# Transport Assessment Appendices

Promotion to the Flintshire
Local Development Plan

## HWN005, Mancot

Flintshire

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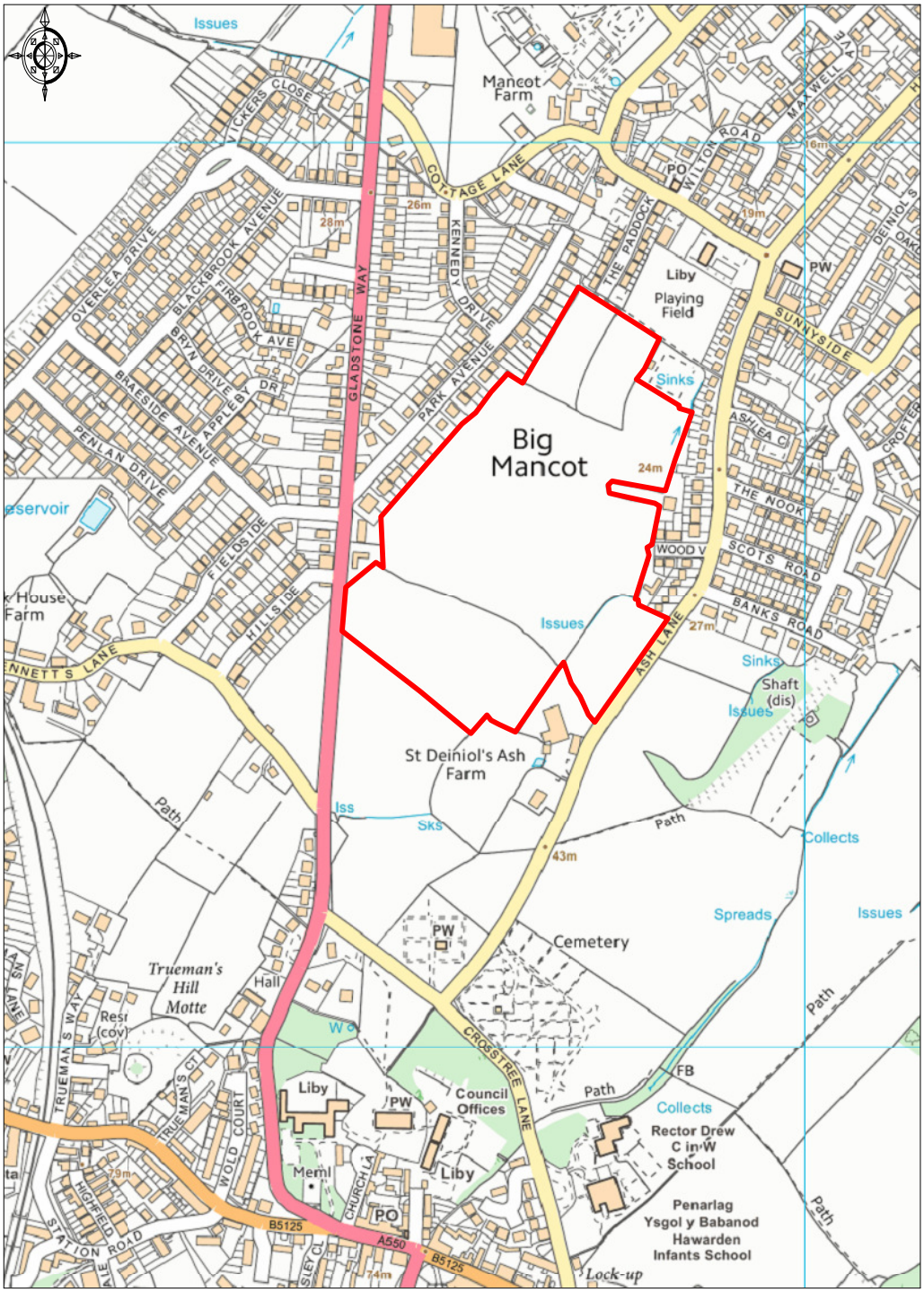
30 August 2018
Project Reference: 120574
Document Reference: TA01
Revision: 2
Prepared For: Hawarden Estates

# Appendix A – Site Location Plan

Site HWN005 between Gladstone Way and Ash Lane, Mancot, Flintshire CH5 3HZ
Promotion to the Flintshire Local Development Plan by Hawarden Estate



# Appendix B – Scoping Note

# Transport Assessment - Scoping Note

| | |
|---|---|
| Project Name: Site HWN005, Mancot | Author: Ian Bullard |
| Project Reference: 120574 | Date: 23 July 2018 |
| Project Manager: MWDuckworth | Document Reference: 001 |

## 1.1 Scope of Assessment

The proposed site is for a residential development for up to 250 units site. The site is to be promoted for inclusion into the LDP.

Based on our initial discussions with Flintshire County Council (FCC) and Welsh Government (WG) it is understood that the planning application will need to be supported by a Transport Assessment prepared in line with TAN18 guidance.

It is proposed that, subject to design and operational assessment being agreed with FCC, access to the site will be provided via two simple priority junctions located on Gladstone Way and Ash Lane, respectively.

## 2.1 Assessment year

Based on the currently understood timeframe for adoption of the Flintshire LDP, the assumed start of construction year is 2022. We will assume a total construction period of 5 years.

The assessment year for the local highway network is proposed at 2027 which is 5 years following the start of construction. The assessment year for the strategic highway network is proposed at 2037 which is 10 years following the final construction year.

Anticipated background traffic growth has been derived using NTEM 7.2 datasets for Flintshire, specifically super output area Flintshire 011 (W02000068), along with 2015 NTM forecasts for Urban roads (all types) in TEMPRO version 7.2. Growth factors are summarised in the table below.

| Year | Factor | |
|---|---|---|
| | AM Peak | PM Peak |
| **2016 to 2027** | 1.1036 | 1.0998 |
| **2018 to 2027** | 1.0789 | 1.0765 |
| **2018 to 2037** | 1.1541 | 1.1499 |

### 3.1 Trip Generation and Distribution

Trip rates have been derived from a sample of representative sites from the TRICS database, as summarised below:

| 250 Houses | Trip Rates (TRICS) | | | Traffic Generation | | |
|---|---|---|---|---|---|---|
| | Arrive | Depart | Total | Arrive | Depart | Total |
| **AM Peak (0800 – 0900)** | 0.16 | 0.45 | **0.62** | 41 | 113 | **154** |
| **PM Peak (1700 – 1800)** | 0.41 | 0.23 | **0.64** | 103 | 57 | **160** |

A trip distribution pattern has been derived using the 2011 census using data sets WU03EW - *Location of usual residence and place of work by method of travel to work (MSOA level)*, for the two adjacent super output areas Flintshire 011 and 013 (W02000068 and W02000070) to ensure a broad representation of destinations.

The trip distribution and development traffic flows are shown on the plans included as **Figure 1** and **Figure 2**, respectively.

The likely modal split of development traffic will be calculated using mode splits within the 2011 census data.

### 4.1 Network of interest

The highway network to be considered has been identified during initial discussions, as below:

- A550/A494
- A55/A550
- A550/B5125 (2 junctions)
- Ash Lane/site access (east)
- Gladstone Way/site access (west)

In order to inform the assessment, 2016 ATC traffic flow data has been obtained from FCC for Gladstone Way and Crosstree Lane. Furthermore, ATC data has been obtained for Ash Lane over 7 days from the 9th July 2018.

Data has also been obtained from classified turning counts undertaken on Monday 9th July 2018 for the following junctions.

- A550/A494 (12hr counts)
- A55/A550 (12hr counts)
- A550/B5125 (peak hour counts)

### 5.1 Operational Assessments

From **Figure 2** it can be seen that the following total two-way flows at each junction are as follows:

| Junction | AM Flow | | PM Flow | |
|---|---|---|---|---|
| | Survey flows | Development Flows | Survey Flows | Development Flows |
| **A550/A494** | 8879 | 69 | 3651 | 71 |
| **A55/A550** | 1844 | 28 | 1700 | 30 |
| **A550/B5125 (east junction)** | 1139 | 28 | 1242 | 30 |
| **A550/B5125 (west junction)** | 1205 | 50 | 1240 | 53 |
| **Gladstone Way/site access** | 1249 | 118 | 940 | 124 |
| **Ash Lane/site access** | 217 | 35 | 236 | 36 |

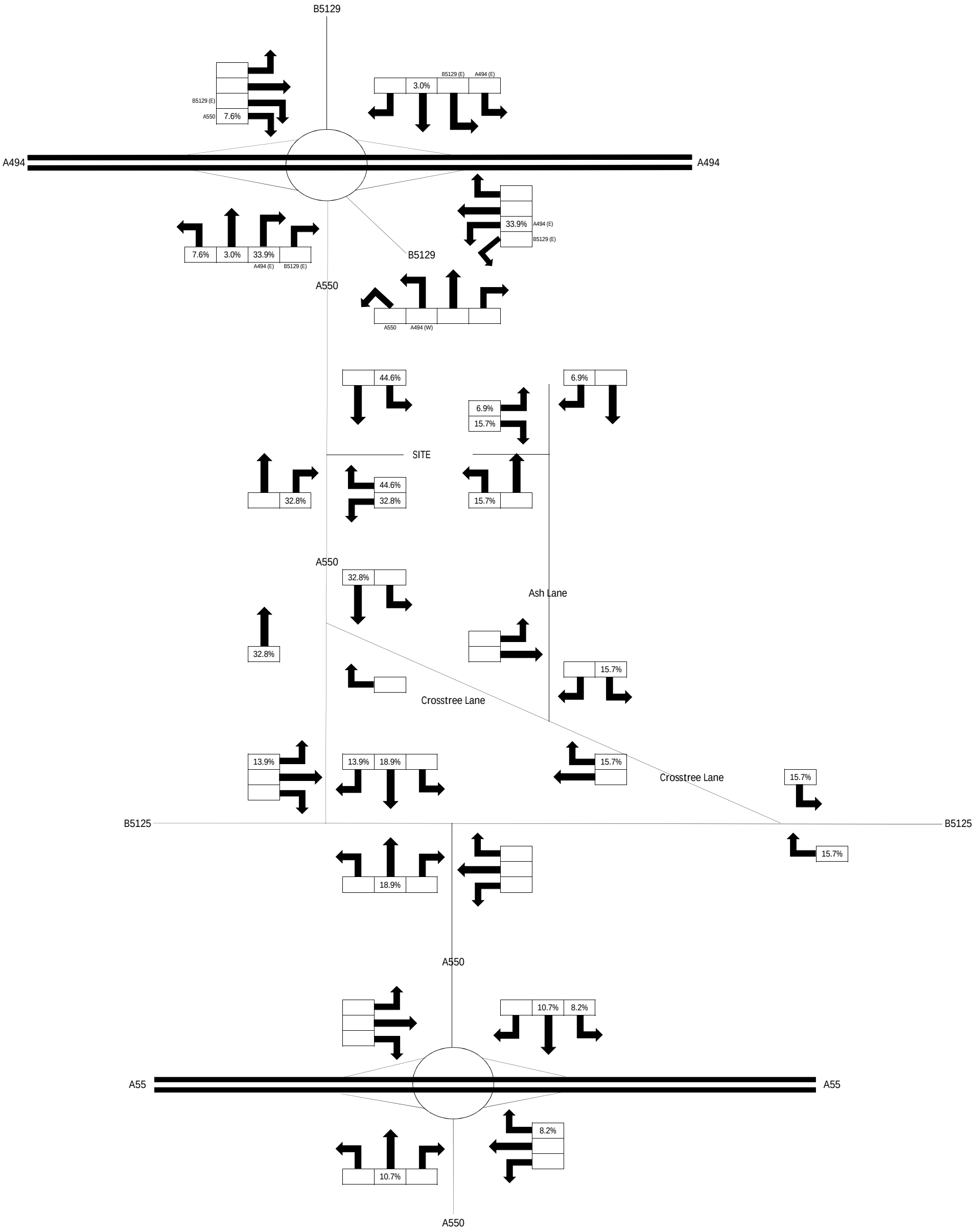
Based on the two-way development traffic flows identified above, the potential impact of development traffic on the A494/B5125 junction is considered to be non-material when considering the form of the junction and the likely volume of background traffic. Similarly, the potential impact on the A55/A550 junction is also considered to be non-material.

It is therefore proposed that the operational capacity of the following junctions will be assessed within the TA.

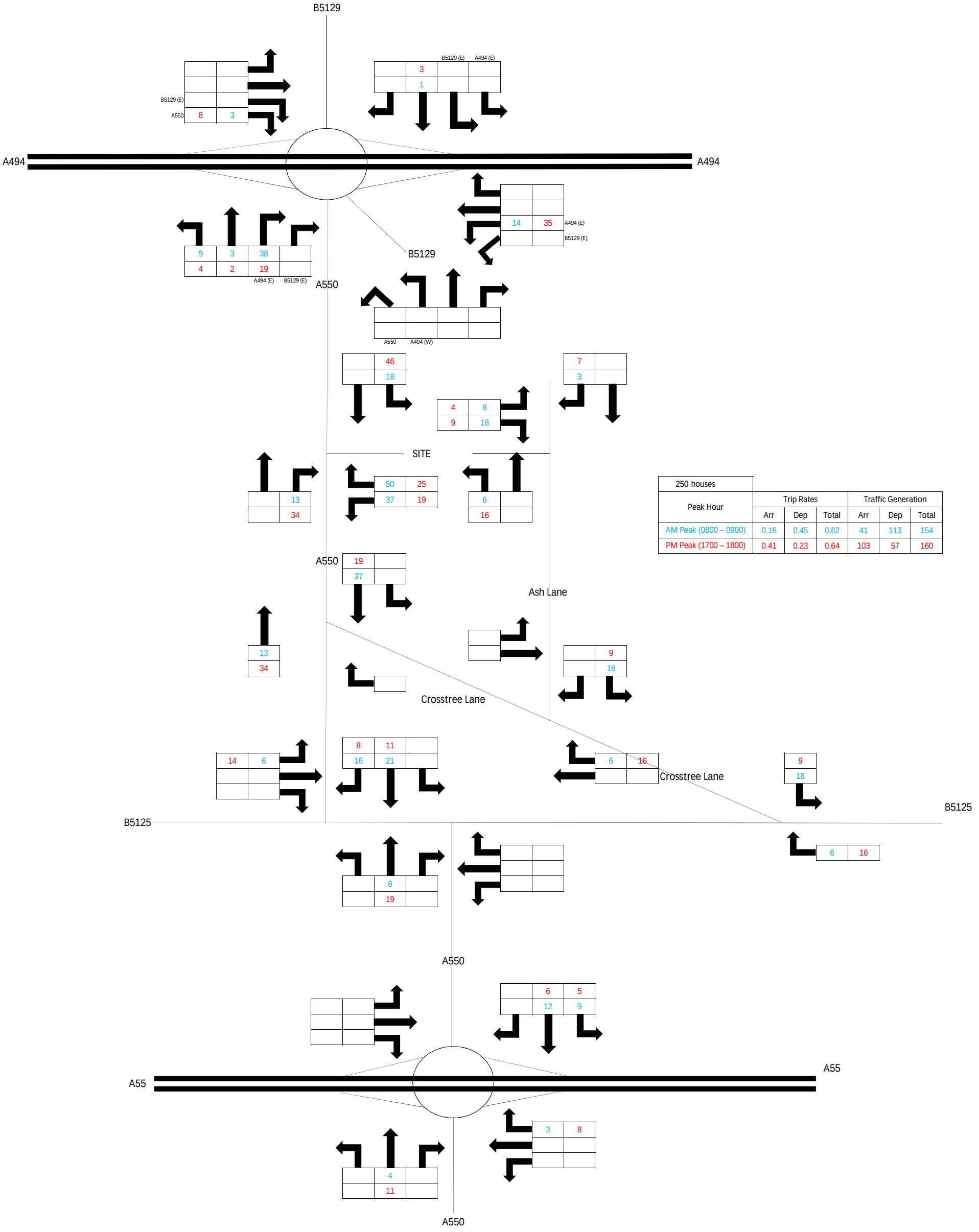
- A550/A494
- A550/B5125 (2 junctions)
- Ash Lane/Site Access
- Gladstone Way/Site Access

### 6.1 Committed Development

Committed development flows for the Northern Gateway development, consented in 2012 will be included to the future year baseline traffic flows.




TRIP DISTRIBUTION




| 250 houses | | | | | | |
|---|---|---|---|---|---|---|
| Peak Hour | Trip Rates | | | Traffic Generation | | |
| | Arr | Dep | Total | Arr | Dep | Total |
| AM Peak (0800 – 0900) | 0.16 | 0.45 | 0.62 | 41 | 113 | 154 |
| PM Peak (1700 – 1800) | 0.41 | 0.23 | 0.64 | 103 | 57 | 160 |

DEVELOPMENT TRIP GENERATION

# Appendix C – Hawarden Walk Extract

4

# Hawarden

## Historic village, woodland and farmland

**Distance:** 8 km / 5 miles

**Time:** 2 – 2.5 hrs

**Parking:** Tinkersdale public car park, Hawarden (SJ316657)

**Grade:** Easy

**Ten Minute Walk:** A disused tarmac road with lush woodland on both sides

**Facilities:** Pubs, café and shops in Hawarden

**Livestock:** Sheep and cattle

## Pentref hanesyddol, coedlannau a thir fferm

**Pellter:** 8 km / 5 milltir

**Amser:** 2 – 2.5 awr

**Parcio:** Maes parcio cyhoeddus Tinkersdale, Penarlâg (SJ316657)

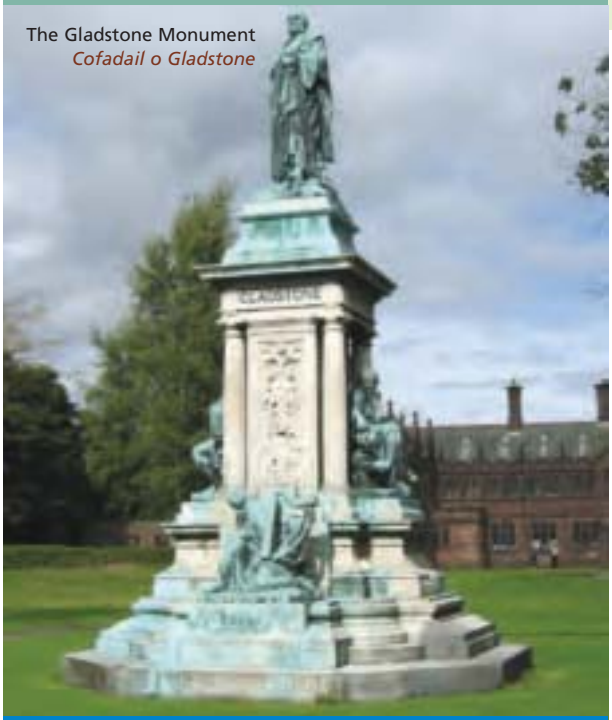
**Graddfa:** Hawdd

**Taith gerdded 10 munud:** Hen ffordd darmac segur. Coedwigoedd o bobtu

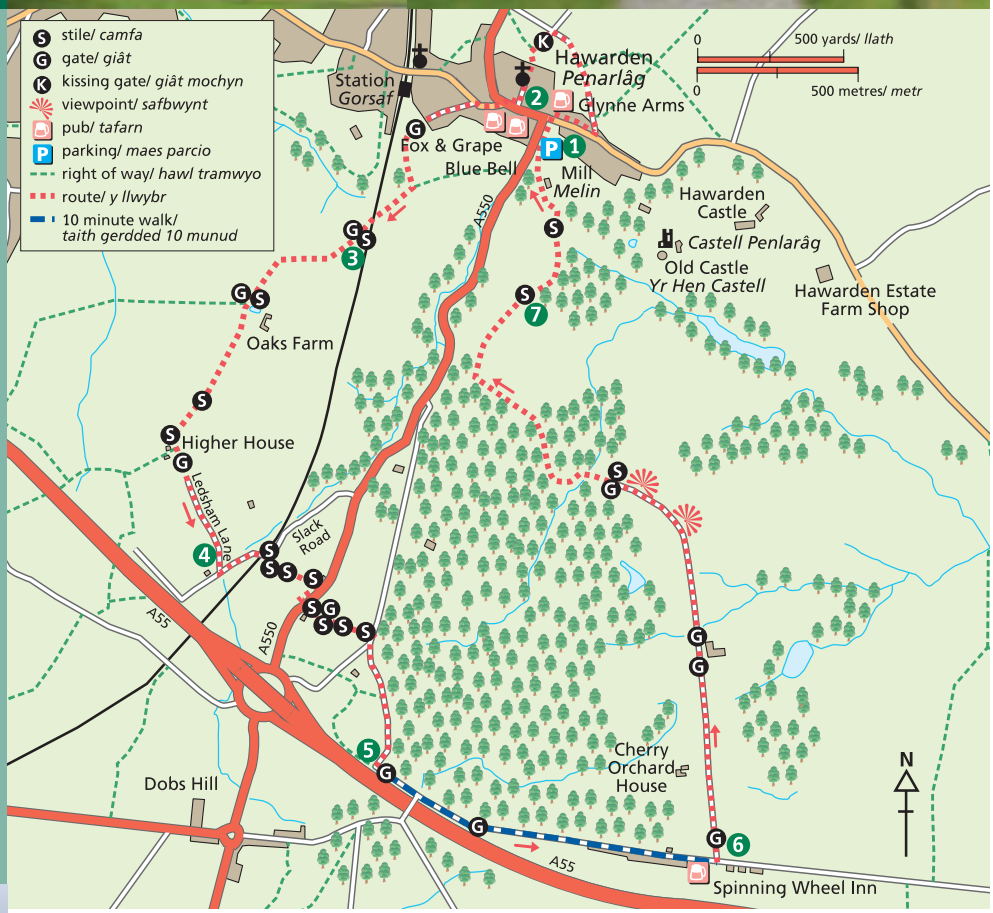
**Cyfleusterau:** Tafarnau, caffi a siopau ym Mhenarlâg

**Da byw:** Defaid a gwartheg

**Waymarking / Arwyddion:**



The Gladstone Monument
*Cofadail o Gladstone*




## The Walk

**1.** From car park turn R uphill to reach fountain and T junction. Turn R onto Glynne Way then first L into Crosstree Lane (old lock-up on corner). Descend hill passing school. At junction with Ash Lane turn L thro' gate into churchyard. Go R around church to exit on opposite side. To R is St Deiniol's Library (Gladstone Exhibition and Coffee Shop open to public. Tel 01244 532350 for details).

**2.** Walk along Church Lane to road. Turn L to cross busy road at pelican crossing. Turn R along road, passing St Deniol's on RHS. Take second L down Station Road. When road forks into Woodlands Court and The Wigdale continue ahead along tarmac footpath. Continue ahead, then R to pass under railway line, then immediately L.

**3.** Continue ahead crossing track to cross stile by gate then continue ahead between golf club greens. Continue along grass track as it bears sharp L towards farm. At gate, cross stile and continue ahead, passing pond at Oaks Farm. After 25m turn R by derelict barn through open entrance then immediately L following LH field boundary up slope through 2 fields to cross stile. Go ahead for 75m then diagonally R to field boundary. Just before house turn L over stile. Then turn L and in 20m go thro' gate onto Ledsham Lane. Continue for 400m.

**4.** At T-junction turn L into Slack Road. Cross railway bridge then turn immediately R to cross stile then a second. Turn L and over next stile. Follow LH field boundary and cross stile by Thatch Cottages. Turn R, cross busy road then stile just before red corrugated barn. Follow path past barn then turn R over stile by gate then L up between 2 hedges. Cross stile next to open entrance then follow RH field boundary. Cross stile onto lane and continue ahead, down lane marked "No through road".

**5.** At end of road turn L through staggered entrance by gate to continue along tarmac path. Pass bridge over A55 on RHS and continue ahead thro' staggered entrance by gate. Continue down road passing Spinning Wheel Inn. Take next L onto lane marked Cherry Orchard Farm.

*Leopold Gate, entrance to Hawarden Castle. Park open daily throughout the year.*

*Giât Leopold, y fynedfa i Gastell Penarlâg. Y tiroedd ar agor bob dydd drwy'r flwyddyn.*

**6.** Within 20m cross stile by cattle grid then continue along road, passing entrance to Cherry Orchard House on LHS after 300m. After a further 400m pass some cottages on RHS. Continue ahead thro' metal gate. At woodland edge, cross stile by gate and continue ahead for 100m. Then turn L and almost immediately R. Continue on waymarked main track for 1.2 km.

**7.** Cross stile and continue along estate wall. Bear L where path forks. After 100m, at gate by 2 stiles, cross stile furthest from gate. After 50m cross stream, with remains of sluice gate on LHS. Soon after on R, is a ruined 18th century corn mill. The mill wheel and much of the machinery still remains. 75m beyond mill turn R up narrow path with handrail, to return to car park.

## Y Daith Gerdded

**1.** O'r maes parcio, troi i'r Dd ac i fyny'r allt i'r ffynnon a'r gyffordd T. Troi Dd i Glynne Way a'r 1af Ch i Crosstree Lane (hen garchar ar y gornel). I lawr a heibio'r ysgol. Ar gyffordd Ash Lane troi drwy'r giat ac i'r fynwent. I'r Dd o amgylch yr eglwys ac allan yr ochr arall. Mae Llyfrgell Coleg Sant Deiniol ar y LlDd (Arddangosfa Gladstone a siop goffi ar agor i'r cyhoedd. Tel 01244 532350)

**2.** Cerddwch ar hyd Lôn yr Eglwys i'r ffordd. Troi i'r Ch i groesi ffordd brysur wrth y groesfan Pelican. Troi i'r Dd ar hyd y ffordd, heibio Sant Deiniol ar eich LlDd. Cymerwch yr ail ar y Ch ac i lawr Ffordd yr Orsaf. Pan fydd y ffordd yn fforchio i Woodlands Court a The Wigdale ewch yn syth ymlaen ar hyd llwybr tarmac. Parhau'n syth ymlaen, yna i'r Dd a dan y lein rheilffordd, yna i'r Ch ar unwaith.

**3.** Dal ymlaen gan groesi'r llwybr llydan i groesi'r gamfa wrth y giât ac yna dal ymlaen rhwng lleiniau gwyrdd y clwb golff. Dal ymlaen ar hyd y llwybr glaswellt wrth iddo wyro'n siarp i'r Ch tua'r fferm. Wrth y giât, croesi'r gamfa ac ymlaen, heibio i'r llyn yn Oaks Farm. Ar ôl 25m troi i'r Dd wrth adfeilion ysgubor a thrwy fynedfa agored ac yna'n union i'r Ch gan ddilyn ffin y cae ar eich LlCh ac i fyny'r llethr drwy 2 gae i groesi'r gamfa. Cerddwch yn syth ymlaen am 75m yna ewch yn groesgornel i'r Dd ac i ffin bellaf y cae. Yn union cyn cyrraedd y tŷ, troi i'r Ch a dros y gamfa. Yna trowch i'r Ch ac, mewn 20m, ewch drwy'r giât i Lôn Ledsham. Dal ymlaen am 400m.

**4.** Wrth y gyffordd T, troi i'r Ch i Slack Road. Croesi pont y rheilffordd ac yna troi ar unwaith i'r Dd i groesi un gamfa ac yna'r ail gamfa. Troi i'r Ch a dros y gamfa nesaf. Dilyn ffin LlCh y cae a chroesi'r gamfa wrth Thatch Cottages. Troi i'r Dd, croesi'r ffordd ac yna'r gamfa yn union o flaen yr ysgubor dun goch. Dilyn y llwybr i ben draw'r ysgubor ac yna troi i'r Dd a thros y gamfa wrth y giât yna i'r Ch i fyny rhwng 2 wrych. Croesi'r gamfa nesaf i'r fynedfa agored yna dilyn ffin LlDd'r cae. Croesi'r gamfa i'r lôn a dal ymlaen i lawr y lôn ac arni'r arwydd "Dim ffordd drwodd".

**5.** Ar ddiwedd y ffordd, trowch i'r Ch drwy fynediad alldro a dal ymlaen ar hyd y llwybr tarmac. Bydd y bont dros yr A55 ar eich LlDd, ymlaen drwy fynediad alldro wrth y giât. Ymlaen i lawr y ffordd gan fynd heibio Tafarn the Spinning Wheel. Cymryd y nesaf ar y Ch i'r Lôn ag arni'r enw Cherry Orchard Farm.

**6.** O fewn 20m croeswch y gamfa wrth y grid gwartheg a dal ar hyd y ffordd gan fynd heibio'r mynediad i Cherry Orchard House ar eich LlCh ymhen 300m. Ar ôl 400m eto, mynd heibio bythynnod ar eich LlDd. Dal ymlaen drwy'r giât fetel. Wrth ymyl y goedlan, croesi'r gamfa wrth y giât a dal ymlaen am 100m. Yna troi i'r Ch ac yna i'r Dd bron ar unwaith. Dal ar y llwybr sydd ag arwydd am 1.2 km

**7.** Dros y gamfa ac ymlaen ar hyd wal y stad. Gwyro i'r Ch ar y fforch. Ymhen 100m. wrth giat a 2 gamfa, croesi'r gamfa bellaf o'r giat. Ymhen 50 m croesi'r nant, bydd olion llifddor ar LlCh. Ar y LlDd bydd melin flawd o'r 18fed ganrif gyda'r rhod a rhai o'r peiriannau'n dal yma. 75 milltir ar ol y felin trowch i'r Dd ar lwybr cul a chanllaw. Yn ol i'r maes parcio.

# Penarlâg

*Hawarden was the home of W. E. Gladstone, British Prime Minister for four terms. He introduced an Education Act and an Electoral Reform Act but failed to achieve home rule for Ireland.*

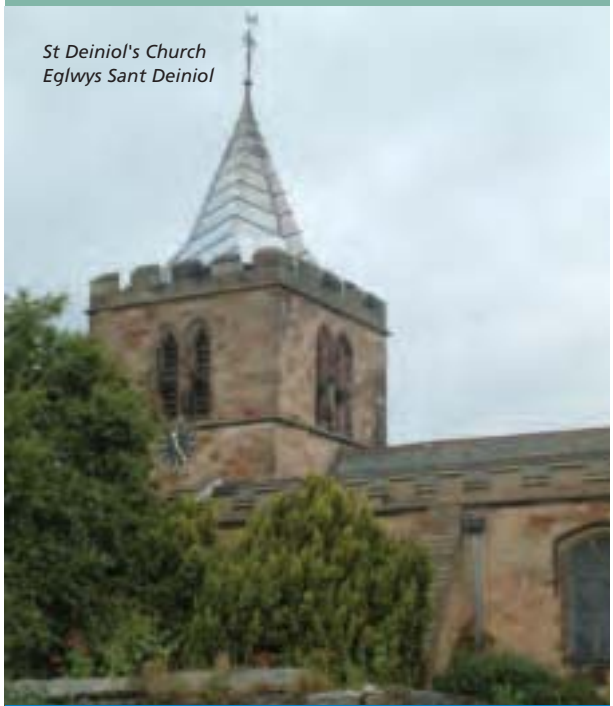
*Hawarden boasts two castles. The ruined 13th century castle was used by Edward I as a base for his invasion of Wales. It was captured by Dafydd, brother of Welsh Prince, Llywelyn ap Gruffudd, in 1282. In the 17th century it suffered severe damage during the Civil War when it was defended by the Parliamentary side.*

*The new castle was Gladstone's home after his marriage to Catherine Glynne, heiress to the Hawarden estate. The family still live there.*

*Roedd Penarlâg yn gartref i W. E. Gladstone, Prif Weinidog Prydain am bedwar tymor. Cyflwynodd ddeddf addysg a deddf diwygiad etholiadol, ond methodd â chael ymreolaeth i Iwerddon.*

*Mae dau gastell ym Mhenarlâg. Defnyddiodd brenin Lloegr, Iorwerth I y castell, a godwyd yn y 13ganrif, yn ganolfan ar gyfer ymosod ar Gymru. Cipiwyd y castell gan Dafydd, brawd y Tywysog Llywelyn ap Gruffudd yn 1282. Yn ddiweddarach dioddefodd yn arw yn ystod y Rhyfel Cartref pan roedd y milwyr Seneddol yn ei amddiffyn*

*Y castell newydd oedd cartref Gladstone ar ôl iddo briodi Catherine Glynne, etifeddes stad Penarlâg. Mae'r teulu'n dal i fyw yma.*



*St Deiniol's Church*
*Eglwys Sant Deiniol*

# Appendix D – Local Cycle Routes

# Deeside Industrial Park

Produced by the Active Travel web site.  Gynhyrchwyd gan y wefan Teithio Llesol.

