0.000 |
| D-BC | 0.00 | 48.27 | 0.00 | 308.37 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 48.11 | 0.72 | 0.00 | 944.76 | 0.051 | 0.08 | 4.017 | A |
| C-D | 582.82 |  | -00 | - | - | - | - |  |
| C-A |  |  | - | - | - | - | - |  |

## (Default Analysis Set) - 2023 With Development, PM

Data Errors and Warnings

| Severity | Area | Item | Description |
| :---: | :---: | :---: | :---: |
| Warning | Minor arm flare | Arm D - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> (HH:mm) | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, PM | Locked |  |  |  |  |  |  |  |  |
| Development With | RM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |  |

## Junction Network

Junctions

| Junction | Name | Junction Type | Major Road <br> Direction | Arm <br> Order | Junction <br> Delay (s) | Junction <br> LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Swanbridge Grove / Sports \& Leisure Club <br> Development Site Proposed Access | OS-NS Stagger (UK <br> RL Stagger) | Two-way | A,B,C,D | 7.46 | $A$ |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Sports \& Leisure Club Development Site Proposed Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |
| D | D | Swanbridge Grove |  | Minor |

Major Arm Geometry

| Arm | Width of <br> carriageway (m) | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn (m) | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 6.90 |  | 0.00 |  | 2.20 | 119.00 | $\checkmark$ | 0.00 |
| C | 6.85 |  | 0.00 |  | 2.20 | 94.00 | $\checkmark$ |  |

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) | $\begin{aligned} & \text { Lane } \\ & \text { Width } \\ & \text { (Left) }(\mathrm{m}) \end{aligned}$ | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | $\begin{aligned} & \text { Visibility To } \\ & \text { Left (m) } \end{aligned}$ | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 9 | 11 |
| D | One lane plus flare |  |  |  | 8.70 | 3.30 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 19 | 27 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 642.877 | - | - | - | 0.239 | 0.239 | 0.239 | - | 0.239 | - | - |
| $\mathbf{1}$ | B-AD | 556.578 | 0.098 | 0.247 | - | - | - | 0.155 | 0.353 | 0.155 | 0.098 | 0.247 |
| $\mathbf{1}$ | B-C | 722.444 | 0.107 | 0.270 | - | - | - | - | - | - | 0.107 | 0.270 |
| $\mathbf{1}$ | C-B | 628.400 | 0.234 | 0.234 | - | - | - | - | - | - | 0.234 | 0.234 |
| $\mathbf{1}$ | D-A | 727.561 | - | - | - | 0.271 | 0.107 | 0.271 | - | 0.107 | - | - |
| $\mathbf{1}$ | D-BC | 522.362 | 0.145 | 0.145 | 0.330 | 0.231 | 0.091 | 0.231 | - | 0.091 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

## Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 800.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 60.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 655.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 4.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 40.000 | 757.000 | 3.000 |  |
|  | B | 25.000 | 0.000 | 35.000 | 0.000 |  |
|  | C | 605.000 | 47.000 | 0.000 | 3.000 |  |
|  | D | 1.000 | 0.000 | 3.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 0.00 | 0.05 | 0.95 | 0.00 |
|  | B | 0.42 | 0.00 | 0.58 | 0.00 |
|  | C | 0.92 | 0.07 | 0.00 | 0.00 |
|  | D | 0.25 | 0.00 | 0.75 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |  |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |  |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |  |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |  |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOs |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.20 | 13.72 | 0.25 | B |
| A-BCD | 0.01 | 3.94 | 0.01 | A |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | A |
| D-BC | 0.00 | 0.00 | 0.00 | A |
| C-ABD | 0.19 | 4.88 | 0.64 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 45.17 | 44.71 | 0.00 | 435.55 | 0.104 | 0.11 | 9.201 | A |
| A-BCD | 5.24 | 5.21 | 0.00 | 919.97 | 0.006 | 0.01 | 3.935 | A |
| A-B | 29.96 | 29.96 | 0.00 | - | - | - | - | - |
| A-C | 567.08 | 567.08 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 598.85 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 324.59 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 78.21 | 2.05 | 0.00 | 817.31 | 0.096 | 0.19 | 4.866 | A |
| C-D | 212.86 | 0.00 | - | - | - | - | - |  |
| C-A |  |  | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 53.94 | 53.77 | 0.00 | 392.01 | 0.138 | 0.16 | 10.637 | B |
| A-BCD | 7.23 | 7.22 | 0.00 | 969.00 | 0.007 | 0.01 | 3.742 | A |
| A-B | 35.73 | 35.73 | 0.00 | - | - | - | - | - |
| A-C | 676.22 | 676.22 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 573.70 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 286.06 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 110.64 | 110.16 | 0.00 | 859.47 | 0.129 | 0.31 | 4.809 | A |
| C-D | 2.36 | 475.83 | 0.00 | - | - | - | - | - |
| C-A | 475.83 |  | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 66.06 | 65.70 | 0.00 | 328.75 | 0.201 | 0.25 | 13.665 | B |
| A-BCD | 10.69 | 10.67 | 0.00 | 1032.45 | 0.010 | 0.01 | 3.522 | A |
| A-B | 43.67 | 43.67 | 0.00 | - | - | - | - | - |
| A-C | 826.46 | 826.46 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 539.05 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 232.89 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 178.80 | 177.52 | 0.00 | 929.24 | 0.192 | 0.63 | 4.802 | A |
| C-D | 2.68 | 539.69 |  | - | - | - | - | - |
| C-A | 539 |  | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 66.06 | 66.05 | 0.00 | 328.52 | 0.201 | 0.25 | 13.715 | B |
| A-BCD | 10.70 | 10.70 | 0.00 | 1032.29 | 0.010 | 0.01 | 3.525 | A |
| A-B | 43.67 | 43.67 | 0.00 | - | - | - | - | - |
| A-C | 826.45 | 026.45 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 538.73 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 179.47 | 0.00 | 232.61 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 179.51 | 2.67 | 538.98 | 0.00 | 929.99 | 0.193 | 0.64 | 4.818 |
| C-D |  |  | - | - | - | - | - |  |
| C-A | 538.98 |  |  | - | - | - | - | - |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 53.94 | 54.29 | 0.00 | 391.72 | 0.138 | 0.16 | 10.681 | B |
| A-BCD | 7.24 | 7.25 | 0.00 | 968.75 | 0.007 | 0.01 | 3.746 | A |
| A-B | 35.73 | 35.73 | 0.00 | - | - | - | - | - |
| A-C | 676.21 | 676.21 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 573.26 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 111.32 | 0.00 | 285.68 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 112.59 | 0.00 | 860.44 | 0.129 | 0.33 | 4.832 | A |  |
| C-D | 2.36 | 0.00 | - | - | - | - | - |  |
| C-A | 475.15 | 475.15 | 0.00 | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 45.17 | 45.35 | 0.00 | 435.32 | 0.104 | 0.12 | 9.235 | A |
| A-BCD | 5.26 | 5.26 | 0.00 | 919.80 | 0.006 | 0.01 | 3.936 | A |
| A-B | 29.96 | 29.96 | 0.00 | - | - | - | - | - |
| A-C | 567.06 | 567.06 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 598.56 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 324.34 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 78.83 | 2.04 | 0.00 | 817.88 | 0.096 | 0.20 | 4.882 | A |
| C-D | 412.24 | 412.24 | 0.00 | - | - | - | - | - |
| C-A |  |  | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 With Development, AM

Data Errors and Warnings

| Severity | Area | Item | Description |
| :--- | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm D - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, <br> AM | 20cked |  |  |  |  |  |  |  |  |
| Development With | AM |  | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road <br> Direction | Arm <br> Order | Junction <br> Delay (s) | Junction <br> LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Swanbridge Grove / Sports \& Leisure Club <br> Development Site Proposed Access | OS-NS Stagger (UK <br> RL Stagger) | Two-way | A,B,C,D | 7.59 | $A$ |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Sports \& Leisure Club Development Site Proposed Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |
| D | D | Swanbridge Grove |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 6.90 |  | 0.00 |  | 2.20 | 119.00 | $\checkmark$ |  |
| C | 6.85 |  | 0.00 |  | 2.20 | 90 |  |  |

[^6]Minor Arm Geometry

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5 m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 9 | 11 |
| D | One lane plus flare |  |  |  | 8.70 | 3.30 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 19 | 27 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 642.877 | - | - | - | 0.239 | 0.239 | 0.239 | - | 0.239 | - | - |
| $\mathbf{1}$ | B-AD | 556.578 | 0.098 | 0.247 | - | - | - | 0.155 | 0.353 | 0.155 | 0.098 | 0.247 |
| $\mathbf{1}$ | B-C | 722.444 | 0.107 | 0.270 | - | - | - | - | - | - | 0.107 | 0.270 |
| $\mathbf{1}$ | C-B | 628.400 | 0.234 | 0.234 | - | - | - | - | - | - | 0.234 | 0.234 |
| $\mathbf{1}$ | D-A | 682.002 | - | - | - | 0.254 | 0.100 | 0.254 | - | 0.100 | - | - |
| $\mathbf{1}$ | D-BC | 531.816 | 0.148 | 0.148 | 0.336 | 0.235 | 0.093 | 0.235 | - | 0.093 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
|  | Percentages | 2.00 |  |  |  |  |  |  |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 658.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 53.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 892.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 5.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 28.000 | 629.000 | 1.000 |  |
|  | B | 26.000 | 0.000 | 27.000 | 0.000 |  |
|  | C | 867.000 | 24.000 | 0.000 | 1.000 |  |
|  | D | 4.000 | 0.000 | 1.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.04 | 0.96 | 0.00 |  |
|  | B | 0.49 | 0.00 | 0.51 | 0.00 |  |
|  | C | 0.97 | 0.03 | 0.00 | 0.00 |  |
|  | D | 0.80 | 0.00 | 0.20 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOs |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.18 | 13.85 | 0.22 | B |
| A-BCD | 0.00 | 4.38 | 0.00 | A |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| D-A | 0.01 | 8.43 | 0.01 | A |
| D-BC | 0.01 | 18.79 | 0.01 | C |
| C-ABD | 0.11 | 3.94 | 0.26 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 39.90 | 39.49 | 0.00 | 425.88 | 0.094 | 0.10 | 9.308 | A |
| A-BCD | 1.64 | 1.63 | 0.00 | 823.77 | 0.002 | 0.00 | 4.378 | A |
| A-B | 21.04 | 21.04 | 0.00 | - | - | - | - | - |
| A-C | 472.69 | 472.69 | 0.00 | - | - | - | - | - |
| D-A | 3.01 | 2.99 | 0.00 | 510.91 | 0.006 | 0.01 | 7.087 | A |
| D-BC | 0.75 | 0.74 | 0.00 | 300.13 | 0.003 | 0.00 | 12.024 | B |
| C-ABD | 50.90 | 0.72 | 0.72 | 0.00 | 965.26 | 0.053 | 0.08 | 3.935 |
| C-D | 619.93 | 0.00 | - | - | - | - | - |  |
| C-A |  |  | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 47.65 | 47.49 | 0.00 | 382.22 | 0.125 | 0.14 | 10.751 | B |
| A-BCD | 2.29 | 2.28 | 0.00 | 860.06 | 0.003 | 0.00 | 4.196 | A |
| A-B | 25.11 | 25.11 | 0.00 | - | - | - | - | - |
| A-C | 564.13 | 564.13 | 0.00 | - | - | - | - | - |
| D-A | 3.60 | 3.59 | 0.00 | 477.56 | 0.008 | 0.01 | 7.594 | A |
| D-BC | 0.90 | 0.89 | 0.00 | 255.07 | 0.004 | 0.00 | 14.162 | B |
| C-ABD | 73.90 | 0.84 | 0.84 | 0.00 | 1030.68 | 0.072 | 0.13 | 3.764 |
| C-D | 727.15 |  | - | - | - | - | - |  |
| C-A | 727.15 |  | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 58.35 | 58.03 | 0.00 | 318.34 | 0.183 | 0.22 | 13.813 | B |
| A-BCD | 3.46 | 3.45 | 0.00 | 909.08 | 0.004 | 0.00 | 3.974 | A |
| A-B | 30.73 | 30.73 | 0.00 | - | - | - | - | - |
| A-C | 690.29 | 690.29 | 0.00 | - | - | - | - | - |
| D-A | 4.40 | 4.39 | 0.00 | 431.47 | 0.010 | 0.01 | 8.429 | A |
| D-BC | 1.10 | 1.09 | 0.00 | 192.84 | 0.006 | 0.01 | 18.775 | C |
| C-ABD | 129.87 | 0.00 | 1143.27 | 0.114 | 0.26 | 3.551 | A |  |
| C-D | 0.98 | 0.98 | 0.00 | - | - | - | - | - |
| C-A | 851.26 | 851.26 |  | - | - | - | - | - |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 58.35 | 58.35 | 0.00 | 318.25 | 0.183 | 0.22 | 13.850 | B |
| A-BCD | 3.46 | 3.46 | 0.00 | 908.99 | 0.004 | 0.00 | 3.975 | A |
| A-B | 30.73 | 30.73 | 0.00 | - | - | - | - | - |
| A-C | 690.29 | 690.29 | 0.00 | - | - | - | - | - |
| D-A | 4.40 | 4.40 | 0.00 | 431.31 | 0.010 | 0.01 | 8.432 | A |
| D-BC | 1.10 | 1.10 | 0.00 | 192.69 | 0.006 | 0.01 | 18.789 | C |
| C-ABD | 130.14 | 0.90 .13 | 0.00 | 1143.56 | 0.114 | 0.26 | 3.557 | A |
| C-D | 0.98 | 850.99 |  |  | - | - | - | - |
| C-A | 850 | - | - | - | - | - |  |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 47.65 | 47.96 | 0.00 | 382.10 | 0.125 | 0.14 | 10.785 | B |
| A-BCD | 2.29 | 2.29 | 0.00 | 859.92 | 0.003 | 0.00 | 4.198 | A |
| A-B | 25.11 | 25.11 | 0.00 | - | - | - | - | - |
| A-C | 564.13 | 564.13 | 0.00 | - | - | - | - | - |
| D-A | 3.60 | 3.61 | 0.00 | 477.33 | 0.008 | 0.01 | 7.601 | A |
| D-BC | 0.90 | 74.66 | 0.00 | 254.87 | 0.004 | 0.00 | 14.175 | B |
| C-ABD | 74.15 | 0.84 | 0.00 | 1031.05 | 0.072 | 0.13 | 3.766 | A |
| C-D | 726.90 |  | 0.00 | - | - | - | - | - |
| C-A |  |  | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 39.90 | 40.06 | 0.00 | 425.78 | 0.094 | 0.10 | 9.338 | A |
| A-BCD | 1.65 | 1.65 | 0.00 | 823.66 | 0.002 | 0.00 | 4.380 | A |
| A-B | 21.04 | 21.04 | 0.00 | - | - | - | - | - |
| A-C | 472.69 | 472.69 | 0.00 | - | - | - | - | - |
| D-A | 3.01 | 3.02 | 0.00 | 510.74 | 0.006 | 0.01 | 7.089 | A |
| D-BC | 0.75 | 0.76 | 0.00 | 299.98 | 0.003 | 0.00 | 12.033 | B |
| C-ABD | 51.17 | 0.71 | 0.71 | 0.00 | 965.49 | 0.053 | 0.08 | 3.941 |
| C-D | 0.79 .66 | 0.00 | - | - | - | - | - |  |
| C-A | 619.66 |  | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 With Development, PM

Data Errors and Warnings

| Severity | Area | Item | Description |
| :--- | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm D - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 202 | Locked |  |  |  |  |  |  |  |  |
| Development, PM | 2028 With | Development | RM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road <br> Direction | Arm <br> Order | Junction <br> Delay (s) | Junction <br> Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Swanbridge Grove / Sports \& Leisure Club <br> Development Site Proposed Access | OS-NS Stagger (UK <br> RL Stagger) | Two-way | A,B,C,D | 7.77 | $A$ |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Sports \& Leisure Club Development Site Proposed Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |
| D | D | Swanbridge Grove |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn (m) | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 6.90 |  | 0.00 |  | 2.20 | 119.00 | $\checkmark$ |  |
| C | 6.85 |  | 0.00 |  | 2.20 | 90 |  |  |

[^7]Minor Arm Geometry

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5 m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 9 | 11 |
| D | One lane plus flare |  |  |  | 8.70 | 3.30 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 19 | 27 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 642.877 | - | - | - | 0.239 | 0.239 | 0.239 | - | 0.239 | - | - |
| $\mathbf{1}$ | B-AD | 556.578 | 0.098 | 0.247 | - | - | - | 0.155 | 0.353 | 0.155 | 0.098 | 0.247 |
| $\mathbf{1}$ | B-C | 722.444 | 0.107 | 0.270 | - | - | - | - | - | - | 0.107 | 0.270 |
| $\mathbf{1}$ | C-B | 628.400 | 0.234 | 0.234 | - | - | - | - | - | - | 0.234 | 0.234 |
| $\mathbf{1}$ | D-A | 685.852 | - | - | - | 0.255 | 0.101 | 0.255 | - | 0.101 | - | - |
| $\mathbf{1}$ | D-BC | 528.831 | 0.147 | 0.147 | 0.334 | 0.234 | 0.093 | 0.234 | - | 0.093 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
|  | Percentages | 2.00 |  |  |  |  |  |  |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 850.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 60.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 695.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 5.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 40.000 | 806.000 | 4.000 |  |
|  | B | 25.000 | 0.000 | 35.000 | 0.000 |  |
|  | C | 644.000 | 47.000 | 0.000 | 4.000 |  |
|  | D | 1.000 | 0.000 | 4.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.05 | 0.95 | 0.00 |  |
|  | B | 0.42 | 0.00 | 0.58 | 0.00 |  |
|  | C | 0.93 | 0.07 | 0.00 | 0.01 |  |
|  | D | 0.20 | 0.00 | 0.80 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOs |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.22 | 15.07 | 0.27 | C |
| A-BCD | 0.01 | 3.88 | 0.02 | A |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| D-A | 0.00 | 7.30 | 0.00 | A |
| D-BC | 0.02 | 16.94 | 0.02 | C |
| C-ABD | 0.21 | 4.82 | 0.73 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 45.17 | 44.70 | 0.00 | 421.18 | 0.107 | 0.12 | 9.551 | A |
| A-BCD | 7.31 | 7.28 | 0.00 | 935.67 | 0.008 | 0.01 | 3.877 | A |
| A-B | 29.91 | 29.91 | 0.00 | - | - | - | - | - |
| A-C | 602.70 | 602.70 | 0.00 | - | - | - | - | - |
| D-A | 0.75 | 0.75 | 0.00 | 555.62 | 0.001 | 0.00 | 6.487 | A |
| D-BC | 3.01 | 82.68 | 0.00 | 315.99 | 0.010 | 0.01 | 11.499 | B |
| C-ABD | 2.72 | 2.72 | 0.00 | 831.33 | 0.099 | 0.21 | 4.804 | A |
| C-D | 437.84 | 0.00 | - | - | - | - | - |  |
| C-A |  |  | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 53.94 | 53.75 | 0.00 | 374.19 | 0.144 | 0.17 | 11.227 | B |
| A-BCD | 10.16 | 10.15 | 0.00 | 986.74 | 0.010 | 0.01 | 3.685 | A |
| A-B | 35.65 | 35.65 | 0.00 | - | - | - | - | - |
| A-C | 718.32 | 718.32 | 0.00 | - | - | - | - | - |
| D-A | 0.90 | 0.90 | 0.00 | 530.00 | 0.002 | 0.00 | 6.803 | A |
| D-BC | 3.60 | 3.58 | 0.00 | 274.52 | 0.013 | 0.01 | 13.287 | B |
| C-ABD | 118.37 | 117.84 | 0.00 | 876.57 | 0.135 | 0.34 | 4.752 | A |
| C-D | 3.13 | 0.00 | - | - | - | - | - |  |
| C-A | 503.30 | 0.00 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 66.06 | 65.64 | 0.00 | 305.27 | 0.216 | 0.27 | 14.994 | B |
| A-BCD | 15.16 | 15.13 | 0.00 | 1052.37 | 0.014 | 0.02 | 3.469 | A |
| A-B | 43.53 | 43.53 | 0.00 | - | - | - | - | - |
| A-C | 877.18 | 877.18 | 0.00 | - | - | - | - | - |
| D-A | 1.10 | 1.10 | 0.00 | 494.49 | 0.002 | 0.00 | 7.295 | A |
| D-BC | 4.40 | 19.38 | 0.00 | 217.29 | 0.020 | 0.02 | 16.907 | C |
| C-ABD | 196.07 | 3.51 | 5.51 | 0.00 | 952.65 | 0.206 | 0.72 | 4.763 |
| C-D | 565.63 |  |  | - | - | - | - | - |
| C-A |  |  | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 66.06 | 66.05 | 0.00 | 304.99 | 0.217 | 0.27 | 15.066 | C |
| A-BCD | 15.17 | 15.17 | 0.00 | 1052.19 | 0.014 | 0.02 | 3.473 | A |
| A-B | 43.53 | 43.53 | 0.00 | - | - | - | - | - |
| A-C | 877.16 | 877.16 | 0.00 | - | - | - | - | - |
| D-A | 1.10 | 1.10 | 0.00 | 494.11 | 0.002 | 0.00 | 7.301 | A |
| D-BC | 4.40 | 196.40 | 0.00 | 216.95 | 0.020 | 0.02 | 16.936 | C |
| C-ABD | 196.96 | 3.51 | 564.74 | 0.00 | 953.54 | 0.207 | 0.73 | 4.780 |
| C-D | 3.51 | - | - | - | - | - |  |  |
| C-A | 564.74 |  |  | - | - | - | - | - |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 53.94 | 54.35 | 0.00 | 373.83 | 0.144 | 0.17 | 11.281 | B |
| A-BCD | 10.18 | 10.20 | 0.00 | 986.46 | 0.010 | 0.01 | 3.686 | A |
| A-B | 35.65 | 35.65 | 0.00 | - | - | - | - | - |
| A-C | 718.31 | 718.31 | 0.00 | - | - | - | - | - |
| D-A | 0.90 | 0.90 | 0.00 | 529.48 | 0.002 | 0.00 | 6.809 | A |
| D-BC | 3.60 | 123.03 | 124.47 | 0.00 | 274.06 | 0.013 | 0.01 | 13.315 |
| C-ABD | 3.10 | 498.67 | 0.00 | 884.68 | 0.139 | 0.37 | 4.756 | A |
| C-D | 498.67 |  | - | - | - | - | - |  |
| C-A |  |  | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 45.17 | 45.37 | 0.00 | 420.91 | 0.107 | 0.12 | 9.590 | A |
| A-BCD | 7.34 | 7.35 | 0.00 | 935.48 | 0.008 | 0.01 | 3.880 | A |
| A-B | 29.91 | 29.91 | 0.00 | - | - | - | - | - |
| A-C | 602.68 | 602.68 | 0.00 | - | - | - | - | - |
| D-A | 0.75 | 0.75 | 0.00 | 555.28 | 0.001 | 0.00 | 6.491 | A |
| D-BC | 3.01 | 3.03 | 0.00 | 315.69 | 0.010 | 0.01 | 11.516 | B |
| C-ABD | 83.38 | 0.00 | 831.99 | 0.100 | 0.22 | 4.823 | A |  |
| C-D | 2.72 | 2.72 | 0.00 | - | - | - | - | - |
| C-A | 437.13 | 437.13 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2023 No Development, AM

Data Errors and Warnings

| Severity | Area | Item | Description |
| :--- | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm D - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No <br> Development, <br> AM | 2023 No <br> Development | AM |  | ONE <br> HOUR | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road <br> Direction | Arm <br> Order | Junction <br> Delay (s) | Junction <br> LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Swanbridge Grove / Sports \& Leisure Club <br> Development Site Proposed Access | OS-NS Stagger (UK <br> RL Stagger) | Two-way | A,B,C,D | 4.47 | $A$ |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Sports \& Leisure Club Development Site Proposed Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |
| D | D | Swanbridge Grove |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 6.90 |  | 0.00 |  | 2.20 | 119.00 | $\checkmark$ |  |
| C | 6.85 |  | 0.00 |  | 2.20 | 90 |  |  |

[^8]Minor Arm Geometry

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5 m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 9 | 11 |
| D | One lane plus flare |  |  |  | 8.70 | 3.30 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 19 | 27 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 642.877 | - | - | - | 0.239 | 0.239 | 0.239 | - | 0.239 | - | - |
| $\mathbf{1}$ | B-AD | 556.578 | 0.098 | 0.247 | - | - | - | 0.155 | 0.353 | 0.155 | 0.098 | 0.247 |
| $\mathbf{1}$ | B-C | 722.444 | 0.107 | 0.270 | - | - | - | - | - | - | 0.107 | 0.270 |
| $\mathbf{1}$ | C-B | 628.400 | 0.234 | 0.234 | - | - | - | - | - | - | 0.234 | 0.234 |
| $\mathbf{1}$ | D-A | 727.561 | - | - | - | 0.271 | 0.107 | 0.271 | - | 0.107 | - | - |
| $\mathbf{1}$ | D-BC | 522.362 | 0.145 | 0.145 | 0.330 | 0.231 | 0.091 | 0.231 | - | 0.091 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
|  | Percentages | 2.00 |  |  |  |  |  |  |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 587.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 0.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 774.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 4.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 0.000 | 586.000 | 1.000 |  |
|  | B | 0.000 | 0.000 | 0.000 | 0.000 |  |
|  | C | 773.000 | 0.000 | 0.000 | 1.000 |  |
|  | D | 3.000 | 0.000 | 1.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.00 | 1.00 | 0.00 |  |
|  | B | 0.25 | 0.25 | 0.25 | 0.25 |  |
|  | C | 1.00 | 0.00 | 0.00 | 0.00 |  |
|  | D | 0.75 | 0.00 | 0.25 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max Los |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | A |
| A-BCD | 0.00 | 4.47 | 0.00 | A |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | A |
| D-BC | 0.00 | 0.00 | 0.00 | A |
| C-ABD | 0.00 | 0.00 | 0.00 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 448.83 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 1.50 | 1.49 | 0.00 | 806.58 | 0.002 | 0.00 | 4.471 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 440.42 | 440.42 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 569.85 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 323.44 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 0.00 | 0.75 | 0.00 | 524.96 | 0.000 | 0.00 | 0.000 | A |
| C-D | 0.75 | 0.00 | - | - | - | - | - |  |
| C-A | 581.95 |  | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 411.36 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 2.05 | 2.05 | 0.00 | 839.67 | 0.002 | 0.00 | 4.297 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 525.65 | 525.65 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 539.24 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 284.83 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 0.00 | 0.90 | 0.00 | 504.88 | 0.000 | 0.00 | 0.000 | A |
| C-D | 0.90 | 0.00 | - | - | - | - | - |  |
| C-A | 694.91 |  | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 357.42 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 3.02 | 3.02 | 0.00 | 884.64 | 0.003 | 0.00 | 4.083 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 643.28 | 643.28 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 496.92 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 231.45 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 0.00 | 0.00 | 0.00 | 477.12 | 0.000 | 0.00 | 0.000 | A |
| C-D | 1.10 | 1.10 | 0.00 | - | - | - | - | - |
| C-A | 851.09 | 851.09 | 0.00 | - | - | - | - | - |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 357.42 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 3.02 | 3.02 | 0.00 | 884.64 | 0.003 | 0.00 | 4.084 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 643.28 | 643.28 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 496.92 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 0.00 | 231.45 | 0.000 | 0.00 | 0.000 |
| C-ABD | 0.00 | 1.10 | 0.00 | 477.12 | 0.000 | 0.00 | 0.000 | A |
| C-D | 1.10 | 851.09 |  | - | - | - | - | - |
| C-A | 851.09 |  | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 411.36 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 2.06 | 2.06 | 0.00 | 839.67 | 0.002 | 0.00 | 4.297 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 525.65 | 525.65 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 539.24 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 0.00 | 284.83 | 0.000 | 0.00 | 0.000 |
| C-ABD | 0.00 | 0.90 | 0.00 | 504.88 | 0.000 | 0.00 | 0.000 | A |
| C-D | 0.90 |  | - | - | - | - | - |  |
| C-A | 694.91 |  | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 448.83 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 1.51 | 1.51 | 0.00 | 806.58 | 0.002 | 0.00 | 4.473 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 440.42 | 440.42 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 569.85 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 323.44 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 0.00 | 0.00 | 524.96 | 0.000 | 0.00 | 0.000 | A |  |
| C-D | 0.75 | 0.00 | - | - | - | - | - |  |
| C-A | 581.95 | 581.95 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2023 No Development, PM

Data Errors and Warnings

| Severity | Area | Item | Description |
| :--- | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm D - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No <br> Development, <br> RM | 20cked <br> Development | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road <br> Direction | Arm <br> Order | Junction <br> Delay (s) | Junction <br> Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Swanbridge Grove / Sports \& Leisure Club <br> Development Site Proposed Access | OS-NS Stagger (UK <br> RL Stagger) | Two-way | A,B,C,D | 4.07 | $A$ |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Sports \& Leisure Club Development Site Proposed Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |
| D | D | Swanbridge Grove |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 6.90 |  | 0.00 |  | 2.20 | 119.00 | $\checkmark$ |  |
| C | 6.85 |  | 0.00 |  | 2.20 | 90 |  |  |

[^9]Minor Arm Geometry

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5 m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 9 | 11 |
| D | One lane plus flare |  |  |  | 8.70 | 3.30 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 19 | 27 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 642.877 | - | - | - | 0.239 | 0.239 | 0.239 | - | 0.239 | - | - |
| $\mathbf{1}$ | B-AD | 556.578 | 0.098 | 0.247 | - | - | - | 0.155 | 0.353 | 0.155 | 0.098 | 0.247 |
| $\mathbf{1}$ | B-C | 722.444 | 0.107 | 0.270 | - | - | - | - | - | - | 0.107 | 0.270 |
| $\mathbf{1}$ | C-B | 628.400 | 0.234 | 0.234 | - | - | - | - | - | - | 0.234 | 0.234 |
| $\mathbf{1}$ | D-A | 727.561 | - | - | - | 0.271 | 0.107 | 0.271 | - | 0.107 | - | - |
| $\mathbf{1}$ | D-BC | 522.362 | 0.145 | 0.145 | 0.330 | 0.231 | 0.091 | 0.231 | - | 0.091 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
|  | Percentages | 2.00 |  |  |  |  |  |  |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 717.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 0.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 586.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 4.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 0.000 | 714.000 | 3.000 |  |
|  | B | 0.000 | 0.000 | 0.000 | 0.000 |  |
|  | C | 583.000 | 0.000 | 0.000 | 3.000 |  |
|  | D | 1.000 | 0.000 | 3.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.00 | 1.00 | 0.00 |  |
|  | B | 0.25 | 0.25 | 0.25 | 0.25 |  |
|  | C | 0.99 | 0.00 | 0.00 | 0.01 |  |
|  | D | 0.25 | 0.00 | 0.75 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max Los |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | A |
| A-BCD | 0.01 | 4.07 | 0.01 | A |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | A |
| D-BC | 0.00 | 0.00 | 0.00 | A |
| C-ABD | 0.00 | 0.00 | 0.00 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 440.06 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 4.86 | 4.84 | 0.00 | 890.14 | 0.005 | 0.01 | 4.066 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 534.94 | 534.94 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 608.44 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 341.85 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 0.00 | 2.26 | 0.00 | 502.36 | 0.000 | 0.00 | 0.000 | A |
| C-D | 2.26 | 438.91 |  | - | - | - | - | - |
| C-A | 438.91 |  | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 401.56 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 6.64 | 6.63 | 0.00 | 935.17 | 0.007 | 0.01 | 3.876 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 637.93 | 637.93 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 585.31 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 306.81 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 0.00 | 0.00 | 477.90 | 0.000 | 0.00 | 0.000 | A |  |
| C-D | 2.70 | 0.00 | - | - | - | - | - |  |
| C-A | 524.11 | 524.11 |  | - | - | - | - | - |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 346.66 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 9.68 | 9.67 | 0.00 | 994.14 | 0.010 | 0.01 | 3.655 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 779.75 | 779.75 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 553.35 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 258.37 | 0.000 | 0.00 | 0.000 | A |
| C-ABD | 0.00 | 0.00 | 0.00 | 444.07 | 0.000 | 0.00 | 0.000 | A |
| C-D | 3.30 | 3.30 | 0.00 | - | - | - | - | - |
| C-A | 641.89 | 641.89 | 0.00 | - | - | - | - | - |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 346.66 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 9.69 | 9.69 | 0.00 | 994.14 | 0.010 | 0.01 | 3.658 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 779.75 | 779.75 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 553.35 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 0.00 | 258.37 | 0.000 | 0.00 | 0.000 |
| C-ABD | 0.00 | 3.30 | 0.00 | 444.07 | 0.000 | 0.00 | 0.000 | A |
| C-D | 3.30 | 641.89 |  | - | - | - | - | - |
| C-A | 641.89 |  | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 401.56 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 6.64 | 6.65 | 0.00 | 935.18 | 0.007 | 0.01 | 3.876 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 637.93 | 637.93 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 585.31 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 0.00 | 306.81 | 0.000 | 0.00 | 0.000 |
| C-ABD | 0.00 | 2.70 | 0.00 | 477.89 | 0.000 | 0.00 | 0.000 | A |
| C-D | 2.70 | 524.11 |  | - | - | - | - | - |
| C-A | 524.11 |  | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 440.06 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 4.87 | 4.88 | 0.00 | 890.15 | 0.005 | 0.01 | 4.067 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 534.92 | 534.92 | 0.00 | - | - | - | - | - |
| D-A | 0.00 | 0.00 | 0.00 | 608.44 | 0.000 | 0.00 | 0.000 | A |
| D-BC | 0.00 | 0.00 | 0.00 | 0.00 | 341.85 | 0.000 | 0.00 | 0.000 |
| C-ABD | 0.00 | 2.26 | 0.00 | 502.36 | 0.000 | 0.00 | 0.000 | A |
| C-D | 2.26 | 438.91 |  | - | - | - | - | - |
| C-A | 438.91 |  | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 No Development, AM

