# Appendix A

## HAVANT ROAD EMSWORTH HAMPSHIRE 192

SCHEDULE OF DWELLINGS

BARRATTS

| REF | TYPE | DESCRIPTION | STOREY | SQ.FT | NO | TOTAL |
|---|---|---|---|---|---|---|
| FA | [illegible] | 4 BED HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| MO | [illegible] | 4 BED HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| KO | [illegible] | 4 BED HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| EN | [illegible] | 3 BED HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| MA | [illegible] | 3 BED HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| TO | [illegible] | 3 BED HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 3 BED HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 2 BED DETACHED | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 2 BED COACH HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 2 BED FLATS | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 2 BED FLATS | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 1 BED HUNDER FLATS | 2.5 | [illegible] | [illegible] | [illegible] |
| SUB TOTAL | | | | | 155 | [illegible] |

AFFORDABLE

| REF | TYPE | DESCRIPTION | STOREY | SQ.FT | NO | TOTAL |
|---|---|---|---|---|---|---|
| SOCIAL HOUSING (50%) | | | | | | |
| [illegible] | TYPE [illegible] | 4 BED HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | TYPE [illegible] | 3 BED HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | TYPE [illegible] | 3 BED HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | TYPE [illegible] | 3 BED HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 2 BED COACH HOUSE | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 2 BED FLATS | 2.5 | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | 1 BED RESERVE FLATS | 2.5 | [illegible] | [illegible] | [illegible] |
| SUB TOTAL | | | | | 37 | [illegible] |
| GRAND TOTAL | | | | | 192 | [illegible] |

BARRATT

SIMON COOPER

# Appendix B

Site No: 00000459 Site Reference: 00000459

HAVANT RD EMSWORTH

From 03/01/2016 To 11/01/2016 Westbound

| Time Begin | Total Vol. | 85th %ile | Mean Ave. | Std. Dev. | Bin 1 <6Mph | Bin 2 6-<11 | Bin 3 11-<16 | Bin 4 16-<21 | Bin 5 21-<26 | Bin 6 26-<31 | Bin 7 31-<36 | Bin 8 36-<41 | Bin 9 41-<46 | Bin 10 46-<51 | Bin 11 51-<56 | Bin 12 56-<61 | Bin 13 =>61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0:00 | 29 | 40.1 | 34.8 | 5.7 | 0 | 0 | 0 | 0 | 1 | 6 | 11 | 6 | 4 | 0 | 0 | 0 | 0 |
| 1:00 | 11 | 39.3 | 34.6 | 5.6 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 3 | 1 | 0 | 0 | 0 | 0 |
| 2:00 | 9 | - | 34.9 | 5.1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 3:00 | 13 | 42.3 | 36.2 | 6.5 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 0 |
| 4:00 | 25 | 42.3 | 35.6 | 6.6 | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 6 | 5 | 0 | 0 | 0 | 0 |
| 5:00 | 81 | 41 | 35.2 | 6 | 0 | 0 | 0 | 0 | 1 | 19 | 30 | 18 | 8 | 3 | 1 | 0 | 0 |
| 6:00 | 288 | 37.5 | 32.7 | 4.9 | 0 | 0 | 0 | 0 | 7 | 107 | 117 | 43 | 10 | 2 | 0 | 0 | 0 |
| 7:00 | 743 | 34.2 | 30 | 3.9 | 0 | 0 | 0 | 3 | 61 | 433 | 212 | 28 | 4 | 0 | 0 | 0 | 0 |
| 8:00 | 862 | 34.8 | 30.4 | 4.3 | 0 | 1 | 3 | 4 | 70 | 424 | 304 | 49 | 6 | 0 | 0 | 0 | 0 |
| 9:00 | 758 | 35 | 31.1 | 3.9 | 0 | 0 | 0 | 0 | 34 | 362 | 305 | 50 | 6 | 0 | 0 | 0 | 0 |
| 10:00 | 743 | 35 | 30.9 | 4 | 0 | 0 | 1 | 2 | 33 | 367 | 286 | 47 | 5 | 0 | 0 | 0 | 0 |
| 11:00 | 758 | 35 | 31 | 3.9 | 0 | 0 | 0 | 3 | 34 | 370 | 297 | 50 | 5 | 0 | 0 | 0 | 0 |
| 12:00 | 724 | 35.2 | 31.2 | 4.2 | 0 | 0 | 1 | 3 | 38 | 323 | 297 | 53 | 8 | 0 | 0 | 0 | 0 |
| 13:00 | 719 | 35.4 | 31.4 | 4.1 | 0 | 0 | 0 | 0 | 33 | 316 | 300 | 60 | 9 | 0 | 0 | 0 | 0 |
| 14:00 | 738 | 35.3 | 31.4 | 4 | 0 | 0 | 0 | 1 | 30 | 313 | 327 | 59 | 4 | 0 | 0 | 0 | 0 |
| 15:00 | 731 | 35.5 | 31.6 | 4.1 | 0 | 0 | 0 | 0 | 34 | 297 | 322 | 67 | 9 | 0 | 0 | 0 | 0 |
| 16:00 | 657 | 35.1 | 31 | 4 | 0 | 0 | 0 | 0 | 35 | 319 | 250 | 47 | 6 | 0 | 0 | 0 | 0 |
| 17:00 | 590 | 35.1 | 30.8 | 4.2 | 0 | 0 | 0 | 2 | 44 | 287 | 205 | 47 | 5 | 0 | 0 | 0 | 0 |
| 18:00 | 437 | 35.4 | 31.3 | 4.4 | 0 | 0 | 0 | 0 | 26 | 191 | 171 | 41 | 7 | 0 | 0 | 0 | 0 |
| 19:00 | 329 | 35.9 | 31.9 | 4.4 | 0 | 0 | 0 | 0 | 14 | 135 | 134 | 39 | 7 | 1 | 0 | 0 | 0 |
| 20:00 | 210 | 36.7 | 32 | 4.7 | 0 | 0 | 0 | 0 | 11 | 87 | 78 | 28 | 6 | 0 | 0 | 0 | 0 |
| 21:00 | 155 | 37.4 | 32.5 | 5 | 0 | 0 | 0 | 0 | 8 | 54 | 62 | 21 | 6 | 0 | 0 | 0 | 0 |
| 22:00 | 118 | 37.3 | 32.4 | 5 | 0 | 0 | 0 | 0 | 6 | 44 | 46 | 16 | 4 | 0 | 0 | 0 | 0 |
| 23:00 | 76 | 38.6 | 33 | 5.4 | 0 | 0 | 0 | 0 | 5 | 23 | 28 | 15 | 4 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | |
| 12H,7-19 | 8462 | 35.1 | 31 | 4.1 | 0 | 1 | 5 | 18 | 474 | 4001 | 3277 | 597 | 74 | 0 | 0 | 0 | 0 |
| 16H,6-22 | 9444 | 35.2 | 31.1 | 4.1 | 0 | 1 | 5 | 18 | 514 | 4384 | 3668 | 728 | 103 | 3 | 0 | 0 | 0 |
| 18H,6-24 | 9638 | 35.2 | 31.1 | 4.2 | 0 | 1 | 5 | 18 | 525 | 4451 | 3742 | 759 | 111 | 3 | 0 | 0 | 0 |
| 24H,0-24 | 9806 | 35.3 | 31.2 | 4.2 | 0 | 1 | 5 | 18 | 527 | 4486 | 3802 | 795 | 129 | 6 | 1 | 0 | 0 |
| | | | | | | | | | | | | | | | | | |
| Am | 7:30 | - | 3:00 | 4:15 | - | 8:00 | 7:15 | 7:30 | 7:30 | 7:30 | 8:30 | 8:30 | 5:45 | 5:30 | 4:45 | 5:45 | 7:45 |
| Peak | 873 | - | 36.2 | 6.8 | - | 1 | 4 | 6 | 94 | 494 | 349 | 57 | 10 | 4 | 1 | 0 | 0 |
| | | | | | | | | | | | | | | | | | |
| Pm | 14:30 | 23:00 | 23:00 | 23:00 | - | 19:45 | 12:00 | 12:00 | 16:45 | 13:15 | 14:00 | 15:00 | 15:30 | 12:15 | 21:15 | 22:15 | 21:45 |
| Peak | 744 | 38.6 | 33 | 5.4 | - | 0 | 1 | 3 | 45 | 325 | 327 | 67 | 9 | 2 | 1 | 0 | 0 |

Collated from 15 minute interval data

Created at 08:54:55 on 10 Jan 2016

Site No: 00000459 Site Reference: 00000459

HAVANT RD EMSWORTH

From 03/01/2016 To 11/01/2016 Eastbound

| Time Begin | Total Vol. | 85th %ile | Mean Ave. | Std. Dev. | Bin 1 <6Mph | Bin 2 6-<11 | Bin 3 11-<16 | Bin 4 16-<21 | Bin 5 21-<26 | Bin 6 26-<31 | Bin 7 31-<36 | Bin 8 36-<41 | Bin 9 41-<46 | Bin 10 46-<51 | Bin 11 51-<56 | Bin 12 56-<61 | Bin 13 =>61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0:00 | 38 | 40.7 | 34.1 | 8.3 | 0 | 0 | 1 | 2 | 0 | 8 | 12 | 9 | 5 | 1 | 0 | 0 | 0 |
| 1:00 | 22 | 44 | 33.2 | 11.8 | 0 | 0 | 3 | 1 | 0 | 2 | 4 | 4 | 4 | 2 | 0 | 0 | 0 |
| 2:00 | 23 | 39.6 | 28.1 | 10.8 | 0 | 0 | 3 | 8 | 1 | 2 | 4 | 3 | 1 | 0 | 0 | 0 | 0 |
| 3:00 | 28 | 40.8 | 28.5 | 11.9 | 0 | 0 | 3 | 11 | 0 | 1 | 4 | 4 | 1 | 1 | 0 | 0 | 0 |
| 4:00 | 89 | 32.2 | 22.9 | 8.2 | 0 | 0 | 10 | 44 | 11 | 8 | 4 | 8 | 3 | 0 | 0 | 0 | 0 |
| 5:00 | 92 | 37.6 | 26.5 | 9.7 | 0 | 0 | 4 | 36 | 14 | 7 | 13 | 11 | 2 | 3 | 0 | 0 | 0 |
| 6:00 | 175 | 39.6 | 32.1 | 7.7 | 0 | 0 | 0 | 15 | 19 | 35 | 54 | 32 | 14 | 3 | 0 | 0 | 0 |
| 7:00 | 420 | 36 | 31.4 | 5.1 | 0 | 0 | 0 | 7 | 35 | 169 | 145 | 51 | 11 | 0 | 1 | 0 | 0 |
| 8:00 | 614 | 35.2 | 30.3 | 4.9 | 0 | 0 | 2 | 10 | 74 | 273 | 192 | 52 | 10 | 2 | 0 | 0 | 0 |
| 9:00 | 538 | 35.7 | 31.3 | 4.9 | 0 | 0 | 0 | 4 | 42 | 231 | 189 | 58 | 11 | 1 | 0 | 0 | 0 |
| 10:00 | 585 | 35.4 | 31 | 4.6 | 0 | 0 | 2 | 5 | 37 | 265 | 212 | 54 | 8 | 1 | 0 | 0 | 0 |
| 11:00 | 671 | 35.3 | 30.4 | 5.1 | 0 | 0 | 1 | 19 | 72 | 290 | 220 | 57 | 8 | 1 | 0 | 0 | 0 |
| 12:00 | 743 | 35.2 | 30.4 | 4.9 | 0 | 0 | 0 | 18 | 83 | 320 | 248 | 63 | 10 | 1 | 0 | 0 | 0 |
| 13:00 | 670 | 35.6 | 31.2 | 4.7 | 0 | 0 | 3 | 4 | 42 | 291 | 248 | 71 | 11 | 2 | 0 | 0 | 0 |
| 14:00 | 700 | 35.7 | 31.6 | 4.5 | 0 | 0 | 0 | 2 | 40 | 293 | 276 | 75 | 13 | 1 | 0 | 0 | 0 |
| 15:00 | 781 | 35 | 30.5 | 4.6 | 0 | 0 | 0 | 15 | 68 | 364 | 268 | 55 | 7 | 0 | 0 | 0 | 0 |
| 16:00 | 862 | 34 | 29.1 | 4.7 | 0 | 0 | 2 | 31 | 146 | 418 | 223 | 37 | 4 | 0 | 0 | 0 | 0 |
| 17:00 | 844 | 34.3 | 29.5 | 4.5 | 0 | 0 | 0 | 13 | 133 | 423 | 224 | 45 | 5 | 0 | 0 | 0 | 0 |
| 18:00 | 633 | 35.5 | 31.2 | 4.6 | 0 | 0 | 0 | 5 | 38 | 279 | 239 | 57 | 11 | 1 | 0 | 0 | 0 |
| 19:00 | 436 | 37 | 32.4 | 4.7 | 0 | 0 | 0 | 1 | 17 | 153 | 184 | 64 | 13 | 2 | 0 | 0 | 0 |
| 20:00 | 286 | 38.7 | 32.7 | 6.3 | 0 | 0 | 2 | 14 | 10 | 76 | 114 | 52 | 15 | 3 | 0 | 0 | 0 |
| 21:00 | 197 | 39.2 | 33.1 | 6.4 | 0 | 0 | 3 | 5 | 10 | 52 | 74 | 39 | 12 | 3 | 1 | 0 | 0 |
| 22:00 | 182 | 38.3 | 31.4 | 7.5 | 0 | 0 | 7 | 17 | 7 | 44 | 67 | 28 | 9 | 1 | 0 | 0 | 0 |
| 23:00 | 98 | 39.8 | 30.9 | 9.3 | 0 | 0 | 8 | 14 | 2 | 19 | 25 | 20 | 8 | 1 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | |
| 12H,7-19 | 8061 | 35.2 | 30.6 | 4.8 | 0 | 0 | 10 | 134 | 809 | 3617 | 2683 | 675 | 109 | 10 | 2 | 0 | 0 |
| 16H,6-22 | 9155 | 35.5 | 30.8 | 5 | 0 | 0 | 15 | 169 | 865 | 3933 | 3109 | 862 | 163 | 21 | 3 | 0 | 0 |
| 18H,6-24 | 9435 | 35.5 | 30.8 | 5.1 | 0 | 0 | 30 | 200 | 874 | 3996 | 3201 | 910 | 180 | 23 | 3 | 0 | 0 |
| 24H,0-24 | 9727 | 35.6 | 30.7 | 5.3 | 0 | 0 | 54 | 302 | 900 | 4024 | 3242 | 949 | 196 | 30 | 3 | 0 | 0 |
| | | | | | | | | | | | | | | | | | |
| Am | 11:00 | 1:00 | 0:15 | 2:45 | - | 1:15 | 4:00 | 4:15 | 8:00 | 11:00 | 10:30 | 8:45 | 6:15 | 5:30 | 6:15 | 6:30 | 10:45 |
| Peak | 671 | 44 | 35.6 | 12.9 | - | 0 | 10 | 47 | 74 | 289 | 222 | 61 | 14 | 4 | 1 | 1 | 0 |
| | | | | | | | | | | | | | | | | | |
| Pm | 16:15 | 22:45 | 20:45 | 23:00 | - | 16:00 | 23:00 | 15:45 | 16:30 | 16:45 | 14:15 | 13:45 | 19:30 | 20:30 | 21:15 | 20:15 | 21:15 |
| Peak | 876 | 39.9 | 33.8 | 9.3 | - | 0 | 7 | 38 | 158 | 443 | 287 | 77 | 15 | 4 | 1 | 1 | 0 |