Flintshire County Council / Cyngor Sir Y Fflint
Alltami Depot / Depot Alltami
Mold Road / Ffordd yr Wyddgrug,
Alltami, Mold, Yr Wyddgrug  CH7 6LG

## Legend / Eglurhad

Active Travel Route / Llwybr Teithio Llesol

- Undefined path design / Dyluniad llwybr heb ei ddiffinio
- Footpath (away from road) / Llwybr troed (i ffwrdd o'r ffordd)
- Footway (alongside road) / Troedffordd (ochr yn ochr â ffordd)
- Cycle track (away from road) / Trac beicio (i ffwrdd o'r ffordd)
- Cycle track (alongside road) / Trac beicio (ochr yn ochr â ffordd)
- Shared use foot/cycle path (away from road) / Llwybr cerdded/beicio a rennir (i ffwrdd o'r ffordd)
- Shared use foot/cycle path (alongside road) / Llwybr cerdded/beicio a rennir (ochr yn ochr â ffordd)
- Segregated foot/cycle path (away from road) / Llwybr cerdded/beicio wedi'i wahanu (i ffwrdd o'r ffordd)
- Segregated foot/cycle path (alongside road) / Llwybr cerdded/beicio wedi'i wahanu (ochr yn ochr â ffordd)
- Cycle route (on road, not segregated) / Lôn feicio (ar y ffordd, heb ei gwahanu)
- Cycle lane (on road, segregated) / Lôn feicio (ar y ffordd, wedi'i gwahanu)
- Pedestrian zone / Ardal cerdded
- Pedestrian and cycle zone / Ardal cerdded a beicio
- Road without footway / Ffordd heb droedffordd

- Line end points / Pwyntiau diwedd llinell
- Built-up Areas / Ardaloedd Adeiledig



Llywodraeth Cymru
Welsh Government

06 Apr 2018 11:07 AM

# Appendix E – Bus Timetables

Stagecoachbus.com

# Wrexham - Mold

# Wrexham - Mold

# Wrexham - Mold

# Wrexham - Mold

## Monday - Friday, period only (not Bank Holidays)

**Services**
**109**
**209**
**9**
**X9**

Operated by: STCR
Stagecoach in Chester

Timetable valid from 11 Sep 2017 until 10 Mar 2018

| | Service: | 109 | 209 | 9 | 9 | X9 | 9 | X9 | 9 | X9 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Notes: | Prd1 | Prd1 | | | | | | | Prd1 |
| | Operator: | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR |
| Chester, Chester Bus Interchange (Stand K) | Depart: | | | 08:35 | 10:05 | | 11:35 | | 13:35 | |
| Bache, Countess Hospital | | | | 08:44 | 10:13 | | 11:43 | | 13:43 | |
| Garden City, Green Lane East | | | | 08:58 | 10:25 | | 11:55 | | 13:55 | |
| Queensferry, Station Road Q | | | | 09:04 | 10:31 | | 12:01 | | 14:01 | |
| Wrexham, Bus Station (Bay 6) | Depart: | | | | | 10:20 | | 12:20 | | 14:20 |
| Bryn Offa, Maelor Hospital | | | | | | 10:24 | | 12:24 | | 14:24 |
| Hope, St Cynfarch`s Church | | | | | | 10:37 | | 12:37 | | 14:37 |
| Higher Kinnerton, Church | | | | | | 10:41 | | 12:41 | | 14:41 |
| Bretton, Old Mill House | | | | | | 10:46 | | 12:46 | | 14:46 |
| Broughton, Tesco | | | | | | 10:50 | | 12:50 | | 14:50 |
| Hawarden, Glynne Arms | | | | | | 10:55 | | 12:55 | | 14:55 |
| Queensferry, Asda | | | | | | 11:00 | | 13:00 | | 15:00 |
| Queensferry, Deeside Leisure Centre | | | 07:56 | 09:04~ | 10:31~ | 11:02~ | 12:01~ | 13:02~ | 14:01~ | |
| Shotton, Chester Rd West | | 07:59 | | 09:08 | 10:35 | 11:05 | 12:05 | 13:05 | 14:05 | |
| Wepre, Connah's Quay Civic Centre | | 08:02 | | 09:11 | 10:38 | 11:08 | 12:08 | 13:08 | 14:08 | |
| Wepre, Sidney Hall Court | | 08:07 | | 09:15 | 10:42 | 11:12 | 12:12 | 13:12 | 14:12 | |
| Golftyn, Boathouse Inn | | | 08:02 | | | | | | | |
| Wepre, St David`s Church | | | 08:03 | | | | | | | |
| Northop Hall, Boar`s Head Inn | | | 08:15 | | | | | | 14:24 | |
| Northop, Red Lion | | 08:21 | 08:20 | | | | | | | |
| Soughton, Cross Keys | | 08:26 | 08:25 | | | | | | | |
| Mold, Theatr Clwyd | | | | | | | | | | |
| Mold, Bus Station (Stand 3) | | 08:31 | | | | | | | | |
| Mold, Campus | Arrive: | 08:36 | 08:36 | | | | | | | |

| | Service: | 9 | 9 |
|---|---|---|---|
| | Notes: | | |
| | Operator: | STCR | STCR |
| Chester, Chester Bus Interchange (Stand K) | Depart: | | 17:13 |
| Bache, Countess Hospital | | | 17:21 |
| Garden City, Green Lane East | | | 17:33 |
| Queensferry, Station Road Q | | | 17:40 |
| Wrexham, Bus Station (Bay 6) | Depart: | | |
| Bryn Offa, Maelor Hospital | | | |
| Hope, St Cynfarch`s Church | | | |
| Higher Kinnerton, Church | | | |
| Bretton, Old Mill House | | | |
| Broughton, Tesco | | | |
| Hawarden, Glynne Arms | | | |
| Queensferry, Asda | | 15:05 | |
| Queensferry, Deeside Leisure Centre | | 15:07~ | 17:40~ |
| Shotton, Chester Rd West | | 15:10 | 17:44 |
| Wepre, Connah's Quay Civic Centre | | 15:13 | 17:53 |
| Wepre, Sidney Hall Court | | 15:17 | 17:58 |
| Golftyn, Boathouse Inn | | | |
| Wepre, St David`s Church | | | |
| Northop Hall, Boar`s Head Inn | | | 18:09 |
| Northop, Red Lion | | | 18:14 |
| Soughton, Cross Keys | | | 18:17 |
| Mold, Theatr Clwyd | | | 18:19 |
| Mold, Bus Station (Stand 3) | | | 18:22 |
| Mold, Campus | Arrive: | | |

~ The time is not a timing point and is an estimate only.

Prd1 Only operates within limited dates (dates not known)

Stagecoachbus.com

# Wrexham - Mold — Services X9
# Wrexham - Mold — 109
# Wrexham - Mold — 209
# Wrexham - Mold — 9

## Monday - Friday, period only (not Bank Holidays)

Operated by: STCR
Stagecoach in Chester

Timetable valid from 11 Mar 2018 until further notice

| | Service: | X9 | 109 | 209 | 9 | 9 | X9 | 9 | X9 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Notes: | XPrd1 | Prd2 | Prd2 | | | | | | |
| | Operator: | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR |
| Chester, Railway Station | Depart: | 07:05 | 07:05 | | | | | | | |
| Chester, Chester Bus Interchange (Stand K) | | 07:10 | 07:10 | | 08:35 | 10:05 | | 11:35 | | 13:30 |
| Bache, Countess Hospital | | 07:19 | 07:19 | | 08:44 | 10:13 | | 11:43 | | 13:41 |
| Garden City, Tenth Avenue | | 07:36 | 07:36 | | | | | 11:59 | | 13:57 |
| Garden City, Deeside Ind Park | | 07:46 | 07:46 | | 08:58 | 10:25 | | 12:08 | | 14:06 |
| Queensferry, Station Road Q | | 07:52 | 07:52 | | 09:04 | 10:31 | | 12:14 | | 14:12 |
| Wrexham, Bus Station (Bay 6) | Depart: | | | | | | 10:15 | | 12:25 | |
| Bryn Offa, Maelor Hospital | | | | | | | 10:19 | | 12:29 | |
| Hope, St Cynfarch`s Church | | | | | | | 10:32 | | 12:42 | |
| Higher Kinnerton, Church | | | | | | | 10:36 | | 12:46 | |
| Bretton, Old Mill House | | | | | | | 10:43 | | 12:53 | |
| Broughton, Tesco | | | | | | | 10:47 | | 12:57 | |
| Hawarden, Glynne Arms | | | | | | | 10:52 | | 13:04 | |
| Queensferry, Asda | | | | | | | 10:58 | | 13:09 | |
| Queensferry, Deeside Leisure Centre | | 07:53~ | 07:53~ | 07:56 | 09:04~ | 10:31~ | 11:00~ | 12:14~ | 13:11~ | 14:12~ |
| Shotton, Chester Rd West | | 07:59 | 07:59 | | 09:08 | 10:35 | 11:03 | 12:18 | 13:14 | 14:16 |
| Wepre, Connah's Quay Civic Centre | | 08:02 | 08:02 | | 09:11 | 10:38 | 11:06 | 12:21 | 13:17 | 14:19 |
| Wepre, Sidney Hall Court | | 08:07 | 08:07 | | 09:15 | 10:42 | 11:10 | 12:28 | 13:21 | 14:23 |
| Golftyn, Boathouse Inn | | | | 08:02 | | | | | | |
| Wepre, St David`s Church | | | | 08:03 | | | | | | |
| Northop Hall, Boar`s Head Inn | | | | 08:15 | | | | | | 14:35 |
| Northop, Red Lion | | 08:21 | 08:21 | 08:20 | | | | | | |
| Soughton, Cross Keys | | 08:26 | 08:26 | 08:25 | | | | | | |
| Mold, Theatr Clwyd | | 08:28 | | | | | | | | |
| Mold, Bus Station (Stand 3) | | 08:31 | 08:31 | | | | | | | |
| Mold, Campus | Arrive: | | 08:36 | 08:36 | | | | | | |

| | Service: | X9 | X9 | 9 |
|---|---|---|---|---|
| | Notes: | Prd2 | XPrd1 | |
| | Operator: | STCR | STCR | STCR |
| Chester, Railway Station | Depart: | | | |
| Chester, Chester Bus Interchange (Stand K) | | | | 17:13 |
| Bache, Countess Hospital | | | | 17:24 |
| Garden City, Tenth Avenue | | | | 17:40 |
| Garden City, Deeside Ind Park | | | | 17:49 |
| Queensferry, Station Road Q | | | | 17:55 |
| Wrexham, Bus Station (Bay 6) | Depart: | 14:30 | 14:30 | |
| Bryn Offa, Maelor Hospital | | 14:34 | 14:34 | |
| Hope, St Cynfarch`s Church | | 14:47 | 14:47 | |
| Higher Kinnerton, Church | | 14:51 | 14:51 | |
| Bretton, Old Mill House | | 14:56 | 14:56 | |
| Broughton, Tesco | | 15:00 | 15:00 | |
| Hawarden, Glynne Arms | | 15:09 | 15:09 | |
| Queensferry, Asda | | 15:14 | 15:14 | |
| Queensferry, Deeside Leisure Centre | | 15:16~ | 15:16~ | 17:55~ |
| Shotton, Chester Rd West | | 15:19 | 15:19 | 17:59 |
| Wepre, Connah's Quay Civic Centre | | 15:22 | 15:22 | 18:02 |
| Wepre, Sidney Hall Court | | 15:26 | 15:26 | 18:06 |
| Golftyn, Boathouse Inn | | | | |
| Wepre, St David`s Church | | | | |
| Northop Hall, Boar`s Head Inn | | | | 18:22 |
| Northop, Red Lion | | | 15:37 | 18:27 |
| Soughton, Cross Keys | | | 15:40 | 18:30 |
| Mold, Theatr Clwyd | | | 15:42 | 18:32 |
| Mold, Bus Station (Stand 3) | | | 15:44 | 18:36 |
| Mold, Campus | Arrive: | | | |

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**Services**

# Mold - Wrexham 9
# Mold - Wrexham X9
# Mold - Wrexham 209
# Mold - Wrexham 109

## Monday - Friday (not Bank Holidays)

Operated by: STCR
Stagecoach in Chester

Timetable valid from 11 Sep 2017 until 10 Mar 2018

| | Service: | 9 | X9 | 9 | 9 | X9 | 9 | X9 | 9 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Notes: | | | | | | | | | |
| | Operator: | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR |
| Mold, Campus | Depart: | | | | | | | | | |
| Mold, Bus Station (Stand 3) | | 07:23 | 08:40 | | | | | | | |
| Mold, Theatr Clwyd | | 07:26 | 08:43 | | | | | | | |
| Soughton, Cross Keys | | 07:28 | 08:45 | | | | | | | |
| Northop, Brook Street | | 07:31 | 08:48 | | | | | | | |
| Northop Hall, Boar`s Head Inn | | 07:36 | 08:53 | | | | | | 14:24 | |
| Wepre, Sidney Hall Court | | 07:48 | 09:05 | 09:20 | 10:50 | 11:20 | 12:50 | 13:20 | 14:40 | 15:50 |
| Wepre, Civic Centre | | 07:54 | 09:11 | 09:26 | 10:56 | 11:26 | 12:56 | 13:26 | 14:46 | 15:56 |
| Wepre, St David`s Church | | | | | | | | | | |
| Golftyn, Boathouse Inn | | | | | | | | | | |
| Shotton, Chester Rd West | | 07:56 | 09:13 | 09:28 | 10:58 | 11:28 | 12:58 | 13:28 | 14:48 | 15:58 |
| Queensferry, Deeside Leisure Centre | | 07:58~ | 09:15~ | 09:31~ | 11:01~ | 11:30~ | 13:01~ | 13:30~ | 14:50~ | 16:01~ |
| Queensferry, Station Road | | 07:59 | | 09:33 | 11:03 | | 13:03 | | | 16:03 |
| Sealand, Green Lane East | | 08:04 | | 09:38 | 11:08 | | 13:08 | | | 16:08 |
| Bache, Countess Hospital | | 08:17 | | 09:51 | 11:21 | | 13:21 | | | 16:21 |
| Chester, Chester Bus Interchange (Stand M) | Arrive: | 08:28 | | 10:01 | 11:31 | | 13:31 | | | 16:31 |
| Queensferry, Asda | | | 09:18 | | | 11:33 | | 13:33 | 14:53 | |
| Hawarden, Glynne Arms | | | 09:23 | | | 11:38 | | 13:38 | | |
| Broughton, Tesco | | | 09:28 | | | 11:43 | | 13:43 | | |
| Bretton, Old Mill House | | | 09:31 | | | 11:47 | | 13:47 | | |
| Higher Kinnerton, Church | | | 09:37 | | | 11:53 | | 13:53 | | |
| Penyffordd, War Memorial Institute | | | | | | | | | | |
| Hope, St Cynfarch`s Church | | | 09:43 | | | 11:58 | | 13:58 | | |
| Bryn Offa, Maelor Hospital | | | 09:56 | | | 12:11 | | 14:11 | | |
| Wrexham, Bus Station (Bay 6) | Arrive: | | 10:00 | | | 12:15 | | 14:15 | | |

| | Service: | 209 | 109 |
|---|---|---|---|
| | Notes: | Prd1 | Prd1 |
| | Operator: | STCR | STCR |
| Mold, Campus | Depart: | 15:40 | 15:40 |
| Mold, Bus Station (Stand 3) | | | 15:45 |
| Mold, Theatr Clwyd | | | |
| Soughton, Cross Keys | | 15:50 | 15:50 |
| Northop, Brook Street | | 15:55 | 15:53 |
| Northop Hall, Boar`s Head Inn | | 16:01 | |
| Wepre, Sidney Hall Court | | | 16:08 |
| Wepre, Civic Centre | | | 16:13 |
| Wepre, St David`s Church | | 16:07 | |
| Golftyn, Boathouse Inn | | 16:13 | |
| Shotton, Chester Rd West | | | 16:15 |
| Queensferry, Deeside Leisure Centre | | 16:20 | 16:17~ |
| Queensferry, Station Road | | | |
| Sealand, Green Lane East | | | |
| Bache, Countess Hospital | | | |
| Chester, Chester Bus Interchange (Stand M) | Arrive: | | |
| Queensferry, Asda | | | 16:20 |
| Hawarden, Glynne Arms | | | 16:25 |
| Broughton, Tesco | | | 16:32 |
| Bretton, Old Mill House | | | |
| Higher Kinnerton, Church | | | |
| Penyffordd, War Memorial Institute | | | 16:39 |
| Hope, St Cynfarch`s Church | | | 16:44 |
| Bryn Offa, Maelor Hospital | | | 16:57 |
| Wrexham, Bus Station (Bay 6) | Arrive: | | 17:05 |

~ The time is not a timing point and is an estimate only.

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**Services**

# Mold - Wrexham 9
# Mold - Wrexham X9
# Mold - Wrexham 109
# Mold - Wrexham 209

## Monday - Friday (not Bank Holidays)

Operated by: STCR
Stagecoach in Chester

Timetable valid from 11 Mar 2018 until further notice

| | Service: | 9 | X9 | 9 | 9 | X9 | 9 | X9 | 9 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Notes: | | | | | | | | | |
| | Operator: | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR |
| Mold, Campus | Depart: | | | | | | | | | |
| Mold, Bus Station (Stand 3) | | 07:06 | 08:42 | | | | | | | |
| Mold, Theatr Clwyd | | 07:09 | 08:45 | | | | | | | |
| Soughton, Cross Keys | | 07:11 | 08:47 | | | | | | | |
| Northop, Brook Street | | 07:15 | 08:50 | | | | | | | |
| Northop Hall, Boar`s Head Inn | | 07:21 | 08:58 | | | | | | 14:35 | |
| Wepre, Sidney Hall Court | | 07:36 | 09:10 | 09:20 | 10:50 | 11:15 | 12:30 | 13:25 | 14:51 | 15:57 |
| Wepre, Civic Centre | | 07:42 | 09:16 | 09:26 | 10:56 | 11:21 | 12:39 | 13:34 | 14:57 | 16:03 |
| Wepre, St David`s Church | | | | | | | | | | |
| Golftyn, Boathouse Inn | | | | | | | | | | |
| Shotton, Chester Rd West | | 07:44 | 09:20 | 09:28 | 10:58 | 11:23 | 12:41 | 13:36 | 14:59 | 16:06 |
| Queensferry, Deeside Leisure Centre | | | | | | | | | | |
| Queensferry, Station Road | | 07:47 | | 09:33 | 11:03 | | 12:46 | | | 16:09 |
| Garden City, Deeside Ind Park | | 07:52 | | 09:38 | 11:08 | | 12:51 | | | 16:14 |
| Garden City, Tenth Avenue | | 08:01 | | | | | 13:00 | | | 16:23 |
| Bache, Countess Hospital | | 08:17 | | 09:51 | 11:21 | | 13:16 | | | 16:39 |
| Chester, Chester Bus Interchange (Stand M) | Arrive: | 08:28 | | 10:01 | 11:31 | | 13:27 | | | 16:50 |
| Queensferry, Asda | | | 09:25 | | | 11:28 | | 13:41 | 15:04 | |
| Hawarden, Glynne Arms | | | 09:30 | | | 11:35 | | 13:46 | | |
| Broughton, Tesco | | | 09:35 | | | 11:40 | | 13:51 | | |
| Bretton, Old Mill House | | | 09:38 | | | 11:47 | | 13:55 | | |
| Higher Kinnerton, Church | | | 09:44 | | | 11:53 | | 14:01 | | |
| Penyffordd, War Memorial Institute | | | | | | | | | | |
| Hope, St Cynfarch`s Church | | | 09:50 | | | 11:58 | | 14:06 | | |
| Bryn Offa, Maelor Hospital | | | 10:03 | | | 12:11 | | 14:19 | | |
| Wrexham, Bus Station (Bay 6) | Arrive: | | 10:07 | | | 12:15 | | 14:25 | | |

| | Service: | X9 | 109 | 209 |
|---|---|---|---|---|
| | Notes: | XPrd1 | Prd2 | Prd2 |
| | Operator: | STCR | STCR | STCR |
| Mold, Campus | Depart: | | 15:40 | 15:40 |
| Mold, Bus Station (Stand 3) | | 15:45 | 15:45 | |
| Mold, Theatr Clwyd | | | | |
| Soughton, Cross Keys | | 15:50 | 15:50 | 15:50 |
| Northop, Brook Street | | 15:53 | 15:53 | 15:55 |
| Northop Hall, Boar`s Head Inn | | 15:58 | | 16:01 |
| Wepre, Sidney Hall Court | | 16:10 | 16:08 | |
| Wepre, Civic Centre | | 16:16 | 16:13 | |
| Wepre, St David`s Church | | | | 16:07 |
| Golftyn, Boathouse Inn | | | | 16:13 |
| Shotton, Chester Rd West | | 16:20 | 16:15 | |
| Queensferry, Deeside Leisure Centre | | 16:22~ | | 16:20 |
| Queensferry, Station Road | | | | |
| Garden City, Deeside Ind Park | | | | |
| Garden City, Tenth Avenue | | | | |
| Bache, Countess Hospital | | | | |
| Chester, Chester Bus Interchange (Stand M) | Arrive: | | | |
| Queensferry, Asda | | 16:25 | 16:20 | |
| Hawarden, Glynne Arms | | 16:30 | 16:25 | |
| Broughton, Tesco | | 16:35 | 16:32 | |
| Bretton, Old Mill House | | | | |
| Higher Kinnerton, Church | | | | |
| Penyffordd, War Memorial Institute | | 16:42 | 16:39 | |
| Hope, St Cynfarch`s Church | | 16:47 | 16:44 | |
| Bryn Offa, Maelor Hospital | | 17:00 | 16:57 | |
| Wrexham, Bus Station (Bay 6) | Arrive: | 17:05 | 17:05 | |

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**Services**

# Wrexham - Mold — X9

# Wrexham - Mold — 9

## Saturdays (not Bank Holidays)

Operated by: STCR
Stagecoach in Chester

Timetable valid from 11 Sep 2017 until 10 Mar 2018

| | Service: | X9 | 9 | 9 | X9 | 9 | X9 | 9 | X9 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Operator: | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR |
| Chester, Chester Bus Interchange (Stand K) | Depart: | | 08:35 | 10:05 | | 11:35 | | 13:35 | | |
| Bache, Countess Hospital | | | 08:44 | 10:13 | | 11:43 | | 13:43 | | |
| Garden City, Green Lane East | | | 08:58 | 10:25 | | 11:55 | | 13:55 | | |
| Queensferry, Station Road Q | | | 09:04 | 10:31 | | 12:01 | | 14:01 | | |
| Wrexham, Bus Station (Bay 6) | Depart: | | | | 10:20 | | 12:20 | | 14:20 | |
| Bryn Offa, Maelor Hospital | | | | | 10:24 | | 12:24 | | 14:24 | |
| Hope, St Cynfarch`s Church | | | | | 10:37 | | 12:37 | | 14:37 | |
| Higher Kinnerton, Church | | | | | 10:41 | | 12:41 | | 14:41 | |
| Bretton, Old Mill House | | | | | 10:46 | | 12:46 | | 14:46 | |
| Broughton, Tesco | | | | | 10:50 | | 12:50 | | 14:50 | |
| Hawarden, Glynne Arms | | | | | 10:55 | | 12:55 | | 14:55 | |
| Queensferry, Asda | | | | | 11:00 | | 13:00 | | 15:00 | 15:05 |
| Shotton, Chester Rd West | | 08:08 | 09:08 | 10:35 | 11:05 | 12:05 | 13:05 | 14:05 | 15:05 | 15:10 |
| Wepre, Connah's Quay Civic Centre | | 08:11 | 09:11 | 10:38 | 11:08 | 12:08 | 13:08 | 14:08 | 15:08 | 15:13 |
| Wepre, Sidney Hall Court | | 08:15 | 09:15 | 10:42 | 11:12 | 12:12 | 13:12 | 14:12 | 15:12 | 15:17 |
| Northop Hall, Boar`s Head Inn | | | | | | | | 14:24 | | |
| Northop, Red Lion | | 08:26 | | | | | | | 15:23 | |
| Soughton, Cross Keys | | 08:29 | | | | | | | 15:26 | |
| Mold, Theatr Clwyd | | 08:31 | | | | | | | 15:28 | |
| Mold, Bus Station (Stand 3) | Arrive: | 08:34 | | | | | | | 15:31 | |

| | Service: | 9 |
|---|---|---|
| | Operator: | STCR |
| Chester, Chester Bus Interchange (Stand K) | Depart: | 17:13 |
| Bache, Countess Hospital | | 17:21 |
| Garden City, Green Lane East | | 17:33 |
| Queensferry, Station Road Q | | 17:40 |
| Wrexham, Bus Station (Bay 6) | Depart: | |
| Bryn Offa, Maelor Hospital | | |
| Hope, St Cynfarch`s Church | | |
| Higher Kinnerton, Church | | |
| Bretton, Old Mill House | | |
| Broughton, Tesco | | |
| Hawarden, Glynne Arms | | |
| Queensferry, Asda | | |
| Shotton, Chester Rd West | | 17:44 |
| Wepre, Connah's Quay Civic Centre | | 17:53 |
| Wepre, Sidney Hall Court | | 17:58 |
| Northop Hall, Boar`s Head Inn | | 18:09 |
| Northop, Red Lion | | 18:14 |
| Soughton, Cross Keys | | 18:17 |
| Mold, Theatr Clwyd | | 18:19 |
| Mold, Bus Station (Stand 3) | Arrive: | 18:22 |

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Services

# Wrexham - Mold X9

# Wrexham - Mold 9

# Wrexham - Mold 91

## Saturdays (not Bank Holidays)

Operated by: STCR
Stagecoach in Chester

Timetable valid from 11 Mar 2018 until further notice

| | Service: | X9 | 9 | 9 | X9 | 9 | X9 | 91 | X9 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Operator: | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR |
| Chester, Chester Bus Interchange (Stand K) | Depart: | | 08:35 | 10:05 | | 11:35 | | 13:35 | | |
| Bache, Countess Hospital | | | 08:44 | 10:13 | | 11:43 | | 13:43 | | |
| Garden City, Deeside Ind Park | | | 08:58 | 10:25 | | 11:55 | | 13:55 | | |
| Queensferry, Station Road Q | | | 09:04 | 10:31 | | 12:01 | | 14:01 | | |
| Wrexham, Bus Station (Bay 6) | Depart: | | | | 10:20 | | 12:20 | | 14:20 | |
| Bryn Offa, Maelor Hospital | | | | | 10:24 | | 12:24 | | 14:24 | |
| Hope, St Cynfarch`s Church | | | | | 10:37 | | 12:37 | | 14:37 | |
| Higher Kinnerton, Church | | | | | 10:41 | | 12:41 | | 14:41 | |
| Bretton, Old Mill House | | | | | 10:46 | | 12:46 | | 14:46 | |
| Broughton, Tesco | | | | | 10:50 | | 12:50 | | 14:50 | |
| Hawarden, Glynne Arms | | | | | 10:55 | | 12:55 | | 14:55 | |
| Queensferry, Asda | | | | | 11:00 | | 13:00 | | 15:00 | 15:05 |
| Shotton, Chester Rd West | | 08:08 | 09:08 | 10:35 | 11:05 | 12:05 | 13:05 | 14:05 | 15:05 | 15:10 |
| Wepre, Connah's Quay Civic Centre | | 08:11 | 09:11 | 10:38 | 11:08 | 12:08 | 13:08 | 14:08 | 15:08 | 15:13 |
| Wepre, Sidney Hall Court | | 08:15 | 09:15 | 10:42 | 11:12 | 12:12 | 13:12 | 14:12 | 15:12 | 15:17 |
| Northop Hall, Boar`s Head Inn | | | | | | | | 14:24 | | |
| Northop, Red Lion | | 08:26 | | | | | | | 15:23 | |
| Soughton, Cross Keys | | 08:29 | | | | | | | 15:26 | |
| Mold, Theatr Clwyd | | 08:31 | | | | | | | 15:28 | |
| Mold, Bus Station (Stand 3) | Arrive: | 08:34 | | | | | | | 15:31 | |

| | Service: | 9 |
|---|---|---|
| | Operator: | STCR |
| Chester, Chester Bus Interchange (Stand K) | Depart: | 17:13 |
| Bache, Countess Hospital | | 17:21 |
| Garden City, Deeside Ind Park | | 17:33 |
| Queensferry, Station Road Q | | 17:40 |
| Wrexham, Bus Station (Bay 6) | Depart: | |
| Bryn Offa, Maelor Hospital | | |
| Hope, St Cynfarch`s Church | | |
| Higher Kinnerton, Church | | |
| Bretton, Old Mill House | | |
| Broughton, Tesco | | |
| Hawarden, Glynne Arms | | |
| Queensferry, Asda | | |
| Shotton, Chester Rd West | | 17:44 |
| Wepre, Connah's Quay Civic Centre | | 17:53 |
| Wepre, Sidney Hall Court | | 17:58 |
| Northop Hall, Boar`s Head Inn | | 18:09 |
| Northop, Red Lion | | 18:14 |
| Soughton, Cross Keys | | 18:17 |
| Mold, Theatr Clwyd | | 18:19 |
| Mold, Bus Station (Stand 3) | Arrive: | 18:22 |

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Services

# Mold - Wrexham 9

# Mold - Wrexham X9

## Saturdays (not Bank Holidays)

Operated by: STCR
Stagecoach in Chester

Timetable valid from 11 Sep 2017 until 10 Mar 2018

| | Service: | 9 | X9 | 9 | 9 | X9 | 9 | X9 | 9 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Operator: | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR |
| Mold, Bus Station (Stand 3) | Depart: | 07:23 | 08:40 | | | | | | | |
| Mold, Theatr Clwyd | | 07:26 | 08:43 | | | | | | | |
| Soughton, Cross Keys | | 07:28 | 08:45 | | | | | | | |
| Northop, Brook Street | | 07:31 | 08:48 | | | | | | | |
| Northop Hall, Boar`s Head Inn | | 07:36 | 08:53 | | | | | | 14:24 | |
| Wepre, Sidney Hall Court | | 07:48 | 09:05 | 09:20 | 10:50 | 11:20 | 12:50 | 13:20 | 14:40 | 15:50 |
| Wepre, Civic Centre | | 07:54 | 09:11 | 09:26 | 10:56 | 11:26 | 12:56 | 13:26 | 14:46 | 15:56 |
| Shotton, Chester Rd West | | 07:56 | 09:13 | 09:28 | 10:58 | 11:28 | 12:58 | 13:28 | 14:48 | 15:58 |
| Queensferry, Station Road | | 07:59 | | 09:33 | 11:03 | | 13:03 | | | 16:03 |
| Sealand, Green Lane East | | 08:04 | | 09:38 | 11:08 | | 13:08 | | | 16:08 |
| Bache, Countess Hospital | | 08:17 | | 09:51 | 11:21 | | 13:21 | | | 16:21 |
| Chester, Chester Bus Interchange (Stand M) | Arrive: | 08:28 | | 10:01 | 11:31 | | 13:31 | | | 16:31 |
| Queensferry, Asda | | | 09:18 | | | 11:33 | | 13:33 | 14:53 | |
| Hawarden, Glynne Arms | | | 09:23 | | | 11:38 | | 13:38 | | |
| Broughton, Tesco | | | 09:28 | | | 11:43 | | 13:43 | | |
| Bretton, Old Mill House | | | 09:31 | | | 11:47 | | 13:47 | | |
| Higher Kinnerton, Church | | | 09:37 | | | 11:53 | | 13:53 | | |
| Penyffordd, War Memorial Institute | | | | | | | | | | |
| Hope, St Cynfarch`s Church | | | 09:43 | | | 11:58 | | 13:58 | | |
| Bryn Offa, Maelor Hospital | | | 09:56 | | | 12:11 | | 14:11 | | |
| Wrexham, Bus Station (Bay 6) | Arrive: | | 10:00 | | | 12:15 | | 14:15 | | |

| | Service: | X9 |
|---|---|---|
| | Operator: | STCR |
| Mold, Bus Station (Stand 3) | Depart: | 15:35 |
| Mold, Theatr Clwyd | | |
| Soughton, Cross Keys | | 15:40 |
| Northop, Brook Street | | 15:43 |
| Northop Hall, Boar`s Head Inn | | 15:48 |
| Wepre, Sidney Hall Court | | 16:00 |
| Wepre, Civic Centre | | 16:06 |
| Shotton, Chester Rd West | | 16:10 |
| Queensferry, Station Road | | |
| Sealand, Green Lane East | | |
| Bache, Countess Hospital | | |
| Chester, Chester Bus Interchange (Stand M) | Arrive: | |
| Queensferry, Asda | | 16:15 |
| Hawarden, Glynne Arms | | 16:20 |
| Broughton, Tesco | | 16:25 |
| Bretton, Old Mill House | | |
| Higher Kinnerton, Church | | |
| Penyffordd, War Memorial Institute | | 16:32 |
| Hope, St Cynfarch`s Church | | 16:37 |
| Bryn Offa, Maelor Hospital | | 16:50 |
| Wrexham, Bus Station (Bay 6) | Arrive: | 16:55 |

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Services

# Mold - Wrexham 9

# Mold - Wrexham X9

## Saturdays (not Bank Holidays)

Operated by: STCR
Stagecoach in Chester

Timetable valid from 11 Mar 2018 until further notice

| | Service: | 9 | X9 | 9 | 9 | X9 | 9 | X9 | 9 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Operator: | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR | STCR |
| Mold, Bus Station (Stand 3) | Depart: | 07:23 | 08:40 | | | | | | | |
| Mold, Theatr Clwyd | | 07:26 | 08:43 | | | | | | | |
| Soughton, Cross Keys | | 07:28 | 08:45 | | | | | | | |
| Northop, Brook Street | | 07:31 | 08:48 | | | | | | | |
| Northop Hall, Boar`s Head Inn | | 07:36 | 08:53 | | | | | | 14:24 | |
| Wepre, Sidney Hall Court | | 07:48 | 09:05 | 09:20 | 10:50 | 11:20 | 12:50 | 13:20 | 14:40 | 15:50 |
| Wepre, Civic Centre | | 07:54 | 09:11 | 09:26 | 10:56 | 11:26 | 12:56 | 13:26 | 14:46 | 15:56 |
| Shotton, Chester Rd West | | 07:56 | 09:13 | 09:28 | 10:58 | 11:28 | 12:58 | 13:28 | 14:48 | 15:58 |
| Queensferry, Asda | | | 09:18 | | | 11:33 | | 13:33 | 14:53 | |
| Hawarden, Glynne Arms | | | 09:23 | | | 11:38 | | 13:38 | | |
| Broughton, Tesco | | | 09:28 | | | 11:43 | | 13:43 | | |
| Bretton, Old Mill House | | | 09:31 | | | 11:47 | | 13:47 | | |
| Higher Kinnerton, Church | | | 09:37 | | | 11:53 | | 13:53 | | |
| Penyffordd, War Memorial Institute | | | | | | | | | | |
| Hope, St Cynfarch`s Church | | | 09:43 | | | 11:58 | | 13:58 | | |
| Bryn Offa, Maelor Hospital | | | 09:56 | | | 12:11 | | 14:11 | | |
| Wrexham, Bus Station (Bay 6) | Arrive: | | 10:00 | | | 12:15 | | 14:15 | | |
| Queensferry, Station Road | | 07:59 | | 09:33 | 11:03 | | 13:03 | | | 16:03 |
| Garden City, Deeside Ind Park | | 08:04 | | 09:38 | 11:08 | | 13:08 | | | 16:08 |
| Bache, Countess Hospital | | 08:17 | | 09:51 | 11:21 | | 13:21 | | | 16:21 |
| Chester, Chester Bus Interchange (Stand M) | Arrive: | 08:28 | | 10:01 | 11:31 | | 13:31 | | | 16:31 |

| | Service: | X9 |
|---|---|---|
| | Operator: | STCR |
| Mold, Bus Station (Stand 3) | Depart: | 15:35 |
| Mold, Theatr Clwyd | | |
| Soughton, Cross Keys | | 15:40 |
| Northop, Brook Street | | 15:43 |
| Northop Hall, Boar`s Head Inn | | 15:48 |
| Wepre, Sidney Hall Court | | 16:00 |
| Wepre, Civic Centre | | 16:06 |
| Shotton, Chester Rd West | | 16:10 |
| Queensferry, Asda | | 16:15 |
| Hawarden, Glynne Arms | | 16:20 |
| Broughton, Tesco | | 16:25 |
| Bretton, Old Mill House | | |
| Higher Kinnerton, Church | | |
| Penyffordd, War Memorial Institute | | 16:32 |
| Hope, St Cynfarch`s Church | | 16:37 |
| Bryn Offa, Maelor Hospital | | 16:50 |
| Wrexham, Bus Station (Bay 6) | Arrive: | 16:55 |
| Queensferry, Station Road | | |
| Garden City, Deeside Ind Park | | |
| Bache, Countess Hospital | | |
| Chester, Chester Bus Interchange (Stand M) | Arrive: | |

Created by Stagecoach Group Plc on 09/03/2018 00:27. This timetable is valid at the time of download from our website. However, this may be affected by alteration at short notice. To read service updates or to re-check your journey go to www.stagecoachbus.com.