Data Errors and Warnings

| Severity | Area | Item | Description |
| :--- | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm D - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 No <br> Development, <br> AM | 20cked <br> Development | AM |  | ONE <br> HOUR | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road <br> Direction | Arm <br> Order | Junction <br> Delay (s) | Junction <br> LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Swanbridge Grove / Sports \& Leisure Club <br> Development Site Proposed Access | OS-NS Stagger (UK <br> RL Stagger) | Two-way | A,B,C,D | 8.00 | $A$ |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Sports \& Leisure Club Development Site Proposed Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |
| D | D | Swanbridge Grove |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 6.90 |  | 0.00 |  | 2.20 | 119.00 | $\checkmark$ |  |
| C | 6.85 |  | 0.00 |  | 2.20 | 90 |  |  |

[^10]Minor Arm Geometry

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5 m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 9 | 11 |
| D | One lane plus flare |  |  |  | 8.70 | 3.30 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 19 | 27 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 642.877 | - | - | - | 0.239 | 0.239 | 0.239 | - | 0.239 | - | - |
| $\mathbf{1}$ | B-AD | 556.578 | 0.098 | 0.247 | - | - | - | 0.155 | 0.353 | 0.155 | 0.098 | 0.247 |
| $\mathbf{1}$ | B-C | 722.444 | 0.107 | 0.270 | - | - | - | - | - | - | 0.107 | 0.270 |
| $\mathbf{1}$ | C-B | 628.400 | 0.234 | 0.234 | - | - | - | - | - | - | 0.234 | 0.234 |
| $\mathbf{1}$ | D-A | 682.002 | - | - | - | 0.254 | 0.100 | 0.254 | - | 0.100 | - | - |
| $\mathbf{1}$ | D-BC | 531.816 | 0.148 | 0.148 | 0.336 | 0.235 | 0.093 | 0.235 | - | 0.093 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
|  | Percentages | 2.00 |  |  |  |  |  |  |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 628.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 0.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 828.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 5.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 0.000 | 627.000 | 1.000 |  |
|  | B | 0.000 | 0.000 | 0.000 | 0.000 |  |
|  | C | 827.000 | 0.000 | 0.000 | 1.000 |  |
|  | D | 4.000 | 0.000 | 1.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.00 | 1.00 | 0.00 |  |
|  | B | 0.25 | 0.25 | 0.25 | 0.25 |  |
|  | C | 1.00 | 0.00 | 0.00 | 0.00 |  |
|  | D | 0.80 | 0.00 | 0.20 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOs |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | A |
| A-BCD | 0.00 | 4.41 | 0.00 | A |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| D-A | 0.01 | 8.08 | 0.01 | A |
| D-BC | 0.01 | 16.83 | 0.01 | C |
| C-ABD | 0.00 | 0.00 | 0.00 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 435.26 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 1.58 | 1.57 | 0.00 | 818.56 | 0.002 | 0.00 | 4.406 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 471.22 | 471.22 | 0.00 | - | - | - | - | - |
| D-A | 3.01 | 2.99 | 0.00 | 523.53 | 0.006 | 0.01 | 6.915 | A |
| D-BC | 0.75 | 0.74 | 0.00 | 315.17 | 0.002 | 0.00 | 11.449 | B |
| C-ABD | 0.00 | 0.00 | 517.54 | 0.000 | 0.00 | 0.000 | A |  |
| C-D | 0.75 | 0.75 | 0.00 | - | - | - | - | - |
| C-A | 622.61 | 622.61 |  | - | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 394.63 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 2.17 | 2.17 | 0.00 | 853.81 | 0.003 | 0.00 | 4.226 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 562.39 | 562.39 | 0.00 | - | - | - | - | - |
| D-A | 3.60 | 3.59 | 0.00 | 492.74 | 0.007 | 0.01 | 7.358 | A |
| D-BC | 0.90 | 0.90 | 0.00 | 273.11 | 0.003 | 0.00 | 13.224 | B |
| C-ABD | 0.00 | 0.00 | 0.00 | 496.02 | 0.000 | 0.00 | 0.000 | A |
| C-D | 0.90 | 0.90 | 0.00 | - | - | - | - | - |
| C-A | 743.46 | 743.46 | 0.00 | - | - | - | - | - |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 335.76 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 3.24 | 3.24 | 0.00 | 901.47 | 0.004 | 0.00 | 4.007 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 688.20 | 688.20 | 0.00 | - | - | - | - | - |
| D-A | 4.40 | 4.39 | 0.00 | 450.12 | 0.010 | 0.01 | 8.076 | A |
| D-BC | 1.10 | 1.09 | 0.00 | 214.97 | 0.005 | 0.01 | 16.832 | C |
| C-ABD | 0.00 | 1.10 | 0.00 | 466.27 | 0.000 | 0.00 | 0.000 | A |
| C-D | 1.10 | 010.54 | 0.00 | - | - | - | - | - |
| C-A | 910.54 |  | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 335.76 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 3.24 | 3.24 | 0.00 | 901.47 | 0.004 | 0.00 | 4.009 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 688.20 | 688.20 | 0.00 | - | - | - | - | - |
| D-A | 4.40 | 4.40 | 0.00 | 450.12 | 0.010 | 0.01 | 8.076 | A |
| D-BC | 1.10 | 0.10 | 0.00 | 0.00 | 214.97 | 0.005 | 0.01 | 16.832 |
| C-ABD | 0.00 | 1.10 | 0.00 | 466.27 | 0.000 | 0.00 | 0.000 | A |
| C-D | 1.10 | 910.54 |  | - | - | - | - | - |
| C-A | 910.54 |  | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 394.63 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 2.18 | 2.18 | 0.00 | 853.81 | 0.003 | 0.00 | 4.228 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 562.38 | 562.38 | 0.00 | - | - | - | - | - |
| D-A | 3.60 | 3.61 | 0.00 | 492.74 | 0.007 | 0.01 | 7.362 | A |
| D-BC | 0.90 | 0.91 | 0.00 | 273.11 | 0.003 | 0.00 | 13.227 | B |
| C-ABD | 0.00 | 0.90 | 0.00 | 496.02 | 0.000 | 0.00 | 0.000 | A |
| C-D | 0.90 | 743.46 |  | - | - | - | - | - |
| C-A | 743.46 |  | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 435.26 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 1.58 | 1.58 | 0.00 | 818.56 | 0.002 | 0.00 | 4.407 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 471.21 | 471.21 | 0.00 | - | - | - | - | - |
| D-A | 3.01 | 3.02 | 0.00 | 523.53 | 0.006 | 0.01 | 6.915 | A |
| D-BC | 0.75 | 0.76 | 0.00 | 315.16 | 0.002 | 0.00 | 11.451 | B |
| C-ABD | 0.00 | 0.00 | 517.54 | 0.000 | 0.00 | 0.000 | A |  |
| C-D | 0.75 | 0.75 | 0.00 | - | - | - | - | - |
| C-A | 622.61 | 62.61 |  | - | - | - | - | - |

## (Default Analysis Set) - 2028 No Development, PM

Data Errors and Warnings

| Severity | Area | Item | Description |
| :--- | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm D - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 No <br> Development, <br> RM | Locked <br> Development | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road <br> Direction | Arm <br> Order | Junction <br> Delay (s) | Junction <br> LoS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Swanbridge Grove / Sports \& Leisure Club <br> Development Site Proposed Access | OS-NS Stagger (UK <br> RL Stagger) | Two-way | A,B,C,D | 6.99 | $A$ |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Sports \& Leisure Club Development Site Proposed Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |
| D | D | Swanbridge Grove |  | Minor |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 6.90 |  | 0.00 |  | 2.20 | 119.00 | $\checkmark$ |  |
| C | 6.85 |  | 0.00 |  | 2.20 | 90 |  |  |

[^11]Minor Arm Geometry

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5 m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 9 | 11 |
| D | One lane plus flare |  |  |  | 8.70 | 3.30 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 19 | 27 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> A-D | Slope <br> for <br> B-A | Slope <br> for <br> B-D | Slope <br> for <br> C-A | Slope <br> for <br> C-B | Slope <br> for <br> C-D | Slope <br> for <br> D-B | Slope <br> for <br> D-C |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | A-D | 642.877 | - | - | - | 0.239 | 0.239 | 0.239 | - | 0.239 | - | - |
| $\mathbf{1}$ | B-AD | 556.578 | 0.098 | 0.247 | - | - | - | 0.155 | 0.353 | 0.155 | 0.098 | 0.247 |
| $\mathbf{1}$ | B-C | 722.444 | 0.107 | 0.270 | - | - | - | - | - | - | 0.107 | 0.270 |
| $\mathbf{1}$ | C-B | 628.400 | 0.234 | 0.234 | - | - | - | - | - | - | 0.234 | 0.234 |
| $\mathbf{1}$ | D-A | 685.852 | - | - | - | 0.255 | 0.101 | 0.255 | - | 0.101 | - | - |
| $\mathbf{1}$ | D-BC | 528.831 | 0.147 | 0.147 | 0.334 | 0.234 | 0.093 | 0.234 | - | 0.093 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Ory <br> Percentages | 2.00 |  |  |  |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 767.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 0.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 627.00 | 100.000 |
| D | ONE HOUR | $\checkmark$ | 5.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.000 | 0.000 | 763.000 | 4.000 |  |
|  | B | 0.000 | 0.000 | 0.000 | 0.000 |  |
|  | C | 623.000 | 0.000 | 0.000 | 4.000 |  |
|  | D | 1.000 | 0.000 | 4.000 | 0.000 |  |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.00 | 0.00 | 0.99 | 0.01 |  |
|  | B | 0.25 | 0.25 | 0.25 | 0.25 |  |
|  | C | 0.99 | 0.00 | 0.00 | 0.01 |  |
|  | D | 0.20 | 0.00 | 0.80 | 0.00 |  |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |
|  | A | 1.000 | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 | 1.000 |
|  | D | 1.000 | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C | D |  |
|  | A | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | B | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | C | 0.0 | 0.0 | 0.0 | 0.0 |  |
|  | D | 0.0 | 0.0 | 0.0 | 0.0 |  |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOs |
| :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | A |
| A-BCD | 0.01 | 4.00 | 0.02 | A |
| A-B | - | - | - | - |
| A-C | - | - | - | - |
| D-A | 0.00 | 7.10 | 0.00 | A |
| D-BC | 0.02 | 15.10 | 0.02 | C |
| C-ABD | 0.00 | 0.00 | 0.00 | A |
| C-D | - | - | - | - |
| C-A | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 425.67 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 6.79 | 6.76 | 0.00 | 906.17 | 0.008 | 0.01 | 4.002 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 570.64 | 570.64 | 0.00 | - | - | - | - | - |
| D-A | 0.75 | 0.75 | 0.00 | 564.51 | 0.001 | 0.00 | 6.384 | A |
| D-BC | 3.01 | 0.98 | 0.00 | 333.29 | 0.009 | 0.01 | 10.897 | B |
| C-ABD | 0.00 | 0.00 | 493.01 | 0.000 | 0.00 | 0.000 | A |  |
| C-D | 3.01 | 0.00 | - | - | - | - | - |  |
| C-A | 469.03 | 469.03 | 0.00 | - | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 383.94 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 9.34 | 9.33 | 0.00 | 953.49 | 0.010 | 0.01 | 3.811 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 680.17 | 680.17 | 0.00 | - | - | - | - | - |
| D-A | 0.90 | 0.90 | 0.00 | 540.82 | 0.002 | 0.00 | 6.666 | A |
| D-BC | 3.60 | 3.58 | 0.00 | 295.33 | 0.012 | 0.01 | 12.339 | B |
| C-ABD | 0.00 | 0.00 | 0.00 | 466.72 | 0.000 | 0.00 | 0.000 | A |
| C-D | 3.60 | 3.60 | 0.00 | - | - | - | - | - |
| C-A | 560.06 | 560.06 | 0.00 | - | - | - | - | - |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 324.13 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 13.76 | 13.74 | 0.00 | 1015.02 | 0.014 | 0.02 | 3.594 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 830.72 | 830.72 | 0.00 | - | - | - | - | - |
| D-A | 1.10 | 1.10 | 0.00 | 507.93 | 0.002 | 0.00 | 7.102 | A |
| D-BC | 4.40 | 0.38 | 0.00 | 242.85 | 0.018 | 0.02 | 15.093 | C |
| C-ABD | 0.00 | 4.40 | 0.00 | 430.38 | 0.000 | 0.00 | 0.000 | A |
| C-D | 4.40 | 0.00 | - | - | - | - | - |  |
| C-A | 685.94 |  | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 324.12 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 13.77 | 13.77 | 0.00 | 1015.03 | 0.014 | 0.02 | 3.597 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 830.71 | 830.71 | 1.10 | 0.00 | - | - | - | - |
| D-A | 1.10 | 4.40 | 0.00 | 507.91 | 0.002 | 0.00 | 7.102 | A |
| D-BC | 4.40 | 0.00 | 0.40 | 0.00 | 242.85 | 0.018 | 0.02 | 15.096 |
| C-ABD | 4.40 | 0.00 | 430.37 | 0.000 | 0.00 | 0.000 | A |  |
| C-D | 685.94 |  | - | - | - | - | - |  |
| C-A |  |  | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 383.93 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 9.35 | 9.37 | 0.00 | 953.50 | 0.010 | 0.01 | 3.815 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 680.16 | 680.16 | 0.00 | - | - | - | - | - |
| D-A | 0.90 | 0.90 | 0.00 | 540.80 | 0.002 | 0.00 | 6.669 | A |
| D-BC | 3.60 | 0.62 | 0.00 | 295.33 | 0.012 | 0.01 | 12.343 | B |
| C-ABD | 0.00 | 3.60 | 0.00 | 466.70 | 0.000 | 0.00 | 0.000 | A |
| C-D | 3.60 | 560.06 |  | - | - | - | - | - |
| C-A | 560.06 |  | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-ACD | 0.00 | 0.00 | 0.00 | 425.65 | 0.000 | 0.00 | 0.000 | A |
| A-BCD | 6.81 | 6.82 | 0.00 | 906.19 | 0.008 | 0.01 | 4.002 | A |
| A-B | 0.00 | 0.00 | 0.00 | - | - | - | - | - |
| A-C | 570.62 | 570.62 | 0.00 | - | - | - | - | - |
| D-A | 0.75 | 0.75 | 0.00 | 564.49 | 0.001 | 0.00 | 6.387 | A |
| D-BC | 3.01 | 3.02 | 0.00 | 333.28 | 0.009 | 0.01 | 10.900 | B |
| C-ABD | 0.00 | 0.00 | 492.99 | 0.000 | 0.00 | 0.000 | A |  |
| C-D | 3.01 | 3.01 | 0.00 | - | - | - | - | - |
| C-A | 469.03 | 469.03 |  | - | - | - | - | - |

## Junctions 8

## PICADY 8 - Priority Intersection Module

## Version: 8.0.4.487 [15039,24/03/2014]

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Filename: Jn6 - South Road - Highbridge Close.arc8
Path: P:IGBCFAITP\HB\Projects\5133321 - Sully Sport \& Social Club - TAYL3270104 - Analysis\Junction Modelling Report generation date: 25/06/2015 12:23:23
" (Default Analysis Set) - 2023 With Development, AM
" (Default Analysis Set) - 2023 With Development, PM
" (Default Analysis Set) - 2028 With Development, AM
" (Default Analysis Set) - 2028 With Development, PM
" (Default Analysis Set) - 2023 No Development, AM
" (Default Analysis Set) - 2023 No Development, PM
" (Default Analysis Set) - 2028 No Development, AM
" (Default Analysis Set) - 2028 No Development, PM

## Summary of junction performance

|  | AM |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Queue (PCU) | Delay (s) | RFC | LOS |
|  | A1-2023 With Development |  |  |  |
| Stream B-C | 0.02 | 8.66 | 0.02 | A |
| Stream B-A | 0.09 | 17.98 | 0.08 | C |
| Stream C-AB | 0.00 | 4.55 | 0.00 | A |
| Stream C-A | - | - | - | - |
| Stream A-B | - | - | - | - |
| Stream A-C | - | - | - | - |

[^12]> "D5 - 2023 With Development, AM " model duration: 07:45-09:15 "D6 - 2023 With Development, PM" model duration: 16:45-18:15 "D7-2028 With Development, AM" model duration: 07:45- 09:15 "D8-2028 With Development, PM" model duration: 16:45-18:15 "D9-2023 No Development, AM" model duration: 07:45-09:15 "D10-2023 No Development, PM" model duration: 16:45-18:15 "D11 - 2028 No Development, AM" model duration: 07:45-09:15 "D12-2028 No Development, PM" model duration: 16:45-18:15

File summary

| Title | (untitled) |
| :--- | :---: |
| Location |  |
| Site Number |  |
| Date | $09 / 10 / 2014$ |
| Version |  |
| Status | (new file) |
| Identifier |  |
| Client |  |
| Jobnumber |  |
| Enumerator | TAYL3270 |
| Description |  |

Analysis Options

| Vehicle Length <br> $(\mathbf{m})$ | Do Queue <br> Variations | Calculate Residual <br> Capacity | Residual Capacity Criteria <br> Type | RFC <br> Threshold | Average Delay Threshold <br> $(\mathbf{s})$ | Queue Threshold <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5.75 |  |  | N/A | 0.85 | 36.00 |  |

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 |

## (Default Analysis Set) - 2023 With Development, AM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(\mathbf{H H : m m})$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, <br> AM | 2023 With <br> Development | AM |  | ONE | HOUR | $07: 45$ | $09: 15$ | 90 | 15 |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LoS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Highbridge Close | T-Junction | Two-way | A,B,C | 14.08 | B |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Highbridge Close |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.80 |  | 0.00 |  | 2.20 | 73.00 | $\checkmark$ |  |

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) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Left) }(\mathrm{m}) \end{gathered}$ | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 4.80 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 34 | 28 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 534.915 | 0.094 | 0.238 | 0.150 | 0.340 |
| $\mathbf{1}$ | B-C | 656.365 | 0.097 | 0.245 | - | - |
| $\mathbf{1}$ | C-B | 616.238 | 0.230 | 0.230 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | PChicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 832.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 23.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 610.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 8.000 | 824.000 |
|  | B | 16.000 | 0.000 | 7.000 |
|  | C | 609.000 | 1.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.70 | 0.00 | 0.30 |
|  | C | 1.00 | 0.00 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.02 | 8.66 | 0.02 | A |
| B-A | 0.08 | 17.98 | 0.09 | C |
| C-AB | 0.00 | 4.55 | 0.00 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.27 | 5.23 | 0.00 | 498.72 | 0.011 | 0.01 | 7.294 | A |
| B-A | 12.05 | 11.89 | 0.00 | 318.08 | 0.038 | 0.04 | 11.751 | B |
| C-AB | 1.59 | 1.58 | 0.00 | 793.55 | 0.002 | 0.00 | 4.545 | A |
| C-A | 457.65 | 457.65 | 0.00 | - | - | - | - | - |
| A-B | 6.02 | 6.02 | 0.00 | - | - | - | - | - |
| A-C | 620.35 | 0.00 | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 6.29 | 6.28 | 0.00 | 467.45 | 0.013 | 0.01 | 7.806 | A |
| B-A | 14.38 | 14.32 | 0.00 | 276.01 | 0.052 | 0.05 | 13.753 | B |
| C-AB | 2.20 | 2.19 | 0.00 | 829.03 | 0.003 | 0.00 | 4.353 | A |
| C-A | 546.18 | 546.18 | 0.00 | - | - | - | - | - |
| A-B | 7.19 | 7.19 | 0.00 | - | - | - | - | - |
| A-C | 740.76 | 0.00 | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 7.71 | 7.69 | 0.00 | 423.64 | 0.018 | 0.02 | 8.654 | A |
| B-A | 17.62 | 17.49 | 0.00 | 217.82 | 0.081 | 0.09 | 17.958 | C |
| C-AB | 3.28 | 3.28 | 0.00 | 877.03 | 0.004 | 0.00 | 4.119 | A |
| C-A | 668.34 | 668.34 | 0.00 | - | - | - | - | - |
| A-B | 8.81 | 8.81 | 0.00 | - | - | - | - | - |
| A-C | 907.24 | 907.24 | 0.00 | - | - | - | - | - |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 7.71 | 7.71 | 0.00 | 423.48 | 0.018 | 0.02 | 8.658 | A |
| B-A | 17.62 | 17.61 | 0.00 | 217.84 | 0.081 | 0.09 | 17.979 | C |
| C-AB | 3.28 | 3.28 | 0.00 | 877.03 | 0.004 | 0.00 | 4.121 | A |
| C-A | 668.34 | 668.34 | 0.00 | - | - | - | - | - |
| A-B | 8.81 | 0.81 | 0.00 | - | - | - | - | - |
| A-C | 907.24 |  | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 6.29 | 6.31 | 0.00 | 467.17 | 0.013 | 0.01 | 7.811 | A |
| B-A | 14.38 | 14.51 | 0.00 | 276.06 | 0.052 | 0.06 | 13.769 | B |
| C-AB | 2.20 | 2.20 | 0.00 | 829.03 | 0.003 | 0.00 | 4.355 | A |
| C-A | 546.18 | 546.18 | 0.00 | - | - | - | - | - |
| A-B | 7.19 | 7.19 | 0.00 | - | - | - | - | - |
| A-C | 740.76 | 740.76 | 0.00 | - | - | - | - | - |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.27 | 5.28 | 0.00 | 498.43 | 0.011 | 0.01 | 7.299 | A |
| B-A | 12.05 | 12.11 | 0.00 | 318.13 | 0.038 | 0.04 | 11.765 | B |
| C-AB | 1.59 | 1.60 | 0.00 | 793.55 | 0.002 | 0.00 | 4.547 | A |
| C-A | 457.65 | 0.00 | - | - | - | - | - |  |
| A-B | 6.02 | 6.02 | 0.00 | - | - | - | - | - |
| A-C | 620.35 | 0.00 | - | - | - | - | - |  |

## (Default Analysis Set) - 2023 With Development, PM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, PM | Locked |  |  |  |  |  |  |  |  |
| Development With | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Highbridge Close | T-Junction | Two-way | A,B,C | 6.53 | A |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Highbridge Close |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{C}$ | 6.80 |  | 0.00 |  | 2.20 | 73.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 4.80 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 34 | 28 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 534.753 | 0.094 | 0.238 | 0.149 | 0.339 |
| $\mathbf{1}$ | B-C | 656.880 | 0.097 | 0.246 | - | - |
| $\mathbf{1}$ | C-B | 616.238 | 0.230 | 0.230 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 653.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 13.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 784.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 15.000 | 638.000 |
|  | B | 9.000 | 0.000 | 4.000 |
|  | C | 772.000 | 12.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.02 | 0.98 |
|  | B | 0.69 | 0.00 | 0.31 |
|  | C | 0.98 | 0.02 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.01 | 7.61 | 0.01 | A |
| B-A | 0.04 | 16.01 | 0.04 | C |
| C-AB | 0.05 | 4.14 | 0.08 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.01 | 2.99 | 0.00 | 535.02 | 0.006 | 0.01 | 6.765 | A |
| B-A | 6.78 | 6.69 | 0.00 | 329.61 | 0.021 | 0.02 | 11.146 | B |
| C-AB | 21.18 | 21.06 | 0.00 | 891.16 | 0.024 | 0.03 | 4.137 | A |
| C-A | 569.06 | 569.06 | 0.00 | - | - | - | - | - |
| A-B | 11.29 | 11.29 | 0.00 | - | - | - | - | - |
| A-C | 480.32 | 480.32 | 0.00 | - | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.60 | 3.59 | 0.00 | 510.94 | 0.007 | 0.01 | 7.094 | A |
| B-A | 8.09 | 8.06 | 0.00 | 289.79 | 0.028 | 0.03 | 12.776 | B |
| C-AB | 29.31 | 29.26 | 0.00 | 940.29 | 0.031 | 0.04 | 3.951 | A |
| C-A | 675.49 | 075.49 | 13.48 | - | - | - | - | - |
| A-B | 13.48 | 573.55 | 0.00 | - | - | - | - | - |
| A-C | 573.55 |  | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 4.40 | 4.40 | 0.00 | 477.41 | 0.009 | 0.01 | 7.609 | A |
| B-A | 9.91 | 9.85 | 0.00 | 234.72 | 0.042 | 0.04 | 16.005 | C |
| C-AB | 52.40 | 52.26 | 0.00 | 1050.58 | 0.050 | 0.08 | 3.605 | A |
| C-A | 810.80 | 810.80 | 0.00 | - | - | - | - | - |
| A-B | 16.52 | 16.52 | 0.00 | - | - | - | - | - |
| A-C | 702.45 | 0.00 | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 4.40 | 4.40 | 0.00 | 477.29 | 0.009 | 0.01 | 7.611 | A |
| B-A | 9.91 | 9.91 | 0.00 | 234.72 | 0.042 | 0.04 | 16.013 | C |
| C-AB | 52.45 | 0.00 | 1050.65 | 0.050 | 0.08 | 3.609 | A |  |
| C-A | 810.75 | 810.75 | 0.00 | - | - | - | - | - |
| A-B | 16.52 | 16.52 | 0.00 | - | - | - | - | - |
| A-C | 702.45 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.60 | 3.60 | 0.00 | 510.71 | 0.007 | 0.01 | 7.098 | A |
| B-A | 8.09 | 8.15 | 0.00 | 289.79 | 0.028 | 0.03 | 12.783 | B |
| C-AB | 29.35 | 29.49 | 0.00 | 940.38 | 0.031 | 0.04 | 3.954 | A |
| C-A | 675.45 | 075.45 | -00 | - | - | - | - |  |
| A-B | 13.48 | 13.48 | 0.00 | - | - | - | - | - |
| A-C | 573.55 | 0.00 | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.01 | 3.02 | 0.00 | 534.77 | 0.006 | 0.01 | 6.771 | A |
| B-A | 6.78 | 6.81 | 0.00 | 329.62 | 0.021 | 0.02 | 11.152 | B |
| C-AB | 21.26 | 21.31 | 0.00 | 891.22 | 0.024 | 0.03 | 4.138 | A |
| C-A | 568.98 | 0.00 | - | - | - | - | - |  |
| A-B | 11.29 | 11.29 | 0.00 | - | - | - | - | - |
| A-C | 480.32 | 0.00 | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 With Development, AM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(\mathbf{H H : m m})$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, <br> AM | 2028 With <br> Development | AM |  | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LoS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Highbridge Close | T-Junction | Two-way | A,B,C | 15.62 | C |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Highbridge Close |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{C}$ | 6.80 |  | 0.00 |  | 2.20 | 73.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 4.80 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 34 | 28 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 535.527 | 0.094 | 0.238 | 0.150 | 0.340 |
| $\mathbf{1}$ | B-C | 654.410 | 0.097 | 0.245 | - | - |
| $\mathbf{1}$ | C-B | 616.238 | 0.230 | 0.230 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 885.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 24.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 650.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 8.000 | 877.000 |
|  | B | 17.000 | 0.000 | 7.000 |
|  | C | 649.000 | 1.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.71 | 0.00 | 0.29 |
|  | C | 1.00 | 0.00 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.02 | 9.02 | 0.02 | A |
| B-A | 0.09 | 20.12 | 0.10 | C |
| C-AB | 0.00 | 4.48 | 0.00 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.27 | 5.23 | 0.00 | 487.04 | 0.011 | 0.01 | 7.471 | A |
| B-A | 12.80 | 12.63 | 0.00 | 304.44 | 0.042 | 0.04 | 12.332 | B |
| C-AB | 1.67 | 1.66 | 0.00 | 805.81 | 0.002 | 0.00 | 4.476 | A |
| C-A | 487.69 | 487.69 | 0.00 | - | - | - | - | - |
| A-B | 6.02 | 6.02 | 0.00 | - | - | - | - | - |
| A-C | 660.25 | 0.00 | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 6.29 | 6.28 | 0.00 | 453.73 | 0.014 | 0.01 | 8.045 | A |
| B-A | 15.28 | 15.21 | 0.00 | 259.61 | 0.059 | 0.06 | 14.724 | B |
| C-AB | 2.33 | 0.32 | 0.00 | 843.44 | 0.003 | 0.00 | 4.279 | A |
| C-A | 582.01 | 782.01 | 0.00 | - | - | - | - | - |
| A-B | 7.19 | 788.19 | 0.00 | - | - | - | - | - |
| A-C | 788.41 | 0.00 | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 7.71 | 7.69 | 0.00 | 406.80 | 0.019 | 0.02 | 9.020 | A |
| B-A | 18.72 | 18.55 | 0.00 | 197.59 | 0.095 | 0.10 | 20.090 | C |
| C-AB | 3.52 | 3.52 | 0.00 | 894.09 | 0.004 | 0.00 | 4.042 | A |
| C-A | 712.14 | 712.14 | 0.00 | - | - | - | - | - |
| A-B | 8.81 | 0.81 | 0.00 | - | - | - | - | - |
| A-C | 965.60 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 7.71 | 7.71 | 0.00 | 406.59 | 0.019 | 0.02 | 9.024 | A |
| B-A | 18.72 | 18.71 | 0.00 | 197.61 | 0.095 | 0.10 | 20.121 | C |
| C-AB | 3.52 | 3.52 | 0.00 | 894.09 | 0.004 | 0.00 | 4.042 | A |
| C-A | 712.14 | 712.14 | 0.00 | - | - | - | - | - |
| A-B | 8.81 | 0.81 | 0.00 | - | - | - | - | - |
| A-C | 965.60 |  |  | - | - | - | - | - |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 6.29 | 6.31 | 0.00 | 453.40 | 0.014 | 0.01 | 8.053 | A |
| B-A | 15.28 | 15.44 | 0.00 | 259.66 | 0.059 | 0.06 | 14.752 | B |
| C-AB | 2.33 | 2.33 | 0.00 | 843.45 | 0.003 | 0.00 | 4.279 | A |
| C-A | 582.01 | 582.01 | 7.19 | 0.00 | - | - | - | - |
| A-B | 7.19 | 788.41 | 0.00 | - | - | - | - | - |
| A-C | 788.41 |  | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.27 | 5.28 | 0.00 | 486.72 | 0.011 | 0.01 | 7.476 | A |
| B-A | 12.80 | 12.87 | 0.00 | 304.49 | 0.042 | 0.04 | 12.349 | B |
| C-AB | 1.67 | 1.68 | 0.00 | 805.82 | 0.002 | 0.00 | 4.478 | A |
| C-A | 487.68 | 487.68 | 0.00 | - | - | - | - | - |
| A-B | 6.02 | 6.02 | 0.00 | - | - | - | - | - |
| A-C | 660.25 | 0.00 | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 With Development, PM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, PM | Locked |  |  |  |  |  |  |  |  |
| Development With | RM |  | ONE <br> HOUR | $16: 45$ | $18: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Highbridge Close | T-Junction | Two-way | A,B,C | 6.49 | A |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Highbridge Close |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{C}$ | 6.80 |  | 0.00 |  | 2.20 | 73.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) ( m ) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 4.80 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 34 | 28 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 557.656 | 0.098 | 0.248 | 0.156 | 0.354 |
| $\mathbf{1}$ | B-C | 660.833 | 0.098 | 0.247 | - | - |
| $\mathbf{1}$ | C-B | 616.238 | 0.230 | 0.230 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 694.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 15.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 834.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 16.000 | 678.000 |
|  | B | 10.000 | 0.000 | 5.000 |
|  | C | 821.000 | 13.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.02 | 0.98 |
|  | B | 0.67 | 0.00 | 0.33 |
|  | C | 0.98 | 0.02 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.01 | 7.78 | 0.01 | A |
| B-A | 0.05 | 16.82 | 0.05 | C |
| C-AB | 0.06 | 4.08 | 0.09 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.76 | 3.74 | 0.00 | 530.47 | 0.007 | 0.01 | 6.834 | A |
| B-A | 7.53 | 7.44 | 0.00 | 330.17 | 0.023 | 0.02 | 11.152 | B |
| C-AB | 24.06 | 23.93 | 0.00 | 907.53 | 0.027 | 0.03 | 4.074 | A |
| C-A | 603.81 | 0.00 | - | - | - | - | - |  |
| A-B | 12.05 | 12.05 | 0.00 | - | - | - | - | - |
| A-C | 510.43 | 0.00 | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 4.49 | 4.49 | 0.00 | 504.64 | 0.009 | 0.01 | 7.196 | A |
| B-A | 8.99 | 8.95 | 0.00 | 286.04 | 0.031 | 0.03 | 12.990 | B |
| C-AB | 38.93 | 38.85 | 0.00 | 994.06 | 0.039 | 0.05 | 3.768 | A |
| C-A | 710.82 | 710.82 | 0.00 | - | - | - | - | - |
| A-B | 14.38 | 14.38 | 0.00 | - | - | - | - | - |
| A-C | 609.51 | 609.51 | 0.00 | - | - | - | - | - |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.51 | 5.49 | 0.00 | 468.58 | 0.012 | 0.01 | 7.773 | A |
| B-A | 11.01 | 10.94 | 0.00 | 224.98 | 0.049 | 0.05 | 16.813 | C |
| C-AB | 61.67 | 61.52 | 0.00 | 1077.16 | 0.057 | 0.09 | 3.544 | A |
| C-A | 856.58 | 056.58 | 0.00 | - | - | - | - | - |
| A-B | 17.62 | 17.62 | 0.00 | - | - | - | - | - |
| A-C | 746.49 | 0.00 | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.51 | 5.50 | 0.00 | 468.43 | 0.012 | 0.01 | 7.776 | A |
| B-A | 11.01 | 11.01 | 0.00 | 225.00 | 0.049 | 0.05 | 16.822 | C |
| C-AB | 61.73 | 61.73 | 0.00 | 1077.23 | 0.057 | 0.09 | 3.547 | A |
| C-A | 856.52 | 056.52 | 0.00 | - | - | - | - | - |
| A-B | 17.62 | 17.62 | 0.00 | - | - | - | - | - |
| A-C | 746.49 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 4.49 | 4.51 | 0.00 | 504.39 | 0.009 | 0.01 | 7.201 | A |
| B-A | 8.99 | 9.06 | 0.00 | 286.11 | 0.031 | 0.03 | 12.996 | B |
| C-AB | 39.00 | 39.15 | 0.00 | 994.19 | 0.039 | 0.06 | 3.772 | A |
| C-A | 710.74 | 710.74 | 0.00 | - | - | - | - | - |
| A-B | 14.38 | 14.38 | 0.00 | - | - | - | - | - |
| A-C | 609.51 | 0.00 | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.76 | 3.77 | 0.00 | 530.20 | 0.007 | 0.01 | 6.837 | A |
| B-A | 7.53 | 7.57 | 0.00 | 330.25 | 0.023 | 0.02 | 11.159 | B |
| C-AB | 24.16 | 24.25 | 0.00 | 907.62 | 0.027 | 0.03 | 4.075 | A |
| C-A | 603.72 | 603.72 | 0.00 | - | - | - | - | - |
| A-B | 12.05 | 12.05 | 510.43 | 0.00 | - | - | - | - |
| A-C | 510.43 |  | - | - | - | - | - | - |