Collated from 15 minute interval data

Created at 08:54:55 on 10 Jan 2016

# Appendix C

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

**Selected Polygon:MC Havant Road, Emsworth**

110435953 13/10/2011 Time 1909 Vehicles 2 Casualties 1 Slight
E:474931 N: 105905 First Road: A 259 Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled B 2148
Crossing: Control None Facilities: Footbridge or subway Road surface Dry
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 2 | Very Likely |
| 2nd: | Failed to judge other persons path or speed | Vehicle 2 | Very Likely |
| 3rd: | Inexperienced or learner driver/rider | Vehicle 2 | Possible |
| 4th: | Sudden braking | Vehicle 1 | Possible |
| 5th: | | | |
| 6th: | | | |

VEH 2 (M/CYCLE) TRAVELLING S ALONG B2148 NORTH STREET ENTERS RBT FAILING TO GIVE WAY TO VEH 1 (CAR) TRAVELLING W ALONG A259 HAVANT ROAD ON RBT AND COLLIDES CAUSING RIDER TO FALL OFF.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH B2148 NORTH STREET, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Back Hit vehicle: 2
Hit object in road None Off road: None
Did not leave carr Age of Driver 41 Male
Not hit and run Breath test Negative
Left hand drive:

Vehicle Reference 2 Motorcycle 50cc and under Starting
Vehicle movement from NW to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle: 1
Hit object in road None Off road: None
Did not leave carr Age of Driver 18 Male
Not hit and run Breath test Negative
Left hand drive:

Casualty Reference: 1 Vehicle: 2 Age: 18 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet:

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

110444017 19/10/2011 Time 0840 Vehicles 2 Casualties 1 Slight
E:473108 N: 105940 First Road: A 259 Road Type Single carriageway
Speed limit: 60 Junction Detail: Not within 20m of junction
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight:street lights present Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Loss of control | Vehicle 1 | Very Likely |
| 2nd: | Swerved | Vehicle 1 | Very Likely |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING W ALONG A259 IN SLOW MOVING TRAFFIC, FAILS TO SLOW ENOUGH AND COLLIDES INTO REAR OF VEH 2 (CAR) IN FRONT. VEH 1 ATTEMPTS TO AVOID BUT LEAVES ROAD TO NEARSIDE COLLIDING WITH A ROADSIGN.
Occurred on A259 HAVANT ROAD 87 METRES EAST OF GREEN POND CORNER, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Stopping
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle: 2
Hit object in road None Off road: Road sign / ATS
Nearside Age of Driver 29 Female
Not hit and run Breath test Negative
Left hand drive:

Vehicle Reference 2 Car Going ahead but held up
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle: 1
Hit object in road None Off road: None
Did not leave carr Age of Driver 42 Male
Not hit and run Breath test Negative
Left hand drive:

Casualty Reference: 1 Vehicle: 2 Age: 42 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet:

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

120041468 29/01/2012 Time 1813 Vehicles 2 Casualties 1 Slight
E:474933 N: 105888 First Road: A 259 Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled B 2148
Crossing: Control None Facilities: None within 50m Road surface Dry
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 1 | Very Likely |
| 2nd: | | | |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING W ALONG A259 HAVANT ROAD ENTERED THE RBT AT B2148 NORTH STREET AND COLLIDED WITH THE NEARSIDE OF VEH 2 (P/CYCLE) CROSSING THE RBT TRAVELLING S.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH B2148 NORTH STREET, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering roundabout First impact Front Hit vehicle: 2
Hit object in road None Off road: None
Did not leave carr Age of Driver 48 Male
Not hit and run Breath test Negative
Left hand drive:

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from N to S No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle: 1
Hit object in road None Off road: None
Did not leave carr Age of Driver 48 Male
Not hit and run Breath test Not applicable
Left hand drive:

Casualty Reference: 1 Vehicle: 2 Age: 48 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet:

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

120169985 03/05/2012 Time 1242 Vehicles 2 Casualties 1 Slight
E:473031 N: 105968 First Road: A 27 Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 259
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Daylight Raining without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 1 | Very Likely |
| 2nd: | | | |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING SW ALONG A27 OFFSLIP FAILED TO SLOW AND ENTERED RBT COLLIDING WITH NEARSIDE VEH 2 (VAN) TRAVELLING SE AROUND A259 HAVANT ROAD RBT.
Occurred on A27 WESTBOUND OFFSLIP AT JUNCTION WITH A259 HAVANT ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from NE to SW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: Tree
Nearside Age of Driver 76 Female
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Van or Goods 3.5 tonnes mgw and under Going ahead right bend
Vehicle movement from SW to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 35 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 35 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

120219940 08/06/2012 Time 1250 Vehicles 2 Casualties 1 Slight
E:474138 N: 105933 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 1 | Very Likely |
| 2nd: | Failed to judge other persons path or speed | Vehicle 1 | Possible |
| 3rd: | Illness or disability, mental or physical | Vehicle 1 | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING N ALONG BEACH ROAD TURNS RIGHT ONTO A259 HAVANT ROAD ACROSS PATH OF VEH 2 (CAR) TRAVELLING W A259 ALONG HAVANT ROAD.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH BEACH ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from S to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering main road First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 87 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 87 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Car Going ahead other
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 39 Male
Not hit and run Breath test Negative
Left hand drive: No

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

120288609 26/07/2012 Time 1440 Vehicles 2 Casualties 1 Slight
E:474589 N: 105890 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 1 | Very Likely |
| 2nd: | Vehicle blind spot | Vehicle 1 | Very Likely |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (GOODS VEH) TRAVELLING E ALONG A259 HAVANT ROAD OVERTAKES VEH 2 (P/CYCLE) TRAVELLING IN FRONT BUT PASSES TOO CLOSE CAUSING VEH 2 TO TAKE AVOIDING ACTION AND RIDER TO FALL OFF.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH LAKE END DRIVE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Goods 7.5 tonnes mgw and over Overtaking moving vehicle O/S
Vehicle movement from W to E Multi trailer Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Cleared junction or waiting/parke First impact Did not impact Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 34 Male
Non-stop, not hit Breath test Not requested
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
Cycle lane (on main carriageway) No skidding, jack-knifing or overturning
Location at impact Cleared junction or waiting/parke First impact Front Hit vehicle:
Hit object in road None Off road: None
Nearside Age of Driver 53 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 53 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not known

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

130001999 01/01/2013 Time 1905 Vehicles 1 Casualties 1 Serious
E:472926 N: 106036 First Road: A 27 Road Type Slip road
Speed limit: 70 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Impaired by alcohol | Vehicle 1 | Very Likely |
| 2nd: | Loss of control | Vehicle 1 | Very Likely |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING NE ALONG THE A7 OFFSLIP APPRAOCHED THE JUNCTION WITH GREEN POND CORNER THEN COLLIDED ON ITS FRONT WITH THE KERB THEN LEAFT THE CARRIAGEWAY TO THE OFFSIDE COLLIDING WITH A ROAD SIGN AND ONTO THE CENTRE OF THE RBT.
Occurred on A27 OFFSLIP AT JUNCTION WITH GREEN POND CORNER, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from SW to NE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road Kerb Off road: Road sign / ATS
O/S Age of Driver 28 Male
Hit and run Breath test Positive
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 28 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

130192952 28/05/2013 Time 1423 Vehicles 1 Casualties 1 Slight
E:473075 N: 105938 First Road: A 259 Road Type Single carriageway
Speed limit: 60 Junction Detail: Not within 20m of junction

Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Daylight Raining without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Loss of control | Vehicle 1 | Very Likely |
| 2nd: | Aggressive driving | Vehicle 1 | Very Likely |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING NE ALONG A259 HAVANT ROAD, LOSES CONTROL GOING ROUND A LEFT HAND BEND DUE TO THE WET CONDITIONS, CAUSING VEH 1 TO LEAVE THE CARRIAGEWAY TO THE NEARSIDE, HITS THE KERB, OVERTURNS AND ENDS UP IN A DITCH.
Occurred on A259 HAVANT ROAD 44 METRES EAST OF A27 WESTBOUND OFF SLIP, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Going ahead left bend
Vehicle movement from NW to NE No tow / articulation Leaving the main road
On main carriageway Skidded and overturned
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: Entered ditch
Nearside Age of Driver 68 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 68 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

130246274 05/07/2013 Time 1330 Vehicles 2 Casualties 1 Slight
E:474258 N: 105925 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 1 | Very Likely |
| 2nd: | | | |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING S ALONG RECORD ROAD, FAILS TO LOOK PROPERLY TURNS RIGHT INTO A259 HAVANT ROAD ACROSS THE PATH OF VEH 2 (CAR) TRAVELLING W ALONG A259 HAVANT ROAD AND COLLIDES.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH RECORD ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from N to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 26 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Car Going ahead other
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 59 Female
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 59 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

130394604 18/10/2013 Time 0700 Vehicles 2 Casualties 1 Serious
E:474916 N: 105902 First Road: U Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Not displaying lights at night or in poor visibility | Vehicle 2 | Very Likely |
| 2nd: | Disobeyed Give Way or Stop sign or markings | Vehicle 1 | Possible |
| 3rd: | Failed to judge other persons path or speed | Vehicle 1 | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING E ALONG HAVANT ROAD DID NOT SLOW COMPLETELY FOR RBT AND COLLIDED WITH REAR WHEEL OF VEH 2 (P/CYCLE) TRAVELLING N ALONG HIGH STREET AND AROUND RBT. VEH 1 FAILED TO STOP.
Occurred on HAVANT ROAD AT JUNCTION WITH HIGH STREET, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Stopping
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Not traced
Hit and run Breath test Not requested
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from S to N No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 15 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 15 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: No

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

140084111 10/03/2014 Time 0749 Vehicles 2 Casualties 1 Slight
E:472901 N: 106071 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 2 | Very Likely |
| 2nd: | | | |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 2 (P/CYCLE) TRAVELLING SW ALONG EMSWORTH ROAD MOVES OFF ENTERING EMSWORTH ROAD AS TRAFFIC HAS SLOWED, RIDER ASSUMED VEH 1 (CAR) TRAVELLING SE ALONG EMSWORTH ROAD WAS GIVING WAY BUT WAS NOT AND COLLIDEA, CAUSING THE RIDER TO FALL OFF.
Occurred on EMSWORTH ROAD AT JUNCTION OF EMSWORTH ROAD, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from NW to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 22 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Starting
Vehicle movement from NE to SW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 52 Female
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 52 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: No

