# PROPOSED EMPLOYMENT DEVELOPMENT

# POWER PARK, EXETER

# SUPPLEMENTARY TRAFFIC ASSESSMENT NO.2

**September 2022**
**jgv/21027/STANO2/v1**

**Northern Transport Planning Ltd**

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# POWER PARK, EXETER

**Document Status – Final**

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|---|---|---|---|---|
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## TABLES



## APPENDICES

# 1 SUPPLEMENTARY TRAFFIC ASSESSMENT N0.2

## 1.1 Introduction

1.1.1 Northern Transport Planning Ltd (NTP) has been appointed to provide advice on the transport implications of proposed employment development known as Power Park in Exeter. This report provides a Supplementary Traffic Assessment (No.2) to support a Local Development Order (LDO) for the proposed development.

## 1.2 Background

1.2.1 A Transport Assessment of the proposed development (Ref: jgv/21027/TA/v1 dated May 2022) was prepared by NTP to support the LDO ('the NTP TA'). National Highways (NH), who are responsible for the A30 trunk road, raised various issues relating to the TA and recommended that planning permission not be granted for a specified period until the issues were satisfactorily dealt with.

1.2.2 In response, NTP prepared a letter to NH (Ref: jgv/22027/270622 dated 27/06/22) outlining how they intended to deal with the issues. NH responded on 08/07/22 by way of email, and were generally content with the approach, subject to a number of caveats.

1.2.3 A Supplementary Traffic Assessment (Ref: jgv/21027/STA/v1 dated 22/08/2022) was prepared dealing with the outstanding issues.

1.2.4 Following receipt of the Supplementary Traffic Assessment, NH stated that there were now two outstanding transport-related issues:

- The A30 eastbound exit slip road at the Clyst Honiton Bypass junction justified a more robust ARCADY analysis due to uneven lane use; and
- Rather than using typical B8 trip rates (TRICS 'Warehousing Commercial' category), the TRICS 'Parcel Distribution Centre' category trip rates should be used.

1.2.5 At a meeting on 06/09/22 it was agreed that NTP would model the A30 eastbound exit slip road as a single lane.

1.2.6 At the meeting on 06/09/22 it was agreed that NTP would interrogate the TRICS data to produce appropriate trip rates using the 'Parcel Distribution Centre' category. It was also agreed that NTP would test the operation of the A30 roundabouts assuming a scenario where 10,400sq.m. of proposed development was B2 (using previously agreed trip rates) and 15,600sq.m. was 100% (TRICS Category) Parcel Distribution Centre.

1.2.7 The Parcel Distribution Centre trip rates were submitted by email to NH on 06/09/22. NH confirmed that the trip rates were "suitable for use" on 12/09/22.

1.2.8 This Supplementary Traffic Assessment No.2 deals with the two outstanding transport-related issues.

## 1.3 Traffic Flows Associated with the Proposed Development

1.3.1 As agreed with NH, the following split of land uses has been considered:

- 10,400sq.m. GFA B2 land use (40%); and
- 15,600sq.m. GFA B8 land use (60%).

1.3.2 The traffic generation has been calculated using the agreed TRICS Industrial Estate category trip rates for B2 and agreed TRICS Parcel Distribution Centre trip rates for B8. For the B2 development the AM and PM peak hours used are 08:00 to 09:00 hours and 16:00 to 17:00 hours respectively. For the B8 development the AM and PM peak hours used are 08:00 to 09:00 hours and 17:00 to 18:00 hours (because this is higher than 16:00 to 17:00 hours) respectively. The vehicle traffic generation calculations are summarised in the following tables:

| Land Use | Trip Rate | | No. of Trips | |
|---|---|---|---|---|
| | Arrive | Depart | Arrive | Depart |
| 10,400sq.m. GFA B2 | 0.551 | 0.284 | 57 | 30 |
| 15,600sq.m. GFA B8 | 0.363 | 0.309 | 57 | 48 |

**Table 1: TRICS Assessment of Peak Hour Vehicle Trips Attracted to Proposed Development Weekday AM Peak**

| Land Use | Trip Rate | | No. of Trips | |
|---|---|---|---|---|
| | Arrive | Depart | Arrive | Depart |
| 10,400sq.m. GFA B2 | 0.355 | 0.557 | 37 | 58 |
| 15,600sq.m. GFA B8 | 0.514 | 0.456 | 80 | 71 |

**Table 2: TRICS Assessment of Peak Hour Vehicle Trips Attracted to Proposed Development Weekday PM Peak**

| Time Period | Arrive | Depart | Total |
|---|---|---|---|
| AM Peak | 114 | 78 | 192 |
| PM Peak | 117 | 129 | 246 |

**Table 3: Weekday Peak Hour Vehicle Trips Attracted to Proposed Development**

1.3.3 The HGV traffic generation calculations are summarised in the following tables (there is no TRICS HGV data for Parcel Distribution Centres, so this has been assumed to be 10% of the trip rate for total traffic):

| Land Use | Trip Rate | | No. of Trips | |
|---|---|---|---|---|
| | Arrive | Depart | Arrive | Depart |
| 10,400sq.m. GFA B2 | 0.028 | 0.030 | 3 | 3 |
| 15,600sq.m. GFA B8 | 0.036 | 0.031 | 6 | 5 |

**Table 4: TRICS Assessment of Peak Hour HGV Trips Attracted to Proposed Development Weekday AM Peak**

| Land Use | Trip Rate | | No. of Trips | |
|---|---|---|---|---|
| | Arrive | Depart | Arrive | Depart |
| 10,400sq.m. GFA B2 | 0.014 | 0.014 | 1 | 1 |
| 15,600sq.m. GFA B8 | 0.051 | 0.046 | 8 | 7 |

**Table 5: TRICS Assessment of Peak Hour HGV Trips Attracted to Proposed Development Weekday PM Peak**

| Time Period | Arrive | Depart | Total |
|---|---|---|---|
| AM Peak | 9 | 8 | 17 |
| PM Peak | 9 | 8 | 17 |

**Table 6: Weekday Peak Hour HGV Trips Attracted to Proposed Development**

1.3.4 Assuming a 2.0 PCU factor for HGVs the PCU traffic generation is calculated in the following table:

| Time Period | Arrive | Depart | Total |
|---|---|---|---|
| AM Peak | 123 | 86 | 209 |
| PM Peak | 126 | 137 | 263 |

**Table 7: Weekday Peak Hour PCU Trips Attracted to Proposed Development**

## 1.4 Traffic Distribution and Assignment

1.4.1 Derivation of the traffic distribution and assignment is fully described in the NTP TA, has been accepted by NH, and the percentages are shown on **Figure 11**. All Figures are provided as **Appendix A**. By applying these percentages to the traffic generation estimates the AM and PM Traffic Distribution and Assignment is derived as shown on **Figure 12** and **Figure 13** respectively.

## 1.5 Future Assessment Year 2027 Traffic Flows 'With Committed and Proposed Development'

1.5.1 The AM and PM future assessment year 2027 traffic flows 'With Committed and Proposed Development' are calculated by adding the traffic distribution and assignment flows to the corresponding 'With Committed Development' flows as shown on **Figure 14** and **Figure 15** respectively.

## 1.6 Future Assessment Year 2034 Traffic Flows 'With Committed and Proposed Development'

1.6.1 The AM and PM future assessment year 2034 traffic flows 'With Committed and Proposed Development' are calculated by adding the traffic distribution and assignment flows to the corresponding 'With Committed Development' flows as shown on **Figure 16** and **Figure 17** respectively.

## 1.7 Operational Analysis

1.7.1 The operation of the A30 roundabouts at the junction with Clyst Honiton Bypass has been analysed for the AM and PM time periods in the future assessment year 2027 and future assessment year 2034 'With Committed Development' and 'With Committed and Proposed Development' scenarios.

1.7.2 The operation of the junctions has been analysed using the ARCADY program. Geometric parameters as agreed with NH have been used, including the modelling of the A30 eastbound and westbound exit slip roads as single lanes.

1.7.3 The full ARCADY output for the junctions is provided as **Appendix B** and described below.

## 1.8 Operation of the A30 slip roads/Clyst Honiton Bypass/B3184 Roundabout Junction

1.8.1 The Maximum Ratio of Flow to Capacity (Max RFC) and Maximum Queue (Max Q.) during the peak hour operation of the A30 slip roads/Clyst Honiton Bypass/B3184 junction is summarised as follows:

| Approach | 2027 with Committed | | 2027 with Committed and Proposed | | 2034 with Committed | | 2034 with Committed and Proposed | |
|---|---|---|---|---|---|---|---|---|
| | Max Q | Max RFC | Max Q | Max RFC | Max Q | Max RFC | Max Q | Max RFC |
| **Clyst Honiton Bypass** | 1.18 | 0.54 | 1.41 | 0.59 | 2.50 | 0.72 | 3.37 | 0.78 |
| **B3184 (E)** | 0.28 | 0.22 | 0.36 | 0.27 | 0.37 | 0.27 | 0.48 | 0.33 |
| **A30 Eastbound Entry Slip** | - | - | - | - | - | - | - | - |
| **B3184 (S)** | 0.12 | 0.11 | 0.13 | 0.12 | 0.13 | 0.11 | 0.14 | 0.12 |
| **A30 Eastbound Exit Slip** | 0.82 | 0.45 | 1.06 | 0.52 | 1.03 | 0.51 | 1.34 | 0.57 |

**Table 8: A30 slip roads/Clyst Honiton Bypass/B3184 Junction ARCADY Analysis Summary Weekday 08:00 – 09:00 Hours**

| Approach | 2027 with Committed | | 2027 with Committed and Proposed | | 2034 with Committed | | 2034 with Committed and Proposed | |
|---|---|---|---|---|---|---|---|---|
| | Max Q | Max RFC | Max Q | Max RFC | Max Q | Max RFC | Max Q | Max RFC |
| **Clyst Honiton Bypass** | 0.32 | 0.24 | 0.36 | 0.26 | 0.43 | 0.30 | 0.47 | 0.32 |
| **B3184 (E)** | 0.87 | 0.47 | 1.15 | 0.54 | 1.08 | 0.52 | 1.45 | 0.59 |
| **A30 Eastbound Entry Slip** | - | - | - | - | - | - | - | - |
| **B3184 (S)** | 0.05 | 0.04 | 0.06 | 0.05 | 0.05 | 0.05 | 0.06 | 0.06 |
| **A30 Eastbound Exit Slip** | 0.64 | 0.39 | 0.82 | 0.45 | 1.15 | 0.54 | 1.50 | 0.60 |

**Table 9: A30 slip roads/Clyst Honiton Bypass/B3184 Junction ARCADY Analysis Summary Weekday 16:30 – 17:30 Hours**

1.8.2 The ARCADY analysis demonstrates that the A30 slip roads/Clyst Honiton Bypass/B3184 junction will operate within capacity in the AM and PM peak period future assessment year 2027 and 2034 'With Committed Development' and 'With Committed and Proposed Development' scenarios. The traffic generated by the proposed development has little effect on the operation of the junction.

## 1.9 Operation of the A30 slip roads/B3184/Bishop's Court Lane Roundabout Junction

1.9.1 The Maximum Ratio of Flow to Capacity (Max RFC) and Maximum Queue (Max Q.) during the peak hour operation of the A30 slip roads/B3184/Bishop's Court Lane junction is summarised as follows:

| Approach | 2027 with Committed | | 2027 with Committed and Proposed | | 2034 with Committed | | 2034 with Committed and Proposed | |
|---|---|---|---|---|---|---|---|---|
| | Max Q | Max RFC | Max Q | Max RFC | Max Q | Max RFC | Max Q | Max RFC |
| **B3184 (N)** | 0.58 | 0.37 | 0.65 | 0.40 | 0.90 | 0.48 | 1.01 | 0.50 |
| **A30 Westbound Exit Slip** | 0.32 | 0.24 | 0.39 | 0.28 | 0.53 | 0.35 | 0.70 | 0.42 |
| **Bishop's Court Lane** | 0.04 | 0.04 | 0.05 | 0.05 | 0.07 | 0.06 | 0.08 | 0.07 |
| **A30 Westbound Entry Slip** | - | - | - | - | - | - | - | - |

**Table 10: A30 slip roads/B3184/Bishop's Court Lane Junction ARCADY Analysis Summary Weekday 08:00 – 09:00 Hours**

| Approach | 2027 with Committed | | 2027 with Committed and Proposed | | 2034 with Committed | | 2034 with Committed and Proposed | |
|---|---|---|---|---|---|---|---|---|
| | Max Q | Max RFC | Max Q | Max RFC | Max Q | Max RFC | Max Q | Max RFC |
| **B3184 (N)** | 0.78 | 0.44 | 0.93 | 0.48 | 0.98 | 0.50 | 1.18 | 0.54 |
| **A30 Westbound Exit Slip** | 0.10 | 0.09 | 0.15 | 0.13 | 0.12 | 0.11 | 0.20 | 0.17 |
| **Bishop's Court Lane** | 0.07 | 0.07 | 0.09 | 0.08 | 0.09 | 0.08 | 0.11 | 0.10 |
| **A30 Westbound Entry Slip** | - | - | - | - | - | - | - | - |

**Table 11: A30 slip roads/B3184/Bishop's Court Lane Junction ARCADY Analysis Summary Weekday 16:30 – 17:30 Hours**

1.9.2 The ARCADY analysis demonstrates that the A30 slip roads/B3184/Bishop's Court Lane junction will operate within capacity in the AM and PM peak period future assessment year 2027 and 2034 'With Committed Development' and 'With Committed and Proposed Development' scenarios. The traffic generated by the proposed development has little effect on the operation of the junction.

## 1.10 Overall Conclusion

Having regard to the above it is concluded that the proposed development is satisfactory from a transport policy, traffic and highways viewpoint.

# APPENDIX A

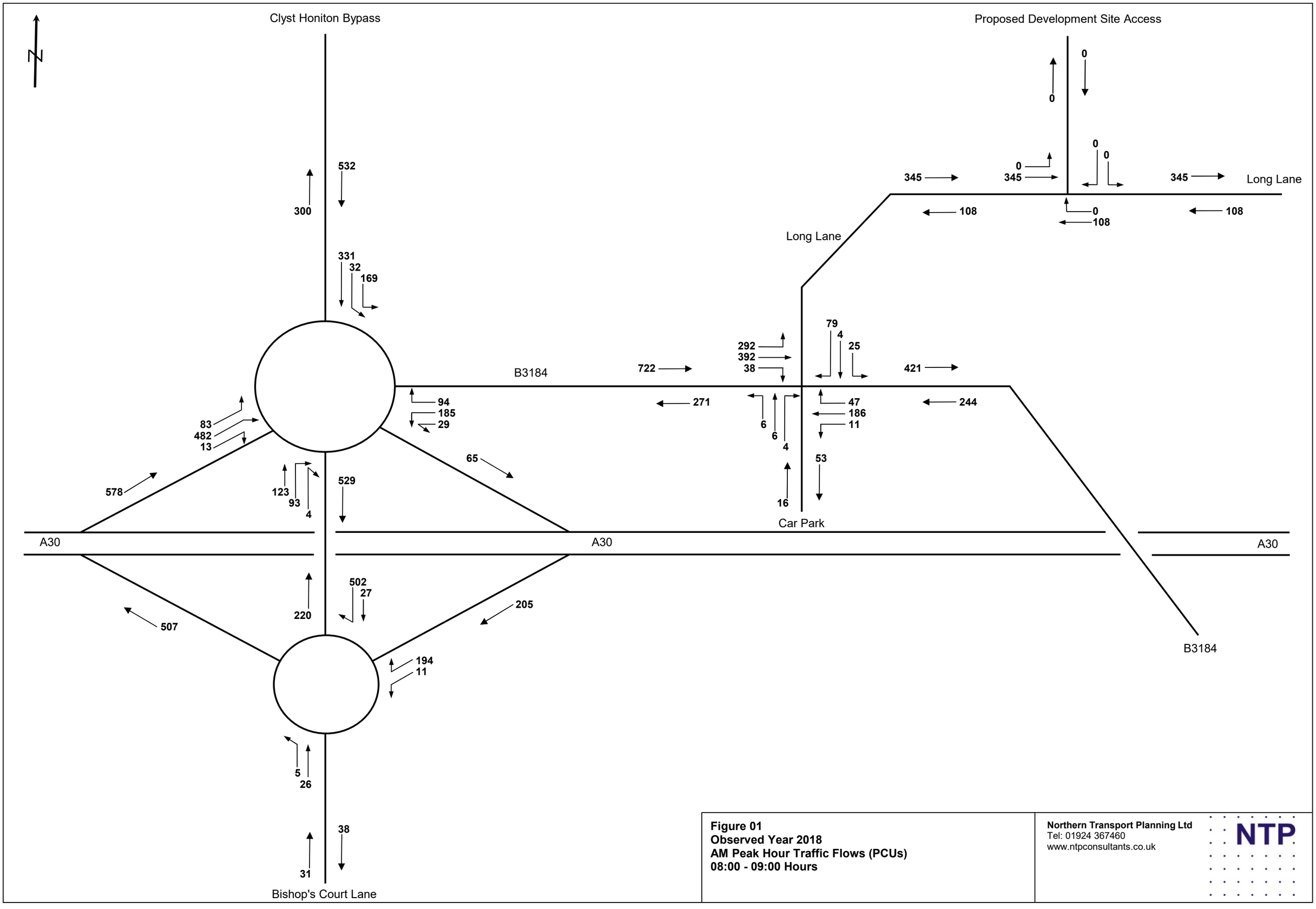


**Figure 01**
**Observed Year 2018**
**AM Peak Hour Traffic Flows (PCUs)**
**08:00 - 09:00 Hours**

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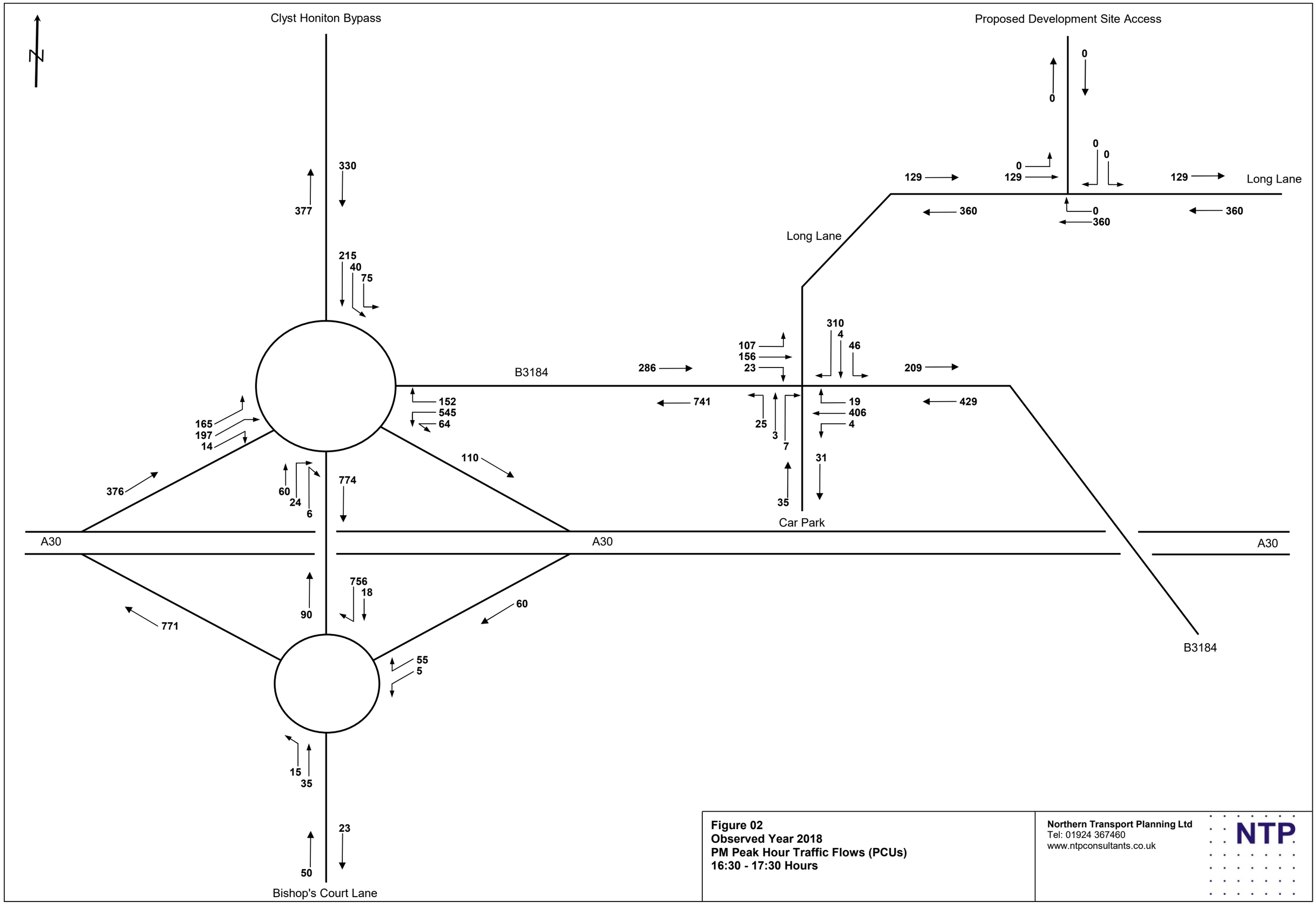


**Figure 02**
**Observed Year 2018**
**PM Peak Hour Traffic Flows (PCUs)**
**16:30 - 17:30 Hours**

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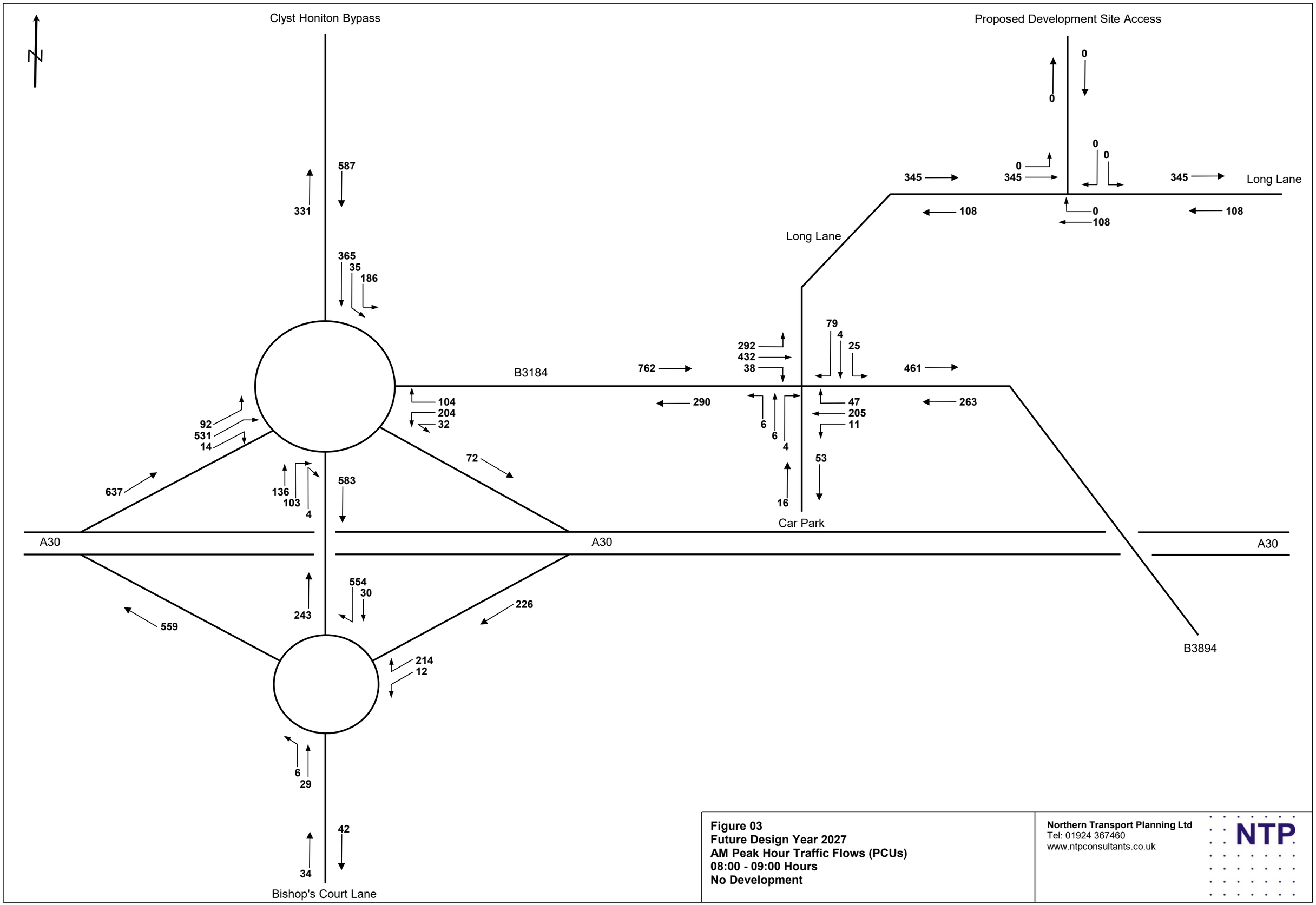


**Figure 03**
**Future Design Year 2027**
**AM Peak Hour Traffic Flows (PCUs)**
**08:00 - 09:00 Hours**
**No Development**