# Holywell to Chester via Queensferry. Connects at Holywell with services 11F, 11G, 11M and 11X for journeys to/from Rhyl

11, 11A

## Monday to Friday - towards Holywell Bus Station

| | 11 | 11 | | 11 | 11 | | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11A | 11A | 11A | 11A | 11A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chester Railway Station | -- | -- | | -- | -- | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2045 | -- | 2300 |
| Chester Bus Interchange | 0645 | 0715 | | 45 | 15 | | 1445 | 1515 | 1545 | 1615 | 1645 | 1715 | 1745 | 1815 | 1845 | 1915 | 1945 | -- | 2145 | -- |
| Broughton Tesco | 0707 | 0737 | | 07 | 37 | | 1507 | 1537 | 1609 | 1639 | 1709 | 1739 | 1807 | 1837 | 1907 | 1934 | 2004 | 2106 | 2204 | 2320 |
| Queensferry Solar Services | 0725 | 0755 | Then at these mins | 25 | 55 | past each hour until | 1525 | 1555 | 1627 | 1657 | 1727 | 1757 | 1825 | 1855 | 1925 | 1948 | 2018 | 2115 | 2218 | 2329 |
| Kelsterton Deeside College | 0738 | 0808 | | 38 | 08 | | 1538 | 1608 | 1640 | 1710 | 1740 | 1810 | 1838 | 1908 | 1938 | 1959 | 2029 | 2126 | 2229 | 2340 |
| Flint Library | -- | -- | | -- | -- | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2133 | -- | 2347 |
| Mold Bus Station | -- | -- | | -- | -- | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2148 | -- | 0000 |
| Flint McDonalds | 0746 | 0816 | | 46 | 16 | | 1546 | 1616 | 1648 | 1718 | 1748 | 1818 | 1846 | 1916 | 1946 | 2006 | 2036 | -- | 2236 | -- |
| Holywell Bus Station | 0801 | 0831 | | 01 | 31 | | 1601 | 1631 | 1703 | 1733 | 1803 | 1833 | 1901 | 1931 | 2001 | 2020 | 2050 | -- | 2250 | -- |

## Monday to Friday - towards Chester Bus Interchange

| | 11 | 11 | 11 | 11 | 11 | 11 | 11 | | 11 | 11 | | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11A | 11A | 11A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mold Bus Station | -- | -- | -- | -- | -- | -- | -- | | -- | -- | | -- | -- | -- | -- | -- | -- | -- | -- | 1927 | -- | 2150 |
| Holywell Bus Station | 0530 | 0550 | 0620 | 0650 | 0720 | 0750 | 0820 | | 50 | 20 | | 1450 | 1520 | 1550 | 1620 | 1650 | 1720 | 1750 | 1820 | -- | 2030 | -- |
| Flint Ship | 0544 | 0605 | 0635 | 0705 | 0735 | 0805 | 0835 | Then at these mins | 05 | 35 | past each hour until | 1505 | 1535 | 1605 | 1635 | 1705 | 1735 | 1805 | 1835 | 1944 | 2044 | 2204 |
| Kelsterton Lane | 0551 | 0613 | 0643 | 0713 | 0743 | 0813 | 0843 | | 13 | 43 | | 1513 | 1543 | 1613 | 1643 | 1713 | 1743 | 1813 | 1843 | 1951 | 2051 | 2211 |
| Queensferry Solar Services | 0602 | 0625 | 0655 | 0726 | 0756 | 0826 | 0856 | | 26 | 56 | | 1526 | 1556 | 1626 | 1656 | 1726 | 1756 | 1826 | 1856 | 2002 | 2102 | 2222 |
| Broughton Tesco | 0617 | 0641 | 0711 | 0744 | 0814 | 0844 | 0914 | | 44 | 14 | | 1544 | 1614 | 1644 | 1714 | 1744 | 1814 | 1844 | 1914 | 2011 | 2116 | 2231 |
| Chester Railway Station | -- | -- | -- | -- | -- | -- | -- | | -- | -- | | -- | -- | -- | -- | -- | -- | -- | -- | 2032 | -- | 2254 |
| Chester Bus Interchange | 0638 | 0703 | 0733 | 0806 | 0838 | 0908 | 0936 | | 06 | 36 | | 1606 | 1638 | 1708 | 1738 | 1806 | 1836 | 1906 | 1936 | -- | 2116 | -- |

## Saturday - towards Holywell Bus Station

| | 11 | 11 | 11 | 11 | 11 | | 11 | 11 | | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11A | 11A | 11A | 11A | 11A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chester Railway Station | -- | -- | -- | -- | -- | | -- | -- | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2045 | -- | 2300 |
| Chester Bus Interchange | 0645 | 0715 | 0745 | 0815 | 0845 | | 15 | 45 | | 1515 | 1545 | 1615 | 1645 | 1715 | 1745 | 1815 | 1845 | 1915 | 1945 | -- | 2145 | -- |
| Broughton Tesco | 0707 | 0737 | 0809 | 0839 | 0907 | | 37 | 07 | | 1537 | 1609 | 1639 | 1709 | 1739 | 1807 | 1837 | 1907 | 1934 | 2004 | 2106 | 2204 | 2320 |
| Queensferry Solar Services | 0725 | 0755 | 0827 | 0857 | 0925 | Then at these mins | 55 | 25 | past each hour until | 1555 | 1627 | 1657 | 1727 | 1757 | 1825 | 1855 | 1925 | 1948 | 2018 | 2115 | 2218 | 2329 |
| Kelsterton Deeside College | 0738 | 0808 | 0840 | 0910 | 0938 | | 08 | 38 | | 1608 | 1640 | 1710 | 1740 | 1810 | 1838 | 1908 | 1938 | 1959 | 2029 | 2126 | 2229 | 2340 |
| Flint Library | -- | -- | -- | -- | -- | | -- | -- | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2133 | -- | 2347 |
| Mold Bus Station | -- | -- | -- | -- | -- | | -- | -- | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2148 | -- | 0000 |
| Flint McDonalds | 0746 | 0816 | 0848 | 0918 | 0946 | | 16 | 46 | | 1616 | 1648 | 1718 | 1748 | 1818 | 1846 | 1916 | 1946 | 2006 | 2036 | -- | 2236 | -- |
| Holywell Bus Station | 0801 | 0831 | 0903 | 0933 | 1001 | | 31 | 01 | | 1631 | 1703 | 1733 | 1803 | 1833 | 1901 | 1931 | 2001 | 2020 | 2050 | -- | 2250 | -- |

## Saturday - towards Chester Bus Interchange

| | 11 | 11 | 11 | 11 | 11 | 11 | 11 | | 11 | 11 | | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11A | 11A | 11A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mold Bus Station | -- | -- | -- | -- | -- | -- | -- | | -- | -- | | -- | -- | -- | -- | -- | -- | -- | -- | 1927 | -- | 2150 |
| Holywell Bus Station | 0530 | 0550 | 0620 | 0650 | 0720 | 0750 | 0820 | | 50 | 20 | | 1450 | 1520 | 1550 | 1620 | 1650 | 1720 | 1750 | 1820 | -- | 2030 | -- |
| Flint Ship | 0544 | 0605 | 0635 | 0705 | 0735 | 0805 | 0835 | Then at these mins | 05 | 35 | past each hour until | 1505 | 1535 | 1605 | 1635 | 1705 | 1735 | 1805 | 1835 | 1944 | 2044 | 2204 |
| Kelsterton Lane | 0551 | 0613 | 0643 | 0713 | 0743 | 0813 | 0843 | | 13 | 43 | | 1513 | 1543 | 1613 | 1643 | 1713 | 1743 | 1813 | 1843 | 1951 | 2051 | 2211 |
| Queensferry Solar Services | 0602 | 0625 | 0655 | 0726 | 0756 | 0826 | 0856 | | 26 | 56 | | 1526 | 1556 | 1626 | 1656 | 1726 | 1756 | 1826 | 1856 | 2002 | 2102 | 2222 |
| Broughton Tesco | 0617 | 0641 | 0711 | 0744 | 0814 | 0844 | 0914 | | 44 | 14 | | 1544 | 1614 | 1644 | 1714 | 1744 | 1814 | 1844 | 1914 | 2011 | 2116 | 2231 |
| Chester Railway Station | -- | -- | -- | -- | -- | -- | -- | | -- | -- | | -- | -- | -- | -- | -- | -- | -- | -- | 2032 | -- | 2254 |
| Chester Bus Interchange | 0638 | 0703 | 0733 | 0806 | 0838 | 0908 | 0936 | | 06 | 36 | | 1606 | 1638 | 1708 | 1738 | 1806 | 1836 | 1906 | 1936 | -- | 2135 | -- |

## Sunday - towards Holywell Bus Station

| | 11A | 11A | 11A | 11A | 11A | 11A | 11A |
|---|---|---|---|---|---|---|---|
| Chester Bus Interchange | 0955 | 1155 | 1355 | 1555 | 1755 | 1955 | 2145 |
| Broughton Tesco | 1017 | 1217 | 1417 | 1617 | 1817 | 2014 | 2204 |
| Queensferry Solar Services | 1035 | 1235 | 1435 | 1635 | 1835 | 2028 | 2218 |
| Kelsterton Deeside College | 1048 | 1248 | 1448 | 1648 | 1848 | 2039 | 2229 |
| Flint McDonalds | 1056 | 1256 | 1456 | 1656 | 1856 | 2046 | 2236 |
| Holywell Bus Station | 1111 | 1311 | 1511 | 1711 | 1911 | 2100 | 2250 |

## Sunday - towards Chester Bus Interchange

| | 11A | 11A | 11A | 11A | 11A | 11A | 11A |
|---|---|---|---|---|---|---|---|
| Holywell Bus Station | 0835 | 1035 | 1235 | 1435 | 1635 | 1835 | 2030 |
| Flint Ship | 0850 | 1050 | 1250 | 1450 | 1650 | 1850 | 2044 |
| Kelsterton Lane | 0858 | 1058 | 1258 | 1458 | 1658 | 1858 | 2051 |

| | 11A | 11A | 11A | 11A | 11A | 11A | 11A |
|---|---|---|---|---|---|---|---|
| **Queensferry Solar Services** | 0911 | 1111 | 1311 | 1511 | 1711 | 1911 | 2102 |
| **Broughton Tesco** | 0929 | 1129 | 1329 | 1529 | 1729 | 1929 | 2116 |
| **Chester Bus Interchange** | 0951 | 1151 | 1351 | 1551 | 1751 | 1951 | 2135 |

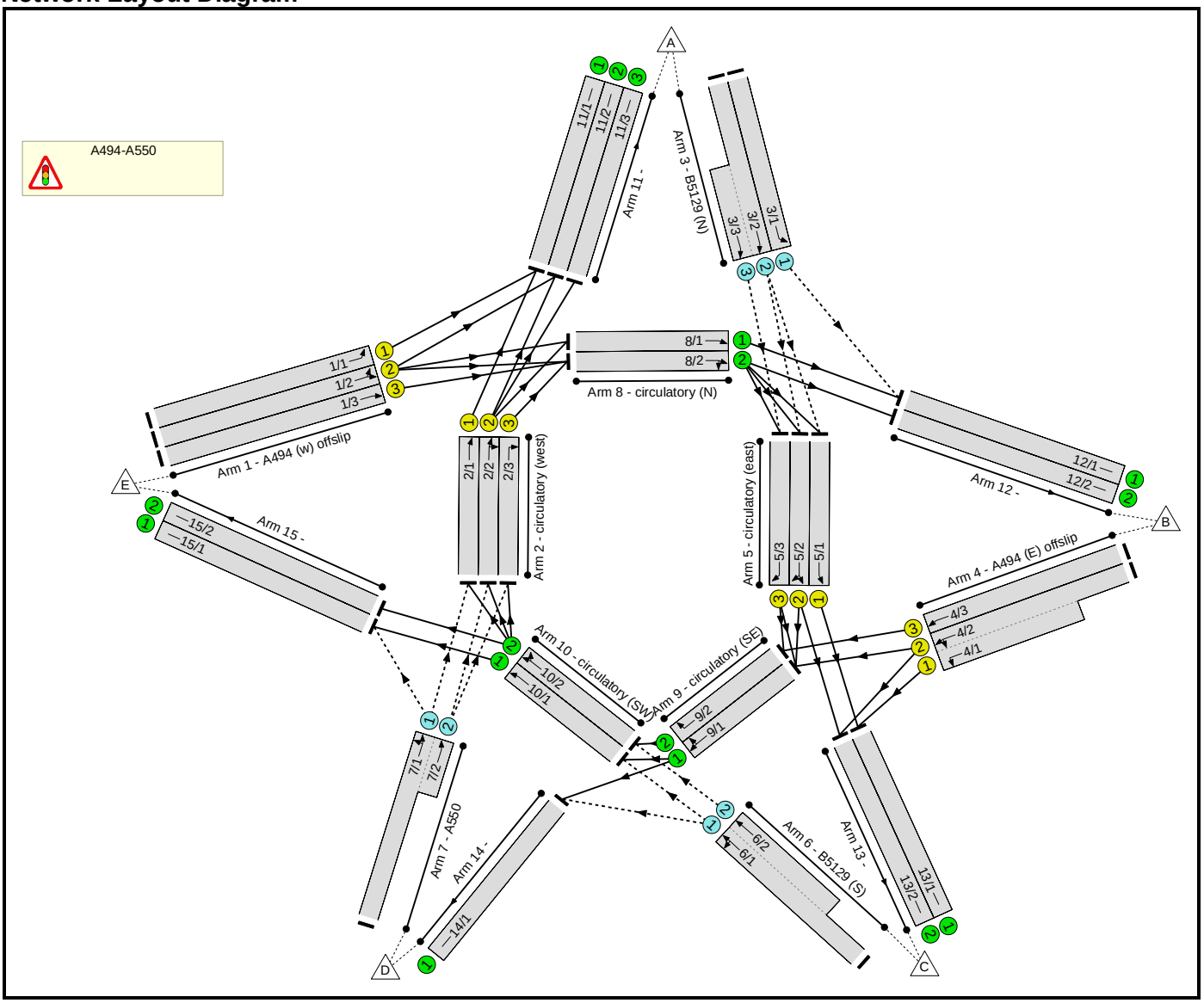
# Appendix F – A494 / A550 Assessment Results

# Full Input Data And Results

## User and Project Details

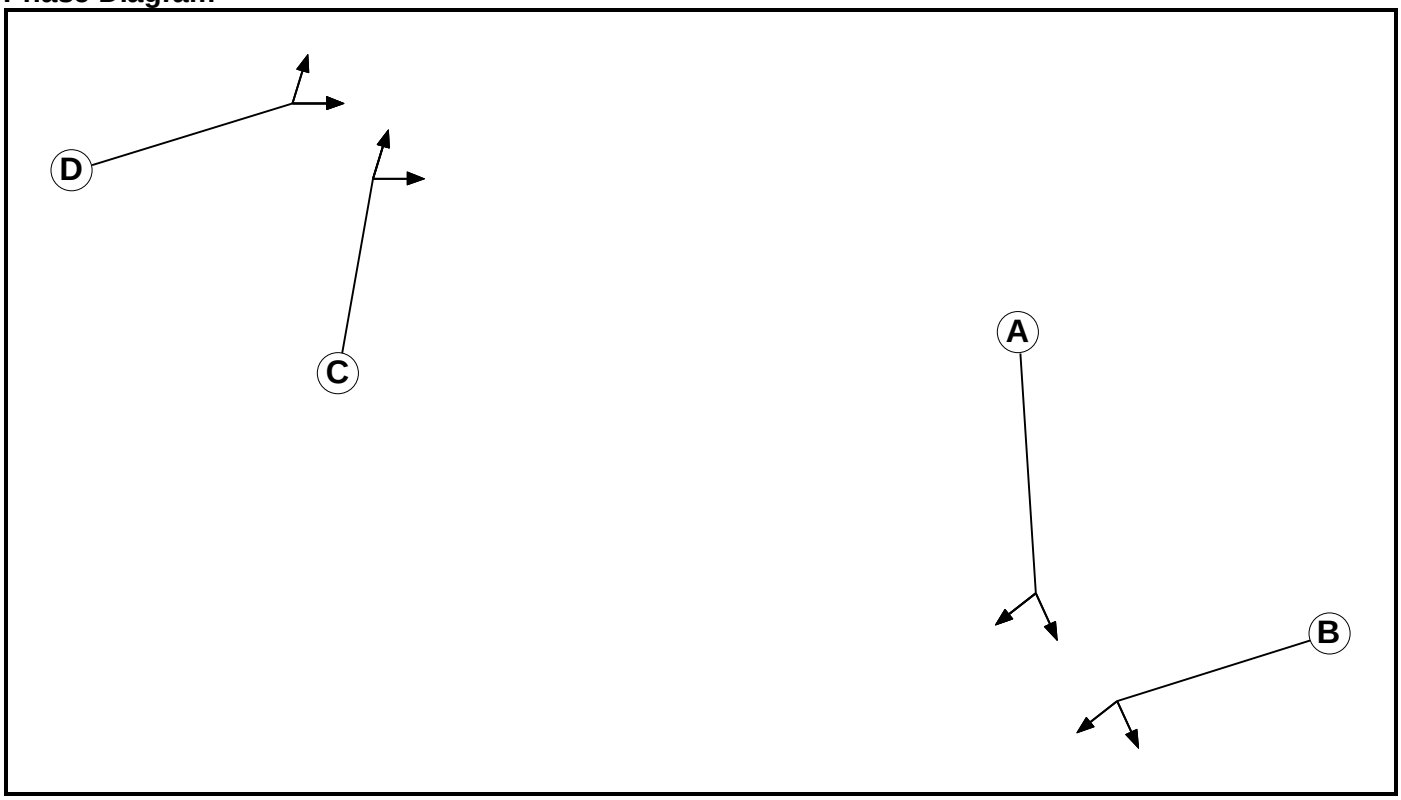
| | |
|---|---|
| **Project:** | **HW005 Mancot** |
| **Title:** | **A494-A550** |
| **Location:** | \\sweco.se\GB\LDS01\Legacy\MNC\Manchester Central\Mancot Flintshire\Models |
| **File name:** | 1. A494-A550.lsg3x |
| **Author:** | MT |
| **Company:** | Sweco |
| **Address:** | |
| **Notes:** | |

## Network Layout Diagram



Full Input Data And Results

## Phase Diagram




## Phase Input Data

| Phase Name | Phase Type | Stage Stream | Assoc. Phase | Street Min | Cont Min |
|---|---|---|---|---|---|
| A | Traffic | 2 | | 7 | 7 |
| B | Traffic | 2 | | 7 | 7 |
| C | Traffic | 1 | | 7 | 7 |
| D | Traffic | 1 | | 7 | 7 |

## Phase Intergreens Matrix

| Terminating Phase | Starting Phase A | B | C | D |
|---|---|---|---|---|
| A | | 5 | - | - |
| B | 5 | | - | - |
| C | - | - | | 5 |
| D | - | - | 5 | |

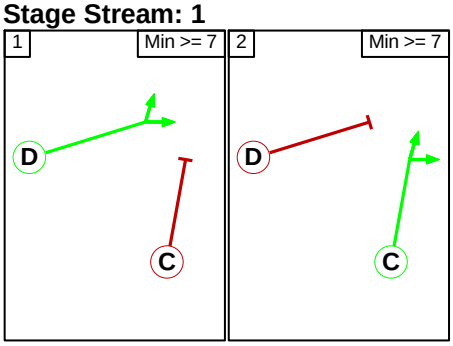
## Phases in Stage

| Stream | Stage No. | Phases in Stage |
|---|---|---|
| 1 | 1 | D |
| 1 | 2 | C |
| 2 | 1 | A |
| 2 | 2 | B |

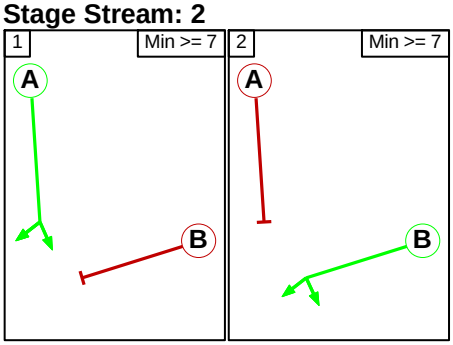
Full Input Data And Results

## Stage Diagram

### Stage Stream: 1




### Stage Stream: 2




## Phase Delays

### Stage Stream: 1

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

### Stage Stream: 2

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

## Prohibited Stage Change

### Stage Stream: 1

| | | To Stage | |
|---|---|---|---|
| | | 1 | 2 |
| From Stage | 1 | | 5 |
| | 2 | 5 | |

### Stage Stream: 2

| | | To Stage | |
|---|---|---|---|
| | | 1 | 2 |
| From Stage | 1 | | 5 |
| | 2 | 5 | |

## Give-Way Lane Input Data

**Junction: A494-A550**

| Lane | Movement | Max Flow when Giving Way (PCU/Hr) | Min Flow when Giving Way (PCU/Hr) | Opposing Lane | Opp. Lane Coeff. | Opp. Mvmnts. | Right Turn Storage (PCU) | Non-Blocking Storage (PCU) | RTF | Right Turn Move up (s) | Max Turns in Intergreen (PCU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/1 (B5129 (N)) | 12/1 (Left) | 1164 | 0 | 8/1 | 0.39 | All | - | - | - | - | - |
| | | | | 8/2 | 0.39 | All | | | | | |
| 3/2 (B5129 (N)) | 5/1 (Ahead) | 1164 | 0 | 8/1 | 0.39 | All | - | - | - | - | - |
| | | | | 8/2 | 0.39 | All | | | | | |
| | 5/2 (Ahead) | 1164 | 0 | 8/1 | 0.39 | All | | | | | |
| | | | | 8/2 | 0.39 | All | | | | | |
| 3/3 (B5129 (N)) | 5/3 (Ahead) | 1164 | 0 | 8/1 | 0.39 | All | - | - | - | - | - |
| | | | | 8/2 | 0.39 | All | | | | | |
| 6/1 (B5129 (S)) | 10/1 (Ahead) | 1579 | 0 | 9/1 | 0.56 | All | - | - | - | - | - |
| | | | | 9/2 | 0.56 | All | | | | | |
| | 14/1 (Left) | 1579 | 0 | 9/1 | 0.56 | All | | | | | |
| | | | | 9/2 | 0.56 | All | | | | | |
| 6/2 (B5129 (S)) | 10/2 (Ahead) | 1579 | 0 | 9/1 | 0.56 | All | - | - | - | - | - |
| | | | | 9/2 | 0.56 | All | | | | | |
| 7/1 (A550) | 2/1 (Ahead) | 1032 | 0 | 10/1 | 0.33 | All | - | - | - | - | - |
| | | | | 10/2 | 0.33 | All | | | | | |
| | 15/1 (Left) | 1032 | 0 | 10/1 | 0.33 | All | | | | | |
| | | | | 10/2 | 0.33 | All | | | | | |
| 7/2 (A550) | 2/2 (Ahead) | 1032 | 0 | 10/1 | 0.33 | All | - | - | - | - | - |
| | | | | 10/2 | 0.33 | All | | | | | |
| | 2/3 (Ahead) | 1032 | 0 | 10/1 | 0.33 | All | | | | | |
| | | | | 10/2 | 0.33 | All | | | | | |

Full Input Data And Results

## Lane Input Data

**Junction: A494-A550**

| Lane | Lane Type | Phases | Start Disp. | End Disp. | Physical Length (PCU) | Sat Flow Type | Def User Saturation Flow (PCU/Hr) | Lane Width (m) | Gradient | Nearside Lane | Turns | Turning Radius (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/1 (A494 (w) offslip) | U | D | 2 | 3 | 60.0 | Geom | - | 3.50 | 0.00 | Y | Arm 11 Left | Inf |
| 1/2 (A494 (w) offslip) | U | D | 2 | 3 | 60.0 | Geom | - | 3.50 | 0.00 | N | Arm 8 Ahead<br>Arm 11 Left | Inf<br>Inf |
| 1/3 (A494 (w) offslip) | U | D | 2 | 3 | 60.0 | Geom | - | 3.50 | 0.00 | N | Arm 8 Ahead | Inf |
| 2/1 (circulatory (west)) | U | C | 2 | 3 | 16.5 | Geom | - | 3.50 | 0.00 | N | Arm 11 Ahead | Inf |
| 2/2 (circulatory (west)) | U | C | 2 | 3 | 16.5 | Geom | - | 3.50 | 0.00 | N | Arm 8 Right<br>Arm 11 Ahead | Inf<br>Inf |
| 2/3 (circulatory (west)) | U | C | 2 | 3 | 16.5 | Geom | - | 3.50 | 0.00 | N | Arm 8 Right | Inf |
| 3/1 (B5129 (N)) | O | | 2 | 3 | 60.0 | Geom | - | 3.20 | 0.00 | Y | Arm 12 Left | Inf |
| 3/2 (B5129 (N)) | O | | 2 | 3 | 60.0 | Geom | - | 3.20 | 0.00 | N | Arm 5 Ahead | Inf |
| 3/3 (B5129 (N)) | O | | 2 | 3 | 7.1 | Geom | - | 3.20 | 0.00 | N | Arm 5 Ahead | Inf |
| 4/1 (A494 (E) offslip) | U | B | 2 | 3 | 11.3 | Geom | - | 3.50 | 0.00 | Y | Arm 13 Left | Inf |
| 4/2 (A494 (E) offslip) | U | B | 2 | 3 | 60.0 | Geom | - | 3.50 | 0.00 | N | Arm 9 Ahead<br>Arm 13 Left | Inf<br>Inf |
| 4/3 (A494 (E) offslip) | U | B | 2 | 3 | 60.0 | Geom | - | 3.50 | 0.00 | N | Arm 9 Ahead | Inf |
| 5/1 (circulatory (east)) | U | A | 2 | 3 | 15.0 | Geom | - | 3.50 | 0.00 | N | Arm 13 Ahead | Inf |
| 5/2 (circulatory (east)) | U | A | 2 | 3 | 15.0 | Geom | - | 3.50 | 0.00 | N | Arm 9 Right<br>Arm 13 Ahead | Inf<br>Inf |
| 5/3 (circulatory (east)) | U | A | 2 | 3 | 15.0 | Geom | - | 3.50 | 0.00 | N | Arm 9 Right | Inf |
| 6/1 (B5129 (S)) | O | | 2 | 3 | 60.0 | Geom | - | 4.10 | 0.00 | Y | Arm 10 Ahead | Inf |

Full Input Data And Results

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Arm 14 Left | Inf |
| 6/2 (B5129 (S)) | O | | 2 | 3 | 9.9 | Geom | - | 4.00 | 0.00 | N | Arm 10 Ahead | Inf |
| 7/1 (A550) | O | | 2 | 3 | 60.0 | Geom | - | 3.50 | 0.00 | Y | Arm 2 Ahead | Inf |
| | | | | | | | | | | | Arm 15 Left | Inf |
| 7/2 (A550) | O | | 2 | 3 | 4.3 | Geom | - | 3.00 | 0.00 | N | Arm 2 Ahead | Inf |
| 8/1 (circulatory (N)) | U | | 2 | 3 | 9.7 | Geom | - | 4.20 | 0.00 | N | Arm 12 Ahead | Inf |
| 8/2 (circulatory (N)) | U | | 2 | 3 | 9.7 | Geom | - | 4.20 | 0.00 | N | Arm 5 Right | Inf |
| | | | | | | | | | | | Arm 12 Ahead | Inf |
| 9/1 (circulatory (SE)) | U | | 2 | 3 | 8.2 | Geom | - | 4.20 | 0.00 | N | Arm 10 Right | Inf |
| | | | | | | | | | | | Arm 14 Ahead | Inf |
| 9/2 (circulatory (SE)) | U | | 2 | 3 | 8.2 | Geom | - | 4.20 | 0.00 | N | Arm 10 Right | Inf |
| 10/1 (circulatory (SW)) | U | | 2 | 3 | 7.0 | Geom | - | 4.20 | 0.00 | N | Arm 15 Ahead | Inf |
| 10/2 (circulatory (SW)) | U | | 2 | 3 | 7.0 | Geom | - | 4.20 | 0.00 | N | Arm 2 Right | Inf |
| | | | | | | | | | | | Arm 15 Ahead | Inf |
| 11/1 | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 11/2 | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 11/3 | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 12/1 | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 12/2 | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 13/1 | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 13/2 | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 14/1 | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 15/1 | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
| 15/2 | U | | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |

Full Input Data And Results

## Traffic Flow Groups

| Flow Group | Start Time | End Time | Duration | Formula |
|---|---|---|---|---|
| 1: '2018 AM - Background' | 08:00 | 09:00 | 01:00 | |
| 2: '2018 PM - Background' | 17:00 | 18:00 | 01:00 | |
| 3: '2037 AM - Base' | 08:00 | 09:00 | 01:00 | |
| 4: '2037 PM - Base' | 17:00 | 18:00 | 01:00 | |
| 5: '2037 AM - Assessment' | 08:00 | 09:00 | 01:00 | |
| 6: '2037 PM - Assessment' | 17:00 | 18:00 | 01:00 | |

**Scenario 1: 'AM 2018 - Background'** (FG1: '2018 AM - Background', Plan 1: 'Network Control Plan 1')

## Traffic Flows, Desired

**Desired Flow :**

| | | Destination | | | | | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | Tot. |
| Origin | A | 0 | 266 | 188 | 104 | 254 | 812 |
| | B | 246 | 12 | 386 | 83 | 0 | 727 |
| | C | 178 | 232 | 3 | 14 | 191 | 618 |
| | D | 168 | 208 | 4 | 0 | 59 | 439 |
| | E | 424 | 0 | 297 | 29 | 13 | 763 |
| | Tot. | 1016 | 718 | 878 | 230 | 517 | 3359 |

Full Input Data And Results

| Lane | Scenario 1: AM 2018 - Background |
|---|---|
| **Junction: A494-A550** | |
| 1/1 | 231 |
| 1/2 | 266 |
| 1/3 | 266 |
| 2/1 | 360 |
| 2/2 | 364 |
| 2/3 | 327 |
| 3/1 | 266 |
| 3/2 (with short) | 546(In) 293(Out) |
| 3/3 (short) | 253 |
| 4/1 (short) | 226 |
| 4/2 (with short) | 469(In) 243(Out) |
| 4/3 | 258 |
| 5/1 | 301 |
| 5/2 | 303 |
| 5/3 | 288 |
| 6/1 (with short) | 618(In) 205(Out) |
| 6/2 (short) | 413 |
| 7/1 (with short) | 439(In) 157(Out) |
| 7/2 (short) | 282 |
| 8/1 | 132 |
| 8/2 | 666 |
| 9/1 | 482 |
| 9/2 | 259 |
| 10/1 | 457 |
| 10/2 | 672 |
| 11/1 | 591 |
| 11/2 | 309 |
| 11/3 | 116 |
| 12/1 | 398 |
| 12/2 | 320 |
| 13/1 | 527 |
| 13/2 | 351 |
| 14/1 | 230 |
| 15/1 | 516 |
| 15/2 | 1 |

Full Input Data And Results

## Lane Saturation Flows

| Junction: A494-A550 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Lane** | **Lane Width (m)** | **Gradient** | **Nearside Lane** | **Allowed Turns** | **Turning Radius (m)** | **Turning Prop.** | **Sat Flow (PCU/Hr)** | **Flared Sat Flow (PCU/Hr)** |
| 1/1 (A494 (w) offslip) | 3.50 | 0.00 | Y | Arm 11 Left | Inf | 100.0 % | 1965 | 1965 |
| 1/2 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 27.4 % | 2105 | 2105 |
| | | | | Arm 11 Left | Inf | 72.6 % | | |
| 1/3 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/1 (circulatory (west)) | 3.50 | 0.00 | N | Arm 11 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/2 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 36.3 % | 2105 | 2105 |
| | | | | Arm 11 Ahead | Inf | 63.7 % | | |
| 2/3 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 100.0 % | 2105 | 2105 |
| 3/1 (B5129 (N)) | 3.20 | 0.00 | Y | Arm 12 Left | Inf | 100.0 % | 1935 | 1935 |
| 3/2 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 3/3 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 4/1 (A494 (E) offslip) | 3.50 | 0.00 | Y | Arm 13 Left | Inf | 100.0 % | 1965 | 1965 |
| 4/2 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 34.2 % | 2105 | 2105 |
| | | | | Arm 13 Left | Inf | 65.8 % | | |
| 4/3 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/1 (circulatory (east)) | 3.50 | 0.00 | N | Arm 13 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/2 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 37.0 % | 2105 | 2105 |
| | | | | Arm 13 Ahead | Inf | 63.0 % | | |
| 5/3 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 100.0 % | 2105 | 2105 |
| 6/1 (B5129 (S)) | 4.10 | 0.00 | Y | Arm 10 Ahead | Inf | 93.2 % | 2025 | 2025 |
| | | | | Arm 14 Left | Inf | 6.8 % | | |
| 6/2 (B5129 (S)) | 4.00 | 0.00 | N | Arm 10 Ahead | Inf | 100.0 % | 2155 | 2155 |
| 7/1 (A550) | 3.50 | 0.00 | Y | Arm 2 Ahead | Inf | 62.4 % | 1965 | 1965 |
| | | | | Arm 15 Left | Inf | 37.6 % | | |
| 7/2 (A550) | 3.00 | 0.00 | N | Arm 2 Ahead | Inf | 100.0 % | 2055 | 2055 |
| 8/1 (circulatory (N)) | 4.20 | 0.00 | N | Arm 12 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 8/2 (circulatory (N)) | 4.20 | 0.00 | N | Arm 5 Right | Inf | 52.0 % | 2175 | 2175 |
| | | | | Arm 12 Ahead | Inf | 48.0 % | | |
| 9/1 | 4.20 | 0.00 | N | Arm 10 Right | Inf | 55.2 % | 2175 | 2175 |

Full Input Data And Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (circulatory (SE)) | | | | Arm 14 Ahead | Inf | 44.8 % | | |
| 9/2 (circulatory (SE)) | 4.20 | 0.00 | N | Arm 10 Right | Inf | 100.0 % | 2175 | 2175 |
| 10/1 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 15 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 10/2 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 2 Right | Inf | 99.9 % | 2175 | 2175 |
| | | | | Arm 15 Ahead | Inf | 0.1 % | | |
| 11/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/3 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 14/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/2 | Infinite Saturation Flow | | | | | | Inf | Inf |

**Scenario 2: 'PM 2018 - Background'** (FG2: '2018 PM - Background', Plan 1: 'Network Control Plan 1')

## Traffic Flows, Desired

**Desired Flow :**

| | | Destination | | | | | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | Tot. |
| Origin | A | 0 | 222 | 294 | 173 | 407 | 1096 |
| | B | 373 | 20 | 247 | 133 | 0 | 773 |
| | C | 249 | 346 | 1 | 15 | 271 | 882 |
| | D | 133 | 169 | 3 | 0 | 36 | 341 |
| | E | 285 | 0 | 213 | 26 | 6 | 530 |
| | Tot. | 1040 | 757 | 758 | 347 | 720 | 3622 |

Full Input Data And Results

| Lane | Scenario 2: PM 2018 - Background |
|---|---|
| **Junction: A494-A550** | |
| 1/1 | 160 |
| 1/2 | 185 |
| 1/3 | 185 |
| 2/1 | 421 |
| 2/2 | 457 |
| 2/3 | 416 |
| 3/1 | 222 |
| 3/2 (with short) | 874(In) 520(Out) |
| 3/3 (short) | 354 |
| 4/1 (short) | 181 |
| 4/2 (with short) | 380(In) 199(Out) |
| 4/3 | 393 |
| 5/1 | 380 |
| 5/2 | 367 |
| 5/3 | 376 |
| 6/1 (with short) | 882(In) 286(Out) |
| 6/2 (short) | 596 |
| 7/1 (with short) | 341(In) 99(Out) |
| 7/2 (short) | 242 |
| 8/1 | 123 |
| 8/2 | 661 |
| 9/1 | 706 |
| 9/2 | 432 |
| 10/1 | 645 |
| 10/2 | 1028 |
| 11/1 | 581 |
| 11/2 | 292 |
| 11/3 | 167 |
| 12/1 | 345 |
| 12/2 | 412 |
| 13/1 | 561 |
| 13/2 | 197 |
| 14/1 | 347 |
| 15/1 | 681 |
| 15/2 | 39 |