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

140091552 15/03/2014 Time 0929 Vehicles 2 Casualties 1 Slight
E:474759 N: 105882 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: Pelican, puffin, toucan etc. Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Passing too close to cyclist, horse rider or pedestrian | Vehicle 1 | Very Likely |
| 2nd: | | | |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TOWING HORSEBOX TRAVELLING E ALONG A259 HAVANT ROAD OVERTAKES VEH 2 (P/CYCLE) TRAVELLING IN FRONT BUT PASSES TOO CLOSE CAUSING HORSEBOX TO COLLIDE WITH VEH 2 KNOCKING RIDER OFF. VEH 1 FAILED TO STOP.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH BRIDGEFOOT PATH, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Overtaking moving vehicle O/S
Vehicle movement from W to E Single trailer Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Not traced
Hit and run Breath test Driver not contacted
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 50 Female
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 50 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not known

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

140111459 31/03/2014 Time 0849 Vehicles 2 Casualties 1 Slight
E:474140 N: 105935 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Vehicle blind spot | Vehicle 1 | Very Likely |
| 2nd: | Vehicle blind spot | Vehicle 2 | Very Likely |
| 3rd: | Failed to look properly | Vehicle 1 | Possible |
| 4th: | Failed to look properly | Vehicle 2 | Possible |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING N ALONG BEACH ROAD TURNED RIGHT FOR A259 HAVANT ROAD. VEH 2 (M/CYCLE) TRAVELLING W ALONG HAVANT ROAD OVERTAKING HEAVY TRAFFIC COLLIDED WITH THE OFFSIDE OF VEH 1.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH BEACH ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from S to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering main road First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 37 Female
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Motorcycle over 500cc Overtaking moving vehicle O/S
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 41 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 41 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet:

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

140134688 15/04/2014 Time 1522 Vehicles 2 Casualties 1 Serious
E:472926 N: 106054 First Road: A 27 Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 1 | Very Likely |
| 2nd: | Dazzling sun | Vehicle 1 | Possible |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING SE ALONG EMSWORTH ROAD ENTERED RBT AND COLLIDED WITH VEH 2 (P/CYCLE) TRAVELLING SE AROUND RBT.
Occurred on A27 EASTBOUND OFFSLIP AT JUNCTION WITH EMSWORTH ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Starting
Vehicle movement from NW to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead right bend
Vehicle movement from SW to SE No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 46 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 46 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Yes

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

140140855 22/04/2014 Time 1734 Vehicles 2 Casualties 1 Slight
E:472915 N: 106041 First Road: A 27 Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 1 | Possible |
| 2nd: | Failed to signal/Misleading signal | Vehicle 2 | Possible |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (VAN) TRAVELLING NE ALONG A27 OFFSLIP, ENTERS RBT ACROSS THE PATH OF VEH 2 (P/CYCLE) TRAVELLING NW ALONG EMSWORTH ROAD AROUND THE RBT AND COLLIDES
Occurred on A27 EASTBOUND OFFSLIP AT JUNCTION WITH EMSWORTH ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Van or Goods 3.5 tonnes mgw and under Turning left
Vehicle movement from SW to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 35 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from SE to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 13 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 13 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Yes

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

140204692 10/06/2014 Time 1800 Vehicles 2 Casualties 1 Serious
E:474465 N: 105906 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 1 | Very Likely |
| 2nd: | Stationary or parked vehicle | Vehicle 1 | Possible |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING W ALONG A259 HAVANT ROAD TURNS RIGHT INTO HIGHLAND ROAD AFTER BEING ALLOWED TO DO SO BY A VEH TRAVELLING E. VEH 1 TURNS ACROSS PATH OF VEH 2 (P/CYCLE) TRAVELLING E ALONG A259 HAVANT ROAD IN CYCLE LANE.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH HIGHLAND ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from E to N No tow / articulation Leaving the main road
Cycle lane (on main carriageway) No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 45 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
Cycle lane (on main carriageway) No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 47 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 47 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Yes

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

140264774 19/06/2014 Time 1530 Vehicles 1 Casualties 1 Serious
E:473034 N: 105977 First Road: A 27 Road Type Slip road
Speed limit: 70 Junction Detail: Roundabout Give way or controlled A 259
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site Road surface defective Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Poor or defective road surface | Vehicle 1 | Very Likely |
| 2nd: | Inadequate/Masked signs or road markings | Vehicle 1 | Very Likely |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (M/CYCLE) TRAVELLING SW ALONG A27 WESTBOUND OFFSLIP WHEN VEH RIDES OVER DEFECTIVE DIVIDING LINES BETWEEN LANE 1 AND 2, UNSETTLING VEH 1 WHEN BRAKING CAUSING VEH TO LOSE CONTROL AND LEAVE THE ROAD TO THE OFFSIDE HITTING A LAMPPOST.
Occurred on A27 WESTBOUND AT JUNCTION WITH A259 HAVANT ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Motorcycle over 500cc Going ahead other
Vehicle movement from NE to SW No tow / articulation Leaving the main road
On main carriageway Skidded
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: Lamp post
O/S Age of Driver 43 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 43 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

140238042 05/07/2014 Time 0720 Vehicles 1 Casualties 1 Slight
E:473055 N: 105934 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Daylight Raining without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Slippery road (due to weather) | Vehicle 1 | Very Likely |
| 2nd: | Careless/Reckless/In a hurry | Vehicle 1 | Possible |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING W ALONG A259 HAVANT ROAD, LOSES CONTROL ON WET ROADS GOING AROUND A RIGHT HAND BEND, LEAVES TO THE NEARSIDE AND COLLIDES WITH ALAMP POST AND ENDS UP IN THE DITCH FACING THE OPPOSITE DIRECTION.
Occurred on A259 HAVANT ROAD 25METRES EAST OF A27 WESTBOUND OFF SLIP, HAVANT, HAMPSHIRE

Vehicle Reference 1 Car Going ahead right bend
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway Skidded
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: Lamp post
Nearside Age of Driver 21 Female
Not hit and run Breath test Not requested
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 21 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

140432426 03/12/2014 Time 1310 Vehicles 1 Casualties 1 Slight
E:473842 N: 105965 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Fatigue | Vehicle 1 | Very Likely |
| 2nd: | | | |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING SW ALONG A259 HAVANT ROAD, THE DRIVER FALLS ASLEEP AT THE WHEEL, LEAVES THE CARRIAGEWAY TO THE OFFSIDE, MOUNTS THE PAVEMENT AND COLLIDES WITH A LAMP POST.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH BARN CLOSE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from SE to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:
Hit object in road None Off road: Lamp post
O/S Age of Driver 36 Female
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 36 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

150013884 13/01/2015 Time 1820 Vehicles 2 Casualties 1 Serious
E:473782 N: 105975 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 1 | Possible |
| 2nd: | Failed to look properly | Vehicle 2 | Possible |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING S ALONG NORE FARM AVENUE TURNS RIGHT ONTO A259 HAVANT ROAD AFTER A VEH HAD STOPPED TO LET IT OUT. AS VEH 1 TURNS IT COLLIDES WITH VEH 2 (P/CYCLE) TRAVELLING E ALONG A259 HAVANT ROAD AND PASSING THE STOPPED VEH.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH NORE FARM AVENUE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from N to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 32 Female
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Overtaking moving vehicle O/S
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 54 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 54 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Yes

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

150061622 21/02/2015 Time 2110 Vehicles 1 Casualties 1 Slight
E:473842 N: 105973 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction

Crossing: Control None Facilities: Central reservation Road surface Dry
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Impaired by alcohol | Casualty 1 | Very Likely |
| 2nd: | Careless/Reckless/In a hurry | Casualty 1 | Very Likely |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (BUS) TRAVELLING E ALONG A259 HAVANT ROAD WHEN CAS 1 (PEDESTRIAN) RAN TOWARDS THE NEARSIDE OF VEH 1 AND PUNCHED THE SIDE OF THE BUS. CAS 1 THEN FELL TO THE FLOOR.
Occurred on A259 HAVANT ROAD OUTSIDE BARN CLOSE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Bus or coach Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 68 Male
Not hit and run Breath test Not requested
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 29 Male Pedestrian Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Within 50m ped crossing S bound

Driver's nearside

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

150071962 02/03/2015 Time 1345 Vehicles 2 Casualties 1 Slight
E:474914 N: 105831 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Loss of control | Vehicle 1 | Very Likely |
| 2nd: | | | |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (P/CYCLE) TRAV S HIGH STREET TURNED LEFT INTO WEST STREET, CUTTING CORNER IN THE PROCESS. RIDER FELL DUE TO WEIGHT OF BAG HANGING ON ONE HANDLEBAR. VEH 1 THEN COLLIDED WITH FRONT OF VEH 2 (CAR) WAITING TO TURN LEFT INTO HIGH STREET.
Occurred on HIGH STREET AT JUNCTION WITH WEST STREET, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Pedal Cycle Turning right
Vehicle movement from N to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 87 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 87 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: No

Vehicle Reference 2 Car Waiting to turn left
Vehicle movement from W to N No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 74 Female
Not hit and run Breath test Not requested
Left hand drive: No

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

150149814 04/05/2015 Time 1408 Vehicles 2 Casualties 1 Slight
E:473782 N: 105973 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to judge other persons path or speed | Vehicle 1 | Very Likely |
| 2nd: | | | |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (M/CYCLE) TRAVELLING W ALONG A259 HAVANT ROAD FAILED TO REACT TO TRAFFIC AHEAD SLOWING DUE TO A VEHICLE TURNING RIGHT INTO PARK CRESCENT AND COLLIDED WITH THE REAR OF VEH 2 (VAN).
Occurred on A259 HAVANT ROAD AT JUNCTION WITH NORE FARM AVENUE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Motor Cycle over 50 cc and up to 125cc Going ahead other
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 22 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 22 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Van or Goods 3.5 tonnes mgw and under Going ahead but held up
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 28 Male
Not hit and run Breath test Negative
Left hand drive: No

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

150175789 25/05/2015 Time 1025 Vehicles 1 Casualties 1 Slight
E:474928 N: 105848 First Road: B 2148 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: Central reservation Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 1 | Very Likely |
| 2nd: | Careless/Reckless/In a hurry | Vehicle 1 | Possible |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (GOODS VEH) TRAVELLING S ALONG B2148 HIGH STREET INITIATED A U-TURN AND AS IT WAS DOING SO THE TRAILER COLLIDED WITH CAS 1 (PEDESTRIAN) WALKING S ALONG THE PAVEMENT.
Occurred on B2148 HIGH STREET AT JUNCTION WITH WEST STREET, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Goods 7.5 tonnes mgw and over U-turn
Vehicle movement from N to N Articulated Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 44 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 77 Female Pedestrian Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

On footpath / verge S bound

Movement U/K

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

150291730 22/08/2015 Time 1523 Vehicles 1 Casualties 1 Slight
E:472977 N: 105959 First Road: A 27 Road Type Slip road
Speed limit: 70 Junction Detail: Not within 20m of junction

Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Deposit on road (eg oil, mud, chippings) | Vehicle 1 | Very Likely |
| 2nd: | | | |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (M/CYCLE) TRAVELLING W ENTERING A27 WESTBOUND ON SLIP, WHILST NEGOTIATING SLITGHT BEND REAR WHEEL SLIP SON GRAVEL CAUSING RIDER TO COME OFF.
Occurred on A27 WESTBOUND ON SLIP, WARBLINGTON, HAMPSHIRE

Vehicle Reference 1 Motorcycle over 500cc Going ahead left bend
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 51 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 51 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

150304008 02/09/2015 Time 0830 Vehicles 2 Casualties 1 Slight
E:474394 N: 105911 First Road: A 259 Road Type Single carriageway
Speed limit: 40 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to look properly | Vehicle 1 | Very Likely |
| 2nd: | | | |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING E ALONG A259 HAVANT ROAD AND COLLIDES WITH THE REAR OF VEH 2 (CAR) STATIONARY WAITING TO TURN RIGHT INTO CLOVELLY ROAD
Occurred on A259 HAVANT ROAD AT JUNCTION WITH CLOVELLY ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 27 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Car Waiting to turn right
Vehicle movement from W to S No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 51 Female
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 51 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

150329092 22/09/2015 Time 1420 Vehicles 2 Casualties 3 Serious
E:474735 N: 105878 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: Zebra crossing Road surface Wet/Damp
Daylight Raining without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Poor turn or manoevre | Vehicle 1 | Very Likely |
| 2nd: | Failed to look properly | Vehicle 1 | Very Likely |
| 3rd: | Vehicle blind spot | Vehicle 1 | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (CAR) TRAVELLING N ALONG BATH ROAD TURNED RIGHT ONTO A259 HAVANT ROAD THINKING THE ROAD WAS CLEAR AND WAS HIT BY VEH 2 (GOODS VEH) TRAVELLING W ALONG A259 HAVANT ROAD.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH BATH ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from S to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 82 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 82 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Casualty Reference: 2 Vehicle: 1 Age: 75 Female Passenger Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Back seat

Casualty Reference: 3 Vehicle: 1 Age: 78 Female Passenger Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Front seat

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:** **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