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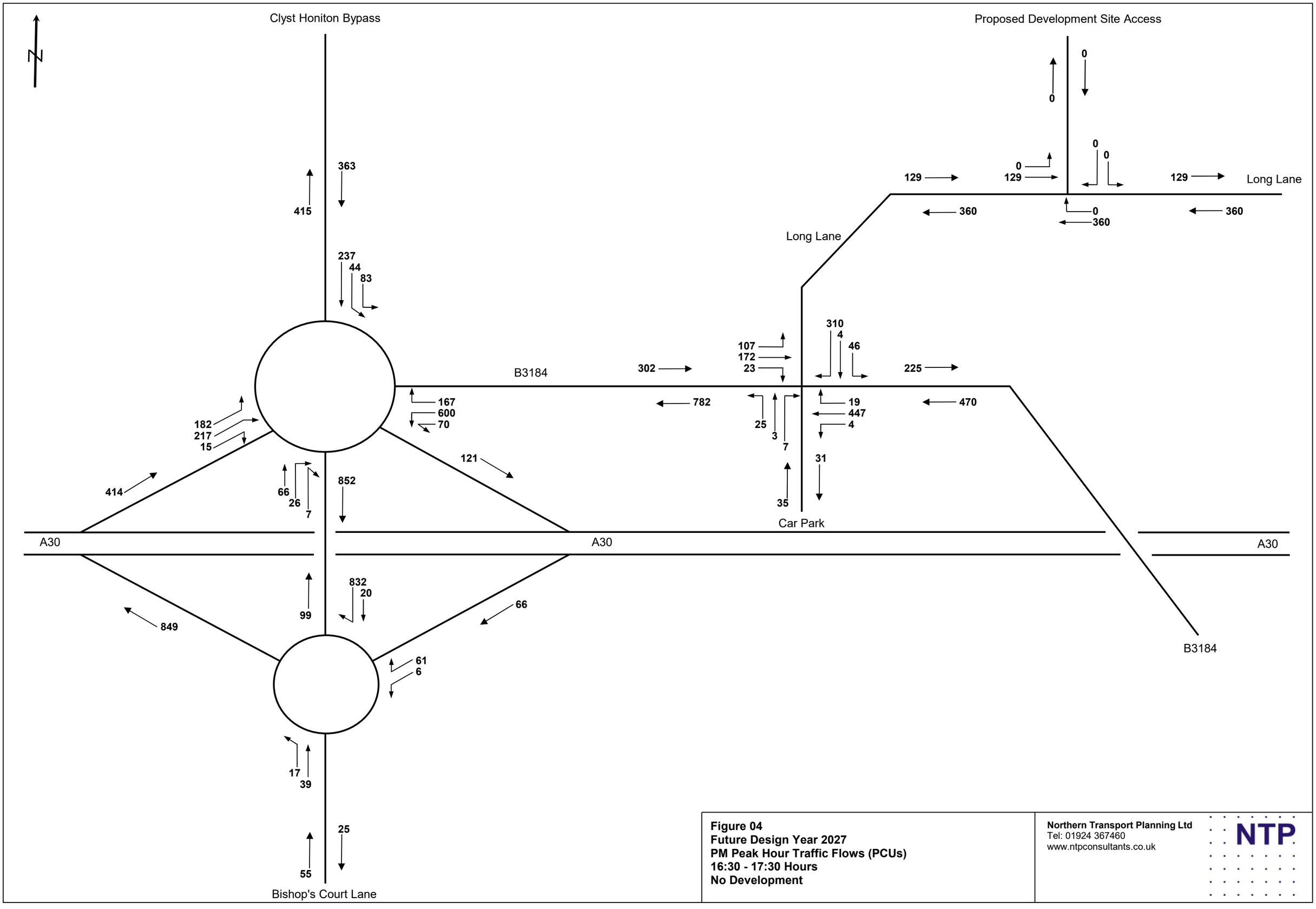


**Figure 04**
**Future Design Year 2027**
**PM Peak Hour Traffic Flows (PCUs)**
**16:30 - 17:30 Hours**
**No Development**

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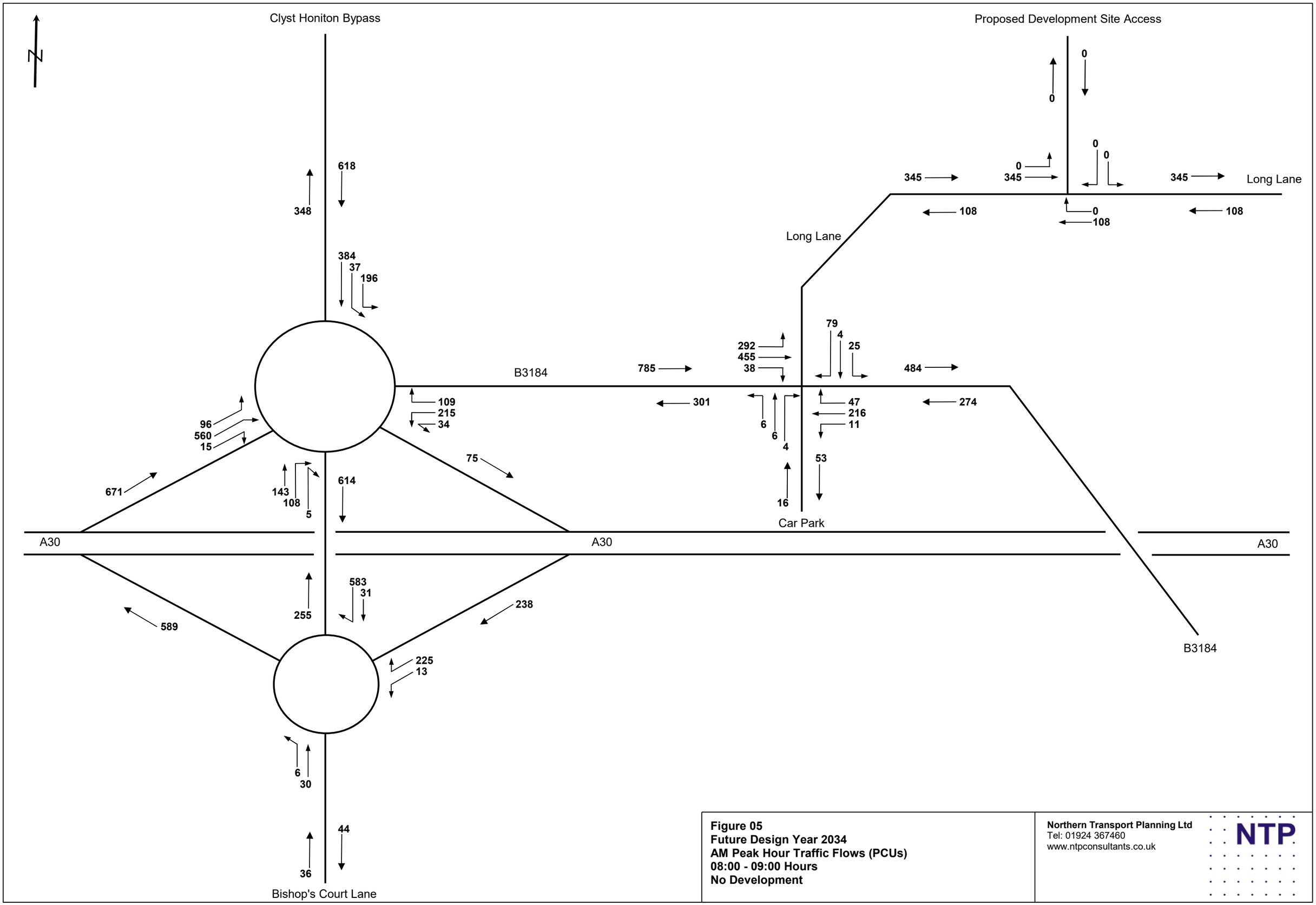


**Figure 05**
**Future Design Year 2034**
**AM Peak Hour Traffic Flows (PCUs)**
**08:00 - 09:00 Hours**
**No Development**

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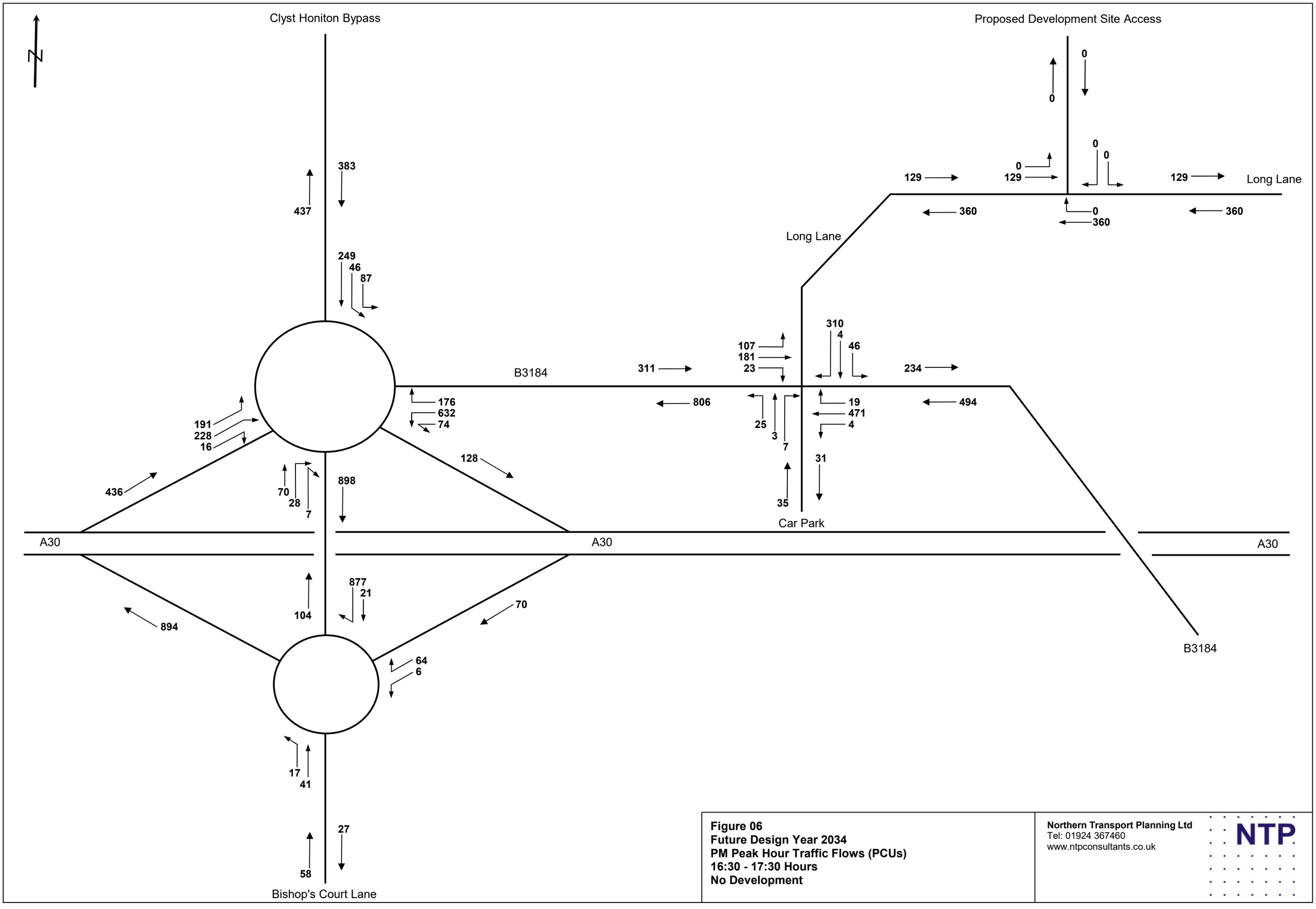


**Figure 06**
**Future Design Year 2034**
**PM Peak Hour Traffic Flows (PCUs)**
**16:30 - 17:30 Hours**
**No Development**

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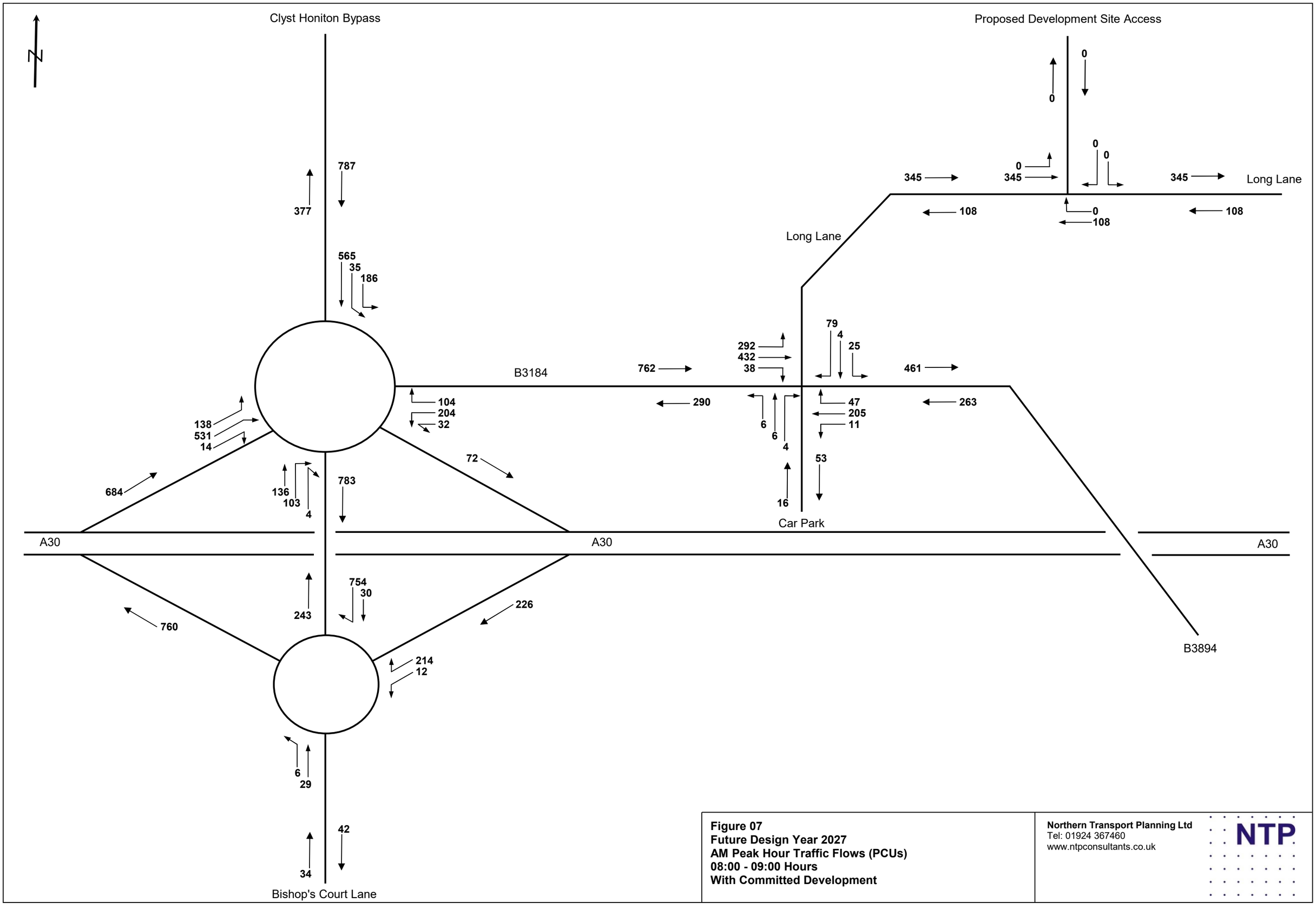


**Figure 07**
**Future Design Year 2027**
**AM Peak Hour Traffic Flows (PCUs)**
**08:00 - 09:00 Hours**
**With Committed Development**

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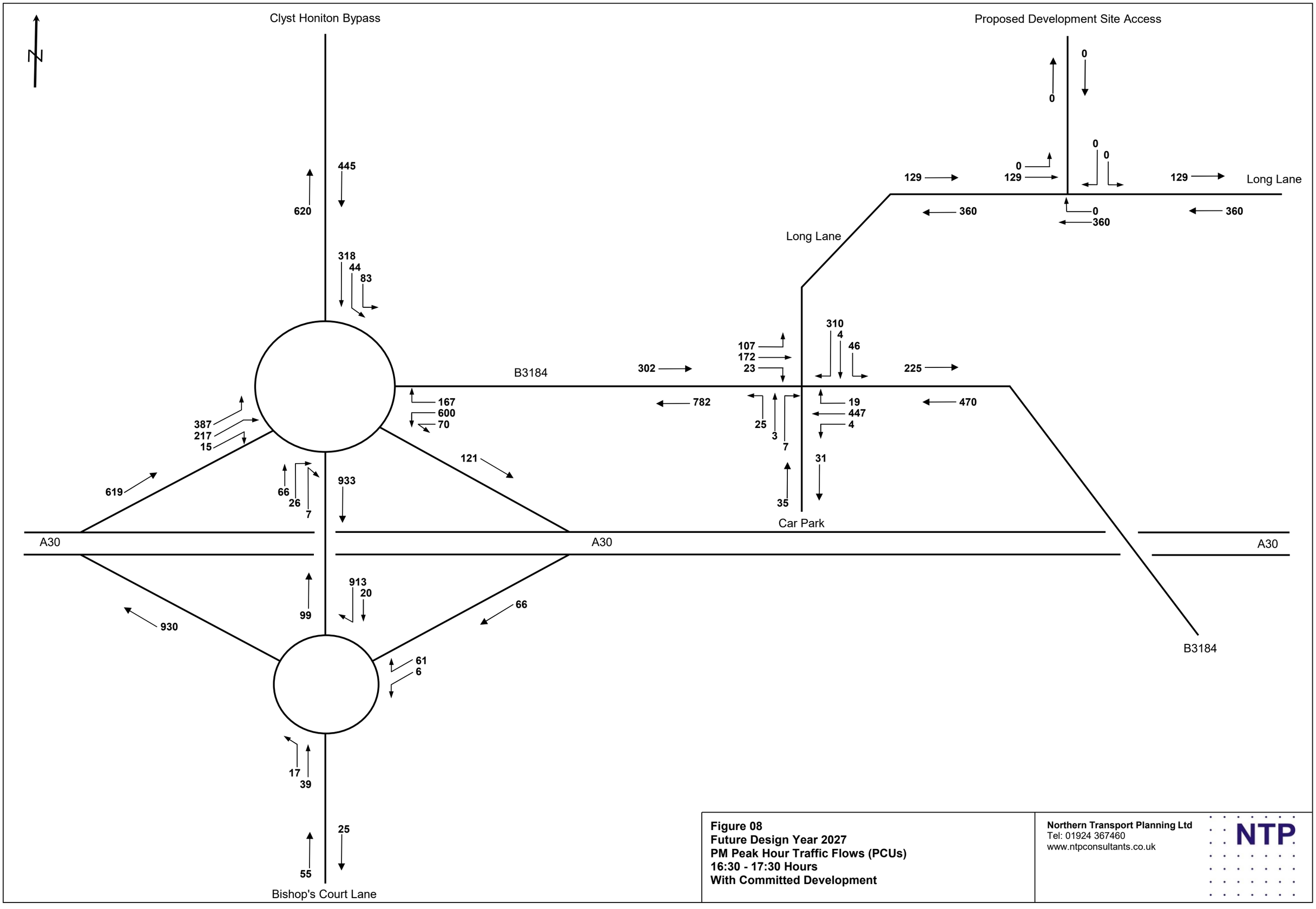


**Figure 08**
**Future Design Year 2027**
**PM Peak Hour Traffic Flows (PCUs)**
**16:30 - 17:30 Hours**
**With Committed Development**

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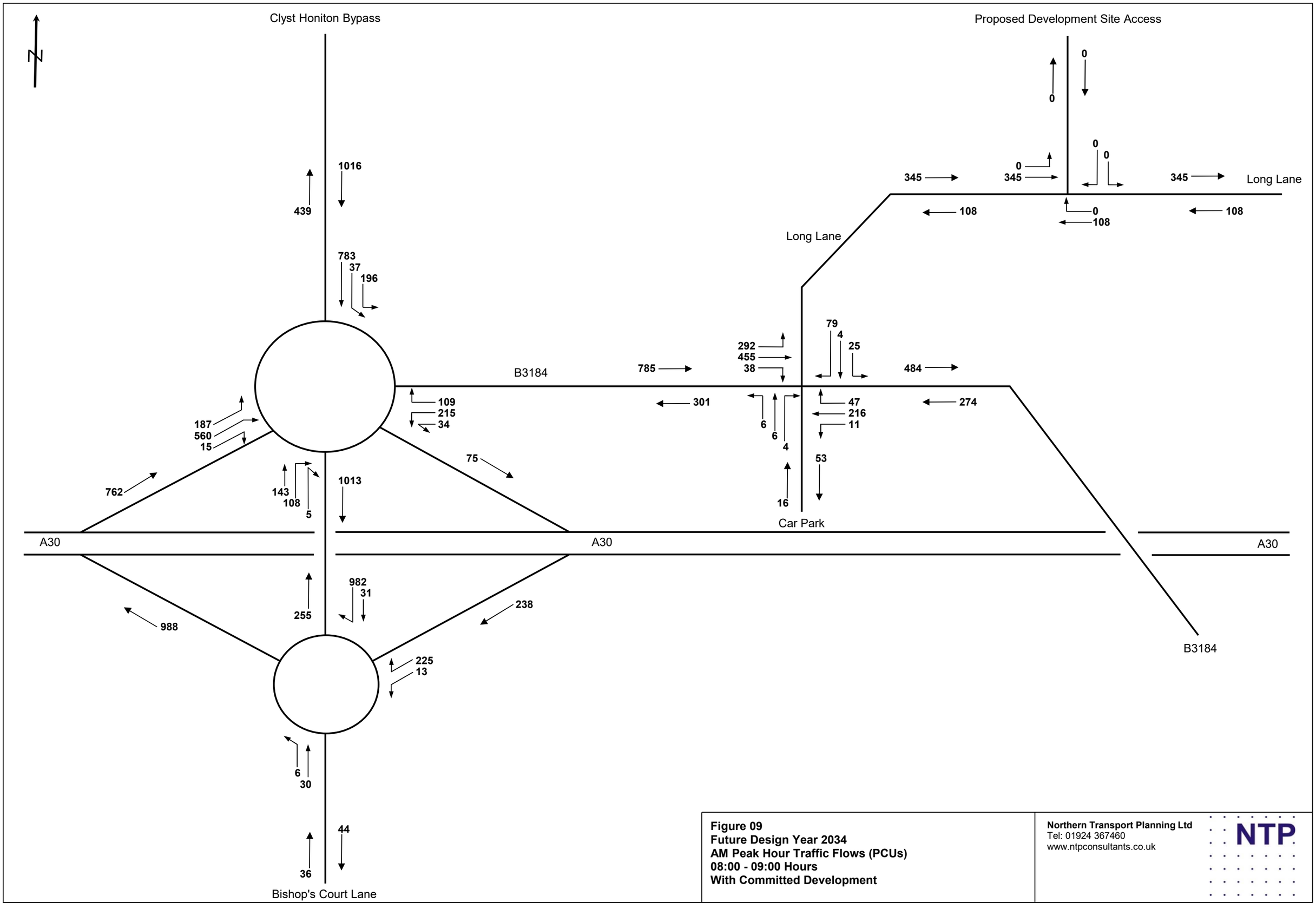


**Figure 09**
**Future Design Year 2034**
**AM Peak Hour Traffic Flows (PCUs)**
**08:00 - 09:00 Hours**
**With Committed Development**

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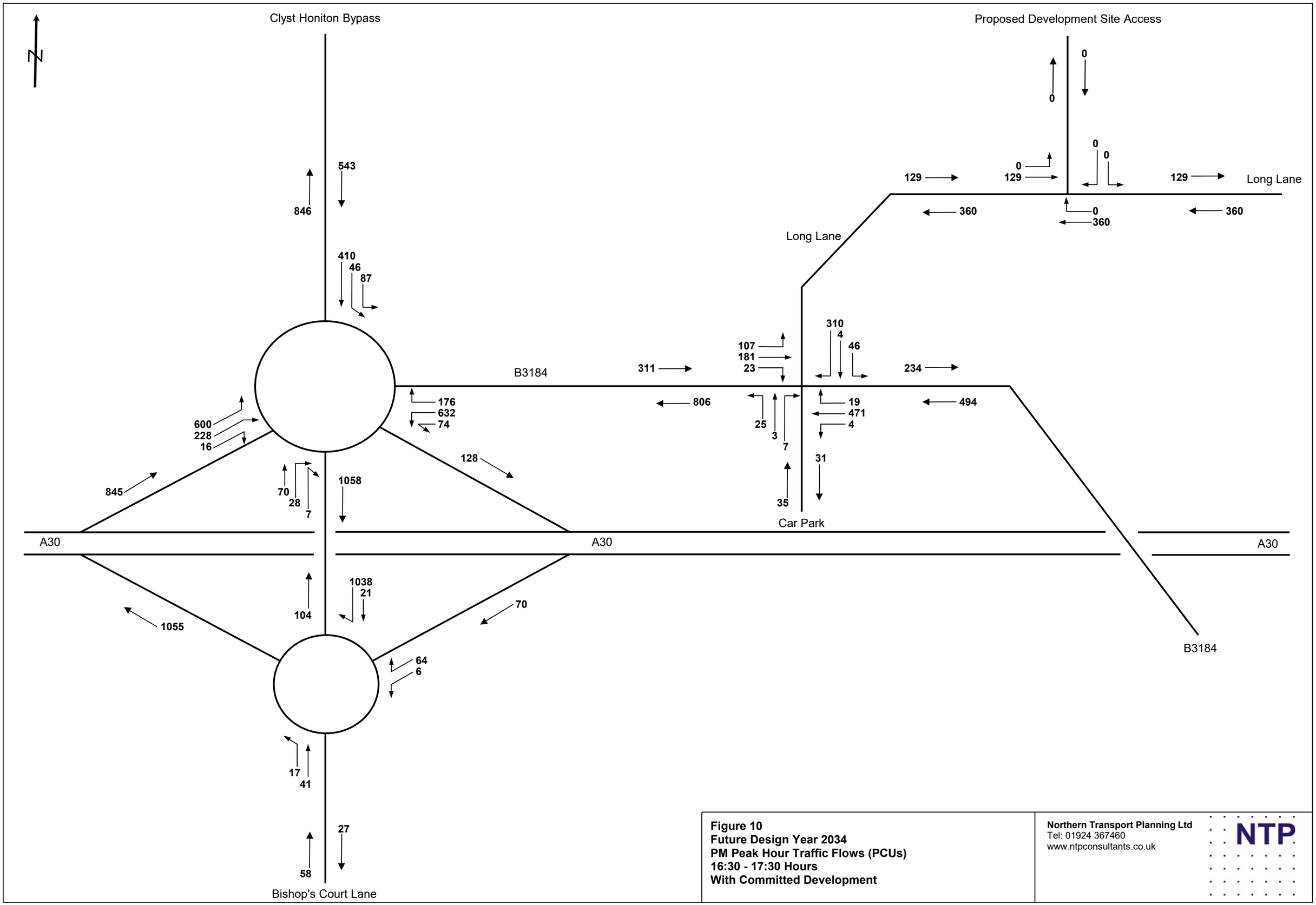