## (Default Analysis Set) - 2023 No Development, AM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No Development, AM | 2023 No Development | AM |  | ONE <br> HOUR | 07:45 | 09:15 | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Highbridge Close | T-Junction | Two-way | A,B,C | 13.12 | B |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Highbridge Close |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{C}$ | 6.80 |  | 0.00 |  | 2.20 | 73.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) ( m ) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 4.80 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 34 | 28 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 534.915 | 0.094 | 0.238 | 0.150 | 0.340 |
| $\mathbf{1}$ | B-C | 656.365 | 0.097 | 0.245 | - | - |
| $\mathbf{1}$ | C-B | 616.238 | 0.230 | 0.230 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 777.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 23.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 590.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 8.000 | 769.000 |
|  | B | 16.000 | 0.000 | 7.000 |
|  | C | 589.000 | 1.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.70 | 0.00 | 0.30 |
|  | C | 1.00 | 0.00 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.02 | 8.35 | 0.02 | A |
| B-A | 0.07 | 16.52 | 0.08 | C |
| C-AB | 0.00 | 4.56 | 0.00 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.27 | 5.23 | 0.00 | 508.97 | 0.010 | 0.01 | 7.146 | A |
| B-A | 12.05 | 11.90 | 0.00 | 330.18 | 0.036 | 0.04 | 11.306 | B |
| C-AB | 1.54 | 1.53 | 0.00 | 791.18 | 0.002 | 0.00 | 4.558 | A |
| C-A | 442.64 | 442.64 | 0.00 | - | - | - | - | - |
| A-B | 6.02 | 6.02 | 0.00 | - | - | - | - | - |
| A-C | 578.94 | 0.00 | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 6.29 | 6.28 | 0.00 | 479.76 | 0.013 | 0.01 | 7.602 | A |
| B-A | 14.38 | 14.33 | 0.00 | 290.45 | 0.050 | 0.05 | 13.034 | B |
| C-AB | 2.12 | 2.11 | 0.00 | 826.05 | 0.003 | 0.00 | 4.368 | A |
| C-A | 528.28 | 528.28 | 0.00 | - | - | - | - | - |
| A-B | 7.19 | 7.19 | 0.00 | - | - | - | - | - |
| A-C | 691.32 | 0.01 .32 | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 7.71 | 7.69 | 0.00 | 438.94 | 0.018 | 0.02 | 8.347 | A |
| B-A | 17.62 | 17.50 | 0.00 | 235.51 | 0.075 | 0.08 | 16.505 | C |
| C-AB | 3.13 | 0.12 | 0.00 | 873.27 | 0.004 | 0.00 | 4.136 | A |
| C-A | 646.47 | 0.00 | - | - | - | - | - |  |
| A-B | 8.81 | 8.81 | 0.00 | - | - | - | - | - |
| A-C | 846.68 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 7.71 | 7.71 | 0.00 | 438.80 | 0.018 | 0.02 | 8.350 | A |
| B-A | 17.62 | 17.61 | 0.00 | 235.52 | 0.075 | 0.08 | 16.520 | C |
| C-AB | 3.13 | 0.13 | 0.00 | 873.27 | 0.004 | 0.00 | 4.136 | A |
| C-A | 646.47 | 646.47 | 0.81 | - | - | - | - | - |
| A-B | 8.81 | 846.68 | 0.00 | - | - | - | - | - |
| A-C |  | - | - | - | - | - |  |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 6.29 | 6.31 | 0.00 | 479.52 | 0.013 | 0.01 | 7.606 | A |
| B-A | 14.38 | 14.49 | 0.00 | 290.49 | 0.050 | 0.05 | 13.047 | B |
| C-AB | 2.12 | 2.12 | 0.00 | 826.05 | 0.003 | 0.00 | 4.368 | A |
| C-A | 528.28 | 528.28 | 0.00 | - | - | - | - | - |
| A-B | 7.19 | 7.19 | 0.00 | - | - | - | - | - |
| A-C | 691.32 | 0.00 | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.27 | 5.28 | 0.00 | 508.70 | 0.010 | 0.01 | 7.153 | A |
| B-A | 12.05 | 12.10 | 0.00 | 330.22 | 0.036 | 0.04 | 11.320 | B |
| C-AB | 1.55 | 1.55 | 0.00 | 791.18 | 0.002 | 0.00 | 4.558 | A |
| C-A | 442.64 | 442.64 | 0.00 | - | - | - | - | - |
| A-B | 6.02 | 0.00 | - | - | - | - | - |  |
| A-C | 578.94 | 578.94 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2023 No Development, PM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No Development, PM | 2023 No Development | PM |  | ONE <br> HOUR | 16:45 | 18:15 | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LoS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Highbridge Close | T-Junction | Two-way | A,B,C | 6.45 | A |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Highbridge Close |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{C}$ | 6.80 |  | 0.00 |  | 2.20 | 73.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 4.80 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 34 | 28 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 534.753 | 0.094 | 0.238 | 0.149 | 0.339 |
| $\mathbf{1}$ | B-C | 656.880 | 0.097 | 0.246 | - | - |
| $\mathbf{1}$ | C-B | 616.238 | 0.230 | 0.230 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 599.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 13.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 720.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 15.000 | 584.000 |
|  | B | 9.000 | 0.000 | 4.000 |
|  | C | 708.000 | 12.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.03 | 0.97 |
|  | B | 0.69 | 0.00 | 0.31 |
|  | C | 0.98 | 0.02 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.01 | 7.38 | 0.01 | A |
| B-A | 0.04 | 14.43 | 0.04 | B |
| C-AB | 0.05 | 4.24 | 0.07 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.01 | 2.99 | 0.00 | 545.10 | 0.006 | 0.01 | 6.640 | A |
| B-A | 6.78 | 6.70 | 0.00 | 346.47 | 0.020 | 0.02 | 10.593 | B |
| C-AB | 19.87 | 19.76 | 0.00 | 869.46 | 0.023 | 0.03 | 4.237 | A |
| C-A | 522.18 | 522.18 | 0.00 | - | - | - | - | - |
| A-B | 11.29 | 11.29 | 0.00 | - | - | - | - | - |
| A-C | 439.67 | 439.67 | 0.00 | - | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.60 | 3.59 | 0.00 | 523.03 | 0.007 | 0.01 | 6.929 | A |
| B-A | 8.09 | 8.06 | 0.00 | 309.92 | 0.026 | 0.03 | 11.926 | B |
| C-AB | 27.24 | 27.20 | 0.00 | 915.53 | 0.030 | 0.04 | 4.052 | A |
| C-A | 620.02 | 0.00 | - | - | - | - | - |  |
| A-B | 13.48 | 13.48 | 0.00 | - | - | - | - | - |
| A-C | 525.00 | 0.00 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 4.40 | 4.40 | 0.00 | 492.39 | 0.009 | 0.01 | 7.376 | A |
| B-A | 9.91 | 9.86 | 0.00 | 259.39 | 0.038 | 0.04 | 14.423 | B |
| C-AB | 46.98 | 46.86 | 0.00 | 1015.17 | 0.046 | 0.07 | 3.717 | A |
| C-A | 745.76 | 745.76 | 0.00 | - | - | - | - | - |
| A-B | 16.52 | 16.52 | 0.00 | - | - | - | - | - |
| A-C | 643.00 | 0.00 | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 4.40 | 4.40 | 0.00 | 492.29 | 0.009 | 0.01 | 7.377 | A |
| B-A | 9.91 | 9.91 | 0.00 | 259.38 | 0.038 | 0.04 | 14.429 | B |
| C-AB | 47.02 | 47.02 | 0.00 | 1015.24 | 0.046 | 0.07 | 3.717 | A |
| C-A | 745.72 | 745.72 | 0.00 | - | - | - | - | - |
| A-B | 16.52 | 16.52 | 0.00 | - | - | - | - | - |
| A-C | 643.00 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.60 | 3.60 | 0.00 | 522.85 | 0.007 | 0.01 | 6.932 | A |
| B-A | 8.09 | 8.14 | 0.00 | 309.93 | 0.026 | 0.03 | 11.930 | B |
| C-AB | 27.28 | 27.40 | 0.00 | 915.61 | 0.030 | 0.04 | 4.053 | A |
| C-A | 619.98 | 619.98 | 0.00 | - | - | - | - | - |
| A-B | 13.48 | 13.48 | 525.00 | 0.00 | - | - | - | - |
| A-C | 525.00 |  | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.01 | 3.02 | 0.00 | 544.87 | 0.006 | 0.01 | 6.645 | A |
| B-A | 6.78 | 6.80 | 0.00 | 346.48 | 0.020 | 0.02 | 10.600 | B |
| C-AB | 19.95 | 19.99 | 0.00 | 869.52 | 0.023 | 0.03 | 4.239 | A |
| C-A | 522.11 | 0.00 | - | - | - | - | - |  |
| A-B | 11.29 | 11.29 | 0.00 | - | - | - | - | - |
| A-C | 439.67 | 0.00 | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 No Development, AM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> (HH:mm) | Model Finish <br> Time <br> (HH:mm) | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Locked |  |  |  |  |  |  |  |  |  |
| Levelopment, <br> AM | 2028 No <br> Development | AM | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LoS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Highbridge Close | T-Junction | Two-way | A,B,C | 14.42 | B |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Highbridge Close |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{C}$ | 6.80 |  | 0.00 |  | 2.20 | 73.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 4.80 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 34 | 28 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 535.527 | 0.094 | 0.238 | 0.150 | 0.340 |
| $\mathbf{1}$ | B-C | 654.410 | 0.097 | 0.245 | - | - |
| $\mathbf{1}$ | C-B | 616.238 | 0.230 | 0.230 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 830.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 24.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 630.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 8.000 | 822.000 |
|  | B | 17.000 | 0.000 | 7.000 |
|  | C | 629.000 | 1.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.71 | 0.00 | 0.29 |
|  | C | 1.00 | 0.00 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.02 | 8.69 | 0.02 | A |
| B-A | 0.09 | 18.31 | 0.09 | C |
| C-AB | 0.00 | 4.49 | 0.00 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.27 | 5.23 | 0.00 | 497.27 | 0.011 | 0.01 | 7.316 | A |
| B-A | 12.80 | 12.63 | 0.00 | 316.55 | 0.040 | 0.04 | 11.839 | B |
| C-AB | 1.62 | 1.61 | 0.00 | 803.40 | 0.002 | 0.00 | 4.489 | A |
| C-A | 472.68 | 472.68 | 0.00 | - | - | - | - | - |
| A-B | 6.02 | 6.02 | 0.00 | - | - | - | - | - |
| A-C | 618.84 | 0.00 | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 6.29 | 6.28 | 0.00 | 466.04 | 0.014 | 0.01 | 7.830 | A |
| B-A | 15.28 | 15.22 | 0.00 | 274.07 | 0.056 | 0.06 | 13.904 | B |
| C-AB | 2.24 | 2.24 | 0.00 | 840.43 | 0.003 | 0.00 | 4.294 | A |
| C-A | 564.12 | 564.12 | 0.00 | - | - | - | - | - |
| A-B | 7.19 | 7.19 | 0.00 | - | - | - | - | - |
| A-C | 738.96 | 738.96 | 0.00 | - | - | - | - | - |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 7.71 | 7.69 | 0.00 | 422.20 | 0.018 | 0.02 | 8.685 | A |
| B-A | 18.72 | 18.58 | 0.00 | 215.30 | 0.087 | 0.09 | 18.287 | C |
| C-AB | 3.36 | 3.35 | 0.00 | 890.31 | 0.004 | 0.00 | 4.058 | A |
| C-A | 690.29 | 690.29 | 0.00 | - | - | - | - | - |
| A-B | 8.81 | 0.81 | 0.00 | - | - | - | - | - |
| A-C | 905.04 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 7.71 | 7.71 | 0.00 | 422.02 | 0.018 | 0.02 | 8.688 | A |
| B-A | 18.72 | 18.71 | 0.00 | 215.32 | 0.087 | 0.09 | 18.311 | C |
| C-AB | 3.36 | 0.36 | 0.00 | 890.31 | 0.004 | 0.00 | 4.060 | A |
| C-A | 690.29 | 090.29 | 0.81 | 0.00 | - | - | - | - |
| A-B | 8.81 | 905.04 | 0.00 | - | - | - | - | - |
| A-C | 905.04 |  | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 6.29 | 6.31 | 0.00 | 465.75 | 0.014 | 0.01 | 7.837 | A |
| B-A | 15.28 | 15.42 | 0.00 | 274.11 | 0.056 | 0.06 | 13.922 | B |
| C-AB | 2.24 | 2.25 | 0.00 | 840.43 | 0.003 | 0.00 | 4.294 | A |
| C-A | 564.11 | 564.11 | 0.00 | - | - | - | - | - |
| A-B | 7.19 | 738.19 | 0.00 | - | - | - | - | - |
| A-C | 738.96 | 0.00 | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.27 | 5.28 | 0.00 | 496.98 | 0.011 | 0.01 | 7.323 | A |
| B-A | 12.80 | 12.87 | 0.00 | 316.60 | 0.040 | 0.04 | 11.854 | B |
| C-AB | 1.62 | 1.63 | 0.00 | 803.40 | 0.002 | 0.00 | 4.491 | A |
| C-A | 472.67 | 472.67 | 0.00 | - | - | - | - | - |
| A-B | 6.02 | 0.00 | - | - | - | - | - |  |
| A-C | 618.84 | 618.84 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2028 No Development, PM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> (HH:mm) | Model Finish <br> Time <br> (HH:mm) | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Locked |  |  |  |  |  |  |  |  |  |
| Levelopment, <br> PM | 2028 No <br> Development | PM | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LoS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Highbridge Close | T-Junction | Two-way | A,B,C | 6.46 | A |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Highbridge Close |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{C}$ | 6.80 |  | 0.00 |  | 2.20 | 73.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 4.80 | 3.30 | 3.30 | 3.30 | $\checkmark$ | 1.00 | 34 | 28 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 557.656 | 0.098 | 0.248 | 0.156 | 0.354 |
| $\mathbf{1}$ | B-C | 660.833 | 0.098 | 0.247 | - | - |
| $\mathbf{1}$ | C-B | 616.238 | 0.230 | 0.230 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 640.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 15.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 770.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 16.000 | 624.000 |
|  | B | 10.000 | 0.000 | 5.000 |
|  | C | 757.000 | 13.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.03 | 0.98 |
|  | B | 0.67 | 0.00 | 0.33 |
|  | C | 0.98 | 0.02 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.01 | 7.53 | 0.01 | A |
| B-A | 0.04 | 15.02 | 0.05 | C |
| C-AB | 0.05 | 4.17 | 0.08 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.76 | 3.74 | 0.00 | 540.61 | 0.007 | 0.01 | 6.705 | A |
| B-A | 7.53 | 7.44 | 0.00 | 347.76 | 0.022 | 0.02 | 10.576 | B |
| C-AB | 22.60 | 22.47 | 0.00 | 886.15 | 0.026 | 0.03 | 4.168 | A |
| C-A | 557.09 | 557.09 | 0.00 | - | - | - | - | - |
| A-B | 12.05 | 12.05 | 0.00 | - | - | - | - | - |
| A-C | 469.78 | 469.78 | 0.00 | - | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 4.49 | 4.49 | 0.00 | 516.84 | 0.009 | 0.01 | 7.025 | A |
| B-A | 8.99 | 8.96 | 0.00 | 307.04 | 0.029 | 0.03 | 12.075 | B |
| C-AB | 31.21 | 31.16 | 0.00 | 934.59 | 0.033 | 0.04 | 3.984 | A |
| C-A | 661.00 | 661.00 | 0.00 | - | - | - | - | - |
| A-B | 14.38 | 0.00 | - | - | - | - | - |  |
| A-C | 560.96 | 560.96 | 0.00 | - | - | - | - | - |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.51 | 5.49 | 0.00 | 483.74 | 0.011 | 0.01 | 7.526 | A |
| B-A | 11.01 | 10.95 | 0.00 | 250.70 | 0.044 | 0.05 | 15.012 | C |
| C-AB | 55.34 | 55.18 | 0.00 | 1042.41 | 0.053 | 0.08 | 3.646 | A |
| C-A | 792.45 | 792.45 | 0.00 | - | - | - | - | - |
| A-B | 17.62 | 17.62 | 0.00 | - | - | - | - | - |
| A-C | 687.04 | 0.00 | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 5.51 | 5.50 | 0.00 | 483.62 | 0.011 | 0.01 | 7.528 | A |
| B-A | 11.01 | 11.01 | 0.00 | 250.72 | 0.044 | 0.05 | 15.017 | C |
| C-AB | 55.39 | 0.00 | 1042.49 | 0.053 | 0.08 | 3.646 | A |  |
| C-A | 792.40 | 792.40 | 0.00 | - | - | - | - | - |
| A-B | 17.62 | 17.62 | 0.00 | - | - | - | - | - |
| A-C | 687.04 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 4.49 | 4.51 | 0.00 | 516.63 | 0.009 | 0.01 | 7.031 | A |
| B-A | 8.99 | 9.05 | 0.00 | 307.09 | 0.029 | 0.03 | 12.082 | B |
| C-AB | 31.26 | 31.41 | 0.00 | 934.69 | 0.033 | 0.05 | 3.986 | A |
| C-A | 660.95 | 060.95 | 14.38 | - | - | - | - | - |
| A-B | 14.38 | 560.96 | 0.00 | - | - | - | - | - |
| A-C | 560.96 |  | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.76 | 3.77 | 0.00 | 540.38 | 0.007 | 0.01 | 6.708 | A |
| B-A | 7.53 | 7.56 | 0.00 | 347.83 | 0.022 | 0.02 | 10.582 | B |
| C-AB | 22.69 | 22.74 | 0.00 | 886.22 | 0.026 | 0.03 | 4.169 | A |
| C-A | 557.00 | 557.00 | 0.00 | - | - | - | - | - |
| A-B | 12.05 | 12.05 | 0.00 | - | - | - | - | - |
| A-C | 469.78 | 0.00 | - | - | - | - | - |  |

## Junctions 8

## PICADY 8 - Priority Intersection Module

## Version: 8.0.4.487 [15039,24/03/2014]

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Filename: Jn5 - South Road - Existing Site Access.arc8
Path: P:IGBCFAITPIHB\Projects\5133321 - Sully Sport \& Social Club - TAYL3270104 - Analysis\Junction Modelling Report generation date: 25/06/2015 11:46:37
" (Default Analysis Set) - 2023 With Development, AM
" (Default Analysis Set) - 2023 With Development, PM
" (Default Analysis Set) - 2028 With Development, AM
" (Default Analysis Set) - 2028 With Development, PM
" (Default Analysis Set) - 2023 No Development, AM
" (Default Analysis Set) - 2023 No Development, PM
" (Default Analysis Set) - 2028 No Development, AM
" (Default Analysis Set) - 2028 No Development, PM

## Summary of junction performance

|  | AM |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Queue (PCU) | Delay (s) | RFC | LOS |
|  | A1 - 2023 | With Development |  |  |
| Stream B-C | 0.10 | 8.05 | 0.09 | A |
| Stream B-A | 0.25 | 19.07 | 0.20 | C |
| Stream C-AB | 0.20 | 4.14 | 0.10 | A |
| Stream C-A | - | - | - | - |
| Stream A-B | - | - | - | - |
| Stream A-C | - | - | - | - |

[^13]> "D5 - 2023 With Development, AM " model duration: 07:45-09:15 "D6 - 2023 With Development, PM" model duration: 16:45-18:15 "D7-2028 With Development, AM" model duration: 07:45- 09:15 "D8-2028 With Development, PM" model duration: 16:45-18:15 "D9-2023 No Development, AM" model duration: 07:45-09:15 "D10-2023 No Development, PM" model duration: 16:45-18:15 "D11 - 2028 No Development, AM" model duration: 07:45-09:15 "D12-2028 No Development, PM" model duration: 16:45-18:15

## File summary

| Title | (untitled) |
| :--- | :---: |
| Location |  |
| Site Number |  |
| Date | $09 / 10 / 2014$ |
| Version |  |
| Status | (new file) |
| Identifier |  |
| Client |  |
| Jobnumber |  |
| Enumerator | TAYL3270 |
| Description |  |

## Analysis Options

| Vehicle Length <br> $(\mathbf{m})$ | Do Queue <br> Variations | Calculate Residual <br> Capacity | Residual Capacity Criteria <br> Type | RFC <br> Threshold | Average Delay Threshold <br> (s) | Queue Threshold <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5.75 |  |  | N/A | 0.85 | 36.00 |  |

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 |

## (Default Analysis Set) - 2023 With Development, AM

Data Errors and Warnings

| Severity | Area | Item | Description |
| :--- | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm B - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, <br> AM | 2023 With <br> Development | AM |  | ONE <br> HOUR | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Existing Site Access | T-Junction | Two-way | A,B,C | 9.18 | A |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Existing Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 35.80 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) ( m ) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 8.60 | 4.10 | 4.10 | 4.10 | 4.10 | $\checkmark$ | 1.00 | 9 | 11 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 543.006 | 0.096 | 0.243 | 0.153 | 0.347 |
| $\mathbf{1}$ | B-C | 703.153 | 0.105 | 0.265 | - | - |
| $\mathbf{1}$ | C-B | 594.695 | 0.224 | 0.224 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 625.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 83.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 810.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 9.000 | 616.000 |
|  | B | 43.000 | 0.000 | 40.000 |
|  | C | 789.000 | 21.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.52 | 0.00 | 0.48 |
|  | C | 0.97 | 0.03 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.09 | 8.05 | 0.10 | A |
| B-A | 0.20 | 19.07 | 0.25 | C |
| C-AB | 0.10 | 4.14 | 0.20 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 30.11 | 29.89 | 0.00 | 565.12 | 0.053 | 0.06 | 6.722 | A |
| B-A | 32.37 | 31.95 | 0.00 | 333.35 | 0.097 | 0.11 | 11.927 | B |
| C-AB | 42.37 | 42.09 | 0.00 | 911.32 | 0.046 | 0.07 | 4.140 | A |
| C-A | 567.44 | 0.00 | - | - | - | - | - |  |
| A-B | 6.78 | 6.78 | 0.00 | - | - | - | - | - |
| A-C | 463.76 | 463.76 | 0.00 | - | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 35.96 | 35.90 | 0.00 | 535.51 | 0.067 | 0.07 | 7.205 | A |
| B-A | 38.66 | 38.48 | 0.00 | 292.59 | 0.132 | 0.15 | 14.156 | B |
| C-AB | 60.96 | 60.82 | 0.00 | 973.60 | 0.063 | 0.10 | 3.944 | A |
| C-A | 667.22 | 667.22 | 0.00 | - | - | - | - | - |
| A-B | 8.09 | 8.09 | 0.00 | - | - | - | - | - |
| A-C | 553.77 | 0.00 | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 44.04 | 43.94 | 0.00 | 491.81 | 0.090 | 0.10 | 8.036 | A |
| B-A | 47.34 | 46.96 | 0.00 | 236.15 | 0.200 | 0.24 | 18.990 | C |
| C-AB | 103.84 | 103.47 | 0.00 | 1077.96 | 0.096 | 0.20 | 3.694 | A |
| C-A | 787.99 | 787.99 | 0.00 | - | - | - | - | - |
| A-B | 9.91 | 9.91 | 0.00 | - | - | - | - | - |
| A-C | 678.23 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 44.04 | 44.04 | 0.00 | 490.98 | 0.090 | 0.10 | 8.054 | A |
| B-A | 47.34 | 47.33 | 0.00 | 236.12 | 0.201 | 0.25 | 19.065 | C |
| C-AB | 104.02 | 104.02 | 0.00 | 1078.17 | 0.096 | 0.20 | 3.697 | A |
| C-A | 787.80 | 787.80 | 0.00 | - | - | - | - | - |
| A-B | 9.91 | 9.91 | 078.23 | 0.00 | - | - | - | - |
| A-C | 678.23 |  | - | - | - | - | - | - |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 35.96 | 36.06 | 0.00 | 534.19 | 0.067 | 0.07 | 7.230 | A |
| B-A | 38.66 | 39.03 | 0.00 | 292.60 | 0.132 | 0.15 | 14.219 | B |
| C-AB | 61.13 | 61.50 | 0.00 | 973.89 | 0.063 | 0.11 | 3.949 | A |
| C-A | 667.04 | 0.00 | - | - | - | - | - |  |
| A-B | 8.09 | 0.09 | 0.00 | - | - | - | - | - |
| A-C | 553.77 | 0.00 | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 30.11 | 30.18 | 0.00 | 563.81 | 0.053 | 0.06 | 6.748 | A |
| B-A | 32.37 | 32.56 | 0.00 | 333.38 | 0.097 | 0.11 | 11.973 | B |
| C-AB | 42.59 | 42.73 | 0.00 | 911.52 | 0.047 | 0.07 | 4.144 | A |
| C-A | 567.22 | 567.22 | 0.00 | - | - | - | - | - |
| A-B | 6.78 | 0.78 | 463.76 | 0.00 | - | - | - | - |
| A-C | 463.76 |  | - | - | - |  |  |  |

## (Default Analysis Set) - 2023 With Development, PM

Data Errors and Warnings

| Severity | Area | Item | Description |
| :--- | :---: | :---: | :---: |
| Warning | Minor arm flare | Arm B - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, PM | Locked |  |  |  |  |  |  |  |  |
| Development With | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |  |
| HOUR | 15 |  |  |  |  |  |  |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Existing Site Access | T-Junction | Two-way | A,B,C | 7.46 | A |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Existing Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway ( $\mathbf{m}$ ) | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn (m) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 35.80 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10 m (m) | Width at 15m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 8.60 | 4.10 | 4.10 | 4.10 | 4.10 | $\checkmark$ | 1.00 | 9 | 11 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 542.384 | 0.096 | 0.243 | 0.153 | 0.347 |
| $\mathbf{1}$ | B-C | 707.191 | 0.105 | 0.266 | - | - |
| $\mathbf{1}$ | C-B | 594.695 | 0.224 | 0.224 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

## Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Pactor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 780.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 47.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 664.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 50.000 | 730.000 |
|  | B | 24.000 | 0.000 | 23.000 |
|  | C | 630.000 | 34.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.06 | 0.94 |
|  | B | 0.51 | 0.00 | 0.49 |
|  | C | 0.95 | 0.05 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.05 | 8.08 | 0.06 | A |
| B-A | 0.12 | 18.32 | 0.13 | C |
| C-AB | 0.15 | 4.80 | 0.41 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 17.32 | 17.19 | 0.00 | 549.05 | 0.032 | 0.03 | 6.766 | A |
| B-A | 18.07 | 17.84 | 0.00 | 324.13 | 0.056 | 0.06 | 11.745 | B |
| C-AB | 59.71 | 59.19 | 0.00 | 810.69 | 0.074 | 0.13 | 4.789 | A |
| C-A | 440.18 | 440.18 | 0.00 | - | - | - | - | - |
| A-B | 37.64 | 37.64 | 0.00 | - | - | - | - | - |
| A-C | 549.58 | 0.00 | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 20.68 | 20.64 | 0.00 | 516.85 | 0.040 | 0.04 | 7.254 | A |
| B-A | 21.58 | 21.48 | 0.00 | 281.68 | 0.077 | 0.08 | 13.831 | B |
| C-AB | 85.01 | 84.72 | 0.00 | 857.30 | 0.099 | 0.21 | 4.663 | A |
| C-A | 511.91 | 511.91 | 0.00 | - | - | - | - | - |
| A-B | 44.95 | 0.00 | - | - | - | - | - |  |
| A-C | 656.26 | 656.26 | 0.00 | - | - | - | - | - |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 25.32 | 25.26 | 0.00 | 471.53 | 0.054 | 0.06 | 8.066 | A |
| B-A | 26.42 | 26.23 | 0.00 | 223.02 | 0.118 | 0.13 | 18.275 | C |
| C-AB | 139.02 | 138.24 | 0.00 | 934.00 | 0.149 | 0.40 | 4.531 | A |
| C-A | 592.06 | 592.06 | 0.00 | - | - | - | - | - |
| A-B | 55.05 | 0.00 | - | - | - | - | - |  |
| A-C | 803.74 | 803.74 | 0.00 | - | - | - | - | - |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 25.32 | 25.32 | 0.00 | 470.93 | 0.054 | 0.06 | 8.078 | A |
| B-A | 26.42 | 26.42 | 0.00 | 222.92 | 0.119 | 0.13 | 18.319 | C |
| C-AB | 139.43 | 139.41 | 0.00 | 934.47 | 0.149 | 0.41 | 4.537 | A |
| C-A | 591.65 | 591.65 | 0.00 | - | - | - | - | - |
| A-B | 55.05 | 0.00 | - | - | - | - | - |  |
| A-C | 803.74 | 803.74 | 0.00 | - | - | - | - | - |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 20.68 | 20.73 | 0.00 | 515.80 | 0.040 | 0.04 | 7.271 | A |
| B-A | 21.58 | 21.77 | 0.00 | 281.57 | 0.077 | 0.08 | 13.866 | B |
| C-AB | 85.42 | 86.19 | 0.00 | 857.92 | 0.100 | 0.21 | 4.673 | A |
| C-A | 511.51 | 0.00 | - | - | - | - | - |  |
| A-B | 44.95 | 44.95 | 0.00 | - | - | - | - | - |
| A-C | 656.26 | 0.00 | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 17.32 | 17.35 | 0.00 | 547.97 | 0.032 | 0.03 | 6.784 | A |
| B-A | 18.07 | 18.17 | 0.00 | 324.05 | 0.056 | 0.06 | 11.772 | B |
| C-AB | 60.13 | 60.44 | 0.00 | 811.07 | 0.074 | 0.14 | 4.802 | A |
| C-A | 439.77 | 439.77 | 0.00 | - | - | - | - | - |
| A-B | 37.64 | 0.00 | - | - | - | - | - |  |
| A-C | 549.58 | 549.58 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2028 With Development, AM