Full Input Data And Results

## Lane Saturation Flows

**Junction: A494-A550**

| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
|---|---|---|---|---|---|---|---|---|
| 1/1 (A494 (w) offslip) | 3.50 | 0.00 | Y | Arm 11 Left | Inf | 100.0 % | 1965 | 1965 |
| 1/2 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 32.4 % | 2105 | 2105 |
| | | | | Arm 11 Left | Inf | 67.6 % | | |
| 1/3 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/1 (circulatory (west)) | 3.50 | 0.00 | N | Arm 11 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/2 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 26.9 % | 2105 | 2105 |
| | | | | Arm 11 Ahead | Inf | 73.1 % | | |
| 2/3 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 100.0 % | 2105 | 2105 |
| 3/1 (B5129 (N)) | 3.20 | 0.00 | Y | Arm 12 Left | Inf | 100.0 % | 1935 | 1935 |
| 3/2 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 3/3 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 4/1 (A494 (E) offslip) | 3.50 | 0.00 | Y | Arm 13 Left | Inf | 100.0 % | 1965 | 1965 |
| 4/2 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 66.8 % | 2105 | 2105 |
| | | | | Arm 13 Left | Inf | 33.2 % | | |
| 4/3 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/1 (circulatory (east)) | 3.50 | 0.00 | N | Arm 13 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/2 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 64.3 % | 2105 | 2105 |
| | | | | Arm 13 Ahead | Inf | 35.7 % | | |
| 5/3 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 100.0 % | 2105 | 2105 |
| 6/1 (B5129 (S)) | 4.10 | 0.00 | Y | Arm 10 Ahead | Inf | 94.8 % | 2025 | 2025 |
| | | | | Arm 14 Left | Inf | 5.2 % | | |
| 6/2 (B5129 (S)) | 4.00 | 0.00 | N | Arm 10 Ahead | Inf | 100.0 % | 2155 | 2155 |
| 7/1 (A550) | 3.50 | 0.00 | Y | Arm 2 Ahead | Inf | 63.6 % | 1965 | 1965 |
| | | | | Arm 15 Left | Inf | 36.4 % | | |
| 7/2 (A550) | 3.00 | 0.00 | N | Arm 2 Ahead | Inf | 100.0 % | 2055 | 2055 |
| 8/1 (circulatory (N)) | 4.20 | 0.00 | N | Arm 12 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 8/2 (circulatory (N)) | 4.20 | 0.00 | N | Arm 5 Right | Inf | 37.7 % | 2175 | 2175 |
| | | | | Arm 12 Ahead | Inf | 62.3 % | | |
| 9/1 | 4.20 | 0.00 | N | Arm 10 Right | Inf | 53.0 % | 2175 | 2175 |

Full Input Data And Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (circulatory (SE)) | | | | Arm 14 Ahead | Inf | 47.0 % | | |
| 9/2 (circulatory (SE)) | 4.20 | 0.00 | N | Arm 10 Right | Inf | 100.0 % | 2175 | 2175 |
| 10/1 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 15 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 10/2 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 2 Right | Inf | 96.2 % | 2175 | 2175 |
| | | | | Arm 15 Ahead | Inf | 3.8 % | | |
| 11/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/3 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 14/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/2 | Infinite Saturation Flow | | | | | | Inf | Inf |

**Scenario 3: 'AM 2037 - Base'** (FG3: '2037 AM - Base', Plan 1: 'Network Control Plan 1')

## Traffic Flows, Desired

**Desired Flow :**

| | | Destination | | | | | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | Tot. |
| Origin | A | 0 | 306 | 217 | 119 | 294 | 936 |
| | B | 295 | 14 | 448 | 99 | 0 | 856 |
| | C | 206 | 271 | 3 | 16 | 220 | 716 |
| | D | 194 | 249 | 5 | 0 | 68 | 516 |
| | E | 489 | 0 | 343 | 33 | 15 | 880 |
| | Tot. | 1184 | 840 | 1016 | 267 | 597 | 3904 |

Full Input Data And Results

| Lane | Scenario 3: AM 2037 - Base |
|---|---|
| **Junction: A494-A550** | |
| 1/1 | 268 |
| 1/2 | 306 |
| 1/3 | 306 |
| 2/1 | 399 |
| 2/2 | 426 |
| 2/3 | 412 |
| 3/1 | 306 |
| 3/2 (with short) | 630(In) 360(Out) |
| 3/3 (short) | 270 |
| 4/1 (short) | 264 |
| 4/2 (with short) | 547(In) 283(Out) |
| 4/3 | 309 |
| 5/1 | 374 |
| 5/2 | 344 |
| 5/3 | 311 |
| 6/1 (with short) | 716(In) 236(Out) |
| 6/2 (short) | 480 |
| 7/1 (with short) | 516(In) 172(Out) |
| 7/2 (short) | 344 |
| 8/1 | 130 |
| 8/2 | 803 |
| 9/1 | 555 |
| 9/2 | 314 |
| 10/1 | 524 |
| 10/2 | 794 |
| 11/1 | 667 |
| 11/2 | 369 |
| 11/3 | 148 |
| 12/1 | 436 |
| 12/2 | 404 |
| 13/1 | 638 |
| 13/2 | 378 |
| 14/1 | 267 |
| 15/1 | 592 |
| 15/2 | 5 |

Full Input Data And Results

## Lane Saturation Flows

**Junction: A494-A550**

| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
|---|---|---|---|---|---|---|---|---|
| 1/1 (A494 (w) offslip) | 3.50 | 0.00 | Y | Arm 11 Left | Inf | 100.0 % | 1965 | 1965 |
| 1/2 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 27.8 % | 2105 | 2105 |
| | | | | Arm 11 Left | Inf | 72.2 % | | |
| 1/3 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/1 (circulatory (west)) | 3.50 | 0.00 | N | Arm 11 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/2 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 30.5 % | 2105 | 2105 |
| | | | | Arm 11 Ahead | Inf | 69.5 % | | |
| 2/3 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 100.0 % | 2105 | 2105 |
| 3/1 (B5129 (N)) | 3.20 | 0.00 | Y | Arm 12 Left | Inf | 100.0 % | 1935 | 1935 |
| 3/2 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 3/3 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 4/1 (A494 (E) offslip) | 3.50 | 0.00 | Y | Arm 13 Left | Inf | 100.0 % | 1965 | 1965 |
| 4/2 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 35.0 % | 2105 | 2105 |
| | | | | Arm 13 Left | Inf | 65.0 % | | |
| 4/3 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/1 (circulatory (east)) | 3.50 | 0.00 | N | Arm 13 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/2 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 43.6 % | 2105 | 2105 |
| | | | | Arm 13 Ahead | Inf | 56.4 % | | |
| 5/3 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 100.0 % | 2105 | 2105 |
| 6/1 (B5129 (S)) | 4.10 | 0.00 | Y | Arm 10 Ahead | Inf | 93.2 % | 2025 | 2025 |
| | | | | Arm 14 Left | Inf | 6.8 % | | |
| 6/2 (B5129 (S)) | 4.00 | 0.00 | N | Arm 10 Ahead | Inf | 100.0 % | 2155 | 2155 |
| 7/1 (A550) | 3.50 | 0.00 | Y | Arm 2 Ahead | Inf | 60.5 % | 1965 | 1965 |
| | | | | Arm 15 Left | Inf | 39.5 % | | |
| 7/2 (A550) | 3.00 | 0.00 | N | Arm 2 Ahead | Inf | 100.0 % | 2055 | 2055 |
| 8/1 (circulatory (N)) | 4.20 | 0.00 | N | Arm 12 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 8/2 (circulatory (N)) | 4.20 | 0.00 | N | Arm 5 Right | Inf | 49.7 % | 2175 | 2175 |
| | | | | Arm 12 Ahead | Inf | 50.3 % | | |
| 9/1 | 4.20 | 0.00 | N | Arm 10 Right | Inf | 54.8 % | 2175 | 2175 |

Full Input Data And Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (circulatory (SE)) | | | | Arm 14 Ahead | Inf | 45.2 % | | |
| 9/2 (circulatory (SE)) | 4.20 | 0.00 | N | Arm 10 Right | Inf | 100.0 % | 2175 | 2175 |
| 10/1 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 15 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 10/2 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 2 Right | Inf | 99.4 % | 2175 | 2175 |
| | | | | Arm 15 Ahead | Inf | 0.6 % | | |
| 11/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/3 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 14/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/2 | Infinite Saturation Flow | | | | | | Inf | Inf |

**Scenario 4: 'PM 2037 - Base'** (FG4: '2037 PM - Base', Plan 1: 'Network Control Plan 1')

## Traffic Flows, Desired

**Desired Flow :**

| | | Destination | | | | | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | Tot. |
| Origin | A | 0 | 255 | 338 | 199 | 468 | 1260 |
| | B | 438 | 23 | 291 | 159 | 0 | 911 |
| | C | 286 | 401 | 1 | 18 | 312 | 1018 |
| | D | 153 | 197 | 3 | 0 | 42 | 395 |
| | E | 328 | 0 | 246 | 30 | 7 | 611 |
| | Tot. | 1205 | 876 | 879 | 406 | 829 | 4195 |

Full Input Data And Results

| Lane | Scenario 4: PM 2037 - Base |
|---|---|
| **Junction: A494-A550** | |
| 1/1 | 185 |
| 1/2 | 214 |
| 1/3 | 212 |
| 2/1 | 463 |
| 2/2 | 518 |
| 2/3 | 521 |
| 3/1 | 255 |
| 3/2 (with short) | 1005(In) 608(Out) |
| 3/3 (short) | 397 |
| 4/1 (short) | 216 |
| 4/2 (with short) | 450(In) 234(Out) |
| 4/3 | 461 |
| 5/1 | 442 |
| 5/2 | 427 |
| 5/3 | 423 |
| 6/1 (with short) | 1018(In) 330(Out) |
| 6/2 (short) | 688 |
| 7/1 (with short) | 395(In) 105(Out) |
| 7/2 (short) | 290 |
| 8/1 | 104 |
| 8/2 | 804 |
| 9/1 | 821 |
| 9/2 | 503 |
| 10/1 | 745 |
| 10/2 | 1191 |
| 11/1 | 648 |
| 11/2 | 350 |
| 11/3 | 207 |
| 12/1 | 359 |
| 12/2 | 517 |
| 13/1 | 658 |
| 13/2 | 221 |
| 14/1 | 406 |
| 15/1 | 787 |
| 15/2 | 42 |

Full Input Data And Results

## Lane Saturation Flows

**Junction: A494-A550**

| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
|---|---|---|---|---|---|---|---|---|
| 1/1 (A494 (w) offslip) | 3.50 | 0.00 | Y | Arm 11 Left | Inf | 100.0 % | 1965 | 1965 |
| 1/2 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 33.2 % | 2105 | 2105 |
| | | | | Arm 11 Left | Inf | 66.8 % | | |
| 1/3 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/1 (circulatory (west)) | 3.50 | 0.00 | N | Arm 11 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/2 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 20.1 % | 2105 | 2105 |
| | | | | Arm 11 Ahead | Inf | 79.9 % | | |
| 2/3 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 100.0 % | 2105 | 2105 |
| 3/1 (B5129 (N)) | 3.20 | 0.00 | Y | Arm 12 Left | Inf | 100.0 % | 1935 | 1935 |
| 3/2 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 3/3 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 4/1 (A494 (E) offslip) | 3.50 | 0.00 | Y | Arm 13 Left | Inf | 100.0 % | 1965 | 1965 |
| 4/2 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 67.9 % | 2105 | 2105 |
| | | | | Arm 13 Left | Inf | 32.1 % | | |
| 4/3 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/1 (circulatory (east)) | 3.50 | 0.00 | N | Arm 13 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/2 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 65.8 % | 2105 | 2105 |
| | | | | Arm 13 Ahead | Inf | 34.2 % | | |
| 5/3 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 100.0 % | 2105 | 2105 |
| 6/1 (B5129 (S)) | 4.10 | 0.00 | Y | Arm 10 Ahead | Inf | 94.5 % | 2025 | 2025 |
| | | | | Arm 14 Left | Inf | 5.5 % | | |
| 6/2 (B5129 (S)) | 4.00 | 0.00 | N | Arm 10 Ahead | Inf | 100.0 % | 2155 | 2155 |
| 7/1 (A550) | 3.50 | 0.00 | Y | Arm 2 Ahead | Inf | 60.0 % | 1965 | 1965 |
| | | | | Arm 15 Left | Inf | 40.0 % | | |
| 7/2 (A550) | 3.00 | 0.00 | N | Arm 2 Ahead | Inf | 100.0 % | 2055 | 2055 |
| 8/1 (circulatory (N)) | 4.20 | 0.00 | N | Arm 12 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 8/2 (circulatory (N)) | 4.20 | 0.00 | N | Arm 5 Right | Inf | 35.7 % | 2175 | 2175 |
| | | | | Arm 12 Ahead | Inf | 64.3 % | | |
| 9/1 | 4.20 | 0.00 | N | Arm 10 Right | Inf | 52.7 % | 2175 | 2175 |

Full Input Data And Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (circulatory (SE)) | | | | Arm 14 Ahead | Inf | 47.3 % | | |
| 9/2 (circulatory (SE)) | 4.20 | 0.00 | N | Arm 10 Right | Inf | 100.0 % | 2175 | 2175 |
| 10/1 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 15 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 10/2 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 2 Right | Inf | 96.5 % | 2175 | 2175 |
| | | | | Arm 15 Ahead | Inf | 3.5 % | | |
| 11/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/3 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 14/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/2 | Infinite Saturation Flow | | | | | | Inf | Inf |

**Scenario 5: 'AM 2037 - Assessment'** (FG5: '2037 AM - Assessment', Plan 1: 'Network Control Plan 1')

## Traffic Flows, Desired

**Desired Flow :**

| | | Destination | | | | | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | Tot. |
| Origin | A | 0 | 306 | 217 | 120 | 294 | 937 |
| | B | 295 | 14 | 448 | 113 | 0 | 870 |
| | C | 206 | 271 | 3 | 16 | 220 | 716 |
| | D | 197 | 287 | 5 | 0 | 77 | 566 |
| | E | 489 | 0 | 343 | 36 | 15 | 883 |
| | Tot. | 1187 | 878 | 1016 | 285 | 606 | 3972 |

Full Input Data And Results

| Lane | Scenario 5: AM 2037 - Assessment |
|---|---|
| **Junction: A494-A550** | |
| 1/1 | 270 |
| 1/2 | 305 |
| 1/3 | 308 |
| 2/1 | 412 |
| 2/2 | 441 |
| 2/3 | 425 |
| 3/1 | 306 |
| 3/2 (with short) | 631(In) 363(Out) |
| 3/3 (short) | 268 |
| 4/1 (short) | 271 |
| 4/2 (with short) | 561(In) 290(Out) |
| 4/3 | 309 |
| 5/1 | 377 |
| 5/2 | 345 |
| 5/3 | 311 |
| 6/1 (with short) | 716(In) 236(Out) |
| 6/2 (short) | 480 |
| 7/1 (with short) | 566(In) 186(Out) |
| 7/2 (short) | 380 |
| 8/1 | 155 |
| 8/2 | 819 |
| 9/1 | 576 |
| 9/2 | 311 |
| 10/1 | 527 |
| 10/2 | 791 |
| 11/1 | 682 |
| 11/2 | 362 |
| 11/3 | 143 |
| 12/1 | 461 |
| 12/2 | 417 |
| 13/1 | 648 |
| 13/2 | 368 |
| 14/1 | 285 |
| 15/1 | 604 |
| 15/2 | 2 |

Full Input Data And Results

## Lane Saturation Flows

**Junction: A494-A550**

| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
|---|---|---|---|---|---|---|---|---|
| 1/1 (A494 (w) offslip) | 3.50 | 0.00 | Y | Arm 11 Left | Inf | 100.0 % | 1965 | 1965 |
| 1/2 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 28.2 % | 2105 | 2105 |
| | | | | Arm 11 Left | Inf | 71.8 % | | |
| 1/3 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/1 (circulatory (west)) | 3.50 | 0.00 | N | Arm 11 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/2 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 35.1 % | 2105 | 2105 |
| | | | | Arm 11 Ahead | Inf | 64.9 % | | |
| 2/3 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 100.0 % | 2105 | 2105 |
| 3/1 (B5129 (N)) | 3.20 | 0.00 | Y | Arm 12 Left | Inf | 100.0 % | 1935 | 1935 |
| 3/2 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 3/3 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 4/1 (A494 (E) offslip) | 3.50 | 0.00 | Y | Arm 13 Left | Inf | 100.0 % | 1965 | 1965 |
| 4/2 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 39.0 % | 2105 | 2105 |
| | | | | Arm 13 Left | Inf | 61.0 % | | |
| 4/3 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/1 (circulatory (east)) | 3.50 | 0.00 | N | Arm 13 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/2 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 44.6 % | 2105 | 2105 |
| | | | | Arm 13 Ahead | Inf | 55.4 % | | |
| 5/3 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 100.0 % | 2105 | 2105 |
| 6/1 (B5129 (S)) | 4.10 | 0.00 | Y | Arm 10 Ahead | Inf | 93.2 % | 2025 | 2025 |
| | | | | Arm 14 Left | Inf | 6.8 % | | |
| 6/2 (B5129 (S)) | 4.00 | 0.00 | N | Arm 10 Ahead | Inf | 100.0 % | 2155 | 2155 |
| 7/1 (A550) | 3.50 | 0.00 | Y | Arm 2 Ahead | Inf | 58.6 % | 1965 | 1965 |
| | | | | Arm 15 Left | Inf | 41.4 % | | |
| 7/2 (A550) | 3.00 | 0.00 | N | Arm 2 Ahead | Inf | 100.0 % | 2055 | 2055 |
| 8/1 (circulatory (N)) | 4.20 | 0.00 | N | Arm 12 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 8/2 (circulatory (N)) | 4.20 | 0.00 | N | Arm 5 Right | Inf | 49.1 % | 2175 | 2175 |
| | | | | Arm 12 Ahead | Inf | 50.9 % | | |
| 9/1 | 4.20 | 0.00 | N | Arm 10 Right | Inf | 53.3 % | 2175 | 2175 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (circulatory (SE)) | | | | Arm 14 Ahead | Inf | 46.7 % | | |
| 9/2 (circulatory (SE)) | 4.20 | 0.00 | N | Arm 10 Right | Inf | 100.0 % | 2175 | 2175 |
| 10/1 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 15 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 10/2 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 2 Right | Inf | 99.7 % | 2175 | 2175 |
| | | | | Arm 15 Ahead | Inf | 0.3 % | | |
| 11/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/3 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 14/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/2 | Infinite Saturation Flow | | | | | | Inf | Inf |

**Scenario 6: 'PM 2037 - Assessment'** (FG6: '2037 PM - Assessment', Plan 1: 'Network Control Plan 1')

## Traffic Flows, Desired

**Desired Flow :**

| | | Destination | | | | | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | Tot. |
| Origin | A | 0 | 255 | 338 | 202 | 468 | 1263 |
| | B | 438 | 23 | 291 | 194 | 0 | 946 |
| | C | 286 | 401 | 1 | 18 | 312 | 1018 |
| | D | 155 | 216 | 3 | 0 | 46 | 420 |
| | E | 328 | 0 | 246 | 38 | 7 | 619 |
| | Tot. | 1207 | 895 | 879 | 452 | 833 | 4266 |

Full Input Data And Results

| Lane | Scenario 6: PM 2037 - Assessment |
|---|---|
| **Junction: A494-A550** | |
| 1/1 | 187 |
| 1/2 | 217 |
| 1/3 | 215 |
| 2/1 | 571 |
| 2/2 | 524 |
| 2/3 | 428 |
| 3/1 | 255 |
| 3/2 (with short) | 1008(In) 562(Out) |
| 3/3 (short) | 446 |
| 4/1 (short) | 231 |
| 4/2 (with short) | 485(In) 254(Out) |
| 4/3 | 461 |
| 5/1 | 413 |
| 5/2 | 419 |
| 5/3 | 471 |
| 6/1 (with short) | 1018(In) 330(Out) |
| 6/2 (short) | 688 |
| 7/1 (with short) | 420(In) 157(Out) |
| 7/2 (short) | 263 |
| 8/1 | 216 |
| 8/2 | 719 |
| 9/1 | 859 |
| 9/2 | 511 |
| 10/1 | 737 |
| 10/2 | 1199 |
| 11/1 | 758 |
| 11/2 | 295 |
| 11/3 | 154 |
| 12/1 | 471 |
| 12/2 | 424 |
| 13/1 | 644 |
| 13/2 | 235 |
| 14/1 | 452 |
| 15/1 | 783 |
| 15/2 | 50 |

Full Input Data And Results

## Lane Saturation Flows

**Junction: A494-A550**

| Lane | Lane Width (m) | Gradient | Nearside Lane | Allowed Turns | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
|---|---|---|---|---|---|---|---|---|
| 1/1 (A494 (w) offslip) | 3.50 | 0.00 | Y | Arm 11 Left | Inf | 100.0 % | 1965 | 1965 |
| 1/2 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 35.0 % | 2105 | 2105 |
| | | | | Arm 11 Left | Inf | 65.0 % | | |
| 1/3 (A494 (w) offslip) | 3.50 | 0.00 | N | Arm 8 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/1 (circulatory (west)) | 3.50 | 0.00 | N | Arm 11 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 2/2 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 41.2 % | 2105 | 2105 |
| | | | | Arm 11 Ahead | Inf | 58.8 % | | |
| 2/3 (circulatory (west)) | 3.50 | 0.00 | N | Arm 8 Right | Inf | 100.0 % | 2105 | 2105 |
| 3/1 (B5129 (N)) | 3.20 | 0.00 | Y | Arm 12 Left | Inf | 100.0 % | 1935 | 1935 |
| 3/2 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 3/3 (B5129 (N)) | 3.20 | 0.00 | N | Arm 5 Ahead | Inf | 100.0 % | 2075 | 2075 |
| 4/1 (A494 (E) offslip) | 3.50 | 0.00 | Y | Arm 13 Left | Inf | 100.0 % | 1965 | 1965 |
| 4/2 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 76.4 % | 2105 | 2105 |
| | | | | Arm 13 Left | Inf | 23.6 % | | |
| 4/3 (A494 (E) offslip) | 3.50 | 0.00 | N | Arm 9 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/1 (circulatory (east)) | 3.50 | 0.00 | N | Arm 13 Ahead | Inf | 100.0 % | 2105 | 2105 |
| 5/2 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 58.2 % | 2105 | 2105 |
| | | | | Arm 13 Ahead | Inf | 41.8 % | | |
| 5/3 (circulatory (east)) | 3.50 | 0.00 | N | Arm 9 Right | Inf | 100.0 % | 2105 | 2105 |
| 6/1 (B5129 (S)) | 4.10 | 0.00 | Y | Arm 10 Ahead | Inf | 94.5 % | 2025 | 2025 |
| | | | | Arm 14 Left | Inf | 5.5 % | | |
| 6/2 (B5129 (S)) | 4.00 | 0.00 | N | Arm 10 Ahead | Inf | 100.0 % | 2155 | 2155 |
| 7/1 (A550) | 3.50 | 0.00 | Y | Arm 2 Ahead | Inf | 70.7 % | 1965 | 1965 |
| | | | | Arm 15 Left | Inf | 29.3 % | | |
| 7/2 (A550) | 3.00 | 0.00 | N | Arm 2 Ahead | Inf | 100.0 % | 2055 | 2055 |
| 8/1 (circulatory (N)) | 4.20 | 0.00 | N | Arm 12 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 8/2 (circulatory (N)) | 4.20 | 0.00 | N | Arm 5 Right | Inf | 41.0 % | 2175 | 2175 |
| | | | | Arm 12 Ahead | Inf | 59.0 % | | |
| 9/1 | 4.20 | 0.00 | N | Arm 10 Right | Inf | 49.5 % | 2175 | 2175 |

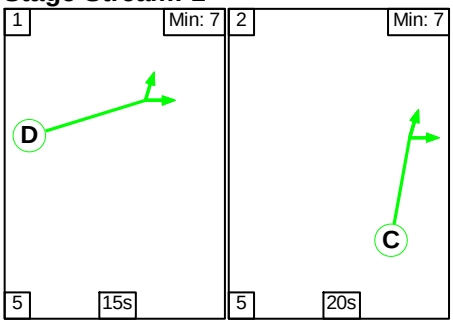
Full Input Data And Results

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (circulatory (SE)) | | | | Arm 14 Ahead | Inf | 50.5 % | | |
| 9/2 (circulatory (SE)) | 4.20 | 0.00 | N | Arm 10 Right | Inf | 100.0 % | 2175 | 2175 |
| 10/1 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 15 Ahead | Inf | 100.0 % | 2175 | 2175 |
| 10/2 (circulatory (SW)) | 4.20 | 0.00 | N | Arm 2 Right | Inf | 95.8 % | 2175 | 2175 |
| | | | | Arm 15 Ahead | Inf | 4.2 % | | |
| 11/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 11/3 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 12/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 13/2 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 14/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/1 | Infinite Saturation Flow | | | | | | Inf | Inf |
| 15/2 | Infinite Saturation Flow | | | | | | Inf | Inf |

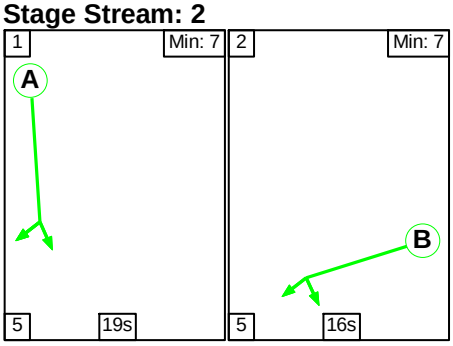
**Scenario 1: 'AM 2018 - Background'** (FG1: '2018 AM - Background', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram

### Stage Stream: 1




### Stage Stream: 2




## Stage Timings

### Stage Stream: 1

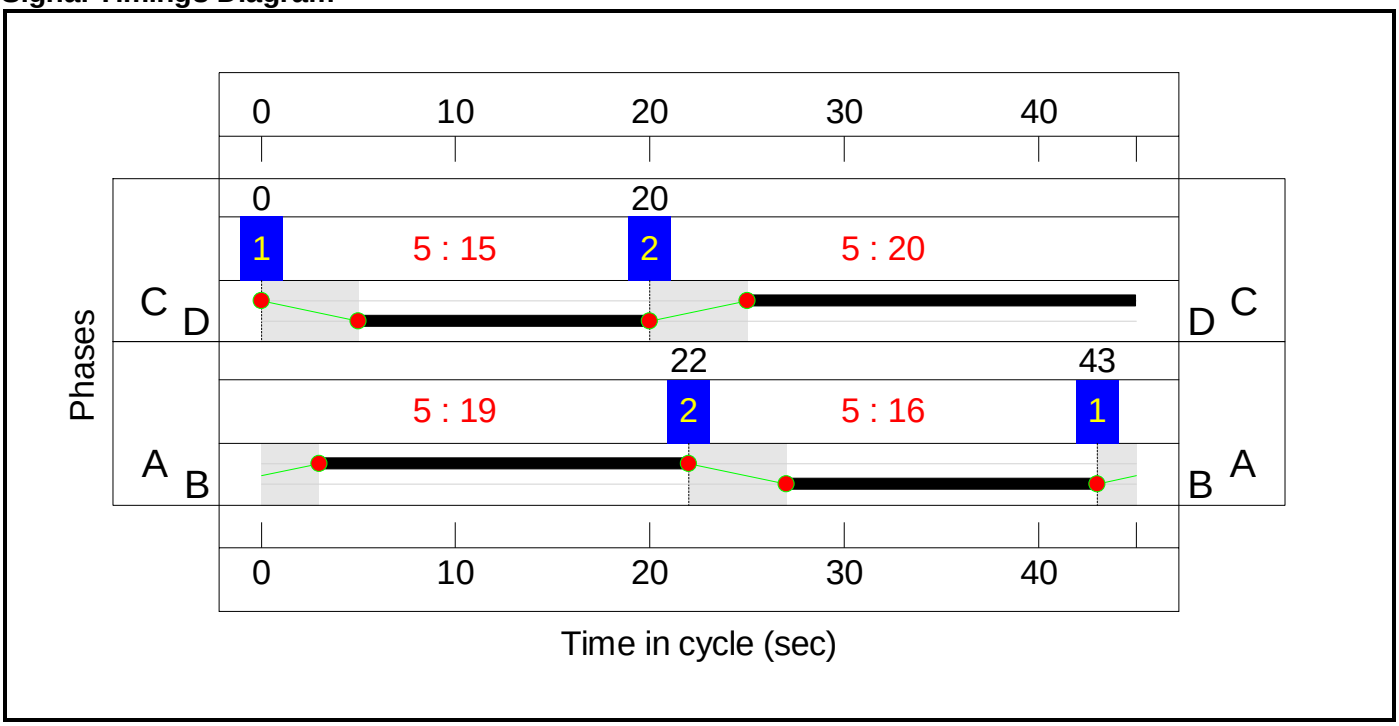
| Stage | 1 | 2 |
|---|---|---|
| Duration | 15 | 20 |
| Change Point | 0 | 20 |

Full Input Data And Results

**Stage Stream: 2**

| Stage | 1 | 2 |
|---|---|---|
| Duration | 19 | 16 |
| Change Point | 43 | 22 |

**Signal Timings Diagram**



Full Input Data And Results

## Network Results

| Item | Lane Description | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) | Turners In Gaps (pcu) | Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Mean Max Queue (pcu) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Network: A494-A550** | **-** | **-** | **-** | **-** | **42.8%** | **3472** | **8.4** | **13.1** | **-** | **-** |
| **A494-A550** | **-** | **-** | **-** | **-** | **42.8%** | **3472** | **8.4** | **13.1** | **-** | **-** |
| 1/1 | A494 (w) offslip Left | 231 | 1965 | 699 | 33.1% | - | 0.7 | 0.9 | 14.4 | 2.3 |
| 1/2 | A494 (w) offslip Ahead Left | 266 | 2105 | 748 | 35.5% | - | 0.8 | 1.1 | 14.4 | 2.7 |
| 1/3 | A494 (w) offslip Ahead | 266 | 2105 | 748 | 35.5% | - | 0.8 | 1.1 | 14.4 | 2.7 |
| 2/1 | circulatory (west) Ahead | 360 | 2105 | 982 | 36.6% | - | 0.8 | 1.1 | 10.8 | 2.7 |
| 2/2 | circulatory (west) Right Ahead | 364 | 2105 | 982 | 37.1% | - | 0.8 | 1.1 | 10.8 | 2.9 |
| 2/3 | circulatory (west) Right | 327 | 2105 | 982 | 33.3% | - | 0.7 | 0.9 | 10.4 | 2.8 |
| 3/1 | B5129 (N) Left | 266 | 1935 | 853 | 31.2% | 266 | 0.0 | 0.2 | 3.1 | 0.4 |
| 3/2+3/3 | B5129 (N) Ahead | 546 | 2075:2075 | 853+853 | 34.4 : 29.7% | 1092 | 0.0 | 0.2 | 1.6 | 0.5 |
| 4/2+4/1 | A494 (E) offslip Ahead Left | 469 | 2105:1965 | 795+742 | 30.6 : 30.4% | - | 1.3 | 1.5 | 11.5 | 2.3 |
| 4/3 | A494 (E) offslip Ahead | 258 | 2105 | 795 | 32.4% | - | 0.7 | 1.0 | 13.3 | 2.5 |
| 5/1 | circulatory (east) Ahead | 301 | 2105 | 936 | 32.2% | - | 0.6 | 0.8 | 9.8 | 1.8 |
| 5/2 | circulatory (east) Right Ahead | 303 | 2105 | 936 | 32.4% | - | 0.6 | 0.9 | 10.1 | 2.1 |
| 5/3 | circulatory (east) Right | 288 | 2105 | 936 | 30.8% | - | 0.6 | 0.8 | 10.6 | 2.3 |
| 6/1+6/2 | B5129 (S) Ahead Left | 618 | 2025:2155 | 629+1164 | 32.6 : 35.5% | 1236 | 0.0 | 0.3 | 1.6 | 0.7 |
| 7/1+7/2 | A550 Ahead Left | 439 | 1965:2055 | 367+659 | 42.8 : 42.8% | 878 | 0.0 | 0.4 | 3.1 | 0.5 |
| 8/1 | circulatory (N) Ahead | 132 | 2175 | 2175 | 6.1% | - | 0.0 | 0.0 | 0.9 | 0.0 |
| 8/2 | circulatory (N) Right Ahead | 666 | 2175 | 2175 | 30.6% | - | 0.0 | 0.2 | 1.2 | 1.6 |
| 9/1 | circulatory (SE) Right Ahead | 482 | 2175 | 2175 | 22.2% | - | 0.0 | 0.1 | 1.1 | 1.5 |
| 9/2 | circulatory (SE) Right | 259 | 2175 | 2175 | 11.9% | - | 0.0 | 0.1 | 0.9 | 0.1 |
| 10/1 | circulatory (SW) Ahead | 457 | 2175 | 2175 | 21.0% | - | 0.0 | 0.1 | 1.0 | 0.1 |
| 10/2 | circulatory (SW) Right Ahead | 672 | 2175 | 2175 | 30.9% | - | 0.0 | 0.2 | 1.2 | 0.2 |
| 11/1 | | 591 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/2 | | 309 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/3 | | 116 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 12/1 | | 398 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

Full Input Data And Results

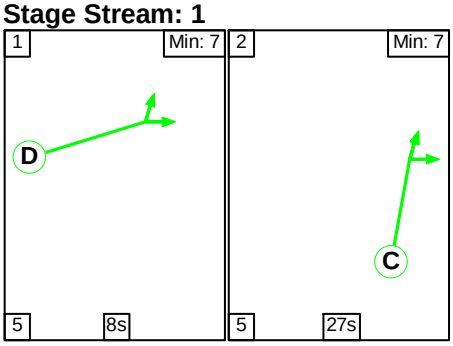
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 12/2 | | 320 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/1 | | 527 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/2 | | 351 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 14/1 | | 230 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/1 | | 516 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/2 | | 1 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| C1 | Stream: 1 PRC for Signalled Lanes (%): | 142.9 | Total Delay for Signalled Lanes (pcuHr): | 6.18 |
| C1 | Stream: 2 PRC for Signalled Lanes (%): | 177.4 | Total Delay for Signalled Lanes (pcuHr): | 4.97 |
| | PRC Over All Lanes (%): | 110.4 | Total Delay Over All Lanes(pcuHr): | 13.10 |

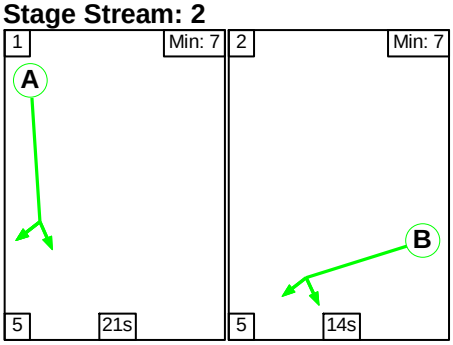
**Scenario 2: 'PM 2018 - Background'** (FG2: '2018 PM - Background', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram

### Stage Stream: 1




### Stage Stream: 2




## Stage Timings

### Stage Stream: 1

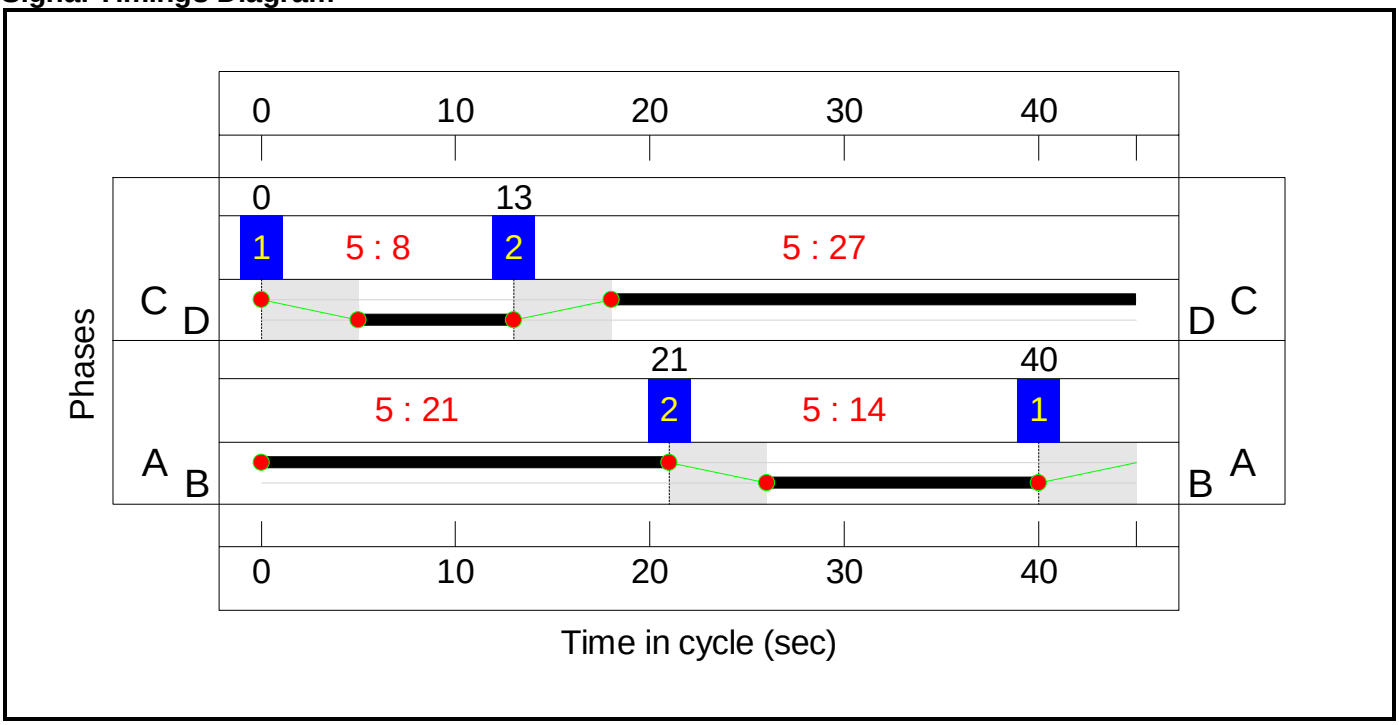
| Stage | 1 | 2 |
|---|---|---|
| Duration | 8 | 27 |
| Change Point | 0 | 13 |

### Stage Stream: 2

| Stage | 1 | 2 |
|---|---|---|
| Duration | 21 | 14 |
| Change Point | 40 | 21 |

Full Input Data And Results

**Signal Timings Diagram**



Full Input Data And Results

## Network Results

| Item | Lane Description | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) | Turners In Gaps (pcu) | Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Mean Max Queue (pcu) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Network: A494-A550** | **-** | **-** | **-** | **-** | **63.1%** | **4416** | **8.9** | **16.0** | **-** | **-** |
| **A494-A550** | **-** | **-** | **-** | **-** | **63.1%** | **4416** | **8.9** | **16.0** | **-** | **-** |
| 1/1 | A494 (w) offslip Left | 160 | 1965 | 393 | 40.7% | - | 0.7 | 1.0 | 23.4 | 2.1 |
| 1/2 | A494 (w) offslip Ahead Left | 185 | 2105 | 421 | 43.9% | - | 0.8 | 1.2 | 23.4 | 2.4 |
| 1/3 | A494 (w) offslip Ahead | 185 | 2105 | 421 | 43.9% | - | 0.8 | 1.2 | 23.4 | 2.4 |
| 2/1 | circulatory (west) Ahead | 421 | 2105 | 1310 | 32.1% | - | 0.6 | 0.8 | 7.2 | 2.5 |
| 2/2 | circulatory (west) Right Ahead | 457 | 2105 | 1310 | 34.9% | - | 0.6 | 0.9 | 7.1 | 2.8 |
| 2/3 | circulatory (west) Right | 416 | 2105 | 1310 | 31.8% | - | 0.5 | 0.7 | 6.5 | 2.7 |
| 3/1 | B5129 (N) Left | 222 | 1935 | 858 | 25.9% | 222 | 0.0 | 0.2 | 2.8 | 0.2 |
| 3/2+3/3 | B5129 (N) Ahead | 874 | 2075:2075 | 858+584 | 60.6 : 60.6% | 1748 | 0.0 | 0.8 | 3.3 | 1.8 |
| 4/2+4/1 | A494 (E) offslip Ahead Left | 380 | 2105:1965 | 702+655 | 28.4 : 27.6% | - | 1.2 | 1.4 | 12.9 | 2.0 |
| 4/3 | A494 (E) offslip Ahead | 393 | 2105 | 702 | 56.0% | - | 1.3 | 2.0 | 18.1 | 4.6 |
| 5/1 | circulatory (east) Ahead | 380 | 2105 | 1029 | 36.9% | - | 0.6 | 0.9 | 8.7 | 2.3 |
| 5/2 | circulatory (east) Right Ahead | 367 | 2105 | 1029 | 35.7% | - | 0.7 | 1.0 | 9.3 | 2.7 |
| 5/3 | circulatory (east) Right | 376 | 2105 | 1029 | 36.5% | - | 0.7 | 1.0 | 9.8 | 3.0 |
| 6/1+6/2 | B5129 (S) Ahead Left | 882 | 2025:2155 | 453+945 | 63.1 : 63.1% | 1764 | 0.2 | 1.1 | 4.3 | 2.7 |
| 7/1+7/2 | A550 Ahead Left | 341 | 1965:2055 | 196+480 | 50.5 : 50.5% | 682 | 0.0 | 0.5 | 5.4 | 0.6 |
| 8/1 | circulatory (N) Ahead | 123 | 2175 | 2175 | 5.7% | - | 0.0 | 0.0 | 0.9 | 0.0 |
| 8/2 | circulatory (N) Right Ahead | 661 | 2175 | 2175 | 30.4% | - | 0.0 | 0.2 | 1.2 | 1.4 |
| 9/1 | circulatory (SE) Right Ahead | 706 | 2175 | 2175 | 32.5% | - | 0.1 | 0.3 | 1.5 | 4.1 |
| 9/2 | circulatory (SE) Right | 432 | 2175 | 2175 | 19.9% | - | 0.0 | 0.1 | 1.0 | 0.1 |
| 10/1 | circulatory (SW) Ahead | 645 | 2175 | 2175 | 29.7% | - | 0.0 | 0.2 | 1.2 | 0.2 |
| 10/2 | circulatory (SW) Right Ahead | 1028 | 2175 | 2175 | 47.3% | - | 0.0 | 0.4 | 1.6 | 0.4 |
| 11/1 | | 581 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/2 | | 292 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/3 | | 167 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 12/1 | | 345 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

Full Input Data And Results

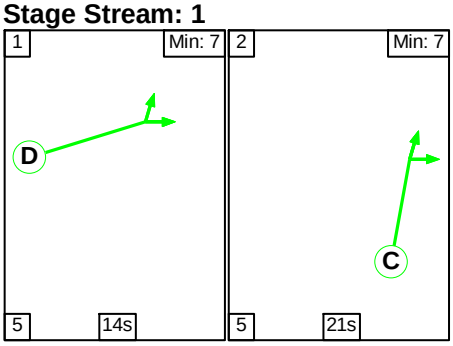
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 12/2 | | 412 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/1 | | 561 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/2 | | 197 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 14/1 | | 347 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/1 | | 681 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/2 | | 39 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| C1 | Stream: 1 PRC for Signalled Lanes (%): | 104.8 | Total Delay for Signalled Lanes (pcuHr): | 5.94 |
| C1 | Stream: 2 PRC for Signalled Lanes (%): | 60.7 | Total Delay for Signalled Lanes (pcuHr): | 6.23 |
| | PRC Over All Lanes (%): | 42.6 | Total Delay Over All Lanes(pcuHr): | 16.03 |

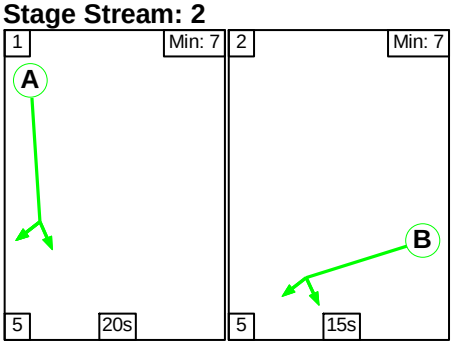
**Scenario 3: 'AM 2037 - Base'** (FG3: '2037 AM - Base', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram

### Stage Stream: 1




### Stage Stream: 2




## Stage Timings

### Stage Stream: 1

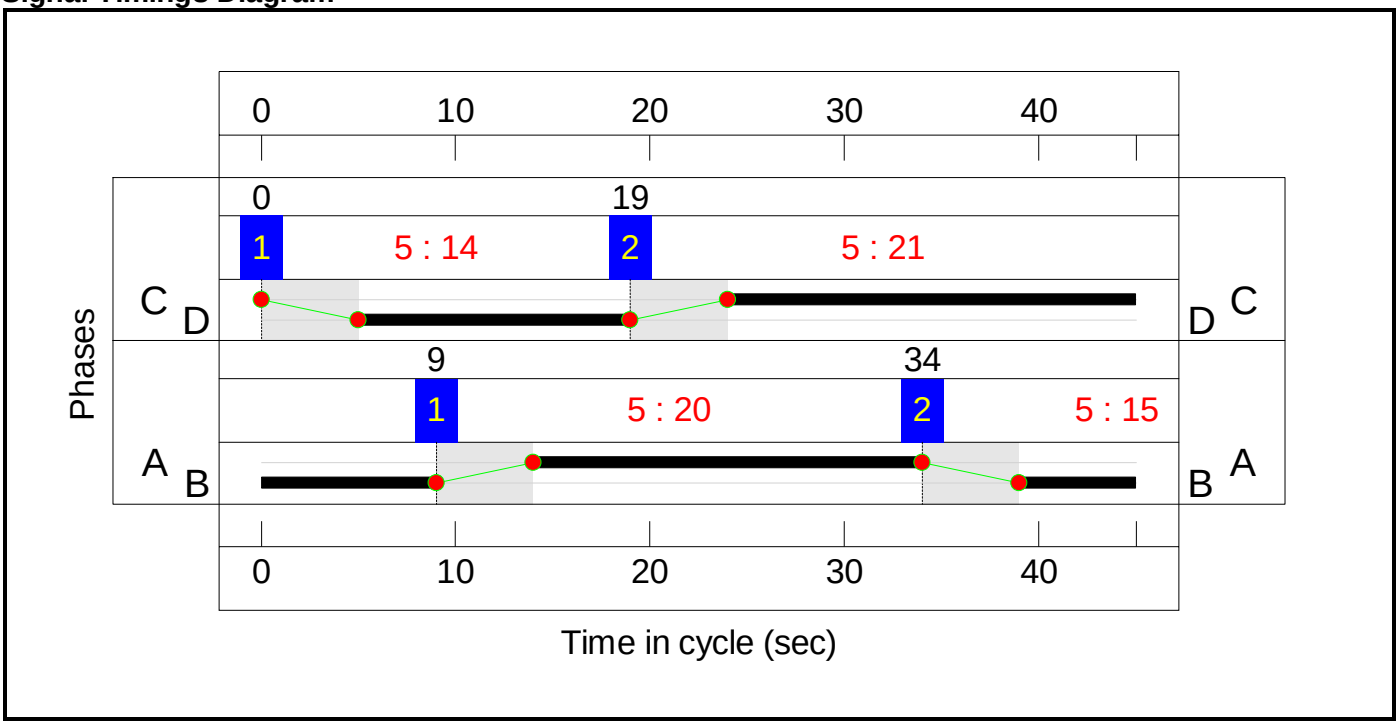
| Stage | 1 | 2 |
|---|---|---|
| Duration | 14 | 21 |
| Change Point | 0 | 19 |

### Stage Stream: 2

| Stage | 1 | 2 |
|---|---|---|
| Duration | 20 | 15 |
| Change Point | 9 | 34 |

Full Input Data And Results

**Signal Timings Diagram**



Full Input Data And Results

## Network Results

| Item | Lane Description | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) | Turners In Gaps (pcu) | Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Mean Max Queue (pcu) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Network: A494-A550** | **-** | **-** | **-** | **-** | **57.6%** | **4030** | **10.0** | **16.4** | **-** | **-** |
| **A494-A550** | **-** | **-** | **-** | **-** | **57.6%** | **4030** | **10.0** | **16.4** | **-** | **-** |
| 1/1 | A494 (w) offslip Left | 268 | 1965 | 655 | 40.9% | - | 0.9 | 1.2 | 16.2 | 2.9 |
| 1/2 | A494 (w) offslip Ahead Left | 306 | 2105 | 702 | 43.6% | - | 1.0 | 1.4 | 16.2 | 3.4 |
| 1/3 | A494 (w) offslip Ahead | 306 | 2105 | 702 | 43.6% | - | 1.0 | 1.4 | 16.2 | 3.4 |
| 2/1 | circulatory (west) Ahead | 399 | 2105 | 1029 | 38.8% | - | 1.2 | 1.5 | 13.5 | 4.3 |
| 2/2 | circulatory (west) Right Ahead | 426 | 2105 | 1029 | 41.4% | - | 1.1 | 1.5 | 12.3 | 4.3 |
| 2/3 | circulatory (west) Right | 412 | 2105 | 1029 | 40.0% | - | 0.8 | 1.2 | 10.3 | 3.6 |
| 3/1 | B5129 (N) Left | 306 | 1935 | 800 | 38.2% | 306 | 0.0 | 0.3 | 3.7 | 0.6 |
| 3/2+3/3 | B5129 (N) Ahead | 630 | 2075:2075 | 800+600 | 45.0 : 45.0% | 1260 | 0.0 | 0.4 | 2.4 | 1.0 |
| 4/2+4/1 | A494 (E) offslip Ahead Left | 547 | 2105:1965 | 748+699 | 37.8 : 37.8% | - | 1.6 | 1.9 | 12.8 | 2.9 |
| 4/3 | A494 (E) offslip Ahead | 309 | 2105 | 748 | 41.3% | - | 0.9 | 1.3 | 15.0 | 3.2 |
| 5/1 | circulatory (east) Ahead | 374 | 2105 | 982 | 38.1% | - | 0.3 | 0.6 | 5.9 | 1.6 |
| 5/2 | circulatory (east) Right Ahead | 344 | 2105 | 982 | 35.0% | - | 0.5 | 0.7 | 7.6 | 2.2 |
| 5/3 | circulatory (east) Right | 311 | 2105 | 982 | 31.7% | - | 0.6 | 0.8 | 9.1 | 2.3 |
| 6/1+6/2 | B5129 (S) Ahead Left | 716 | 2025:2155 | 560+1092 | 42.1 : 43.9% | 1432 | 0.0 | 0.4 | 2.1 | 1.2 |
| 7/1+7/2 | A550 Ahead Left | 516 | 1965:2055 | 298+597 | 57.6 : 57.6% | 1032 | 0.0 | 0.7 | 4.8 | 1.1 |
| 8/1 | circulatory (N) Ahead | 130 | 2175 | 2175 | 6.0% | - | 0.0 | 0.0 | 0.9 | 0.0 |
| 8/2 | circulatory (N) Right Ahead | 803 | 2175 | 2175 | 36.9% | - | 0.0 | 0.3 | 1.4 | 2.8 |
| 9/1 | circulatory (SE) Right Ahead | 555 | 2175 | 2175 | 25.5% | - | 0.0 | 0.2 | 1.2 | 2.8 |
| 9/2 | circulatory (SE) Right | 314 | 2175 | 2175 | 14.4% | - | 0.0 | 0.1 | 1.0 | 0.1 |
| 10/1 | circulatory (SW) Ahead | 524 | 2175 | 2175 | 24.1% | - | 0.0 | 0.2 | 1.1 | 0.2 |
| 10/2 | circulatory (SW) Right Ahead | 794 | 2175 | 2175 | 36.5% | - | 0.0 | 0.3 | 1.3 | 1.5 |
| 11/1 | | 667 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/2 | | 369 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/3 | | 148 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 12/1 | | 436 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

Full Input Data And Results

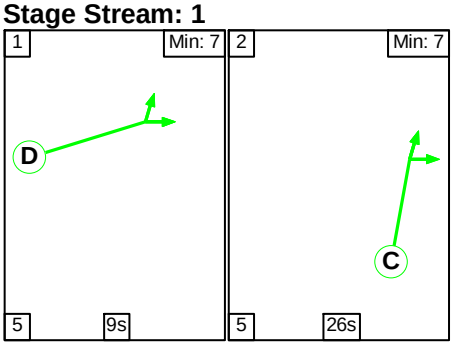
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 12/2 | | 404 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/1 | | 638 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/2 | | 378 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 14/1 | | 267 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/1 | | 592 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/2 | | 5 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| C1 | Stream: 1 PRC for Signalled Lanes (%): | 106.4 | Total Delay for Signalled Lanes (pcuHr): | 8.10 |
| C1 | Stream: 2 PRC for Signalled Lanes (%): | 118.0 | Total Delay for Signalled Lanes (pcuHr): | 5.37 |
| | PRC Over All Lanes (%): | 56.1 | Total Delay Over All Lanes(pcuHr): | 16.36 |

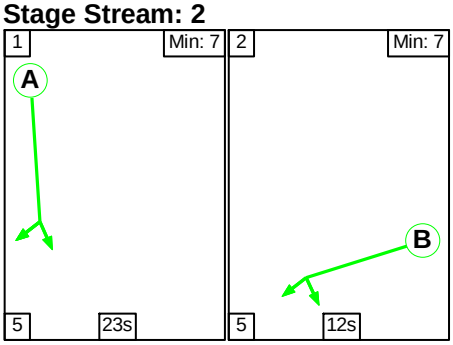
**Scenario 4: 'PM 2037 - Base'** (FG4: '2037 PM - Base', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram

### Stage Stream: 1




### Stage Stream: 2




## Stage Timings

### Stage Stream: 1

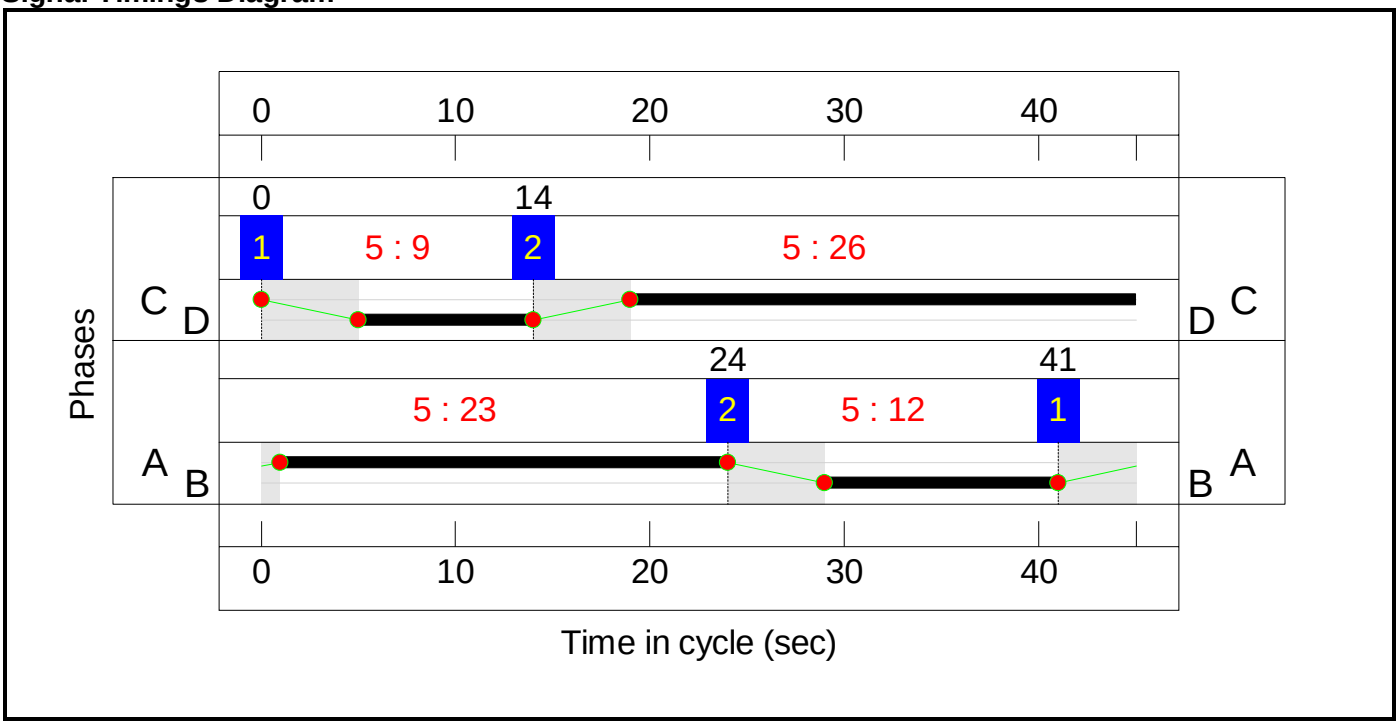
| Stage | 1 | 2 |
|---|---|---|
| Duration | 9 | 26 |
| Change Point | 0 | 14 |

### Stage Stream: 2

| Stage | 1 | 2 |
|---|---|---|
| Duration | 23 | 12 |
| Change Point | 41 | 24 |

Full Input Data And Results

**Signal Timings Diagram**



Full Input Data And Results

## Network Results

| Item | Lane Description | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) | Turners In Gaps (pcu) | Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Mean Max Queue (pcu) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Network: A494-A550** | **-** | **-** | **-** | **-** | **81.3%** | **5091** | **11.2** | **23.1** | **-** | **-** |
| **A494-A550** | **-** | **-** | **-** | **-** | **81.3%** | **5091** | **11.2** | **23.1** | **-** | **-** |
| 1/1 | A494 (w) offslip Left | 185 | 1965 | 437 | 42.4% | - | 0.8 | 1.1 | 22.2 | 2.3 |
| 1/2 | A494 (w) offslip Ahead Left | 214 | 2105 | 468 | 45.7% | - | 0.9 | 1.3 | 22.2 | 2.7 |
| 1/3 | A494 (w) offslip Ahead | 212 | 2105 | 468 | 45.3% | - | 0.9 | 1.3 | 22.2 | 2.7 |
| 2/1 | circulatory (west) Ahead | 463 | 2105 | 1263 | 36.7% | - | 1.1 | 1.4 | 10.6 | 3.9 |
| 2/2 | circulatory (west) Right Ahead | 518 | 2105 | 1263 | 41.0% | - | 1.0 | 1.4 | 9.4 | 4.1 |
| 2/3 | circulatory (west) Right | 521 | 2105 | 1263 | 41.3% | - | 0.6 | 1.0 | 6.6 | 3.4 |
| 3/1 | B5129 (N) Left | 255 | 1935 | 810 | 31.5% | 255 | 0.0 | 0.2 | 3.3 | 0.4 |
| 3/2+3/3 | B5129 (N) Ahead | 1005 | 2075:2075 | 810+529 | 75.1 : 75.1% | 2010 | 0.1 | 1.6 | 5.7 | 3.5 |
| 4/2+4/1 | A494 (E) offslip Ahead Left | 450 | 2105:1965 | 608+568 | 38.5 : 38.1% | - | 1.6 | 1.9 | 15.3 | 2.6 |
| 4/3 | A494 (E) offslip Ahead | 461 | 2105 | 608 | 75.8% | - | 1.9 | 3.4 | 26.6 | 6.7 |
| 5/1 | circulatory (east) Ahead | 442 | 2105 | 1123 | 39.4% | - | 0.5 | 0.8 | 6.8 | 2.4 |
| 5/2 | circulatory (east) Right Ahead | 427 | 2105 | 1123 | 38.0% | - | 0.6 | 0.9 | 7.6 | 2.8 |
| 5/3 | circulatory (east) Right | 423 | 2105 | 1123 | 37.7% | - | 0.7 | 1.0 | 8.6 | 3.2 |
| 6/1+6/2 | B5129 (S) Ahead Left | 1018 | 2025:2155 | 406+847 | 81.3 : 81.3% | 2036 | 0.5 | 2.6 | 9.3 | 8.2 |
| 7/1+7/2 | A550 Ahead Left | 395 | 1965:2055 | 142+393 | 73.8 : 73.8% | 790 | 0.0 | 1.4 | 12.9 | 2.2 |
| 8/1 | circulatory (N) Ahead | 104 | 2175 | 2175 | 4.8% | - | 0.0 | 0.0 | 0.9 | 0.0 |
| 8/2 | circulatory (N) Right Ahead | 804 | 2175 | 2175 | 37.0% | - | 0.0 | 0.3 | 1.3 | 1.7 |
| 9/1 | circulatory (SE) Right Ahead | 821 | 2175 | 2175 | 37.7% | - | 0.1 | 0.4 | 1.7 | 4.7 |
| 9/2 | circulatory (SE) Right | 503 | 2175 | 2175 | 23.1% | - | 0.0 | 0.2 | 1.1 | 0.2 |
| 10/1 | circulatory (SW) Ahead | 745 | 2175 | 2175 | 34.3% | - | 0.0 | 0.3 | 1.3 | 0.3 |
| 10/2 | circulatory (SW) Right Ahead | 1191 | 2175 | 2175 | 54.8% | - | 0.0 | 0.6 | 1.8 | 1.8 |
| 11/1 | | 648 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/2 | | 350 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/3 | | 207 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 12/1 | | 359 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

Full Input Data And Results

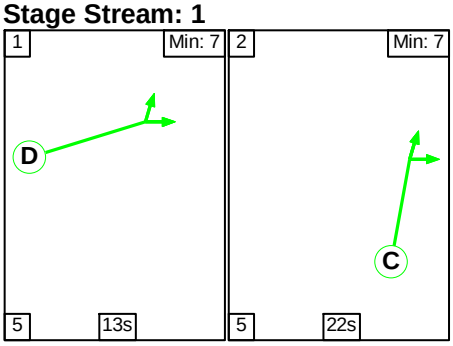
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 12/2 | | 517 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/1 | | 658 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/2 | | 221 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 14/1 | | 406 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/1 | | 787 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/2 | | 42 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| C1 | Stream: 1 PRC for Signalled Lanes (%): | 96.7 | Total Delay for Signalled Lanes (pcuHr): | 7.44 |
| C1 | Stream: 2 PRC for Signalled Lanes (%): | 18.7 | Total Delay for Signalled Lanes (pcuHr): | 8.06 |
| | PRC Over All Lanes (%): | 10.7 | Total Delay Over All Lanes(pcuHr): | 23.08 |

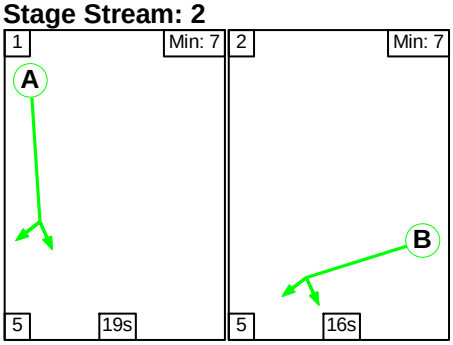
**Scenario 5: 'AM 2037 - Assessment'** (FG5: '2037 AM - Assessment', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram

### Stage Stream: 1




### Stage Stream: 2




## Stage Timings

### Stage Stream: 1

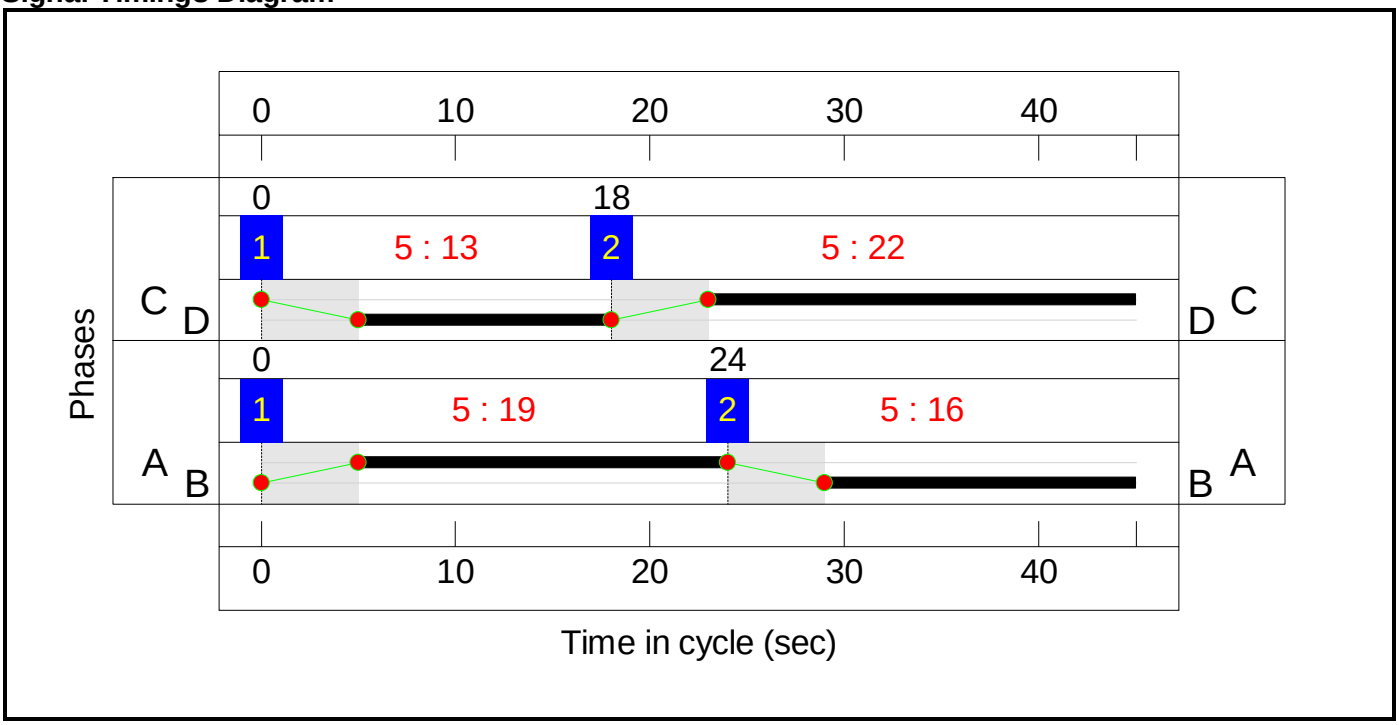
| Stage | 1 | 2 |
|---|---|---|
| Duration | 13 | 22 |
| Change Point | 0 | 18 |

### Stage Stream: 2

| Stage | 1 | 2 |
|---|---|---|
| Duration | 19 | 16 |
| Change Point | 0 | 24 |

Full Input Data And Results

**Signal Timings Diagram**



Full Input Data And Results

## Network Results

| Item | Lane Description | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) | Turners In Gaps (pcu) | Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Mean Max Queue (pcu) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Network: A494-A550** | **-** | **-** | **-** | **-** | **63.7%** | **4132** | **10.4** | **17.2** | **-** | **-** |
| **A494-A550** | **-** | **-** | **-** | **-** | **63.7%** | **4132** | **10.4** | **17.2** | **-** | **-** |
| 1/1 | A494 (w) offslip Left | 270 | 1965 | 611 | 44.2% | - | 0.9 | 1.3 | 17.6 | 3.0 |
| 1/2 | A494 (w) offslip Ahead Left | 305 | 2105 | 655 | 46.6% | - | 1.1 | 1.5 | 17.6 | 3.5 |
| 1/3 | A494 (w) offslip Ahead | 308 | 2105 | 655 | 47.0% | - | 1.1 | 1.5 | 17.7 | 3.5 |
| 2/1 | circulatory (west) Ahead | 412 | 2105 | 1076 | 38.3% | - | 1.0 | 1.3 | 11.7 | 3.4 |
| 2/2 | circulatory (west) Right Ahead | 441 | 2105 | 1076 | 41.0% | - | 1.0 | 1.3 | 10.9 | 3.7 |
| 2/3 | circulatory (west) Right | 425 | 2105 | 1076 | 39.5% | - | 0.8 | 1.1 | 9.7 | 3.5 |
| 3/1 | B5129 (N) Left | 306 | 1935 | 784 | 39.0% | 306 | 0.0 | 0.3 | 3.9 | 0.7 |
| 3/2+3/3 | B5129 (N) Ahead | 631 | 2075:2075 | 784+579 | 46.3 : 46.3% | 1262 | 0.0 | 0.5 | 2.6 | 1.0 |
| 4/2+4/1 | A494 (E) offslip Ahead Left | 561 | 2105:1965 | 795+742 | 36.5 : 36.5% | - | 1.6 | 1.9 | 12.0 | 2.9 |
| 4/3 | A494 (E) offslip Ahead | 309 | 2105 | 795 | 38.9% | - | 0.9 | 1.2 | 13.9 | 3.1 |
| 5/1 | circulatory (east) Ahead | 377 | 2105 | 936 | 40.3% | - | 0.6 | 0.9 | 8.9 | 2.0 |
| 5/2 | circulatory (east) Right Ahead | 345 | 2105 | 936 | 36.9% | - | 0.6 | 0.9 | 9.7 | 2.4 |
| 5/3 | circulatory (east) Right | 311 | 2105 | 936 | 33.2% | - | 0.7 | 0.9 | 10.4 | 2.4 |
| 6/1+6/2 | B5129 (S) Ahead Left | 716 | 2025:2155 | 557+1082 | 42.4 : 44.4% | 1432 | 0.0 | 0.4 | 2.1 | 1.2 |
| 7/1+7/2 | A550 Ahead Left | 566 | 1965:2055 | 292+597 | 63.7 : 63.7% | 1132 | 0.0 | 0.9 | 5.6 | 1.4 |
| 8/1 | circulatory (N) Ahead | 155 | 2175 | 2175 | 7.1% | - | 0.0 | 0.0 | 0.9 | 0.0 |
| 8/2 | circulatory (N) Right Ahead | 819 | 2175 | 2175 | 37.7% | - | 0.0 | 0.3 | 1.4 | 2.9 |
| 9/1 | circulatory (SE) Right Ahead | 576 | 2175 | 2175 | 26.5% | - | 0.0 | 0.2 | 1.3 | 2.9 |
| 9/2 | circulatory (SE) Right | 311 | 2175 | 2175 | 14.3% | - | 0.0 | 0.1 | 1.0 | 0.1 |
| 10/1 | circulatory (SW) Ahead | 527 | 2175 | 2175 | 24.2% | - | 0.0 | 0.2 | 1.1 | 0.2 |
| 10/2 | circulatory (SW) Right Ahead | 791 | 2175 | 2175 | 36.4% | - | 0.0 | 0.3 | 1.3 | 0.9 |
| 11/1 | | 682 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/2 | | 362 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/3 | | 143 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 12/1 | | 461 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