**Figure 10**
**Future Design Year 2034**
**PM Peak Hour Traffic Flows (PCUs)**
**16:30 - 17:30 Hours**
**With Committed Development**

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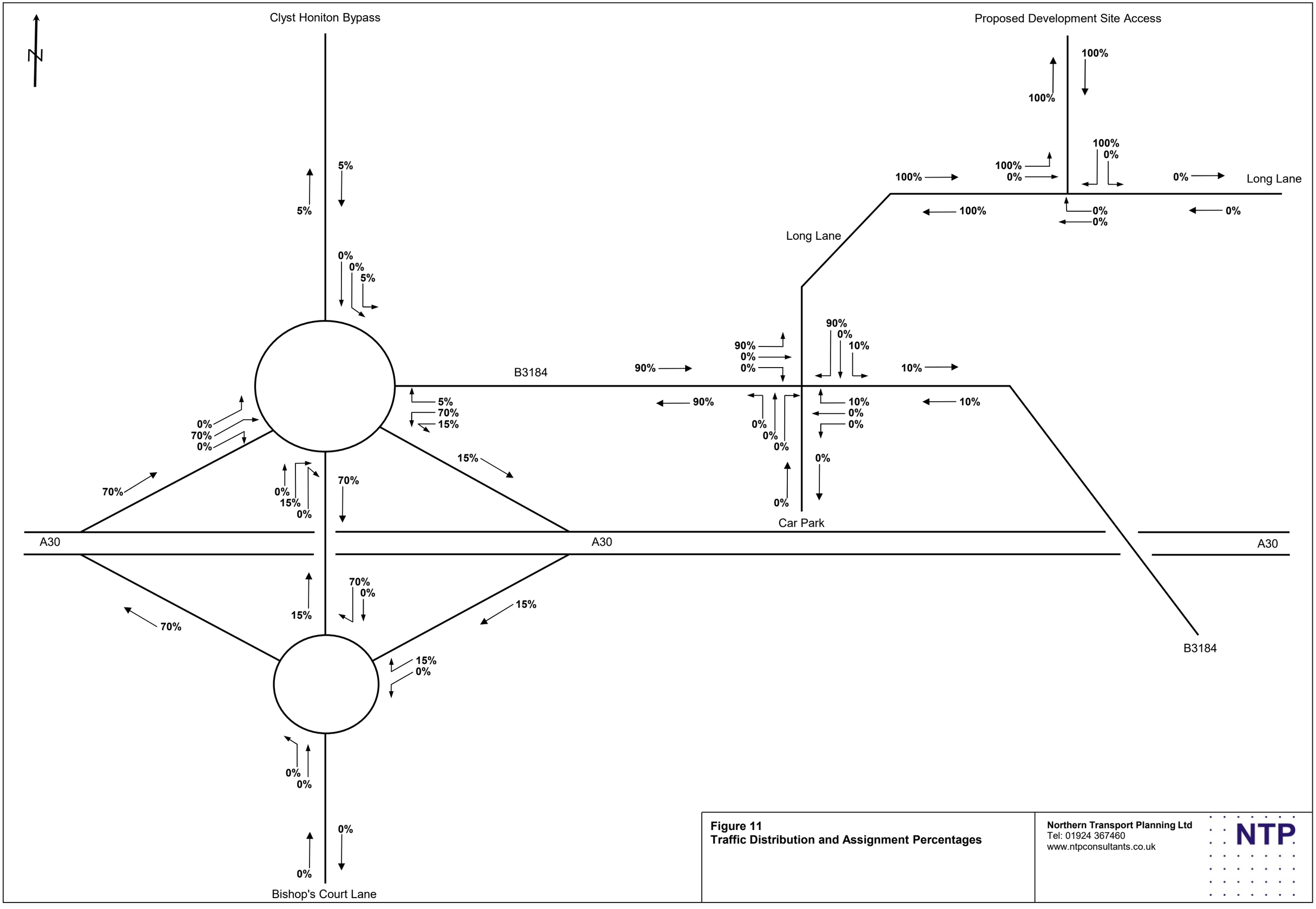


**Figure 11**
**Traffic Distribution and Assignment Percentages**

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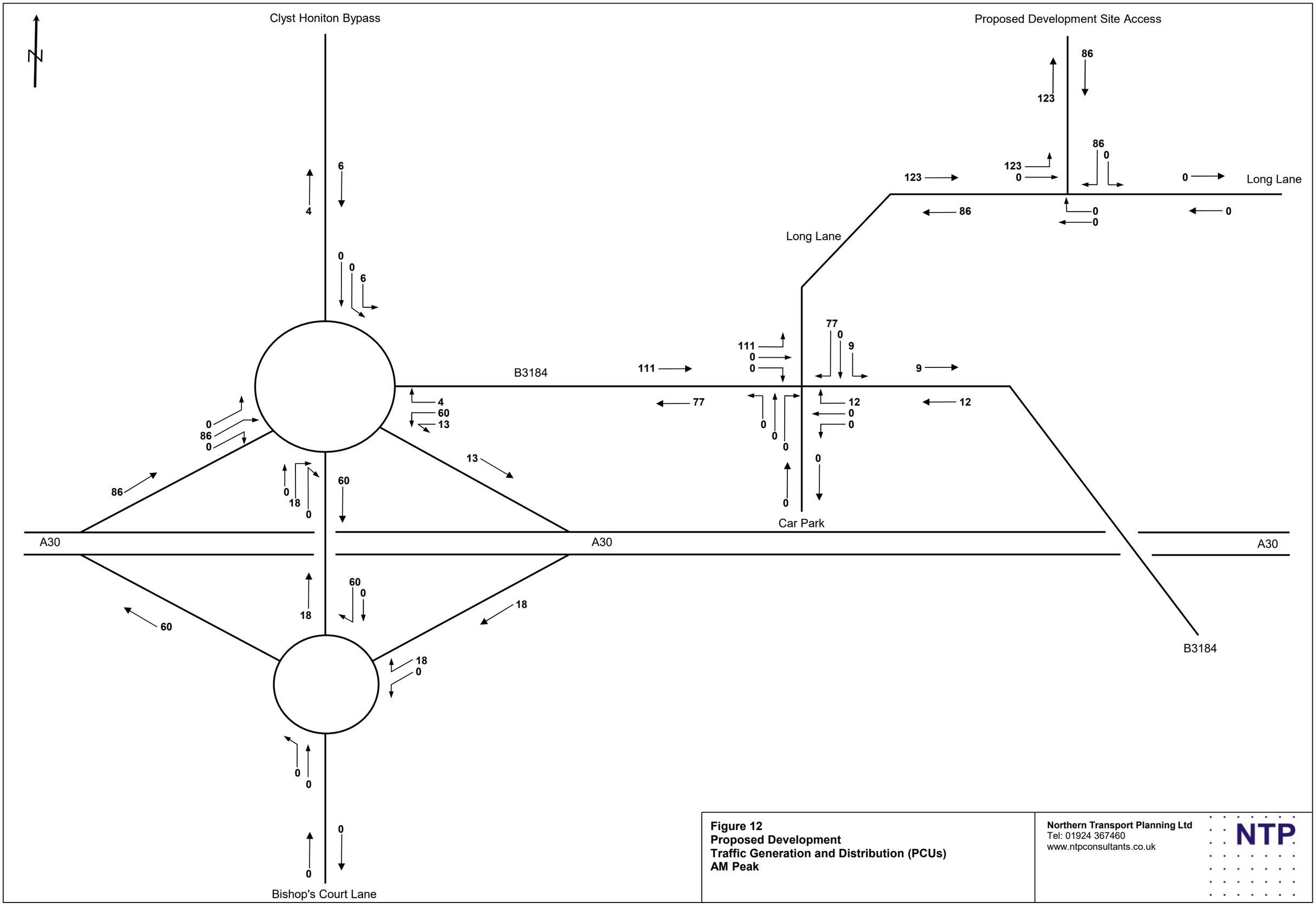


**Figure 12**
**Proposed Development**
**Traffic Generation and Distribution (PCUs)**
**AM Peak**

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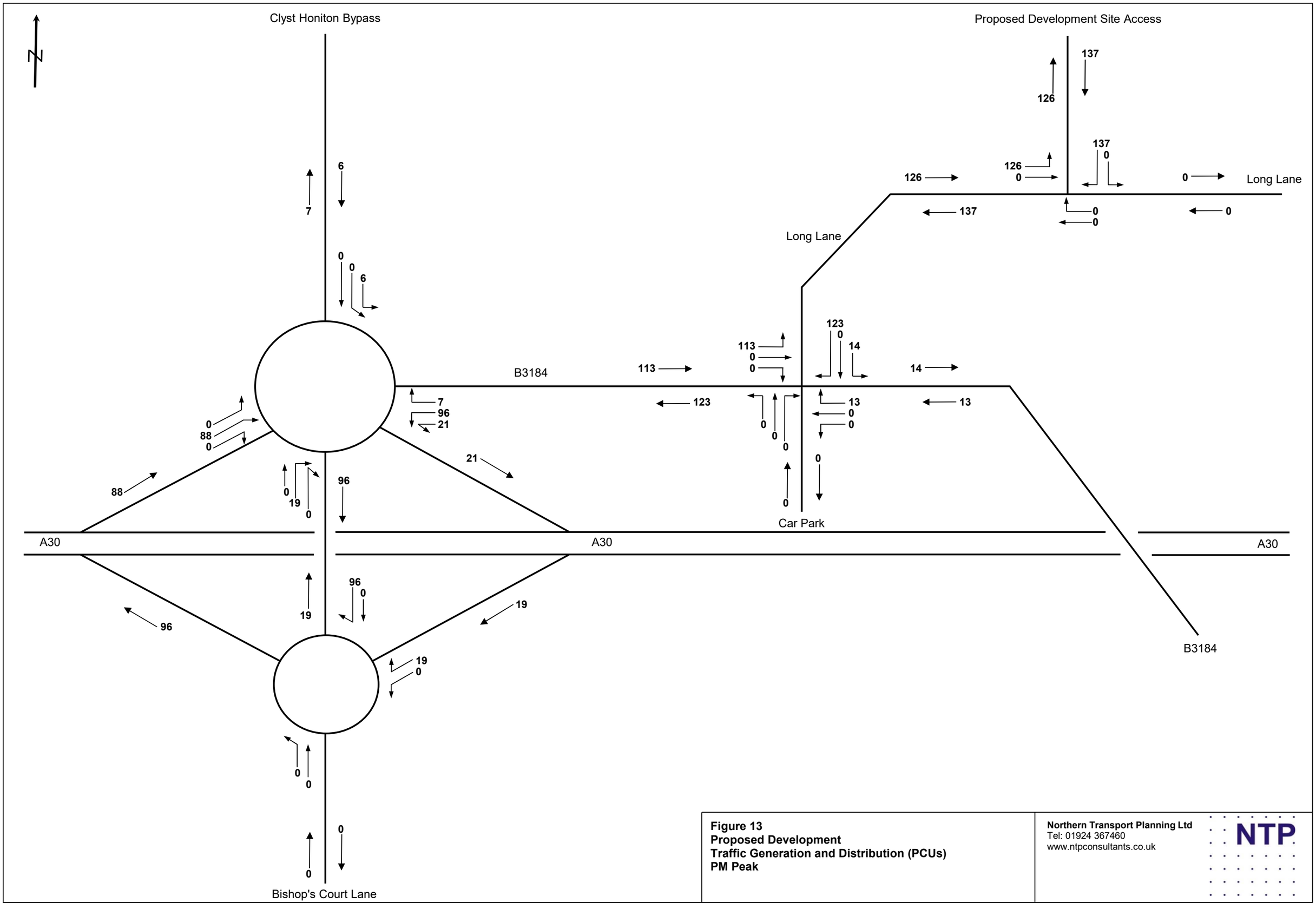


**Figure 13**
**Proposed Development**
**Traffic Generation and Distribution (PCUs)**
**PM Peak**

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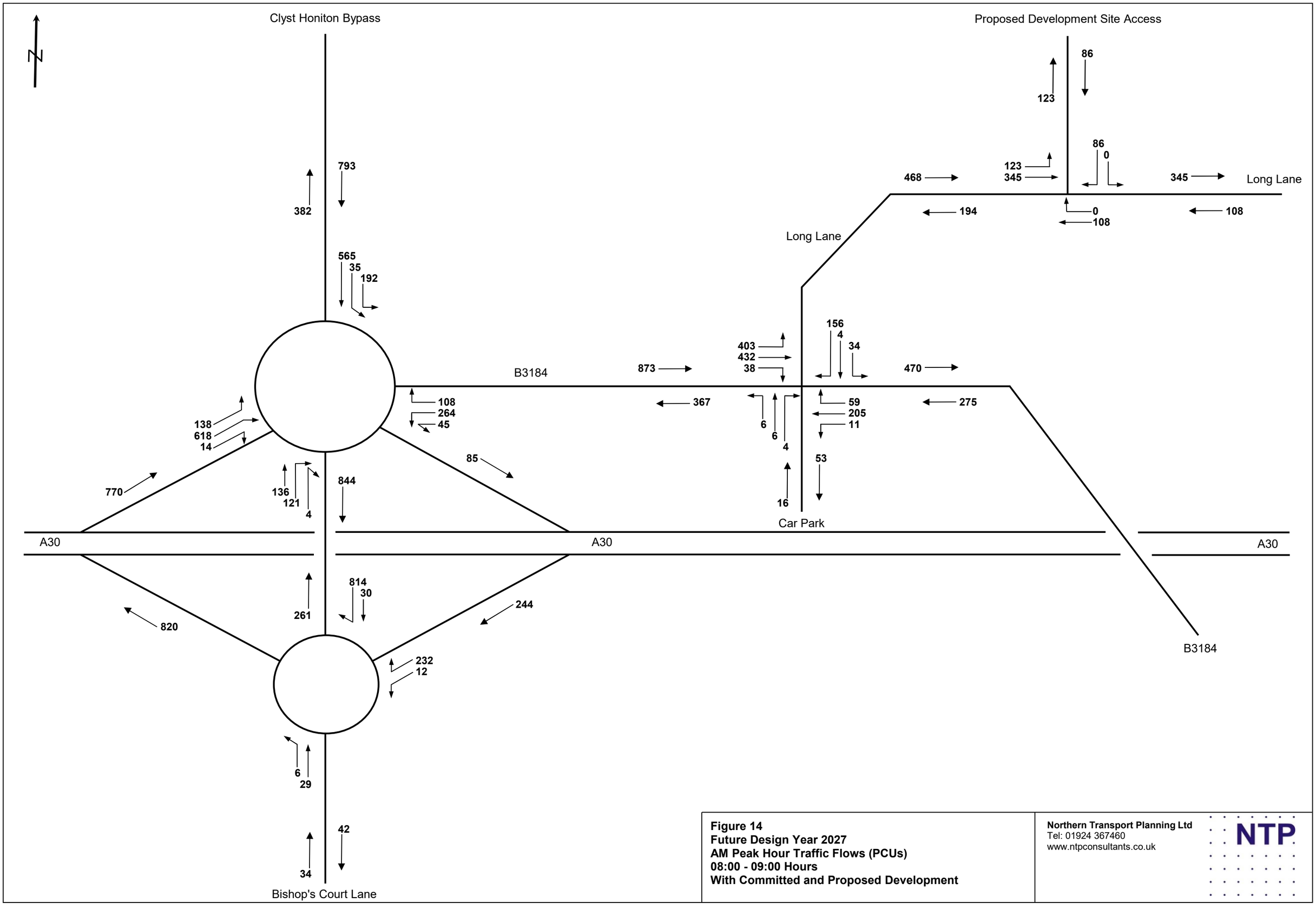


**Figure 14**
**Future Design Year 2027**
**AM Peak Hour Traffic Flows (PCUs)**
**08:00 - 09:00 Hours**
**With Committed and Proposed Development**

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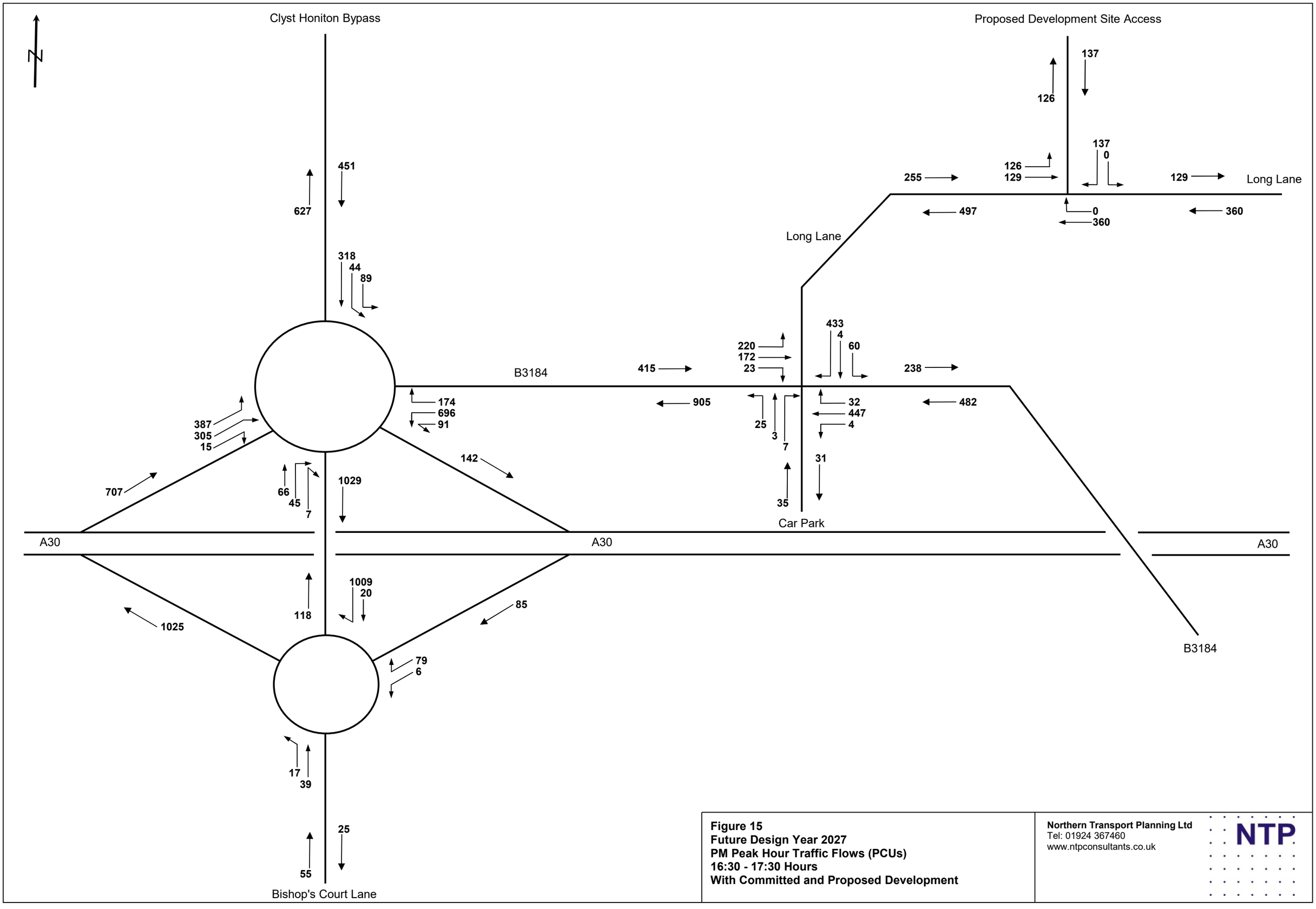


**Figure 15**
**Future Design Year 2027**
**PM Peak Hour Traffic Flows (PCUs)**
**16:30 - 17:30 Hours**
**With Committed and Proposed Development**

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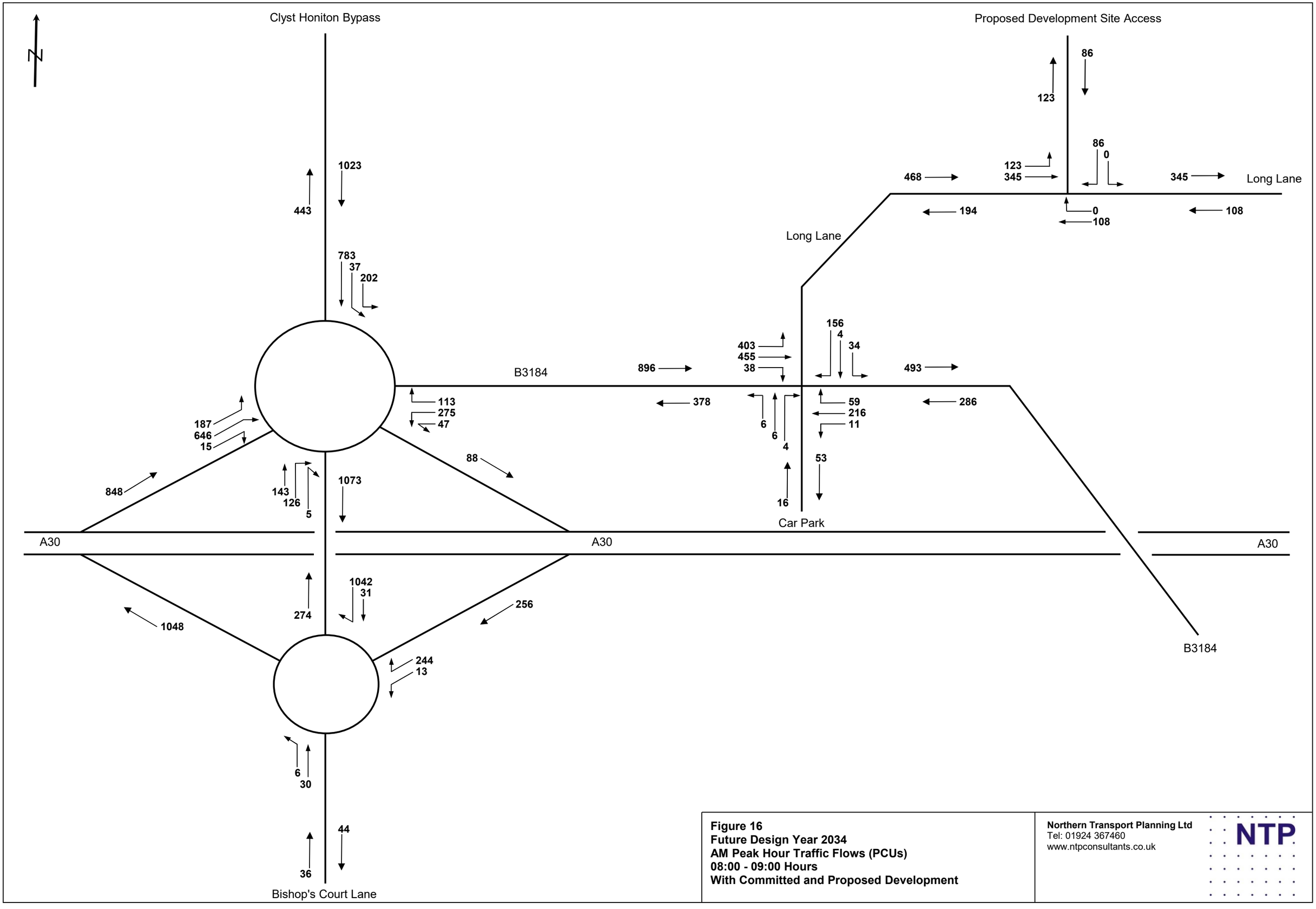


**Figure 16**
**Future Design Year 2034**
**AM Peak Hour Traffic Flows (PCUs)**
**08:00 - 09:00 Hours**
**With Committed and Proposed Development**

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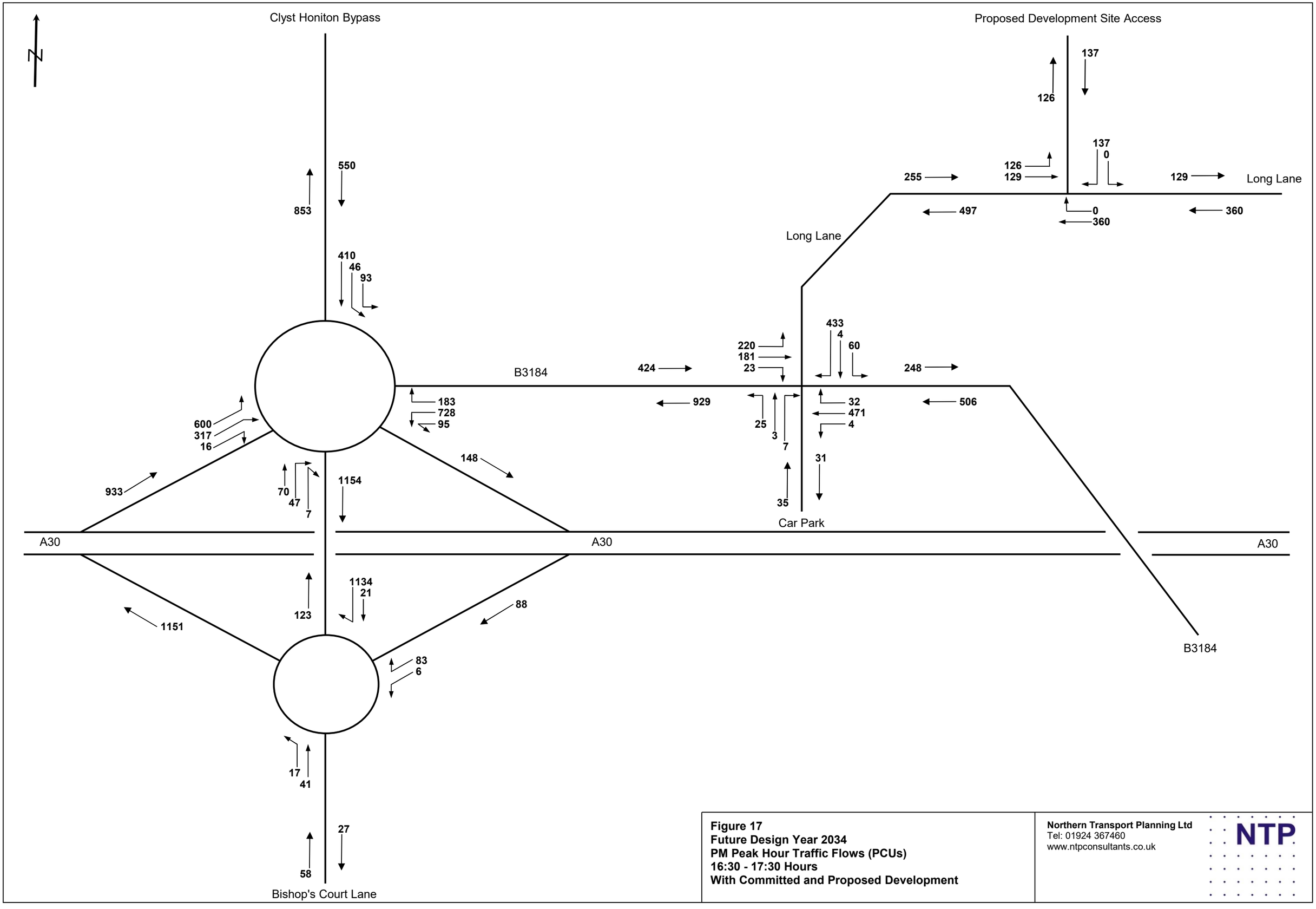