Data Errors and Warnings

| Severity | Area | Item | Description |
| :--- | :---: | :---: | :---: |
| Warning | Minor arm flare | Arm B - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, <br> AM | 2028 With <br> Development | AM |  | ONE <br> HOUR | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Existing Site Access | T-Junction | Two-way | A,B,C | 9.48 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Existing Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 35.80 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Left) (m) } \end{gathered}$ | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 8.60 | 4.10 | 4.10 | 4.10 | 4.10 | $\checkmark$ | 1.00 | 9 | 11 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 543.006 | 0.096 | 0.243 | 0.153 | 0.347 |
| $\mathbf{1}$ | B-C | 703.153 | 0.105 | 0.265 | - | - |
| $\mathbf{1}$ | C-B | 594.695 | 0.224 | 0.224 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 666.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 83.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 864.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 9.000 | 657.000 |
|  | B | 43.000 | 0.000 | 40.000 |
|  | C | 842.000 | 22.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.52 | 0.00 | 0.48 |
|  | C | 0.97 | 0.03 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | 1.000 | 1.000 |
|  | B | C |  |  |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.09 | 8.33 | 0.10 | A |
| B-A | 0.22 | 21.36 | 0.28 | C |
| C-AB | 0.11 | 4.07 | 0.24 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 30.11 | 29.89 | 0.00 | 556.50 | 0.054 | 0.06 | 6.832 | A |
| B-A | 32.37 | 31.93 | 0.00 | 319.49 | 0.101 | 0.11 | 12.500 | B |
| C-AB | 47.29 | 46.98 | 0.00 | 933.10 | 0.051 | 0.08 | 4.062 | A |
| C-A | 603.17 | 603.17 | 0.00 | - | - | - | - | - |
| A-B | 6.78 | 0.78 | 494.62 | 0.00 | - | - | - | - |
| A-C | 494.62 |  | - | - | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 35.96 | 35.89 | 0.00 | 524.75 | 0.069 | 0.07 | 7.364 | A |
| B-A | 38.66 | 38.46 | 0.00 | 276.03 | 0.140 | 0.16 | 15.140 | C |
| C-AB | 68.77 | 68.61 | 0.00 | 998.94 | 0.069 | 0.12 | 3.871 | A |
| C-A | 707.95 | 0.00 | - | - | - | - | - |  |
| A-B | 8.09 | 8.09 | 0.00 | - | - | - | - | - |
| A-C | 590.63 | 0.00 | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 44.04 | 43.93 | 0.00 | 476.97 | 0.092 | 0.10 | 8.311 | A |
| B-A | 47.34 | 46.89 | 0.00 | 215.85 | 0.219 | 0.27 | 21.248 | C |
| C-AB | 120.37 | 119.90 | 0.00 | 1111.09 | 0.108 | 0.24 | 3.632 | A |
| C-A | 830.91 | 830.91 | 0.00 | - | - | - | - | - |
| A-B | 9.91 | 9.91 | 0.00 | - | - | - | - | - |
| A-C | 723.37 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 44.04 | 44.04 | 0.00 | 475.94 | 0.093 | 0.10 | 8.335 | A |
| B-A | 47.34 | 47.33 | 0.00 | 215.82 | 0.219 | 0.28 | 21.361 | C |
| C-AB | 120.61 | 120.61 | 0.00 | 1111.36 | 0.109 | 0.24 | 3.638 | A |
| C-A | 830.67 | 830.67 | 0.00 | - | - | - | - | - |
| A-B | 9.91 | 9.91 | 0.00 | - | - | - | - | - |
| A-C | 723.37 | 0.00 | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 35.96 | 36.07 | 0.00 | 523.16 | 0.069 | 0.07 | 7.391 | A |
| B-A | 38.66 | 39.10 | 0.00 | 276.04 | 0.140 | 0.17 | 15.223 | C |
| C-AB | 68.99 | 09.46 | 0.00 | 999.30 | 0.069 | 0.12 | 3.876 | A |
| C-A | 707.73 | 0.00 | - | - | - | - | - |  |
| A-B | 8.09 | 8.09 | 0.00 | - | - | - | - | - |
| A-C | 590.63 | 0.00 | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 30.11 | 30.18 | 0.00 | 555.05 | 0.054 | 0.06 | 6.858 | A |
| B-A | 32.37 | 32.58 | 0.00 | 319.52 | 0.101 | 0.11 | 12.556 | B |
| C-AB | 47.55 | 47.72 | 0.00 | 933.33 | 0.051 | 0.08 | 4.067 | A |
| C-A | 602.91 | 602.91 | 0.00 | - | - | - | - | - |
| A-B | 6.78 | 6.78 | 0.00 | - | - | - | - | - |
| A-C | 494.62 | 0.00 | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 With Development, PM

## Data Errors and Warnings

| Severity | Area | Item | Description |
| :---: | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm B - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, PM | 2028 With <br> Development | PM |  | ONE <br> HOUR | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Existing Site Access | T-Junction | Two-way | A,B,C | 7.59 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Existing Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCC $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 35.80 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Left) (m) } \end{gathered}$ | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 8.60 | 4.10 | 4.10 | 4.10 | 4.10 | $\checkmark$ | 1.00 | 9 | 11 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 541.494 | 0.096 | 0.242 | 0.152 | 0.346 |
| $\mathbf{1}$ | B-C | 712.970 | 0.106 | 0.268 | - | - |
| $\mathbf{1}$ | C-B | 594.695 | 0.224 | 0.224 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 830.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 48.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 706.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 50.000 | 780.000 |
|  | B | 24.000 | 0.000 | 24.000 |
|  | C | 671.000 | 35.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.06 | 0.94 |
|  | B | 0.50 | 0.00 | 0.50 |
|  | C | 0.95 | 0.05 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | 1.000 | 1.000 |
|  | B | C |  |  |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.06 | 8.33 | 0.06 | A |
| B-A | 0.13 | 20.51 | 0.15 | C |
| C-AB | 0.16 | 4.74 | 0.48 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 18.07 | 17.93 | 0.00 | 543.20 | 0.033 | 0.03 | 6.851 | A |
| B-A | 18.07 | 17.82 | 0.00 | 309.52 | 0.058 | 0.06 | 12.332 | B |
| C-AB | 65.08 | 64.50 | 0.00 | 826.28 | 0.079 | 0.14 | 4.725 | A |
| C-A | 466.43 | 466.43 | 0.00 | - | - | - | - | - |
| A-B | 37.64 | 37.64 | 587.22 | 0.00 | - | - | - | - |
| A-C | 587.22 |  | - | - | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 21.58 | 21.54 | 0.00 | 508.50 | 0.042 | 0.04 | 7.392 | A |
| B-A | 21.58 | 21.47 | 0.00 | 264.39 | 0.082 | 0.09 | 14.813 | B |
| C-AB | 93.75 | 93.40 | 0.00 | 876.12 | 0.107 | 0.23 | 4.603 | A |
| C-A | 540.93 | 0.00 | - | - | - | - | - |  |
| A-B | 44.95 | 44.95 | 0.00 | - | - | - | - | - |
| A-C | 701.20 | 701.20 | 0.00 | - | - | - | - | - |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 26.42 | 26.36 | 0.00 | 459.29 | 0.058 | 0.06 | 8.314 | A |
| B-A | 26.42 | 26.19 | 0.00 | 202.03 | 0.131 | 0.15 | 20.448 | C |
| C-AB | 157.13 | 156.15 | 0.00 | 959.42 | 0.164 | 0.47 | 4.490 | A |
| C-A | 620.20 | 620.20 | 0.00 | - | - | - | - | - |
| A-B | 55.05 | 55.05 | 0.00 | - | - | - | - | - |
| A-C | 858.80 | 0.00 | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 26.42 | 26.42 | 0.00 | 458.55 | 0.058 | 0.06 | 8.330 | A |
| B-A | 26.42 | 26.42 | 0.00 | 201.90 | 0.131 | 0.15 | 20.513 | C |
| C-AB | 157.66 | 157.64 | 0.00 | 960.01 | 0.164 | 0.48 | 4.498 | A |
| C-A | 619.66 | 619.66 | 0.00 | - | - | - | - | - |
| A-B | 55.05 | 55.05 | 0.00 | - | - | - | - | - |
| A-C | 858.80 | 058.80 |  | - | - | - | - | - |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 21.58 | 21.64 | 0.00 | 507.25 | 0.043 | 0.04 | 7.416 | A |
| B-A | 21.58 | 21.81 | 0.00 | 264.25 | 0.082 | 0.09 | 14.861 | B |
| C-AB | 94.25 | 95.21 | 0.00 | 876.89 | 0.107 | 0.24 | 4.616 | A |
| C-A | 540.43 | 0.00 | - | - | - | - | - |  |
| A-B | 44.95 | 44.95 | 0.00 | - | - | - | - | - |
| A-C | 701.20 | 701.20 | 0.00 | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 18.07 | 18.11 | 0.00 | 542.00 | 0.033 | 0.03 | 6.874 | A |
| B-A | 18.07 | 18.18 | 0.00 | 309.43 | 0.058 | 0.06 | 12.364 | B |
| C-AB | 65.57 | 65.93 | 0.00 | 826.73 | 0.079 | 0.15 | 4.738 | A |
| C-A | 465.95 | 465.95 | 0.00 | - | - | - | - | - |
| A-B | 37.64 | 37.64 | 0.00 | - | - | - | - | - |
| A-C | 587.22 | 0.00 | - | - | - | - | - |  |

## (Default Analysis Set) - 2023 No Development, AM

## Data Errors and Warnings

| Severity | Area | Item | Description |
| :---: | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm B - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No <br> Development, <br> AM | Locked |  |  |  |  |  |  |  |  |
| Development | AM |  | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Existing Site Access | T-Junction | Two-way | A,B,C | 5.49 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Existing Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCC $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 35.80 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 8.60 | 4.10 | 4.10 | 4.10 | 4.10 | $\checkmark$ | 1.00 | 9 | 11 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 515.218 | 0.091 | 0.230 | 0.145 | 0.329 |
| $\mathbf{1}$ | B-C | 711.706 | 0.106 | 0.268 | - | - |
| $\mathbf{1}$ | C-B | 594.695 | 0.224 | 0.224 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 605.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 5.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 780.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 7.000 | 598.000 |
|  | B | 2.000 | 0.000 | 3.000 |
|  | C | 774.000 | 6.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.40 | 0.00 | 0.60 |
|  | C | 0.99 | 0.01 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | 1.000 | 1.000 |
|  | B | C |  |  |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.01 | 6.79 | 0.01 | A |
| B-A | 0.01 | 15.33 | 0.01 | C |
| C-AB | 0.02 | 4.12 | 0.03 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 2.26 | 2.24 | 0.00 | 589.83 | 0.004 | 0.00 | 6.126 | A |
| B-A | 1.51 | 1.49 | 0.00 | 324.99 | 0.005 | 0.00 | 11.128 | B |
| C-AB | 10.74 | 10.68 | 0.00 | 884.87 | 0.012 | 0.01 | 4.118 | A |
| C-A | 576.49 | 576.49 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 0.00 | - | - | - | - | - |  |
| A-C | 450.21 | 450.21 | 0.00 | - | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 2.70 | 2.69 | 0.00 | 566.10 | 0.005 | 0.00 | 6.389 | A |
| B-A | 1.80 | 1.79 | 0.00 | 288.06 | 0.006 | 0.01 | 12.575 | B |
| C-AB | 14.84 | 14.82 | 0.00 | 936.03 | 0.016 | 0.02 | 3.907 | A |
| C-A | 686.36 | 686.36 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 0.29 | 0.00 | - | - | - | - | - |
| A-C | 537.59 | 537.59 | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.30 | 3.30 | 0.00 | 533.21 | 0.006 | 0.01 | 6.792 | A |
| B-A | 2.20 | 2.19 | 0.00 | 237.00 | 0.009 | 0.01 | 15.331 | C |
| C-AB | 21.95 | 21.92 | 0.00 | 1002.15 | 0.022 | 0.03 | 3.671 | A |
| C-A | 836.84 | 836.84 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 658.41 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.30 | 3.30 | 0.00 | 533.20 | 0.006 | 0.01 | 6.792 | A |
| B-A | 2.20 | 2.20 | 0.00 | 237.00 | 0.009 | 0.01 | 15.331 | C |
| C-AB | 21.97 | 21.97 | 0.00 | 1002.17 | 0.022 | 0.03 | 3.671 | A |
| C-A | 836.83 | 036.83 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 658.41 | 0.00 | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 2.70 | 2.70 | 0.00 | 566.09 | 0.005 | 0.00 | 6.389 | A |
| B-A | 1.80 | 1.81 | 0.00 | 288.05 | 0.006 | 0.01 | 12.576 | B |
| C-AB | 14.86 | 14.89 | 0.00 | 936.05 | 0.016 | 0.02 | 3.909 | A |
| C-A | 686.35 | 086.35 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 0.00 | - | - | - | - | - |  |
| A-C | 537.59 | 0.00 | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 2.26 | 2.26 | 0.00 | 589.82 | 0.004 | 0.00 | 6.128 | A |
| B-A | 1.51 | 1.51 | 0.00 | 324.98 | 0.005 | 0.00 | 11.131 | B |
| C-AB | 10.78 | 10.79 | 0.00 | 884.90 | 0.012 | 0.01 | 4.119 | A |
| C-A | 576.45 | 576.45 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 450.21 | 450.21 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2023 No Development, PM

## Data Errors and Warnings

| Severity | Area | Item | Description |
| :---: | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm B - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Locked |  |  |  |  |  |  |  |  |  |
| Levelopment, <br> RM | 2023 No <br> Development | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Existing Site Access | T-Junction | Two-way | A,B,C | 5.79 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Existing Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCC $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 35.80 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 8.60 | 4.10 | 4.10 | 4.10 | 4.10 | $\checkmark$ | 1.00 | 9 | 11 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 515.218 | 0.091 | 0.230 | 0.145 | 0.329 |
| $\mathbf{1}$ | B-C | 711.706 | 0.106 | 0.268 | - | - |
| $\mathbf{1}$ | C-B | 594.695 | 0.224 | 0.224 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 716.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 11.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 609.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 7.000 | 709.000 |
|  | B | 2.000 | 0.000 | 9.000 |
|  | C | 598.000 | 11.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.18 | 0.00 | 0.82 |
|  | C | 0.98 | 0.02 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | 1.000 | 1.000 |
|  | B | C |  |  |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.02 | 7.34 | 0.02 | A |
| B-A | 0.01 | 15.46 | 0.01 | C |
| C-AB | 0.04 | 4.66 | 0.06 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 6.78 | 6.73 | 0.00 | 567.46 | 0.012 | 0.01 | 6.419 | A |
| B-A | 1.51 | 1.49 | 0.00 | 323.70 | 0.005 | 0.00 | 11.172 | B |
| C-AB | 17.25 | 17.14 | 0.00 | 789.85 | 0.022 | 0.03 | 4.659 | A |
| C-A | 441.24 | 441.24 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 533.77 | 0.00 | - | - | - | - |
| A-C | 533.77 |  | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 8.09 | 8.08 | 0.00 | 539.39 | 0.015 | 0.02 | 6.774 | A |
| B-A | 1.80 | 1.79 | 0.00 | 286.51 | 0.006 | 0.01 | 12.643 | B |
| C-AB | 23.66 | 23.62 | 0.00 | 827.73 | 0.029 | 0.04 | 4.476 | A |
| C-A | 523.82 | 0.00 | - | - | - | - | - |  |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 637.38 | 0.00 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 9.91 | 9.89 | 0.00 | 500.53 | 0.020 | 0.02 | 7.336 | A |
| B-A | 2.20 | 2.19 | 0.00 | 235.10 | 0.009 | 0.01 | 15.455 | C |
| C-AB | 39.56 | 39.45 | 0.00 | 907.72 | 0.044 | 0.06 | 4.146 | A |
| C-A | 630.96 | 630.96 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 780.62 | 0.00 | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 9.91 | 9.91 | 0.00 | 500.52 | 0.020 | 0.02 | 7.336 | A |
| B-A | 2.20 | 2.20 | 0.00 | 235.08 | 0.009 | 0.01 | 15.458 | C |
| C-AB | 39.60 | 39.59 | 0.00 | 907.78 | 0.044 | 0.06 | 4.148 | A |
| C-A | 630.93 | 630.93 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 780.62 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 8.09 | 8.11 | 0.00 | 539.39 | 0.015 | 0.02 | 6.778 | A |
| B-A | 1.80 | 1.81 | 0.00 | 286.48 | 0.006 | 0.01 | 12.648 | B |
| C-AB | 23.70 | 23.80 | 0.00 | 827.80 | 0.029 | 0.04 | 4.479 | A |
| C-A | 523.78 | 0.00 | - | - | - | - | - |  |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 637.38 | 0.00 | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 6.78 | 6.79 | 0.00 | 567.45 | 0.012 | 0.01 | 6.422 | A |
| B-A | 1.51 | 1.51 | 0.00 | 323.67 | 0.005 | 0.00 | 11.176 | B |
| C-AB | 17.32 | 17.36 | 0.00 | 789.90 | 0.022 | 0.03 | 4.659 | A |
| C-A | 441.17 | 441.17 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 533.77 | 0.00 | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 No Development, AM

## Data Errors and Warnings

| Severity | Area | Item | Description |
| :---: | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm B - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 No <br> Development, <br> AM | Locked |  |  |  |  |  |  |  |  |
| Development | AM |  | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Existing Site Access | T-Junction | Two-way | A,B,C | 5.55 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Existing Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCC $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 35.80 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 8.60 | 4.10 | 4.10 | 4.10 | 4.10 | $\checkmark$ | 1.00 | 9 | 11 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 515.218 | 0.091 | 0.230 | 0.145 | 0.329 |
| $\mathbf{1}$ | B-C | 711.706 | 0.106 | 0.268 | - | - |
| $\mathbf{1}$ | C-B | 594.695 | 0.224 | 0.224 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 646.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 6.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 834.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 7.000 | 639.000 |
|  | B | 2.000 | 0.000 | 4.000 |
|  | C | 828.000 | 6.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.33 | 0.00 | 0.67 |
|  | C | 0.99 | 0.01 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | 1.000 | 1.000 |
|  | B | C |  |  |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.01 | 6.97 | 0.01 | A |
| B-A | 0.01 | 16.68 | 0.01 | C |
| C-AB | 0.02 | 4.04 | 0.03 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.01 | 2.99 | 0.00 | 581.54 | 0.005 | 0.01 | 6.221 | A |
| B-A | 1.51 | 1.49 | 0.00 | 311.98 | 0.005 | 0.00 | 11.594 | B |
| C-AB | 11.31 | 11.26 | 0.00 | 903.70 | 0.013 | 0.01 | 4.033 | A |
| C-A | 616.57 | 616.57 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 0.00 | - | - | - | - | - |  |
| A-C | 481.07 | 481.07 | 0.00 | - | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.60 | 3.59 | 0.00 | 556.18 | 0.006 | 0.01 | 6.514 | A |
| B-A | 1.80 | 1.79 | 0.00 | 272.52 | 0.007 | 0.01 | 13.296 | B |
| C-AB | 15.75 | 15.73 | 0.00 | 957.29 | 0.016 | 0.02 | 3.822 | A |
| C-A | 734.00 | 734.00 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 0.29 | 0.00 | - | - | - | - | - |
| A-C | 574.45 | 574.45 | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 4.40 | 4.40 | 0.00 | 521.03 | 0.008 | 0.01 | 6.967 | A |
| B-A | 2.20 | 2.19 | 0.00 | 217.98 | 0.010 | 0.01 | 16.682 | C |
| C-AB | 23.52 | 23.48 | 0.00 | 1026.02 | 0.023 | 0.03 | 3.590 | A |
| C-A | 894.74 | 894.74 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 703.55 | 703.55 | 0.00 | - | - | - | - | - |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 4.40 | 4.40 | 0.00 | 521.03 | 0.008 | 0.01 | 6.967 | A |
| B-A | 2.20 | 2.20 | 0.00 | 217.97 | 0.010 | 0.01 | 16.684 | C |
| C-AB | 23.53 | 23.53 | 0.00 | 1026.03 | 0.023 | 0.03 | 3.593 | A |
| C-A | 894.72 | 894.72 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 703.55 | 0.00 | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.60 | 3.60 | 0.00 | 556.17 | 0.006 | 0.01 | 6.514 | A |
| B-A | 1.80 | 1.81 | 0.00 | 272.51 | 0.007 | 0.01 | 13.301 | B |
| C-AB | 15.77 | 15.80 | 0.00 | 957.32 | 0.016 | 0.02 | 3.825 | A |
| C-A | 733.98 | 733.98 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 574.45 | 0.00 | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 3.01 | 3.02 | 0.00 | 581.53 | 0.005 | 0.01 | 6.224 | A |
| B-A | 1.51 | 1.51 | 0.00 | 311.97 | 0.005 | 0.00 | 11.595 | B |
| C-AB | 11.35 | 11.37 | 0.00 | 903.73 | 0.013 | 0.01 | 4.035 | A |
| C-A | 616.53 | 616.53 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 481.07 | 0.00 | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 No Development, PM

## Data Errors and Warnings

| Severity | Area | Item | Description |
| :---: | :---: | :---: | :--- |
| Warning | Minor arm flare | Arm B - Minor Arm <br> Geometry | Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero <br> flare length is not allowed. |

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 No <br> Development, <br> RM | Locked <br> Development | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Existing Site Access | T-Junction | Two-way | A,B,C | 5.78 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Existing Access |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCC $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 35.80 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 8.60 | 4.10 | 4.10 | 4.10 | 4.10 | $\checkmark$ | 1.00 | 9 | 11 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 515.218 | 0.091 | 0.230 | 0.145 | 0.329 |
| $\mathbf{1}$ | B-C | 711.706 | 0.106 | 0.268 | - | - |
| $\mathbf{1}$ | C-B | 594.695 | 0.224 | 0.224 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 766.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 12.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 651.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 7.000 | 759.000 |
|  | B | 2.000 | 0.000 | 10.000 |
|  | C | 639.000 | 12.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.17 | 0.00 | 0.83 |
|  | C | 0.98 | 0.02 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.02 | 7.58 | 0.02 | A |
| B-A | 0.01 | 16.88 | 0.01 | C |
| C-AB | 0.05 | 4.60 | 0.08 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 7.53 | 7.47 | 0.00 | 557.36 | 0.014 | 0.01 | 6.546 | A |
| B-A | 1.51 | 1.49 | 0.00 | 310.30 | 0.005 | 0.00 | 11.657 | B |
| C-AB | 19.75 | 19.63 | 0.00 | 803.19 | 0.025 | 0.03 | 4.594 | A |
| C-A | 470.36 | 470.36 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 571.41 | 0.00 | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 8.99 | 8.98 | 0.00 | 527.32 | 0.017 | 0.02 | 6.944 | A |
| B-A | 1.80 | 1.79 | 0.00 | 270.50 | 0.007 | 0.01 | 13.396 | B |
| C-AB | 27.33 | 27.28 | 0.00 | 843.32 | 0.032 | 0.04 | 4.411 | A |
| C-A | 557.91 | 0.00 | - | - | - | - | - |  |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 682.33 | 0.00 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 11.01 | 10.99 | 0.00 | 485.71 | 0.023 | 0.02 | 7.582 | A |
| B-A | 2.20 | 2.19 | 0.00 | 215.50 | 0.010 | 0.01 | 16.875 | C |
| C-AB | 46.93 | 46.80 | 0.00 | 930.55 | 0.050 | 0.08 | 4.073 | A |
| C-A | 669.83 | 069.83 | -00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 835.67 | 0.00 | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 11.01 | 11.01 | 0.00 | 485.70 | 0.023 | 0.02 | 7.582 | A |
| B-A | 2.20 | 2.20 | 0.00 | 215.48 | 0.010 | 0.01 | 16.879 | C |
| C-AB | 46.98 | 46.98 | 0.00 | 930.63 | 0.050 | 0.08 | 4.074 | A |
| C-A | 669.78 | 669.78 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 835.67 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 8.99 | 9.01 | 0.00 | 527.31 | 0.017 | 0.02 | 6.947 | A |
| B-A | 1.80 | 1.81 | 0.00 | 270.47 | 0.007 | 0.01 | 13.402 | B |
| C-AB | 27.37 | 27.51 | 0.00 | 843.42 | 0.032 | 0.04 | 4.414 | A |
| C-A | 557.86 | 0.00 | - | - | - | - | - |  |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 682.33 | 0.00 | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 7.53 | 7.54 | 0.00 | 557.35 | 0.014 | 0.01 | 6.547 | A |
| B-A | 1.51 | 1.51 | 0.00 | 310.27 | 0.005 | 0.00 | 11.661 | B |
| C-AB | 19.83 | 19.88 | 0.00 | 803.25 | 0.025 | 0.03 | 4.597 | A |
| C-A | 470.27 | 470.27 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 571.41 | 0.00 | - | - | - | - | - |  |

## Junctions 8

## PICADY 8 - Priority Intersection Module

## Version: 8.0.4.487 [15039,24/03/2014]

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Filename: Jn4 - B4267 (South Rd) - Cleveland Avenue.arc8
Path: P:IGBCFAITPIHB\Projects15133321 - Sully Sport \& Social Club - TAYL3270104 - Analysis\Junction Modelling Report generation date: 25/06/2015 11:30:44
" (Default Analysis Set) - 2023 With Development, AM
" (Default Analysis Set) - 2023 With Development, PM
" (Default Analysis Set) - 2028 With Development, AM
" (Default Analysis Set) - 2028 With Development, PM
" (Default Analysis Set) - 2023 No Development, AM
" (Default Analysis Set) - 2023 No Development, PM
" (Default Analysis Set) - 2028 No Development, AM
" (Default Analysis Set) - 2028 No Development, PM

## Summary of junction performance

|  | AM |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Queue (PCU) | Delay (s) | RFC | LOS |
|  | A1 - 2023 With Development |  |  |  |
| Stream B-AC | 0.14 | 13.89 | 0.12 | B |
| Stream C-AB | 0.10 | 4.12 | 0.06 | A |
| Stream C-A | - | - | - | - |
| Stream A-B | - | - | - | - |
| Stream A-C | - | - | - | - |

[^14]"D5-2023 With Development, AM " model duration: 07:45-09:15 "D6 - 2023 With Development, PM" model duration: 16:45-18:15 "D7-2028 With Development, AM" model duration: 07:45-09:15 "D8 - 2028 With Development, PM" model duration: 16:45-18:15 "D9 - 2023 No Development, AM" model duration: 07:45-09:15 "D10-2023 No Development, PM" model duration: 16:45-18:15 "D11-2028 No Development, AM" model duration: 07:45-09:15 "D12-2028 No Development, PM" model duration: 16:45-18:15

File summary

| Title | (untitled) |
| :--- | :---: |
| Location |  |
| Site Number |  |
| Date | $09 / 10 / 2014$ |
| Version |  |
| Status | (new file) |
| Identifier |  |
| Client |  |
| Jobnumber |  |
| Enumerator | TAYL3270 |
| Description |  |

Analysis Options

| Vehicle Length <br> $(\mathbf{m})$ | Do Queue <br> Variations | Calculate Residual <br> Capacity | Residual Capacity Criteria <br> Type | RFC <br> Threshold | Average Delay Threshold <br> (s) | Queue Threshold <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5.75 |  |  | N/A | 0.85 | 36.00 |  |

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 |

## (Default Analysis Set) - 2023 With Development, AM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, <br> AM | 2023 With <br> Development | AM |  | ONE <br> HOUR | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Cleveland Avenue | T-Junction | Two-way | A,B,C | 8.05 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Clevedon Ave |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn $(\mathrm{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 87.20 | $\checkmark$ |  |

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 <br> Arm <br> Type | Lane <br> Width <br> $(\mathrm{m})$ | Lane <br> Width <br> $($ Left $)(\mathrm{m})$ | Lane <br> Width <br> $($ Right $)(\mathrm{m})$ | Width at <br> give-way <br> $(\mathrm{m})$ | Width at <br> $5 \mathrm{~m}(\mathrm{~m})$ | Width at <br> $\mathbf{1 0 m}(\mathrm{m})$ | Width at <br> $\mathbf{1 5 m}(\mathrm{m})$ | Width at <br> $\mathbf{2 0 m}(\mathrm{m})$ | Estimate <br> Flare <br> Length | Flare <br> Length <br> $($ PCU $)$ | Visibility To <br> Left $(\mathrm{m})$ | Visibility To <br> Right $(\mathrm{m})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One <br> lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 9 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 554.684 | 0.098 | 0.248 | 0.156 | 0.354 |
| $\mathbf{1}$ | B-C | 720.930 | 0.107 | 0.271 | - | - |
| $\mathbf{1}$ | C-B | 624.462 | 0.235 | 0.235 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | Pactor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions <br> Vary Over Entry |  |  |  |  |  |
| $\checkmark$ | 2.00 |  |  |  |  |  |  |  |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 654.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 33.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 800.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 7.000 | 647.000 |
|  | B | 21.000 | 0.000 | 12.000 |
|  | C | 785.000 | 15.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.64 | 0.00 | 0.36 |
|  | C | 0.98 | 0.02 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-AC | 0.12 | 13.89 | 0.14 | B |
| C-AB | 0.06 | 4.12 | 0.10 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 24.84 | 24.58 | 0.00 | 398.98 | 0.062 | 0.07 | 9.608 | A |
| C-AB | 26.56 | 26.41 | 0.00 | 900.85 | 0.029 | 0.04 | 4.117 | A |
| C-A | 575.72 | 575.72 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 487.10 | 487.10 | 0.00 | - | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 29.67 | 29.57 | 0.00 | 356.44 | 0.083 | 0.09 | 11.009 | B |
| C-AB | 42.23 | 42.14 | 0.00 | 982.03 | 0.043 | 0.06 | 3.829 | A |
| C-A | 676.95 | 676.95 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 581.64 | 581.64 | 0.00 | - | - | - | - | - |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 36.33 | 36.14 | 0.00 | 295.59 | 0.123 | 0.14 | 13.865 | B |
| C-AB | 66.14 | 65.98 | 0.00 | 1061.76 | 0.062 | 0.10 | 3.614 | A |
| C-A | 814.68 | 814.68 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 712.36 | 712.36 | 0.00 | - | - | - | - | - |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 36.33 | 36.33 | 0.00 | 295.56 | 0.123 | 0.14 | 13.886 | B |
| C-AB | 66.21 | 66.21 | 0.00 | 1061.85 | 0.062 | 0.10 | 3.615 | A |
| C-A | 814.60 | 814.60 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 712.36 | 0.00 | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 29.67 | 29.85 | 0.00 | 356.39 | 0.083 | 0.09 | 11.030 | B |
| C-AB | 42.32 | 42.48 | 0.00 | 982.17 | 0.043 | 0.06 | 3.834 | A |
| C-A | 676.86 | 676.86 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 581.64 | 581.64 | 0.00 | - | - | - | - | - |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 24.84 | 24.94 | 0.00 | 398.93 | 0.062 | 0.07 | 9.629 | A |
| C-AB | 26.67 | 26.77 | 0.00 | 900.95 | 0.030 | 0.04 | 4.120 | A |
| C-A | 575.61 | 575.61 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 487.10 | 487.10 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2023 With Development, PM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, PM | Locked |  |  |  |  |  |  |  |  |
| Development With | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd/Cleveland Avenue | T-Junction | Two-way | A,B,C | 9.60 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Clevedon Ave |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 87.20 | $\checkmark$ |  |

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 <br> Arm <br> Type | Lane <br> Width <br> $(\mathrm{m})$ | Lane <br> Width <br> $($ Left $)(\mathrm{m})$ | Lane <br> Width <br> $($ Right $)(\mathrm{m})$ | Width at <br> give-way <br> $(\mathrm{m})$ | Width at <br> $5 \mathrm{~m}(\mathrm{~m})$ | Width at <br> $\mathbf{1 0 m}(\mathrm{m})$ | Width at <br> $\mathbf{1 5 m}(\mathrm{m})$ | Width at <br> $\mathbf{2 0 m}(\mathrm{m})$ | Estimate <br> Flare <br> Length | Flare <br> Length <br> $($ PCU $)$ | Visibility To <br> Left $(\mathrm{m})$ | Visibility To <br> Right $(\mathrm{m})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One <br> lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  |  | 7 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 554.684 | 0.098 | 0.248 | 0.156 | 0.354 |
| $\mathbf{1}$ | B-C | 720.930 | 0.107 | 0.271 | - | - |
| $\mathbf{1}$ | C-B | 624.462 | 0.235 | 0.235 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | PCU <br> Vehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entrylexit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 761.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 22.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 652.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 21.000 | 740.000 |
|  | B | 15.000 | 0.000 | 7.000 |
|  | C | 645.000 | 7.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.03 | 0.97 |
|  | B | 0.68 | 0.00 | 0.32 |
|  | C | 0.99 | 0.01 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-AC | 0.09 | 13.86 | 0.09 | B |
| C-AB | 0.03 | 4.43 | 0.03 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LOS |  |  |  |  |  |  |  |
| B-AC | 16.56 | 16.39 | 0.00 | 387.29 | 0.043 | 0.04 | 9.702 |
| C-AB | 11.26 | 11.20 | 0.00 | 824.07 | 0.014 | 0.02 | 4.428 |
| C-A | 479.60 | 479.60 | 0.00 | - | - | - | - |
| A-B | 15.81 | 15.81 | 0.00 | - | - | - | - |
| A-C | 557.11 | 557.11 | 0.00 | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 19.78 | 19.71 | 0.00 | 344.55 | 0.057 | 0.06 | 11.078 | B |
| C-AB | 15.53 | 15.50 | 0.00 | 862.80 | 0.018 | 0.02 | 4.248 | A |
| C-A | 570.61 | 570.61 | 0.00 | - | - | - | - | - |
| A-B | 18.88 | 18.88 | 0.00 | - | - | - | - | - |
| A-C | 665.24 | 665.24 | 0.00 | - | - | - | - | - |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 24.22 | 24.10 | 0.00 | 283.99 | 0.085 | 0.09 | 13.844 | B |
| C-AB | 23.06 | 23.02 | 0.00 | 914.63 | 0.025 | 0.03 | 4.037 | A |
| C-A | 694.80 | 694.80 | 0.00 | - | - | - | - | - |
| A-B | 23.12 | 23.12 | 0.00 | - | - | - | - | - |
| A-C | 814.76 | 014.76 |  | - | - | - | - | - |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 24.22 | 24.22 | 0.00 | 283.98 | 0.085 | 0.09 | 13.857 | B |
| C-AB | 23.08 | 23.08 | 0.00 | 914.65 | 0.025 | 0.03 | 4.039 | A |
| C-A | 694.79 | 694.79 | 0.00 | - | - | - | - | - |
| A-B | 23.12 | 23.12 | 0.00 | - | - | - | - | - |
| A-C | 814.76 | 814.76 | 0.00 | - | - | - | - | - |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 19.78 | 19.90 | 0.00 | 344.54 | 0.057 | 0.06 | 11.095 | B |
| C-AB | 15.55 | 15.59 | 0.00 | 862.83 | 0.018 | 0.02 | 4.250 | A |
| C-A | 570.59 | 570.59 | 0.00 | - | - | - | - | - |
| A-B | 18.88 | 18.88 | 0.00 | - | - | - | - | - |
| A-C | 665.24 | 665.24 | 0.00 | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 16.56 | 16.63 | 0.00 | 387.27 | 0.043 | 0.05 | 9.716 | A |
| C-AB | 11.30 | 11.32 | 0.00 | 824.10 | 0.014 | 0.02 | 4.429 | A |
| C-A | 479.56 | 479.56 | 0.00 | - | - | - | - | - |
| A-B | 15.81 | 15.81 | 0.00 | - | - | - | - | - |
| A-C | 557.11 | 557.11 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2028 With Development, AM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, <br> AM | 2028 With <br> Development | AM |  | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Cleveland Avenue | T-Junction | Two-way | A,B,C | 8.35 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Clevedon Ave |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Width of kerbed central reserve ( m ) | Has right turn bay | Width For Right Turn (m) | Visibility For Right Turn (m) | Blocks? | Blocking Queue (PCU) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 87.20 | $\checkmark$ | 0.00 |