Vehicle Reference 2 Goods 7.5 tonnes mgw and over Going ahead other
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 52 Male
Not hit and run Breath test Not requested
Left hand drive: No

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

150362085 18/10/2015 Time 1430 Vehicles 2 Casualties 1 Serious
E:473003 N: 105977 First Road: A 259 Road Type 1
Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 27
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Failed to judge other persons path or speed | Vehicle 1 | Very Likely |
| 2nd: | Vehicle blind spot | Vehicle 2 | Very Likely |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (M/CYCLE) TRAV NE ALONG A259 HAVANT ROAD ENTERED THE RBT AT A27 WESTBOUND AND ATTEMPTED PASSING VEH 2 (GOODS VEH) WHICH WAS MAKING A U-TURN AROUND THE RBT. THE CAB SECTION OF VEH 2 CLIPPED VEH 1 AS VEH 1 ATTEMPTED GOING STRAIGHT ON.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH A27 WESTBOUND, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Motor Cycle over 50 cc and up to 125cc Overtaking moving vehicle O/S
Vehicle movement from SE to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 53 Male
Not hit and run Breath test Not requested
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 53 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Goods 7.5 tonnes mgw and over U-turn
Vehicle movement from SE to SE Articulated Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 42 Male
Not hit and run Breath test Not requested
Left hand drive: No

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**
Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

100486149 16/11/2010 Time 1200 Vehicles 1 Casualties 1 Slight
E:474931 N: 105856 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight:street lights present Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

| | Factor: | Participant: | Confidence: |
|---|---|---|---|
| 1st: | Vehicle travelling along pavement | Vehicle 1 | Very Likely |
| 2nd: | Poor turn or manoevre | Vehicle 1 | Very Likely |
| 3rd: | | | |
| 4th: | | | |
| 5th: | | | |
| 6th: | | | |

VEH 1 (GOOD VEH) PARKED IN LAYBY FACING S, PULLS OFF AND PERFORMS A U-TURN. THE REAR OF VEH 1 GOES OVER THE PAVEMENT AND COLLIDES INTO CAS 1 (PEDESTRIAN) WALKING S ALONG PAVEMENT KNOCKING OVER INTO A BUSH.
Occurred on HIGH STREET OUTSIDE NUMBER 2, HAVANT, HAMPSHIRE

Vehicle Reference 1 Goods 7.5 tonnes mgw and over U-turn
Vehicle movement from N to N No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Male
Not hit and run Breath test Driver not contacted
Left hand drive:

Casualty Reference: 1 Vehicle: 1 Age: 89 Female Pedestrian Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet:

On footpath / verge S bound

Movement U/K

**Accidents between dates** **01/11/2010** **and** **31/10/2015** (60) months

**Selection:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("MC Havant Road, Emsworth")

**Notes:**

Accidents involving:

| | Fatal | Serious | Slight | Total |
|---|---|---|---|---|
| Motor vehicles only (excluding 2-wheels) | 0 | 2 | 11 | 13 |
| 2-wheeled motor vehicles | 0 | 2 | 4 | 6 |
| Pedal cycles | 0 | 4 | 6 | 10 |
| Horses & other | 0 | 0 | 0 | 0 |
| Total | 0 | 8 | 21 | 29 |

Casualties:

| | Fatal | Serious | Slight | Total |
|---|---|---|---|---|
| Vehicle driver | 0 | 2 | 8 | 10 |
| Passenger | 0 | 0 | 2 | 2 |
| Motorcycle rider | 0 | 2 | 4 | 6 |
| Cyclist | 0 | 4 | 6 | 10 |
| Pedestrian | 0 | 0 | 3 | 3 |
| Other | 0 | 0 | 0 | 0 |
| Total | 0 | 8 | 23 | 31 |

# Appendix D

**041.0025NMU/1**

| | |
|---|---|
| Project Name: | Havant Road, Emsworth |
| Document Reference: | 041.0025/NMU/1 |
| Document Name: | Non-Motorised User Context Report |
| Prepared By: | Shannon Betteridge (11/07/2016) |
| Approved By: | Beth Wilson (11/07/2016) |

## 1.0 INTRODUCTION

1.1 This Non-Motorised User (NMU) context report has been prepared by Paul Basham Associates (PBA) on behalf of Barratt Homes (BH) to support an application for a proposed residential development at Havant Road, Emsworth (hereafter referred to as 'the Site'). The proposed development consists of 192 dwellings with vehicular access onto Havant Road.

1.2 The primary purpose of this NMU is to inform the access and design process by determining opportunities and constraints for NMUs on anticipated desire lines to and from the Site.

1.3 This NMU context report has been prepared in accordance with guidance available within Hampshire County Council's (HCC) '*Practice Note: Offsite Highway Works carried out by Developers on behalf of the Highway Authority*' (Third Edition: September 2008).

1.4 In accordance with HCC's guidance, this report has been prepared to look at four NMU groups (pedestrians, cyclists, visually and mobility impaired and equestrians) in order to identify plans which adhere to NMU needs in the vicinity of the site

1.5 The Site will have two access points, with a vehicular access including pedestrian/ cycle links onto Havant Road and a separate access for pedestrians, cyclists and emergency vehicles onto Selangor Avenue. These are demonstrated in the site layout, which accompanies this document.

1.6 This NMU Audit will cover the two access locations, but will also extend along potential NMU desire lines into Havant to the west and along Selangor Avenue to the Primary School to the north east.

## 2.0 HAVANT ROAD

### Pedestrians

2.1 Havant Road comprises a recently installed shared footway/ cycleway on the northern side of the carriageway across the site frontage as demonstrated in **Photograph 1**, followed by a footway c.1.8m wide into Emsworth town centre. The southern side of Havant Road also benefits from footway, which is much narrower, at c.0.5m wide (separated from the carriageway by a grass verge).

**Photograph 1**. Footway on Havant Road (North)

2.2 There are a number of pedestrian refuge islands along Havant Road with the closest situated 120m to the east of the site access, providing a crossing for both cyclists and pedestrians to the bus stop on the opposite side of the carriageway. This is demonstrated in **Photograph 2**.

**Photograph 2**: Recently Upgraded Pedestrian Refuge Island on Havant Road

2.3 To the west of the site towards Havant, the pedestrian/cycle facilities have also been improved, to provide a more user-friendly link to the underpass, which takes

users along a vehicle-free route to Havant under the A27. The improved facilities in this area are demonstrated in **Photograph 3**.

**Photograph 3**: Recently Upgraded Shared Footway/ Cycleway to the west of the Site

2.4 The PIA data has been obtained from Hampshire Constabulary for a period of 5 years from 2010 to 2015. The results show that there have been 2 incidents involving pedestrians on Havant Road (between North street/ High Street/ Havant Road roundabout and the A27 dumbell roundabouts), of which both were classified as 'slight'. The 2 incidents are summarised below, and demonstrated in **Figure 1**:

1. Pedestrian ran towards nearside of a bus and punched it, then fell to the floor.

*Date of incident: 21/02/2015*

2. Goods vehicle attempted U-turn with trailer colliding with pedestrian on the pavement.

*Date of incident: 21/02/2015*

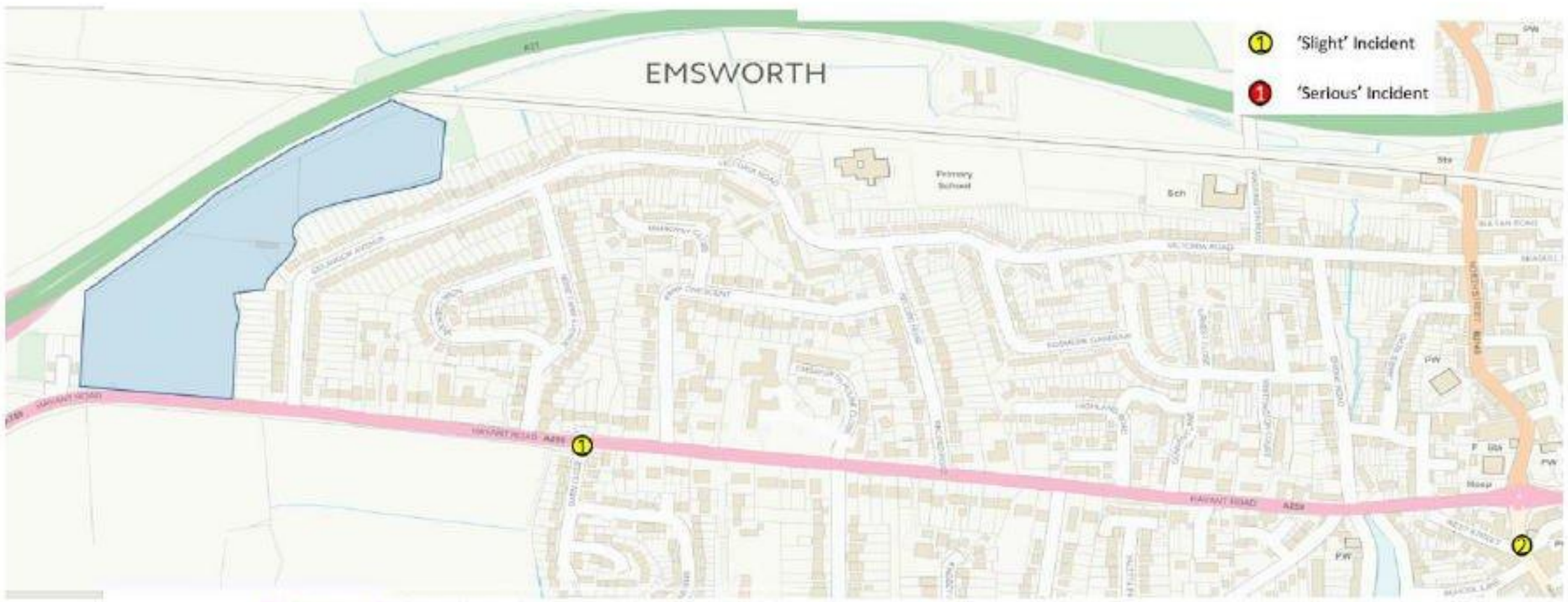



**Figure 1**: Pedestrian Incidents on Havant Road (2010-2015)

2.5 As demonstrated, each incident is not attributed to the design of road, with each instead attributed to human error.

### Cyclists

2.6 Across the site frontage, Havant Road benefits from both on-and off road cycle lanes, with the off-road cycle lane considered in excellent condition, having been recently upgraded (in January 2016). On-road cycle lanes on both sides of the carriageway are also in good condition and are demarcated in a suitable manner from the carriageway itself, however the inner markings would benefit from being re-painted. It is understood that HCC is aware of this requirement.

2.7 National Cycle Route 2 passes along the southern site boundary along Havant Road on both sides of the carriageway, as demonstrated in **Figure 2**. National Cycle Route 2 runs along the south coast between Emsworth town centre and Chichester to the east, and Havant railway station to the west (by way of an underpass under the A27).

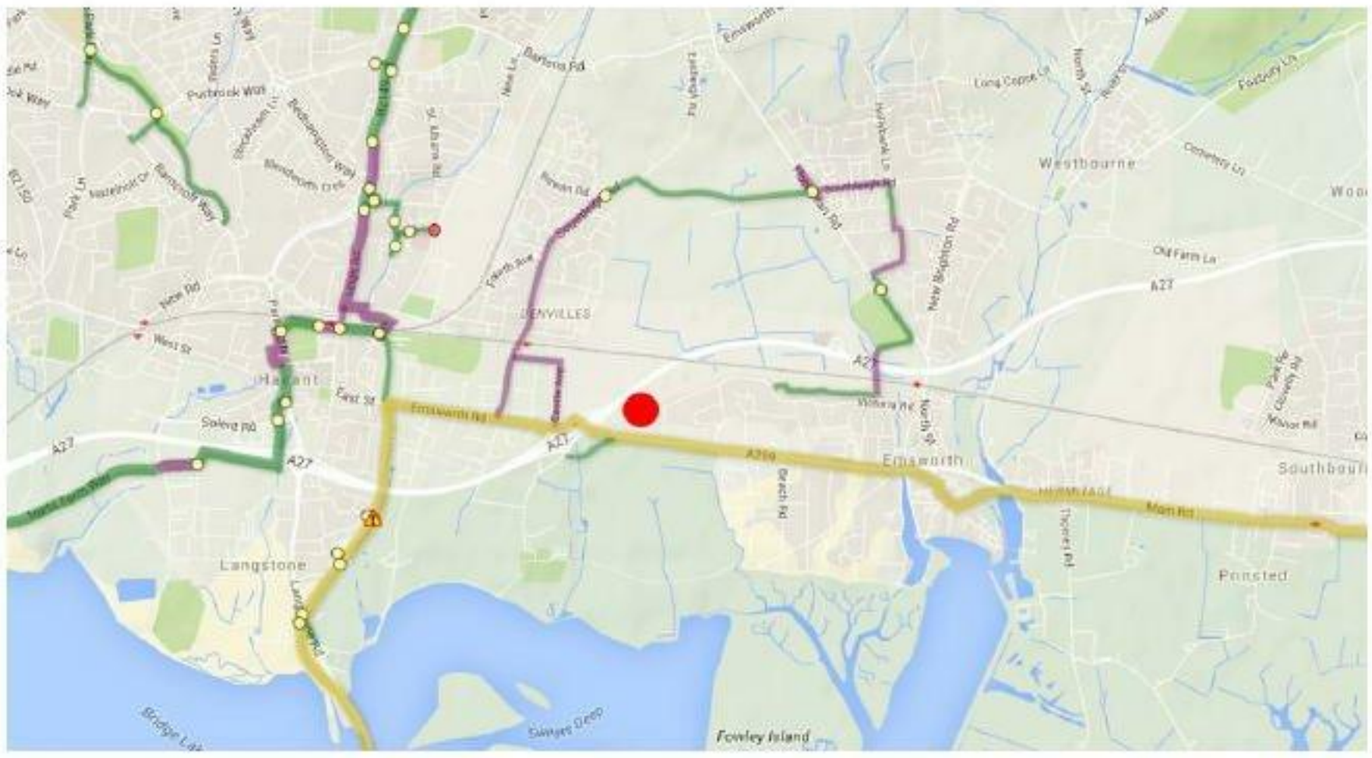



**Figure 2**: Local Cycle Routes (extract from www.sustrans.co.uk)

2.8 Cycle routes on the wider road network are also demonstrated in **Figure 2**, with green coloured routes representing off-road cycling facilities and purple coloured routes representing on-road cycle facilities. The red circle represents the site location.