**Figure 17**
**Future Design Year 2034**
**PM Peak Hour Traffic Flows (PCUs)**
**16:30 - 17:30 Hours**
**With Committed and Proposed Development**

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# APPENDIX B

# Junctions 8

## ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]


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



**Filename:** A30 NORTHERN ROUNDABOUT 140922.arc8
**Path:** C:\Users\NTP Laptop\Desktop\ARCADY PICADY ETC\EXETER
**Report generation date:** 14/09/2022 14:10:17



## Summary of junction performance

| | 0800-0900 | | | | 1630-1730 | | | |
|---|---|---|---|---|---|---|---|---|
| | Queue (PCU) | Delay (s) | RFC | LOS | Queue (PCU) | Delay (s) | RFC | LOS |
| | EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED | | | | | | | |
| Arm A | 1.18 | 4.92 | 0.54 | A | 0.32 | 2.38 | 0.24 | A |
| Arm B | 0.28 | 2.69 | 0.22 | A | 0.87 | 3.42 | 0.47 | A |
| Arm D | 0.12 | 1.61 | 0.11 | A | 0.05 | 1.55 | 0.04 | A |
| Arm E | 0.82 | 3.94 | 0.45 | A | 0.64 | 3.38 | 0.39 | A |
| | EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED AND PROPOSED | | | | | | | |
| Arm A | 1.41 | 5.85 | 0.59 | A | 0.36 | 2.58 | 0.26 | A |
| Arm B | 0.36 | 2.87 | 0.27 | A | 1.15 | 3.93 | 0.54 | A |
| Arm D | 0.13 | 1.63 | 0.12 | A | 0.06 | 1.57 | 0.05 | A |
| Arm E | 1.06 | 4.52 | 0.52 | A | 0.82 | 3.82 | 0.45 | A |
| | EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED | | | | | | | |
| Arm A | 2.50 | 8.15 | 0.72 | A | 0.43 | 2.59 | 0.30 | A |
| Arm B | 0.37 | 3.36 | 0.27 | A | 1.08 | 4.01 | 0.52 | A |
| Arm D | 0.13 | 1.63 | 0.11 | A | 0.05 | 1.56 | 0.05 | A |
| Arm E | 1.03 | 4.45 | 0.51 | A | 1.15 | 4.48 | 0.54 | A |
| | EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED AND PROPOSED | | | | | | | |
| Arm A | 3.37 | 11.04 | 0.78 | B | 0.47 | 2.83 | 0.32 | A |
| Arm B | 0.48 | 3.64 | 0.33 | A | 1.45 | 4.73 | 0.59 | A |
| Arm D | 0.14 | 1.64 | 0.12 | A | 0.06 | 1.59 | 0.06 | A |
| Arm E | 1.34 | 5.20 | 0.57 | A | 1.50 | 5.30 | 0.60 | A |

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

*"D3 - 2027 WEEKDAY WITH COMMITTED, 0800-0900 " model duration: 07:45 - 09:15*
*"D4 - 2027 WEEKDAY WITH COMMITTED, 1630-1730" model duration: 16:15 - 17:45*

*"D5 - 2027 WEEKDAY WITH COMMITTED AND PROPOSED, 0800-0900" model duration: 07:45 - 09:15*
*"D6 - 2027 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730" model duration: 16:15 - 17:45*
*"D7 - 2034 WEEKDAY WITH COMMITTED, 0800-0900" model duration: 07:45 - 09:15*
*"D8 - 2034 WEEKDAY WITH COMMITTED, 1630-1730" model duration: 16:15 - 17:45*
*"D9 - 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 0800-0900" model duration: 07:45 - 09:15*
*"D10 - 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730" model duration: 16:15 - 17:45*

*Run using Junctions 8.0.2.316 at 14/09/2022 14:10:13*

## File summary

### File Description

| | |
|---|---|
| **Title** | A30 NORTHERN ROUNDABOUT |
| **Location** | EXETER |
| **Site Number** | |
| **Date** | 14/09/2022 |
| **Version** | |
| **Status** | AS EXISTING BUT WITH A30 EXIT SLIP MODELLED AS SINGLE LANE |
| **Identifier** | |
| **Client** | |
| **Jobnumber** | |
| **Enumerator** | |
| **Description** | |

## Analysis Options

| Vehicle Length (m) | Do Queue Variations | Calculate Residual Capacity | Residual Capacity Criteria Type | RFC Threshold | Average Delay Threshold (s) | Queue Threshold (PCU) |
|---|---|---|---|---|---|---|
| 5.75 | | | N/A | 0.85 | 36.00 | 20.00 |

## Units

| Distance Units | Speed Units | Traffic Units Input | Traffic Units Results | Flow Units | Average Delay Units | Total Delay Units | Rate Of Delay Units |
|---|---|---|---|---|---|---|---|
| m | kph | PCU | PCU | perHour | s | -Min | perMin |

# EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED, 0800-0900

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2027 WEEKDAY WITH COMMITTED, 0800-0900 | 2027 WEEKDAY WITH COMMITTED | 0800-0900 | | ONE HOUR | 07:45 | 09:15 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 NORTHERN ROUNDABOUT | Roundabout | A,B,C,D,E | ✓ | | 3.83 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | CLYST HONITON BYPASS (N) | |
| **B** | B3184 (E) | |
| **C** | A30 EASTBOUND ENTRY SLIP | |
| **D** | B3184 (S) | |
| **E** | A30 EASTBOUND EXIT SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.10 | 6.00 | 5.25 | 15.00 | 70.00 | 43.00 | |
| **B** | 3.20 | 7.30 | 12.61 | 15.00 | 70.00 | 33.00 | |
| **C** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |
| **D** | 4.50 | 6.80 | 11.02 | 15.00 | 70.00 | 29.00 | |
| **E** | 3.65 | 3.65 | 0.00 | 30.00 | 70.00 | 23.00 | |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |
| **E** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |
| **E** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| A | | (calculated) | (calculated) | 0.955 | 2283.057 |
| B | | (calculated) | (calculated) | 1.013 | 2403.423 |
| C | | (calculated) | (calculated) | Exit-only | Exit-only |
| D | | (calculated) | (calculated) | 1.095 | 2626.516 |
| E | | (calculated) | (calculated) | 0.918 | 2016.444 |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| A | ONE HOUR | ✓ | 786.00 | 100.000 |
| B | ONE HOUR | ✓ | 340.00 | 100.000 |
| C | Exit-only | ✓ | Exit-only | Exit-only |
| D | ONE HOUR | ✓ | 243.00 | 100.000 |
| E | ONE HOUR | ✓ | 683.00 | 100.000 |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| 07:45-08:00 | A | 591.74 | 591.74 | | |
| 07:45-08:00 | B | 255.97 | 255.97 | | |
| 07:45-08:00 | C | Exit-only | 0.00 | | |
| 07:45-08:00 | D | 182.94 | 182.94 | | |
| 07:45-08:00 | E | 514.20 | 514.20 | | |
| 08:00-08:15 | A | 706.60 | 706.60 | | |
| 08:00-08:15 | B | 305.65 | 305.65 | | |
| 08:00-08:15 | C | Exit-only | 0.00 | | |

| | | | | | |
|---|---|---|---|---|---|
| 08:00-08:15 | D | 218.45 | 218.45 | | |
| 08:00-08:15 | E | 614.00 | 614.00 | | |
| 08:15-08:30 | A | 865.40 | 865.40 | | |
| 08:15-08:30 | B | 374.35 | 374.35 | | |
| 08:15-08:30 | C | Exit-only | 0.00 | | |
| 08:15-08:30 | D | 267.55 | 267.55 | | |
| 08:15-08:30 | E | 752.00 | 752.00 | | |
| 08:30-08:45 | A | 865.40 | 865.40 | | |
| 08:30-08:45 | B | 374.35 | 374.35 | | |
| 08:30-08:45 | C | Exit-only | 0.00 | | |
| 08:30-08:45 | D | 267.55 | 267.55 | | |
| 08:30-08:45 | E | 752.00 | 752.00 | | |
| 08:45-09:00 | A | 706.60 | 706.60 | | |
| 08:45-09:00 | B | 305.65 | 305.65 | | |
| 08:45-09:00 | C | Exit-only | 0.00 | | |
| 08:45-09:00 | D | 218.45 | 218.45 | | |
| 08:45-09:00 | E | 614.00 | 614.00 | | |
| 09:00-09:15 | A | 591.74 | 591.74 | | |
| 09:00-09:15 | B | 255.97 | 255.97 | | |
| 09:00-09:15 | C | Exit-only | 0.00 | | |
| 09:00-09:15 | D | 182.94 | 182.94 | | |
| 09:00-09:15 | E | 514.20 | 514.20 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 186.000 | 35.000 | 565.000 | 0.000 |
| | B | 104.000 | 0.000 | 32.000 | 204.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 136.000 | 103.000 | 4.000 | 0.000 | 0.000 |
| | E | 138.000 | 531.000 | 0.000 | 14.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.00 | 0.24 | 0.04 | 0.72 | 0.00 |
| | B | 0.31 | 0.00 | 0.09 | 0.60 | 0.00 |
| | C | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| | D | 0.56 | 0.42 | 0.02 | 0.00 | 0.00 |
| | E | 0.20 | 0.78 | 0.00 | 0.02 | 0.00 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | E | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | E | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.54 | 4.92 | 1.18 | A |
| B | 0.22 | 2.69 | 0.28 | A |
| C | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 0.11 | 1.61 | 0.12 | A |
| E | 0.45 | 3.94 | 0.82 | A |

## Main Results for each time segment

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 591.74 | 589.82 | 489.43 | 0.00 | 1815.57 | 0.326 | 0.48 | 2.937 | A |
| B | 255.97 | 255.36 | 463.76 | 0.00 | 1933.54 | 0.132 | 0.15 | 2.145 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 182.94 | 182.63 | 78.11 | 0.00 | 2540.98 | 0.072 | 0.08 | 1.526 | A |
| E | 514.20 | 512.58 | 260.74 | 0.00 | 1777.13 | 0.289 | 0.41 | 2.843 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 706.60 | 705.76 | 585.65 | 0.00 | 1723.66 | 0.410 | 0.69 | 3.533 | A |
| B | 305.65 | 305.47 | 554.92 | 0.00 | 1841.17 | 0.166 | 0.20 | 2.344 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 218.45 | 218.38 | 93.44 | 0.00 | 2524.20 | 0.087 | 0.09 | 1.560 | A |
| E | 614.00 | 613.44 | 311.82 | 0.00 | 1730.25 | 0.355 | 0.55 | 3.221 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 865.40 | 863.49 | 716.96 | 0.00 | 1598.24 | 0.541 | 1.17 | 4.887 | A |
| B | 374.35 | 374.03 | 678.95 | 0.00 | 1715.50 | 0.218 | 0.28 | 2.683 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 267.55 | 267.45 | 114.41 | 0.00 | 2501.23 | 0.107 | 0.12 | 1.610 | A |
| E | 752.00 | 750.92 | 381.86 | 0.00 | 1665.97 | 0.451 | 0.82 | 3.929 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 865.40 | 865.37 | 717.85 | 0.00 | 1597.38 | 0.542 | 1.18 | 4.917 | A |
| B | 374.35 | 374.34 | 680.41 | 0.00 | 1714.03 | 0.218 | 0.28 | 2.686 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 267.55 | 267.55 | 114.51 | 0.00 | 2501.13 | 0.107 | 0.12 | 1.611 | A |
| E | 752.00 | 751.98 | 382.05 | 0.00 | 1665.79 | 0.451 | 0.82 | 3.939 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 706.60 | 708.50 | 587.03 | 0.00 | 1722.34 | 0.410 | 0.70 | 3.559 | A |
| B | 305.65 | 305.97 | 557.04 | 0.00 | 1839.02 | 0.166 | 0.20 | 2.348 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 218.45 | 218.55 | 93.59 | 0.00 | 2524.03 | 0.087 | 0.09 | 1.563 | A |
| E | 614.00 | 615.07 | 312.14 | 0.00 | 1729.96 | 0.355 | 0.55 | 3.231 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 591.74 | 592.60 | 491.35 | 0.00 | 1813.73 | 0.326 | 0.49 | 2.949 | A |
| **B** | 255.97 | 256.16 | 465.93 | 0.00 | 1931.34 | 0.133 | 0.15 | 2.150 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 182.94 | 183.01 | 78.35 | 0.00 | 2540.71 | 0.072 | 0.08 | 1.528 | A |
| **E** | 514.20 | 514.77 | 261.37 | 0.00 | 1776.56 | 0.289 | 0.41 | 2.856 | A |

# EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED, 1630-1730

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2027 WEEKDAY WITH COMMITTED, 1630-1730 | 2027 WEEKDAY WITH COMMITTED | 1630-1730 | | ONE HOUR | 16:15 | 17:45 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 NORTHERN ROUNDABOUT | Roundabout | A,B,C,D,E | ✓ | | 3.08 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | CLYST HONITON BYPASS (N) | |
| **B** | B3184 (E) | |
| **C** | A30 EASTBOUND ENTRY SLIP | |
| **D** | B3184 (S) | |
| **E** | A30 EASTBOUND EXIT SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| A | 4.10 | 6.00 | 5.25 | 15.00 | 70.00 | 43.00 | |
| B | 3.20 | 7.30 | 12.61 | 15.00 | 70.00 | 33.00 | |
| C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |
| D | 4.50 | 6.80 | 11.02 | 15.00 | 70.00 | 29.00 | |
| E | 3.65 | 3.65 | 0.00 | 30.00 | 70.00 | 23.00 | |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| A | 0.00 | 0.00 |
| B | 0.00 | 0.00 |
| C | 0.00 | 0.00 |
| D | 0.00 | 0.00 |
| E | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| A | None |
| B | None |
| C | None |
| D | None |
| E | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| A | | (calculated) | (calculated) | 0.955 | 2283.057 |
| B | | (calculated) | (calculated) | 1.013 | 2403.423 |
| C | | (calculated) | (calculated) | Exit-only | Exit-only |
| D | | (calculated) | (calculated) | 1.095 | 2626.516 |
| E | | (calculated) | (calculated) | 0.918 | 2016.444 |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| **A** | ONE HOUR | ✓ | 445.00 | 100.000 |
| **B** | ONE HOUR | ✓ | 837.00 | 100.000 |
| **C** | Exit-only | ✓ | Exit-only | Exit-only |
| **D** | ONE HOUR | ✓ | 99.00 | 100.000 |
| **E** | ONE HOUR | ✓ | 619.00 | 100.000 |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| **16:15-16:30** | **A** | 335.02 | 335.02 | | |
| **16:15-16:30** | **B** | 630.14 | 630.14 | | |
| **16:15-16:30** | **C** | Exit-only | 0.00 | | |
| **16:15-16:30** | **D** | 74.53 | 74.53 | | |
| **16:15-16:30** | **E** | 466.02 | 466.02 | | |
| **16:30-16:45** | **A** | 400.05 | 400.05 | | |
| **16:30-16:45** | **B** | 752.45 | 752.45 | | |
| **16:30-16:45** | **C** | Exit-only | 0.00 | | |
| **16:30-16:45** | **D** | 89.00 | 89.00 | | |
| **16:30-16:45** | **E** | 556.47 | 556.47 | | |
| **16:45-17:00** | **A** | 489.95 | 489.95 | | |
| **16:45-17:00** | **B** | 921.55 | 921.55 | | |
| **16:45-17:00** | **C** | Exit-only | 0.00 | | |
| **16:45-17:00** | **D** | 109.00 | 109.00 | | |
| **16:45-17:00** | **E** | 681.53 | 681.53 | | |
| **17:00-17:15** | **A** | 489.95 | 489.95 | | |
| **17:00-17:15** | **B** | 921.55 | 921.55 | | |
| **17:00-17:15** | **C** | Exit-only | 0.00 | | |
| **17:00-17:15** | **D** | 109.00 | 109.00 | | |
| **17:00-17:15** | **E** | 681.53 | 681.53 | | |
| **17:15-17:30** | **A** | 400.05 | 400.05 | | |
| **17:15-17:30** | **B** | 752.45 | 752.45 | | |

| | | | | | |
|---|---|---|---|---|---|
| **17:15-17:30** | **C** | Exit-only | 0.00 | | |
| **17:15-17:30** | **D** | 89.00 | 89.00 | | |
| **17:15-17:30** | **E** | 556.47 | 556.47 | | |
| **17:30-17:45** | **A** | 335.02 | 335.02 | | |
| **17:30-17:45** | **B** | 630.14 | 630.14 | | |
| **17:30-17:45** | **C** | Exit-only | 0.00 | | |
| **17:30-17:45** | **D** | 74.53 | 74.53 | | |
| **17:30-17:45** | **E** | 466.02 | 466.02 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | **A** | **B** | **C** | **D** | **E** |
| **From** | **A** | 0.000 | 83.000 | 44.000 | 318.000 | 0.000 |
| | **B** | 167.000 | 0.000 | 70.000 | 600.000 | 0.000 |
| | **C** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | **D** | 66.000 | 26.000 | 7.000 | 0.000 | 0.000 |
| | **E** | 387.000 | 217.000 | 0.000 | 15.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | **A** | **B** | **C** | **D** | **E** |
| **From** | **A** | 0.00 | 0.19 | 0.10 | 0.71 | 0.00 |
| | **B** | 0.20 | 0.00 | 0.08 | 0.72 | 0.00 |
| | **C** | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| | **D** | 0.67 | 0.26 | 0.07 | 0.00 | 0.00 |
| | **E** | 0.63 | 0.35 | 0.00 | 0.02 | 0.00 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | **A** | **B** | **C** | **D** | **E** |
| **From** | **A** | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | **B** | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | **C** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | **D** | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | **E** | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | E | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.24 | 2.38 | 0.32 | A |
| B | 0.47 | 3.42 | 0.87 | A |
| C | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 0.04 | 1.55 | 0.05 | A |
| E | 0.39 | 3.38 | 0.64 | A |

## Main Results for each time segment

### Main results: (16:15-16:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 335.02 | 334.26 | 198.96 | 0.00 | 2093.02 | 0.160 | 0.19 | 2.045 | A |
| B | 630.14 | 628.44 | 288.44 | 0.00 | 2111.18 | 0.298 | 0.42 | 2.426 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 74.53 | 74.41 | 125.39 | 0.00 | 2489.21 | 0.030 | 0.03 | 1.490 | A |
| E | 466.02 | 464.66 | 199.80 | 0.00 | 1833.07 | 0.254 | 0.34 | 2.628 | A |

### Main results: (16:30-16:45)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 400.05 | 399.84 | 238.06 | 0.00 | 2055.67 | 0.195 | 0.24 | 2.174 | A |
| B | 752.45 | 751.84 | 345.03 | 0.00 | 2053.83 | 0.366 | 0.58 | 2.763 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 89.00 | 88.97 | 150.01 | 0.00 | 2462.25 | 0.036 | 0.04 | 1.516 | A |
| E | 556.47 | 556.04 | 238.98 | 0.00 | 1797.10 | 0.310 | 0.45 | 2.901 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 489.95 | 489.63 | 291.47 | 0.00 | 2004.65 | 0.244 | 0.32 | 2.376 | A |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **B** | 921.55 | 920.38 | 422.51 | 0.00 | 1975.34 | 0.467 | 0.87 | 3.410 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 109.00 | 108.96 | 183.64 | 0.00 | 2425.42 | 0.045 | 0.05 | 1.553 | A |
| **E** | 681.53 | 680.78 | 292.60 | 0.00 | 1747.89 | 0.390 | 0.64 | 3.372 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 489.95 | 489.95 | 291.77 | 0.00 | 2004.37 | 0.244 | 0.32 | 2.376 | A |
| **B** | 921.55 | 921.54 | 422.79 | 0.00 | 1975.05 | 0.467 | 0.87 | 3.416 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 109.00 | 109.00 | 183.87 | 0.00 | 2425.17 | 0.045 | 0.05 | 1.553 | A |
| **E** | 681.53 | 681.52 | 292.87 | 0.00 | 1747.65 | 0.390 | 0.64 | 3.375 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 400.05 | 400.37 | 238.52 | 0.00 | 2055.23 | 0.195 | 0.24 | 2.177 | A |
| **B** | 752.45 | 753.61 | 345.49 | 0.00 | 2053.37 | 0.366 | 0.58 | 2.773 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 89.00 | 89.04 | 150.36 | 0.00 | 2461.86 | 0.036 | 0.04 | 1.516 | A |
| **E** | 556.47 | 557.21 | 239.40 | 0.00 | 1796.72 | 0.310 | 0.45 | 2.907 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 335.02 | 335.22 | 199.68 | 0.00 | 2092.33 | 0.160 | 0.19 | 2.048 | A |
| **B** | 630.14 | 630.75 | 289.27 | 0.00 | 2110.33 | 0.299 | 0.43 | 2.433 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 74.53 | 74.56 | 125.85 | 0.00 | 2488.70 | 0.030 | 0.03 | 1.490 | A |
| **E** | 466.02 | 466.45 | 200.41 | 0.00 | 1832.51 | 0.254 | 0.34 | 2.637 | A |

# EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED AND PROPOSED, 0800-0900

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2027 WEEKDAY WITH COMMITTED AND | 2027 WEEKDAY WITH COMMITTED AND | 0800- | | ONE | 07:45 | 09:15 | 90 | 15 | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| PROPOSED, 0800-0900 | PROPOSED | 0900 | | HOUR | | | | | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 NORTHERN ROUNDABOUT | Roundabout | A,B,C,D,E | ✓ | | 4.35 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | CLYST HONITON BYPASS (N) | |
| **B** | B3184 (E) | |
| **C** | A30 EASTBOUND ENTRY SLIP | |
| **D** | B3184 (S) | |
| **E** | A30 EASTBOUND EXIT SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.10 | 6.00 | 5.25 | 15.00 | 70.00 | 43.00 | |
| **B** | 3.20 | 7.30 | 12.61 | 15.00 | 70.00 | 33.00 | |
| **C** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |
| **D** | 4.50 | 6.80 | 11.02 | 15.00 | 70.00 | 29.00 | |
| **E** | 3.65 | 3.65 | 0.00 | 30.00 | 70.00 | 23.00 | |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |
| **E** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |
| **E** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| A | | (calculated) | (calculated) | 0.955 | 2283.057 |
| B | | (calculated) | (calculated) | 1.013 | 2403.423 |
| C | | (calculated) | (calculated) | Exit-only | Exit-only |
| D | | (calculated) | (calculated) | 1.095 | 2626.516 |
| E | | (calculated) | (calculated) | 0.918 | 2016.444 |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| A | ONE HOUR | ✓ | 792.00 | 100.000 |
| B | ONE HOUR | ✓ | 417.00 | 100.000 |
| C | Exit-only | ✓ | Exit-only | Exit-only |
| D | ONE HOUR | ✓ | 261.00 | 100.000 |
| E | ONE HOUR | ✓ | 770.00 | 100.000 |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| 07:45-08:00 | A | 596.26 | 596.26 | | |
| 07:45-08:00 | B | 313.94 | 313.94 | | |
| 07:45-08:00 | C | Exit-only | 0.00 | | |
| 07:45-08:00 | D | 196.49 | 196.49 | | |
| 07:45-08:00 | E | 579.70 | 579.70 | | |
| 08:00-08:15 | A | 711.99 | 711.99 | | |
| 08:00-08:15 | B | 374.87 | 374.87 | | |

| | | | | | |
|---|---|---|---|---|---|
| **08:00-08:15** | **C** | Exit-only | 0.00 | | |
| **08:00-08:15** | **D** | 234.63 | 234.63 | | |
| **08:00-08:15** | **E** | 692.21 | 692.21 | | |
| **08:15-08:30** | **A** | 872.01 | 872.01 | | |
| **08:15-08:30** | **B** | 459.13 | 459.13 | | |
| **08:15-08:30** | **C** | Exit-only | 0.00 | | |
| **08:15-08:30** | **D** | 287.37 | 287.37 | | |
| **08:15-08:30** | **E** | 847.79 | 847.79 | | |
| **08:30-08:45** | **A** | 872.01 | 872.01 | | |
| **08:30-08:45** | **B** | 459.13 | 459.13 | | |
| **08:30-08:45** | **C** | Exit-only | 0.00 | | |
| **08:30-08:45** | **D** | 287.37 | 287.37 | | |
| **08:30-08:45** | **E** | 847.79 | 847.79 | | |
| **08:45-09:00** | **A** | 711.99 | 711.99 | | |
| **08:45-09:00** | **B** | 374.87 | 374.87 | | |
| **08:45-09:00** | **C** | Exit-only | 0.00 | | |
| **08:45-09:00** | **D** | 234.63 | 234.63 | | |
| **08:45-09:00** | **E** | 692.21 | 692.21 | | |
| **09:00-09:15** | **A** | 596.26 | 596.26 | | |
| **09:00-09:15** | **B** | 313.94 | 313.94 | | |
| **09:00-09:15** | **C** | Exit-only | 0.00 | | |
| **09:00-09:15** | **D** | 196.49 | 196.49 | | |
| **09:00-09:15** | **E** | 579.70 | 579.70 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | **A** | **B** | **C** | **D** | **E** |
| **From** | **A** | 0.000 | 192.000 | 35.000 | 565.000 | 0.000 |
| | **B** | 108.000 | 0.000 | 45.000 | 264.000 | 0.000 |
| | **C** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

| | | | | | | |
|---|---|---|---|---|---|---|
| | D | 136.000 | 121.000 | 4.000 | 0.000 | 0.000 |
| | E | 138.000 | 618.000 | 0.000 | 14.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.00 | 0.24 | 0.04 | 0.71 | 0.00 |
| | B | 0.26 | 0.00 | 0.11 | 0.63 | 0.00 |
| | C | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| | D | 0.52 | 0.46 | 0.02 | 0.00 | 0.00 |
| | E | 0.18 | 0.80 | 0.00 | 0.02 | 0.00 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | E | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | E | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.59 | 5.85 | 1.41 | A |
| B | 0.27 | 2.87 | 0.36 | A |
| C | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 0.12 | 1.63 | 0.13 | A |
| E | 0.52 | 4.52 | 1.06 | A |