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

| Arm | $\begin{gathered} \hline \text { Minor } \\ \text { Arm } \\ \text { Type } \end{gathered}$ | Lane Width (m) |  | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 9 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 554.684 | 0.098 | 0.248 | 0.156 | 0.354 |
| $\mathbf{1}$ | B-C | 720.930 | 0.107 | 0.271 | - | - |
| $\mathbf{1}$ | C-B | 624.462 | 0.235 | 0.235 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 695.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 36.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 853.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 7.000 | 688.000 |
|  | B | 23.000 | 0.000 | 13.000 |
|  | C | 837.000 | 16.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.64 | 0.00 | 0.36 |
|  | C | 0.98 | 0.02 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | 1.000 | 1.000 |
|  | B | C |  |  |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-AC | 0.15 | 15.43 | 0.17 | C |
| C-AB | 0.08 | 4.05 | 0.14 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 27.10 | 26.80 | 0.00 | 384.49 | 0.070 | 0.07 | 10.056 | B |
| C-AB | 29.78 | 29.61 | 0.00 | 918.21 | 0.032 | 0.04 | 4.051 | A |
| C-A | 612.40 | 612.40 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 517.96 | 0.00 | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 32.36 | 32.25 | 0.00 | 338.75 | 0.096 | 0.10 | 11.745 | B |
| C-AB | 48.43 | 48.32 | 0.00 | 1006.20 | 0.048 | 0.07 | 3.757 | A |
| C-A | 718.40 | 718.40 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 618.50 | 618.50 | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 39.64 | 39.39 | 0.00 | 273.03 | 0.145 | 0.17 | 15.390 | C |
| C-AB | 84.60 | 84.34 | 0.00 | 1114.52 | 0.076 | 0.14 | 3.494 | A |
| C-A | 854.57 | 854.57 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 757.50 | 757.50 | 0.00 | - | - | - | - | - |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 39.64 | 39.63 | 0.00 | 272.99 | 0.145 | 0.17 | 15.425 | C |
| C-AB | 84.72 | 84.72 | 0.00 | 1114.67 | 0.076 | 0.14 | 3.495 | A |
| C-A | 854.45 | 854.45 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 757.50 | 757.50 | 0.00 | - | - | - | - | - |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 32.36 | 32.61 | 0.00 | 338.69 | 0.096 | 0.11 | 11.770 | B |
| C-AB | 48.54 | 48.80 | 0.00 | 1006.41 | 0.048 | 0.07 | 3.763 | A |
| C-A | 718.29 | 718.29 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 618.50 | 0.00 | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 27.10 | 27.22 | 0.00 | 384.44 | 0.071 | 0.08 | 10.083 | B |
| C-AB | 29.91 | 30.02 | 0.00 | 918.32 | 0.033 | 0.04 | 4.054 | A |
| C-A | 612.28 | 612.28 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 517.96 | 517.96 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2028 With Development, PM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, PM | Locked |  |  |  |  |  |  |  |  |
| Development With | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Cleveland Avenue | T-Junction | Two-way | A,B,C | 10.35 | B |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Clevedon Ave |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn $(\mathrm{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 87.20 | $\checkmark$ |  |

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 <br> Arm <br> Type | Lane <br> Width <br> $(\mathrm{m})$ | Lane <br> Width <br> $($ Left $)(\mathrm{m})$ | Lane <br> Width <br> $($ Right $)(\mathrm{m})$ | Width at <br> give-way <br> $(\mathrm{m})$ | Width at <br> $5 \mathrm{~m}(\mathrm{~m})$ | Width at <br> $\mathbf{1 0 m}(\mathrm{m})$ | Width at <br> $\mathbf{1 5 m}(\mathrm{m})$ | Width at <br> $\mathbf{2 0 m}(\mathrm{m})$ | Estimate <br> Flare <br> Length | Flare <br> Length <br> $($ PCU $)$ | Visibility To <br> Left $(\mathrm{m})$ | Visibility To <br> Right $(\mathrm{m})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One <br> lane | 4.45 |  |  |  |  |  |  |  |  |  |  |  |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 554.684 | 0.098 | 0.248 | 0.156 | 0.354 |
| $\mathbf{1}$ | B-C | 720.930 | 0.107 | 0.271 | - | - |
| $\mathbf{1}$ | C-B | 624.462 | 0.235 | 0.235 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions <br> Vary Over Entry |  |  |  |  |  |
| $\checkmark$ | 2.00 |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 812.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 23.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 692.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 23.000 | 789.000 |
|  | B | 16.000 | 0.000 | 7.000 |
|  | C | 685.000 | 7.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.03 | 0.97 |
|  | B | 0.70 | 0.00 | 0.30 |
|  | C | 0.99 | 0.01 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-AC | 0.10 | 15.35 | 0.11 | C |
| C-AB | 0.03 | 4.37 | 0.03 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 17.32 | 17.12 | 0.00 | 370.66 | 0.047 | 0.05 | 10.177 | B |
| C-AB | 11.79 | 11.73 | 0.00 | 836.04 | 0.014 | 0.02 | 4.367 | A |
| C-A | 509.18 | 509.18 | 0.00 | - | - | - | - | - |
| A-B | 17.32 | 17.32 | 0.00 | - | - | - | - | - |
| A-C | 594.00 | 0.00 | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 20.68 | 20.60 | 0.00 | 324.85 | 0.064 | 0.07 | 11.829 | B |
| C-AB | 16.40 | 16.37 | 0.00 | 876.77 | 0.019 | 0.02 | 4.183 | A |
| C-A | 605.70 | 605.70 | 0.00 | - | - | - | - | - |
| A-B | 20.68 | 20.68 | 0.00 | - | - | - | - | - |
| A-C | 709.29 | 709.29 | 0.00 | - | - | - | - | - |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 25.32 | 25.17 | 0.00 | 259.79 | 0.097 | 0.11 | 15.335 | C |
| C-AB | 24.65 | 24.61 | 0.00 | 930.99 | 0.026 | 0.03 | 3.971 | A |
| C-A | 737.25 | 737.25 | 0.00 | - | - | - | - | - |
| A-B | 25.32 | 25.32 | 0.00 | - | - | - | - | - |
| A-C | 868.71 | 0.00 | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 25.32 | 25.32 | 0.00 | 259.78 | 0.097 | 0.11 | 15.353 | C |
| C-AB | 24.67 | 24.67 | 0.00 | 931.01 | 0.027 | 0.03 | 3.971 | A |
| C-A | 737.24 | 737.24 | 0.00 | - | - | - | - | - |
| A-B | 25.32 | 25.32 | 0.00 | - | - | - | - | - |
| A-C | 868.71 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 20.68 | 20.83 | 0.00 | 324.84 | 0.064 | 0.07 | 11.849 | B |
| C-AB | 16.42 | 16.46 | 0.00 | 876.81 | 0.019 | 0.02 | 4.186 | A |
| C-A | 605.67 | 605.67 | 0.00 | - | - | - | - | - |
| A-B | 20.68 | 20.68 | 0.00 | - | - | - | - | - |
| A-C | 709.29 | 709.29 | 0.00 | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 17.32 | 17.39 | 0.00 | 370.64 | 0.047 | 0.05 | 10.192 | B |
| C-AB | 11.83 | 11.86 | 0.00 | 836.07 | 0.014 | 0.02 | 4.369 | A |
| C-A | 509.14 | 509.14 | 0.00 | - | - | - | - | - |
| A-B | 17.32 | 17.32 | 0.00 | - | - | - | - | - |
| A-C | 594.00 | 594.00 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2023 No Development, AM

Data Errors and Warnings
No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Locked |  |  |  |  |  |  |  |  |  |
| 2023 No <br> Development, <br> AM | 2023 No <br> Development | AM |  | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd/Cleveland Avenue | T-Junction | Two-way | A,B,C | 7.74 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Clevedon Ave |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn $(\mathrm{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 87.20 | $\checkmark$ |  |

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 <br> Arm <br> Type | Lane <br> Width <br> $(\mathrm{m})$ | Lane <br> Width <br> $($ Left $)(\mathrm{m})$ | Lane <br> Width <br> $($ Right $)(\mathrm{m})$ | Width at <br> give-way <br> $(\mathrm{m})$ | Width at <br> $5 \mathrm{~m}(\mathrm{~m})$ | Width at <br> $\mathbf{1 0 m}(\mathrm{m})$ | Width at <br> $\mathbf{1 5 m}(\mathrm{m})$ | Width at <br> $\mathbf{2 0 m}(\mathrm{m})$ | Estimate <br> Flare <br> Length | Flare <br> Length <br> $($ PCU $)$ | Visibility To <br> Left $(\mathrm{m})$ | Visibility To <br> Right $(\mathrm{m})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One <br> lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 9 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 554.684 | 0.098 | 0.248 | 0.156 | 0.354 |
| $\mathbf{1}$ | B-C | 720.930 | 0.107 | 0.271 | - | - |
| $\mathbf{1}$ | C-B | 624.462 | 0.235 | 0.235 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | Pactor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions <br> Vary Over Entry |  |  |  |  |  |
| $\checkmark$ | 2.00 |  |  |  |  |  |  |  |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 599.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 33.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 769.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 7.000 | 592.000 |
|  | B | 21.000 | 0.000 | 12.000 |
|  | C | 754.000 | 15.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.64 | 0.00 | 0.36 |
|  | C | 0.98 | 0.02 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-AC | 0.11 | 12.80 | 0.13 | B |
| C-AB | 0.06 | 4.15 | 0.10 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 24.84 | 24.59 | 0.00 | 413.24 | 0.060 | 0.06 | 9.257 | A |
| C-AB | 25.62 | 25.47 | 0.00 | 894.18 | 0.029 | 0.04 | 4.144 | A |
| C-A | 553.32 | 553.32 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 445.69 | 445.69 | 0.00 | - | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 29.67 | 29.58 | 0.00 | 373.80 | 0.079 | 0.09 | 10.456 | B |
| C-AB | 40.08 | 40.00 | 0.00 | 971.60 | 0.041 | 0.06 | 3.864 | A |
| C-A | 651.23 | 651.23 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 532.20 | 532.20 | 0.00 | - | - | - | - | - |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 36.33 | 36.17 | 0.00 | 317.60 | 0.114 | 0.13 | 12.783 | B |
| C-AB | 62.01 | 61.86 | 0.00 | 1049.20 | 0.059 | 0.10 | 3.645 | A |
| C-A | 784.68 | 784.68 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 651.80 | 051.80 | 0.00 | - | - | - | - | - |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 36.33 | 36.33 | 0.00 | 317.57 | 0.114 | 0.13 | 12.799 | B |
| C-AB | 62.07 | 62.07 | 0.00 | 1049.28 | 0.059 | 0.10 | 3.646 | A |
| C-A | 784.61 | 784.61 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 651.80 | 051.80 |  | - | - | - | - | - |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 29.67 | 29.83 | 0.00 | 373.76 | 0.079 | 0.09 | 10.471 | B |
| C-AB | 40.16 | 40.31 | 0.00 | 971.73 | 0.041 | 0.06 | 3.867 | A |
| C-A | 651.16 | 651.16 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 532.20 | 532.20 | 0.00 | - | - | - | - | - |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 24.84 | 24.93 | 0.00 | 413.19 | 0.060 | 0.06 | 9.275 | A |
| C-AB | 25.72 | 25.81 | 0.00 | 894.28 | 0.029 | 0.04 | 4.147 | A |
| C-A | 553.22 | 553.22 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 445.69 | 445.69 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2023 No Development, PM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No <br> Levelopment, <br> RM | 20cked <br> Development | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Cleveland Avenue | T-Junction | Two-way | A,B,C | 9.26 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Clevedon Ave |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathrm{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 87.20 | $\checkmark$ |  |

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 <br> Arm <br> Type | Lane <br> Width <br> $(\mathrm{m})$ | Lane <br> Width <br> (Left) $(\mathrm{m})$ | Lane <br> Width <br> $($ Right $)(\mathrm{m})$ | Width at <br> give-way <br> $(\mathrm{m})$ | Width at <br> $5 \mathrm{~m}(\mathrm{~m})$ | Width at <br> $\mathbf{1 0 m}(\mathrm{m})$ | Width at <br> $\mathbf{1 5 m}(\mathrm{m})$ | Width at <br> $\mathbf{2 0 m}(\mathrm{m})$ | Estimate <br> Flare <br> Length | Flare <br> Length <br> $($ PCU $)$ | Visibility To <br> Left $(\mathrm{m})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | Visibility To <br> Right $(\mathrm{m})$ |  |  |  |  |  |  |  |  |  |  |  |
| One | 4.45 |  |  |  |  |  |  |  |  |  |  |  |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 554.684 | 0.098 | 0.248 | 0.156 | 0.354 |
| $\mathbf{1}$ | B-C | 720.930 | 0.107 | 0.271 | - | - |
| $\mathbf{1}$ | C-B | 624.462 | 0.235 | 0.235 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle <br> Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entry/exit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 726.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 22.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 597.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 21.000 | 705.000 |
|  | B | 15.000 | 0.000 | 7.000 |
|  | C | 590.000 | 7.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.03 | 0.97 |
|  | B | 0.68 | 0.00 | 0.32 |
|  | C | 0.99 | 0.01 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-AC | 0.08 | 12.88 | 0.09 | B |
| C-AB | 0.02 | 4.54 | 0.03 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 16.56 | 16.39 | 0.00 | 400.00 | 0.041 | 0.04 | 9.381 | A |
| C-AB | 10.64 | 10.58 | 0.00 | 802.77 | 0.013 | 0.01 | 4.544 | A |
| C-A | 438.82 | 438.82 | 0.00 | - | - | - | - | - |
| A-B | 15.81 | 15.81 | 0.00 | - | - | - | - | - |
| A-C | 530.76 | 530.76 | 0.00 | - | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 19.78 | 19.72 | 0.00 | 360.03 | 0.055 | 0.06 | 10.577 | B |
| C-AB | 14.53 | 14.51 | 0.00 | 838.03 | 0.017 | 0.02 | 4.371 | A |
| C-A | 522.16 | 522.16 | 0.00 | - | - | - | - | - |
| A-B | 18.88 | 18.88 | 0.00 | - | - | - | - | - |
| A-C | 633.78 | 033.78 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 24.22 | 24.11 | 0.00 | 303.61 | 0.080 | 0.09 | 12.874 | B |
| C-AB | 21.34 | 21.30 | 0.00 | 885.64 | 0.024 | 0.03 | 4.164 | A |
| C-A | 635.97 | 635.97 | 0.00 | - | - | - | - | - |
| A-B | 23.12 | 23.12 | 0.00 | - | - | - | - | - |
| A-C | 776.22 | 776.22 | 0.00 | - | - | - | - | - |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 24.22 | 24.22 | 0.00 | 303.60 | 0.080 | 0.09 | 12.884 | B |
| C-AB | 21.35 | 21.35 | 0.00 | 885.66 | 0.024 | 0.03 | 4.166 | A |
| C-A | 635.95 | 635.95 | 0.00 | - | - | - | - | - |
| A-B | 23.12 | 23.12 | 0.00 | - | - | - | - | - |
| A-C | 776.22 | 776.22 | 0.00 | - | - | - | - | - |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 19.78 | 19.89 | 0.00 | 360.02 | 0.055 | 0.06 | 10.586 | B |
| C-AB | 14.55 | 14.59 | 0.00 | 838.06 | 0.017 | 0.02 | 4.373 | A |
| C-A | 522.14 | 522.14 | 0.00 | - | - | - | - | - |
| A-B | 18.88 | 18.88 | 0.00 | - | - | - | - | - |
| A-C | 633.78 | 633.78 | 0.00 | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 16.56 | 16.62 | 0.00 | 399.98 | 0.041 | 0.04 | 9.391 | A |
| C-AB | 10.67 | 10.69 | 0.00 | 802.80 | 0.013 | 0.02 | 4.544 | A |
| C-A | 438.78 | 438.78 | 0.00 | - | - | - | - | - |
| A-B | 15.81 | 15.81 | 0.00 | - | - | - | - | - |
| A-C | 530.76 | 0.00 | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 No Development, AM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 No <br> Development, <br> AM | 2028 No <br> Development | AM |  | ONE | Locked |  |  |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Cleveland Avenue | T-Junction | Two-way | A,B,C | 8.11 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Clevedon Ave |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn (m) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{C}$ | 6.65 |  | 0.00 |  | 2.20 | 87.20 | $\checkmark$ | 0.00 |

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

| Arm | Minor <br> Arm <br> Type | Lane <br> Width <br> $(\mathrm{m})$ | Lane <br> Width <br> $($ Left $)(\mathrm{m})$ | Lane <br> Width <br> $($ Right $)(\mathrm{m})$ | Width at <br> give-way <br> $(\mathrm{m})$ | Width at <br> $5 \mathrm{~m}(\mathrm{~m})$ | Width at <br> $\mathbf{1 0 m}(\mathrm{m})$ | Width at <br> $\mathbf{1 5 m}(\mathrm{m})$ | Width at <br> $\mathbf{2 0 m}(\mathrm{m})$ | Estimate <br> Flare <br> Length | Flare <br> Length <br> $($ PCU $)$ | Visibility To <br> Left $(\mathrm{m})$ | Visibility To <br> Right $(\mathrm{m})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One <br> lane | 4.45 |  |  |  |  |  |  | $\checkmark$ |  |  |  |  |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 554.684 | 0.098 | 0.248 | 0.156 | 0.354 |
| $\mathbf{1}$ | B-C | 720.930 | 0.107 | 0.271 | - | - |
| $\mathbf{1}$ | C-B | 624.462 | 0.235 | 0.235 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 640.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 36.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 822.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 7.000 | 633.000 |
|  | B | 23.000 | 0.000 | 13.000 |
|  | C | 806.000 | 16.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.01 | 0.99 |
|  | B | 0.64 | 0.00 | 0.36 |
|  | C | 0.98 | 0.02 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | 1.000 | 1.000 |
|  | B | C |  |  |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-AC | 0.13 | 14.08 | 0.15 | B |
| C-AB | 0.07 | 4.08 | 0.11 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LOS |  |  |  |  |  |  |  |
| B-AC | 27.10 | 26.81 | 0.00 | 398.84 | 0.068 | 0.07 | 9.670 |
| C-AB | 28.72 | 28.56 | 0.00 | 911.62 | 0.032 | 0.04 | 4.077 |
| C-A | 590.12 | 590.12 | 0.00 | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - |  |
| A-C | 476.56 | 476.56 | 0.00 | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 32.36 | 32.26 | 0.00 | 356.27 | 0.091 | 0.10 | 11.107 | B |
| C-AB | 45.96 | 45.85 | 0.00 | 995.79 | 0.046 | 0.07 | 3.789 | A |
| C-A | 693.00 | 693.00 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 569.05 | 0.00 | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 39.64 | 39.42 | 0.00 | 295.37 | 0.134 | 0.15 | 14.054 | B |
| C-AB | 72.08 | 71.90 | 0.00 | 1077.44 | 0.067 | 0.11 | 3.579 | A |
| C-A | 832.96 | 032.96 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 696.95 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 39.64 | 39.63 | 0.00 | 295.34 | 0.134 | 0.15 | 14.078 | B |
| C-AB | 72.17 | 72.16 | 0.00 | 1077.53 | 0.067 | 0.11 | 3.581 | A |
| C-A | 832.87 | 832.87 | 0.00 | - | - | - | - | - |
| A-B | 7.71 | 7.71 | 0.00 | - | - | - | - | - |
| A-C | 696.95 | 0.06 .95 | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 32.36 | 32.57 | 0.00 | 356.22 | 0.091 | 0.10 | 11.129 | B |
| C-AB | 46.06 | 46.24 | 0.00 | 995.95 | 0.046 | 0.07 | 3.793 | A |
| C-A | 692.90 | 692.90 | 0.00 | - | - | - | - | - |
| A-B | 6.29 | 6.29 | 0.00 | - | - | - | - | - |
| A-C | 569.05 | 0.00 | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 27.10 | 27.21 | 0.00 | 398.78 | 0.068 | 0.07 | 9.692 | A |
| C-AB | 28.84 | 28.95 | 0.00 | 911.73 | 0.032 | 0.04 | 4.078 | A |
| C-A | 590.00 | 590.00 | 0.00 | - | - | - | - | - |
| A-B | 5.27 | 5.27 | 0.00 | - | - | - | - | - |
| A-C | 476.56 | 476.56 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2028 No Development, PM

Data Errors and Warnings
No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Locked |  |  |  |  |  |  |  |  |  |
| Levelopment, <br> RM | 2028 No <br> Development | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd/Cleveland Avenue | T-Junction | Two-way | A,B,C | 9.92 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

## Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (East) |  | Major |
| B | B | Clevedon Ave |  | Minor |
| C | C | B4267 South Rd (West) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathrm{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 6.65 |  | 0.00 |  | 2.20 | 87.20 | $\checkmark$ | 0.00 |

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

## Minor Arm Geometry

| Arm | Minor Arm Type | Lane Width (m) | $\begin{aligned} & \text { Lane } \\ & \text { Width } \\ & \text { (Left) }(\mathrm{m}) \end{aligned}$ | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5 m (m) | Width at 10 m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane | 4.45 |  |  |  |  |  |  |  | $\checkmark$ |  | 7 | 9 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 554.684 | 0.098 | 0.248 | 0.156 | 0.354 |
| $\mathbf{1}$ | B-C | 720.930 | 0.107 | 0.271 | - | - |
| $\mathbf{1}$ | C-B | 624.462 | 0.235 | 0.235 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

## Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | PChicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 777.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 23.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 637.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 23.000 | 754.000 |
|  | B | 16.000 | 0.000 | 7.000 |
|  | C | 630.000 | 7.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.03 | 0.97 |
|  | B | 0.70 | 0.00 | 0.30 |
|  | C | 0.99 | 0.01 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-AC | 0.09 | 14.15 | 0.10 | B |
| C-AB | 0.03 | 4.48 | 0.03 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 17.32 | 17.13 | 0.00 | 383.48 | 0.045 | 0.05 | 9.821 | A |
| C-AB | 11.14 | 11.08 | 0.00 | 814.90 | 0.014 | 0.02 | 4.478 | A |
| C-A | 468.42 | 468.42 | 0.00 | - | - | - | - | - |
| A-B | 17.32 | 17.32 | 0.00 | - | - | - | - | - |
| A-C | 567.65 | 567.65 | 0.00 | - | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 20.68 | 20.61 | 0.00 | 340.49 | 0.061 | 0.06 | 11.251 | B |
| C-AB | 15.36 | 15.34 | 0.00 | 852.28 | 0.018 | 0.02 | 4.301 | A |
| C-A | 557.29 | 557.29 | 0.00 | - | - | - | - | - |
| A-B | 20.68 | 0.00 | - | - | - | - | - |  |
| A-C | 677.83 | 677.83 | 0.00 | - | - | - | - | - |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 25.32 | 25.19 | 0.00 | 279.67 | 0.091 | 0.10 | 14.139 | B |
| C-AB | 22.83 | 22.79 | 0.00 | 902.51 | 0.025 | 0.03 | 4.092 | A |
| C-A | 678.52 | 078.52 | 0.00 | - | - | - | - | - |
| A-B | 25.32 | 0.00 | - | - | - | - | - |  |
| A-C | 830.17 | 830.17 | 0.00 | - | - | - | - | - |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 25.32 | 25.32 | 0.00 | 279.66 | 0.091 | 0.10 | 14.153 | B |
| C-AB | 22.85 | 22.85 | 0.00 | 902.53 | 0.025 | 0.03 | 4.092 | A |
| C-A | 678.50 | 678.50 | 0.00 | - | - | - | - | - |
| A-B | 25.32 | 25.32 | 0.00 | - | - | - | - | - |
| A-C | 830.17 | 830.17 | 0.00 | - | - | - | - | - |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 20.68 | 20.81 | 0.00 | 340.48 | 0.061 | 0.07 | 11.265 | B |
| C-AB | 15.38 | 15.42 | 0.00 | 852.31 | 0.018 | 0.02 | 4.301 | A |
| C-A | 557.27 | 557.27 | 0.00 | - | - | - | - | - |
| A-B | 20.68 | 20.68 | 0.00 | - | - | - | - | - |
| A-C | 677.83 | 0.00 | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-AC | 17.32 | 17.39 | 0.00 | 383.46 | 0.045 | 0.05 | 9.837 | A |
| C-AB | 11.18 | 11.21 | 0.00 | 814.93 | 0.014 | 0.02 | 4.480 | A |
| C-A | 468.38 | 468.38 | 0.00 | - | - | - | - | - |
| A-B | 17.32 | 17.32 | 0.00 | - | - | - | - | - |
| A-C | 567.65 | 567.65 | 0.00 | - | - | - | - | - |

## Junctions 8

## PICADY 8 - Priority Intersection Module

Version: 8.0.4.487 [15039,24/03/2014]
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Filename: Jn3-B4267-Cog Road.arc8
Path: P:IGBCFAITPIHBIProjectsI5133321 - Sully Sport \& Social Club - TAYL3270104 - Analysis\Junction Modelling
Report generation date: 25/06/2015 09:18:29
" (Default Analysis Set) - 2023 No Development, AM
» (Default Analysis Set) - 2023 No Development, PM
" (Default Analysis Set) - 2028 No Development, AM
" (Default Analysis Set) - 2028 No Development, PM
" (Default Analysis Set) - 2023 With Development, AM
" (Default Analysis Set) - 2023 With Development, PM
" (Default Analysis Set) - 2028 With Development, AM
" (Default Analysis Set) - 2028 With Development, PM
" (Default Analysis Set) - 2023 With Development (No Growth), AM
" (Default Analysis Set) - 2023 With Development (No Growth), PM
" (Default Analysis Set) - 2023 No Development (No Growth), AM
" (Default Analysis Set) - 2023 No Development (No Growth), PM

## Summary of junction performance

|  | AM |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Queue (PCU) | Delay (s) | RFC | LOS |
|  | A1 - 2023 No Development |  |  |  |
| Stream B-C | 4.65 | 226.77 | 0.99 | F |
| Stream B-A | 8.94 | 159.03 | 0.98 | F |
| Stream C-AB | 0.40 | 4.74 | 0.15 | A |
| Stream C-A | - | - | - | - |
| Stream A-B | - | - | - | - |
| Stream A-C | - | - | - | - |

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.
"D1-2023 No Development, AM " model duration: 07:45-09:15 "D2-2023 No Development, PM" model duration: 16:45-18:15 "D3-2028 No Development, AM" model duration: 07:45-09:15 "D4 - 2028 No Development, PM" model duration: 16:45-18:15
"D5-2023 With Development, AM" model duration: 07:45-09:15 "D6 - 2023 With Development, PM" model duration: 16:45-18:15 "D7-2028 With Development, AM" model duration: 07:45-09:15
"D8-2028 With Development, PM" model duration: 16:45-18:15
"D9-2023 With Development (No Growth), AM" model duration: 07:45-09:15 "D10-2023 With Development (No Growth), PM" model duration: 16:45-18:15 "D11-2023 No Development (No Growth), AM" model duration: 07:45-09:15 "D12-2023 No Development (No Growth), PM" model duration: 16:45-18:15

Run using Junctions 8.0.4.487 at 25/06/2015 09:18:25

## File summary

| Title | (untitled) |
| :--- | :---: |
| Location |  |
| Site Number |  |
| Date | $09 / 10 / 2014$ |
| Version |  |
| Status | (new file) |
| Identifier |  |
| Client |  |
| Jobnumber |  |
| Enumerator | TAYL3270 |
| Description |  |

## Analysis Options

| Vehicle Length <br> $(\mathbf{m})$ | Do Queue <br> Variations | Calculate Residual <br> Capacity | Residual Capacity Criteria <br> Type | RFC <br> Threshold | Average Delay Threshold <br> (s) | Queue Threshold <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5.75 |  |  | N/A | 0.85 | 36.00 |  |

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 |

## (Default Analysis Set) - 2023 No Development, AM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No <br> Development, <br> AM | 20cked |  |  |  |  |  |  |  |  |
| Development No | AM |  | ONE | HOUR | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 128.34 | F |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathbf{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathbf{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathbf{m})$ | Visibility For Right <br> Turn $(\mathbf{m})$ | Blocks? | Blocking Queue <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Left) }(\mathrm{m}) \end{gathered}$ | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate Flare Length | Flare Length (PCU) | Visibility To Left (m) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 578.975 | 0.097 | 0.246 | 0.155 | 0.351 |
| $\mathbf{1}$ | B-C | 705.289 | 0.100 | 0.252 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\checkmark$ | $\checkmark$ | HV <br> Proportions <br> Percentages | 2.00 |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 1002.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 258.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 685.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 198.000 | 804.000 |
|  | B | 191.000 | 0.000 | 67.000 |
|  | C | 654.000 | 31.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.20 | 0.80 |
|  | B | 0.74 | 0.00 | 0.26 |
|  | C | 0.95 | 0.05 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.99 | 226.77 | 4.65 | F |
| B-A | 0.98 | 159.03 | 8.94 | F |
| C-AB | 0.15 | 4.74 | 0.40 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 50.44 | 49.96 | 0.00 | 466.16 | 0.108 | 0.12 | 8.640 | A |
| B-A | 143.79 | 140.84 | 0.00 | 331.36 | 0.434 | 0.74 | 18.626 | C |
| C-AB | 56.51 | 56.03 | 0.00 | 817.63 | 0.069 | 0.12 | 4.728 | A |
| C-A | 459.19 | 459.19 | 0.00 | - | - | - | - | - |
| A-B | 149.06 | 149.06 | 0.00 | - | - | - | - | - |
| A-C | 605.29 | 0.00 | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 60.23 | 59.96 | 0.00 | 378.04 | 0.159 | 0.19 | 11.309 | B |
| B-A | 171.71 | 168.96 | 0.00 | 283.01 | 0.607 | 1.43 | 30.778 | D |
| C-AB | 81.83 | 81.54 | 0.00 | 862.10 | 0.095 | 0.19 | 4.614 | A |
| C-A | 533.97 | 533.97 | 0.00 | - | - | - | - | - |
| A-B | 178.00 | 178.00 | 0.00 | - | - | - | - | - |
| A-C | 722.78 | 722.78 | 0.00 | - | - | - | - | - |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 73.77 | 59.33 | 0.00 | 74.25 | 0.994 | 3.80 | 175.658 | F |
| B-A | 210.29 | 190.30 | 0.00 | 215.23 | 0.977 | 6.42 | 103.230 | F |
| C-AB | 138.48 | 137.66 | 0.00 | 938.19 | 0.148 | 0.40 | 4.502 | A |
| C-A | 615.72 | 615.72 | 0.00 | - | - | - | - | - |
| A-B | 218.00 | 218.00 | 0.00 | - | - | - | - | - |
| A-C | 885.22 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 73.77 | 70.36 | 0.00 | 80.74 | 0.914 | 4.65 | 226.769 | F |
| B-A | 210.29 | 200.21 | 0.00 | 214.21 | 0.982 | 8.94 | 159.033 | F |
| C-AB | 138.92 | 138.90 | 0.00 | 938.70 | 0.148 | 0.40 | 4.512 | A |
| C-A | 615.28 | 615.28 | 0.00 | - | - | - | - | - |
| A-B | 218.00 | 218.00 | 0.00 | - | - | - | - | - |
| A-C | 885.22 | 0.00 | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 60.23 | 77.88 | 0.00 | 319.75 | 0.188 | 0.24 | 15.952 | C |
| B-A | 171.71 | 200.55 | 0.00 | 281.51 | 0.610 | 1.73 | 55.445 | F |
| C-AB | 82.23 | 83.04 | 0.00 | 862.75 | 0.095 | 0.20 | 4.627 | A |
| C-A | 533.57 | 533.57 | 0.00 | - | - | - | - | - |
| A-B | 178.00 | 178.00 | 0.00 | - | - | - | - | - |
| A-C | 722.78 | 0.00 | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 50.44 | 50.89 | 0.00 | 460.09 | 0.110 | 0.12 | 8.806 | A |
| B-A | 143.79 | 147.55 | 0.00 | 331.38 | 0.434 | 0.79 | 19.954 | C |
| C-AB | 56.90 | 57.20 | 0.00 | 818.00 | 0.070 | 0.12 | 4.737 | A |
| C-A | 458.80 | 458.80 | 0.00 | - | - | - | - | - |
| A-B | 149.06 | 149.06 | 605.29 | 0.00 | - | - | - | - |
| A-C | 605.29 |  | - | - | - |  |  |  |