Full Input Data And Results

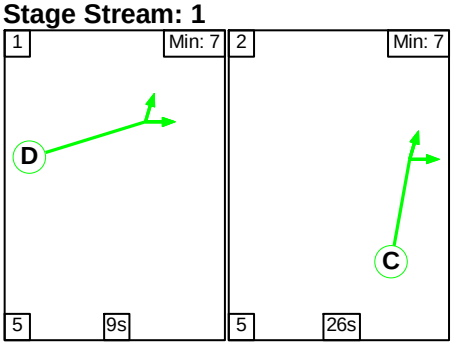
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 12/2 | | 417 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/1 | | 648 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/2 | | 368 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 14/1 | | 285 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/1 | | 604 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/2 | | 2 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| C1 | Stream: 1 PRC for Signalled Lanes (%): | 91.4 | Total Delay for Signalled Lanes (pcuHr): | 8.15 |
| C1 | Stream: 2 PRC for Signalled Lanes (%): | 123.3 | Total Delay for Signalled Lanes (pcuHr): | 5.82 |
| | PRC Over All Lanes (%): | 41.4 | Total Delay Over All Lanes(pcuHr): | 17.15 |

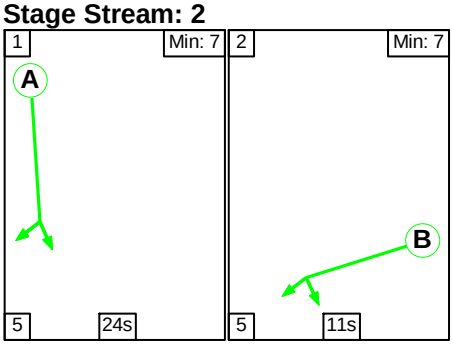
**Scenario 6: 'PM 2037 - Assessment'** (FG6: '2037 PM - Assessment', Plan 1: 'Network Control Plan 1')

## Stage Sequence Diagram

### Stage Stream: 1




### Stage Stream: 2




## Stage Timings

### Stage Stream: 1

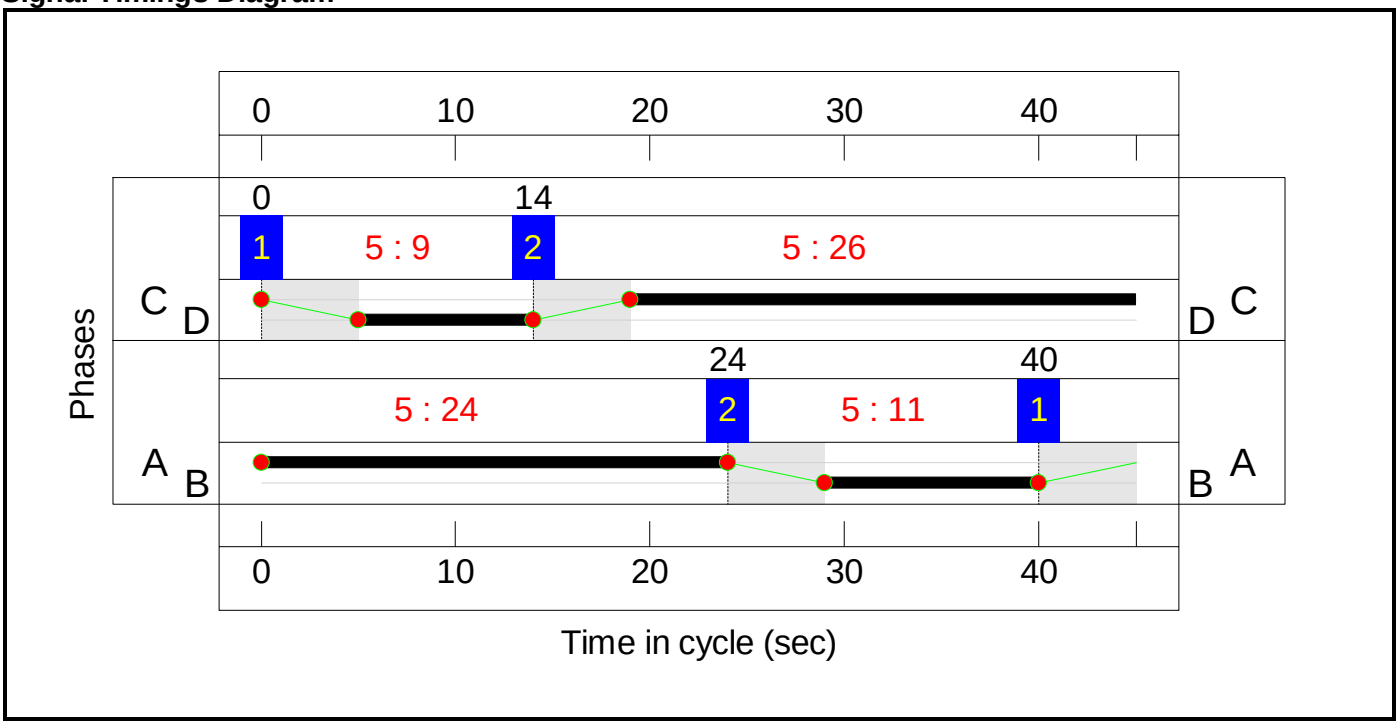
| Stage | 1 | 2 |
|---|---|---|
| Duration | 9 | 26 |
| Change Point | 0 | 14 |

### Stage Stream: 2

| Stage | 1 | 2 |
|---|---|---|
| Duration | 24 | 11 |
| Change Point | 40 | 24 |

Full Input Data And Results

**Signal Timings Diagram**



Full Input Data And Results

## Network Results

| Item | Lane Description | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%) | Turners In Gaps (pcu) | Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Mean Max Queue (pcu) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Network: A494-A550** | **-** | **-** | **-** | **-** | **82.9%** | **5147** | **11.7** | **23.7** | **-** | **-** |
| **A494-A550** | **-** | **-** | **-** | **-** | **82.9%** | **5147** | **11.7** | **23.7** | **-** | **-** |
| 1/1 | A494 (w) offslip Left | 187 | 1965 | 437 | 42.8% | - | 0.8 | 1.2 | 22.3 | 2.3 |
| 1/2 | A494 (w) offslip Ahead Left | 217 | 2105 | 468 | 46.4% | - | 0.9 | 1.3 | 22.3 | 2.8 |
| 1/3 | A494 (w) offslip Ahead | 215 | 2105 | 468 | 46.0% | - | 0.9 | 1.3 | 22.3 | 2.7 |
| 2/1 | circulatory (west) Ahead | 571 | 2105 | 1263 | 45.2% | - | 1.3 | 1.7 | 10.8 | 4.8 |
| 2/2 | circulatory (west) Right Ahead | 524 | 2105 | 1263 | 41.5% | - | 0.9 | 1.3 | 8.7 | 4.0 |
| 2/3 | circulatory (west) Right | 428 | 2105 | 1263 | 33.9% | - | 0.4 | 0.7 | 5.9 | 2.5 |
| 3/1 | B5129 (N) Left | 255 | 1935 | 799 | 31.9% | 255 | 0.0 | 0.2 | 3.3 | 0.4 |
| 3/2+3/3 | B5129 (N) Ahead | 1008 | 2075:2075 | 799+706 | 70.3 : 63.2% | 2016 | 0.1 | 1.1 | 4.0 | 2.7 |
| 4/2+4/1 | A494 (E) offslip Ahead Left | 485 | 2105:1965 | 561+524 | 45.2 : 44.1% | - | 1.9 | 2.3 | 16.8 | 3.0 |
| 4/3 | A494 (E) offslip Ahead | 461 | 2105 | 561 | 82.1% | - | 2.0 | 4.2 | 32.7 | 7.6 |
| 5/1 | circulatory (east) Ahead | 413 | 2105 | 1169 | 35.3% | - | 0.4 | 0.7 | 6.1 | 2.1 |
| 5/2 | circulatory (east) Right Ahead | 419 | 2105 | 1169 | 35.8% | - | 0.5 | 0.8 | 6.7 | 2.4 |
| 5/3 | circulatory (east) Right | 471 | 2105 | 1169 | 40.3% | - | 0.8 | 1.1 | 8.4 | 3.5 |
| 6/1+6/2 | B5129 (S) Ahead Left | 1018 | 2025:2155 | 398+830 | 82.9 : 82.9% | 2036 | 0.7 | 3.0 | 10.7 | 8.7 |
| 7/1+7/2 | A550 Ahead Left | 420 | 1965:2055 | 235+393 | 66.9 : 66.9% | 840 | 0.0 | 1.0 | 8.8 | 1.7 |
| 8/1 | circulatory (N) Ahead | 216 | 2175 | 2175 | 9.9% | - | 0.0 | 0.1 | 0.9 | 0.1 |
| 8/2 | circulatory (N) Right Ahead | 719 | 2175 | 2175 | 33.1% | - | 0.0 | 0.3 | 1.3 | 2.1 |
| 9/1 | circulatory (SE) Right Ahead | 859 | 2175 | 2175 | 39.5% | - | 0.1 | 0.4 | 1.6 | 4.6 |
| 9/2 | circulatory (SE) Right | 511 | 2175 | 2175 | 23.5% | - | 0.0 | 0.2 | 1.1 | 0.2 |
| 10/1 | circulatory (SW) Ahead | 737 | 2175 | 2175 | 33.9% | - | 0.0 | 0.3 | 1.3 | 0.3 |
| 10/2 | circulatory (SW) Right Ahead | 1199 | 2175 | 2175 | 55.1% | - | 0.0 | 0.6 | 1.8 | 1.2 |
| 11/1 | | 758 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/2 | | 295 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 11/3 | | 154 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 12/1 | | 471 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

Full Input Data And Results

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 12/2 | | 424 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/1 | | 644 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 13/2 | | 235 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 14/1 | | 452 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/1 | | 783 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |
| 15/2 | | 50 | Inf | Inf | 0.0% | - | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|---|---|---|---|---|---|
| C1 | Stream: 1 PRC for Signalled Lanes (%): | 94.0 | Total Delay for Signalled Lanes (pcuHr): | 7.52 |
| C1 | Stream: 2 PRC for Signalled Lanes (%): | 9.6 | Total Delay for Signalled Lanes (pcuHr): | 9.02 |
| | PRC Over All Lanes (%): | 8.6 | Total Delay Over All Lanes(pcuHr): | 23.66 |

# Appendix G – A550 Westernmost Junction Assessment Results

# Junctions 9

## PICADY 9 - Priority Intersection Module

Version: 9.0.0.4211 []


For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk



**Filename:** 2. westernmost.j9
**Path:** \\sweco.se\GB\LDS01\Legacy\MNC\Manchester Central\Mancot Flintshire\Models
**Report generation date:** 15/08/2018 13:29:31

## Summary of junction performance

| | AM | | | | PM | | | |
|---|---|---|---|---|---|---|---|---|
| | Queue (PCU) | Delay (s) | RFC | LOS | Queue (PCU) | Delay (s) | RFC | LOS |
| | 2018 | | | | | | | |
| Stream B-ACD | 0.0 | 9.68 | 0.02 | A | 0.0 | 11.38 | 0.02 | B |
| Stream A-BCD | 1.1 | 9.67 | 0.46 | A | 1.5 | 7.42 | 0.47 | A |
| Stream A-B | | | | | | | | |
| Stream A-C | | | | | | | | |
| Stream D-ABC | 2.5 | 28.98 | 0.72 | D | 1.9 | 22.30 | 0.66 | C |
| Stream C-ABD | 0.0 | 4.40 | 0.00 | A | 0.0 | 5.33 | 0.01 | A |
| Stream C-D | | | | | | | | |
| Stream C-A | | | | | | | | |
| | 2027 Base | | | | | | | |
| Stream B-ACD | 0.0 | 10.06 | 0.02 | B | 0.0 | 13.08 | 0.03 | B |
| Stream A-BCD | 1.4 | 10.96 | 0.52 | B | 1.9 | 8.24 | 0.54 | A |
| Stream A-B | | | | | | | | |
| Stream A-C | | | | | | | | |
| Stream D-ABC | 4.0 | 44.16 | 0.82 | E | 2.6 | 29.55 | 0.74 | D |
| Stream C-ABD | 0.0 | 4.34 | 0.00 | A | 0.0 | 5.32 | 0.01 | A |
| Stream C-D | | | | | | | | |
| Stream C-A | | | | | | | | |
| | 2027 Assessment | | | | | | | |
| Stream B-ACD | 0.0 | 10.12 | 0.02 | B | 0.0 | 13.47 | 0.03 | B |
| Stream A-BCD | 1.5 | 11.45 | 0.54 | B | 2.4 | 9.50 | 0.60 | A |
| Stream A-B | | | | | | | | |
| Stream A-C | | | | | | | | |
| Stream D-ABC | 8.0 | 80.44 | 0.93 | F | 3.6 | 38.60 | 0.80 | E |
| Stream C-ABD | 0.0 | 4.33 | 0.00 | A | 0.0 | 5.29 | 0.01 | A |
| Stream C-D | | | | | | | | |
| Stream C-A | | | | | | | | |

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

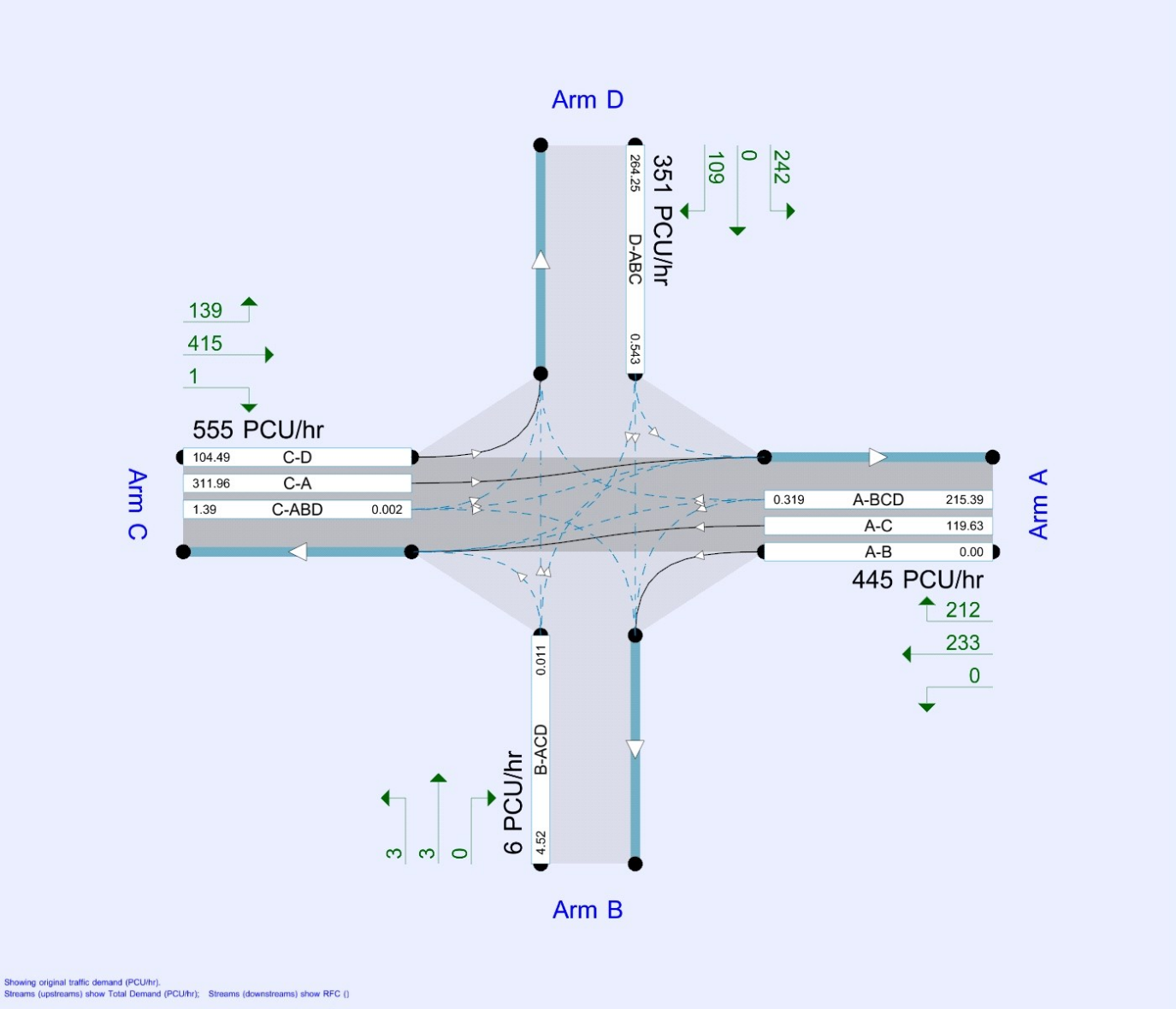
## File summary

### File Description

| | |
|---|---|
| Title | HW005 |
| Location | Hawarden |
| Site number | |
| Date | 26/07/2018 |
| Version | |
| Status | (new file) |
| Identifier | |
| Client | |
| Jobnumber | |
| Enumerator | SWECO"GBIABN |
| Description | |

## Units

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




*The junction diagram reflects the last run of Junctions.*

## Analysis Options

| Calculate Queue Percentiles | Calculate residual capacity | RFC Threshold | Average Delay threshold (s) | Queue threshold (PCU) |
|---|---|---|---|---|
| | | 0.85 | 36.00 | 20.00 |

## Demand Set Summary

| Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|
| 2018 | AM | ONE HOUR | 08:00 | 09:30 | 15 |
| 2018 | PM | ONE HOUR | 17:00 | 18:30 | 15 |
| 2027 Base | AM | ONE HOUR | 08:00 | 09:30 | 15 |
| 2027 Base | PM | ONE HOUR | 17:00 | 18:30 | 15 |
| 2027 Assessment | AM | ONE HOUR | 08:00 | 09:30 | 15 |
| 2027 Assessment | PM | ONE HOUR | 17:00 | 18:30 | 15 |

# 2018, AM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

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

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | westernmost | Crossroads | Two-way | 9.15 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description | Arm type |
|---|---|---|---|
| A | The Highway (E) | | Major |
| B | Mossley Court | | Minor |
| C | B5125 | | Major |
| D | A550 | | Minor |

## Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Has right turn bay | Visibility for right turn (m) | Blocks? | Blocking queue (PCU) |
|---|---|---|---|---|---|---|
| A | 6.00 | | | 150.0 | ✓ | 0.00 |
| C | 6.00 | | | 150.0 | ✓ | 0.00 |

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

## Minor Arm Geometry

| Arm | Minor arm type | Lane width (m) | Visibility to left (m) | Visibility to right (m) |
|---|---|---|---|---|
| B | One lane | 2.40 | 15 | 15 |
| D | One lane | 3.50 | 52 | 22 |

## 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 | 660.830 | - | - | - | - | - | - | 0.256 | 0.366 | 0.256 | - | - | - |
| 1 | B-A | 460.454 | 0.084 | 0.212 | 0.212 | - | - | - | 0.133 | 0.303 | - | 0.212 | 0.212 | 0.106 |
| 1 | B-C | 595.332 | 0.091 | 0.231 | - | - | - | - | - | - | - | - | - | - |
| 1 | B-D, nearside lane | 460.454 | 0.084 | 0.212 | 0.212 | - | - | - | 0.133 | 0.303 | 0.133 | - | - | - |
| 1 | B-D, offside lane | 460.454 | 0.084 | 0.212 | 0.212 | - | - | - | 0.133 | 0.303 | 0.133 | - | - | - |
| 1 | C-B | 660.830 | 0.256 | 0.256 | 0.366 | - | - | - | - | - | - | - | - | - |
| 1 | D-A | 669.713 | - | - | - | - | - | - | 0.259 | - | 0.103 | - | - | - |
| 1 | D-B, nearside lane | 530.496 | 0.154 | 0.154 | 0.349 | - | - | - | 0.244 | 0.244 | 0.097 | - | - | - |
| 1 | D-B, offside lane | 530.496 | 0.154 | 0.154 | 0.349 | - | - | - | 0.244 | 0.244 | 0.097 | - | - | - |
| 1 | D-C | 530.496 | - | 0.154 | 0.349 | 0.122 | 0.244 | 0.244 | 0.244 | 0.244 | 0.097 | - | - | - |

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

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

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

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D1 | 2018 | AM | ONE HOUR | 08:00 | 09:30 | 15 |

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

## Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 402.00 | 100.000 |
| B | | ✓ | 6.00 | 100.000 |
| C | | ✓ | 507.00 | 100.000 |
| D | | ✓ | 289.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 216.000 | 186.000 |
| | B | 0.000 | 0.000 | 3.000 | 3.000 |
| | C | 385.000 | 1.000 | 0.000 | 121.000 |
| | D | 203.000 | 0.000 | 86.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.02 | 9.68 | 0.0 | A |
| A-BCD | 0.46 | 9.67 | 1.1 | A |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.72 | 28.98 | 2.5 | D |
| C-ABD | 0.00 | 4.40 | 0.0 | A |
| C-D | | | | |
| C-A | | | | |

## Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 4.52 | 426.53 | 0.011 | 4.47 | 0.0 | 8.528 | A |
| A-BCD | 184.34 | 674.69 | 0.273 | 182.50 | 0.5 | 7.297 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 118.31 | | | 118.31 | | | |
| D-ABC | 217.57 | 501.93 | 0.433 | 214.59 | 0.7 | 12.407 | B |
| C-ABD | 1.32 | 819.42 | 0.002 | 1.31 | 0.0 | 4.400 | A |
| C-D | 90.96 | | | 90.96 | | | |
| C-A | 289.42 | | | 289.42 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.39 | 406.73 | 0.013 | 5.38 | 0.0 | 8.969 | A |
| A-BCD | 234.34 | 679.68 | 0.345 | 233.54 | 0.7 | 8.076 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 127.05 | | | 127.05 | | | |
| D-ABC | 259.81 | 476.84 | 0.545 | 258.18 | 1.2 | 16.335 | C |
| C-ABD | 1.75 | 850.06 | 0.002 | 1.74 | 0.0 | 4.243 | A |
| C-D | 108.57 | | | 108.57 | | | |
| C-A | 345.46 | | | 345.46 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.61 | 378.64 | 0.017 | 6.59 | 0.0 | 9.676 | A |
| A-BCD | 313.33 | 687.38 | 0.456 | 311.65 | 1.1 | 9.589 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 129.28 | | | 129.28 | | | |
| D-ABC | 318.19 | 441.10 | 0.721 | 313.42 | 2.3 | 27.201 | D |
| C-ABD | 2.46 | 892.12 | 0.003 | 2.46 | 0.0 | 4.046 | A |
| C-D | 132.90 | | | 132.90 | | | |
| C-A | 422.86 | | | 422.86 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.61 | 378.30 | 0.017 | 6.61 | 0.0 | 9.685 | A |
| A-BCD | 313.86 | 687.91 | 0.456 | 313.80 | 1.1 | 9.671 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 128.75 | | | 128.75 | | | |
| D-ABC | 318.19 | 440.82 | 0.722 | 317.75 | 2.5 | 28.978 | D |
| C-ABD | 2.46 | 891.75 | 0.003 | 2.46 | 0.0 | 4.049 | A |
| C-D | 132.90 | | | 132.90 | | | |
| C-A | 422.86 | | | 422.86 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.39 | 406.23 | 0.013 | 5.41 | 0.0 | 8.983 | A |
| A-BCD | 234.96 | 680.42 | 0.345 | 236.59 | 0.7 | 8.161 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 126.43 | | | 126.43 | | | |
| D-ABC | 259.81 | 476.45 | 0.545 | 264.66 | 1.2 | 17.362 | C |
| C-ABD | 1.75 | 849.45 | 0.002 | 1.75 | 0.0 | 4.248 | A |
| C-D | 108.57 | | | 108.57 | | | |
| C-A | 345.46 | | | 345.46 | | | |

## Main results: (09:15-09:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 4.52 | 426.03 | 0.011 | 4.53 | 0.0 | 8.540 | A |
| A-BCD | 184.97 | 675.23 | 0.274 | 185.81 | 0.5 | 7.381 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 117.67 | | | 117.67 | | | |
| D-ABC | 217.57 | 501.50 | 0.434 | 219.42 | 0.8 | 12.843 | B |
| C-ABD | 1.32 | 818.69 | 0.002 | 1.32 | 0.0 | 4.404 | A |
| C-D | 90.96 | | | 90.96 | | | |
| C-A | 289.42 | | | 289.42 | | | |

# 2018, PM

### Data Errors and Warnings

*No errors or warnings*

### Analysis Set Details

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

# Junction Network

### Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | westernmost | Crossroads | Two-way | 7.24 | A |

### Junction Network Options

*[same as above]*

# Arms

### Arms

*[same as above]*

### Major Arm Geometry

*[same as above]*

### Minor Arm Geometry

*[same as above]*

### Slope / Intercept / Capacity

*[same as above]*

# Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D2 | 2018 | PM | ONE HOUR | 17:00 | 18:30 | 15 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 650.00 | 100.000 |
| B | | ✓ | 6.00 | 100.000 |
| C | | ✓ | 303.00 | 100.000 |
| D | | ✓ | 280.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 474.000 | 176.000 |
| | B | 1.000 | 0.000 | 3.000 | 2.000 |
| | C | 225.000 | 3.000 | 0.000 | 75.000 |
| | D | 197.000 | 5.000 | 78.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.02 | 11.38 | 0.0 | B |
| A-BCD | 0.47 | 7.42 | 1.5 | A |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.66 | 22.30 | 1.9 | C |
| C-ABD | 0.01 | 5.33 | 0.0 | A |
| C-D | | | | |
| C-A | | | | |

# Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 4.52 | 390.26 | 0.012 | 4.47 | 0.0 | 9.330 | A |
| A-BCD | 228.24 | 838.16 | 0.272 | 226.01 | 0.6 | 5.874 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 261.11 | | | 261.11 | | | |
| D-ABC | 210.80 | 522.83 | 0.403 | 208.15 | 0.7 | 11.349 | B |
| C-ABD | 3.31 | 679.27 | 0.005 | 3.29 | 0.0 | 5.325 | A |
| C-D | 56.20 | | | 56.20 | | | |
| C-A | 168.60 | | | 168.60 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.39 | 362.80 | 0.015 | 5.38 | 0.0 | 10.072 | B |
| A-BCD | 307.84 | 876.98 | 0.351 | 306.74 | 0.8 | 6.328 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 276.50 | | | 276.50 | | | |
| D-ABC | 251.71 | 500.97 | 0.502 | 250.44 | 1.0 | 14.292 | B |
| C-ABD | 4.32 | 685.20 | 0.006 | 4.31 | 0.0 | 5.286 | A |
| C-D | 67.02 | | | 67.02 | | | |
| C-A | 201.06 | | | 201.06 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.61 | 323.73 | 0.020 | 6.58 | 0.0 | 11.351 | B |
| A-BCD | 439.92 | 929.49 | 0.473 | 437.50 | 1.4 | 7.346 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 275.75 | | | 275.75 | | | |
| D-ABC | 308.29 | 469.21 | 0.657 | 305.02 | 1.8 | 21.494 | C |
| C-ABD | 5.98 | 695.23 | 0.009 | 5.97 | 0.0 | 5.222 | A |
| C-D | 81.91 | | | 81.91 | | | |
| C-A | 245.72 | | | 245.72 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.61 | 322.97 | 0.020 | 6.61 | 0.0 | 11.378 | B |
| A-BCD | 441.22 | 930.55 | 0.474 | 441.13 | 1.5 | 7.419 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 274.44 | | | 274.44 | | | |
| D-ABC | 308.29 | 468.84 | 0.658 | 308.05 | 1.9 | 22.303 | C |
| C-ABD | 5.99 | 694.65 | 0.009 | 5.99 | 0.0 | 5.229 | A |
| C-D | 81.90 | | | 81.90 | | | |
| C-A | 245.71 | | | 245.71 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.39 | 361.75 | 0.015 | 5.42 | 0.0 | 10.102 | B |
| A-BCD | 309.26 | 878.53 | 0.352 | 311.63 | 0.9 | 6.406 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 275.07 | | | 275.07 | | | |
| D-ABC | 251.71 | 500.48 | 0.503 | 254.96 | 1.0 | 14.848 | B |
| C-ABD | 4.32 | 684.30 | 0.006 | 4.34 | 0.0 | 5.296 | A |
| C-D | 67.02 | | | 67.02 | | | |
| C-A | 201.05 | | | 201.05 | | | |

## Main results: (18:15-18:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 4.52 | 389.35 | 0.012 | 4.53 | 0.0 | 9.354 | A |
| A-BCD | 229.62 | 839.26 | 0.274 | 230.78 | 0.6 | 5.942 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 259.74 | | | 259.74 | | | |
| D-ABC | 210.80 | 522.33 | 0.404 | 212.21 | 0.7 | 11.662 | B |
| C-ABD | 3.32 | 678.32 | 0.005 | 3.33 | 0.0 | 5.332 | A |
| C-D | 56.20 | | | 56.20 | | | |
| C-A | 168.59 | | | 168.59 | | | |

# 2027 Base, AM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

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

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | westernmost | Crossroads | Two-way | 13.20 | B |

## Junction Network Options

*[same as above]*

# Arms

## Arms

*[same as above]*

## Major Arm Geometry

*[same as above]*

## Minor Arm Geometry

*[same as above]*

## Slope / Intercept / Capacity

*[same as above]*

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D3 | 2027 Base | AM | ONE HOUR | 08:00 | 09:30 | 15 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 438.00 | 100.000 |
| B | | ✓ | 6.00 | 100.000 |
| C | | ✓ | 550.00 | 100.000 |
| D | | ✓ | 314.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 233.000 | 205.000 |
| | B | 0.000 | 0.000 | 3.000 | 3.000 |
| | C | 415.000 | 1.000 | 0.000 | 134.000 |
| | D | 220.000 | 0.000 | 94.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.02 | 10.06 | 0.0 | B |
| A-BCD | 0.52 | 10.96 | 1.4 | B |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.82 | 44.16 | 4.0 | E |
| C-ABD | 0.00 | 4.34 | 0.0 | A |
| C-D | | | | |
| C-A | | | | |

# Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 4.52 | 417.93 | 0.011 | 4.47 | 0.0 | 8.705 | A |
| A-BCD | 208.18 | 675.98 | 0.308 | 205.99 | 0.5 | 7.639 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 121.57 | | | 121.57 | | | |
| D-ABC | 236.40 | 490.74 | 0.482 | 232.79 | 0.9 | 13.774 | B |
| C-ABD | 1.38 | 832.60 | 0.002 | 1.37 | 0.0 | 4.330 | A |
| C-D | 100.73 | | | 100.73 | | | |
| C-A | 311.96 | | | 311.96 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.39 | 396.05 | 0.014 | 5.38 | 0.0 | 9.214 | A |
| A-BCD | 266.32 | 681.63 | 0.391 | 265.28 | 0.8 | 8.654 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 127.43 | | | 127.43 | | | |
| D-ABC | 282.28 | 463.03 | 0.610 | 279.95 | 1.5 | 19.406 | C |
| C-ABD | 1.84 | 865.53 | 0.002 | 1.84 | 0.0 | 4.167 | A |
| C-D | 120.23 | | | 120.23 | | | |
| C-A | 372.36 | | | 372.36 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.61 | 364.88 | 0.018 | 6.59 | 0.0 | 10.047 | B |
| A-BCD | 359.36 | 690.38 | 0.521 | 356.98 | 1.4 | 10.806 | B |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 122.89 | | | 122.89 | | | |
| D-ABC | 345.72 | 423.27 | 0.817 | 337.10 | 3.6 | 38.385 | E |
| C-ABD | 2.62 | 910.52 | 0.003 | 2.62 | 0.0 | 3.964 | A |
| C-D | 147.17 | | | 147.17 | | | |
| C-A | 455.77 | | | 455.77 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.61 | 364.38 | 0.018 | 6.61 | 0.0 | 10.061 | B |
| A-BCD | 360.20 | 691.16 | 0.521 | 360.09 | 1.4 | 10.956 | B |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 122.05 | | | 122.05 | | | |
| D-ABC | 345.72 | 422.86 | 0.818 | 344.36 | 4.0 | 44.161 | E |
| C-ABD | 2.63 | 910.00 | 0.003 | 2.63 | 0.0 | 3.968 | A |
| C-D | 147.16 | | | 147.16 | | | |
| C-A | 455.77 | | | 455.77 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.39 | 395.35 | 0.014 | 5.41 | 0.0 | 9.234 | A |
| A-BCD | 267.26 | 682.73 | 0.391 | 269.59 | 0.8 | 8.793 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 126.49 | | | 126.49 | | | |
| D-ABC | 282.28 | 462.48 | 0.610 | 291.59 | 1.7 | 22.077 | C |
| C-ABD | 1.85 | 864.70 | 0.002 | 1.85 | 0.0 | 4.173 | A |
| C-D | 120.23 | | | 120.23 | | | |
| C-A | 372.36 | | | 372.36 | | | |

## Main results: (09:15-09:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 4.52 | 417.30 | 0.011 | 4.53 | 0.0 | 8.721 | A |
| A-BCD | 209.03 | 676.70 | 0.309 | 210.14 | 0.6 | 7.750 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 120.72 | | | 120.72 | | | |
| D-ABC | 236.40 | 490.20 | 0.482 | 239.17 | 1.0 | 14.493 | B |
| C-ABD | 1.38 | 831.73 | 0.002 | 1.38 | 0.0 | 4.336 | A |
| C-D | 100.73 | | | 100.73 | | | |
| C-A | 311.96 | | | 311.96 | | | |

# 2027 Base, PM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

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

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | westernmost | Crossroads | Two-way | 9.32 | A |

## Junction Network Options

*[same as above]*

# Arms

## Arms

*[same as above]*

## Major Arm Geometry

*[same as above]*

## Minor Arm Geometry

*[same as above]*

## Slope / Intercept / Capacity

*[same as above]*

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D4 | 2027 Base | PM | ONE HOUR | 17:00 | 18:30 | 15 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 700.00 | 100.000 |
| B | | ✓ | 7.00 | 100.000 |
| C | | ✓ | 326.00 | 100.000 |
| D | | ✓ | 304.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 510.000 | 190.000 |
| | B | 2.000 | 0.000 | 3.000 | 2.000 |
| | C | 242.000 | 3.000 | 0.000 | 81.000 |
| | D | 214.000 | 5.000 | 85.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.03 | 13.08 | 0.0 | B |
| A-BCD | 0.54 | 8.24 | 1.9 | A |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.74 | 29.55 | 2.6 | D |
| C-ABD | 0.01 | 5.32 | 0.0 | A |
| C-D | | | | |
| C-A | | | | |

# Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.27 | 361.80 | 0.015 | 5.21 | 0.0 | 10.094 | B |
| A-BCD | 259.17 | 853.78 | 0.304 | 256.54 | 0.7 | 6.020 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 267.82 | | | 267.82 | | | |
| D-ABC | 228.87 | 514.56 | 0.445 | 225.74 | 0.8 | 12.336 | B |
| C-ABD | 3.43 | 681.69 | 0.005 | 3.40 | 0.0 | 5.307 | A |
| C-D | 60.69 | | | 60.69 | | | |
| C-A | 181.32 | | | 181.32 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.29 | 329.84 | 0.019 | 6.27 | 0.0 | 11.126 | B |
| A-BCD | 350.07 | 894.65 | 0.391 | 348.69 | 1.0 | 6.613 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 279.22 | | | 279.22 | | | |
| D-ABC | 273.29 | 490.50 | 0.557 | 271.57 | 1.2 | 16.310 | C |
| C-ABD | 4.50 | 688.39 | 0.007 | 4.49 | 0.0 | 5.263 | A |
| C-D | 72.37 | | | 72.37 | | | |
| C-A | 216.20 | | | 216.20 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 7.71 | 284.20 | 0.027 | 7.67 | 0.0 | 13.017 | B |
| A-BCD | 510.81 | 953.32 | 0.536 | 507.38 | 1.9 | 8.114 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 259.90 | | | 259.90 | | | |
| D-ABC | 334.71 | 455.25 | 0.735 | 329.55 | 2.5 | 27.542 | D |
| C-ABD | 6.32 | 699.66 | 0.009 | 6.30 | 0.0 | 5.191 | A |
| C-D | 88.43 | | | 88.43 | | | |
| C-A | 264.19 | | | 264.19 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 7.71 | 282.85 | 0.027 | 7.71 | 0.0 | 13.083 | B |
| A-BCD | 512.91 | 954.90 | 0.537 | 512.76 | 1.9 | 8.245 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 257.80 | | | 257.80 | | | |
| D-ABC | 334.71 | 454.72 | 0.736 | 334.19 | 2.6 | 29.546 | D |
| C-ABD | 6.33 | 698.85 | 0.009 | 6.33 | 0.0 | 5.197 | A |
| C-D | 88.42 | | | 88.42 | | | |
| C-A | 264.18 | | | 264.18 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.29 | 328.06 | 0.019 | 6.32 | 0.0 | 11.189 | B |
| A-BCD | 352.19 | 896.86 | 0.393 | 355.58 | 1.1 | 6.729 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 277.10 | | | 277.10 | | | |
| D-ABC | 273.29 | 489.81 | 0.558 | 278.57 | 1.3 | 17.437 | C |
| C-ABD | 4.51 | 687.17 | 0.007 | 4.52 | 0.0 | 5.275 | A |
| C-D | 72.36 | | | 72.36 | | | |
| C-A | 216.19 | | | 216.19 | | | |

## Main results: (18:15-18:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.27 | 360.47 | 0.015 | 5.29 | 0.0 | 10.137 | B |
| A-BCD | 261.00 | 855.21 | 0.305 | 262.48 | 0.7 | 6.107 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 266.00 | | | 266.00 | | | |
| D-ABC | 228.87 | 513.94 | 0.445 | 230.83 | 0.8 | 12.804 | B |
| C-ABD | 3.44 | 680.57 | 0.005 | 3.44 | 0.0 | 5.318 | A |
| C-D | 60.69 | | | 60.69 | | | |
| C-A | 181.31 | | | 181.31 | | | |

# 2027 Assessment, AM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

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

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | westernmost | Crossroads | Two-way | 23.51 | C |

## Junction Network Options

*[same as above]*

# Arms

## Arms

*[same as above]*

## Major Arm Geometry

*[same as above]*

## Minor Arm Geometry

*[same as above]*

## Slope / Intercept / Capacity

*[same as above]*

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D5 | 2027 Assessment | AM | ONE HOUR | 08:00 | 09:30 | 15 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 445.00 | 100.000 |
| B | | ✓ | 6.00 | 100.000 |
| C | | ✓ | 555.00 | 100.000 |
| D | | ✓ | 351.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 233.000 | 212.000 |
| | B | 0.000 | 0.000 | 3.000 | 3.000 |
| | C | 415.000 | 1.000 | 0.000 | 139.000 |
| | D | 242.000 | 0.000 | 109.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.02 | 10.12 | 0.0 | B |
| A-BCD | 0.54 | 11.45 | 1.5 | B |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.93 | 80.44 | 8.0 | F |
| C-ABD | 0.00 | 4.33 | 0.0 | A |
| C-D | | | | |
| C-A | | | | |

# Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 4.52 | 416.67 | 0.011 | 4.47 | 0.0 | 8.732 | A |
| A-BCD | 215.39 | 675.11 | 0.319 | 213.09 | 0.6 | 7.769 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 119.63 | | | 119.63 | | | |
| D-ABC | 264.25 | 486.55 | 0.543 | 259.67 | 1.1 | 15.575 | C |
| C-ABD | 1.39 | 833.41 | 0.002 | 1.38 | 0.0 | 4.326 | A |
| C-D | 104.49 | | | 104.49 | | | |
| C-A | 311.96 | | | 311.96 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.39 | 394.45 | 0.014 | 5.38 | 0.0 | 9.252 | A |
| A-BCD | 275.61 | 680.63 | 0.405 | 274.50 | 0.9 | 8.870 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 124.43 | | | 124.43 | | | |
| D-ABC | 315.54 | 458.21 | 0.689 | 311.93 | 2.0 | 24.008 | C |
| C-ABD | 1.86 | 866.47 | 0.002 | 1.85 | 0.0 | 4.163 | A |
| C-D | 124.72 | | | 124.72 | | | |
| C-A | 372.36 | | | 372.36 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.61 | 362.77 | 0.018 | 6.59 | 0.0 | 10.107 | B |
| A-BCD | 372.05 | 689.21 | 0.540 | 369.44 | 1.5 | 11.265 | B |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 117.90 | | | 117.90 | | | |
| D-ABC | 386.46 | 417.50 | 0.926 | 368.47 | 6.5 | 58.806 | F |
| C-ABD | 2.65 | 911.67 | 0.003 | 2.64 | 0.0 | 3.960 | A |
| C-D | 152.65 | | | 152.65 | | | |
| C-A | 455.76 | | | 455.76 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.61 | 362.22 | 0.018 | 6.61 | 0.0 | 10.122 | B |
| A-BCD | 372.98 | 690.06 | 0.541 | 372.86 | 1.5 | 11.445 | B |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 116.97 | | | 116.97 | | | |
| D-ABC | 386.46 | 417.03 | 0.927 | 380.51 | 8.0 | 80.438 | F |
| C-ABD | 2.65 | 911.11 | 0.003 | 2.65 | 0.0 | 3.962 | A |
| C-D | 152.65 | | | 152.65 | | | |
| C-A | 455.76 | | | 455.76 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.39 | 393.68 | 0.014 | 5.41 | 0.0 | 9.273 | A |
| A-BCD | 276.64 | 681.83 | 0.406 | 279.21 | 0.9 | 9.033 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 123.40 | | | 123.40 | | | |
| D-ABC | 315.54 | 457.58 | 0.690 | 337.97 | 2.4 | 34.375 | D |
| C-ABD | 1.86 | 865.57 | 0.002 | 1.86 | 0.0 | 4.169 | A |
| C-D | 124.72 | | | 124.72 | | | |
| C-A | 372.36 | | | 372.36 | | | |

## Main results: (09:15-09:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 4.52 | 416.00 | 0.011 | 4.53 | 0.0 | 8.750 | A |
| A-BCD | 216.29 | 675.88 | 0.320 | 217.49 | 0.6 | 7.889 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 118.73 | | | 118.73 | | | |
| D-ABC | 264.25 | 485.96 | 0.544 | 269.01 | 1.2 | 16.935 | C |
| C-ABD | 1.39 | 832.48 | 0.002 | 1.39 | 0.0 | 4.333 | A |
| C-D | 104.49 | | | 104.49 | | | |
| C-A | 311.96 | | | 311.96 | | | |

# 2027 Assessment, PM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

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

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | westernmost | Crossroads | Two-way | 12.12 | B |

## Junction Network Options

*[same as above]*

# Arms

## Arms

*[same as above]*

## Major Arm Geometry

*[same as above]*

## Minor Arm Geometry

*[same as above]*

## Slope / Intercept / Capacity

*[same as above]*

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D6 | 2027 Assessment | PM | ONE HOUR | 17:00 | 18:30 | 15 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 719.00 | 100.000 |
| B | | ✓ | 7.00 | 100.000 |
| C | | ✓ | 341.00 | 100.000 |
| D | | ✓ | 322.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 510.000 | 209.000 |
| | B | 2.000 | 0.000 | 3.000 | 2.000 |
| | C | 242.000 | 3.000 | 0.000 | 96.000 |
| | D | 224.000 | 5.000 | 93.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.03 | 13.47 | 0.0 | B |
| A-BCD | 0.60 | 9.50 | 2.4 | A |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.80 | 38.60 | 3.6 | E |
| C-ABD | 0.01 | 5.29 | 0.0 | A |
| C-D | | | | |
| C-A | | | | |

# Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.27 | 357.59 | 0.015 | 5.21 | 0.0 | 10.215 | B |
| A-BCD | 285.71 | 851.50 | 0.336 | 282.70 | 0.8 | 6.319 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 255.59 | | | 255.59 | | | |
| D-ABC | 242.42 | 508.05 | 0.477 | 238.87 | 0.9 | 13.210 | B |
| C-ABD | 3.50 | 684.90 | 0.005 | 3.48 | 0.0 | 5.282 | A |
| C-D | 71.92 | | | 71.92 | | | |
| C-A | 181.30 | | | 181.30 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.29 | 324.42 | 0.019 | 6.27 | 0.0 | 11.315 | B |
| A-BCD | 386.34 | 892.19 | 0.433 | 384.65 | 1.2 | 7.115 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 260.03 | | | 260.03 | | | |
| D-ABC | 289.47 | 482.54 | 0.600 | 287.30 | 1.4 | 18.226 | C |
| C-ABD | 4.62 | 692.32 | 0.007 | 4.61 | 0.0 | 5.234 | A |
| C-D | 85.76 | | | 85.76 | | | |
| C-A | 216.18 | | | 216.18 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 7.71 | 276.84 | 0.028 | 7.67 | 0.0 | 13.372 | B |
| A-BCD | 564.66 | 950.66 | 0.594 | 560.12 | 2.3 | 9.273 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 226.97 | | | 226.97 | | | |
| D-ABC | 354.53 | 445.03 | 0.797 | 346.97 | 3.3 | 34.297 | D |
| C-ABD | 6.53 | 704.71 | 0.009 | 6.51 | 0.0 | 5.155 | A |
| C-D | 104.78 | | | 104.78 | | | |
| C-A | 264.14 | | | 264.14 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 7.71 | 274.94 | 0.028 | 7.71 | 0.0 | 13.470 | B |
| A-BCD | 567.57 | 952.73 | 0.596 | 567.33 | 2.4 | 9.504 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 224.06 | | | 224.06 | | | |
| D-ABC | 354.53 | 444.29 | 0.798 | 353.47 | 3.6 | 38.596 | E |
| C-ABD | 6.54 | 703.66 | 0.009 | 6.54 | 0.0 | 5.163 | A |
| C-D | 104.78 | | | 104.78 | | | |
| C-A | 264.13 | | | 264.13 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 6.29 | 321.96 | 0.020 | 6.33 | 0.0 | 11.408 | B |
| A-BCD | 389.20 | 895.04 | 0.435 | 393.71 | 1.2 | 7.298 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 257.17 | | | 257.17 | | | |
| D-ABC | 289.47 | 481.61 | 0.601 | 297.49 | 1.6 | 20.318 | C |
| C-ABD | 4.63 | 690.75 | 0.007 | 4.64 | 0.0 | 5.246 | A |
| C-D | 85.75 | | | 85.75 | | | |
| C-A | 216.17 | | | 216.17 | | | |

## Main results: (18:15-18:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 5.27 | 356.01 | 0.015 | 5.29 | 0.0 | 10.266 | B |
| A-BCD | 287.89 | 853.20 | 0.337 | 289.71 | 0.8 | 6.435 | A |
| A-B | 0.00 | | | 0.00 | | | |
| A-C | 253.41 | | | 253.41 | | | |
| D-ABC | 242.42 | 507.30 | 0.478 | 244.98 | 0.9 | 13.853 | B |
| C-ABD | 3.51 | 683.58 | 0.005 | 3.52 | 0.0 | 5.295 | A |
| C-D | 71.92 | | | 71.92 | | | |
| C-A | 181.29 | | | 181.29 | | | |

# Appendix H – A550 Easternmost Junction Assessment Results

# Junctions 9

## PICADY 9 - Priority Intersection Module

Version: 9.0.0.4211 []


For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk



**Filename:** 3. easternmost.j9
**Path:** \\sweco.se\GB\LDS01\Legacy\MNC\Manchester Central\Mancot Flintshire\Models
**Report generation date:** 15/08/2018 13:02:54

## Summary of junction performance

| | AM | | | | PM | | | |
|---|---|---|---|---|---|---|---|---|
| | Queue (PCU) | Delay (s) | RFC | LOS | Queue (PCU) | Delay (s) | RFC | LOS |
| | 2018 - Background | | | | | | | |
| Stream B-ACD | 2.1 | 25.85 | 0.69 | D | 1.2 | 20.39 | 0.54 | C |
| Stream A-BCD | 0.0 | 5.42 | 0.02 | A | 0.0 | 4.16 | 0.01 | A |
| Stream A-B | | | | | | | | |
| Stream A-C | | | | | | | | |
| Stream D-ABC | 0.1 | 14.68 | 0.05 | B | 0.0 | 12.05 | 0.04 | B |
| Stream C-ABD | 0.6 | 5.07 | 0.25 | A | 1.2 | 10.09 | 0.47 | B |
| Stream C-D | | | | | | | | |
| Stream C-A | | | | | | | | |
| | 2027 - Base | | | | | | | |
| Stream B-ACD | 3.0 | 34.40 | 0.76 | D | 1.5 | 25.24 | 0.61 | D |
| Stream A-BCD | 0.0 | 5.40 | 0.02 | A | 0.0 | 4.08 | 0.01 | A |
| Stream A-B | | | | | | | | |
| Stream A-C | | | | | | | | |
| Stream D-ABC | 0.1 | 15.96 | 0.06 | C | 0.0 | 12.81 | 0.04 | B |
| Stream C-ABD | 0.7 | 5.16 | 0.28 | A | 1.6 | 11.36 | 0.53 | B |
| Stream C-D | | | | | | | | |
| Stream C-A | | | | | | | | |
| | 2027 - Assessment | | | | | | | |
| Stream B-ACD | 3.4 | 38.18 | 0.79 | E | 1.9 | 28.43 | 0.66 | D |
| Stream A-BCD | 0.0 | 5.44 | 0.02 | A | 0.0 | 4.09 | 0.01 | A |
| Stream A-B | | | | | | | | |
| Stream A-C | | | | | | | | |
| Stream D-ABC | 0.1 | 16.50 | 0.06 | C | 0.0 | 13.11 | 0.05 | B |
| Stream C-ABD | 0.9 | 5.65 | 0.34 | A | 1.7 | 12.10 | 0.56 | B |
| Stream C-D | | | | | | | | |
| Stream C-A | | | | | | | | |

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

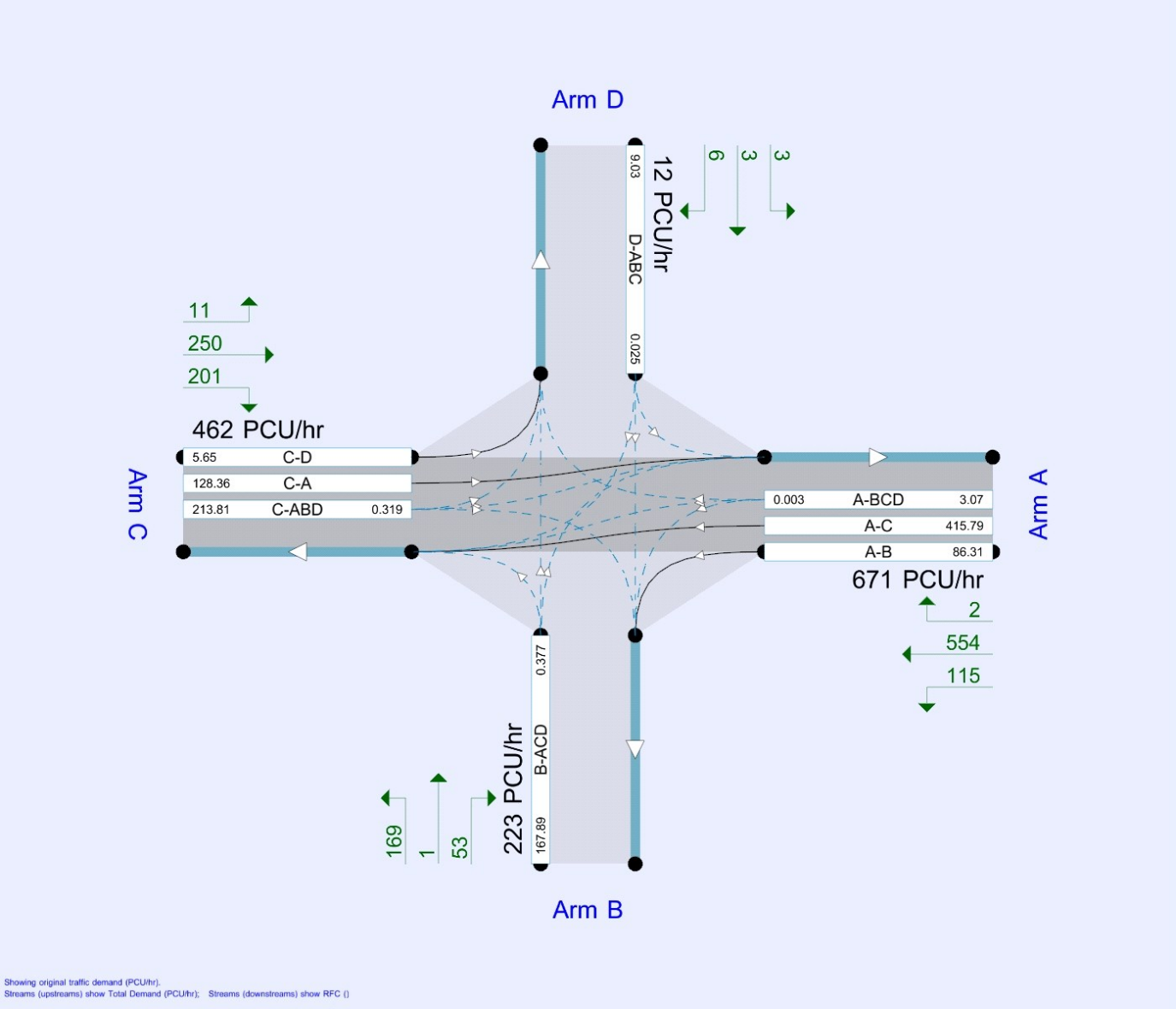
## File summary

### File Description

| | |
|---|---|
| Title | HW005 |
| Location | Hawarden |
| Site number | |
| Date | 26/07/2018 |
| Version | |
| Status | (new file) |
| Identifier | |
| Client | |
| Jobnumber | |
| Enumerator | SWECO"GBIABN |
| Description | |

## Units

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




*The junction diagram reflects the last run of Junctions.*

## Analysis Options

| Calculate Queue Percentiles | Calculate residual capacity | RFC Threshold | Average Delay threshold (s) | Queue threshold (PCU) |
|---|---|---|---|---|
| | | 0.85 | 36.00 | 20.00 |

## Demand Set Summary

| Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|
| 2018 - Background | AM | ONE HOUR | 08:00 | 09:30 | 15 |
| 2018 - Background | PM | ONE HOUR | 17:00 | 18:30 | 15 |
| 2027 - Base | AM | ONE HOUR | 08:00 | 09:30 | 15 |
| 2027 - Base | PM | ONE HOUR | 17:00 | 18:30 | 15 |
| 2027 - Assessment | AM | ONE HOUR | 08:00 | 09:30 | 15 |
| 2027 - Assessment | PM | ONE HOUR | 17:00 | 18:30 | 15 |

# 2018 - Background, AM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

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

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | Easternmost | Crossroads | Two-way | 7.39 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description | Arm type |
|---|---|---|---|
| A | Glynne Way | | Major |
| B | A550 | | Minor |
| C | The Highway | | Major |
| D | Rectory Lane | | Minor |

## Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Has right turn bay | Visibility for right turn (m) | Blocks? | Blocking queue (PCU) |
|---|---|---|---|---|---|---|
| A | 6.00 | | | 150.0 | ✓ | 0.00 |
| C | 6.00 | | | 150.0 | ✓ | 0.00 |

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

## Minor Arm Geometry

| Arm | Minor arm type | Lane width (m) | Visibility to left (m) | Visibility to right (m) |
|---|---|---|---|---|
| B | One lane | 3.00 | 10 | 10 |
| D | One lane | 3.00 | 19 | 12 |

## 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 | 660.830 | - | - | - | - | - | - | 0.256 | 0.366 | 0.256 | - | - | - |
| 1 | B-A | 485.856 | 0.088 | 0.224 | 0.224 | - | - | - | 0.141 | 0.320 | - | 0.224 | 0.224 | 0.112 |
| 1 | B-C | 630.232 | 0.097 | 0.244 | - | - | - | - | - | - | - | - | - | - |
| 1 | B-D, nearside lane | 485.856 | 0.088 | 0.224 | 0.224 | - | - | - | 0.141 | 0.320 | 0.141 | - | - | - |
| 1 | B-D, offside lane | 485.856 | 0.088 | 0.224 | 0.224 | - | - | - | 0.141 | 0.320 | 0.141 | - | - | - |
| 1 | C-B | 660.830 | 0.256 | 0.256 | 0.366 | - | - | - | - | - | - | - | - | - |
| 1 | D-A | 631.491 | - | - | - | - | - | - | 0.245 | - | 0.097 | - | - | - |
| 1 | D-B, nearside lane | 489.696 | 0.142 | 0.142 | 0.322 | - | - | - | 0.225 | 0.225 | 0.089 | - | - | - |
| 1 | D-B, offside lane | 489.696 | 0.142 | 0.142 | 0.322 | - | - | - | 0.225 | 0.225 | 0.089 | - | - | - |
| 1 | D-C | 489.696 | - | 0.142 | 0.322 | 0.113 | 0.225 | 0.225 | 0.225 | 0.225 | 0.089 | - | - | - |

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

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

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

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D1 | 2018 - Background | AM | ONE HOUR | 08:00 | 09:30 | 15 |

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

## Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 261.00 | 100.000 |
| B | | ✓ | 279.00 | 100.000 |
| C | | ✓ | 588.00 | 100.000 |
| D | | ✓ | 12.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 38.000 | 216.000 | 7.000 |
| | B | 95.000 | 0.000 | 181.000 | 3.000 |
| | C | 475.000 | 94.000 | 0.000 | 19.000 |
| | D | 0.000 | 2.000 | 10.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.69 | 25.85 | 2.1 | D |
| A-BCD | 0.02 | 5.42 | 0.0 | A |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.05 | 14.68 | 0.1 | B |
| C-ABD | 0.25 | 5.07 | 0.6 | A |
| C-D | | | | |
| C-A | | | | |

## Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 210.05 | 488.06 | 0.430 | 207.10 | 0.7 | 12.687 | B |
| A-BCD | 7.26 | 672.26 | 0.011 | 7.21 | 0.0 | 5.413 | A |
| A-B | 28.31 | | | 28.31 | | | |
| A-C | 160.92 | | | 160.92 | | | |
| D-ABC | 9.03 | 333.18 | 0.027 | 8.92 | 0.0 | 11.098 | B |
| C-ABD | 123.80 | 854.10 | 0.145 | 122.67 | 0.3 | 4.921 | A |
| C-D | 12.26 | | | 12.26 | | | |
| C-A | 306.61 | | | 306.61 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 250.82 | 470.49 | 0.533 | 249.36 | 1.1 | 16.166 | C |
| A-BCD | 9.32 | 676.47 | 0.014 | 9.30 | 0.0 | 5.395 | A |
| A-B | 33.71 | | | 33.71 | | | |
| A-C | 191.61 | | | 191.61 | | | |
| D-ABC | 10.79 | 301.90 | 0.036 | 10.75 | 0.0 | 12.363 | B |
| C-ABD | 165.02 | 893.05 | 0.185 | 164.58 | 0.4 | 4.947 | A |
| C-D | 13.98 | | | 13.98 | | | |
| C-A | 349.59 | | | 349.59 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 307.18 | 445.42 | 0.690 | 303.39 | 2.1 | 24.683 | C |
| A-BCD | 12.62 | 683.63 | 0.018 | 12.60 | 0.0 | 5.364 | A |
| A-B | 41.10 | | | 41.10 | | | |
| A-C | 233.64 | | | 233.64 | | | |
| D-ABC | 13.21 | 259.17 | 0.051 | 13.15 | 0.1 | 14.630 | B |
| C-ABD | 239.64 | 951.47 | 0.252 | 238.76 | 0.6 | 5.062 | A |
| C-D | 15.68 | | | 15.68 | | | |
| C-A | 392.08 | | | 392.08 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 307.18 | 445.30 | 0.690 | 306.87 | 2.1 | 25.848 | D |
| A-BCD | 12.63 | 683.43 | 0.018 | 12.63 | 0.0 | 5.366 | A |
| A-B | 41.10 | | | 41.10 | | | |
| A-C | 233.63 | | | 233.63 | | | |
| D-ABC | 13.21 | 258.34 | 0.051 | 13.21 | 0.1 | 14.685 | B |
| C-ABD | 240.03 | 951.87 | 0.252 | 240.01 | 0.6 | 5.072 | A |
| C-D | 15.67 | | | 15.67 | | | |
| C-A | 391.70 | | | 391.70 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 250.82 | 470.31 | 0.533 | 254.60 | 1.2 | 16.965 | C |
| A-BCD | 9.33 | 676.14 | 0.014 | 9.35 | 0.0 | 5.398 | A |
| A-B | 33.71 | | | 33.71 | | | |
| A-C | 191.60 | | | 191.60 | | | |
| D-ABC | 10.79 | 300.68 | 0.036 | 10.85 | 0.0 | 12.423 | B |
| C-ABD | 165.47 | 893.63 | 0.185 | 166.32 | 0.4 | 4.966 | A |
| C-D | 13.97 | | | 13.97 | | | |
| C-A | 349.17 | | | 349.17 | | | |

## Main results: (09:15-09:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 210.05 | 487.81 | 0.431 | 211.69 | 0.8 | 13.116 | B |
| A-BCD | 7.28 | 671.82 | 0.011 | 7.29 | 0.0 | 5.419 | A |
| A-B | 28.31 | | | 28.31 | | | |
| A-C | 160.91 | | | 160.91 | | | |
| D-ABC | 9.03 | 332.04 | 0.027 | 9.07 | 0.0 | 11.147 | B |
| C-ABD | 124.45 | 854.60 | 0.146 | 124.91 | 0.3 | 4.944 | A |
| C-D | 12.24 | | | 12.24 | | | |
| C-A | 305.99 | | | 305.99 | | | |

# 2018 - Background, PM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

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

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | Easternmost | Crossroads | Two-way | 5.41 | A |

## Junction Network Options

*[same as above]*

# Arms

## Arms

*[same as above]*

## Major Arm Geometry

*[same as above]*

## Minor Arm Geometry

*[same as above]*

## Slope / Intercept / Capacity

*[same as above]*

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D2 | 2018 - Background | PM | ONE HOUR | 17:00 | 18:30 | 15 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 623.00 | 100.000 |
| B | | ✓ | 189.00 | 100.000 |
| C | | ✓ | 419.00 | 100.000 |
| D | | ✓ | 12.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 107.000 | 514.000 | 2.000 |
| | B | 49.000 | 0.000 | 139.000 | 1.000 |
| | C | 232.000 | 177.000 | 0.000 | 10.000 |
| | D | 3.000 | 3.000 | 6.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.54 | 20.39 | 1.2 | C |
| A-BCD | 0.01 | 4.16 | 0.0 | A |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.04 | 12.05 | 0.0 | B |
| C-ABD | 0.47 | 10.09 | 1.2 | B |
| C-D | | | | |
| C-A | | | | |

# Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 142.29 | 452.16 | 0.315 | 140.49 | 0.5 | 11.487 | B |
| A-BCD | 2.92 | 869.80 | 0.003 | 2.90 | 0.0 | 4.152 | A |
| A-B | 80.31 | | | 80.31 | | | |
| A-C | 385.80 | | | 385.80 | | | |
| D-ABC | 9.03 | 381.62 | 0.024 | 8.94 | 0.0 | 9.658 | A |
| C-ABD | 183.00 | 667.93 | 0.274 | 181.09 | 0.5 | 7.379 | A |
| C-D | 5.47 | | | 5.47 | | | |
| C-A | 126.97 | | | 126.97 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 169.91 | 424.39 | 0.400 | 169.10 | 0.7 | 14.057 | B |
| A-BCD | 3.93 | 908.53 | 0.004 | 3.92 | 0.0 | 3.979 | A |
| A-B | 95.82 | | | 95.82 | | | |
| A-C | 460.31 | | | 460.31 | | | |
| D-ABC | 10.79 | 352.86 | 0.031 | 10.76 | 0.0 | 10.523 | B |
| C-ABD | 235.43 | 672.40 | 0.350 | 234.54 | 0.7 | 8.230 | A |
| C-D | 5.84 | | | 5.84 | | | |
| C-A | 135.40 | | | 135.40 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 208.09 | 384.57 | 0.541 | 206.19 | 1.1 | 19.964 | C |
| A-BCD | 5.62 | 960.45 | 0.006 | 5.61 | 0.0 | 3.769 | A |
| A-B | 117.22 | | | 117.22 | | | |
| A-C | 563.10 | | | 563.10 | | | |
| D-ABC | 13.21 | 312.70 | 0.042 | 13.16 | 0.0 | 12.017 | B |
| C-ABD | 320.54 | 679.73 | 0.472 | 318.54 | 1.2 | 9.982 | A |
| C-D | 5.82 | | | 5.82 | | | |
| C-A | 134.97 | | | 134.97 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 208.09 | 384.27 | 0.542 | 207.99 | 1.2 | 20.390 | C |
| A-BCD | 5.63 | 960.05 | 0.006 | 5.63 | 0.0 | 3.773 | A |
| A-B | 117.22 | | | 117.22 | | | |
| A-C | 563.09 | | | 563.09 | | | |
| D-ABC | 13.21 | 311.98 | 0.042 | 13.21 | 0.0 | 12.048 | B |
| C-ABD | 321.26 | 680.44 | 0.472 | 321.18 | 1.2 | 10.087 | B |
| C-D | 5.79 | | | 5.79 | | | |
| C-A | 134.28 | | | 134.28 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 169.91 | 423.99 | 0.401 | 171.78 | 0.7 | 14.375 | B |
| A-BCD | 3.93 | 907.87 | 0.004 | 3.94 | 0.0 | 3.982 | A |
| A-B | 95.82 | | | 95.82 | | | |
| A-C | 460.31 | | | 460.31 | | | |
| D-ABC | 10.79 | 351.83 | 0.031 | 10.84 | 0.0 | 10.560 | B |
| C-ABD | 236.24 | 673.38 | 0.351 | 238.19 | 0.7 | 8.337 | A |
| C-D | 5.80 | | | 5.80 | | | |
| C-A | 134.63 | | | 134.63 | | | |

## Main results: (18:15-18:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 142.29 | 451.75 | 0.315 | 143.16 | 0.5 | 11.700 | B |
| A-BCD | 2.93 | 869.08 | 0.003 | 2.93 | 0.0 | 4.156 | A |
| A-B | 80.31 | | | 80.31 | | | |
| A-C | 385.79 | | | 385.79 | | | |
| D-ABC | 9.03 | 380.63 | 0.024 | 9.06 | 0.0 | 9.689 | A |
| C-ABD | 183.76 | 668.59 | 0.275 | 184.71 | 0.5 | 7.469 | A |
| C-D | 5.44 | | | 5.44 | | | |
| C-A | 126.24 | | | 126.24 | | | |

# 2027 - Base, AM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

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

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | Easternmost | Crossroads | Two-way | 9.56 | A |

## Junction Network Options

*[same as above]*

# Arms

## Arms

*[same as above]*

## Major Arm Geometry

*[same as above]*

## Minor Arm Geometry

*[same as above]*

## Slope / Intercept / Capacity

*[same as above]*

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D3 | 2027 - Base | AM | ONE HOUR | 08:00 | 09:30 | 15 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 283.00 | 100.000 |
| B | | ✓ | 302.00 | 100.000 |
| C | | ✓ | 635.00 | 100.000 |
| D | | ✓ | 12.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 41.000 | 235.000 | 7.000 |
| | B | 102.000 | 0.000 | 197.000 | 3.000 |
| | C | 514.000 | 101.000 | 0.000 | 20.000 |
| | D | 0.000 | 2.000 | 10.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.76 | 34.40 | 3.0 | D |
| A-BCD | 0.02 | 5.40 | 0.0 | A |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.06 | 15.96 | 0.1 | C |
| C-ABD | 0.28 | 5.16 | 0.7 | A |
| C-D | | | | |
| C-A | | | | |

# Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 227.36 | 481.64 | 0.472 | 223.89 | 0.9 | 13.791 | B |
| A-BCD | 7.48 | 674.95 | 0.011 | 7.44 | 0.0 | 5.393 | A |
| A-B | 30.54 | | | 30.54 | | | |
| A-C | 175.03 | | | 175.03 | | | |
| D-ABC | 9.03 | 320.37 | 0.028 | 8.92 | 0.0 | 11.555 | B |
| C-ABD | 139.08 | 870.13 | 0.160 | 137.79 | 0.3 | 4.914 | A |
| C-D | 12.70 | | | 12.70 | | | |
| C-A | 326.29 | | | 326.29 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 271.49 | 462.42 | 0.587 | 269.53 | 1.4 | 18.466 | C |
| A-BCD | 9.67 | 679.98 | 0.014 | 9.66 | 0.0 | 5.370 | A |
| A-B | 36.36 | | | 36.36 | | | |
| A-C | 208.38 | | | 208.38 | | | |
| D-ABC | 10.79 | 286.42 | 0.038 | 10.75 | 0.0 | 13.057 | B |
| C-ABD | 190.29 | 915.55 | 0.208 | 189.73 | 0.5 | 4.966 | A |
| C-D | 14.25 | | | 14.25 | | | |
| C-A | 366.30 | | | 366.30 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 332.51 | 434.85 | 0.765 | 326.55 | 2.8 | 31.582 | D |
| A-BCD | 13.25 | 688.41 | 0.019 | 13.22 | 0.0 | 5.331 | A |
| A-B | 44.32 | | | 44.32 | | | |
| A-C | 254.02 | | | 254.02 | | | |
| D-ABC | 13.21 | 240.03 | 0.055 | 13.14 | 0.1 | 15.862 | C |
| C-ABD | 275.93 | 976.19 | 0.283 | 274.86 | 0.7 | 5.146 | A |
| C-D | 15.85 | | | 15.85 | | | |
| C-A | 407.36 | | | 407.36 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 332.51 | 434.69 | 0.765 | 331.81 | 3.0 | 34.404 | D |
| A-BCD | 13.26 | 688.16 | 0.019 | 13.26 | 0.0 | 5.333 | A |
| A-B | 44.32 | | | 44.32 | | | |
| A-C | 254.01 | | | 254.01 | | | |
| D-ABC | 13.21 | 238.79 | 0.055 | 13.21 | 0.1 | 15.958 | C |
| C-ABD | 276.46 | 976.69 | 0.283 | 276.43 | 0.7 | 5.162 | A |
| C-D | 15.83 | | | 15.83 | | | |
| C-A | 406.86 | | | 406.86 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 271.49 | 462.19 | 0.587 | 277.62 | 1.5 | 20.093 | C |
| A-BCD | 9.69 | 679.58 | 0.014 | 9.71 | 0.0 | 5.373 | A |
| A-B | 36.35 | | | 36.35 | | | |
| A-C | 208.37 | | | 208.37 | | | |
| D-ABC | 10.79 | 284.63 | 0.038 | 10.86 | 0.0 | 13.155 | B |
| C-ABD | 190.90 | 916.32 | 0.208 | 191.95 | 0.5 | 4.990 | A |
| C-D | 14.23 | | | 14.23 | | | |
| C-A | 365.72 | | | 365.72 | | | |