## Main Results for each time segment

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 596.26 | 594.19 | 568.15 | 0.00 | 1740.38 | 0.343 | 0.52 | 3.135 | A |
| B | 313.94 | 313.17 | 463.65 | 0.00 | 1933.65 | 0.162 | 0.19 | 2.220 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 196.49 | 196.16 | 81.11 | 0.00 | 2537.70 | 0.077 | 0.08 | 1.536 | A |
| E | 579.70 | 577.74 | 277.27 | 0.00 | 1761.97 | 0.329 | 0.49 | 3.034 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 711.99 | 711.00 | 679.88 | 0.00 | 1633.66 | 0.436 | 0.77 | 3.898 | A |
| B | 374.87 | 374.63 | 554.80 | 0.00 | 1841.29 | 0.204 | 0.25 | 2.454 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 234.63 | 234.56 | 97.03 | 0.00 | 2520.27 | 0.093 | 0.10 | 1.574 | A |
| E | 692.21 | 691.47 | 331.58 | 0.00 | 1712.11 | 0.404 | 0.67 | 3.526 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 872.01 | 869.50 | 832.17 | 0.00 | 1488.19 | 0.586 | 1.39 | 5.796 | A |
| B | 459.13 | 458.69 | 678.50 | 0.00 | 1715.96 | 0.268 | 0.36 | 2.863 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 287.37 | 287.26 | 118.80 | 0.00 | 2496.43 | 0.115 | 0.13 | 1.628 | A |
| E | 847.79 | 846.27 | 406.05 | 0.00 | 1643.76 | 0.516 | 1.05 | 4.506 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 872.01 | 871.96 | 833.45 | 0.00 | 1486.97 | 0.586 | 1.41 | 5.853 | A |
| B | 459.13 | 459.12 | 680.39 | 0.00 | 1714.04 | 0.268 | 0.36 | 2.868 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 287.37 | 287.37 | 118.91 | 0.00 | 2496.30 | 0.115 | 0.13 | 1.628 | A |
| E | 847.79 | 847.76 | 406.27 | 0.00 | 1643.56 | 0.516 | 1.06 | 4.523 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 711.99 | 714.50 | 681.82 | 0.00 | 1631.81 | 0.436 | 0.78 | 3.936 | A |
| B | 374.87 | 375.31 | 557.50 | 0.00 | 1838.56 | 0.204 | 0.26 | 2.460 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 234.63 | 234.74 | 97.20 | 0.00 | 2520.07 | 0.093 | 0.10 | 1.577 | A |
| E | 692.21 | 693.72 | 331.94 | 0.00 | 1711.78 | 0.404 | 0.68 | 3.540 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 596.26 | 597.28 | 570.57 | 0.00 | 1738.07 | 0.343 | 0.52 | 3.160 | A |
| B | 313.94 | 314.19 | 466.05 | 0.00 | 1931.22 | 0.163 | 0.19 | 2.228 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 196.49 | 196.57 | 81.37 | 0.00 | 2537.41 | 0.077 | 0.08 | 1.537 | A |
| E | 579.70 | 580.46 | 277.94 | 0.00 | 1761.35 | 0.329 | 0.49 | 3.049 | A |

# EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2027 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730 | 2027 WEEKDAY WITH COMMITTED AND PROPOSED | 1630-1730 | | ONE HOUR | 16:15 | 17:45 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 NORTHERN ROUNDABOUT | Roundabout | A,B,C,D,E | ✓ | | 3.50 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| A | CLYST HONITON BYPASS (N) | |
| B | B3184 (E) | |
| C | A30 EASTBOUND ENTRY SLIP | |
| D | B3184 (S) | |
| | | |

| | | |
|---|---|---|
| **E** | A30 EASTBOUND EXIT SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.10 | 6.00 | 5.25 | 15.00 | 70.00 | 43.00 | |
| **B** | 3.20 | 7.30 | 12.61 | 15.00 | 70.00 | 33.00 | |
| **C** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |
| **D** | 4.50 | 6.80 | 11.02 | 15.00 | 70.00 | 29.00 | |
| **E** | 3.65 | 3.65 | 0.00 | 30.00 | 70.00 | 23.00 | |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |
| **E** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |
| **E** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 0.955 | 2283.057 |
| **B** | | (calculated) | (calculated) | 1.013 | 2403.423 |
| **C** | | (calculated) | (calculated) | Exit-only | Exit-only |
| **D** | | (calculated) | (calculated) | 1.095 | 2626.516 |
| **E** | | (calculated) | (calculated) | 0.918 | 2016.444 |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| A | ONE HOUR | ✓ | 451.00 | 100.000 |
| B | ONE HOUR | ✓ | 961.00 | 100.000 |
| C | Exit-only | ✓ | Exit-only | Exit-only |
| D | ONE HOUR | ✓ | 118.00 | 100.000 |
| E | ONE HOUR | ✓ | 707.00 | 100.000 |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| 16:15-16:30 | A | 339.54 | 339.54 | | |
| 16:15-16:30 | B | 723.49 | 723.49 | | |
| 16:15-16:30 | C | Exit-only | 0.00 | | |
| 16:15-16:30 | D | 88.84 | 88.84 | | |
| 16:15-16:30 | E | 532.27 | 532.27 | | |
| 16:30-16:45 | A | 405.44 | 405.44 | | |
| 16:30-16:45 | B | 863.92 | 863.92 | | |
| 16:30-16:45 | C | Exit-only | 0.00 | | |
| 16:30-16:45 | D | 106.08 | 106.08 | | |
| 16:30-16:45 | E | 635.58 | 635.58 | | |
| 16:45-17:00 | A | 496.56 | 496.56 | | |
| 16:45-17:00 | B | 1058.08 | 1058.08 | | |
| 16:45-17:00 | C | Exit-only | 0.00 | | |
| 16:45-17:00 | D | 129.92 | 129.92 | | |
| 16:45-17:00 | E | 778.42 | 778.42 | | |
| 17:00-17:15 | A | 496.56 | 496.56 | | |
| 17:00-17:15 | B | 1058.08 | 1058.08 | | |
| 17:00-17:15 | C | Exit-only | 0.00 | | |
| 17:00-17:15 | D | 129.92 | 129.92 | | |
| 17:00-17:15 | E | 778.42 | 778.42 | | |
| 17:15- | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 17:30 | A | 405.44 | 405.44 | | |
| 17:15-17:30 | B | 863.92 | 863.92 | | |
| 17:15-17:30 | C | Exit-only | 0.00 | | |
| 17:15-17:30 | D | 106.08 | 106.08 | | |
| 17:15-17:30 | E | 635.58 | 635.58 | | |
| 17:30-17:45 | A | 339.54 | 339.54 | | |
| 17:30-17:45 | B | 723.49 | 723.49 | | |
| 17:30-17:45 | C | Exit-only | 0.00 | | |
| 17:30-17:45 | D | 88.84 | 88.84 | | |
| 17:30-17:45 | E | 532.27 | 532.27 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 89.000 | 44.000 | 318.000 | 0.000 |
| | B | 174.000 | 0.000 | 91.000 | 696.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 66.000 | 45.000 | 7.000 | 0.000 | 0.000 |
| | E | 387.000 | 305.000 | 0.000 | 15.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.00 | 0.20 | 0.10 | 0.71 | 0.00 |
| | B | 0.18 | 0.00 | 0.09 | 0.72 | 0.00 |
| | C | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| | D | 0.56 | 0.38 | 0.06 | 0.00 | 0.00 |
| | E | 0.55 | 0.43 | 0.00 | 0.02 | 0.00 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

| | | | | | | |
|---|---|---|---|---|---|---|
| | D | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | E | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | E | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.26 | 2.58 | 0.36 | A |
| B | 0.54 | 3.93 | 1.15 | A |
| C | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 0.05 | 1.57 | 0.06 | A |
| E | 0.45 | 3.82 | 0.82 | A |

## Main Results for each time segment

### Main results: (16:15-16:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 339.54 | 338.73 | 279.25 | 0.00 | 2016.33 | 0.168 | 0.20 | 2.144 | A |
| B | 723.49 | 721.41 | 288.40 | 0.00 | 2111.21 | 0.343 | 0.52 | 2.587 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 88.84 | 88.69 | 130.62 | 0.00 | 2483.48 | 0.036 | 0.04 | 1.502 | A |
| E | 532.27 | 530.61 | 219.31 | 0.00 | 1815.16 | 0.293 | 0.41 | 2.798 | A |

### Main results: (16:30-16:45)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 405.44 | 405.21 | 334.15 | 0.00 | 1963.89 | 0.206 | 0.26 | 2.309 | A |
| B | 863.92 | 863.11 | 345.01 | 0.00 | 2053.86 | 0.421 | 0.72 | 3.022 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 106.08 | 106.05 | 156.28 | 0.00 | 2455.38 | 0.043 | 0.05 | 1.531 | A |
| E | 635.58 | 635.01 | 262.32 | 0.00 | 1775.68 | 0.358 | 0.55 | 3.154 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 496.56 | 496.18 | 409.08 | 0.00 | 1892.32 | 0.262 | 0.35 | 2.578 | A |
| B | 1058.08 | 1056.40 | 422.46 | 0.00 | 1975.38 | 0.536 | 1.14 | 3.910 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 129.92 | 129.87 | 191.27 | 0.00 | 2417.06 | 0.054 | 0.06 | 1.573 | A |
| E | 778.42 | 777.36 | 321.15 | 0.00 | 1721.69 | 0.452 | 0.82 | 3.809 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 496.56 | 496.56 | 409.57 | 0.00 | 1891.84 | 0.262 | 0.36 | 2.579 | A |
| B | 1058.08 | 1058.06 | 422.79 | 0.00 | 1975.05 | 0.536 | 1.15 | 3.925 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 129.92 | 129.92 | 191.57 | 0.00 | 2416.73 | 0.054 | 0.06 | 1.573 | A |
| E | 778.42 | 778.41 | 321.49 | 0.00 | 1721.37 | 0.452 | 0.82 | 3.816 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 405.44 | 405.82 | 334.91 | 0.00 | 1963.16 | 0.207 | 0.26 | 2.311 | A |
| B | 863.92 | 865.59 | 345.54 | 0.00 | 2053.32 | 0.421 | 0.73 | 3.034 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 106.08 | 106.13 | 156.73 | 0.00 | 2454.89 | 0.043 | 0.05 | 1.534 | A |
| E | 635.58 | 636.62 | 262.85 | 0.00 | 1775.20 | 0.358 | 0.56 | 3.164 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 339.54 | 339.77 | 280.34 | 0.00 | 2015.29 | 0.168 | 0.20 | 2.148 | A |
| B | 723.49 | 724.32 | 289.30 | 0.00 | 2110.31 | 0.343 | 0.52 | 2.600 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 88.84 | 88.87 | 131.15 | 0.00 | 2482.90 | 0.036 | 0.04 | 1.505 | A |
| E | 532.27 | 532.84 | 220.01 | 0.00 | 1814.51 | 0.293 | 0.42 | 2.809 | A |

# EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED, 0800-0900

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2034 WEEKDAY WITH COMMITTED, 0800-0900 | 2034 WEEKDAY WITH COMMITTED | 0800-0900 | | ONE HOUR | 07:45 | 09:15 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 NORTHERN ROUNDABOUT | Roundabout | A,B,C,D,E | ✓ | | 5.56 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | CLYST HONITON BYPASS (N) | |
| **B** | B3184 (E) | |
| **C** | A30 EASTBOUND ENTRY SLIP | |
| **D** | B3184 (S) | |
| **E** | A30 EASTBOUND EXIT SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.10 | 6.00 | 5.25 | 15.00 | 70.00 | 43.00 | |
| **B** | 3.20 | 7.30 | 12.61 | 15.00 | 70.00 | 33.00 | |
| **C** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |
| **D** | 4.50 | 6.80 | 11.02 | 15.00 | 70.00 | 29.00 | |
| **E** | 3.65 | 3.65 | 0.00 | 30.00 | 70.00 | 23.00 | |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |
| **E** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |

| | |
|---|---|
| **C** | None |
| **D** | None |
| **E** | None |

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 0.955 | 2283.057 |
| **B** | | (calculated) | (calculated) | 1.013 | 2403.423 |
| **C** | | (calculated) | (calculated) | Exit-only | Exit-only |
| **D** | | (calculated) | (calculated) | 1.095 | 2626.516 |
| **E** | | (calculated) | (calculated) | 0.918 | 2016.444 |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

### Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

### General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| **A** | ONE HOUR | ✓ | 1016.00 | 100.000 |
| **B** | ONE HOUR | ✓ | 358.00 | 100.000 |
| **C** | Exit-only | ✓ | Exit-only | Exit-only |
| **D** | ONE HOUR | ✓ | 256.00 | 100.000 |
| **E** | ONE HOUR | ✓ | 762.00 | 100.000 |

# Direct/Resultant Flows

### Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| **07:45-08:00** | **A** | 764.90 | 764.90 | | |
| **07:45-08:00** | **B** | 269.52 | 269.52 | | |
| **07:45-08:00** | **C** | Exit-only | 0.00 | | |
| **07:45-08:00** | **D** | 192.73 | 192.73 | | |
| **07:45-08:00** | **E** | 573.67 | 573.67 | | |

| | | | | | |
|---|---|---|---|---|---|
| **08:00-08:15** | **A** | 913.36 | 913.36 | | |
| **08:00-08:15** | **B** | 321.83 | 321.83 | | |
| **08:00-08:15** | **C** | Exit-only | 0.00 | | |
| **08:00-08:15** | **D** | 230.14 | 230.14 | | |
| **08:00-08:15** | **E** | 685.02 | 685.02 | | |
| **08:15-08:30** | **A** | 1118.64 | 1118.64 | | |
| **08:15-08:30** | **B** | 394.17 | 394.17 | | |
| **08:15-08:30** | **C** | Exit-only | 0.00 | | |
| **08:15-08:30** | **D** | 281.86 | 281.86 | | |
| **08:15-08:30** | **E** | 838.98 | 838.98 | | |
| **08:30-08:45** | **A** | 1118.64 | 1118.64 | | |
| **08:30-08:45** | **B** | 394.17 | 394.17 | | |
| **08:30-08:45** | **C** | Exit-only | 0.00 | | |
| **08:30-08:45** | **D** | 281.86 | 281.86 | | |
| **08:30-08:45** | **E** | 838.98 | 838.98 | | |
| **08:45-09:00** | **A** | 913.36 | 913.36 | | |
| **08:45-09:00** | **B** | 321.83 | 321.83 | | |
| **08:45-09:00** | **C** | Exit-only | 0.00 | | |
| **08:45-09:00** | **D** | 230.14 | 230.14 | | |
| **08:45-09:00** | **E** | 685.02 | 685.02 | | |
| **09:00-09:15** | **A** | 764.90 | 764.90 | | |
| **09:00-09:15** | **B** | 269.52 | 269.52 | | |
| **09:00-09:15** | **C** | Exit-only | 0.00 | | |
| **09:00-09:15** | **D** | 192.73 | 192.73 | | |
| **09:00-09:15** | **E** | 573.67 | 573.67 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | **A** | **B** | **C** | **D** | **E** |

| | | | | | | |
|---|---|---|---|---|---|---|
| From | A | 0.000 | 196.000 | 37.000 | 783.000 | 0.000 |
| | B | 109.000 | 0.000 | 34.000 | 215.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 143.000 | 108.000 | 5.000 | 0.000 | 0.000 |
| | E | 187.000 | 560.000 | 0.000 | 15.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.00 | 0.19 | 0.04 | 0.77 | 0.00 |
| | B | 0.30 | 0.00 | 0.09 | 0.60 | 0.00 |
| | C | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| | D | 0.56 | 0.42 | 0.02 | 0.00 | 0.00 |
| | E | 0.25 | 0.73 | 0.00 | 0.02 | 0.00 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | E | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | E | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.72 | 8.15 | 2.50 | A |
| B | 0.27 | 3.36 | 0.37 | A |
| C | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 0.11 | 1.63 | 0.13 | A |
| E | 0.51 | 4.45 | 1.03 | A |

## Main Results for each time segment

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 764.90 | 761.93 | 516.37 | 0.00 | 1789.83 | 0.427 | 0.74 | 3.492 | A |
| B | 269.52 | 268.80 | 629.96 | 0.00 | 1765.14 | 0.153 | 0.18 | 2.404 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 192.73 | 192.40 | 81.84 | 0.00 | 2536.89 | 0.076 | 0.08 | 1.535 | A |
| E | 573.67 | 571.76 | 274.24 | 0.00 | 1764.74 | 0.325 | 0.48 | 3.012 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 913.36 | 911.69 | 617.92 | 0.00 | 1692.84 | 0.540 | 1.16 | 4.598 | A |
| B | 321.83 | 321.58 | 753.78 | 0.00 | 1639.69 | 0.196 | 0.24 | 2.731 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 230.14 | 230.07 | 97.91 | 0.00 | 2519.30 | 0.091 | 0.10 | 1.571 | A |
| E | 685.02 | 684.30 | 327.98 | 0.00 | 1715.42 | 0.399 | 0.66 | 3.490 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 1118.64 | 1113.45 | 756.35 | 0.00 | 1560.62 | 0.717 | 2.46 | 7.960 | A |
| B | 394.17 | 393.68 | 920.64 | 0.00 | 1470.62 | 0.268 | 0.36 | 3.340 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 281.86 | 281.75 | 119.86 | 0.00 | 2495.26 | 0.113 | 0.13 | 1.625 | A |
| E | 838.98 | 837.51 | 401.62 | 0.00 | 1647.83 | 0.509 | 1.03 | 4.434 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 1118.64 | 1118.47 | 757.49 | 0.00 | 1559.53 | 0.717 | 2.50 | 8.153 | A |
| B | 394.17 | 394.16 | 924.72 | 0.00 | 1466.48 | 0.269 | 0.37 | 3.356 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 281.86 | 281.86 | 120.01 | 0.00 | 2495.10 | 0.113 | 0.13 | 1.625 | A |
| E | 838.98 | 838.96 | 401.87 | 0.00 | 1647.60 | 0.509 | 1.03 | 4.451 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 913.36 | 918.60 | 619.64 | 0.00 | 1691.20 | 0.540 | 1.19 | 4.692 | A |
| B | 321.83 | 322.32 | 759.40 | 0.00 | 1633.99 | 0.197 | 0.25 | 2.745 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **D** | 230.14 | 230.24 | 98.14 | 0.00 | 2519.05 | 0.091 | 0.10 | 1.572 | A |
| **E** | 685.02 | 686.47 | 328.38 | 0.00 | 1715.05 | 0.399 | 0.67 | 3.504 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 764.90 | 766.64 | 518.55 | 0.00 | 1787.75 | 0.428 | 0.75 | 3.533 | A |
| **B** | 269.52 | 269.78 | 633.81 | 0.00 | 1761.24 | 0.153 | 0.18 | 2.413 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 192.73 | 192.80 | 82.14 | 0.00 | 2536.57 | 0.076 | 0.08 | 1.537 | A |
| **E** | 573.67 | 574.41 | 274.94 | 0.00 | 1764.10 | 0.325 | 0.48 | 3.027 | A |

# EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED, 1630-1730

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2034 WEEKDAY WITH COMMITTED, 1630-1730 | 2034 WEEKDAY WITH COMMITTED | 1630-1730 | | ONE HOUR | 16:15 | 17:45 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 NORTHERN ROUNDABOUT | Roundabout | A,B,C,D,E | ✓ | | 3.74 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | CLYST HONITON BYPASS (N) | |
| **B** | B3184 (E) | |

| | | |
|---|---|---|
| **C** | A30 EASTBOUND ENTRY SLIP | |
| **D** | B3184 (S) | |
| **E** | A30 EASTBOUND EXIT SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.10 | 6.00 | 5.25 | 15.00 | 70.00 | 43.00 | |
| **B** | 3.20 | 7.30 | 12.61 | 15.00 | 70.00 | 33.00 | |
| **C** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |
| **D** | 4.50 | 6.80 | 11.02 | 15.00 | 70.00 | 29.00 | |
| **E** | 3.65 | 3.65 | 0.00 | 30.00 | 70.00 | 23.00 | |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |
| **E** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |
| **E** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 0.955 | 2283.057 |
| **B** | | (calculated) | (calculated) | 1.013 | 2403.423 |
| **C** | | (calculated) | (calculated) | Exit-only | Exit-only |
| **D** | | (calculated) | (calculated) | 1.095 | 2626.516 |
| **E** | | (calculated) | (calculated) | 0.918 | 2016.444 |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| A | ONE HOUR | ✓ | 543.00 | 100.000 |
| B | ONE HOUR | ✓ | 882.00 | 100.000 |
| C | Exit-only | ✓ | Exit-only | Exit-only |
| D | ONE HOUR | ✓ | 105.00 | 100.000 |
| E | ONE HOUR | ✓ | 844.00 | 100.000 |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| 16:15-16:30 | A | 408.80 | 408.80 | | |
| 16:15-16:30 | B | 664.02 | 664.02 | | |
| 16:15-16:30 | C | Exit-only | 0.00 | | |
| 16:15-16:30 | D | 79.05 | 79.05 | | |
| 16:15-16:30 | E | 635.41 | 635.41 | | |
| 16:30-16:45 | A | 488.15 | 488.15 | | |
| 16:30-16:45 | B | 792.90 | 792.90 | | |
| 16:30-16:45 | C | Exit-only | 0.00 | | |
| 16:30-16:45 | D | 94.39 | 94.39 | | |
| 16:30-16:45 | E | 758.74 | 758.74 | | |
| 16:45-17:00 | A | 597.85 | 597.85 | | |
| 16:45-17:00 | B | 971.10 | 971.10 | | |
| 16:45-17:00 | C | Exit-only | 0.00 | | |
| 16:45-17:00 | D | 115.61 | 115.61 | | |
| 16:45-17:00 | E | 929.26 | 929.26 | | |
| 17:00-17:15 | A | 597.85 | 597.85 | | |
| 17:00-17:15 | B | 971.10 | 971.10 | | |
| 17:00-17:15 | C | Exit-only | 0.00 | | |
| 17:00-17:15 | D | 115.61 | 115.61 | | |

| | | | | | |
|---|---|---|---|---|---|
| **17:00-17:15** | **E** | 929.26 | 929.26 | | |
| **17:15-17:30** | **A** | 488.15 | 488.15 | | |
| **17:15-17:30** | **B** | 792.90 | 792.90 | | |
| **17:15-17:30** | **C** | Exit-only | 0.00 | | |
| **17:15-17:30** | **D** | 94.39 | 94.39 | | |
| **17:15-17:30** | **E** | 758.74 | 758.74 | | |
| **17:30-17:45** | **A** | 408.80 | 408.80 | | |
| **17:30-17:45** | **B** | 664.02 | 664.02 | | |
| **17:30-17:45** | **C** | Exit-only | 0.00 | | |
| **17:30-17:45** | **D** | 79.05 | 79.05 | | |
| **17:30-17:45** | **E** | 635.41 | 635.41 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | **A** | **B** | **C** | **D** | **E** |
| **From** | **A** | 0.000 | 87.000 | 46.000 | 410.000 | 0.000 |
| | **B** | 176.000 | 0.000 | 74.000 | 632.000 | 0.000 |
| | **C** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | **D** | 70.000 | 28.000 | 7.000 | 0.000 | 0.000 |
| | **E** | 600.000 | 228.000 | 0.000 | 16.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | **A** | **B** | **C** | **D** | **E** |
| **From** | **A** | 0.00 | 0.16 | 0.08 | 0.76 | 0.00 |
| | **B** | 0.20 | 0.00 | 0.08 | 0.72 | 0.00 |
| | **C** | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| | **D** | 0.67 | 0.27 | 0.07 | 0.00 | 0.00 |
| | **E** | 0.71 | 0.27 | 0.00 | 0.02 | 0.00 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 3 (for whole period)

| | To | | | | |
|---|---|---|---|---|---|
| | **A** | **B** | **C** | **D** | **E** |
| **A** | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

| | | | | | | |
|---|---|---|---|---|---|---|
| From | B | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | E | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | E | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.30 | 2.59 | 0.43 | A |
| B | 0.52 | 4.01 | 1.08 | A |
| C | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 0.05 | 1.56 | 0.05 | A |
| E | 0.54 | 4.48 | 1.15 | A |

## Main Results for each time segment

### Main results: (16:15-16:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 408.80 | 407.83 | 209.39 | 0.00 | 2083.06 | 0.196 | 0.24 | 2.148 | A |
| B | 664.02 | 662.09 | 359.75 | 0.00 | 2038.92 | 0.326 | 0.48 | 2.611 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 79.05 | 78.92 | 132.12 | 0.00 | 2481.84 | 0.032 | 0.03 | 1.497 | A |
| E | 635.41 | 633.28 | 211.04 | 0.00 | 1822.75 | 0.349 | 0.53 | 3.021 | A |