2.9 There have been 7 incidents involving cyclists on Havant Road between 2010 and 2015 (between North street/ High Street/ Havant Road roundabout and the A27 junction), of which three were classified as 'serious' and four were classified

as 'slight'. The 7 incidents are summarised below, and demonstrated in **Figure 3**:

1. Car turned right from Nore Farm Avenue onto Havant Road and collides with cyclist.
*Date of incident: 13/01/2015*
2. Car turned right into Highland Road and crossed path of cyclist on Havant Road.
*Date of incident: 10/06/2014*
3. Goods Vehicle passes too close to cyclist and rider falls off.
*Date of incident: 26/07/2012*
4. Car towing horsebox passes too close to cyclist and box collides with cyclist knocking him off.
*Date of incident: 15/03/2014*
5. Car entered the roundabout and collided with the nearside of the cyclist.
*Date of incident: 29/01/2012*
6. Car travelling along Havant Road did not slow completely at roundabout and collided with cyclist's rear wheel
*Date of incident: 18/10/2013*
7. Cyclist cut corner travelling south on High Street and then collided with another vehicle waiting to turn.
*Date of incident: 02/03/2015*

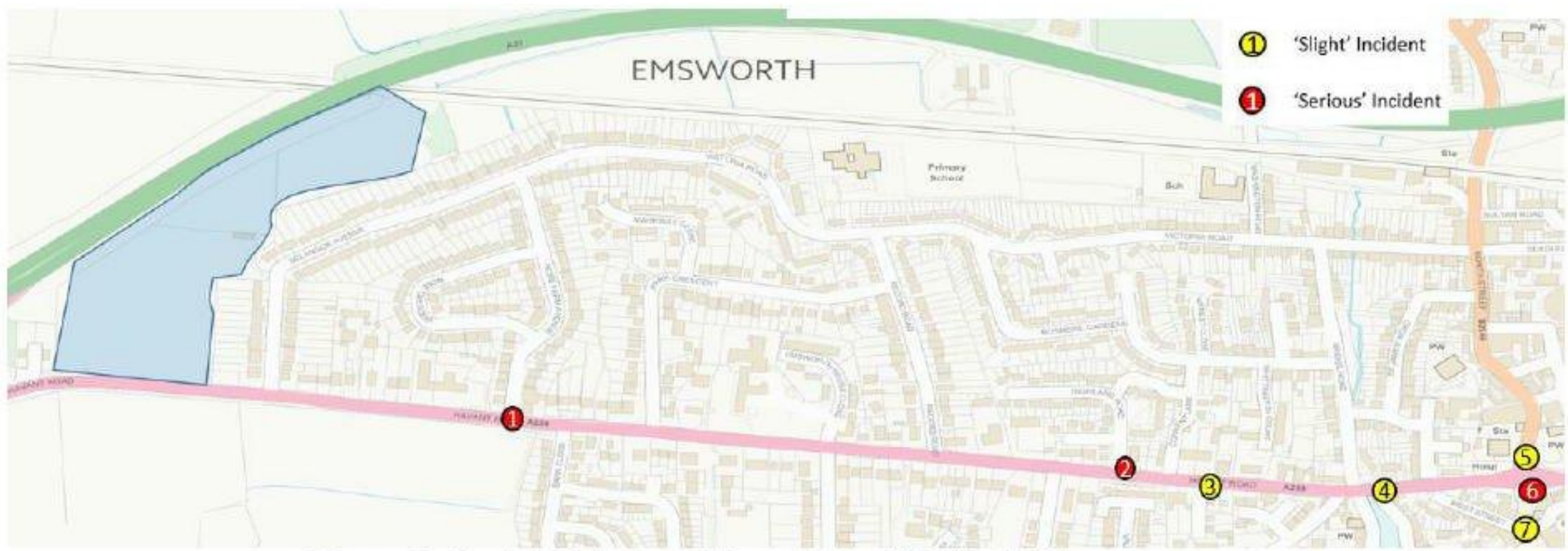



**Figure 3**: Cycle Incidents on Havant Road (2010-2015)

2.10 Again as demonstrated, each incident is not attributed to the design of road, with each instead attributed to driver error.

### Visually and Mobility Impaired

2.11 Pedestrian footways provided measure c.3m metres in width on the northern side of Havant Road, thus facilitating the use of mobility scooters. Footways on the southern side would not be particularly suitable for mobility scooters given the narrow width.

2.12 Previously, the pedestrian refuge island on Havant Road, c.120m to the east of the site did not cater for the visually or mobility impaired, with no tactile paving and a

signpost obstructing the island. Along with the other recent improvements, the crossing has recently been substantially upgraded, and is now considered adequate for the visually and mobility impaired. The crossing is demonstrated in **Photograph 4**.

**Photograph 4**: Recently Improved Pedestrian Refuge Island

### Equestrians

2.13 There are no equestrian interests in this area.

## 3.0 SELANGOR AVENUE

### Pedestrians

3.1 Selangor Avenue comprises a c.1m wide shared footway with grass verge on both sides of the carriageway (see **Photograph 5**).

**Photograph 5**: Selangor Avenue Pedestrian Environment

3.2 The footways on Selangor Avenue are narrow in places, with tree roots partially broken through in some areas. The footways on Selangor Avenue are in-keeping with the residential feel of the environment, with grass verges and street trees, which help to differentiate the street from Havant Road to the south.

3.3 It is noted that pre-application comments suggest improved links to the school to the north east of the site for pedestrians, which could be implemented if required. However, the residential nature of Selangor Avenue, including grass verges and street trees, would be lost.

3.4 According to data retrieved from Crashmap evaluating PIAs between 2010 and 2014, no incidents were recorded on Selangor Avenue, with two 'slight' incidents occurring at the junction with Havant Road in 2010. This information is demonstrated in **Figure 4**.

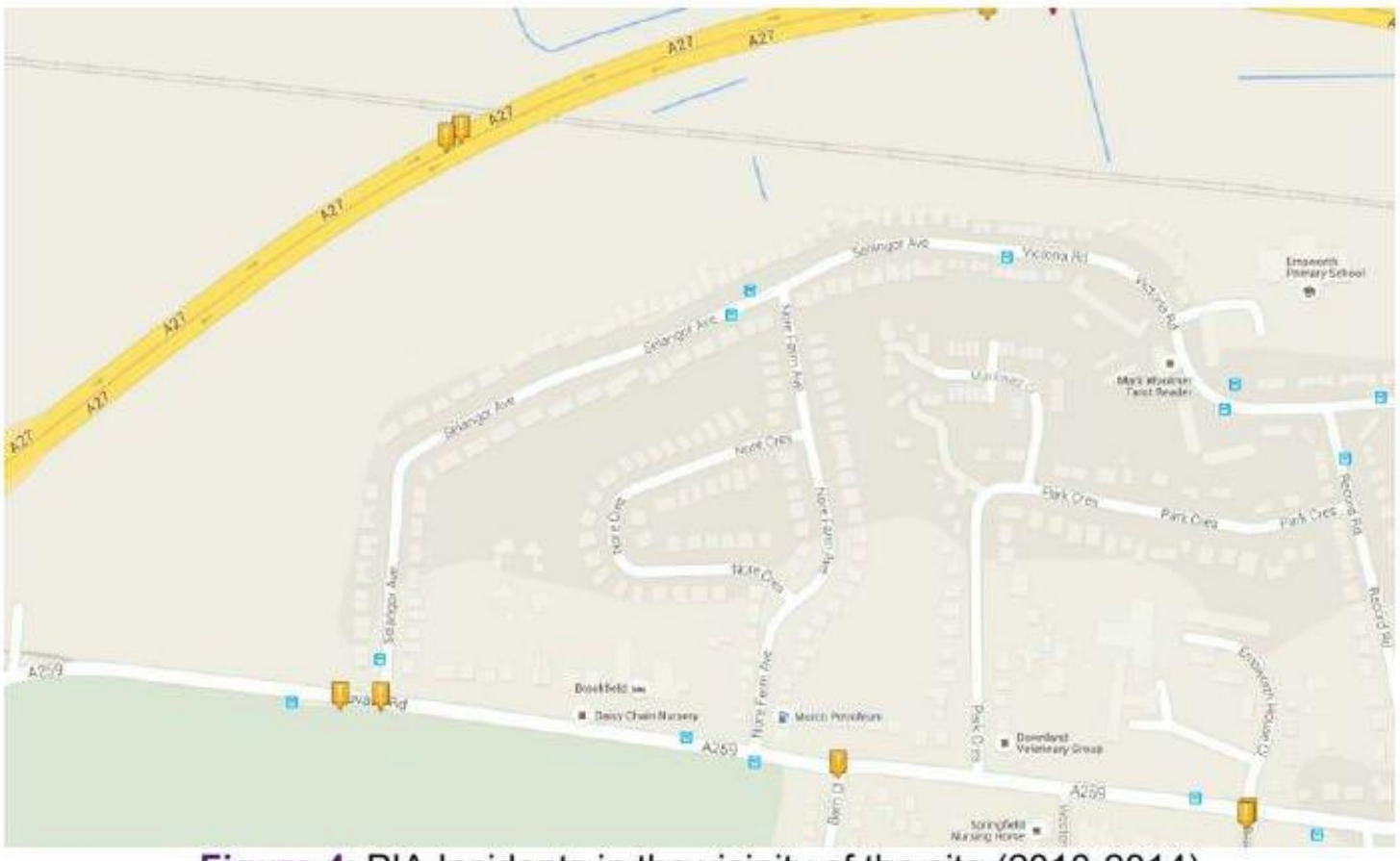



**Figure 4**: PIA Incidents in the vicinity of the site (2010-2014)

### Cyclists

3.5 Whilst Selangor Avenue does not benefit from off-road cycle lanes, the residential nature of the road lends itself to cycling on-road. On the approach to Havant Road, cyclists can mount the kerb onto the shared footway/ cycleway, or continue on-road using dedicated cycle lanes.

### Visually and Mobility Impaired

3.6 The existing footways are (as previously described) slightly narrow on Selangor Avenue, however the presence of footways on both sides of the road reduces the risk of conflict between pedestrians and other user of the footway such as mobility scooters or prams. As previously described, improvements could be made, however the loss of street trees and verge on Selangor Avenue may have implications on the appearance of the residential nature of the road.