## Main results: (09:15-09:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 227.36 | 481.36 | 0.472 | 229.64 | 0.9 | 14.430 | B |
| A-BCD | 7.51 | 674.44 | 0.011 | 7.52 | 0.0 | 5.397 | A |
| A-B | 30.53 | | | 30.53 | | | |
| A-C | 175.02 | | | 175.02 | | | |
| D-ABC | 9.03 | 318.96 | 0.028 | 9.08 | 0.0 | 11.618 | B |
| C-ABD | 139.87 | 870.76 | 0.161 | 140.46 | 0.3 | 4.942 | A |
| C-D | 12.67 | | | 12.67 | | | |
| C-A | 325.52 | | | 325.52 | | | |

# 2027 - Base, PM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

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

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | Easternmost | Crossroads | Two-way | 6.54 | A |

## Junction Network Options

*[same as above]*

# Arms

## Arms

*[same as above]*

## Major Arm Geometry

*[same as above]*

## Minor Arm Geometry

*[same as above]*

## Slope / Intercept / Capacity

*[same as above]*

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D4 | 2027 - Base | PM | ONE HOUR | 17:00 | 18:30 | 15 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 671.00 | 100.000 |
| B | | ✓ | 204.00 | 100.000 |
| C | | ✓ | 452.00 | 100.000 |
| D | | ✓ | 12.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 115.000 | 554.000 | 2.000 |
| | B | 53.000 | 0.000 | 150.000 | 1.000 |
| | C | 250.000 | 191.000 | 0.000 | 11.000 |
| | D | 3.000 | 3.000 | 6.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.61 | 25.24 | 1.5 | D |
| A-BCD | 0.01 | 4.08 | 0.0 | A |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.04 | 12.81 | 0.0 | B |
| C-ABD | 0.53 | 11.36 | 1.6 | B |
| C-D | | | | |
| C-A | | | | |

# Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 153.58 | 441.28 | 0.348 | 151.49 | 0.5 | 12.338 | B |
| A-BCD | 3.06 | 885.43 | 0.003 | 3.04 | 0.0 | 4.079 | A |
| A-B | 86.31 | | | 86.31 | | | |
| A-C | 415.79 | | | 415.79 | | | |
| D-ABC | 9.03 | 370.40 | 0.024 | 8.94 | 0.0 | 9.957 | A |
| C-ABD | 203.18 | 669.66 | 0.303 | 200.95 | 0.6 | 7.661 | A |
| C-D | 5.78 | | | 5.78 | | | |
| C-A | 131.33 | | | 131.33 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 183.39 | 410.90 | 0.446 | 182.35 | 0.8 | 15.676 | C |
| A-BCD | 4.15 | 926.56 | 0.004 | 4.14 | 0.0 | 3.902 | A |
| A-B | 102.98 | | | 102.98 | | | |
| A-C | 496.09 | | | 496.09 | | | |
| D-ABC | 10.79 | 339.06 | 0.032 | 10.76 | 0.0 | 10.965 | B |
| C-ABD | 263.39 | 674.97 | 0.390 | 262.25 | 0.8 | 8.740 | A |
| C-D | 6.02 | | | 6.02 | | | |
| C-A | 136.93 | | | 136.93 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 224.61 | 366.97 | 0.612 | 221.82 | 1.5 | 24.333 | C |
| A-BCD | 5.99 | 981.34 | 0.006 | 5.99 | 0.0 | 3.690 | A |
| A-B | 125.97 | | | 125.97 | | | |
| A-C | 606.83 | | | 606.83 | | | |
| D-ABC | 13.21 | 295.19 | 0.045 | 13.16 | 0.0 | 12.760 | B |
| C-ABD | 364.25 | 684.28 | 0.532 | 361.44 | 1.5 | 11.171 | B |
| C-D | 5.62 | | | 5.62 | | | |
| C-A | 127.79 | | | 127.79 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 224.61 | 366.53 | 0.613 | 224.41 | 1.5 | 25.238 | D |
| A-BCD | 6.00 | 980.79 | 0.006 | 6.00 | 0.0 | 3.695 | A |
| A-B | 125.96 | | | 125.96 | | | |
| A-C | 606.82 | | | 606.82 | | | |
| D-ABC | 13.21 | 294.14 | 0.045 | 13.21 | 0.0 | 12.813 | B |
| C-ABD | 365.38 | 685.33 | 0.533 | 365.25 | 1.6 | 11.361 | B |
| C-D | 5.58 | | | 5.58 | | | |
| C-A | 126.71 | | | 126.71 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 183.39 | 410.34 | 0.447 | 186.17 | 0.8 | 16.249 | C |
| A-BCD | 4.16 | 925.68 | 0.004 | 4.16 | 0.0 | 3.906 | A |
| A-B | 102.98 | | | 102.98 | | | |
| A-C | 496.08 | | | 496.08 | | | |
| D-ABC | 10.79 | 337.61 | 0.032 | 10.84 | 0.0 | 11.018 | B |
| C-ABD | 264.58 | 676.41 | 0.391 | 267.34 | 0.9 | 8.897 | A |
| C-D | 5.97 | | | 5.97 | | | |
| C-A | 135.79 | | | 135.79 | | | |

## Main results: (18:15-18:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 153.58 | 440.78 | 0.348 | 154.73 | 0.5 | 12.636 | B |
| A-BCD | 3.07 | 884.59 | 0.003 | 3.07 | 0.0 | 4.083 | A |
| A-B | 86.31 | | | 86.31 | | | |
| A-C | 415.78 | | | 415.78 | | | |
| D-ABC | 9.03 | 369.19 | 0.024 | 9.07 | 0.0 | 9.996 | A |
| C-ABD | 204.17 | 670.52 | 0.304 | 205.39 | 0.6 | 7.777 | A |
| C-D | 5.74 | | | 5.74 | | | |
| C-A | 130.39 | | | 130.39 | | | |

# 2027 - Assessment, AM

### Data Errors and Warnings
*No errors or warnings*

### Analysis Set Details

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

# Junction Network

### Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | Easternmost | Crossroads | Two-way | 10.76 | B |

### Junction Network Options
*[same as above]*

# Arms

### Arms
*[same as above]*

### Major Arm Geometry
*[same as above]*

### Minor Arm Geometry
*[same as above]*

### Slope / Intercept / Capacity
*[same as above]*

# Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D5 | 2027 - Assessment | AM | ONE HOUR | 08:00 | 09:30 | 15 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 283.00 | 100.000 |
| B | | ✓ | 309.00 | 100.000 |
| C | | ✓ | 657.00 | 100.000 |
| D | | ✓ | 12.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 41.000 | 235.000 | 7.000 |
| | B | 102.000 | 0.000 | 204.000 | 3.000 |
| | C | 514.000 | 123.000 | 0.000 | 20.000 |
| | D | 0.000 | 2.000 | 10.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.79 | 38.18 | 3.4 | E |
| A-BCD | 0.02 | 5.44 | 0.0 | A |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.06 | 16.50 | 0.1 | C |
| C-ABD | 0.34 | 5.65 | 0.9 | A |
| C-D | | | | |
| C-A | | | | |

# Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 232.63 | 480.34 | 0.484 | 228.99 | 0.9 | 14.129 | B |
| A-BCD | 7.51 | 669.58 | 0.011 | 7.46 | 0.0 | 5.436 | A |
| A-B | 30.53 | | | 30.53 | | | |
| A-C | 175.01 | | | 175.01 | | | |
| D-ABC | 9.03 | 315.60 | 0.029 | 8.92 | 0.0 | 11.735 | B |
| C-ABD | 169.37 | 870.13 | 0.195 | 167.79 | 0.4 | 5.124 | A |
| C-D | 12.18 | | | 12.18 | | | |
| C-A | 313.07 | | | 313.07 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 277.78 | 460.34 | 0.603 | 275.63 | 1.4 | 19.255 | C |
| A-BCD | 9.72 | 673.64 | 0.014 | 9.71 | 0.0 | 5.421 | A |
| A-B | 36.35 | | | 36.35 | | | |
| A-C | 208.34 | | | 208.34 | | | |
| D-ABC | 10.79 | 280.61 | 0.038 | 10.75 | 0.0 | 13.338 | B |
| C-ABD | 231.76 | 915.64 | 0.253 | 231.04 | 0.6 | 5.269 | A |
| C-D | 13.44 | | | 13.44 | | | |
| C-A | 345.43 | | | 345.43 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 340.22 | 431.54 | 0.788 | 333.29 | 3.2 | 34.380 | D |
| A-BCD | 13.36 | 680.89 | 0.020 | 13.34 | 0.0 | 5.392 | A |
| A-B | 44.30 | | | 44.30 | | | |
| A-C | 253.92 | | | 253.92 | | | |
| D-ABC | 13.21 | 232.82 | 0.057 | 13.13 | 0.1 | 16.381 | C |
| C-ABD | 336.11 | 976.34 | 0.344 | 334.66 | 0.9 | 5.625 | A |
| C-D | 14.50 | | | 14.50 | | | |
| C-A | 372.76 | | | 372.76 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 340.22 | 431.34 | 0.789 | 339.29 | 3.4 | 38.183 | E |
| A-BCD | 13.38 | 680.56 | 0.020 | 13.38 | 0.0 | 5.397 | A |
| A-B | 44.30 | | | 44.30 | | | |
| A-C | 253.91 | | | 253.91 | | | |
| D-ABC | 13.21 | 231.32 | 0.057 | 13.21 | 0.1 | 16.505 | C |
| C-ABD | 336.86 | 977.01 | 0.345 | 336.81 | 0.9 | 5.653 | A |
| C-D | 14.48 | | | 14.48 | | | |
| C-A | 372.04 | | | 372.04 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 277.78 | 460.04 | 0.604 | 285.02 | 1.6 | 21.330 | C |
| A-BCD | 9.74 | 673.11 | 0.014 | 9.77 | 0.0 | 5.428 | A |
| A-B | 36.35 | | | 36.35 | | | |
| A-C | 208.33 | | | 208.33 | | | |
| D-ABC | 10.79 | 278.46 | 0.039 | 10.86 | 0.0 | 13.458 | B |
| C-ABD | 232.61 | 916.65 | 0.254 | 234.01 | 0.6 | 5.301 | A |
| C-D | 13.41 | | | 13.41 | | | |
| C-A | 344.61 | | | 344.61 | | | |

## Main results: (09:15-09:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 232.63 | 479.98 | 0.485 | 235.17 | 1.0 | 14.852 | B |
| A-BCD | 7.53 | 668.94 | 0.011 | 7.55 | 0.0 | 5.442 | A |
| A-B | 30.53 | | | 30.53 | | | |
| A-C | 174.99 | | | 174.99 | | | |
| D-ABC | 9.03 | 314.00 | 0.029 | 9.08 | 0.0 | 11.809 | B |
| C-ABD | 170.37 | 870.92 | 0.196 | 171.13 | 0.4 | 5.161 | A |
| C-D | 12.14 | | | 12.14 | | | |
| C-A | 312.11 | | | 312.11 | | | |

# 2027 - Assessment, PM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

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

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | Easternmost | Crossroads | Two-way | 7.58 | A |

## Junction Network Options

*[same as above]*

# Arms

## Arms

*[same as above]*

## Major Arm Geometry

*[same as above]*

## Minor Arm Geometry

*[same as above]*

## Slope / Intercept / Capacity

*[same as above]*

# Traffic Demand

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| D6 | 2027 - Assessment | PM | ONE HOUR | 17:00 | 18:30 | 15 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 671.00 | 100.000 |
| B | | ✓ | 223.00 | 100.000 |
| C | | ✓ | 462.00 | 100.000 |
| D | | ✓ | 12.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 115.000 | 554.000 | 2.000 |
| | B | 53.000 | 0.000 | 169.000 | 1.000 |
| | C | 250.000 | 201.000 | 0.000 | 11.000 |
| | D | 3.000 | 3.000 | 6.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-ACD | 0.66 | 28.43 | 1.9 | D |
| A-BCD | 0.01 | 4.09 | 0.0 | A |
| A-B | | | | |
| A-C | | | | |
| D-ABC | 0.05 | 13.11 | 0.0 | B |
| C-ABD | 0.56 | 12.10 | 1.7 | B |
| C-D | | | | |
| C-A | | | | |

# Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 167.89 | 445.84 | 0.377 | 165.52 | 0.6 | 12.741 | B |
| A-BCD | 3.07 | 883.41 | 0.003 | 3.05 | 0.0 | 4.089 | A |
| A-B | 86.31 | | | 86.31 | | | |
| A-C | 415.79 | | | 415.79 | | | |
| D-ABC | 9.03 | 366.68 | 0.025 | 8.93 | 0.0 | 10.061 | B |
| C-ABD | 213.81 | 669.66 | 0.319 | 211.43 | 0.6 | 7.835 | A |
| C-D | 5.65 | | | 5.65 | | | |
| C-A | 128.36 | | | 128.36 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 200.47 | 415.53 | 0.482 | 199.23 | 0.9 | 16.537 | C |
| A-BCD | 4.16 | 924.24 | 0.005 | 4.16 | 0.0 | 3.912 | A |
| A-B | 102.98 | | | 102.98 | | | |
| A-C | 496.08 | | | 496.08 | | | |
| D-ABC | 10.79 | 334.39 | 0.032 | 10.76 | 0.0 | 11.121 | B |
| C-ABD | 277.19 | 675.01 | 0.411 | 275.94 | 0.9 | 9.033 | A |
| C-D | 5.82 | | | 5.82 | | | |
| C-A | 132.31 | | | 132.31 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 245.53 | 371.56 | 0.661 | 241.95 | 1.8 | 27.040 | D |
| A-BCD | 6.03 | 978.72 | 0.006 | 6.02 | 0.0 | 3.700 | A |
| A-B | 125.96 | | | 125.96 | | | |
| A-C | 606.80 | | | 606.80 | | | |
| D-ABC | 13.21 | 289.12 | 0.046 | 13.16 | 0.0 | 13.041 | B |
| C-ABD | 383.37 | 684.35 | 0.560 | 380.18 | 1.7 | 11.853 | B |
| C-D | 5.28 | | | 5.28 | | | |
| C-A | 120.02 | | | 120.02 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 245.53 | 371.07 | 0.662 | 245.23 | 1.9 | 28.433 | D |
| A-BCD | 6.04 | 978.10 | 0.006 | 6.04 | 0.0 | 3.705 | A |
| A-B | 125.96 | | | 125.96 | | | |
| A-C | 606.79 | | | 606.79 | | | |
| D-ABC | 13.21 | 287.85 | 0.046 | 13.21 | 0.0 | 13.107 | B |
| C-ABD | 384.68 | 685.54 | 0.561 | 384.52 | 1.7 | 12.095 | B |
| C-D | 5.23 | | | 5.23 | | | |
| C-A | 118.76 | | | 118.76 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 200.47 | 414.93 | 0.483 | 204.09 | 1.0 | 17.351 | C |
| A-BCD | 4.17 | 923.26 | 0.005 | 4.18 | 0.0 | 3.918 | A |
| A-B | 102.97 | | | 102.97 | | | |
| A-C | 496.07 | | | 496.07 | | | |
| D-ABC | 10.79 | 332.64 | 0.032 | 10.84 | 0.0 | 11.188 | B |
| C-ABD | 278.55 | 676.63 | 0.412 | 281.72 | 1.0 | 9.233 | A |
| C-D | 5.76 | | | 5.76 | | | |
| C-A | 131.01 | | | 131.01 | | | |

## Main results: (18:15-18:30)

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-ACD | 167.89 | 445.33 | 0.377 | 169.28 | 0.6 | 13.105 | B |
| A-BCD | 3.08 | 882.49 | 0.003 | 3.08 | 0.0 | 4.093 | A |
| A-B | 86.31 | | | 86.31 | | | |
| A-C | 415.78 | | | 415.78 | | | |
| D-ABC | 9.03 | 365.32 | 0.025 | 9.07 | 0.0 | 10.107 | B |
| C-ABD | 214.89 | 670.60 | 0.320 | 216.24 | 0.6 | 7.966 | A |
| C-D | 5.60 | | | 5.60 | | | |
| C-A | 127.32 | | | 127.32 | | | |

# Appendix I – Gladstone Way Site Access Assessment Results

# Junctions 9

## PICADY 9 - Priority Intersection Module



**Filename:** 4. Gladstone Way Site Access (2027).j9
**Path:** \\sweco.se\GB\LDS01\Legacy\MNC\Manchester Central\Mancot Flintshire\Models
**Report generation date:** 15/08/2018 13:16:34



## Summary of junction performance

| | AM | | | PM | | |
|---|---|---|---|---|---|---|
| | Queue (PCU) | Delay (s) | RFC | Queue (PCU) | Delay (s) | RFC |
| | 2027 Assessment | | | | | |
| Stream B-AC | 0.5 | 18.92 | 0.34 | 0.2 | 11.37 | 0.13 |
| Stream C-AB | 0.1 | 4.00 | 0.05 | 0.3 | 4.09 | 0.12 |
| Stream C-A | | | | | | |
| Stream A-B | | | | | | |
| Stream A-C | | | | | | |

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

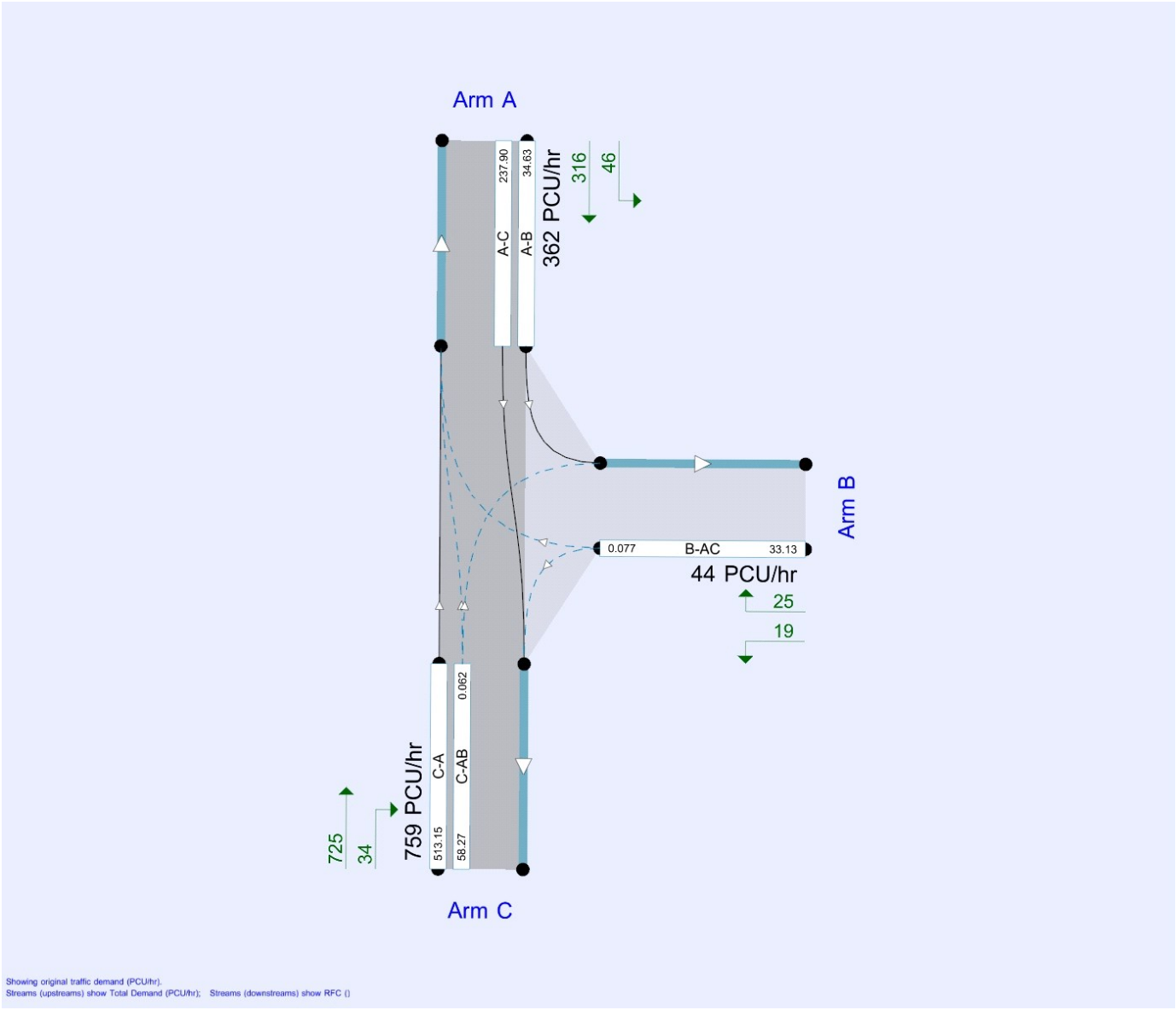
## File summary

### File Description

| | |
|---|---|
| **Title** | HW005 Mancot |
| **Location** | Gladstone Way Site Access |
| **Site number** | |
| **Date** | 16/07/2018 |
| **Version** | |
| **Status** | (new file) |
| **Identifier** | |
| **Client** | |
| **Jobnumber** | |
| **Enumerator** | SWECO"GBJAMS |
| **Description** | |

## Units

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




*The junction diagram reflects the last run of Junctions.*

## Analysis Options

| Calculate Queue Percentiles | Calculate residual capacity | RFC Threshold | Average Delay threshold (s) | Queue threshold (PCU) |
|---|---|---|---|---|
| | | 0.85 | 36.00 | 20.00 |

## Analysis Set Details

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

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| **D2** | 2027 Assessment | PM | ONE HOUR | 16:45 | 18:15 | 15 |

# 2027 Assessment, PM

## Data Errors and Warnings

*No errors or warnings*

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | Gladstone Way Site Access | T-Junction | Two-way | 0.77 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description | Arm type |
|---|---|---|---|
| A | untitled | | Major |
| B | untitled | | Minor |
| C | untitled | | Major |

## Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Has right turn bay | Visibility for right turn (m) | Blocks? | Blocking queue (PCU) |
|---|---|---|---|---|---|---|
| C | 6.20 | | | 120.0 | ✓ | 0.00 |

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

## Minor Arm Geometry

| Arm | Minor arm type | Lane width (m) | Visibility to left (m) | Visibility to right (m) |
|---|---|---|---|---|
| B | One lane | 3.00 | 30 | 30 |

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept (PCU/hr) | Slope for A-B | Slope for A-C | Slope for C-A | Slope for C-B |
|---|---|---|---|---|---|---|
| 1 | B-A | 502.054 | 0.091 | 0.229 | 0.144 | 0.327 |
| 1 | B-C | 642.823 | 0.098 | 0.247 | - | - |
| 1 | C-B | 643.457 | 0.247 | 0.247 | - | - |

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

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

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

# Traffic Demand

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

## Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 362.00 | 100.000 |
| B | | ✓ | 44.00 | 100.000 |
| C | | ✓ | 759.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | A | B | C |
| From | A | 0.000 | 46.000 | 316.000 |
| | B | 25.000 | 0.000 | 19.000 |
| | C | 725.000 | 34.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

## Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-AC | 0.13 | 11.37 | 0.2 | B |
| C-AB | 0.12 | 4.09 | 0.3 | A |
| C-A | | | | |
| A-B | | | | |
| A-C | | | | |

## Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 33.13 | 428.52 | 0.077 | 32.79 | 0.1 | 9.090 | A |
| C-AB | 58.27 | 939.96 | 0.062 | 57.86 | 0.1 | 4.081 | A |
| C-A | 513.15 | | | 513.15 | | | |
| A-B | 34.63 | | | 34.63 | | | |
| A-C | 237.90 | | | 237.90 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 39.56 | 402.34 | 0.098 | 39.46 | 0.1 | 9.918 | A |
| C-AB | 81.13 | 997.26 | 0.081 | 80.93 | 0.2 | 3.931 | A |
| C-A | 601.20 | | | 601.20 | | | |
| A-B | 41.35 | | | 41.35 | | | |
| A-C | 284.08 | | | 284.08 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 48.44 | 365.03 | 0.133 | 48.27 | 0.2 | 11.359 | B |
| C-AB | 129.84 | 1089.58 | 0.119 | 129.34 | 0.3 | 3.753 | A |
| C-A | 705.83 | | | 705.83 | | | |
| A-B | 50.65 | | | 50.65 | | | |
| A-C | 347.92 | | | 347.92 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 48.44 | 364.95 | 0.133 | 48.44 | 0.2 | 11.373 | B |
| C-AB | 130.09 | 1089.83 | 0.119 | 130.08 | 0.3 | 3.757 | A |
| C-A | 705.59 | | | 705.59 | | | |
| A-B | 50.65 | | | 50.65 | | | |
| A-C | 347.92 | | | 347.92 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 39.56 | 402.23 | 0.098 | 39.72 | 0.1 | 9.936 | A |
| C-AB | 81.38 | 997.61 | 0.082 | 81.87 | 0.2 | 3.935 | A |
| C-A | 600.95 | | | 600.95 | | | |
| A-B | 41.35 | | | 41.35 | | | |
| A-C | 284.08 | | | 284.08 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 33.13 | 428.42 | 0.077 | 33.23 | 0.1 | 9.113 | A |
| C-AB | 58.57 | 940.20 | 0.062 | 58.78 | 0.1 | 4.087 | A |
| C-A | 512.84 | | | 512.84 | | | |
| A-B | 34.63 | | | 34.63 | | | |
| A-C | 237.90 | | | 237.90 | | | |

# Appendix J – Ash Lane Site Access Assessment Results

# Junctions 9

## PICADY 9 - Priority Intersection Module



**Filename:** 5. Ash Lane Site Access (2027).j9
**Path:** \\sweco.se\GB\LDS01\Legacy\MNC\Manchester Central\Mancot Flintshire\Models
**Report generation date:** 15/08/2018 13:22:19



## Summary of junction performance

| | AM | | | PM | | |
|---|---|---|---|---|---|---|
| | Queue (PCU) | Delay (s) | RFC | Queue (PCU) | Delay (s) | RFC |
| | 2027 Assessment | | | | | |
| Stream B-AC | 0.1 | 7.93 | 0.06 | 0.0 | 7.62 | 0.03 |
| Stream C-AB | 0.0 | 5.36 | 0.01 | 0.0 | 5.33 | 0.01 |
| Stream C-A | | | | | | |
| Stream A-B | | | | | | |
| Stream A-C | | | | | | |

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

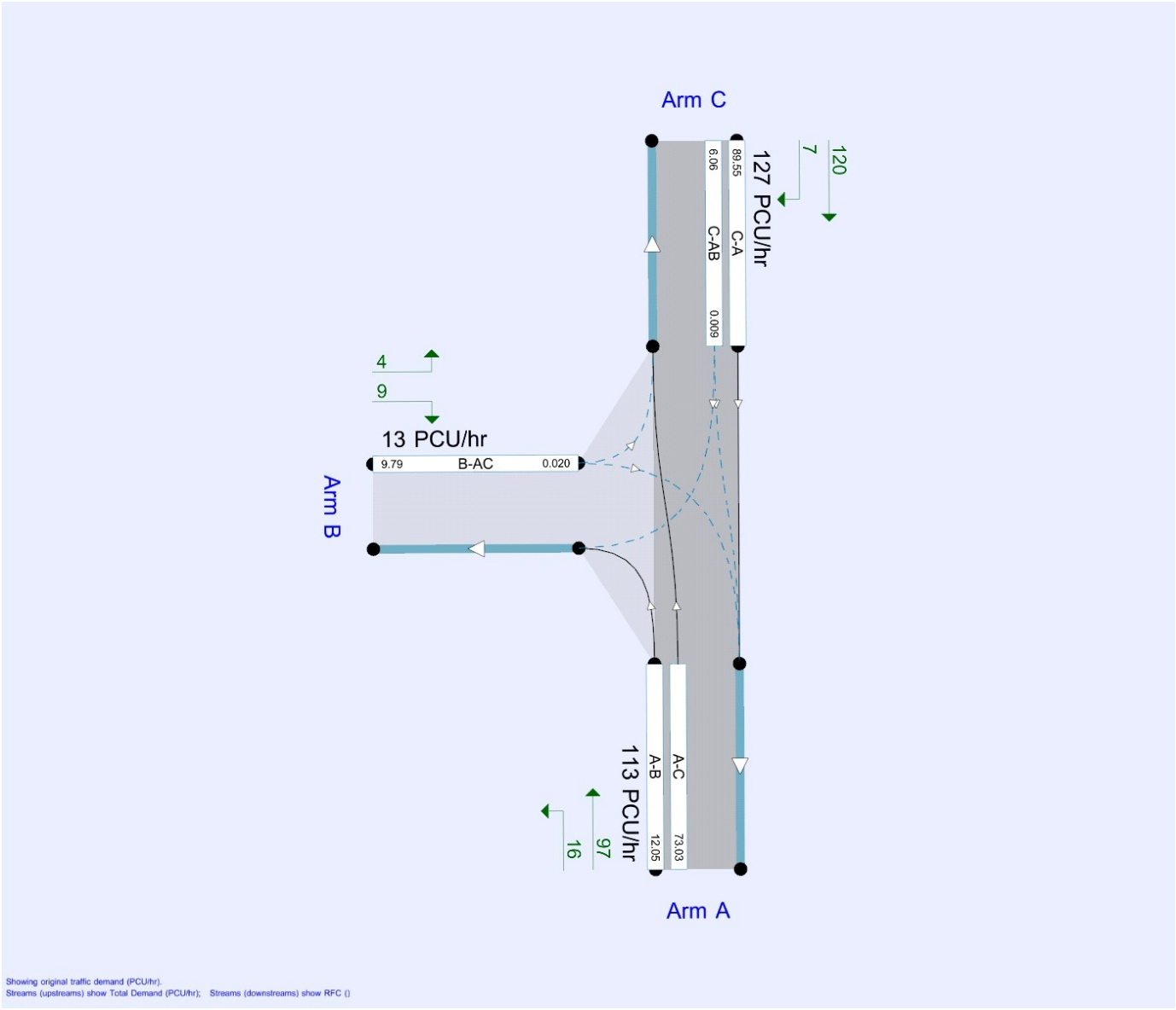
## File summary

### File Description

| | |
|---|---|
| Title | HW005 Mancot |
| Location | Ash Lane Site Access |
| Site number | |
| Date | 16/07/2018 |
| Version | |
| Status | (new file) |
| Identifier | |
| Client | |
| Jobnumber | |
| Enumerator | SWECO"GBJAMS |
| Description | |

## Units

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




*The junction diagram reflects the last run of Junctions.*

## Analysis Options

| Calculate Queue Percentiles | Calculate residual capacity | RFC Threshold | Average Delay threshold (s) | Queue threshold (PCU) |
|---|---|---|---|---|
| | | 0.85 | 36.00 | 20.00 |

## Analysis Set Details

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

## Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Model start time (HH:mm) | Model finish time (HH:mm) | Time segment length (min) |
|---|---|---|---|---|---|---|
| **D2** | 2027 Assessment | PM | ONE HOUR | 16:45 | 18:15 | 15 |

# 2027 Assessment, PM

## Data Errors and Warnings

*No errors or warnings*

# Junction Network

## Junctions

| Junction | Name | Junction Type | Major road direction | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|
| 1 | Ash Lane Site Access | T-Junction | Two-way | 0.57 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description | Arm type |
|---|---|---|---|
| A | untitled | | Major |
| B | untitled | | Minor |
| C | untitled | | Major |

## Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Has right turn bay | Visibility for right turn (m) | Blocks? | Blocking queue (PCU) |
|---|---|---|---|---|---|---|
| C | 6.00 | | | 120.0 | ✓ | 0.00 |

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

## Minor Arm Geometry

| Arm | Minor arm type | Lane width (m) | Visibility to left (m) | Visibility to right (m) |
|---|---|---|---|---|
| B | One lane | 3.00 | 20 | 20 |

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

| Junction | Stream | Intercept (PCU/hr) | Slope for A-B | Slope for A-C | Slope for C-A | Slope for C-B |
|---|---|---|---|---|---|---|
| 1 | B-A | 493.923 | 0.090 | 0.227 | 0.143 | 0.325 |
| 1 | B-C | 636.527 | 0.098 | 0.247 | - | - |
| 1 | C-B | 643.457 | 0.249 | 0.249 | - | - |

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

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

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

# Traffic Demand

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

### Demand overview (Traffic)

| Arm | Linked arm | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|---|---|---|---|---|
| A | | ✓ | 113.00 | 100.000 |
| B | | ✓ | 13.00 | 100.000 |
| C | | ✓ | 127.00 | 100.000 |

# Origin-Destination Data

### Demand (PCU/hr)

| | | To | | |
|---|---|---|---|---|
| | | A | B | C |
| From | A | 0.000 | 16.000 | 97.000 |
| | B | 9.000 | 0.000 | 4.000 |
| | C | 120.000 | 7.000 | 0.000 |

# Vehicle Mix

### Heavy Vehicle proportion

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

# Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| B-AC | 0.03 | 7.62 | 0.0 | A |
| C-AB | 0.01 | 5.33 | 0.0 | A |
| C-A | | | | |
| A-B | | | | |
| A-C | | | | |

# Main Results for each time segment

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 9.79 | 500.45 | 0.020 | 9.71 | 0.0 | 7.336 | A |
| C-AB | 6.06 | 681.22 | 0.009 | 6.02 | 0.0 | 5.331 | A |
| C-A | 89.55 | | | 89.55 | | | |
| A-B | 12.05 | | | 12.05 | | | |
| A-C | 73.03 | | | 73.03 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 11.69 | 494.57 | 0.024 | 11.67 | 0.0 | 7.454 | A |
| C-AB | 7.44 | 688.73 | 0.011 | 7.43 | 0.0 | 5.283 | A |
| C-A | 106.73 | | | 106.73 | | | |
| A-B | 14.38 | | | 14.38 | | | |
| A-C | 87.20 | | | 87.20 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 14.31 | 486.44 | 0.029 | 14.29 | 0.0 | 7.624 | A |
| C-AB | 9.45 | 699.18 | 0.014 | 9.44 | 0.0 | 5.218 | A |
| C-A | 130.38 | | | 130.38 | | | |
| A-B | 17.62 | | | 17.62 | | | |
| A-C | 106.80 | | | 106.80 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 14.31 | 486.44 | 0.029 | 14.31 | 0.0 | 7.624 | A |
| C-AB | 9.46 | 699.18 | 0.014 | 9.46 | 0.0 | 5.221 | A |
| C-A | 130.37 | | | 130.37 | | | |
| A-B | 17.62 | | | 17.62 | | | |
| A-C | 106.80 | | | 106.80 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 11.69 | 494.57 | 0.024 | 11.71 | 0.0 | 7.455 | A |
| C-AB | 7.44 | 688.73 | 0.011 | 7.45 | 0.0 | 5.283 | A |
| C-A | 106.73 | | | 106.73 | | | |
| A-B | 14.38 | | | 14.38 | | | |
| A-C | 87.20 | | | 87.20 | | | |

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

| Stream | Total Demand (PCU/hr) | Capacity (PCU/hr) | RFC | Throughput (PCU/hr) | End queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|
| B-AC | 9.79 | 500.43 | 0.020 | 9.80 | 0.0 | 7.336 | A |
| C-AB | 6.07 | 681.22 | 0.009 | 6.07 | 0.0 | 5.333 | A |
| C-A | 89.55 | | | 89.55 | | | |
| A-B | 12.05 | | | 12.05 | | | |
| A-C | 73.03 | | | 73.03 | | | |