### Main results: (16:30-16:45)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 488.15 | 487.87 | 250.57 | 0.00 | 2043.72 | 0.239 | 0.31 | 2.313 | A |
| B | 792.90 | 792.14 | 430.36 | 0.00 | 1967.38 | 0.403 | 0.67 | 3.062 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 94.39 | 94.36 | 158.07 | 0.00 | 2453.42 | 0.038 | 0.04 | 1.525 | A |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **E** | 758.74 | 757.93 | 252.43 | 0.00 | 1784.76 | 0.425 | 0.73 | 3.502 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 597.85 | 597.39 | 306.70 | 0.00 | 1990.11 | 0.300 | 0.43 | 2.585 | A |
| **B** | 971.10 | 969.50 | 526.97 | 0.00 | 1869.49 | 0.519 | 1.07 | 3.992 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 115.61 | 115.57 | 193.46 | 0.00 | 2414.67 | 0.048 | 0.05 | 1.565 | A |
| **E** | 929.26 | 927.62 | 309.03 | 0.00 | 1732.82 | 0.536 | 1.14 | 4.462 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 597.85 | 597.85 | 307.18 | 0.00 | 1989.65 | 0.300 | 0.43 | 2.586 | A |
| **B** | 971.10 | 971.08 | 527.39 | 0.00 | 1869.07 | 0.520 | 1.08 | 4.008 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 115.61 | 115.61 | 193.78 | 0.00 | 2414.32 | 0.048 | 0.05 | 1.565 | A |
| **E** | 929.26 | 929.24 | 309.38 | 0.00 | 1732.49 | 0.536 | 1.15 | 4.481 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 488.15 | 488.60 | 251.30 | 0.00 | 2043.02 | 0.239 | 0.32 | 2.316 | A |
| **B** | 792.90 | 794.49 | 431.03 | 0.00 | 1966.70 | 0.403 | 0.68 | 3.074 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 94.39 | 94.43 | 158.54 | 0.00 | 2452.91 | 0.038 | 0.04 | 1.528 | A |
| **E** | 758.74 | 760.36 | 252.97 | 0.00 | 1784.26 | 0.425 | 0.74 | 3.523 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 408.80 | 409.08 | 210.29 | 0.00 | 2082.19 | 0.196 | 0.25 | 2.151 | A |
| **B** | 664.02 | 664.79 | 360.87 | 0.00 | 2037.79 | 0.326 | 0.49 | 2.625 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 79.05 | 79.08 | 132.66 | 0.00 | 2481.25 | 0.032 | 0.03 | 1.497 | A |
| **E** | 635.41 | 636.23 | 211.73 | 0.00 | 1822.11 | 0.349 | 0.54 | 3.039 | A |

# EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 0800-0900

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 0800-0900 | 2034 WEEKDAY WITH COMMITTED AND PROPOSED | 0800-0900 | | ONE HOUR | 07:45 | 09:15 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 NORTHERN ROUNDABOUT | Roundabout | A,B,C,D,E | ✓ | | 6.87 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | CLYST HONITON BYPASS (N) | |
| **B** | B3184 (E) | |
| **C** | A30 EASTBOUND ENTRY SLIP | |
| **D** | B3184 (S) | |
| **E** | A30 EASTBOUND EXIT SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.10 | 6.00 | 5.25 | 15.00 | 70.00 | 43.00 | |
| **B** | 3.20 | 7.30 | 12.61 | 15.00 | 70.00 | 33.00 | |
| **C** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |
| **D** | 4.50 | 6.80 | 11.02 | 15.00 | 70.00 | 29.00 | |
| **E** | 3.65 | 3.65 | 0.00 | 30.00 | 70.00 | 23.00 | |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |
| **E** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|

| | |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |
| **E** | None |

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 0.955 | 2283.057 |
| **B** | | (calculated) | (calculated) | 1.013 | 2403.423 |
| **C** | | (calculated) | (calculated) | Exit-only | Exit-only |
| **D** | | (calculated) | (calculated) | 1.095 | 2626.516 |
| **E** | | (calculated) | (calculated) | 0.918 | 2016.444 |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

### Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

### General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| **A** | ONE HOUR | ✓ | 1022.00 | 100.000 |
| **B** | ONE HOUR | ✓ | 435.00 | 100.000 |
| **C** | Exit-only | ✓ | Exit-only | Exit-only |
| **D** | ONE HOUR | ✓ | 274.00 | 100.000 |
| **E** | ONE HOUR | ✓ | 848.00 | 100.000 |

# Direct/Resultant Flows

### Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| **07:45-08:00** | **A** | 769.42 | 769.42 | | |
| **07:45-08:00** | **B** | 327.49 | 327.49 | | |
| **07:45-08:00** | **C** | Exit-only | 0.00 | | |
| **07:45-08:00** | **D** | 206.28 | 206.28 | | |

| | | | | | |
|---|---|---|---|---|---|
| **07:45-08:00** | **E** | 638.42 | 638.42 | | |
| **08:00-08:15** | **A** | 918.76 | 918.76 | | |
| **08:00-08:15** | **B** | 391.06 | 391.06 | | |
| **08:00-08:15** | **C** | Exit-only | 0.00 | | |
| **08:00-08:15** | **D** | 246.32 | 246.32 | | |
| **08:00-08:15** | **E** | 762.33 | 762.33 | | |
| **08:15-08:30** | **A** | 1125.24 | 1125.24 | | |
| **08:15-08:30** | **B** | 478.94 | 478.94 | | |
| **08:15-08:30** | **C** | Exit-only | 0.00 | | |
| **08:15-08:30** | **D** | 301.68 | 301.68 | | |
| **08:15-08:30** | **E** | 933.67 | 933.67 | | |
| **08:30-08:45** | **A** | 1125.24 | 1125.24 | | |
| **08:30-08:45** | **B** | 478.94 | 478.94 | | |
| **08:30-08:45** | **C** | Exit-only | 0.00 | | |
| **08:30-08:45** | **D** | 301.68 | 301.68 | | |
| **08:30-08:45** | **E** | 933.67 | 933.67 | | |
| **08:45-09:00** | **A** | 918.76 | 918.76 | | |
| **08:45-09:00** | **B** | 391.06 | 391.06 | | |
| **08:45-09:00** | **C** | Exit-only | 0.00 | | |
| **08:45-09:00** | **D** | 246.32 | 246.32 | | |
| **08:45-09:00** | **E** | 762.33 | 762.33 | | |
| **09:00-09:15** | **A** | 769.42 | 769.42 | | |
| **09:00-09:15** | **B** | 327.49 | 327.49 | | |
| **09:00-09:15** | **C** | Exit-only | 0.00 | | |
| **09:00-09:15** | **D** | 206.28 | 206.28 | | |
| **09:00-09:15** | **E** | 638.42 | 638.42 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 202.000 | 37.000 | 783.000 | 0.000 |
| | B | 113.000 | 0.000 | 47.000 | 275.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 143.000 | 126.000 | 5.000 | 0.000 | 0.000 |
| | E | 187.000 | 646.000 | 0.000 | 15.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.00 | 0.20 | 0.04 | 0.77 | 0.00 |
| | B | 0.26 | 0.00 | 0.11 | 0.63 | 0.00 |
| | C | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| | D | 0.52 | 0.46 | 0.02 | 0.00 | 0.00 |
| | E | 0.22 | 0.76 | 0.00 | 0.02 | 0.00 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | E | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | E | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.78 | 11.04 | 3.37 | B |
| B | 0.33 | 3.64 | 0.48 | A |
| C | Exit-only | Exit-only | Exit-only | Exit-only |

| | | | | |
|---|---|---|---|---|
| **D** | 0.12 | 1.64 | 0.14 | A |
| **E** | 0.57 | 5.20 | 1.34 | A |

## Main Results for each time segment

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 769.42 | 766.19 | 594.31 | 0.00 | 1715.39 | 0.449 | 0.81 | 3.780 | A |
| **B** | 327.49 | 326.58 | 629.76 | 0.00 | 1765.35 | 0.186 | 0.23 | 2.501 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 206.28 | 205.93 | 84.84 | 0.00 | 2533.62 | 0.081 | 0.09 | 1.546 | A |
| **E** | 638.42 | 636.13 | 290.76 | 0.00 | 1749.58 | 0.365 | 0.57 | 3.226 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 918.76 | 916.69 | 711.21 | 0.00 | 1603.73 | 0.573 | 1.32 | 5.224 | A |
| **B** | 391.06 | 390.72 | 753.47 | 0.00 | 1640.00 | 0.238 | 0.31 | 2.881 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 246.32 | 246.24 | 101.50 | 0.00 | 2515.37 | 0.098 | 0.11 | 1.585 | A |
| **E** | 762.33 | 761.38 | 347.74 | 0.00 | 1697.29 | 0.449 | 0.81 | 3.842 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 1125.24 | 1117.43 | 870.32 | 0.00 | 1451.75 | 0.775 | 3.28 | 10.529 | B |
| **B** | 478.94 | 478.27 | 918.55 | 0.00 | 1472.74 | 0.325 | 0.48 | 3.618 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 301.68 | 301.56 | 124.24 | 0.00 | 2490.46 | 0.121 | 0.14 | 1.643 | A |
| **E** | 933.67 | 931.58 | 425.80 | 0.00 | 1625.64 | 0.574 | 1.33 | 5.171 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 1125.24 | 1124.88 | 871.98 | 0.00 | 1450.17 | 0.776 | 3.37 | 11.035 | B |
| **B** | 478.94 | 478.93 | 924.56 | 0.00 | 1466.65 | 0.327 | 0.48 | 3.643 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 301.68 | 301.68 | 124.41 | 0.00 | 2490.28 | 0.121 | 0.14 | 1.644 | A |
| **E** | 933.67 | 933.63 | 426.09 | 0.00 | 1625.37 | 0.574 | 1.34 | 5.203 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 918.76 | 926.78 | 713.66 | 0.00 | 1601.39 | 0.574 | 1.36 | 5.399 | A |
| **B** | 391.06 | 391.72 | 761.62 | 0.00 | 1631.75 | 0.240 | 0.32 | 2.906 | A |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 246.32 | 246.44 | 101.76 | 0.00 | 2515.09 | 0.098 | 0.11 | 1.588 | A |
| **E** | 762.33 | 764.41 | 348.19 | 0.00 | 1696.87 | 0.449 | 0.82 | 3.870 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 769.42 | 771.58 | 597.06 | 0.00 | 1712.77 | 0.449 | 0.82 | 3.835 | A |
| **B** | 327.49 | 327.84 | 634.16 | 0.00 | 1760.89 | 0.186 | 0.23 | 2.512 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 206.28 | 206.36 | 85.16 | 0.00 | 2533.26 | 0.081 | 0.09 | 1.548 | A |
| **E** | 638.42 | 639.39 | 291.52 | 0.00 | 1748.88 | 0.365 | 0.58 | 3.249 | A |

# EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730 | 2034 WEEKDAY WITH COMMITTED AND PROPOSED | 1630-1730 | | ONE HOUR | 16:15 | 17:45 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 NORTHERN ROUNDABOUT | Roundabout | A,B,C,D,E | ✓ | | 4.38 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|

| | | |
|---|---|---|
| **A** | CLYST HONITON BYPASS (N) | |
| **B** | B3184 (E) | |
| **C** | A30 EASTBOUND ENTRY SLIP | |
| **D** | B3184 (S) | |
| **E** | A30 EASTBOUND EXIT SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.10 | 6.00 | 5.25 | 15.00 | 70.00 | 43.00 | |
| **B** | 3.20 | 7.30 | 12.61 | 15.00 | 70.00 | 33.00 | |
| **C** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |
| **D** | 4.50 | 6.80 | 11.02 | 15.00 | 70.00 | 29.00 | |
| **E** | 3.65 | 3.65 | 0.00 | 30.00 | 70.00 | 23.00 | |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |
| **E** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |
| **E** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 0.955 | 2283.057 |
| **B** | | (calculated) | (calculated) | 1.013 | 2403.423 |
| **C** | | (calculated) | (calculated) | Exit-only | Exit-only |
| **D** | | (calculated) | (calculated) | 1.095 | 2626.516 |
| **E** | | (calculated) | (calculated) | 0.918 | 2016.444 |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| A | ONE HOUR | ✓ | 549.00 | 100.000 |
| B | ONE HOUR | ✓ | 1006.00 | 100.000 |
| C | Exit-only | ✓ | Exit-only | Exit-only |
| D | ONE HOUR | ✓ | 124.00 | 100.000 |
| E | ONE HOUR | ✓ | 933.00 | 100.000 |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| 16:15-16:30 | A | 413.32 | 413.32 | | |
| 16:15-16:30 | B | 757.37 | 757.37 | | |
| 16:15-16:30 | C | Exit-only | 0.00 | | |
| 16:15-16:30 | D | 93.35 | 93.35 | | |
| 16:15-16:30 | E | 702.41 | 702.41 | | |
| 16:30-16:45 | A | 493.54 | 493.54 | | |
| 16:30-16:45 | B | 904.37 | 904.37 | | |
| 16:30-16:45 | C | Exit-only | 0.00 | | |
| 16:30-16:45 | D | 111.47 | 111.47 | | |
| 16:30-16:45 | E | 838.75 | 838.75 | | |
| 16:45-17:00 | A | 604.46 | 604.46 | | |
| 16:45-17:00 | B | 1107.63 | 1107.63 | | |
| 16:45-17:00 | C | Exit-only | 0.00 | | |
| 16:45-17:00 | D | 136.53 | 136.53 | | |
| 16:45-17:00 | E | 1027.25 | 1027.25 | | |
| 17:00-17:15 | A | 604.46 | 604.46 | | |
| 17:00-17:15 | B | 1107.63 | 1107.63 | | |
| 17:00-17:15 | C | Exit-only | 0.00 | | |

| | | | | | |
|---|---|---|---|---|---|
| 17:00-17:15 | D | 136.53 | 136.53 | | |
| 17:00-17:15 | E | 1027.25 | 1027.25 | | |
| 17:15-17:30 | A | 493.54 | 493.54 | | |
| 17:15-17:30 | B | 904.37 | 904.37 | | |
| 17:15-17:30 | C | Exit-only | 0.00 | | |
| 17:15-17:30 | D | 111.47 | 111.47 | | |
| 17:15-17:30 | E | 838.75 | 838.75 | | |
| 17:30-17:45 | A | 413.32 | 413.32 | | |
| 17:30-17:45 | B | 757.37 | 757.37 | | |
| 17:30-17:45 | C | Exit-only | 0.00 | | |
| 17:30-17:45 | D | 93.35 | 93.35 | | |
| 17:30-17:45 | E | 702.41 | 702.41 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 93.000 | 46.000 | 410.000 | 0.000 |
| | B | 183.000 | 0.000 | 95.000 | 728.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 70.000 | 47.000 | 7.000 | 0.000 | 0.000 |
| | E | 600.000 | 317.000 | 0.000 | 16.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.00 | 0.17 | 0.08 | 0.75 | 0.00 |
| | B | 0.18 | 0.00 | 0.09 | 0.72 | 0.00 |
| | C | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| | D | 0.56 | 0.38 | 0.06 | 0.00 | 0.00 |
| | E | 0.64 | 0.34 | 0.00 | 0.02 | 0.00 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 3 (for whole period)

| | To |
|---|---|

| | | A | B | C | D | E |
|---|---|---|---|---|---|---|
| From | A | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| | E | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 3 (for whole period)

| | | To | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| | D | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | E | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*Arm C is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.32 | 2.83 | 0.47 | A |
| B | 0.59 | 4.73 | 1.45 | A |
| C | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 0.06 | 1.59 | 0.06 | A |
| E | 0.60 | 5.30 | 1.50 | A |

## Main Results for each time segment

### Main results: (16:15-16:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 413.32 | 412.28 | 290.38 | 0.00 | 2005.69 | 0.206 | 0.26 | 2.258 | A |
| B | 757.37 | 755.02 | 359.70 | 0.00 | 2038.97 | 0.371 | 0.59 | 2.799 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| D | 93.35 | 93.20 | 137.34 | 0.00 | 2476.12 | 0.038 | 0.04 | 1.510 | A |
| E | 702.41 | 699.88 | 230.54 | 0.00 | 1804.85 | 0.389 | 0.63 | 3.251 | A |

### Main results: (16:30-16:45)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 493.54 | 493.23 | 347.51 | 0.00 | 1951.13 | 0.253 | 0.34 | 2.469 | A |
| B | 904.37 | 903.35 | 430.33 | 0.00 | 1967.41 | 0.460 | 0.84 | 3.380 | A |
| C | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit- | Exit-only | Exit- | Exit- |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | only | | only | only |
| **D** | 111.47 | 111.44 | 164.33 | 0.00 | 2446.57 | 0.046 | 0.05 | 1.540 | A |
| **E** | 838.75 | 837.68 | 275.77 | 0.00 | 1763.34 | 0.476 | 0.90 | 3.885 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 604.46 | 603.92 | 425.23 | 0.00 | 1876.89 | 0.322 | 0.47 | 2.826 | A |
| **B** | 1107.63 | 1105.26 | 526.90 | 0.00 | 1869.57 | 0.592 | 1.44 | 4.696 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 136.53 | 136.48 | 201.06 | 0.00 | 2406.35 | 0.057 | 0.06 | 1.585 | A |
| **E** | 1027.25 | 1024.89 | 337.53 | 0.00 | 1706.65 | 0.602 | 1.49 | 5.263 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 604.46 | 604.46 | 426.08 | 0.00 | 1876.08 | 0.322 | 0.47 | 2.830 | A |
| **B** | 1107.63 | 1107.59 | 527.38 | 0.00 | 1869.07 | 0.593 | 1.45 | 4.727 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 136.53 | 136.53 | 201.48 | 0.00 | 2405.88 | 0.057 | 0.06 | 1.585 | A |
| **E** | 1027.25 | 1027.21 | 338.01 | 0.00 | 1706.22 | 0.602 | 1.50 | 5.301 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 493.54 | 494.08 | 348.76 | 0.00 | 1949.93 | 0.253 | 0.34 | 2.473 | A |
| **B** | 904.37 | 906.73 | 431.10 | 0.00 | 1966.63 | 0.460 | 0.86 | 3.403 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 111.47 | 111.52 | 164.94 | 0.00 | 2445.90 | 0.046 | 0.05 | 1.543 | A |
| **E** | 838.75 | 841.09 | 276.46 | 0.00 | 1762.70 | 0.476 | 0.92 | 3.917 | A |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 413.32 | 413.63 | 291.76 | 0.00 | 2004.38 | 0.206 | 0.26 | 2.263 | A |
| **B** | 757.37 | 758.42 | 360.90 | 0.00 | 2037.75 | 0.372 | 0.59 | 2.817 | A |
| **C** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |
| **D** | 93.35 | 93.39 | 137.96 | 0.00 | 2475.44 | 0.038 | 0.04 | 1.513 | A |
| **E** | 702.41 | 703.51 | 231.35 | 0.00 | 1804.11 | 0.389 | 0.64 | 3.273 | A |

# Junctions 8

## ARCADY 8 - Roundabout Module

Version: 8.0.2.316 [14 Feb 2013]


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



**Filename:** A30 SOUTHERN ROUNDABOUT 140922.arc8
**Path:** C:\Users\NTP Laptop\Desktop\ARCADY PICADY ETC\EXETER
**Report generation date:** 14/09/2022 14:10:48



## Summary of junction performance

| | 0800-0900 | | | | 1630-1730 | | | |
|---|---|---|---|---|---|---|---|---|
| | Queue (PCU) | Delay (s) | RFC | LOS | Queue (PCU) | Delay (s) | RFC | LOS |
| **EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED** | | | | | | | | |
| **Arm A** | 0.58 | 2.42 | 0.37 | A | 0.78 | 2.73 | 0.44 | A |
| **Arm B** | 0.32 | 4.65 | 0.24 | A | 0.10 | 4.66 | 0.09 | A |
| **Arm C** | 0.04 | 4.09 | 0.04 | A | 0.07 | 4.23 | 0.07 | A |
| **EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED AND PROPOSED** | | | | | | | | |
| **Arm A** | 0.65 | 2.54 | 0.40 | A | 0.93 | 2.96 | 0.48 | A |
| **Arm B** | 0.39 | 5.27 | 0.28 | A | 0.15 | 5.63 | 0.13 | A |
| **Arm C** | 0.05 | 4.56 | 0.05 | A | 0.09 | 5.02 | 0.08 | A |
| **EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED** | | | | | | | | |
| **Arm A** | 0.90 | 2.92 | 0.48 | A | 0.98 | 3.05 | 0.50 | A |
| **Arm B** | 0.53 | 7.35 | 0.35 | A | 0.12 | 5.80 | 0.11 | A |
| **Arm C** | 0.07 | 6.01 | 0.06 | A | 0.09 | 5.16 | 0.08 | A |
| **EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED AND PROPOSED** | | | | | | | | |
| **Arm A** | 1.01 | 3.09 | 0.50 | A | 1.18 | 3.35 | 0.54 | A |
| **Arm B** | 0.70 | 9.04 | 0.42 | A | 0.20 | 7.40 | 0.17 | A |
| **Arm C** | 0.08 | 7.12 | 0.07 | A | 0.11 | 6.40 | 0.10 | A |

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

*"D3 - 2027 WEEKDAY WITH COMMITTED, 0800-0900 " model duration: 07:45 - 09:15*
*"D4 - 2027 WEEKDAY WITH COMMITTED, 1630-1730" model duration: 16:15 - 17:45*
*"D5 - 2027 WEEKDAY WITH COMMITTED AND PROPOSED, 0800-0900" model duration: 07:45 - 09:15*
*"D6 - 2027 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730" model duration: 16:15 - 17:45*
*"D7 - 2034 WEEKDAY WITH COMMITTED, 0800-0900" model duration: 07:45 - 09:15*
*"D8 - 2034 WEEKDAY WITH COMMITTED, 1630-1730" model duration: 16:15 - 17:45*
*"D9 - 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 0800-0900" model duration: 07:45 - 09:15*
*"D10 - 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730" model duration: 16:15 - 17:45*

*Run using Junctions 8.0.2.316 at 14/09/2022 14:10:45*

## File summary

### File Description

| | |
|---|---|
| **Title** | A30 SOUTHERN ROUNDABOUT |
| **Location** | EXETER |
| **Site Number** | |
| **Date** | 14/09/2022 |
| **Version** | |
| **Status** | AS EXISTING BUT WITH A30 EXIT SLIP MODELLED AS SINGLE LANE |
| **Identifier** | |
| **Client** | |
| **Jobnumber** | |
| **Enumerator** | |
| **Description** | |

## Analysis Options

| Vehicle Length (m) | Do Queue Variations | Calculate Residual Capacity | Residual Capacity Criteria Type | RFC Threshold | Average Delay Threshold (s) | Queue Threshold (PCU) |
|---|---|---|---|---|---|---|
| 5.75 | | | N/A | 0.85 | 36.00 | 20.00 |

## Units

| Distance Units | Speed Units | Traffic Units Input | Traffic Units Results | Flow Units | Average Delay Units | Total Delay Units | Rate Of Delay Units |
|---|---|---|---|---|---|---|---|
| m | kph | PCU | PCU | perHour | s | -Min | perMin |

# EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED, 0800-0900

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2027 WEEKDAY WITH COMMITTED, 0800-0900 | 2027 WEEKDAY WITH COMMITTED | 0800-0900 | | ONE HOUR | 07:45 | 09:15 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| A30 SOUTHERN ROUNDABOUT | Roundabout | A,B,C,D | ✓ | | 2.96 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | B3184 (N) | |
| **B** | A30 WESTBOUND EXIT SLIP | |
| **C** | BISHOP'S COURT LANE (S) | |
| **D** | A30 WESTBOUND ENTRY SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.40 | 6.60 | 3.11 | 15.00 | 45.00 | 36.00 | |
| **B** | 3.65 | 3.65 | 0.00 | 15.00 | 45.00 | 31.00 | |
| **C** | 2.75 | 6.50 | 9.11 | 15.00 | 45.00 | 54.00 | |
| **D** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 1.228 | 2347.300 |
| **B** | | (calculated) | (calculated) | 1.074 | 1949.422 |
| **C** | | (calculated) | (calculated) | 1.068 | 2057.561 |
| **D** | | (calculated) | (calculated) | Exit-only | Exit-only |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| **A** | ONE HOUR | ✓ | 784.00 | 100.000 |
| **B** | ONE HOUR | ✓ | 226.00 | 100.000 |
| **C** | ONE HOUR | ✓ | 35.00 | 100.000 |
| **D** | Exit-only | ✓ | Exit-only | Exit-only |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| **07:45-08:00** | **A** | 590.24 | 590.24 | | |
| **07:45-08:00** | **B** | 170.14 | 170.14 | | |
| **07:45-08:00** | **C** | 26.35 | 26.35 | | |
| **07:45-08:00** | **D** | Exit-only | 0.00 | | |
| **08:00-08:15** | **A** | 704.80 | 704.80 | | |
| **08:00-08:15** | **B** | 203.17 | 203.17 | | |
| **08:00-08:15** | **C** | 31.46 | 31.46 | | |
| **08:00-08:15** | **D** | Exit-only | 0.00 | | |
| **08:15-08:30** | **A** | 863.20 | 863.20 | | |
| **08:15-08:30** | **B** | 248.83 | 248.83 | | |
| **08:15-08:30** | **C** | 38.54 | 38.54 | | |
| **08:15-08:30** | **D** | Exit-only | 0.00 | | |
| **08:30-08:45** | **A** | 863.20 | 863.20 | | |
| **08:30-08:45** | **B** | 248.83 | 248.83 | | |

| | | | | | |
|---|---|---|---|---|---|
| 08:30-08:45 | C | 38.54 | 38.54 | | |
| 08:30-08:45 | D | Exit-only | 0.00 | | |
| 08:45-09:00 | A | 704.80 | 704.80 | | |
| 08:45-09:00 | B | 203.17 | 203.17 | | |
| 08:45-09:00 | C | 31.46 | 31.46 | | |
| 08:45-09:00 | D | Exit-only | 0.00 | | |
| 09:00-09:15 | A | 590.24 | 590.24 | | |
| 09:00-09:15 | B | 170.14 | 170.14 | | |
| 09:00-09:15 | C | 26.35 | 26.35 | | |
| 09:00-09:15 | D | Exit-only | 0.00 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 30.000 | 754.000 |
| | B | 214.000 | 0.000 | 12.000 | 0.000 |
| | C | 29.000 | 0.000 | 0.000 | 6.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.00 | 0.00 | 0.04 | 0.96 |
| | B | 0.95 | 0.00 | 0.05 | 0.00 |
| | C | 0.83 | 0.00 | 0.00 | 0.17 |
| | D | 0.25 | 0.25 | 0.25 | 0.25 |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | 1.000 | 1.000 | 1.000 | 1.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | 0.000 | 0.000 | 0.000 | 0.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.37 | 2.42 | 0.58 | A |
| B | 0.24 | 4.65 | 0.32 | A |
| C | 0.04 | 4.09 | 0.04 | A |
| D | Exit-only | Exit-only | Exit-only | Exit-only |