3.7 Upon reaching Havant Road, the footways become wider with separate cycle lanes and the presence of tactile paving.

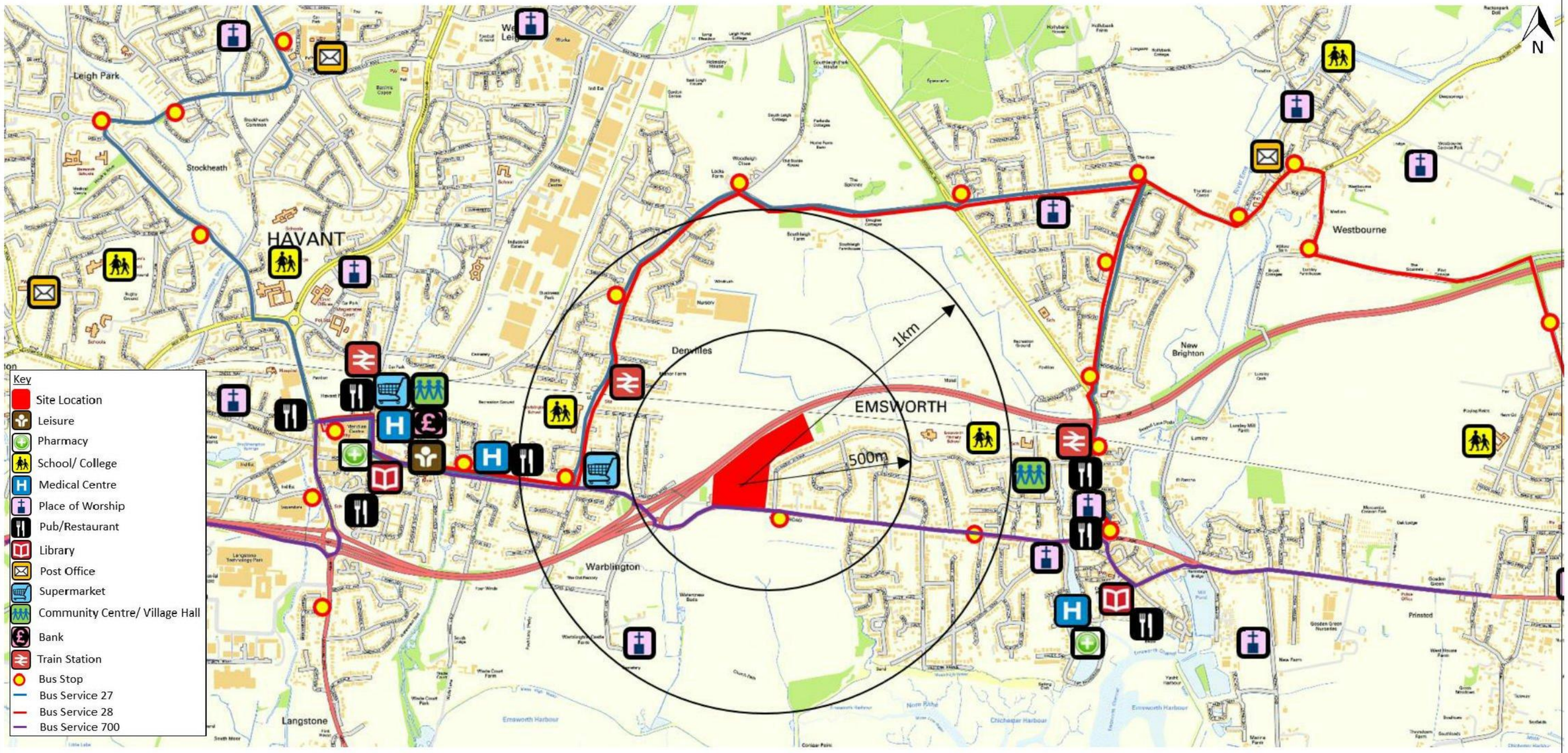
### Equestrians

3.8 There are no equestrian interests in this area.

## 4.0 SCHEME OBJECTIVES

4.1 Through consideration of all NMUs likely to be present within this scheme boundary, it is not considered that any particular measures are identified at this stage, given that the scheme is unlikely to have an adverse impact on NMU facilities in the vicinity of the site.

# Appendix E




| Project Number: 041.0025 | Title: | | Checked By: BW | Checked Date: 27.01.16 | Scale: N/A |
|---|---|---|---|---|---|
| Project Name: HAVANT ROAD, EMSWORTH | ACCESSIBILITY MAP | | Drawn By: AS | Drawn Date: 27.01.16 | |

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# Appendix F

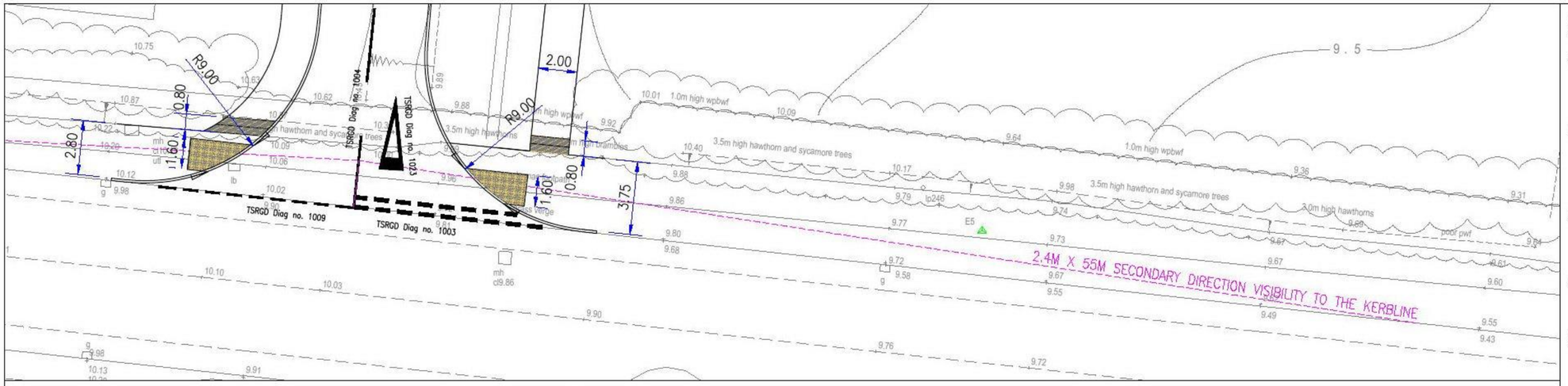
**SELANGOR AVE EMSWORTH**
**16-06-16**

JUNCTION 1

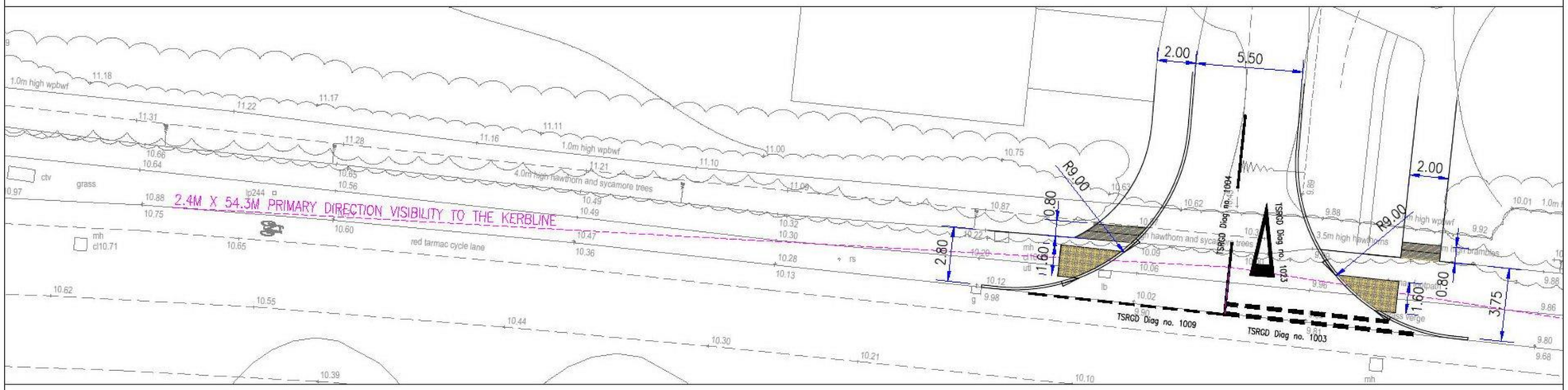
# SELANGOR AVE

| | IN | | | | | | OUT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TIME** | CARS | LIGHT GOODS VEHICLES | HGV | BUSES AND COACHES | M/C | **TOTAL MOVEMENTS** | CARS | LIGHT GOODS VEHICLES | HGV | BUSES AND COACHES | M/C | **TOTAL MOVEMENTS** |
| 7:00 - 7:15 | 3 | 2 | | | | ***5*** | 10 | 3 | | | | ***13*** |
| 7:15 - 7:30 | 4 | 2 | | | | ***6*** | 10 | 2 | | | | ***12*** |
| 7:30 - 7:45 | 4 | | | | | ***4*** | 5 | 2 | | | 1 | ***8*** |
| 7:45 - 8:00 | 6 | 3 | | | | ***9*** | 13 | 4 | | | | ***17*** |
| 8:00 - 8:15 | 10 | 7 | 1 | | | ***18*** | 8 | 2 | | | | ***10*** |
| 8:15 - 8:30 | 15 | 6 | | | | ***21*** | 11 | 1 | 1 | | | ***13*** |
| 8:30 - 8:45 | 25 | | | 1 | | ***26*** | 15 | 2 | | | | ***17*** |
| 8:45 - 9:00 | 7 | 1 | | | | ***8*** | 23 | | | | | ***23*** |
| 9:00 - 9:15 | 5 | | 1 | | | ***6*** | 10 | 2 | | | | ***12*** |
| 9:15 - 9:30 | 8 | 1 | | | | ***9*** | 6 | 2 | 2 | | | ***10*** |
| 9:30 - 9:45 | 5 | 3 | | | | ***8*** | 9 | 1 | 2 | | | ***12*** |
| 9:45 - 10:00 | 11 | | | | | ***11*** | 8 | | 1 | | | ***9*** |
| | | | | | | | | | | | | |
| **HOUR TOTALS** | AM | | | | | | | | | | | |
| 7:00 - 8:00 | 17 | 7 | 0 | 0 | 0 | ***24*** | 38 | 11 | 0 | 0 | 1 | ***50*** |
| 7:15 - 8:15 | 24 | 12 | 1 | 0 | 0 | ***37*** | 36 | 10 | 0 | 0 | 1 | ***47*** |
| 7:30 - 8:30 | 35 | 16 | 1 | 0 | 0 | ***52*** | 37 | 9 | 1 | 0 | 1 | ***48*** |
| 7:45 - 8:45 | 56 | 16 | 1 | 1 | 0 | ***74*** | 47 | 9 | 1 | 0 | 0 | ***57*** |
| 8:00 - 9:00 | 57 | 14 | 1 | 1 | 0 | ***73*** | 57 | 5 | 1 | 0 | 0 | ***63*** |
| 8:15 - 9:15 | 52 | 7 | 1 | 1 | 0 | ***61*** | 59 | 5 | 1 | 0 | 0 | ***65*** |
| 8:30 - 9:30 | 45 | 2 | 1 | 1 | 0 | ***49*** | 54 | 6 | 2 | 0 | 0 | ***62*** |
| 8:45 - 9:45 | 25 | 5 | 1 | 0 | 0 | ***31*** | 48 | 5 | 4 | 0 | 0 | ***57*** |
| 9:00 - 10:00 | 29 | 4 | 1 | 0 | 0 | ***34*** | 33 | 5 | 5 | 0 | 0 | ***43*** |

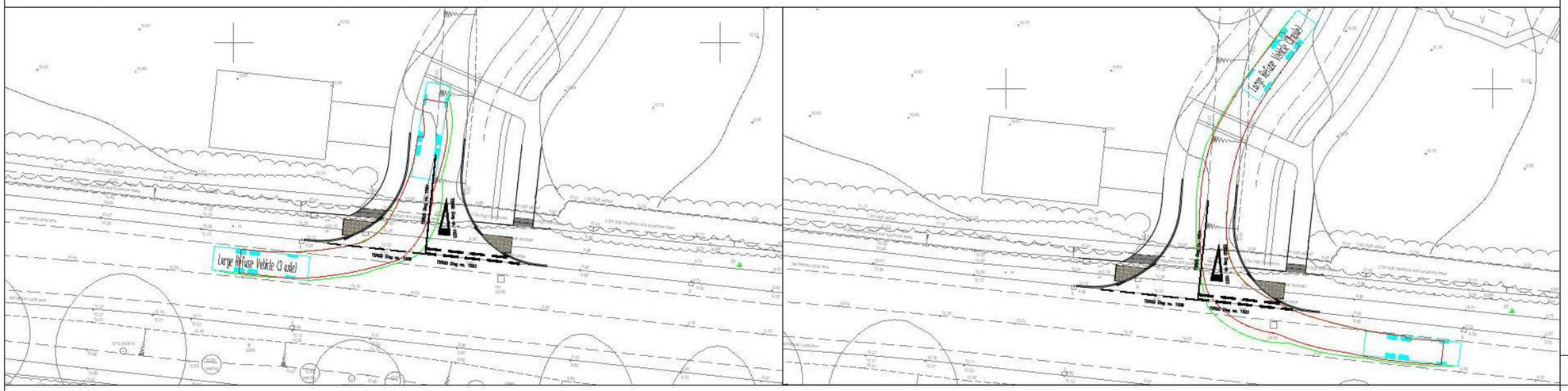
# Appendix G




SECONDARY DIRECTION VISIBILITY TO THE KERBLINE (SCALE 1:250)




PRIMARY DIRECTION VISIBILITY TO THE KERBLINE (SCALE 1:250)




ACCESS REFUSE TRACKING (SCALE 1:500)

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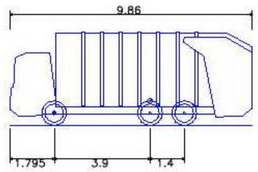
6. VISIBILITY SPLAYS ARE BASED ON THE RECORDED 85%ILE SPEEDS OF 35.6MPH EASTBOUND & 35.3MPH WESTBOUND BETWEEN 03.01.16–11.01.16. THE ATC LOCATION WAS DIRECTLY OUTSIDE THE PROPOSED ACCESS.