## (Default Analysis Set) - 2023 No Development, PM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No Development, PM | 2023 No Development | PM |  | ONE <br> HOUR | 16:45 | 18:15 | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 10.93 | B |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) ( m ) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 579.502 | 0.097 | 0.246 | 0.155 | 0.351 |
| $\mathbf{1}$ | B-C | 704.167 | 0.099 | 0.251 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 683.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 147.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 622.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 158.000 | 525.000 |
|  | B | 110.000 | 0.000 | 37.000 |
|  | C | 562.000 | 60.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.23 | 0.77 |
|  | B | 0.75 | 0.00 | 0.25 |
|  | C | 0.90 | 0.10 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.09 | 8.30 | 0.09 | A |
| B-A | 0.40 | 20.00 | 0.66 | C |
| C-AB | 0.22 | 5.06 | 0.66 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 27.86 | 27.65 | 0.00 | 560.50 | 0.050 | 0.05 | 6.756 | A |
| B-A | 82.81 | 81.75 | 0.00 | 389.41 | 0.213 | 0.27 | 11.663 | B |
| C-AB | 92.71 | 91.68 | 0.00 | 809.25 | 0.115 | 0.26 | 5.017 | A |
| C-A | 375.56 | 375.56 | 0.00 | - | - | - | - | - |
| A-B | 118.95 | 118.95 | 0.00 | - | - | - | - | - |
| A-C | 395.25 | 0.00 | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 33.26 | 33.20 | 0.00 | 527.97 | 0.063 | 0.07 | 7.276 | A |
| B-A | 98.89 | 98.42 | 0.00 | 352.28 | 0.281 | 0.38 | 14.153 | B |
| C-AB | 128.71 | 128.20 | 0.00 | 849.67 | 0.151 | 0.39 | 4.999 | A |
| C-A | 430.45 | 430.45 | 0.00 | - | - | - | - | - |
| A-B | 142.04 | 142.04 | 0.00 | - | - | - | - | - |
| A-C | 471.96 | 471.96 | 0.00 | - | - | - | - | - |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 40.74 | 40.63 | 0.00 | 475.35 | 0.086 | 0.09 | 8.279 | A |
| B-A | 121.11 | 120.04 | 0.00 | 301.13 | 0.402 | 0.65 | 19.761 | C |
| C-AB | 200.34 | 199.27 | 0.00 | 914.30 | 0.219 | 0.66 | 5.049 | A |
| C-A | 484.49 | 484.49 | 0.00 | - | - | - | - | - |
| A-B | 173.96 | 173.96 | 0.00 | - | - | - | - | - |
| A-C | 578.04 | 0.00 | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 40.74 | 40.74 | 0.00 | 474.31 | 0.086 | 0.09 | 8.302 | A |
| B-A | 121.11 | 121.07 | 0.00 | 300.96 | 0.402 | 0.66 | 20.000 | C |
| C-AB | 200.86 | 200.82 | 0.00 | 914.91 | 0.220 | 0.66 | 5.062 | A |
| C-A | 483.98 | 483.98 | 0.00 | - | - | - | - | - |
| A-B | 173.96 | 173.96 | 0.00 | - | - | - | - | - |
| A-C | 578.04 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 33.26 | 33.36 | 0.00 | 526.90 | 0.063 | 0.07 | 7.294 | A |
| B-A | 98.89 | 99.94 | 0.00 | 352.04 | 0.281 | 0.40 | 14.337 | B |
| C-AB | 129.27 | 130.31 | 0.00 | 850.53 | 0.152 | 0.40 | 5.017 | A |
| C-A | 429.90 | 429.90 | 0.00 | - | - | - | - | - |
| A-B | 142.04 | 142.04 | 0.00 | - | - | - | - | - |
| A-C | 471.96 | 471.96 | 0.00 | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 27.86 | 27.92 | 0.00 | 559.60 | 0.050 | 0.05 | 6.770 | A |
| B-A | 82.81 | 83.31 | 0.00 | 389.11 | 0.213 | 0.27 | 11.790 | B |
| C-AB | 93.44 | 93.97 | 0.00 | 809.90 | 0.115 | 0.27 | 5.041 | A |
| C-A | 374.83 | 0.00 | - | - | - | - | - |  |
| A-B | 118.95 | 118.95 | 0.00 | - | - | - | - | - |
| A-C | 395.25 | 395.25 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2028 No Development, AM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> (HH:mm) | Model Finish <br> Time <br> (HH:mm) | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Locked |  |  |  |  |  |  |  |  |  |
| Levelopment, <br> AM | 2028 No <br> Development | AM | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 229.65 | F |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) ( m ) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 578.515 | 0.097 | 0.245 | 0.154 | 0.351 |
| $\mathbf{1}$ | B-C | 706.268 | 0.100 | 0.252 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 1070.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 270.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 733.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 210.000 | 860.000 |
|  | B | 198.000 | 0.000 | 72.000 |
|  | C | 699.000 | 34.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.20 | 0.80 |
|  | B | 0.73 | 0.00 | 0.27 |
|  | C | 0.95 | 0.05 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 1.17 | 382.94 | 8.18 | F |
| B-A | 1.15 | 311.91 | 19.50 | F |
| C-AB | 0.18 | 4.70 | 0.55 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 54.21 | 53.66 | 0.00 | 445.93 | 0.122 | 0.14 | 9.164 | A |
| B-A | 149.06 | 145.60 | 0.00 | 313.80 | 0.475 | 0.87 | 21.006 | C |
| C-AB | 66.21 | 65.62 | 0.00 | 833.31 | 0.079 | 0.15 | 4.688 | A |
| C-A | 485.64 | 485.64 | 0.00 | - | - | - | - | - |
| A-B | 158.10 | 158.10 | 647.45 | 0.00 | - | - | - | - |
| A-C | 647.45 |  | - | - | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 64.73 | 64.33 | 0.00 | 332.82 | 0.194 | 0.24 | 13.388 | B |
| B-A | 178.00 | 173.95 | 0.00 | 261.97 | 0.679 | 1.88 | 39.191 | E |
| C-AB | 97.32 | 96.93 | 0.00 | 881.28 | 0.110 | 0.24 | 4.592 | A |
| C-A | 561.63 | 561.63 | 0.00 | - | - | - | - | - |
| A-B | 188.79 | 188.79 | 0.00 | - | - | - | - | - |
| A-C | 773.12 | 0.00 | - | - | - | - | - |  |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 79.27 | 57.99 | 0.00 | 67.67 | 1.172 | 5.56 | 238.468 | F |
| B-A | 218.00 | 179.18 | 0.00 | 190.22 | 1.146 | 11.58 | 170.330 | F |
| C-AB | 169.98 | 168.80 | 0.00 | 964.82 | 0.176 | 0.54 | 4.531 | A |
| C-A | 637.07 | 637.07 | 0.00 | - | - | - | - | - |
| A-B | 231.21 | 231.21 | 0.00 | - | - | - | - | - |
| A-C | 946.88 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 79.27 | 68.80 | 0.00 | 72.73 | 1.090 | 8.18 | 382.942 | F |
| B-A | 218.00 | 186.33 | 0.00 | 189.40 | 1.151 | 19.50 | 311.914 | F |
| C-AB | 170.67 | 170.64 | 0.00 | 965.56 | 0.177 | 0.55 | 4.545 | A |
| C-A | 636.37 | 636.37 | 0.00 | - | - | - | - | - |
| A-B | 231.21 | 231.21 | 0.00 | - | - | - | - | - |
| A-C | 946.88 | 0.00 | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 64.73 | 89.30 | 0.00 | 107.73 | 0.601 | 2.03 | 201.645 | F |
| B-A | 178.00 | 242.80 | 0.00 | 258.37 | 0.689 | 3.30 | 179.800 | F |
| C-AB | 97.92 | 99.11 | 0.00 | 882.22 | 0.111 | 0.25 | 4.611 | A |
| C-A | 561.03 | 0.00 | - | - | - | - | - |  |
| A-B | 188.79 | 188.79 | 0.00 | - | - | - | - | - |
| A-C | 773.12 | 0.00 | - | - | - | - | - |  |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 54.21 | 61.77 | 0.00 | 434.08 | 0.125 | 0.14 | 9.861 | A |
| B-A | 149.06 | 158.46 | 0.00 | 313.06 | 0.476 | 0.95 | 24.543 | C |
| C-AB | 66.72 | 67.13 | 0.00 | 833.81 | 0.080 | 0.15 | 4.700 | A |
| C-A | 485.12 | 485.12 | 0.00 | - | - | - | - | - |
| A-B | 158.10 | 158.10 | 647.45 | 0.00 | - | - | - | - |
| A-C | 647.45 |  | - | - | - |  |  |  |

## (Default Analysis Set) - 2028 No Development, PM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> (HH:mm) | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 No <br> Development, <br> PM | 2028 No <br> Development | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 11.87 | $B$ |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) ( m ) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 579.192 | 0.097 | 0.246 | 0.155 | 0.351 |
| $\mathbf{1}$ | B-C | 704.828 | 0.100 | 0.252 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 726.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 156.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 666.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 166.000 | 560.000 |
|  | B | 116.000 | 0.000 | 40.000 |
|  | C | 601.000 | 65.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.23 | 0.77 |
|  | B | 0.74 | 0.00 | 0.26 |
|  | C | 0.90 | 0.10 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.10 | 8.83 | 0.11 | A |
| B-A | 0.45 | 23.33 | 0.81 | C |
| C-AB | 0.25 | 5.15 | 0.81 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 30.11 | 29.88 | 0.00 | 550.97 | 0.055 | 0.06 | 6.905 | A |
| B-A | 87.33 | 86.14 | 0.00 | 376.28 | 0.232 | 0.30 | 12.358 | B |
| C-AB | 105.69 | 104.47 | 0.00 | 824.04 | 0.128 | 0.31 | 5.003 | A |
| C-A | 395.71 | 395.71 | 0.00 | - | - | - | - | - |
| A-B | 124.97 | 124.97 | 0.00 | - | - | - | - | - |
| A-C | 421.60 | 0.00 | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 35.96 | 35.89 | 0.00 | 515.01 | 0.070 | 0.07 | 7.513 | A |
| B-A | 104.28 | 103.72 | 0.00 | 336.62 | 0.310 | 0.44 | 15.419 | C |
| C-AB | 152.13 | 151.49 | 0.00 | 872.98 | 0.174 | 0.47 | 5.000 | A |
| C-A | 446.59 | 446.59 | 0.00 | - | - | - | - | - |
| A-B | 149.23 | 149.23 | 0.00 | - | - | - | - | - |
| A-C | 503.43 | 0.00 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 44.04 | 43.91 | 0.00 | 453.24 | 0.097 | 0.11 | 8.792 | A |
| B-A | 127.72 | 126.30 | 0.00 | 281.98 | 0.453 | 0.79 | 22.914 | C |
| C-AB | 235.66 | 234.32 | 0.00 | 938.34 | 0.251 | 0.80 | 5.132 | A |
| C-A | 497.61 | 497.61 | 0.00 | - | - | - | - | - |
| A-B | 182.77 | 182.77 | 616.57 | 0.00 | - | - | - | - |
| A-C | 616.57 |  | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 44.04 | 44.04 | 0.00 | 451.59 | 0.098 | 0.11 | 8.832 | A |
| B-A | 127.72 | 127.65 | 0.00 | 281.77 | 0.453 | 0.81 | 23.329 | C |
| C-AB | 236.38 | 236.33 | 0.00 | 939.11 | 0.252 | 0.81 | 5.149 | A |
| C-A | 496.90 | 496.90 | 0.00 | - | - | - | - | - |
| A-B | 182.77 | 182.77 | 0.00 | - | - | - | - | - |
| A-C | 616.57 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 35.96 | 36.08 | 0.00 | 513.50 | 0.070 | 0.08 | 7.541 | A |
| B-A | 104.28 | 105.68 | 0.00 | 336.32 | 0.310 | 0.46 | 15.701 | C |
| C-AB | 152.90 | 154.20 | 0.00 | 874.13 | 0.175 | 0.49 | 5.025 | A |
| C-A | 445.82 | 445.82 | 0.00 | - | - | - | - | - |
| A-B | 149.23 | 149.23 | 0.00 | - | - | - | - | - |
| A-C | 503.43 | 503.43 | 0.00 | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 30.11 | 30.18 | 0.00 | 549.88 | 0.055 | 0.06 | 6.929 | A |
| B-A | 87.33 | 87.94 | 0.00 | 375.92 | 0.232 | 0.31 | 12.529 | B |
| C-AB | 106.59 | 107.26 | 0.00 | 824.87 | 0.129 | 0.32 | 5.032 | A |
| C-A | 394.81 | 394.81 | 0.00 | - | - | - | - | - |
| A-B | 124.97 | 124.97 | 421.60 | 0.00 | - | - | - | - |
| A-C | 421.60 |  | - | - | - |  |  |  |

## (Default Analysis Set) - 2023 With Development, AM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(\mathbf{H H : m m})$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, <br> AM | Locked |  |  |  |  |  |  |  |  |
| Development With | AM |  | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 163.04 | F |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 578.600 | 0.097 | 0.246 | 0.154 | 0.351 |
| $\mathbf{1}$ | B-C | 706.088 | 0.100 | 0.252 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 1024.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 260.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 734.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 198.000 | 826.000 |
|  | B | 191.000 | 0.000 | 69.000 |
|  | C | 701.000 | 33.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.19 | 0.81 |
|  | B | 0.73 | 0.00 | 0.27 |
|  | C | 0.96 | 0.04 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 1.07 | 274.62 | 5.98 | F |
| B-A | 1.05 | 218.93 | 12.81 | F |
| C-AB | 0.17 | 4.65 | 0.49 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 51.95 | 51.44 | 0.00 | 459.50 | 0.113 | 0.13 | 8.812 | A |
| B-A | 143.79 | 140.68 | 0.00 | 321.07 | 0.448 | 0.78 | 19.657 | C |
| C-AB | 63.72 | 63.17 | 0.00 | 839.86 | 0.076 | 0.14 | 4.634 | A |
| C-A | 488.87 | 488.87 | 0.00 | - | - | - | - | - |
| A-B | 149.06 | 149.06 | 0.00 | - | - | - | - | - |
| A-C | 621.86 | 0.00 | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 62.03 | 61.72 | 0.00 | 362.04 | 0.171 | 0.20 | 11.975 | B |
| B-A | 171.71 | 168.51 | 0.00 | 270.74 | 0.634 | 1.58 | 34.171 | D |
| C-AB | 93.24 | 92.89 | 0.00 | 888.58 | 0.105 | 0.22 | 4.528 | A |
| C-A | 566.61 | 566.61 | 0.00 | - | - | - | - | - |
| A-B | 178.00 | 178.00 | 0.00 | - | - | - | - | - |
| A-C | 742.56 | 742.56 | 0.00 | - | - | - | - | - |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 75.97 | 58.77 | 0.00 | 71.11 | 1.068 | 4.50 | 201.068 | F |
| B-A | 210.29 | 183.21 | 0.00 | 200.60 | 1.048 | 8.35 | 130.163 | F |
| C-AB | 161.57 | 160.52 | 0.00 | 972.92 | 0.166 | 0.49 | 4.437 | A |
| C-A | 646.58 | 646.58 | 0.00 | - | - | - | - | - |
| A-B | 218.00 | 218.00 | 0.00 | - | - | - | - | - |
| A-C | 909.44 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 75.97 | 70.08 | 0.00 | 77.01 | 0.987 | 5.98 | 274.623 | F |
| B-A | 210.29 | 192.44 | 0.00 | 199.68 | 1.053 | 12.81 | 218.929 | F |
| C-AB | 162.17 | 162.14 | 0.00 | 973.57 | 0.167 | 0.49 | 4.450 | A |
| C-A | 645.98 | 645.98 | 0.00 | - | - | - | - | - |
| A-B | 218.00 | 218.00 | 0.00 | - | - | - | - | - |
| A-C | 909.44 | 0.00 | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 62.03 | 84.61 | 0.00 | 254.69 | 0.244 | 0.33 | 23.93 | C |
| B-A | 171.71 | 214.72 | 0.00 | 268.73 | 0.639 | 2.06 | 89.751 | F |
| C-AB | 93.77 | 94.81 | 0.00 | 889.41 | 0.105 | 0.23 | 4.541 | A |
| C-A | 566.08 | 566.08 | 0.00 | - | - | - | - | - |
| A-B | 178.00 | 178.00 | 0.00 | - | - | - | - | - |
| A-C | 742.56 | 742.56 | 0.00 | - | - | - | - | - |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 51.95 | 52.75 | 0.00 | 451.84 | 0.115 | 0.13 | 9.039 | A |
| B-A | 143.79 | 148.66 | 0.00 | 321.06 | 0.448 | 0.84 | 21.421 | C |
| C-AB | 64.19 | 64.56 | 0.00 | 840.31 | 0.076 | 0.14 | 4.647 | A |
| C-A | 488.40 | 488.40 | 0.00 | - | - | - | - | - |
| A-B | 149.06 | 149.06 | 621.86 | 0.00 | - | - | - | - |
| A-C | 621.86 |  | - | - | - |  |  |  |

## (Default Analysis Set) - 2023 With Development, PM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, PM | Locked |  |  |  |  |  |  |  |  |
| Development With | RM |  | ONE <br> HOUR | $16: 45$ | $18: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 11.40 | B |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 578.515 | 0.097 | 0.245 | 0.154 | 0.351 |
| $\mathbf{1}$ | B-C | 706.268 | 0.100 | 0.252 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 725.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 150.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 648.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 158.000 | 567.000 |
|  | B | 110.000 | 0.000 | 40.000 |
|  | C | 585.000 | 63.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.22 | 0.78 |
|  | B | 0.73 | 0.00 | 0.27 |
|  | C | 0.90 | 0.10 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.10 | 8.67 | 0.11 | A |
| B-A | 0.43 | 22.08 | 0.73 | C |
| C-AB | 0.24 | 5.14 | 0.76 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 30.11 | 29.89 | 0.00 | 553.55 | 0.054 | 0.06 | 6.871 | A |
| B-A | 82.81 | 81.71 | 0.00 | 377.52 | 0.219 | 0.28 | 12.126 | B |
| C-AB | 100.61 | 99.45 | 0.00 | 815.85 | 0.123 | 0.29 | 5.029 | A |
| C-A | 387.23 | 387.23 | 0.00 | - | - | - | - | - |
| A-B | 118.95 | 118.95 | 0.00 | - | - | - | - | - |
| A-C | 426.87 | 0.00 | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 35.96 | 35.89 | 0.00 | 518.61 | 0.069 | 0.07 | 7.457 | A |
| B-A | 98.89 | 98.38 | 0.00 | 338.24 | 0.292 | 0.40 | 14.974 | B |
| C-AB | 144.13 | 143.53 | 0.00 | 862.79 | 0.167 | 0.44 | 5.013 | A |
| C-A | 438.41 | 438.41 | 0.00 | - | - | - | - | - |
| A-B | 142.04 | 142.04 | 0.00 | - | - | - | - | - |
| A-C | 509.72 | 0.00 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 44.04 | 43.92 | 0.00 | 460.61 | 0.096 | 0.10 | 8.636 | A |
| B-A | 121.11 | 119.87 | 0.00 | 284.14 | 0.426 | 0.71 | 21.750 | C |
| C-AB | 222.21 | 220.97 | 0.00 | 925.84 | 0.240 | 0.75 | 5.124 | A |
| C-A | 491.25 | 491.25 | 0.00 | - | - | - | - | - |
| A-B | 173.96 | 173.96 | 0.00 | - | - | - | - | - |
| A-C | 624.28 | 624.28 | 0.00 | - | - | - | - | - |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 44.04 | 44.04 | 0.00 | 459.27 | 0.096 | 0.11 | 8.669 | A |
| B-A | 121.11 | 121.05 | 0.00 | 283.94 | 0.427 | 0.73 | 22.080 | C |
| C-AB | 222.86 | 222.82 | 0.00 | 926.56 | 0.241 | 0.76 | 5.142 | A |
| C-A | 490.61 | 490.61 | 0.00 | - | - | - | - | - |
| A-B | 173.96 | 173.96 | 0.00 | - | - | - | - | - |
| A-C | 624.28 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 35.96 | 36.08 | 0.00 | 517.32 | 0.070 | 0.08 | 7.481 | A |
| B-A | 98.89 | 100.11 | 0.00 | 337.97 | 0.293 | 0.42 | 15.209 | C |
| C-AB | 144.83 | 146.03 | 0.00 | 863.85 | 0.168 | 0.46 | 5.037 | A |
| C-A | 437.71 | 437.71 | 0.00 | - | - | - | - | - |
| A-B | 142.04 | 142.04 | 0.00 | - | - | - | - | - |
| A-C | 509.72 | 509.72 | 0.00 | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 30.11 | 30.18 | 0.00 | 552.55 | 0.055 | 0.06 | 6.894 | A |
| B-A | 82.81 | 83.36 | 0.00 | 377.18 | 0.220 | 0.29 | 12.276 | B |
| C-AB | 101.45 | 102.08 | 0.00 | 816.62 | 0.124 | 0.30 | 5.052 | A |
| C-A | 386.40 | 386.40 | 0.00 | - | - | - | - | - |
| A-B | 118.95 | 118.95 | 0.00 | - | - | - | - | - |
| A-C | 426.87 | 0.00 | - | - | - | - | - |  |

## (Default Analysis Set) - 2028 With Development, AM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(\mathbf{H H : m m})$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, <br> AM | Locked |  |  |  |  |  |  |  |  |
| Development With | AM |  | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 284.34 | F |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) ( m ) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 578.159 | 0.097 | 0.245 | 0.154 | 0.350 |
| $\mathbf{1}$ | B-C | 707.025 | 0.100 | 0.252 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 1092.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 272.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 781.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 210.000 | 882.000 |
|  | B | 198.000 | 0.000 | 74.000 |
|  | C | 746.000 | 35.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.19 | 0.81 |
|  | B | 0.73 | 0.00 | 0.27 |
|  | C | 0.96 | 0.04 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 1.27 | 479.44 | 10.42 | F |
| B-A | 1.24 | 408.42 | 25.57 | F |
| C-AB | 0.20 | 4.61 | 0.67 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 55.71 | 55.14 | 0.00 | 438.39 | 0.127 | 0.14 | 9.379 | A |
| B-A | 149.06 | 145.39 | 0.00 | 303.79 | 0.491 | 0.92 | 22.257 | C |
| C-AB | 72.17 | 71.53 | 0.00 | 855.55 | 0.084 | 0.16 | 4.591 | A |
| C-A | 515.81 | 515.81 | 0.00 | - | - | - | - | - |
| A-B | 158.10 | 158.10 | 664.02 | 0.00 | - | - | - | - |
| A-C | 664.02 |  | - | - | - | - | - | - |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 66.52 | 66.03 | 0.00 | 311.22 | 0.214 | 0.27 | 14.653 | B |
| B-A | 178.00 | 173.17 | 0.00 | 250.02 | 0.712 | 2.12 | 44.289 | E |
| C-AB | 112.20 | 111.69 | 0.00 | 918.53 | 0.122 | 0.29 | 4.465 | A |
| C-A | 589.90 | 589.90 | 0.00 | - | - | - | - | - |
| A-B | 188.79 | 188.79 | 0.00 | - | - | - | - | - |
| A-C | 792.90 | 792.90 | 0.00 | - | - | - | - | - |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 81.48 | 56.31 | 0.00 | 64.14 | 1.270 | 6.56 | 277.863 | F |
| B-A | 218.00 | 168.52 | 0.00 | 175.99 | 1.239 | 14.49 | 214.473 | F |
| C-AB | 198.28 | 196.78 | 0.00 | 1008.18 | 0.197 | 0.66 | 4.446 | A |
| C-A | 661.62 | 661.62 | 0.00 | - | - | - | - | - |
| A-B | 231.21 | 231.21 | 0.00 | - | - | - | - | - |
| A-C | 971.10 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 81.48 | 66.03 | 0.00 | 68.40 | 1.191 | 10.42 | 479.437 | F |
| B-A | 218.00 | 173.71 | 0.00 | 175.25 | 1.244 | 25.57 | 408.418 | F |
| C-AB | 199.24 | 199.19 | 0.00 | 1009.16 | 0.197 | 0.67 | 4.462 | A |
| C-A | 660.66 | 660.66 | 0.00 | - | - | - | - | - |
| A-B | 231.21 | 231.21 | 0.00 | - | - | - | - | - |
| A-C | 971.10 | 0.00 | - | - | - | - | - |  |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 66.52 | 86.90 | 0.00 | 95.24 | 0.698 | 5.32 | 313.270 | F |
| B-A | 178.00 | 237.41 | 0.00 | 246.70 | 0.722 | 10.71 | 281.241 | F |
| C-AB | 113.04 | 114.53 | 0.00 | 919.83 | 0.123 | 0.30 | 4.486 | A |
| C-A | 589.07 | 589.07 | 0.00 | - | - | - | - | - |
| A-B | 188.79 | 188.79 | 0.00 | - | - | - | - | - |
| A-C | 792.90 | 792.90 | 0.00 | - | - | - | - | - |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 55.71 | 76.33 | 0.00 | 387.05 | 0.144 | 0.17 | 12.357 | B |
| B-A | 149.06 | 187.78 | 0.00 | 302.47 | 0.493 | 1.03 | 41.194 | E |
| C-AB | 72.77 | 73.31 | 0.00 | 856.15 | 0.085 | 0.17 | 4.606 | A |
| C-A | 515.20 | 515.20 | 0.00 | - | - | - | - | - |
| A-B | 158.10 | 158.10 | 664.02 | 0.00 | - | - | - | - |
| A-C | 664.02 |  | - | - | - |  |  |  |

## (Default Analysis Set) - 2028 With Development, PM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, PM | Locked |  |  |  |  |  |  |  |  |
| Development With | RM |  | ONE <br> HOUR | $16: 45$ | $18: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 12.60 | B |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn ( $\mathbf{m}$ ) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) ( m ) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15 m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 578.266 | 0.097 | 0.245 | 0.154 | 0.351 |
| $\mathbf{1}$ | B-C | 706.798 | 0.100 | 0.252 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Pehicle Mix <br> Source | Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 769.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 159.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 691.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 166.000 | 603.000 |
|  | B | 116.000 | 0.000 | 43.000 |
|  | C | 624.000 | 67.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.22 | 0.78 |
|  | B | 0.73 | 0.00 | 0.27 |
|  | C | 0.90 | 0.10 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.11 | 9.31 | 0.12 | A |
| B-A | 0.48 | 26.17 | 0.91 | D |
| C-AB | 0.27 | 5.23 | 0.92 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 32.37 | 32.12 | 0.00 | 543.59 | 0.060 | 0.06 | 7.035 | A |
| B-A | 87.33 | 86.09 | 0.00 | 364.53 | 0.240 | 0.31 | 12.874 | B |
| C-AB | 112.64 | 111.32 | 0.00 | 830.61 | 0.136 | 0.33 | 5.005 | A |
| C-A | 407.58 | 407.58 | 0.00 | - | - | - | - | - |
| A-B | 124.97 | 124.97 | 0.00 | - | - | - | - | - |
| A-C | 453.97 | 453.97 | 0.00 | - | - | - | - | - |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 38.66 | 38.58 | 0.00 | 504.95 | 0.077 | 0.08 | 7.718 | A |
| B-A | 104.28 | 103.66 | 0.00 | 322.74 | 0.323 | 0.47 | 16.383 | C |
| C-AB | 163.82 | 163.10 | 0.00 | 881.86 | 0.186 | 0.51 | 5.020 | A |
| C-A | 457.37 | 457.37 | 0.00 | - | - | - | - | - |
| A-B | 149.23 | 149.23 | 0.00 | - | - | - | - | - |
| A-C | 542.08 | 0.00 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 47.34 | 47.19 | 0.00 | 436.07 | 0.109 | 0.12 | 9.250 | A |
| B-A | 127.72 | 126.05 | 0.00 | 265.17 | 0.482 | 0.88 | 25.569 | D |
| C-AB | 256.90 | 255.33 | 0.00 | 949.89 | 0.270 | 0.90 | 5.202 | A |
| C-A | 503.91 | 503.91 | 0.00 | - | - | - | - | - |
| A-B | 182.77 | 182.77 | 663.92 | 0.00 | - | - | - | - |
| A-C | 663.92 |  | - | - | - | - | - |  |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 47.34 | 47.34 | 0.00 | 433.84 | 0.109 | 0.12 | 9.313 | A |
| B-A | 127.72 | 127.63 | 0.00 | 264.92 | 0.482 | 0.91 | 26.173 | D |
| C-AB | 257.76 | 257.71 | 0.00 | 950.80 | 0.271 | 0.92 | 5.227 | A |
| C-A | 503.04 | 503.04 | 0.00 | - | - | - | - | - |
| A-B | 182.77 | 182.77 | 0.00 | - | - | - | - | - |
| A-C | 663.92 | 0.00 | - | - | - | - | - |  |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 38.66 | 38.81 | 0.00 | 503.09 | 0.077 | 0.08 | 7.757 | A |
| B-A | 104.28 | 105.94 | 0.00 | 322.41 | 0.323 | 0.49 | 16.754 | C |
| C-AB | 164.74 | 166.26 | 0.00 | 883.21 | 0.187 | 0.54 | 5.048 | A |
| C-A | 456.46 | 456.46 | 0.00 | - | - | - | - | - |
| A-B | 149.23 | 149.23 | 0.00 | - | - | - | - | - |
| A-C | 542.08 | 0.00 | - | - | - | - | - |  |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 32.37 | 32.45 | 0.00 | 542.39 | 0.060 | 0.06 | 7.062 | A |
| B-A | 87.33 | 88.01 | 0.00 | 364.14 | 0.240 | 0.32 | 13.070 | B |
| C-AB | 113.66 | 114.42 | 0.00 | 831.55 | 0.137 | 0.35 | 5.037 | A |
| C-A | 406.56 | 406.56 | 0.00 | - | - | - | - | - |
| A-B | 124.97 | 124.97 | 0.00 | - | - | - | - | - |
| A-C | 453.97 | 0.00 | - | - | - | - | - |  |

## (Default Analysis Set) - 2023 With Development (No Growth), AM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time ( $\mathrm{HH}: \mathrm{mm}$ ) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With Development (No Growth), AM | 2023 With Development (No Growth) | AM |  | $\begin{aligned} & \text { ONE } \\ & \text { HOUR } \end{aligned}$ | 07:45 | 09:15 | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 50.24 | F |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn (m) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 579.206 | 0.097 | 0.246 | 0.155 | 0.351 |
| $\mathbf{1}$ | B-C | 704.798 | 0.100 | 0.252 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | Pactor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions <br> Vercentages | 2.00 |  |  |  |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 927.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 242.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 665.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 182.000 | 745.000 |
|  | B | 180.000 | 0.000 | 62.000 |
|  | C | 635.000 | 30.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.20 | 0.80 |
|  | B | 0.74 | 0.00 | 0.26 |
|  | C | 0.95 | 0.05 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.38 | 31.54 | 0.58 | D |
| B-A | 0.84 | 79.99 | 4.05 | F |
| C-AB | 0.13 | 4.72 | 0.34 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 46.68 | 46.26 | 0.00 | 486.90 | 0.096 | 0.10 | 8.162 | A |
| B-A | 135.51 | 133.02 | 0.00 | 346.10 | 0.392 | 0.62 | 16.710 | C |
| C-AB | 52.68 | 52.25 | 0.00 | 816.78 | 0.065 | 0.11 | 4.709 | A |
| C-A | 447.97 | 447.97 | 0.00 | - | - | - | - | - |
| A-B | 137.02 | 137.02 | 0.00 | - | - | - | - | - |
| A-C | 560.88 | 0.00 | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 55.74 | 55.55 | 0.00 | 416.81 | 0.134 | 0.15 | 9.960 | A |
| B-A | 161.82 | 159.90 | 0.00 | 300.65 | 0.538 | 1.10 | 25.227 | D |
| C-AB | 75.48 | 75.23 | 0.00 | 860.42 | 0.088 | 0.17 | 4.588 | A |
| C-A | 522.34 | 522.34 | 0.00 | - | - | - | - | - |
| A-B | 163.61 | 163.61 | 669.74 | 0.00 | - | - | - | - |
| A-C | 669.74 |  | - | - | - | - | - | - |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 68.26 | 67.11 | 0.00 | 217.02 | 0.315 | 0.44 | 23.836 | C |
| B-A | 198.18 | 188.50 | 0.00 | 237.34 | 0.835 | 3.52 | 64.111 | F |
| C-AB | 125.13 | 124.47 | 0.00 | 934.02 | 0.134 | 0.34 | 4.450 | A |
| C-A | 607.05 | 607.05 | 0.00 | - | - | - | - | - |
| A-B | 200.39 | 200.39 | 0.00 | - | - | - | - | - |
| A-C | 820.26 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 68.26 | 67.73 | 0.00 | 181.22 | 0.377 | 0.58 | 31.544 | D |
| B-A | 198.18 | 196.06 | 0.00 | 237.22 | 0.835 | 4.05 | 79.991 | F |
| C-AB | 125.47 | 125.46 | 0.00 | 934.43 | 0.134 | 0.34 | 4.459 | A |
| C-A | 606.71 | 606.71 | 0.00 | - | - | - | - | - |
| A-B | 200.39 | 200.39 | 0.00 | - | - | - | - | - |
| A-C | 820.26 | 820.26 | 0.00 | - | - | - | - | - |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 55.74 | 57.38 | 0.00 | 398.50 | 0.140 | 0.16 | 10.601 | B |
| B-A | 161.82 | 173.08 | 0.00 | 300.71 | 0.538 | 1.24 | 30.323 | D |
| C-AB | 75.80 | 76.46 | 0.00 | 860.95 | 0.088 | 0.18 | 4.597 | A |
| C-A | 522.02 | 522.02 | 0.00 | - | - | - | - | - |
| A-B | 163.61 | 163.61 | 669.74 | 0.00 | - | - | - | - |
| A-C | 669.74 |  | - | - | - | - | - | - |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 46.68 | 46.90 | 0.00 | 483.12 | 0.097 | 0.11 | 8.256 | A |
| B-A | 135.51 | 137.81 | 0.00 | 346.10 | 0.392 | 0.66 | 17.466 | C |
| C-AB | 53.02 | 53.28 | 0.00 | 817.10 | 0.065 | 0.11 | 4.716 | A |
| C-A | 447.63 | 447.63 | 0.00 | - | - | - | - | - |
| A-B | 137.02 | 137.02 | 0.00 | - | - | - | - | - |
| A-C | 560.88 | 560.88 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2023 With Development (No Growth), PM