## Main Results for each time segment

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 590.24 | 588.90 | 0.00 | 0.00 | 2347.30 | 0.251 | 0.33 | 2.046 | A |
| B | 170.14 | 169.55 | 588.90 | 0.00 | 1317.17 | 0.129 | 0.15 | 3.135 | A |
| C | 26.35 | 26.27 | 726.91 | 0.00 | 1281.14 | 0.021 | 0.02 | 2.868 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 704.80 | 704.43 | 0.00 | 0.00 | 2347.30 | 0.300 | 0.43 | 2.191 | A |
| B | 203.17 | 202.94 | 704.43 | 0.00 | 1193.13 | 0.170 | 0.20 | 3.635 | A |
| C | 31.46 | 31.43 | 869.64 | 0.00 | 1128.69 | 0.028 | 0.03 | 3.280 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 863.20 | 862.59 | 0.00 | 0.00 | 2347.30 | 0.368 | 0.58 | 2.423 | A |
| B | 248.83 | 248.37 | 862.59 | 0.00 | 1023.32 | 0.243 | 0.32 | 4.642 | A |
| C | 38.54 | 38.48 | 1064.77 | 0.00 | 920.27 | 0.042 | 0.04 | 4.082 | A |
| | | | | | | Exit- | | Exit- | Exit- |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | only | Exit-only | only | only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 863.20 | 863.20 | 0.00 | 0.00 | 2347.30 | 0.368 | 0.58 | 2.425 | A |
| **B** | 248.83 | 248.83 | 863.20 | 0.00 | 1022.68 | 0.243 | 0.32 | 4.651 | A |
| **C** | 38.54 | 38.54 | 1065.78 | 0.00 | 919.19 | 0.042 | 0.04 | 4.087 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 704.80 | 705.40 | 0.00 | 0.00 | 2347.30 | 0.300 | 0.43 | 2.194 | A |
| **B** | 203.17 | 203.63 | 705.40 | 0.00 | 1192.09 | 0.170 | 0.21 | 3.645 | A |
| **C** | 31.46 | 31.52 | 871.22 | 0.00 | 1127.00 | 0.028 | 0.03 | 3.288 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 590.24 | 590.61 | 0.00 | 0.00 | 2347.30 | 0.251 | 0.34 | 2.049 | A |
| **B** | 170.14 | 170.37 | 590.61 | 0.00 | 1315.33 | 0.129 | 0.15 | 3.146 | A |
| **C** | 26.35 | 26.38 | 729.34 | 0.00 | 1278.55 | 0.021 | 0.02 | 2.874 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

# EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED, 1630-1730

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2027 WEEKDAY WITH COMMITTED, 1630-1730 | 2027 WEEKDAY WITH COMMITTED | 1630-1730 | | ONE HOUR | 16:15 | 17:45 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 SOUTHERN ROUNDABOUT | Roundabout | A,B,C,D | ✓ | | 2.93 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | B3184 (N) | |
| **B** | A30 WESTBOUND EXIT SLIP | |
| **C** | BISHOP'S COURT LANE (S) | |
| **D** | A30 WESTBOUND ENTRY SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.40 | 6.60 | 3.11 | 15.00 | 45.00 | 36.00 | |
| **B** | 3.65 | 3.65 | 0.00 | 15.00 | 45.00 | 31.00 | |
| **C** | 2.75 | 6.50 | 9.11 | 15.00 | 45.00 | 54.00 | |
| **D** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 1.228 | 2347.300 |
| **B** | | (calculated) | (calculated) | 1.074 | 1949.422 |
| **C** | | (calculated) | (calculated) | 1.068 | 2057.561 |
| **D** | | (calculated) | (calculated) | Exit-only | Exit-only |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| **A** | ONE HOUR | ✓ | 933.00 | 100.000 |
| **B** | ONE HOUR | ✓ | 67.00 | 100.000 |
| **C** | ONE HOUR | ✓ | 56.00 | 100.000 |
| **D** | Exit-only | ✓ | Exit-only | Exit-only |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| **16:15-16:30** | **A** | 702.41 | 702.41 | | |
| **16:15-16:30** | **B** | 50.44 | 50.44 | | |
| **16:15-16:30** | **C** | 42.16 | 42.16 | | |
| **16:15-16:30** | **D** | Exit-only | 0.00 | | |
| **16:30-16:45** | **A** | 838.75 | 838.75 | | |
| **16:30-16:45** | **B** | 60.23 | 60.23 | | |
| **16:30-16:45** | **C** | 50.34 | 50.34 | | |
| **16:30-16:45** | **D** | Exit-only | 0.00 | | |
| **16:45-17:00** | **A** | 1027.25 | 1027.25 | | |
| **16:45-17:00** | **B** | 73.77 | 73.77 | | |
| **16:45-17:00** | **C** | 61.66 | 61.66 | | |
| **16:45-17:00** | **D** | Exit-only | 0.00 | | |
| **17:00-17:15** | **A** | 1027.25 | 1027.25 | | |
| **17:00-17:15** | **B** | 73.77 | 73.77 | | |

| | | | | | |
|---|---|---|---|---|---|
| 17:00-17:15 | C | 61.66 | 61.66 | | |
| 17:00-17:15 | D | Exit-only | 0.00 | | |
| 17:15-17:30 | A | 838.75 | 838.75 | | |
| 17:15-17:30 | B | 60.23 | 60.23 | | |
| 17:15-17:30 | C | 50.34 | 50.34 | | |
| 17:15-17:30 | D | Exit-only | 0.00 | | |
| 17:30-17:45 | A | 702.41 | 702.41 | | |
| 17:30-17:45 | B | 50.44 | 50.44 | | |
| 17:30-17:45 | C | 42.16 | 42.16 | | |
| 17:30-17:45 | D | Exit-only | 0.00 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 20.000 | 913.000 |
| | B | 61.000 | 0.000 | 6.000 | 0.000 |
| | C | 39.000 | 0.000 | 0.000 | 17.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.00 | 0.00 | 0.02 | 0.98 |
| | B | 0.91 | 0.00 | 0.09 | 0.00 |
| | C | 0.70 | 0.00 | 0.00 | 0.30 |
| | D | 0.25 | 0.25 | 0.25 | 0.25 |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | 1.000 | 1.000 | 1.000 | 1.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | 0.000 | 0.000 | 0.000 | 0.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.44 | 2.73 | 0.78 | A |
| B | 0.09 | 4.66 | 0.10 | A |
| C | 0.07 | 4.23 | 0.07 | A |
| D | Exit-only | Exit-only | Exit-only | Exit-only |

## Main Results for each time segment

### Main results: (16:15-16:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 702.41 | 700.71 | 0.00 | 0.00 | 2347.30 | 0.299 | 0.43 | 2.184 | A |
| B | 50.44 | 50.27 | 700.71 | 0.00 | 1197.13 | 0.042 | 0.04 | 3.138 | A |
| C | 42.16 | 42.02 | 731.45 | 0.00 | 1276.29 | 0.033 | 0.03 | 2.916 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

### Main results: (16:30-16:45)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 838.75 | 838.24 | 0.00 | 0.00 | 2347.30 | 0.357 | 0.55 | 2.385 | A |
| B | 60.23 | 60.16 | 838.24 | 0.00 | 1049.48 | 0.057 | 0.06 | 3.638 | A |
| C | 50.34 | 50.29 | 875.04 | 0.00 | 1122.92 | 0.045 | 0.05 | 3.355 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 1027.25 | 1026.37 | 0.00 | 0.00 | 2347.30 | 0.438 | 0.77 | 2.724 | A |
| B | 73.77 | 73.63 | 1026.37 | 0.00 | 847.49 | 0.087 | 0.09 | 4.652 | A |
| C | 61.66 | 61.56 | 1071.41 | 0.00 | 913.18 | 0.068 | 0.07 | 4.227 | A |
| | | | | | | Exit- | | Exit- | Exit- |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | only | Exit-only | only | only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 1027.25 | 1027.24 | 0.00 | 0.00 | 2347.30 | 0.438 | 0.78 | 2.726 | A |
| **B** | 73.77 | 73.77 | 1027.24 | 0.00 | 846.55 | 0.087 | 0.10 | 4.658 | A |
| **C** | 61.66 | 61.66 | 1072.38 | 0.00 | 912.14 | 0.068 | 0.07 | 4.232 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 838.75 | 839.62 | 0.00 | 0.00 | 2347.30 | 0.357 | 0.56 | 2.390 | A |
| **B** | 60.23 | 60.37 | 839.62 | 0.00 | 1047.99 | 0.057 | 0.06 | 3.644 | A |
| **C** | 50.34 | 50.44 | 876.58 | 0.00 | 1121.27 | 0.045 | 0.05 | 3.364 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 702.41 | 702.93 | 0.00 | 0.00 | 2347.30 | 0.299 | 0.43 | 2.189 | A |
| **B** | 50.44 | 50.51 | 702.93 | 0.00 | 1194.74 | 0.042 | 0.04 | 3.148 | A |
| **C** | 42.16 | 42.21 | 733.85 | 0.00 | 1273.73 | 0.033 | 0.03 | 2.922 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

# EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED AND PROPOSED, 0800-0900

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2027 WEEKDAY WITH COMMITTED AND PROPOSED, 0800-0900 | 2027 WEEKDAY WITH COMMITTED AND PROPOSED | 0800-0900 | | ONE HOUR | 07:45 | 09:15 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 SOUTHERN ROUNDABOUT | Roundabout | A,B,C,D | ✓ | | 3.19 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | B3184 (N) | |
| **B** | A30 WESTBOUND EXIT SLIP | |
| **C** | BISHOP'S COURT LANE (S) | |
| **D** | A30 WESTBOUND ENTRY SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.40 | 6.60 | 3.11 | 15.00 | 45.00 | 36.00 | |
| **B** | 3.65 | 3.65 | 0.00 | 15.00 | 45.00 | 31.00 | |
| **C** | 2.75 | 6.50 | 9.11 | 15.00 | 45.00 | 54.00 | |
| **D** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 1.228 | 2347.300 |
| **B** | | (calculated) | (calculated) | 1.074 | 1949.422 |
| **C** | | (calculated) | (calculated) | 1.068 | 2057.561 |
| **D** | | (calculated) | (calculated) | Exit-only | Exit-only |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| A | ONE HOUR | ✓ | 844.00 | 100.000 |
| B | ONE HOUR | ✓ | 244.00 | 100.000 |
| C | ONE HOUR | ✓ | 35.00 | 100.000 |
| D | Exit-only | ✓ | Exit-only | Exit-only |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| 07:45-08:00 | A | 635.41 | 635.41 | | |
| 07:45-08:00 | B | 183.70 | 183.70 | | |
| 07:45-08:00 | C | 26.35 | 26.35 | | |
| 07:45-08:00 | D | Exit-only | 0.00 | | |
| 08:00-08:15 | A | 758.74 | 758.74 | | |
| 08:00-08:15 | B | 219.35 | 219.35 | | |
| 08:00-08:15 | C | 31.46 | 31.46 | | |
| 08:00-08:15 | D | Exit-only | 0.00 | | |
| 08:15-08:30 | A | 929.26 | 929.26 | | |
| 08:15-08:30 | B | 268.65 | 268.65 | | |
| 08:15-08:30 | C | 38.54 | 38.54 | | |
| 08:15-08:30 | D | Exit-only | 0.00 | | |
| 08:30-08:45 | A | 929.26 | 929.26 | | |
| 08:30-08:45 | B | 268.65 | 268.65 | | |

| | | | | | |
|---|---|---|---|---|---|
| 08:30-08:45 | C | 38.54 | 38.54 | | |
| 08:30-08:45 | D | Exit-only | 0.00 | | |
| 08:45-09:00 | A | 758.74 | 758.74 | | |
| 08:45-09:00 | B | 219.35 | 219.35 | | |
| 08:45-09:00 | C | 31.46 | 31.46 | | |
| 08:45-09:00 | D | Exit-only | 0.00 | | |
| 09:00-09:15 | A | 635.41 | 635.41 | | |
| 09:00-09:15 | B | 183.70 | 183.70 | | |
| 09:00-09:15 | C | 26.35 | 26.35 | | |
| 09:00-09:15 | D | Exit-only | 0.00 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 30.000 | 814.000 |
| | B | 232.000 | 0.000 | 12.000 | 0.000 |
| | C | 29.000 | 0.000 | 0.000 | 6.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.00 | 0.00 | 0.04 | 0.96 |
| | B | 0.95 | 0.00 | 0.05 | 0.00 |
| | C | 0.83 | 0.00 | 0.00 | 0.17 |
| | D | 0.25 | 0.25 | 0.25 | 0.25 |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | 1.000 | 1.000 | 1.000 | 1.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | 0.000 | 0.000 | 0.000 | 0.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.40 | 2.54 | 0.65 | A |
| B | 0.28 | 5.27 | 0.39 | A |
| C | 0.05 | 4.56 | 0.05 | A |
| D | Exit-only | Exit-only | Exit-only | Exit-only |

## Main Results for each time segment

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 635.41 | 633.93 | 0.00 | 0.00 | 2347.30 | 0.271 | 0.37 | 2.099 | A |
| B | 183.70 | 183.02 | 633.93 | 0.00 | 1268.82 | 0.145 | 0.17 | 3.314 | A |
| C | 26.35 | 26.26 | 785.42 | 0.00 | 1218.65 | 0.022 | 0.02 | 3.018 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 758.74 | 758.32 | 0.00 | 0.00 | 2347.30 | 0.323 | 0.48 | 2.265 | A |
| B | 219.35 | 219.07 | 758.32 | 0.00 | 1135.28 | 0.193 | 0.24 | 3.928 | A |
| C | 31.46 | 31.43 | 939.66 | 0.00 | 1053.90 | 0.030 | 0.03 | 3.520 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 929.26 | 928.56 | 0.00 | 0.00 | 2347.30 | 0.396 | 0.65 | 2.536 | A |
| B | 268.65 | 268.04 | 928.56 | 0.00 | 952.51 | 0.282 | 0.39 | 5.255 | A |
| C | 38.54 | 38.46 | 1150.41 | 0.00 | 828.80 | 0.047 | 0.05 | 4.555 | A |
| | | | | | | Exit- | | Exit- | Exit- |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | only | Exit-only | only | only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 929.26 | 929.26 | 0.00 | 0.00 | 2347.30 | 0.396 | 0.65 | 2.538 | A |
| **B** | 268.65 | 268.64 | 929.26 | 0.00 | 951.75 | 0.282 | 0.39 | 5.269 | A |
| **C** | 38.54 | 38.53 | 1151.65 | 0.00 | 827.47 | 0.047 | 0.05 | 4.562 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 758.74 | 759.44 | 0.00 | 0.00 | 2347.30 | 0.323 | 0.48 | 2.267 | A |
| **B** | 219.35 | 219.95 | 759.44 | 0.00 | 1134.08 | 0.193 | 0.24 | 3.942 | A |
| **C** | 31.46 | 31.54 | 941.58 | 0.00 | 1051.85 | 0.030 | 0.03 | 3.527 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 635.41 | 635.84 | 0.00 | 0.00 | 2347.30 | 0.271 | 0.37 | 2.103 | A |
| **B** | 183.70 | 183.98 | 635.84 | 0.00 | 1266.78 | 0.145 | 0.17 | 3.327 | A |
| **C** | 26.35 | 26.38 | 788.17 | 0.00 | 1215.71 | 0.022 | 0.02 | 3.026 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

# EXISTING LAYOUT - 2027 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2027 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730 | 2027 WEEKDAY WITH COMMITTED AND PROPOSED | 1630-1730 | | ONE HOUR | 16:15 | 17:45 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 SOUTHERN ROUNDABOUT | Roundabout | A,B,C,D | ✓ | | 3.26 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | B3184 (N) | |
| **B** | A30 WESTBOUND EXIT SLIP | |
| **C** | BISHOP'S COURT LANE (S) | |
| **D** | A30 WESTBOUND ENTRY SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.40 | 6.60 | 3.11 | 15.00 | 45.00 | 36.00 | |
| **B** | 3.65 | 3.65 | 0.00 | 15.00 | 45.00 | 31.00 | |
| **C** | 2.75 | 6.50 | 9.11 | 15.00 | 45.00 | 54.00 | |
| **D** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 1.228 | 2347.300 |
| **B** | | (calculated) | (calculated) | 1.074 | 1949.422 |
| **C** | | (calculated) | (calculated) | 1.068 | 2057.561 |
| **D** | | (calculated) | (calculated) | Exit-only | Exit-only |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| A | ONE HOUR | ✓ | 1029.00 | 100.000 |
| B | ONE HOUR | ✓ | 85.00 | 100.000 |
| C | ONE HOUR | ✓ | 56.00 | 100.000 |
| D | Exit-only | ✓ | Exit-only | Exit-only |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| 16:15-16:30 | A | 774.69 | 774.69 | | |
| 16:15-16:30 | B | 63.99 | 63.99 | | |
| 16:15-16:30 | C | 42.16 | 42.16 | | |
| 16:15-16:30 | D | Exit-only | 0.00 | | |
| 16:30-16:45 | A | 925.05 | 925.05 | | |
| 16:30-16:45 | B | 76.41 | 76.41 | | |
| 16:30-16:45 | C | 50.34 | 50.34 | | |
| 16:30-16:45 | D | Exit-only | 0.00 | | |
| 16:45-17:00 | A | 1132.95 | 1132.95 | | |
| 16:45-17:00 | B | 93.59 | 93.59 | | |
| 16:45-17:00 | C | 61.66 | 61.66 | | |
| 16:45-17:00 | D | Exit-only | 0.00 | | |
| 17:00-17:15 | A | 1132.95 | 1132.95 | | |
| 17:00-17:15 | B | 93.59 | 93.59 | | |

| | | | | | |
|---|---|---|---|---|---|
| 17:00-17:15 | C | 61.66 | 61.66 | | |
| 17:00-17:15 | D | Exit-only | 0.00 | | |
| 17:15-17:30 | A | 925.05 | 925.05 | | |
| 17:15-17:30 | B | 76.41 | 76.41 | | |
| 17:15-17:30 | C | 50.34 | 50.34 | | |
| 17:15-17:30 | D | Exit-only | 0.00 | | |
| 17:30-17:45 | A | 774.69 | 774.69 | | |
| 17:30-17:45 | B | 63.99 | 63.99 | | |
| 17:30-17:45 | C | 42.16 | 42.16 | | |
| 17:30-17:45 | D | Exit-only | 0.00 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 20.000 | 1009.000 |
| | B | 79.000 | 0.000 | 6.000 | 0.000 |
| | C | 39.000 | 0.000 | 0.000 | 17.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.00 | 0.00 | 0.02 | 0.98 |
| | B | 0.93 | 0.00 | 0.07 | 0.00 |
| | C | 0.70 | 0.00 | 0.00 | 0.30 |
| | D | 0.25 | 0.25 | 0.25 | 0.25 |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | 1.000 | 1.000 | 1.000 | 1.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | 0.000 | 0.000 | 0.000 | 0.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.48 | 2.96 | 0.93 | A |
| B | 0.13 | 5.63 | 0.15 | A |
| C | 0.08 | 5.02 | 0.09 | A |
| D | Exit-only | Exit-only | Exit-only | Exit-only |

## Main Results for each time segment

### Main results: (16:15-16:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 774.69 | 772.72 | 0.00 | 0.00 | 2347.30 | 0.330 | 0.49 | 2.283 | A |
| B | 63.99 | 63.75 | 772.72 | 0.00 | 1119.81 | 0.057 | 0.06 | 3.408 | A |
| C | 42.16 | 42.01 | 816.95 | 0.00 | 1184.96 | 0.036 | 0.04 | 3.149 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

### Main results: (16:30-16:45)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 925.05 | 924.42 | 0.00 | 0.00 | 2347.30 | 0.394 | 0.65 | 2.528 | A |
| B | 76.41 | 76.31 | 924.42 | 0.00 | 956.94 | 0.080 | 0.09 | 4.088 | A |
| C | 50.34 | 50.28 | 977.38 | 0.00 | 1013.61 | 0.050 | 0.05 | 3.736 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 1132.95 | 1131.83 | 0.00 | 0.00 | 2347.30 | 0.483 | 0.93 | 2.959 | A |
| B | 93.59 | 93.35 | 1131.83 | 0.00 | 734.26 | 0.127 | 0.15 | 5.616 | A |
| C | 61.66 | 61.52 | 1196.60 | 0.00 | 779.47 | 0.079 | 0.09 | 5.014 | A |
| | | | | | | Exit- | | Exit- | Exit- |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | only | Exit-only | only | only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 1132.95 | 1132.94 | 0.00 | 0.00 | 2347.30 | 0.483 | 0.93 | 2.963 | A |
| **B** | 93.59 | 93.58 | 1132.94 | 0.00 | 733.08 | 0.128 | 0.15 | 5.628 | A |
| **C** | 61.66 | 61.66 | 1197.90 | 0.00 | 778.08 | 0.079 | 0.09 | 5.024 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 925.05 | 926.16 | 0.00 | 0.00 | 2347.30 | 0.394 | 0.65 | 2.534 | A |
| **B** | 76.41 | 76.65 | 926.16 | 0.00 | 955.08 | 0.080 | 0.09 | 4.100 | A |
| **C** | 50.34 | 50.48 | 979.39 | 0.00 | 1011.46 | 0.050 | 0.05 | 3.748 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 774.69 | 775.32 | 0.00 | 0.00 | 2347.30 | 0.330 | 0.49 | 2.290 | A |
| **B** | 63.99 | 64.10 | 775.32 | 0.00 | 1117.02 | 0.057 | 0.06 | 3.418 | A |
| **C** | 42.16 | 42.22 | 819.82 | 0.00 | 1181.90 | 0.036 | 0.04 | 3.160 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

# EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED, 0800-0900

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2034 WEEKDAY WITH COMMITTED, 0800-0900 | 2034 WEEKDAY WITH COMMITTED | 0800-0900 | | ONE HOUR | 07:45 | 09:15 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 SOUTHERN ROUNDABOUT | Roundabout | A,B,C,D | ✓ | | 3.83 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | B3184 (N) | |
| **B** | A30 WESTBOUND EXIT SLIP | |
| **C** | BISHOP'S COURT LANE (S) | |
| **D** | A30 WESTBOUND ENTRY SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.40 | 6.60 | 3.11 | 15.00 | 45.00 | 36.00 | |
| **B** | 3.65 | 3.65 | 0.00 | 15.00 | 45.00 | 31.00 | |
| **C** | 2.75 | 6.50 | 9.11 | 15.00 | 45.00 | 54.00 | |
| **D** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 1.228 | 2347.300 |
| **B** | | (calculated) | (calculated) | 1.074 | 1949.422 |
| **C** | | (calculated) | (calculated) | 1.068 | 2057.561 |
| **D** | | (calculated) | (calculated) | Exit-only | Exit-only |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| **A** | ONE HOUR | ✓ | 1013.00 | 100.000 |
| **B** | ONE HOUR | ✓ | 238.00 | 100.000 |
| **C** | ONE HOUR | ✓ | 36.00 | 100.000 |
| **D** | Exit-only | ✓ | Exit-only | Exit-only |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| **07:45-08:00** | **A** | 762.64 | 762.64 | | |
| **07:45-08:00** | **B** | 179.18 | 179.18 | | |
| **07:45-08:00** | **C** | 27.10 | 27.10 | | |
| **07:45-08:00** | **D** | Exit-only | 0.00 | | |
| **08:00-08:15** | **A** | 910.67 | 910.67 | | |
| **08:00-08:15** | **B** | 213.96 | 213.96 | | |
| **08:00-08:15** | **C** | 32.36 | 32.36 | | |
| **08:00-08:15** | **D** | Exit-only | 0.00 | | |
| **08:15-08:30** | **A** | 1115.33 | 1115.33 | | |
| **08:15-08:30** | **B** | 262.04 | 262.04 | | |
| **08:15-08:30** | **C** | 39.64 | 39.64 | | |
| **08:15-08:30** | **D** | Exit-only | 0.00 | | |
| **08:30-08:45** | **A** | 1115.33 | 1115.33 | | |
| **08:30-08:45** | **B** | 262.04 | 262.04 | | |

| | | | | | |
|---|---|---|---|---|---|
| 08:30-08:45 | C | 39.64 | 39.64 | | |
| 08:30-08:45 | D | Exit-only | 0.00 | | |
| 08:45-09:00 | A | 910.67 | 910.67 | | |
| 08:45-09:00 | B | 213.96 | 213.96 | | |
| 08:45-09:00 | C | 32.36 | 32.36 | | |
| 08:45-09:00 | D | Exit-only | 0.00 | | |
| 09:00-09:15 | A | 762.64 | 762.64 | | |
| 09:00-09:15 | B | 179.18 | 179.18 | | |
| 09:00-09:15 | C | 27.10 | 27.10 | | |
| 09:00-09:15 | D | Exit-only | 0.00 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 31.000 | 982.000 |
| | B | 225.000 | 0.000 | 13.000 | 0.000 |
| | C | 30.000 | 0.000 | 0.000 | 6.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.00 | 0.00 | 0.03 | 0.97 |
| | B | 0.95 | 0.00 | 0.05 | 0.00 |
| | C | 0.83 | 0.00 | 0.00 | 0.17 |
| | D | 0.25 | 0.25 | 0.25 | 0.25 |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | 1.000 | 1.000 | 1.000 | 1.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | 0.000 | 0.000 | 0.000 | 0.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.48 | 2.92 | 0.90 | A |
| B | 0.35 | 7.35 | 0.53 | A |
| C | 0.06 | 6.01 | 0.07 | A |
| D | Exit-only | Exit-only | Exit-only | Exit-only |