## VEHICLE PROFILE




| Large Refuse Vehicle (3 axle) | |
|---|---|
| Overall Length | 9.860m |
| Overall Width | 2.450m |
| Overall Body Height | 3.814m |
| Min Body Ground Clearance | 0.366m |
| Track Width | 2.450m |
| Lock–to–lock time | 4.00s |
| Curb to Curb Turning Radius | 9.500m |

NORTH

| Rev | Description | Date | By | Chkd |
|---|---|---|---|---|
| B | REVISED HAZARD PAVING | 18.07.16 | EK | BW |
| A | REVISED DRAWING ON NEW LAYOUT | 14.07.16 | EK | BW |

| Project Name | Title | Checked By | Checked Date | Scale |
|---|---|---|---|---|
| WARBLINGTON MEADOWS HAVANT | SITE ACCESS GENERAL ARRANGEMENT DRAWING | MS | 17.06.16 | AS SHOWN (AT A3 SIZE) |
| **Project Phase** | | **Drawn By** | **Drawn Date** | **Client Drawing No.** / **PBA Drawing No.** / **Revision** |
| PRELIMINARY | | WF | 17.06.16 | - / 041.0025.003 / B |

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Client: BARRATT HOMES

# Appendix H

GM
TRAFFIC CONSULTANTS

# HAVANT ROAD
# EMSWORTH

# SITE ACCESS ARRANGEMENTS

# STAGE 1 ROAD SAFETY AUDIT

## JULY 2016

GM
Traffic Consultants Ltd
Registered in England No. 07100121.
Registered Office: 7 Bournemouth Rd, Chandlers Ford Eastleigh, Hants, SO53 3DA

GM
TRAFFIC CONSULTANTS

| Revision Status | Prepared by: (Name) | Checked by: (Name) | Approved by: (Signature) | Date Approved: |
|---|---|---|---|---|
| Original | Mark Barrett | Ian Medd | [redacted] | 15 July 2016 |
| Designer's Response | | | | |
| Authority's Response | | | | |
| Audit Response | | | | |

**Client:**
**PBA**

**Engineer:**
**GM**
**Traffic Consultants Ltd**
2 Brook Close
North Baddesley
SO52 9FJ

Date: 15 July 2016

Road Safety Audit – Stage 1
Havant Road, Emsworth
Site Access Arrangements

## TABLE OF CONTENTS

1.0 INTRODUCTION ..... 3
2.0 ITEMS CONSIDERED ..... 4
3.0 MATTERS ARISING FROM THIS STAGE 1 RSA ..... 5
4.0 AUDITOR STATEMENT ..... 6

**APPENDIX A** Location Plans

**APPENDIX B** Designers Response

**APPENDIX C** Local Highway Authority Response

# 1.0 INTRODUCTION

## 1.1 General

1.1.1 This report results from a Stage 1 Road Safety Audit (RSA) carried out on the proposed access arrangements for a residential development on land on the north side of the A259 Havant Road in Emsworth. The access, which will be located west of Selangor Avenue, will take the form of a simple priority T-junction with primary visibility splay of 2.4m x 54.3m and a secondary splay of 2.4m x 55m.

1.1.2 Pedestrian crossing facilities in the form of dropped kerbs and tactile paving will be provided either side of the 9m radii junction.

1.1.3 The RSA was carried out at the request of PBA.

1.1.4 GM Traffic Consultants Ltd carried out the Audit on 15th July 2016. The Auditors were:

Mark Barrett Highways England Cert. of Comp.

Ian Medd FSoRSA

1.1.5 The Audit Team are independent of the project design team and has had no other involvement with the project.

1.1.6 The report has been prepared in accordance with the Design Manual for Roads and Bridges (DMRB) Highways Directive (HD) 19/15.

1.1.7 Whilst reference is made to certain design standards, where safety may be compromised by a reduction in standard, this report is not intended to provide a design check. The Auditors have only reported on matters that might have an adverse effect on road safety in the context of the chosen design. No attempt has been made to comment on the justification of the scheme or the appropriateness of the design. Consequently, the Auditors accept no responsibility for the design or construction of the scheme.

1.1.8 The Audit consisted of a desktop study and a site visit, which was carried out on Friday 15th July 2016 at 12:00 where traffic was moderate and weather dry.

1.1.9 The recommendations in this report are aimed at addressing the road safety problems; however there may be other alternative acceptable ways to overcome a specific problem, when other practical issues are considered. The recommendations contained herein do not absolve the Designer of his/her responsibilities.

1.1.10 The Auditors would be pleased to discuss the acceptability of alternative solutions to problems identified during the Audit, and would encourage the Designer to consult them on this matter.

1.1.11 The LHA response to the RSA should be formally recorded and reported to the Designer and the RSA Team so that a record of the Audit process is contained in the *As Built* design pack to be provided and retained by the LHA on final completion.

## 2.0 ITEMS CONSIDERED

2.1 The Road Safety Audit was undertaken on the scheme detailed in the following documentation.

| Drawing No. | Rev | Title |
|---|---|---|
| 041.0025.003 | A | Site Access General Arrangement |
| 18-2059-001 | - | Planning Layout |

2.2 The results of an Automatic Traffic Counter (ATC) survey undertaken in January 2016 identified both eastbound and westbound 85% speeds around 35mph.

2.3 The reported personal injury accident record for the five year period ending 31 October 2015 along with the Picady Analysis Program has also been provided.

2.3 The Audit Team have not been informed of any Departure from Standards.

## 3.0 MATTERS ARISING FROM THIS STAGE 1 RSA

### 3.1 PROBLEM

LOCATION: Proposed access

SUMMARY: Hazard paving proposed in wrong location.

The proposed hazard paving at the junction is located on the shared footway/cycleway rather than the adjoining footways. This will result in pedestrians not being aware they are entering a shared facility when joining from the footways on the proposed access. This may increase the risk of pedestrian/cycle collisions.

RECOMMENDATION

Reposition the hazard paving from the shared facility to the adjoining footways.

## 4.0 AUDITOR STATEMENT

4.1 I certify that this audit has been carried out in compliance with HD 19/15.

**AUDIT TEAM LEADER**

Mark Barrett

**GM Traffic Consultants Ltd**

**Signed:** [redacted]

TEL: 07787 158 834

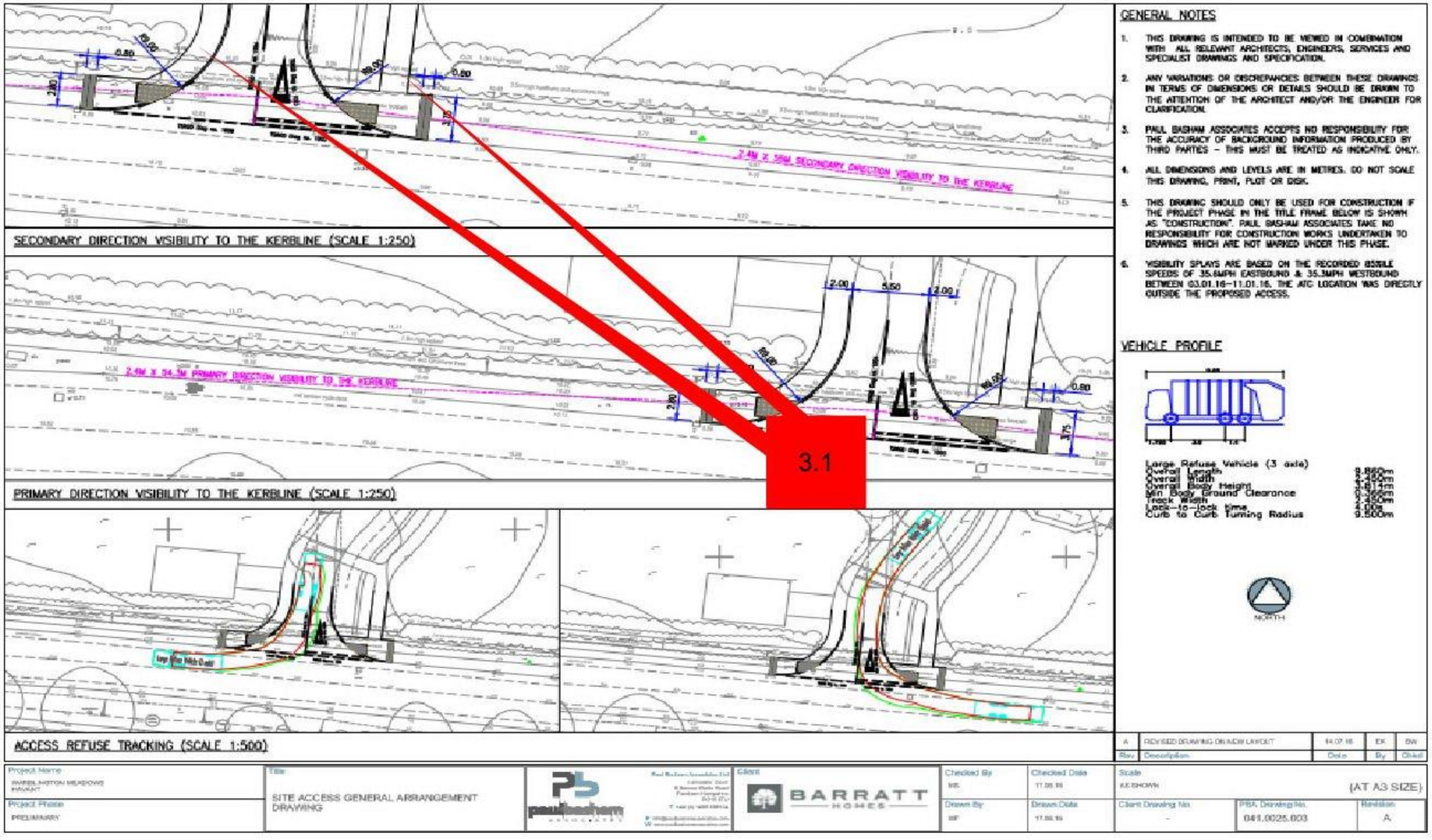
**AUDIT TEAM MEMBER**

Ian Medd

**Signed:** [redacted]

**Date: 15 July 2016**

# APPENDIX A: LOCATION PLAN



# APPENDIX B: DESIGNERS RESPONSE

Auditors: Mark Barrett (Team Leader) and Ian Medd (Team Member)

Scheme: Havant Road, Emsworth - Site Access Arrangements

Date Audit Completed: 15 July 2016

This response is to a Stage 1 Road Safety Audit to the design standard detailed within HD19/15 of Volume 5, Section 2, Part 2, of the Design Manual for Roads and Bridges, as detailed by the Highways Agency.

| Problem no. in safety audit report | Problem accepted (yes/no) | Recommended measure accepted (yes/no) | Alternative measure (detail description) |
|---|---|---|---|
| 3.1 | YES | YES | General Arrangement drawing (041.0025.003) revised in accordance with recommendations. |

## APPENDIX C: LOCAL HIGHWAY AUTHORITY RESPONSE

# Principal Engineer's Statement:

**Road Safety Audit for Havant Road, Emsworth - Site Access Arrangements**

I certify that I have considered the items that have arisen in the Stage 1 Road Safety Audit Report and I am content to accept all of its recommendations except for the ones listed above. I have stated my reasons for not accepting them and I seek the Chief Engineer's endorsement of my proposals.

..... Date.....

Principal Engineer

# Chief Engineer's Decision:

I accept these proposals by the Principal Engineer.

..... Date.....

Chief Engineer

# Appendix I

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6. 25m JUNCTION VISIBILITY SPLAYS AND 17m FORWARD VISIBILITY SPLAYS ARE BASED ON DESIGN SPEEDS OF 20MPH (WTH 15MPH ON ROAD BENDS) IN ACCORDANCE WITH MANUAL FOR STREETS DESIGN PRINCIPLES.