Data Errors and Warnings
No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | $\begin{aligned} & \text { Model Start } \\ & \text { Time } \\ & (\mathrm{HH}: \mathrm{mm}) \end{aligned}$ | Model Finish Time ( $\mathrm{HH}: \mathrm{mm}$ ) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With Development (No Growth), PM | 2023 With Development (No Growth) | PM |  | ONE <br> HOUR | 16:45 | 18:15 | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 10.23 | B |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Width of kerbed central reserve ( m ) | Has right turn bay | Width For Right Turn (m) | Visibility For Right Turn (m) | Blocks? | Blocking Queue (PCU) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 578.772 | 0.097 | 0.246 | 0.155 | 0.351 |
| $\mathbf{1}$ | B-C | 705.722 | 0.100 | 0.252 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 663.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 137.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 585.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 147.000 | 516.000 |
|  | B | 101.000 | 0.000 | 36.000 |
|  | C | 529.000 | 56.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.22 | 0.78 |
|  | B | 0.74 | 0.00 | 0.26 |
|  | C | 0.90 | 0.10 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.08 | 8.00 | 0.09 | A |
| B-A | 0.36 | 17.97 | 0.55 | C |
| C-AB | 0.20 | 5.07 | 0.57 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 27.10 | 26.90 | 0.00 | 567.55 | 0.048 | 0.05 | 6.657 | A |
| B-A | 76.04 | 75.10 | 0.00 | 396.29 | 0.192 | 0.23 | 11.176 | B |
| C-AB | 83.10 | 82.21 | 0.00 | 794.65 | 0.105 | 0.22 | 5.052 | A |
| C-A | 357.32 | 0.00 | - | - | - | - | - |  |
| A-B | 110.67 | 110.67 | 0.00 | - | - | - | - | - |
| A-C | 388.47 | 0.00 | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 32.36 | 32.31 | 0.00 | 537.16 | 0.060 | 0.06 | 7.130 | A |
| B-A | 90.80 | 90.41 | 0.00 | 360.67 | 0.252 | 0.33 | 13.302 | B |
| C-AB | 114.46 | 113.99 | 0.00 | 832.09 | 0.138 | 0.34 | 5.021 | A |
| C-A | 411.44 | 411.44 | 0.00 | - | - | - | - | - |
| A-B | 132.15 | 132.15 | 0.00 | - | - | - | - | - |
| A-C | 463.87 | 0.00 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 39.64 | 39.54 | 0.00 | 490.16 | 0.081 | 0.09 | 7.987 | A |
| B-A | 111.20 | 110.37 | 0.00 | 311.57 | 0.357 | 0.54 | 17.817 | C |
| C-AB | 175.47 | 174.58 | 0.00 | 891.41 | 0.197 | 0.56 | 5.033 | A |
| C-A | 468.63 | 468.63 | 0.00 | - | - | - | - | - |
| A-B | 161.85 | 161.85 | 0.00 | - | - | - | - | - |
| A-C | 568.13 | 568.13 | 0.00 | - | - | - | - | - |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 39.64 | 39.63 | 0.00 | 489.46 | 0.081 | 0.09 | 8.002 | A |
| B-A | 111.20 | 111.17 | 0.00 | 311.43 | 0.357 | 0.55 | 17.968 | C |
| C-AB | 175.87 | 175.85 | 0.00 | 891.91 | 0.197 | 0.57 | 5.044 | A |
| C-A | 468.22 | 468.22 | 0.00 | - | - | - | - | - |
| A-B | 161.85 | 161.85 | 0.00 | - | - | - | - | - |
| A-C | 568.13 | 568.13 | 0.00 | - | - | - | - | - |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 32.36 | 32.45 | 0.00 | 536.35 | 0.060 | 0.06 | 7.144 | A |
| B-A | 90.80 | 91.61 | 0.00 | 360.46 | 0.252 | 0.34 | 13.430 | B |
| C-AB | 114.93 | 115.79 | 0.00 | 832.81 | 0.138 | 0.35 | 5.036 | A |
| C-A | 410.97 | 410.97 | 0.00 | - | - | - | - | - |
| A-B | 132.15 | 132.15 | 0.00 | - | - | - | - | - |
| A-C | 463.87 | 463.87 | 0.00 | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 27.10 | 27.16 | 0.00 | 566.78 | 0.048 | 0.05 | 6.671 | A |
| B-A | 76.04 | 76.45 | 0.00 | 396.02 | 0.192 | 0.24 | 11.278 | B |
| C-AB | 83.72 | 84.20 | 0.00 | 795.20 | 0.105 | 0.23 | 5.074 | A |
| C-A | 356.70 | 356.70 | 0.00 | - | - | - | - | - |
| A-B | 110.67 | 110.67 | 0.00 | - | - | - | - | - |
| A-C | 388.47 | 388.47 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2023 No Development (No Growth), AM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model <br> Finish Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length <br> $(\mathbf{m i n})$ | Time <br> Segment <br> Length <br> $(\mathbf{m i n})$ | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No <br> Development (No <br> Growth), AM | 2023 No <br> Levelopment (No <br> Growth) | AM |  | ONE <br> HOUR | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 39.94 | E |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn (m) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | Lane Width (Right) (m) | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right ( m ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 579.614 | 0.097 | 0.246 | 0.155 | 0.351 |
| $\mathbf{1}$ | B-C | 703.928 | 0.099 | 0.251 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 904.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 240.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 616.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 182.000 | 722.000 |
|  | B | 180.000 | 0.000 | 60.000 |
|  | C | 588.000 | 28.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.20 | 0.80 |
|  | B | 0.75 | 0.00 | 0.25 |
|  | C | 0.95 | 0.05 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | 1.000 | 1.000 |
|  | B | C |  |  |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.28 | 20.92 | 0.37 | C |
| B-A | 0.78 | 61.81 | 3.17 | F |
| C-AB | 0.12 | 4.81 | 0.28 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (07:45-08:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 45.17 | 44.77 | 0.00 | 492.75 | 0.092 | 0.10 | 8.028 | A |
| B-A | 135.51 | 133.13 | 0.00 | 356.62 | 0.380 | 0.60 | 15.947 | C |
| C-AB | 46.39 | 46.02 | 0.00 | 794.71 | 0.058 | 0.09 | 4.808 | A |
| C-A | 417.36 | 417.36 | 0.00 | - | - | - | - | - |
| A-B | 137.02 | 137.02 | 0.00 | - | - | - | - | - |
| A-C | 543.56 | 0.00 | - | - | - | - | - |  |

Main results: (08:00-08:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 53.94 | 53.77 | 0.00 | 428.08 | 0.126 | 0.14 | 9.614 | A |
| B-A | 161.82 | 160.13 | 0.00 | 313.17 | 0.517 | 1.02 | 23.260 | C |
| C-AB | 65.75 | 65.55 | 0.00 | 833.99 | 0.079 | 0.14 | 4.686 | A |
| C-A | 488.02 | 488.02 | 0.00 | - | - | - | - | - |
| A-B | 163.61 | 163.61 | 649.06 | 0.00 | - | - | - | - |
| A-C | 649.06 |  | - | - | - | - | - | - |

Main results: (08:15-08:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 66.06 | 65.31 | 0.00 | 260.14 | 0.254 | 0.33 | 18.407 | C |
| B-A | 198.18 | 190.79 | 0.00 | 252.70 | 0.784 | 2.87 | 52.879 | F |
| C-AB | 106.53 | 106.01 | 0.00 | 899.45 | 0.118 | 0.27 | 4.540 | A |
| C-A | 571.70 | 571.70 | 0.00 | - | - | - | - | - |
| A-B | 200.39 | 200.39 | 0.00 | - | - | - | - | - |
| A-C | 794.94 | 0.00 | - | - | - | - | - |  |

Main results: (08:30-08:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 66.06 | 65.89 | 0.00 | 237.78 | 0.278 | 0.37 | 20.917 | C |
| B-A | 198.18 | 196.98 | 0.00 | 252.65 | 0.784 | 3.17 | 61.815 | F |
| C-AB | 106.78 | 106.77 | 0.00 | 899.76 | 0.119 | 0.28 | 4.545 | A |
| C-A | 571.45 | 571.45 | 0.00 | - | - | - | - | - |
| A-B | 200.39 | 200.39 | 0.00 | - | - | - | - | - |
| A-C | 794.94 | 794.94 | 0.00 | - | - | - | - | - |

Main results: (08:45-09:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 53.94 | 54.83 | 0.00 | 415.79 | 0.130 | 0.15 | 9.998 | A |
| B-A | 161.82 | 169.98 | 0.00 | 313.25 | 0.517 | 1.13 | 26.379 | D |
| C-AB | 66.01 | 66.51 | 0.00 | 834.40 | 0.079 | 0.15 | 4.695 | A |
| C-A | 487.77 | 487.77 | 0.00 | - | - | - | - | - |
| A-B | 163.61 | 163.61 | 649.06 | 0.00 | - | - | - | - |
| A-C | 649.06 |  | - | - | - | - | - | - |

Main results: (09:00-09:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 45.17 | 45.36 | 0.00 | 489.50 | 0.092 | 0.10 | 8.108 | A |
| B-A | 135.51 | 137.49 | 0.00 | 356.62 | 0.380 | 0.63 | 16.571 | C |
| C-AB | 46.67 | 46.88 | 0.00 | 794.97 | 0.059 | 0.10 | 4.814 | A |
| C-A | 417.08 | 417.08 | 0.00 | - | - | - | - | - |
| A-B | 137.02 | 137.02 | 0.00 | - | - | - | - | - |
| A-C | 543.56 | 543.56 | 0.00 | - | - | - | - | - |

## (Default Analysis Set) - 2023 No Development (No Growth), PM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | N/A |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No <br> Development (No Growth), PM | 2023 No Development (No Growth) | PM |  | ONE <br> HOUR | 16:45 | 18:15 | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Major Road Direction | Arm Order | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | T-Junction | Two-way | A,B,C | 9.89 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description | Arm Type |
| :---: | :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd (West) |  | Major |
| B | B | Cog Rd |  | Minor |
| C | C | B4267 South Rd (East) |  | Major |

## Major Arm Geometry

| Arm | Width of <br> carriageway $(\mathrm{m})$ | Has kerbed central <br> reserve | Width of kerbed central <br> reserve $(\mathrm{m})$ | Has right <br> turn bay | Width For Right <br> Turn $(\mathrm{m})$ | Visibility For Right <br> Turn (m) | Blocks? | Blocking Queue <br> $($ PCCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 7.80 |  | 0.00 |  | 2.20 | 85.00 | $\checkmark$ | 0.00 |

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

| Arm | Minor Arm Type | Lane Width (m) | Lane Width (Left) (m) | $\begin{gathered} \text { Lane } \\ \text { Width } \\ \text { (Right) }(\mathrm{m}) \end{gathered}$ | Width at give-way (m) | Width at 5m (m) | Width at 10m (m) | Width at 15m (m) | Width at 20m (m) | Estimate <br> Flare Length | Flare Length (PCU) | Visibility To Left ( m ) | Visibility To Right (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | One lane plus flare |  |  |  | 10.00 | 10.00 | 6.50 | 4.20 | 3.10 | $\checkmark$ | 2.00 | 34 | 37 |

## Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept <br> (PCU/hr) | Slope <br> for <br> A-B | Slope <br> for <br> A-C | Slope <br> for <br> C-A | Slope <br> for <br> C-B |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | B-A | 579.861 | 0.097 | 0.246 | 0.155 | 0.351 |
| $\mathbf{1}$ | B-C | 703.404 | 0.099 | 0.251 | - | - |
| $\mathbf{1}$ | C-B | 623.188 | 0.223 | 0.223 | - | - |

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Vary Over Entry |  |  |  |  |  |
|  |  | 2.00 |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 620.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 134.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 560.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 147.000 | 473.000 |
|  | B | 101.000 | 0.000 | 33.000 |
|  | C | 506.000 | 54.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.24 | 0.76 |
|  | B | 0.75 | 0.00 | 0.25 |
|  | C | 0.90 | 0.10 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| B-C | 0.07 | 7.72 | 0.08 | A |
| B-A | 0.34 | 16.57 | 0.51 | C |
| C-AB | 0.18 | 5.08 | 0.50 | A |
| C-A | - | - | - | - |
| A-B | - | - | - | - |
| A-C | - | - | - | - |

## Main Results for each time segment

Main results: (16:45-17:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 24.84 | 24.66 | 0.00 | 574.32 | 0.043 | 0.04 | 6.548 | A |
| B-A | 76.04 | 75.14 | 0.00 | 408.21 | 0.186 | 0.23 | 10.780 | B |
| C-AB | 77.54 | 76.73 | 0.00 | 788.32 | 0.098 | 0.20 | 5.058 | A |
| C-A | 344.06 | 344.06 | 0.00 | - | - | - | - | - |
| A-B | 110.67 | 110.67 | 0.00 | - | - | - | - | - |
| A-C | 356.10 | 0.00 | - | - | - | - | - |  |

Main results: (17:00-17:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 29.67 | 29.62 | 0.00 | 546.10 | 0.054 | 0.06 | 6.969 | A |
| B-A | 90.80 | 90.44 | 0.00 | 374.71 | 0.242 | 0.31 | 12.647 | B |
| C-AB | 106.01 | 105.59 | 0.00 | 824.17 | 0.129 | 0.31 | 5.015 | A |
| C-A | 397.42 | 397.42 | 0.00 | - | - | - | - | - |
| A-B | 132.15 | 132.15 | 0.00 | - | - | - | - | - |
| A-C | 425.22 | 0.00 | - | - | - | - | - |  |

Main results: (17:15-17:30)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 36.33 | 36.25 | 0.00 | 503.10 | 0.072 | 0.08 | 7.710 | A |
| B-A | 111.20 | 110.47 | 0.00 | 328.53 | 0.338 | 0.50 | 16.450 | C |
| C-AB | 160.28 | 159.52 | 0.00 | 880.39 | 0.182 | 0.50 | 5.005 | A |
| C-A | 456.29 | 456.29 | 0.00 | - | - | - | - | - |
| A-B | 161.85 | 161.85 | 0.00 | - | - | - | - | - |
| A-C | 520.78 | 520.78 | 0.00 | - | - | - | - | - |

Main results: (17:30-17:45)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 36.33 | 36.33 | 0.00 | 502.53 | 0.072 | 0.08 | 7.721 | A |
| B-A | 111.20 | 111.18 | 0.00 | 328.41 | 0.339 | 0.51 | 16.567 | C |
| C-AB | 160.62 | 160.60 | 0.00 | 880.81 | 0.182 | 0.50 | 5.015 | A |
| C-A | 455.95 | 455.95 | 0.00 | - | - | - | - | - |
| A-B | 161.85 | 161.85 | 0.00 | - | - | - | - | - |
| A-C | 520.78 | 520.78 | 0.00 | - | - | - | - | - |

Main results: (17:45-18:00)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 29.67 | 29.74 | 0.00 | 545.41 | 0.054 | 0.06 | 6.981 | A |
| B-A | 90.80 | 91.51 | 0.00 | 374.52 | 0.242 | 0.33 | 12.751 | B |
| C-AB | 106.41 | 107.15 | 0.00 | 824.79 | 0.129 | 0.32 | 5.030 | A |
| C-A | 397.02 | 397.02 | 0.00 | - | - | - | - | - |
| A-B | 132.15 | 132.15 | 0.00 | - | - | - | - | - |
| A-C | 425.22 | 425.22 | 0.00 | - | - | - | - | - |

Main results: (18:00-18:15)

| Stream | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B-C | 24.84 | 24.89 | 0.00 | 573.62 | 0.043 | 0.05 | 6.560 | A |
| B-A | 76.04 | 76.41 | 0.00 | 407.96 | 0.186 | 0.23 | 10.869 | B |
| C-AB | 78.08 | 78.52 | 0.00 | 788.80 | 0.099 | 0.21 | 5.076 | A |
| C-A | 343.52 | 343.52 | 0.00 | - | - | - | - | - |
| A-B | 110.67 | 110.67 | 0.00 | - | - | - | - | - |
| A-C | 356.10 | 356.10 | 0.00 | - | - | - | - | - |

## Junctions 8

## ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
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Filename: Jn2 - B4267-Hayes Rd - Sully Rd Rbt.arc8
Path: P:IGBCFAITP\HB\Projects\5133321 - Sully Sport \& Social Club - TAYL3270104 - Analysis\Junction Modelling Report generation date: 25/06/2015 08:36:55
" (Default Analysis Set) - 2023 With Development, AM
" (Default Analysis Set) - 2023 With Development, PM
" (Default Analysis Set) - 2028 With Development, AM
" (Default Analysis Set) - 2028 With Development, PM
" (Default Analysis Set) - 2023 No Development, AM
" (Default Analysis Set) - 2023 No Development, PM
" (Default Analysis Set) - 2028 No Development, AM
" (Default Analysis Set) - 2028 No Development, PM

## Summary of junction performance

|  | AM |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Queue (PCU) | Delay (s) | RFC | LOS |
|  | A1-2023 With Development |  |  |  |
| Arm A | 0.90 | 3.29 | 0.47 | A |
| Arm B | 0.36 | 2.59 | 0.26 | A |
| Arm C | 1.12 | 4.39 | 0.53 | A |

[^15]"D5-2023 With Development, AM " model duration: 07:45-09:15
"D6 - 2023 With Development, PM" model duration: 16:45-18:15 "D7-2028 With Development, AM" model duration: 07:45-09:15 "D8 - 2028 With Development, PM" model duration: 16:45-18:15 "D9-2023 No Development, AM" model duration: 07:45-09:15 "D10-2023 No Development, PM" model duration: 16:45-18:15 "D11-2028 No Development, AM" model duration: 07:45-09:15 "D12-2028 No Development, PM" model duration: 16:45-18:15

File summary

| Title | (untitled) |
| :--- | :---: |
| Location |  |
| Site Number |  |
| Date | $09 / 10 / 2014$ |
| Version |  |
| Status | (new file) |
| Identifier |  |
| Client |  |
| Jobnumber |  |
| Enumerator | TAYL3270 |
| Description |  |

Analysis Options

| Vehicle Length <br> $(\mathbf{m})$ | Do Queue <br> Variations | Calculate Residual <br> Capacity | Residual Capacity Criteria <br> Type | RFC <br> Threshold | Average Delay Threshold <br> $(\mathbf{s})$ | Queue Threshold <br> $($ PCU $)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5.75 |  |  | N/A | 0.85 | 36.00 |  |

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 |

## (Default Analysis Set) - 2023 With Development, AM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | ARCADY |  |  | 100.000 |  |

Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(\mathbf{H H : m m})$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, <br> AM | 2023 With <br> Development | AM |  | ONE | HOUR | $07: 45$ | $09: 15$ | 90 | 15 |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | Roundabout | A,B,C |  |  | 3.57 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description |
| :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd |  |
| B | B | Hayes Rd |  |
| C | C | B4267 Sully Moors Rd |  |

## Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) |
| :---: | :---: | :---: |
| A | 0.00 | 99999.00 |
| B | 0.00 | 99999.00 |
| C | 0.00 | 99999.00 |

## Roundabout Geometry

| Arm | V - Approach road half- <br> width $(\mathbf{m})$ | $\mathrm{E}-$ Entry width <br> $(\mathrm{m})$ | I' - Effective flare <br> length $(\mathbf{m})$ | R - Entry radius <br> $(\mathbf{m})$ | D - Inscribed circle <br> diameter $(\mathbf{m})$ | PHI - Conflict (entry) <br> angle $($ deg $)$ | Exit <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 4.10 | 9.30 | 26.70 | 29.30 | 35.20 | 34.00 |  |
| B | 6.00 | 9.50 | 27.00 | 23.50 | 35.20 | 29.00 |  |
| C | 3.60 | 10.20 | 22.70 | 33.00 | 35.20 | 55.00 |  |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A |  | (calculated) | (calculated) | 0.756 | 2216.594 |
| B |  | (calculated) | (calculated) | 0.836 | 2595.177 |
| C |  | (calculated) | (calculated) | 0.688 | 1983.226 |

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

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Fora HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Proportions Over Entry |  |  |  |  |  |
| $\checkmark$ |  |  |  |  |  |  |  |  |  |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 896.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 453.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 837.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 130.000 | 766.000 |
|  | B | 319.000 | 0.000 | 134.000 |
|  | C | 673.000 | 164.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.15 | 0.85 |
|  | B | 0.70 | 0.00 | 0.30 |
|  | C | 0.80 | 0.20 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| A | 0.47 | 3.29 | 0.90 | A |
| B | 0.26 | 2.59 | 0.36 | A |
| C | 0.53 | 4.39 | 1.12 | A |

## Main Results for each time segment

Main results: (07:45-08:00)

| Arm | Total Demand <br> $($ PCU/hr $)$ | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ PCU/hr $)$ | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 674.56 | 672.70 | 123.05 | 0.00 | 2123.52 | 0.318 | 0.46 | 2.478 |
| B | 341.04 | 340.27 | 575.10 | 0.00 | 2114.46 | 0.161 | 0.19 | 2.028 |
| C | 630.14 | 628.03 | 239.62 | 0.00 | 1818.39 | 0.347 | 0.53 | 3.019 |

Main results: (08:00-08:15)

| Arm | Total Demand <br> $($ PCU/hr $)$ | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ PCU/hr $)$ | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 805.49 | 804.87 | 147.28 | 0.00 | 2105.19 | 0.383 | 0.62 | 2.767 |
| L | 407.24 | 407.00 | 688.09 | 0.00 | 2020.01 | 0.202 | 0.25 | 2.231 |
| C | 752.45 | 751.66 | 286.61 | 0.00 | 1786.07 | 0.421 | 0.72 | 3.479 |

Main results: (08:15-08:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay <br> (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 986.51 | 985.40 | 180.26 | 0.00 | 2080.24 | 0.474 | 0.90 | 3.285 | A |
| B | 498.76 | 498.34 | 842.43 | 0.00 | 1891.01 | 0.264 | 0.36 | 2.585 | A |
| C | 921.55 | 920.00 | 350.93 | 0.00 | 1741.82 | 0.529 | 1.11 | 4.373 | A |

Main results: (08:30-08:45)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 986.51 | 986.50 | 180.56 | 0.00 | 2080.02 | 0.474 | 0.90 | 3.291 | A |
| B | 498.76 | 498.76 | 843.37 | 0.00 | 1890.22 | 0.264 | 0.36 | 2.586 | A |
| C | 921.55 | 921.53 | 351.22 | 0.00 | 1741.62 | 0.529 | 1.12 | 4.389 | A |

Main results: (08:45-09:00)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 805.49 | 806.59 | 147.73 | 0.00 | 2104.85 | 0.383 | 0.62 | 2.774 | A |
| B | 407.24 | 407.65 | 689.56 | 0.00 | 2018.79 | 0.202 | 0.25 | 2.234 | A |
| C | 752.45 | 753.99 | 287.07 | 0.00 | 1785.75 | 0.421 | 0.73 | 3.493 | A |

Main results: (09:00-09:15)

| Arm | Total Demand <br> $($ PCU/hr $)$ | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr $)$ | Capacity <br> $($ PCU/hr $)$ | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 674.56 | 675.18 | 123.62 | 0.00 | 2123.09 | 0.318 | 0.47 | 2.488 | A |
| B | 341.04 | 341.28 | 577.22 | 0.00 | 2112.69 | 0.161 | 0.19 | 2.032 | A |
| C | 630.14 | 630.94 | 240.33 | 0.00 | 1817.90 | 0.347 | 0.53 | 3.036 | A |

## (Default Analysis Set) - 2023 With Development, PM

Data Errors and Warnings
No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | ARCADY |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 With <br> Development, PM | 2023 With <br> Development | PM |  | ONE <br> HOUR | $16: 45$ | $18: 15$ | 90 | 15 |  |

## Junction Network

Junctions

| Junction | Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LoS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | Roundabout | A,B,C |  |  | 2.81 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description |
| :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd |  |
| B | B | Hayes Rd |  |
| C | C | B4267 Sully Moors Rd |  |

## Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) |
| :---: | :---: | :---: |
| A | 0.00 | 99999.00 |
| B | 0.00 | 99999.00 |
| C | 0.00 | 99999.00 |

## Roundabout Geometry

| Arm | V - Approach road half- <br> width $(\mathrm{m})$ | E-Entry width <br> $(\mathrm{m})$ | I' - Effective flare <br> length $(\mathrm{m})$ | R - Entry radius <br> $(\mathrm{m})$ | D - Inscribed circle <br> diameter $(\mathrm{m})$ | PHI - Conflict (entry) <br> angle (deg) | Exit <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 4.10 | 9.30 | 26.70 | 29.30 | 35.20 | 34.00 |  |
| B | 6.00 | 9.50 | 27.00 | 23.50 | 35.20 | 29.00 |  |
| C | 3.60 | 10.20 | 22.70 | 33.00 | 35.20 | 55.00 |  |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A |  | (calculated) | (calculated) | 0.756 | 2216.594 |
| B |  | (calculated) | (calculated) | 0.836 | 2595.177 |
| C |  | (calculated) | (calculated) | 0.688 | 1983.226 |

[^16]
## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | ```Estimate from entrylexit counts``` | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 693.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 377.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 693.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 150.000 | 543.000 |
|  | B | 180.000 | 0.000 | 197.000 |
|  | C | 577.000 | 116.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.22 | 0.78 |
|  | B | 0.48 | 0.00 | 0.52 |
|  | C | 0.83 | 0.17 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | 1.000 | 1.000 |
|  | B | C |  |  |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| A | 0.36 | 2.65 | 0.56 | A |
| B | 0.20 | 2.14 | 0.25 | A |
| C | 0.41 | 3.32 | 0.70 | A |

## Main Results for each time segment

Main results: (16:45-17:00)

| Arm | Total Demand <br> $($ PCU/hr $)$ | Entry Flow <br> $(\mathbf{P C U} / \mathrm{hr})$ | Circulating Flow <br> $(\mathbf{P C U} / \mathrm{hr})$ | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $(\mathbf{P C U} / \mathrm{hr})$ | RFC | End Queue <br> $(\mathbf{P C U})$ | Delay <br> $(\mathbf{s})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 521.73 | 520.45 | 87.08 | 0.00 | 2150.73 | 0.243 | 0.32 | 2.208 | A |
| B | 283.83 | 283.25 | 407.80 | 0.00 | 2254.31 | 0.126 | 0.14 | 1.826 | A |
| C | 521.73 | 520.21 | 135.24 | 0.00 | 1890.19 | 0.276 | 0.38 | 2.626 | A |

Main results: (17:00-17:15)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity <br> (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 622.99 | 622.63 | 104.20 | 0.00 | 2137.78 | 0.291 | 0.41 | 2.376 | A |
| B | 338.92 | 338.76 | 487.86 | 0.00 | 2187.38 | 0.155 | 0.18 | 1.947 | A |
| C | 622.99 | 622.53 | 161.74 | 0.00 | 1871.96 | 0.333 | 0.50 | 2.881 | A |

Main results: (17:15-17:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay <br> (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 763.01 | 762.41 | 127.58 | 0.00 | 2120.09 | 0.360 | 0.56 | 2.650 | A |
| B | 415.08 | 414.83 | 597.38 | 0.00 | 2095.84 | 0.198 | 0.25 | 2.141 | A |
| C | 763.01 | 762.19 | 198.06 | 0.00 | 1846.98 | 0.413 | 0.70 | 3.317 | A |

Main results: (17:30-17:45)

| Arm | Total Demand <br> $(\mathbf{P C U} / \mathrm{hr})$ | Entry Flow <br> $(\mathbf{P C U} / \mathrm{hr})$ | Circulating Flow <br> $(\mathbf{P C U} / \mathrm{hr})$ | Pedestrian Demand <br> $(\mathbf{P e d} / \mathrm{hr})$ | Capacity <br> $(\mathrm{PCU} / \mathrm{hr})$ | RFC | End Queue <br> $(\mathbf{P C U})$ | Delay <br> $(\mathbf{s})$ | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 763.01 | 763.00 | 127.72 | 0.00 | 2119.99 | 0.360 | 0.56 | 2.652 | A |
| B | 415.08 | 415.08 | 597.85 | 0.00 | 2095.45 | 0.198 | 0.25 | 2.142 | A |
| C | 763.01 | 763.00 | 198.18 | 0.00 | 1846.89 | 0.413 | 0.70 | 3.320 | A |

Main results: (17:45-18:00)

| Arm | Total Demand <br> $($ PCU/hr) | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 622.99 | 623.59 | 104.42 | 0.00 | 2137.61 | 0.291 | 0.41 | 2.380 | A |
| B | 338.92 | 339.17 | 488.61 | 0.00 | 2186.76 | 0.155 | 0.18 | 1.950 | A |
| C | 622.99 | 623.79 | 161.94 | 0.00 | 1871.83 | 0.333 | 0.50 | 2.888 | A |

Main results: (18:00-18:15)

| Arm | Total Demand <br> $($ PCU/hr $)$ | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr $)$ | Capacity <br> $($ PCU/hr $)$ | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 521.73 | 522.09 | 87.41 | 0.00 | 2150.48 | 0.243 | 0.32 | 2.210 |
| B | 283.83 | 283.98 | 409.09 | 0.00 | 2253.23 | 0.126 | 0.14 | 1.830 |
| C | 521.73 | 522.20 | 135.59 | 0.00 | 1889.95 | 0.276 | 0.38 | 2.632 |

## (Default Analysis Set) - 2028 With Development, AM

Data Errors and Warnings
No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | ARCADY |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length $(\mathbf{m i n})$ | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 With <br> Development, <br> AM | 20cked |  |  |  |  |  |  |  |  |
| Development | AM |  | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | Roundabout | A,B,C |  |  | 3.86 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description |
| :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd |  |
| B | B | Hayes Rd |  |
| C | C | B4267 Sully Moors Rd |  |

## Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) |
| :---: | :---: | :---: |
| A | 0.00 | 99999.00 |
| B | 0.00 | 99999.00 |
| C | 0.00 | 99999.00 |

## Roundabout Geometry

| Arm | V - Approach road halfwidth (m) | E-Entry width <br> (m) | I' - Effective flare length (m) | R - Entry radius ( m ) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | $\begin{aligned} & \hline \text { Exit } \\ & \text { Only } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 4.10 | 9.30 | 26.70 | 29.30 | 35.20 | 34.00 |  |
| B | 6.00 | 9.50 | 27.00 | 23.50 | 35.20 | 29.00 |  |
| C | 3.60 | 10.20 | 22.70 | 33.00 | 35.20 | 55.00 |  |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A |  | (calculated) | (calculated) | 0.756 | 2216.594 |
| B |  | (calculated) | (calculated) | 0.836 | 2595.177 |
| C |  | (calculated) | (calculated) | 0.688 | 1983.226 |

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

## Traffic Flows

Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU <br> Factor for a HV (PCU) | Default Turning Proportions | Estimate from entrylexit counts | Turning Proportions Vary Over Time | Turning <br> Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 950.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 485.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 892.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 139.000 | 811.000 |
|  | B | 341.000 | 0.000 | 144.000 |
|  | C | 716.000 | 176.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.15 | 0.85 |
|  | B | 0.70 | 0.00 | 0.30 |
|  | C | 0.80 | 0.20 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| A | 0.51 | 3.51 | 1.02 | A |
| B | 0.29 | 2.74 | 0.41 | A |
| C | 0.57 | 4.85 | 1.31 | A |