## Main Results for each time segment

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 762.64 | 760.72 | 0.00 | 0.00 | 2347.30 | 0.325 | 0.48 | 2.266 | A |
| B | 179.18 | 178.43 | 760.72 | 0.00 | 1132.70 | 0.158 | 0.19 | 3.773 | A |
| C | 27.10 | 27.00 | 906.13 | 0.00 | 1089.72 | 0.025 | 0.03 | 3.387 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 910.67 | 910.06 | 0.00 | 0.00 | 2347.30 | 0.388 | 0.63 | 2.503 | A |
| B | 213.96 | 213.58 | 910.06 | 0.00 | 972.36 | 0.220 | 0.28 | 4.742 | A |
| C | 32.36 | 32.32 | 1084.13 | 0.00 | 899.59 | 0.036 | 0.04 | 4.150 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 1115.33 | 1114.26 | 0.00 | 0.00 | 2347.30 | 0.475 | 0.90 | 2.916 | A |
| B | 262.04 | 261.06 | 1114.26 | 0.00 | 753.13 | 0.348 | 0.53 | 7.301 | A |
| C | 39.64 | 39.52 | 1326.96 | 0.00 | 640.23 | 0.062 | 0.07 | 5.993 | A |
| | | | | | | Exit- | | Exit- | Exit- |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | only | Exit-only | only | only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 1115.33 | 1115.32 | 0.00 | 0.00 | 2347.30 | 0.475 | 0.90 | 2.921 | A |
| **B** | 262.04 | 262.03 | 1115.32 | 0.00 | 751.99 | 0.348 | 0.53 | 7.346 | A |
| **C** | 39.64 | 39.64 | 1328.91 | 0.00 | 638.14 | 0.062 | 0.07 | 6.014 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 910.67 | 911.73 | 0.00 | 0.00 | 2347.30 | 0.388 | 0.64 | 2.509 | A |
| **B** | 213.96 | 214.94 | 911.73 | 0.00 | 970.57 | 0.220 | 0.28 | 4.771 | A |
| **C** | 32.36 | 32.48 | 1087.03 | 0.00 | 896.49 | 0.036 | 0.04 | 4.166 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 762.64 | 763.25 | 0.00 | 0.00 | 2347.30 | 0.325 | 0.48 | 2.273 | A |
| **B** | 179.18 | 179.56 | 763.25 | 0.00 | 1129.98 | 0.159 | 0.19 | 3.791 | A |
| **C** | 27.10 | 27.15 | 909.65 | 0.00 | 1085.96 | 0.025 | 0.03 | 3.402 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

# EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED, 1630-1730

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2034 WEEKDAY WITH COMMITTED, 1630-1730 | 2034 WEEKDAY WITH COMMITTED | 1630-1730 | | ONE HOUR | 16:15 | 17:45 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 SOUTHERN ROUNDABOUT | Roundabout | A,B,C,D | ✓ | | 3.31 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | B3184 (N) | |
| **B** | A30 WESTBOUND EXIT SLIP | |
| **C** | BISHOP'S COURT LANE (S) | |
| **D** | A30 WESTBOUND ENTRY SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.40 | 6.60 | 3.11 | 15.00 | 45.00 | 36.00 | |
| **B** | 3.65 | 3.65 | 0.00 | 15.00 | 45.00 | 31.00 | |
| **C** | 2.75 | 6.50 | 9.11 | 15.00 | 45.00 | 54.00 | |
| **D** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 1.228 | 2347.300 |
| **B** | | (calculated) | (calculated) | 1.074 | 1949.422 |
| **C** | | (calculated) | (calculated) | 1.068 | 2057.561 |
| **D** | | (calculated) | (calculated) | Exit-only | Exit-only |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| **A** | ONE HOUR | ✓ | 1059.00 | 100.000 |
| **B** | ONE HOUR | ✓ | 70.00 | 100.000 |
| **C** | ONE HOUR | ✓ | 58.00 | 100.000 |
| **D** | Exit-only | ✓ | Exit-only | Exit-only |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| **16:15-16:30** | **A** | 797.27 | 797.27 | | |
| **16:15-16:30** | **B** | 52.70 | 52.70 | | |
| **16:15-16:30** | **C** | 43.67 | 43.67 | | |
| **16:15-16:30** | **D** | Exit-only | 0.00 | | |
| **16:30-16:45** | **A** | 952.02 | 952.02 | | |
| **16:30-16:45** | **B** | 62.93 | 62.93 | | |
| **16:30-16:45** | **C** | 52.14 | 52.14 | | |
| **16:30-16:45** | **D** | Exit-only | 0.00 | | |
| **16:45-17:00** | **A** | 1165.98 | 1165.98 | | |
| **16:45-17:00** | **B** | 77.07 | 77.07 | | |
| **16:45-17:00** | **C** | 63.86 | 63.86 | | |
| **16:45-17:00** | **D** | Exit-only | 0.00 | | |
| **17:00-17:15** | **A** | 1165.98 | 1165.98 | | |
| **17:00-17:15** | **B** | 77.07 | 77.07 | | |

| | | | | | |
|---|---|---|---|---|---|
| **17:00-17:15** | **C** | 63.86 | 63.86 | | |
| **17:00-17:15** | **D** | Exit-only | 0.00 | | |
| **17:15-17:30** | **A** | 952.02 | 952.02 | | |
| **17:15-17:30** | **B** | 62.93 | 62.93 | | |
| **17:15-17:30** | **C** | 52.14 | 52.14 | | |
| **17:15-17:30** | **D** | Exit-only | 0.00 | | |
| **17:30-17:45** | **A** | 797.27 | 797.27 | | |
| **17:30-17:45** | **B** | 52.70 | 52.70 | | |
| **17:30-17:45** | **C** | 43.67 | 43.67 | | |
| **17:30-17:45** | **D** | Exit-only | 0.00 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | **A** | **B** | **C** | **D** |
| **From** | **A** | 0.000 | 0.000 | 21.000 | 1038.000 |
| | **B** | 64.000 | 0.000 | 6.000 | 0.000 |
| | **C** | 41.000 | 0.000 | 0.000 | 17.000 |
| | **D** | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | **A** | **B** | **C** | **D** |
| **From** | **A** | 0.00 | 0.00 | 0.02 | 0.98 |
| | **B** | 0.91 | 0.00 | 0.09 | 0.00 |
| | **C** | 0.71 | 0.00 | 0.00 | 0.29 |
| | **D** | 0.25 | 0.25 | 0.25 | 0.25 |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | **A** | **B** | **C** | **D** |
| **From** | **A** | 1.000 | 1.000 | 1.000 | 1.000 |
| | **B** | 1.000 | 1.000 | 1.000 | 1.000 |
| | **C** | 1.000 | 1.000 | 1.000 | 1.000 |
| | **D** | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | 0.000 | 0.000 | 0.000 | 0.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.50 | 3.05 | 0.98 | A |
| B | 0.11 | 5.80 | 0.12 | A |
| C | 0.08 | 5.16 | 0.09 | A |
| D | Exit-only | Exit-only | Exit-only | Exit-only |

## Main Results for each time segment

### Main results: (16:15-16:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 797.27 | 795.22 | 0.00 | 0.00 | 2347.30 | 0.340 | 0.51 | 2.316 | A |
| B | 52.70 | 52.50 | 795.22 | 0.00 | 1095.66 | 0.048 | 0.05 | 3.450 | A |
| C | 43.67 | 43.51 | 827.45 | 0.00 | 1173.75 | 0.037 | 0.04 | 3.184 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

### Main results: (16:30-16:45)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 952.02 | 951.35 | 0.00 | 0.00 | 2347.30 | 0.406 | 0.68 | 2.577 | A |
| B | 62.93 | 62.84 | 951.35 | 0.00 | 928.03 | 0.068 | 0.07 | 4.161 | A |
| C | 52.14 | 52.08 | 989.94 | 0.00 | 1000.20 | 0.052 | 0.05 | 3.796 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 1165.98 | 1164.77 | 0.00 | 0.00 | 2347.30 | 0.497 | 0.98 | 3.041 | A |
| B | 77.07 | 76.87 | 1164.77 | 0.00 | 698.90 | 0.110 | 0.12 | 5.786 | A |
| C | 63.86 | 63.72 | 1211.96 | 0.00 | 763.06 | 0.084 | 0.09 | 5.146 | A |
| | | | | | | Exit- | | Exit- | Exit- |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | only | Exit-only | only | only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 1165.98 | 1165.97 | 0.00 | 0.00 | 2347.30 | 0.497 | 0.98 | 3.046 | A |
| **B** | 77.07 | 77.07 | 1165.97 | 0.00 | 697.62 | 0.110 | 0.12 | 5.800 | A |
| **C** | 63.86 | 63.86 | 1213.31 | 0.00 | 761.61 | 0.084 | 0.09 | 5.158 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 952.02 | 953.21 | 0.00 | 0.00 | 2347.30 | 0.406 | 0.69 | 2.584 | A |
| **B** | 62.93 | 63.13 | 953.21 | 0.00 | 926.03 | 0.068 | 0.07 | 4.174 | A |
| **C** | 52.14 | 52.28 | 992.03 | 0.00 | 997.96 | 0.052 | 0.06 | 3.806 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 797.27 | 797.95 | 0.00 | 0.00 | 2347.30 | 0.340 | 0.52 | 2.324 | A |
| **B** | 52.70 | 52.79 | 797.95 | 0.00 | 1092.73 | 0.048 | 0.05 | 3.463 | A |
| **C** | 43.67 | 43.73 | 830.39 | 0.00 | 1170.61 | 0.037 | 0.04 | 3.196 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

# EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 0800-0900

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 0800-0900 | 2034 WEEKDAY WITH COMMITTED AND PROPOSED | 0800-0900 | | ONE HOUR | 07:45 | 09:15 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 SOUTHERN ROUNDABOUT | Roundabout | A,B,C,D | ✓ | | 4.31 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | B3184 (N) | |
| **B** | A30 WESTBOUND EXIT SLIP | |
| **C** | BISHOP'S COURT LANE (S) | |
| **D** | A30 WESTBOUND ENTRY SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.40 | 6.60 | 3.11 | 15.00 | 45.00 | 36.00 | |
| **B** | 3.65 | 3.65 | 0.00 | 15.00 | 45.00 | 31.00 | |
| **C** | 2.75 | 6.50 | 9.11 | 15.00 | 45.00 | 54.00 | |
| **D** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 1.228 | 2347.300 |
| **B** | | (calculated) | (calculated) | 1.074 | 1949.422 |
| **C** | | (calculated) | (calculated) | 1.068 | 2057.561 |
| **D** | | (calculated) | (calculated) | Exit-only | Exit-only |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| A | ONE HOUR | ✓ | 1073.00 | 100.000 |
| B | ONE HOUR | ✓ | 257.00 | 100.000 |
| C | ONE HOUR | ✓ | 36.00 | 100.000 |
| D | Exit-only | ✓ | Exit-only | Exit-only |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| 07:45-08:00 | A | 807.81 | 807.81 | | |
| 07:45-08:00 | B | 193.48 | 193.48 | | |
| 07:45-08:00 | C | 27.10 | 27.10 | | |
| 07:45-08:00 | D | Exit-only | 0.00 | | |
| 08:00-08:15 | A | 964.60 | 964.60 | | |
| 08:00-08:15 | B | 231.04 | 231.04 | | |
| 08:00-08:15 | C | 32.36 | 32.36 | | |
| 08:00-08:15 | D | Exit-only | 0.00 | | |
| 08:15-08:30 | A | 1181.40 | 1181.40 | | |
| 08:15-08:30 | B | 282.96 | 282.96 | | |
| 08:15-08:30 | C | 39.64 | 39.64 | | |
| 08:15-08:30 | D | Exit-only | 0.00 | | |
| 08:30-08:45 | A | 1181.40 | 1181.40 | | |
| 08:30-08:45 | B | 282.96 | 282.96 | | |

| | | | | | |
|---|---|---|---|---|---|
| 08:30-08:45 | C | 39.64 | 39.64 | | |
| 08:30-08:45 | D | Exit-only | 0.00 | | |
| 08:45-09:00 | A | 964.60 | 964.60 | | |
| 08:45-09:00 | B | 231.04 | 231.04 | | |
| 08:45-09:00 | C | 32.36 | 32.36 | | |
| 08:45-09:00 | D | Exit-only | 0.00 | | |
| 09:00-09:15 | A | 807.81 | 807.81 | | |
| 09:00-09:15 | B | 193.48 | 193.48 | | |
| 09:00-09:15 | C | 27.10 | 27.10 | | |
| 09:00-09:15 | D | Exit-only | 0.00 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 31.000 | 1042.000 |
| | B | 244.000 | 0.000 | 13.000 | 0.000 |
| | C | 30.000 | 0.000 | 0.000 | 6.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.00 | 0.00 | 0.03 | 0.97 |
| | B | 0.95 | 0.00 | 0.05 | 0.00 |
| | C | 0.83 | 0.00 | 0.00 | 0.17 |
| | D | 0.25 | 0.25 | 0.25 | 0.25 |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | 1.000 | 1.000 | 1.000 | 1.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | 0.000 | 0.000 | 0.000 | 0.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.50 | 3.09 | 1.01 | A |
| B | 0.42 | 9.04 | 0.70 | A |
| C | 0.07 | 7.12 | 0.08 | A |
| D | Exit-only | Exit-only | Exit-only | Exit-only |

## Main Results for each time segment

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 807.81 | 805.72 | 0.00 | 0.00 | 2347.30 | 0.344 | 0.52 | 2.332 | A |
| B | 193.48 | 192.62 | 805.72 | 0.00 | 1084.38 | 0.178 | 0.22 | 4.034 | A |
| C | 27.10 | 26.99 | 965.32 | 0.00 | 1026.50 | 0.026 | 0.03 | 3.601 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 964.60 | 963.92 | 0.00 | 0.00 | 2347.30 | 0.411 | 0.69 | 2.601 | A |
| B | 231.04 | 230.56 | 963.92 | 0.00 | 914.54 | 0.253 | 0.34 | 5.260 | A |
| C | 32.36 | 32.31 | 1154.97 | 0.00 | 823.93 | 0.039 | 0.04 | 4.547 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 1181.40 | 1180.15 | 0.00 | 0.00 | 2347.30 | 0.503 | 1.01 | 3.082 | A |
| B | 282.96 | 281.52 | 1180.15 | 0.00 | 682.39 | 0.415 | 0.70 | 8.949 | A |
| C | 39.64 | 39.49 | 1413.33 | 0.00 | 547.97 | 0.072 | 0.08 | 7.078 | A |
| | | | | | | Exit- | | Exit- | Exit- |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | only | Exit-only | only | only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 1181.40 | 1181.38 | 0.00 | 0.00 | 2347.30 | 0.503 | 1.01 | 3.087 | A |
| **B** | 282.96 | 282.93 | 1181.38 | 0.00 | 681.07 | 0.415 | 0.70 | 9.040 | A |
| **C** | 39.64 | 39.63 | 1415.87 | 0.00 | 545.26 | 0.073 | 0.08 | 7.119 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 964.60 | 965.84 | 0.00 | 0.00 | 2347.30 | 0.411 | 0.70 | 2.607 | A |
| **B** | 231.04 | 232.49 | 965.84 | 0.00 | 912.48 | 0.253 | 0.34 | 5.304 | A |
| **C** | 32.36 | 32.51 | 1158.66 | 0.00 | 819.98 | 0.039 | 0.04 | 4.573 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 807.81 | 808.51 | 0.00 | 0.00 | 2347.30 | 0.344 | 0.53 | 2.341 | A |
| **B** | 193.48 | 193.97 | 808.51 | 0.00 | 1081.39 | 0.179 | 0.22 | 4.058 | A |
| **C** | 27.10 | 27.16 | 969.31 | 0.00 | 1022.23 | 0.027 | 0.03 | 3.619 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

# EXISTING LAYOUT - 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Locked | Network Flow Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|
| EXISTING LAYOUT | | | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Traffic Profile Type | Model Start Time (HH:mm) | Model Finish Time (HH:mm) | Model Time Period Length (min) | Time Segment Length (min) | Single Time Segment Only | Locked |
|---|---|---|---|---|---|---|---|---|---|---|
| 2034 WEEKDAY WITH COMMITTED AND PROPOSED, 1630-1730 | 2034 WEEKDAY WITH COMMITTED AND PROPOSED | 1630-1730 | | ONE HOUR | 16:15 | 17:45 | 90 | 15 | | |

# Junction Network

## Junctions

| Name | Junction Type | Arm Order | Grade Separated | Large Roundabout | Junction Delay (s) | Junction LOS |
|---|---|---|---|---|---|---|
| A30 SOUTHERN ROUNDABOUT | Roundabout | A,B,C,D | ✓ | | 3.76 | A |

## Junction Network Options

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

# Arms

## Arms

| Arm | Name | Description |
|---|---|---|
| **A** | B3184 (N) | |
| **B** | A30 WESTBOUND EXIT SLIP | |
| **C** | BISHOP'S COURT LANE (S) | |
| **D** | A30 WESTBOUND ENTRY SLIP | |

## Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | l' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit Only |
|---|---|---|---|---|---|---|---|
| **A** | 4.40 | 6.60 | 3.11 | 15.00 | 45.00 | 36.00 | |
| **B** | 3.65 | 3.65 | 0.00 | 15.00 | 45.00 | 31.00 | |
| **C** | 2.75 | 6.50 | 9.11 | 15.00 | 45.00 | 54.00 | |
| **D** | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only | ✓ |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| **A** | 0.00 | 0.00 |
| **B** | 0.00 | 0.00 |
| **C** | 0.00 | 0.00 |
| **D** | 0.00 | 0.00 |

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

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| **A** | None |
| **B** | None |
| **C** | None |
| **D** | None |

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

| Arm | Enter slope and intercept directly | Entered slope | Entered intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| **A** | | (calculated) | (calculated) | 1.228 | 2347.300 |
| **B** | | (calculated) | (calculated) | 1.074 | 1949.422 |
| **C** | | (calculated) | (calculated) | 1.068 | 2057.561 |
| **D** | | (calculated) | (calculated) | Exit-only | Exit-only |

*The slope and intercept shown above include any corrections and adjustments.*

# Traffic Flows

## Demand Set Data Options

| Default Vehicle Mix | Vehicle Mix Varies Over Time | Vehicle Mix Varies Over Turn | Vehicle Mix Varies Over Entry | Vehicle Mix Source | PCU Factor for a HV (PCU) | Default Turning Proportions | Estimate from entry/exit counts | Turning Proportions Vary Over Time | Turning Proportions Vary Over Turn | Turning Proportions Vary Over Entry |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ✓ | ✓ | PCU Factors | 2.00 | | | | ✓ | ✓ |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (PCU/hr) | Flow Scaling Factor (%) |
|---|---|---|---|---|
| **A** | ONE HOUR | ✓ | 1155.00 | 100.000 |
| **B** | ONE HOUR | ✓ | 89.00 | 100.000 |
| **C** | ONE HOUR | ✓ | 58.00 | 100.000 |
| **D** | Exit-only | ✓ | Exit-only | Exit-only |

# Direct/Resultant Flows

## Direct Flows Data

| Time Segment | Arm | Direct Demand Entry Flow (PCU/hr) | DirectDemandEntryFlowInPCU (PCU/hr) | Direct Demand Exit Flow (PCU/hr) | Direct Demand Pedestrian Flow (Ped/hr) |
|---|---|---|---|---|---|
| **16:15-16:30** | **A** | 869.54 | 869.54 | | |
| **16:15-16:30** | **B** | 67.00 | 67.00 | | |
| **16:15-16:30** | **C** | 43.67 | 43.67 | | |
| **16:15-16:30** | **D** | Exit-only | 0.00 | | |
| **16:30-16:45** | **A** | 1038.32 | 1038.32 | | |
| **16:30-16:45** | **B** | 80.01 | 80.01 | | |
| **16:30-16:45** | **C** | 52.14 | 52.14 | | |
| **16:30-16:45** | **D** | Exit-only | 0.00 | | |
| **16:45-17:00** | **A** | 1271.68 | 1271.68 | | |
| **16:45-17:00** | **B** | 97.99 | 97.99 | | |
| **16:45-17:00** | **C** | 63.86 | 63.86 | | |
| **16:45-17:00** | **D** | Exit-only | 0.00 | | |
| **17:00-17:15** | **A** | 1271.68 | 1271.68 | | |
| **17:00-17:15** | **B** | 97.99 | 97.99 | | |

| | | | | | |
|---|---|---|---|---|---|
| 17:00-17:15 | C | 63.86 | 63.86 | | |
| 17:00-17:15 | D | Exit-only | 0.00 | | |
| 17:15-17:30 | A | 1038.32 | 1038.32 | | |
| 17:15-17:30 | B | 80.01 | 80.01 | | |
| 17:15-17:30 | C | 52.14 | 52.14 | | |
| 17:15-17:30 | D | Exit-only | 0.00 | | |
| 17:30-17:45 | A | 869.54 | 869.54 | | |
| 17:30-17:45 | B | 67.00 | 67.00 | | |
| 17:30-17:45 | C | 43.67 | 43.67 | | |
| 17:30-17:45 | D | Exit-only | 0.00 | | |

# Turning Proportions

### Turning Counts or Proportions (PCU/hr) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 21.000 | 1134.000 |
| | B | 83.000 | 0.000 | 6.000 | 0.000 |
| | C | 41.000 | 0.000 | 0.000 | 17.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Turning Proportions (PCU) - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.00 | 0.00 | 0.02 | 0.98 |
| | B | 0.93 | 0.00 | 0.07 | 0.00 |
| | C | 0.71 | 0.00 | 0.00 | 0.29 |
| | D | 0.25 | 0.25 | 0.25 | 0.25 |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Vehicle Mix

### Average PCU Per Vehicle - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 1.000 | 1.000 | 1.000 | 1.000 |
| | B | 1.000 | 1.000 | 1.000 | 1.000 |
| | C | 1.000 | 1.000 | 1.000 | 1.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

### Heavy Vehicle Percentages - Junction 4 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | A | B | C | D |
| From | A | 0.000 | 0.000 | 0.000 | 0.000 |
| | B | 0.000 | 0.000 | 0.000 | 0.000 |
| | C | 0.000 | 0.000 | 0.000 | 0.000 |
| | D | Exit-only | Exit-only | Exit-only | Exit-only |

*Arm D is exit only and so the above grid should be ignored for this Arm.*

# Results

## Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS |
|---|---|---|---|---|
| A | 0.54 | 3.35 | 1.18 | A |
| B | 0.17 | 7.40 | 0.20 | A |
| C | 0.10 | 6.40 | 0.11 | A |
| D | Exit-only | Exit-only | Exit-only | Exit-only |

## Main Results for each time segment

### Main results: (16:15-16:30)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 869.54 | 867.20 | 0.00 | 0.00 | 2347.30 | 0.370 | 0.59 | 2.428 | A |
| B | 67.00 | 66.72 | 867.20 | 0.00 | 1018.38 | 0.066 | 0.07 | 3.783 | A |
| C | 43.67 | 43.50 | 913.66 | 0.00 | 1081.67 | 0.040 | 0.04 | 3.467 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

### Main results: (16:30-16:45)

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 1038.32 | 1037.51 | 0.00 | 0.00 | 2347.30 | 0.442 | 0.79 | 2.747 | A |
| B | 80.01 | 79.87 | 1037.51 | 0.00 | 835.53 | 0.096 | 0.11 | 4.764 | A |
| C | 52.14 | 52.06 | 1093.13 | 0.00 | 889.98 | 0.059 | 0.06 | 4.296 | A |
| D | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| A | 1271.68 | 1270.14 | 0.00 | 0.00 | 2347.30 | 0.542 | 1.17 | 3.338 | A |
| B | 97.99 | 97.62 | 1270.14 | 0.00 | 585.77 | 0.167 | 0.20 | 7.370 | A |
| C | 63.86 | 63.66 | 1338.08 | 0.00 | 628.34 | 0.102 | 0.11 | 6.374 | A |
| | | | | | | Exit- | | Exit- | Exit- |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | only | Exit-only | only | only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 1271.68 | 1271.66 | 0.00 | 0.00 | 2347.30 | 0.542 | 1.18 | 3.346 | A |
| **B** | 97.99 | 97.98 | 1271.66 | 0.00 | 584.14 | 0.168 | 0.20 | 7.404 | A |
| **C** | 63.86 | 63.86 | 1339.92 | 0.00 | 626.38 | 0.102 | 0.11 | 6.399 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 1038.32 | 1039.84 | 0.00 | 0.00 | 2347.30 | 0.442 | 0.80 | 2.756 | A |
| **B** | 80.01 | 80.38 | 1039.84 | 0.00 | 833.03 | 0.096 | 0.11 | 4.786 | A |
| **C** | 52.14 | 52.34 | 1095.90 | 0.00 | 887.02 | 0.059 | 0.06 | 4.315 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |

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

| Arm | Total Demand (PCU/hr) | Entry Flow (PCU/hr) | Circulating Flow (PCU/hr) | Pedestrian Demand (Ped/hr) | Capacity (PCU/hr) | RFC | End Queue (PCU) | Delay (s) | LOS |
|---|---|---|---|---|---|---|---|---|---|
| **A** | 869.54 | 870.37 | 0.00 | 0.00 | 2347.30 | 0.370 | 0.59 | 2.438 | A |
| **B** | 67.00 | 67.15 | 870.37 | 0.00 | 1014.97 | 0.066 | 0.07 | 3.797 | A |
| **C** | 43.67 | 43.75 | 917.17 | 0.00 | 1077.93 | 0.041 | 0.04 | 3.483 | A |
| **D** | Exit-only | Exit-only | Exit-only | 0.00 | Exit-only | Exit-only | Exit-only | Exit-only | Exit-only |