## Main Results for each time segment

Main results: (07:45-08:00)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 715.21 | 713.18 | 132.04 | 0.00 | 2116.72 | 0.338 | 0.51 | 2.562 | A |
| B | 365.13 | 364.29 | 608.83 | 0.00 | 2086.27 | 0.175 | 0.21 | 2.089 | A |
| C | 671.54 | 669.19 | 256.13 | 0.00 | 1807.03 | 0.372 | 0.59 | 3.157 | A |

Main results: (08:00-08:15)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 854.03 | 853.33 | 158.04 | 0.00 | 2097.06 | 0.407 | 0.68 | 2.893 | A |
| B | 436.01 | 435.73 | 728.47 | 0.00 | 1986.26 | 0.220 | 0.28 | 2.321 | A |
| C | 801.89 | 800.96 | 306.36 | 0.00 | 1772.48 | 0.452 | 0.82 | 3.702 | A |

Main results: (08:15-08:30)

| Arm | Total Demand <br> $($ PCU/hr $)$ | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr $)$ | Capacity <br> $($ PCU/hr $)$ | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 1045.97 | 1044.65 | 193.40 | 0.00 | 2070.31 | 0.505 | 1.01 | 3.505 | A |
| B | 533.99 | 533.50 | 891.80 | 0.00 | 1849.74 | 0.289 | 0.40 | 2.735 | A |
| C | 982.11 | 980.17 | 375.10 | 0.00 | 1725.19 | 0.569 | 1.31 | 4.819 | A |

Main results: (08:30-08:45)

| Arm | Total Demand <br> (PCU/hr) | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 1045.97 | 1045.95 | 193.77 | 0.00 | 2070.02 | 0.505 | 1.02 | 3.514 |
| L | 533.99 | 533.99 | 892.91 | 0.00 | 1848.81 | 0.289 | 0.41 | 2.737 |
| C | 982.11 | 982.08 | 375.44 | 0.00 | 1724.95 | 0.569 | 1.31 | 4.845 |

Main results: (08:45-09:00)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay <br> (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 854.03 | 855.34 | 158.60 | 0.00 | 2096.63 | 0.407 | 0.69 | 2.904 | A |
| B | 436.01 | 436.50 | 730.19 | 0.00 | 1984.83 | 0.220 | 0.28 | 2.325 | A |
| C | 801.89 | 803.81 | 306.90 | 0.00 | 1772.11 | 0.453 | 0.83 | 3.724 | A |

Main results: (09:00-09:15)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay <br> (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 715.21 | 715.92 | 132.69 | 0.00 | 2116.23 | 0.338 | 0.51 | 2.573 | A |
| B | 365.13 | 365.41 | 611.17 | 0.00 | 2084.31 | 0.175 | 0.21 | 2.096 | A |
| C | 671.54 | 672.50 | 256.92 | 0.00 | 1806.49 | 0.372 | 0.59 | 3.179 | A |

## (Default Analysis Set) - 2028 With Development, PM

## Data Errors and Warnings

No errors or warnings

## Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | ARCADY |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \hline 2028 \text { With } \\ \text { Development, PM } \end{gathered}$ | 2028 With Development | PM |  | $\begin{gathered} \text { ONE } \\ \text { HOUR } \end{gathered}$ | 16:45 | 18:15 | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | Roundabout | A,B,C |  |  | 2.94 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description |
| :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd |  |
| B | B | Hayes Rd |  |
| C | C | B4267 Sully Moors Rd |  |

Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) |
| :---: | :---: | :---: |
| A | 0.00 | 99999.00 |
| B | 0.00 | 99999.00 |
| C | 0.00 | 99999.00 |

Roundabout Geometry

| Arm | V Approach road half- <br> width $(\mathbf{m})$ | E-Entry width <br> $(\mathbf{m})$ | I' - Effective flare <br> length $(\mathbf{m})$ | R - Entry radius <br> $(\mathbf{m})$ | D - Inscribed circle <br> diameter $(\mathbf{m})$ | PHI - Conflict (entry) <br> angle $($ deg $)$ | Exit <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 4.10 | 9.30 | 26.70 | 29.30 | 35.20 | 34.00 |  |
| B | 6.00 | 9.50 | 27.00 | 23.50 | 35.20 | 29.00 |  |
| C | 3.60 | 10.20 | 22.70 | 33.00 | 35.20 | 55.00 |  |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A |  | (calculated) | (calculated) | 0.756 | 2216.594 |
| B |  | (calculated) | (calculated) | 0.836 | 2595.177 |
| C |  | (calculated) | (calculated) | 0.688 | 1983.226 |

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

## Traffic Flows

## Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor a HV <br> for <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entry/exit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\checkmark$ | $\checkmark$ | HV <br> Vary Over Entry |  |  |  |  |  |  |
| $\checkmark$ | 2.00 |  |  |  |  |  |  |  |  |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 737.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 403.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 735.00 | 100.000 |

## Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 160.000 | 577.000 |
|  | B | 192.000 | 0.000 | 211.000 |
|  | C | 611.000 | 124.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.22 | 0.78 |
|  | B | 0.48 | 0.00 | 0.52 |
|  | C | 0.83 | 0.17 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| A | 0.38 | 2.76 | 0.62 | A |
| B | 0.21 | 2.22 | 0.27 | A |
| C | 0.44 | 3.50 | 0.78 | A |

## Main Results for each time segment

Main results: (16:45-17:00)

| Arm | Total Demand <br> (PCU/hr) | Entry Flow <br> (PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 554.85 | 553.46 | 93.07 | 0.00 | 2146.19 | 0.259 | 0.35 | 2.258 |
| B | 303.40 | 302.77 | 433.31 | 0.00 | 2232.98 | 0.136 | 0.16 | 1.864 |
| C | 553.35 | 551.69 | 144.25 | 0.00 | 1884.00 | 0.294 | 0.41 | 2.698 |

Main results: (17:00-17:15)

| Arm | Total Demand <br> (PCU/hr) | Entry Flow <br> (PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 662.55 | 662.14 | 111.38 | 0.00 | 2132.34 | 0.311 | 0.45 | 2.448 |
| B | 362.29 | 362.11 | 518.39 | 0.00 | 2161.86 | 0.168 | 0.20 | 2.000 |
| C | 660.75 | 660.22 | 172.52 | 0.00 | 1864.55 | 0.354 | 0.55 | 2.987 |

Main results: (17:15-17:30)

| Arm | Total Demand <br> $($ PCU/hr $)$ | Entry Flow <br> $(\mathbf{P C U} / \mathrm{hr})$ | Circulating Flow <br> $(\mathbf{P C U} / \mathrm{hr})$ | Pedestrian Demand <br> $($ Ped/hr) $)$ | Capacity <br> $(\mathbf{P C U} / \mathrm{hr})$ | RFC | End Queue <br> $(\mathrm{PCU})$ | Delay <br> $(\mathbf{s})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 811.45 | 810.77 | 136.37 | 0.00 | 2113.45 | 0.384 | 0.62 | 2.762 | A |
| B | 443.71 | 443.42 | 634.75 | 0.00 | 2064.60 | 0.215 | 0.27 | 2.220 | A |
| C | 809.25 | 808.31 | 211.26 | 0.00 | 1837.90 | 0.440 | 0.78 | 3.493 | A |

Main results: (17:30-17:45)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 811.45 | 811.45 | 136.52 | 0.00 | 2113.33 | 0.384 | 0.62 | 2.764 | A |
| B | 443.71 | 443.71 | 635.28 | 0.00 | 2064.16 | 0.215 | 0.27 | 2.221 | A |
| C | 809.25 | 809.24 | 211.40 | 0.00 | 1837.81 | 0.440 | 0.78 | 3.499 | A |

Main results: (17:45-18:00)

| Arm | Total Demand <br> (PCU/hr) | Entry Flow <br> (PCU/hr) | Circulating Flow <br> (PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 662.55 | 663.22 | 111.63 | 0.00 | 2132.16 | 0.311 | 0.45 | 2.453 | A |
| B | 362.29 | 362.57 | 519.24 | 0.00 | 2161.15 | 0.168 | 0.20 | 2.001 | A |
| C | 660.75 | 661.68 | 172.74 | 0.00 | 1864.40 | 0.354 | 0.55 | 2.994 | A |

Main results: (18:00-18:15)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 554.85 | 555.26 | 93.44 | 0.00 | 2145.91 | 0.259 | 0.35 | 2.265 | A |
| B | 303.40 | 303.58 | 434.72 | 0.00 | 2231.81 | 0.136 | 0.16 | 1.869 | A |
| C | 553.35 | 553.88 | 144.63 | 0.00 | 1883.73 | 0.294 | 0.42 | 2.709 | A |

## (Default Analysis Set) - 2023 No Development, AM

Data Errors and Warnings
No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | ARCADY |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> (HH:mm) | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Locked |  |  |  |  |  |  |  |  |  |
| 2023 No <br> Development, <br> AM | 2023 No <br> Development | AM |  | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | Roundabout | A,B,C |  |  | 3.45 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description |
| :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd |  |
| B | B | Hayes Rd |  |
| C | C | B4267 Sully Moors Rd |  |

Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) |
| :---: | :---: | :---: |
| A | 0.00 | 99999.00 |
| B | 0.00 | 99999.00 |
| C | 0.00 | 99999.00 |

Roundabout Geometry

| Arm | V Approach road half- <br> width $(\mathbf{m})$ | $\mathrm{E}-$ Entry width <br> $(\mathbf{m})$ | I' - Effective flare <br> length $(\mathbf{m})$ | R - Entry radius <br> $(\mathbf{m})$ | D - Inscribed circle <br> diameter $(\mathbf{m})$ | PHI - Conflict (entry) <br> angle $($ deg $)$ | Exit <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 4.10 | 9.30 | 26.70 | 29.30 | 35.20 | 34.00 |  |
| B | 6.00 | 9.50 | 27.00 | 23.50 | 35.20 |  |  |
| C | 3.60 | 10.20 | 22.70 | 33.00 | 35.20 | 55.00 |  |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A |  | (calculated) | (calculated) | 0.756 | 2216.594 |
| B |  | (calculated) | (calculated) | 0.836 | 2595.177 |
| C |  | (calculated) | (calculated) | 0.688 | 1983.226 |

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

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entrylexit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 850.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 445.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 822.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 123.000 | 727.000 |
|  | B | 311.000 | 0.000 | 134.000 |
|  | C | 658.000 | 164.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.14 | 0.86 |
|  | B | 0.70 | 0.00 | 0.30 |
|  | C | 0.80 | 0.20 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| A | 0.45 | 3.15 | 0.82 | A |
| B | 0.25 | 2.51 | 0.34 | A |
| C | 0.52 | 4.27 | 1.07 | A |

## Main Results for each time segment

Main results: (07:45-08:00)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 639.92 | 638.21 | 123.06 | 0.00 | 2123.51 | 0.301 | 0.43 | 2.422 | A |
| B | 335.02 | 334.28 | 545.85 | 0.00 | 2138.91 | 0.157 | 0.19 | 1.993 | A |
| C | 618.84 | 616.80 | 233.62 | 0.00 | 1822.52 | 0.340 | 0.51 | 2.980 | A |

Main results: (08:00-08:15)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 764.13 | 763.58 | 147.28 | 0.00 | 2105.19 | 0.363 | 0.57 | 2.681 | A |
| B | 400.05 | 399.82 | 653.09 | 0.00 | 2049.27 | 0.195 | 0.24 | 2.182 | A |
| C | 738.96 | 738.22 | 279.42 | 0.00 | 1791.01 | 0.413 | 0.70 | 3.418 | A |

Main results: (08:15-08:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 935.87 | 934.89 | 180.28 | 0.00 | 2080.23 | 0.450 | 0.81 | 3.140 | A |
| B | 489.95 | 489.56 | 799.60 | 0.00 | 1926.81 | 0.254 | 0.34 | 2.505 | A |
| C | 905.04 | 903.58 | 342.14 | 0.00 | 1747.86 | 0.518 | 1.06 | 4.257 | A |

Main results: (08:30-08:45)

| Arm | Total Demand <br> $($ PCU/hr) | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) $)$ | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 935.87 | 935.86 | 180.56 | 0.00 | 2080.02 | 0.450 | 0.82 | 3.145 | A |
| B | 489.95 | 489.95 | 800.43 | 0.00 | 1926.11 | 0.254 | 0.34 | 2.506 | A |
| C | 905.04 | 905.02 | 342.42 | 0.00 | 1747.68 | 0.518 | 1.07 | 4.271 | A |

Main results: (08:45-09:00)

| Arm | Total Demand <br> (PCU/hr) | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 764.13 | 765.10 | 147.72 | 0.00 | 2104.86 | 0.363 | 0.57 | 2.690 |
| B | 400.05 | 400.43 | 654.39 | 0.00 | 2048.19 | 0.195 | 0.24 | 2.186 |
| C | 738.96 | 740.41 | 279.85 | 0.00 | 1790.71 | 0.413 | 0.71 | 3.431 |

Main results: (09:00-09:15)

| Arm | Total Demand <br> $($ PCU/hr $)$ | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 639.92 | 640.48 | 123.62 | 0.00 | 2123.09 | 0.301 | 0.43 | 2.430 |
| B | 335.02 | 335.25 | 547.80 | 0.00 | 2137.28 | 0.157 | 0.19 | 1.999 |
| C | 618.84 | 619.61 | 234.30 | 0.00 | 1822.05 | 0.340 | 0.52 | 2.995 |

## (Default Analysis Set) - 2023 No Development, PM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | ARCADY |  |  | 100.000 |  |

Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2023 No <br> Development, <br> PM | Locked |  |  |  |  |  |  |  |  |
| Development | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | Roundabout | A,B,C |  |  | 2.73 | A |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description |
| :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd |  |
| B | B | Hayes Rd |  |
| C | C | B4267 Sully Moors Rd |  |

## Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) |
| :---: | :---: | :---: |
| A | 0.00 | 99999.00 |
| B | 0.00 | 99999.00 |
| C | 0.00 | 99999.00 |

Roundabout Geometry

| Arm | V Approach road half- <br> width $(\mathbf{m})$ | E-Entry width <br> $(\mathbf{m})$ | I' - Effective flare <br> length $(\mathbf{m})$ | R - Entry radius <br> $(\mathbf{m})$ | D - Inscribed circle <br> diameter $(\mathbf{m})$ | PHI - Conflict (entry) <br> angle $($ deg $)$ | Exit <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 4.10 | 9.30 | 26.70 | 29.30 | 35.20 | 34.00 |  |
| B | 6.00 | 9.50 | 27.00 | 23.50 | 35.20 | 29.00 |  |
| C | 3.60 | 10.20 | 22.70 | 33.00 | 35.20 | 55.00 |  |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A |  | (calculated) | (calculated) | 0.756 | 2216.594 |
| B |  | (calculated) | (calculated) | 0.836 | 2595.177 |
| C |  | (calculated) | (calculated) | 0.688 | 1983.226 |

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

## Traffic Flows

## Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entrylexit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 670.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 367.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 662.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 145.000 | 525.000 |
|  | B | 170.000 | 0.000 | 197.000 |
|  | C | 546.000 | 116.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.22 | 0.78 |
|  | B | 0.46 | 0.00 | 0.54 |
|  | C | 0.82 | 0.18 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| A | 0.35 | 2.60 | 0.53 | A |
| B | 0.19 | 2.11 | 0.24 | A |
| C | 0.39 | 3.20 | 0.65 | A |

## Main Results for each time segment

Main results: (16:45-17:00)

| Arm | Total Demand <br> (PCU/hr) | Entry Flow <br> (PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 504.41 | 503.19 | 87.08 | 0.00 | 2150.73 | 0.235 | 0.31 | 2.184 |
| B | 276.30 | 275.74 | 394.29 | 0.00 | 2265.60 | 0.122 | 0.14 | 1.808 |
| C | 498.39 | 496.97 | 127.73 | 0.00 | 1895.36 | 0.263 | 0.36 | 2.572 |

Main results: (17:00-17:15)

| Arm | Total Demand <br> (PCU/hr) | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 602.32 | 601.97 | 104.21 | 0.00 | 2137.77 | 0.282 | 0.39 | 2.344 |
| L | 329.93 | 329.78 | 471.70 | 0.00 | 2200.90 | 0.150 | 0.18 | 1.923 |
| C | 595.12 | 594.70 | 152.76 | 0.00 | 1878.14 | 0.317 | 0.46 | 2.805 |

Main results: (17:15-17:30)

| Arm | Total Demand <br> $(\mathbf{P C U} / \mathrm{hr})$ | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ PCU/hr) | RFC | End Queue <br> $(\mathbf{P C U})$ | Delay <br> $(\mathbf{s})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 737.68 | 737.12 | 127.59 | 0.00 | 2120.08 | 0.348 | 0.53 | 2.601 | A |
| B | 404.07 | 403.83 | 577.60 | 0.00 | 2112.38 | 0.191 | 0.24 | 2.107 | A |
| C | 728.88 | 728.15 | 187.06 | 0.00 | 1854.54 | 0.393 | 0.64 | 3.194 | A |

Main results: (17:30-17:45)

| Arm | Total Demand <br> $($ PCU/hr) | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 737.68 | 737.68 | 127.72 | 0.00 | 2119.99 | 0.348 | 0.53 | 2.603 | A |
| B | 404.07 | 404.07 | 578.03 | 0.00 | 2112.01 | 0.191 | 0.24 | 2.107 | A |
| C | 728.88 | 728.87 | 187.17 | 0.00 | 1854.47 | 0.393 | 0.65 | 3.197 | A |

Main results: (17:45-18:00)

| Arm | Total Demand <br> $($ PCU/hr) | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 602.32 | 602.87 | 104.41 | 0.00 | 2137.62 | 0.282 | 0.39 | 2.346 |
| B | 329.93 | 330.16 | 472.40 | 0.00 | 2200.31 | 0.150 | 0.18 | 1.926 |
| C | 595.12 | 595.84 | 152.94 | 0.00 | 1878.02 | 0.317 | 0.47 | 2.808 |

Main results: (18:00-18:15)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 504.41 | 504.76 | 87.41 | 0.00 | 2150.48 | 0.235 | 0.31 | 2.189 | A |
| B | 276.30 | 276.45 | 395.52 | 0.00 | 2264.57 | 0.122 | 0.14 | 1.812 | A |
| C | 498.39 | 498.82 | 128.05 | 0.00 | 1895.14 | 0.263 | 0.36 | 2.580 | A |

## (Default Analysis Set) - 2028 No Development, AM

Data Errors and Warnings
No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | ARCADY |  |  | 100.000 |  |

## Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(\mathrm{HH}: \mathrm{mm})$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Locked |  |  |  |  |  |  |  |  |  |
| 2028 No <br> Development, <br> AM | Leven <br> Development | AM |  | ONE | $07: 45$ | $09: 15$ | 90 | 15 |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | Roundabout | A,B,C |  |  | 3.73 | A |

## Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description |
| :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd |  |
| B | B | Hayes Rd |  |
| C | C | B4267 Sully Moors Rd |  |

Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) |
| :---: | :---: | :---: |
| A | 0.00 | 99999.00 |
| B | 0.00 | 99999.00 |
| C | 0.00 | 99999.00 |

Roundabout Geometry

| Arm | V Approach road half- <br> width $(\mathbf{m})$ | $\mathrm{E}-$ Entry width <br> $(\mathbf{m})$ | I' - Effective flare <br> length $(\mathbf{m})$ | R - Entry radius <br> $(\mathbf{m})$ | D - Inscribed circle <br> diameter $(\mathbf{m})$ | PHI - Conflict (entry) <br> angle $($ deg $)$ | Exit <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 4.10 | 9.30 | 26.70 | 29.30 | 35.20 | 34.00 |  |
| B | 6.00 | 9.50 | 27.00 | 23.50 | 35.20 |  |  |
| C | 3.60 | 10.20 | 22.70 | 33.00 | 35.20 | 55.00 |  |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A |  | (calculated) | (calculated) | 0.756 | 2216.594 |
| B |  | (calculated) | (calculated) | 0.836 | 2595.177 |
| C |  | (calculated) | (calculated) | 0.688 | 1983.226 |

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

## Traffic Flows

Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entrylexit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 903.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 478.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 877.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 131.000 | 772.000 |
|  | B | 334.000 | 0.000 | 144.000 |
|  | C | 701.000 | 176.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.15 | 0.85 |
|  | B | 0.70 | 0.00 | 0.30 |
|  | C | 0.80 | 0.20 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| A | 0.48 | 3.35 | 0.92 | A |
| B | 0.28 | 2.65 | 0.39 | A |
| C | 0.56 | 4.71 | 1.26 | A |

## Main Results for each time segment

Main results: (07:45-08:00)

| Arm | Total Demand <br> $(\mathbf{P C U} / \mathrm{hr})$ | Entry Flow <br> $(\mathbf{P C U} / \mathrm{hr})$ | Circulating Flow <br> $(\mathbf{P C U} / \mathrm{hr})$ | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $(\mathbf{P C U} / \mathrm{hr})$ | RFC | End Queue <br> $(\mathrm{PCU})$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 679.83 | 677.94 | 132.04 | 0.00 | 2116.72 | 0.321 | 0.47 | 2.499 |
| LOS | A |  |  |  |  |  |  |  |
| B | 359.86 | 359.04 | 579.59 | 0.00 | 2110.71 | 0.170 | 0.20 | 2.054 |
| C | 660.25 | 657.97 | 250.88 | 0.00 | 1810.64 | 0.365 | 0.57 | 3.116 |

Main results: (08:00-08:15)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 811.78 | 811.15 | 158.04 | 0.00 | 2097.05 | 0.387 | 0.63 | 2.798 | A |
| B | 429.71 | 429.45 | 693.47 | 0.00 | 2015.52 | 0.213 | 0.27 | 2.269 | A |
| C | 788.41 | 787.52 | 300.08 | 0.00 | 1776.80 | 0.444 | 0.79 | 3.635 | A |

Main results: (08:15-08:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 994.22 | 993.07 | 193.41 | 0.00 | 2070.30 | 0.480 | 0.92 | 3.339 | A |
| B | 526.29 | 525.83 | 849.00 | 0.00 | 1885.52 | 0.279 | 0.39 | 2.648 | A |
| C | 965.59 | 963.77 | 367.42 | 0.00 | 1730.48 | 0.558 | 1.25 | 4.684 | A |

Main results: (08:30-08:45)

| Arm | Total Demand <br> $($ PCU/hr) | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) $)$ | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 994.22 | 994.21 | 193.77 | 0.00 | 2070.02 | 0.480 | 0.92 | 3.345 | A |
| B | 526.29 | 526.28 | 849.98 | 0.00 | 1884.70 | 0.279 | 0.39 | 2.649 | A |
| C | 965.59 | 965.57 | 367.74 | 0.00 | 1730.26 | 0.558 | 1.26 | 4.707 | A |

Main results: (08:45-09:00)

| Arm | Total Demand <br> (PCU/hr) | Entry Flow <br> (PCU/hr) | Circulating Flow <br> (PCU/hr) | Pedestrian Demand <br> (Ped/hr) | Capacity <br> (PCU/hr) | RFC | End Queue <br> (PCU) | Delay <br> $(\mathbf{s})$ | Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 811.78 | 812.92 | 158.58 | 0.00 | 2096.64 | 0.387 | 0.63 | 2.808 | A |
| B | 429.71 | 430.17 | 694.99 | 0.00 | 2014.25 | 0.213 | 0.27 | 2.274 | A |
| C | 788.41 | 790.21 | 300.58 | 0.00 | 1776.45 | 0.444 | 0.80 | 3.655 | A |

Main results: (09:00-09:15)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 679.83 | 680.46 | 132.68 | 0.00 | 2116.23 | 0.321 | 0.48 | 2.508 | A |
| B | 359.86 | 360.13 | 581.75 | 0.00 | 2108.91 | 0.171 | 0.21 | 2.058 | A |
| C | 660.25 | 661.16 | 251.64 | 0.00 | 1810.12 | 0.365 | 0.58 | 3.137 | A |

## (Default Analysis Set) - 2028 No Development, PM

## Data Errors and Warnings

No errors or warnings
Analysis Set Details

| Name | Roundabout Capacity Model | Description | Locked | Network Flow Scaling Factor (\%) | Reason For Scaling Factors |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (Default Analysis Set) | ARCADY |  |  | 100.000 |  |

Demand Set Details

| Name | Scenario Name | Time <br> Period <br> Name | Description | Traffic <br> Profile <br> Type | Model Start <br> Time <br> $(H H: m m)$ | Model Finish <br> Time <br> $(H H: m m)$ | Model Time <br> Period <br> Length (min) | Time <br> Segment <br> Length (min) | Single Time <br> Segment <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2028 No <br> Development, <br> PM | Locked |  |  |  |  |  |  |  |  |
| Development | PM |  | ONE | $16: 45$ | $18: 15$ | 90 | 15 |  |  |

## Junction Network

## Junctions

| Junction | Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction Los |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | B4267 South Rd / Hayes Rd | Roundabout | A,B,C |  |  | 2.85 | A |

Junction Network Options

| Driving Side | Lighting |
| :---: | :---: |
| Left | Normal/unknown |

## Arms

Arms

| Arm | Arm | Name | Description |
| :---: | :---: | :---: | :---: |
| A | A | B4267 South Rd |  |
| B | B | Hayes Rd |  |
| C | C | B4267 Sully Moors Rd |  |

## Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) |
| :---: | :---: | :---: |
| A | 0.00 | 99999.00 |
| B | 0.00 | 99999.00 |
| C | 0.00 | 99999.00 |

Roundabout Geometry

| Arm | V Approach road half- <br> width $(\mathbf{m})$ | E-Entry width <br> $(\mathbf{m})$ | I' - Effective flare <br> length $(\mathbf{m})$ | R - Entry radius <br> $(\mathbf{m})$ | D - Inscribed circle <br> diameter $(\mathbf{m})$ | PHI - Conflict (entry) <br> angle $($ deg $)$ | Exit <br> Only |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 4.10 | 9.30 | 26.70 | 29.30 | 35.20 | 34.00 |  |
| B | 6.00 | 9.50 | 27.00 | 23.50 | 35.20 | 29.00 |  |
| C | 3.60 | 10.20 | 22.70 | 33.00 | 35.20 | 55.00 |  |

## Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A |  | (calculated) | (calculated) | 0.756 | 2216.594 |
| B |  | (calculated) | (calculated) | 0.836 | 2595.177 |
| C |  | (calculated) | (calculated) | 0.688 | 1983.226 |

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

## Traffic Flows

## Demand Set Data Options

| Default <br> Vehicle <br> Mix | Vehicle <br> Mix Varies <br> Over Time | Vehicle <br> Mix Varies <br> Over Turn | Vehicle <br> Mix Varies <br> Over Entry | Vehicle Mix <br> Source | PCU <br> Factor <br> for a HV <br> (PCU) | Default <br> Turning <br> Proportions | Estimate <br> from <br> entrylexit <br> counts | Turning <br> Proportions <br> Vary Over Time | Turning <br> Proportions <br> Vary Over Turn | Turning <br> Proportions <br> Vary Over Entry |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\checkmark$ | $\checkmark$ | HV <br> Percentages | 2.00 |  |  |  | $\checkmark$ | $\checkmark$ |

## Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (\%) |
| :---: | :---: | :---: | :---: | :---: |
| A | ONE HOUR | $\checkmark$ | 714.00 | 100.000 |
| B | ONE HOUR | $\checkmark$ | 392.00 | 100.000 |
| C | ONE HOUR | $\checkmark$ | 704.00 | 100.000 |

## Turning Proportions

Turning Counts I Proportions (PCU/hr) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.000 | 155.000 | 559.000 |
|  | B | 181.000 | 0.000 | 211.000 |
|  | C | 580.000 | 124.000 | 0.000 |

Turning Proportions (PCU) - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.00 | 0.22 | 0.78 |
|  | B | 0.46 | 0.00 | 0.54 |
|  | C | 0.82 | 0.18 | 0.00 |

## Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 1.000 | 1.000 | 1.000 |
|  | B | 1.000 | 1.000 | 1.000 |
|  | C | 1.000 | 1.000 | 1.000 |

Heavy Vehicle Percentages - Junction 1 (for whole period)

|  | To |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| From |  | A | B | C |
|  | A | 0.0 | 0.0 | 0.0 |
|  | B | 0.0 | 0.0 | 0.0 |
|  | C | 0.0 | 0.0 | 0.0 |

## Results

Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
| :---: | :---: | :---: | :---: | :---: |
| A | 0.37 | 2.71 | 0.59 | A |
| B | 0.21 | 2.18 | 0.26 | A |
| C | 0.42 | 3.36 | 0.72 | A |

## Main Results for each time segment

Main results: (16:45-17:00)

| Arm | Total Demand <br> (PCU/hr) | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 537.54 | 536.20 | 93.08 | 0.00 | 2146.19 | 0.250 | 0.33 | 2.234 |
| B | 295.12 | 294.51 | 419.80 | 0.00 | 2244.27 | 0.132 | 0.15 | 1.846 |
| C | 530.01 | 528.46 | 135.99 | 0.00 | 1889.68 | 0.280 | 0.39 | 2.643 |

Main results: (17:00-17:15)

| Arm | Total Demand <br> (PCU/hr) | Entry Flow <br> (PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 641.87 | 641.49 | 111.39 | 0.00 | 2132.34 | 0.301 | 0.43 | 2.414 |
| L | 352.40 | 352.23 | 502.23 | 0.00 | 2175.37 | 0.162 | 0.19 | 1.974 |
| C | 632.88 | 632.40 | 162.64 | 0.00 | 1871.35 | 0.338 | 0.51 | 2.903 |

Main results: (17:15-17:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay <br> (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 786.13 | 785.49 | 136.38 | 0.00 | 2113.44 | 0.372 | 0.59 | 2.709 | A |
| B | 431.60 | 431.33 | 614.97 | 0.00 | 2081.14 | 0.207 | 0.26 | 2.182 | A |
| C | 775.12 | 774.28 | 199.16 | 0.00 | 1846.22 | 0.420 | 0.72 | 3.354 | A |

Main results: (17:30-17:45)

| Arm | Total Demand <br> (PCU/hr) | Entry Flow <br> $($ PCU/hr) | Circulating Flow <br> $($ PCU/hr) | Pedestrian Demand <br> $($ Ped/hr) | Capacity <br> $($ (PCU/hr) | RFC | End Queue <br> $($ PCU $)$ | Delay <br> $(\mathbf{s})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 786.13 | 786.12 | 136.52 | 0.00 | 2113.33 | 0.372 | 0.59 | 2.711 |
| B | 431.60 | 431.60 | 615.47 | 0.00 | 2080.72 | 0.207 | 0.26 | 2.182 |
| C | 775.12 | 775.11 | 199.28 | 0.00 | 1846.14 | 0.420 | 0.72 | 3.360 |

Main results: (17:45-18:00)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 641.87 | 642.51 | 111.62 | 0.00 | 2132.17 | 0.301 | 0.43 | 2.417 | A |
| B | 352.40 | 352.67 | 503.03 | 0.00 | 2174.71 | 0.162 | 0.19 | 1.975 | A |
| C | 632.88 | 633.71 | 162.84 | 0.00 | 1871.21 | 0.338 | 0.51 | 2.912 | A |

## Main results: (18:00-18:15)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 537.54 | 537.92 | 93.44 | 0.00 | 2145.92 | 0.250 | 0.34 | 2.240 | A |
| B | 295.12 | 295.29 | 421.15 | 0.00 | 2243.15 | 0.132 | 0.15 | 1.850 | A |
| C | 530.01 | 530.50 | 136.34 | 0.00 | 1889.43 | 0.281 | 0.39 | 2.651 | A |

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[^0]:    ${ }^{1}$ Data refers to travel mode on $27^{\text {th }}$ March 2011. © Crown copyright 2014 Office for National Statistics licensed under the Open Government Licence v.2.0:
    http://www.neighbourhood.statistics.gov.uk/dissemination/LeadTableView.do?a=7\&b=6079975\&c=CF64+5UJ\&d=14\&e=61\&g=418957\& $\mathrm{i}=1 \times 1003 \times 1032 \times 1004 \& \mathrm{o}=1 \& \mathrm{~m}=0 \& \mathrm{r}=0 \& \mathrm{~s}=1405074243059 \& \mathrm{enc}=1 \& \mathrm{dsFamilyId=2567}$

[^1]:    ${ }^{2}$ CSS All Wales Parking Standards (2008)
    http://www.valeofglamorgan.gov.uk/en/our council/council/minutes, agendas and reports/reports/cabinet/2013/13-07-29/County-Surveyors-Society-Wales-Parking-Standards-2008-.aspx

[^2]:    ${ }^{3} \mathrm{http}: / / \mathrm{www}$. spinneyholidaypark.co.uk/spinney
    ${ }^{4}$ http://www.islandviewpark.co.uk/island-view

[^3]:    Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

[^4]:    Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

[^5]:    Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

[^6]:    Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

[^7]:    Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

[^8]:    Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

[^9]:    Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

[^10]:    Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

[^11]:    Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

[^12]:    Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

[^13]:    Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

[^14]:    Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

[^15]:    Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

[^16]:    The slope and intercept shown above include any corrections and adjustments.