NORTH

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W www.paulbashamassociates.com

Client: BARRATT HOMES

| | | | |
|---|---|---|---|
| Project Name: HAVANT ROAD, EMSWORTH | | | |
| Title: INTERNAL VISIBILITY SPLAYS | | | |
| Project Phase: PRELIMINARY | | | |
| Checked By: JH | Checked Date: 19.07.16 | Drawn By: SB/SG | Drawn Date: 19.07.16 |
| Client Drawing No.: - | | Scale: 1:1000 | (AT A1 SIZE) |
| PBA Drawing No.: 041.0025.007 | | | Revision: - |

# Appendix J

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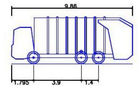
## REFUSE VEHICLE PROFILE




| Large Refuse Vehicle (3 axle) | |
|---|---|
| Overall Length | 9.860m |
| Overall Width | 2.450m |
| Overall Body Height | 3.814m |
| Min Body Ground Clearance | 0.366m |
| Track Width | 2.450m |
| Lock-to-lock time | 4.00s |
| Curb to Curb Turning Radius | 9.500m |

NORTH

Paul Basham Associates Ltd
Lancaster Court
8 Barnes Wallis Road
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E info@paulbashamassociates.com
W www.paulbashamassociates.com

Client: BARRATT HOMES

Project Name: HAVANT ROAD, EMSWORTH

Title: INTERNAL REFUSE TRACKING

Project Phase: PRELIMINARY

| Checked By | Checked Date | Drawn By | Drawn Date |
|---|---|---|---|
| JH | 19.07.16 | BW | 19.07.16 |

| Client Drawing No. | Scale | |
|---|---|---|
| - | 1:1000 | (AT A1 SIZE) |

| PBA Drawing No. | Revision |
|---|---|
| 041.0025.008 | - |

# Appendix K

Calculation Reference: AUDIT-247601-160609-0605

**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
**VEHICLES**

*Selected regions and areas:*

| | | | |
|---|---|---|---|
| **02** | **SOUTH EAST** | | |
| | SC | SURREY | 1 days |
| **03** | **SOUTH WEST** | | |
| | DC | DORSET | 1 days |
| | DV | DEVON | 2 days |
| **04** | **EAST ANGLIA** | | |
| | NF | NORFOLK | 1 days |
| **06** | **WEST MIDLANDS** | | |
| | SH | SHROPSHIRE | 2 days |
| **07** | **YORKSHIRE & NORTH LINCOLNSHIRE** | | |
| | NY | NORTH YORKSHIRE | 3 days |
| | SY | SOUTH YORKSHIRE | 1 days |
| **08** | **NORTH WEST** | | |
| | CH | CHESHIRE | 1 days |
| **09** | **NORTH** | | |
| | CB | CUMBRIA | 1 days |

*This section displays the number of survey days per TRICS® sub-region in the selected set*

**Filtering Stage 2 selection:**

*This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.*

Parameter: Number of dwellings
Actual Range: 51 to 129 (units: )
Range Selected by User: 50 to 150 (units: )

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 28/09/15

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

*Selected survey days:*

| | |
|---|---|
| Monday | 3 days |
| Tuesday | 2 days |
| Wednesday | 2 days |
| Thursday | 3 days |
| Friday | 3 days |

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

*Selected survey types:*

| | |
|---|---|
| Manual count | 13 days |
| Directional ATC Count | 0 days |

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

*Selected Locations:*

| | |
|---|---|
| Suburban Area (PPS6 Out of Centre) | 9 |
| Edge of Town | 4 |

*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*

*Selected Location Sub Categories:*

| | |
|---|---|
| Residential Zone | 9 |

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

**Filtering Stage 3 selection:**

*Use Class:*

| | |
|---|---|
| C3 | 13 days |

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*

*Population within 1 mile:*

| | |
|---|---|
| 1,001 to 5,000 | 2 days |
| 5,001 to 10,000 | 4 days |
| 10,001 to 15,000 | 3 days |
| 15,001 to 20,000 | 2 days |
| 20,001 to 25,000 | 1 days |
| 25,001 to 50,000 | 1 days |

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

*Population within 5 miles:*

| | |
|---|---|
| 5,001 to 25,000 | 3 days |
| 25,001 to 50,000 | 2 days |
| 75,001 to 100,000 | 3 days |
| 100,001 to 125,000 | 2 days |
| 125,001 to 250,000 | 1 days |
| 250,001 to 500,000 | 2 days |

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

*Car ownership within 5 miles:*

| | |
|---|---|
| 0.6 to 1.0 | 1 days |
| 1.1 to 1.5 | 12 days |

*This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.*

*Travel Plan:*

| | |
|---|---|
| No | 13 days |

*This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.*

*LIST OF SITES relevant to selection parameters*

1 **CB-03-A-04** **SEMI DETACHED** **CUMBRIA**
MOORCLOSE ROAD
SALTERBACK
WORKINGTON
Edge of Town
No Sub Category
Total Number of dwellings: 82
*Survey date: FRIDAY* *24/04/09* *Survey Type: MANUAL*

2 **CH-03-A-06** **SEMI-DET./BUNGALOWS** **CHESHIRE**
CREWE ROAD

CREWE
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 129
*Survey date: TUESDAY* *14/10/08* *Survey Type: MANUAL*

3 **DC-03-A-01** **DETACHED** **DORSET**
ISAACS CLOSE

POOLE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 51
*Survey date: WEDNESDAY* *16/07/08* *Survey Type: MANUAL*

4 **DV-03-A-02** **HOUSES & BUNGALOWS** **DEVON**
MILLHEAD ROAD

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 116
*Survey date: FRIDAY* *25/09/15* *Survey Type: MANUAL*

5 **DV-03-A-03** **TERRACED & SEMI DETACHED** **DEVON**
LOWER BRAND LANE

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 70
*Survey date: MONDAY* *28/09/15* *Survey Type: MANUAL*

6 **NF-03-A-02** **HOUSES & FLATS** **NORFOLK**
DEREHAM ROAD

NORWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 98
*Survey date: MONDAY* *22/10/12* *Survey Type: MANUAL*

7 **NY-03-A-06** **BUNGALOWS & SEMI DET.** **NORTH YORKSHIRE**
HORSEFAIR

BOROUGHBRIDGE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 115
*Survey date: FRIDAY* *14/10/11* *Survey Type: MANUAL*

*LIST OF SITES relevant to selection parameters (Cont.)*

**8 NY-03-A-09 MIXED HOUSING NORTH YORKSHIRE**
GRAMMAR SCHOOL LANE

NORTHALLERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 52
*Survey date: MONDAY 16/09/13 Survey Type: MANUAL*

**9 NY-03-A-10 HOUSES AND FLATS NORTH YORKSHIRE**
BOROUGHBRIDGE ROAD

RIPON
Edge of Town
No Sub Category
Total Number of dwellings: 71
*Survey date: TUESDAY 17/09/13 Survey Type: MANUAL*

**10 SC-03-A-04 DETACHED & TERRACED SURREY**
HIGH ROAD

BYFLEET
Edge of Town
Residential Zone
Total Number of dwellings: 71
*Survey date: THURSDAY 23/01/14 Survey Type: MANUAL*

**11 SH-03-A-04 TERRACED SHROPSHIRE**
ST MICHAEL'S STREET

SHREWSBURY
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 108
*Survey date: THURSDAY 11/06/09 Survey Type: MANUAL*

**12 SH-03-A-05 SEMI-DETACHED/TERRACED SHROPSHIRE**
SANDCROFT
SUTTON HILL
TELFORD
Edge of Town
Residential Zone
Total Number of dwellings: 54
*Survey date: THURSDAY 24/10/13 Survey Type: MANUAL*

**13 SY-03-A-01 SEMI DETACHED HOUSES SOUTH YORKSHIRE**
A19 BENTLEY ROAD
BENTLEY RISE
DONCASTER
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 54
*Survey date: WEDNESDAY 18/09/13 Survey Type: MANUAL*

*This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.*

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

## VEHICLES

## Calculation factor: 1 DWELLS

**BOLD print indicates peak (busiest) period**

| Time Range | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. Days | Ave. DWELLS | Trip Rate | No. Days | Ave. DWELLS | Trip Rate | No. Days | Ave. DWELLS | Trip Rate |
| 00:00 - 01:00 | | | | | | | | | |
| 01:00 - 02:00 | | | | | | | | | |
| 02:00 - 03:00 | | | | | | | | | |
| 03:00 - 04:00 | | | | | | | | | |
| 04:00 - 05:00 | | | | | | | | | |
| 05:00 - 06:00 | | | | | | | | | |
| 06:00 - 07:00 | | | | | | | | | |
| 07:00 - 08:00 | 13 | 82 | 0.070 | 13 | 82 | 0.264 | 13 | 82 | 0.334 |
| 08:00 - 09:00 | 13 | 82 | 0.145 | **13** | **82** | **0.362** | **13** | **82** | **0.507** |
| 09:00 - 10:00 | 13 | 82 | 0.162 | 13 | 82 | 0.177 | 13 | 82 | 0.339 |
| 10:00 - 11:00 | 13 | 82 | 0.148 | 13 | 82 | 0.183 | 13 | 82 | 0.331 |
| 11:00 - 12:00 | 13 | 82 | 0.160 | 13 | 82 | 0.164 | 13 | 82 | 0.324 |
| 12:00 - 13:00 | 13 | 82 | 0.173 | 13 | 82 | 0.161 | 13 | 82 | 0.334 |
| 13:00 - 14:00 | 13 | 82 | 0.173 | 13 | 82 | 0.161 | 13 | 82 | 0.334 |
| 14:00 - 15:00 | 13 | 82 | 0.148 | 13 | 82 | 0.154 | 13 | 82 | 0.302 |
| 15:00 - 16:00 | 13 | 82 | 0.233 | 13 | 82 | 0.159 | 13 | 82 | 0.392 |
| 16:00 - 17:00 | 13 | 82 | 0.249 | 13 | 82 | 0.164 | 13 | 82 | 0.413 |
| 17:00 - 18:00 | **13** | **82** | **0.329** | 13 | 82 | 0.174 | 13 | 82 | 0.503 |
| 18:00 - 19:00 | 13 | 82 | 0.215 | 13 | 82 | 0.151 | 13 | 82 | 0.366 |
| 19:00 - 20:00 | | | | | | | | | |
| 20:00 - 21:00 | | | | | | | | | |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 2.205 | | | 2.274 | | | 4.479 |

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

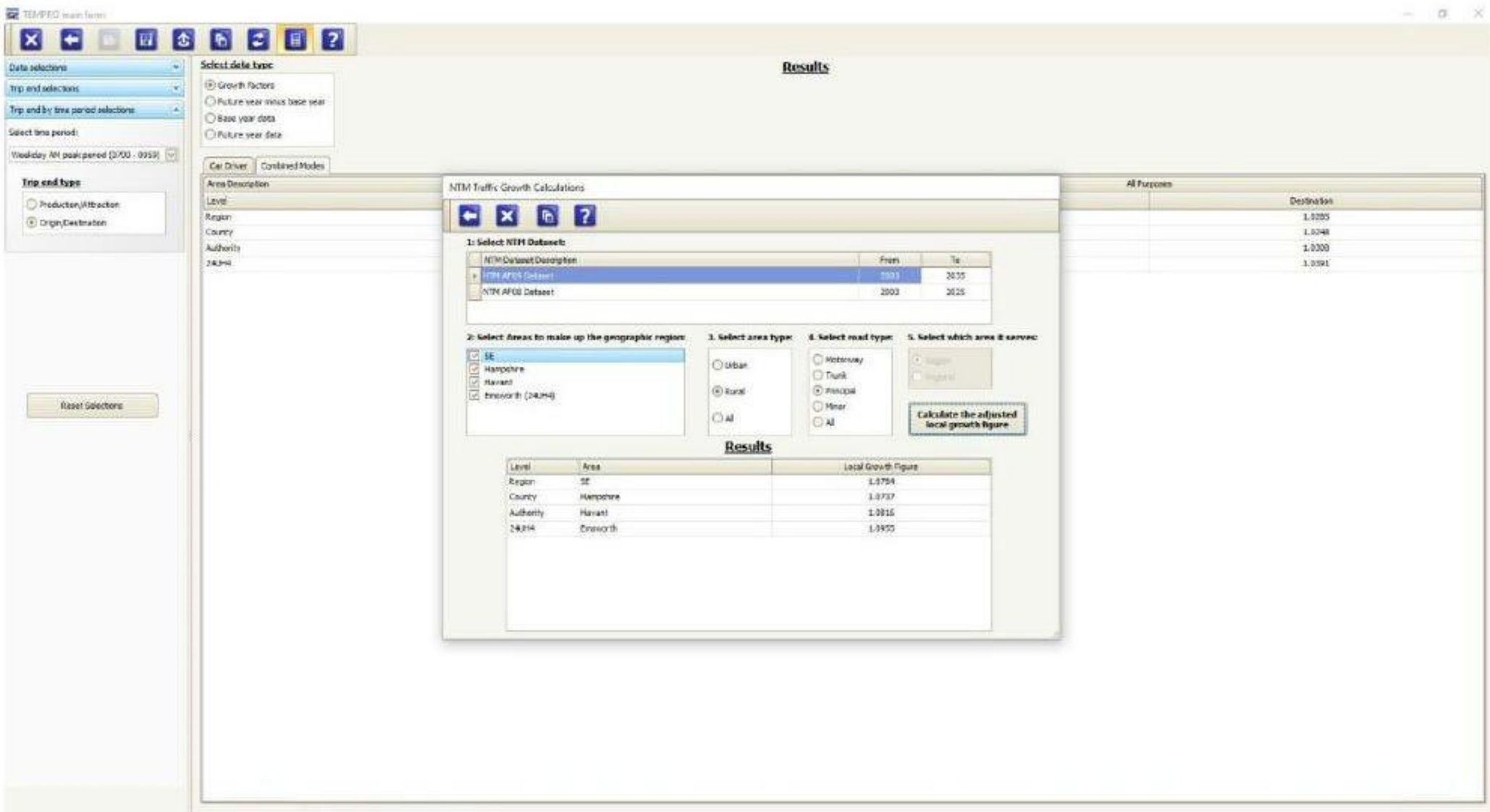
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

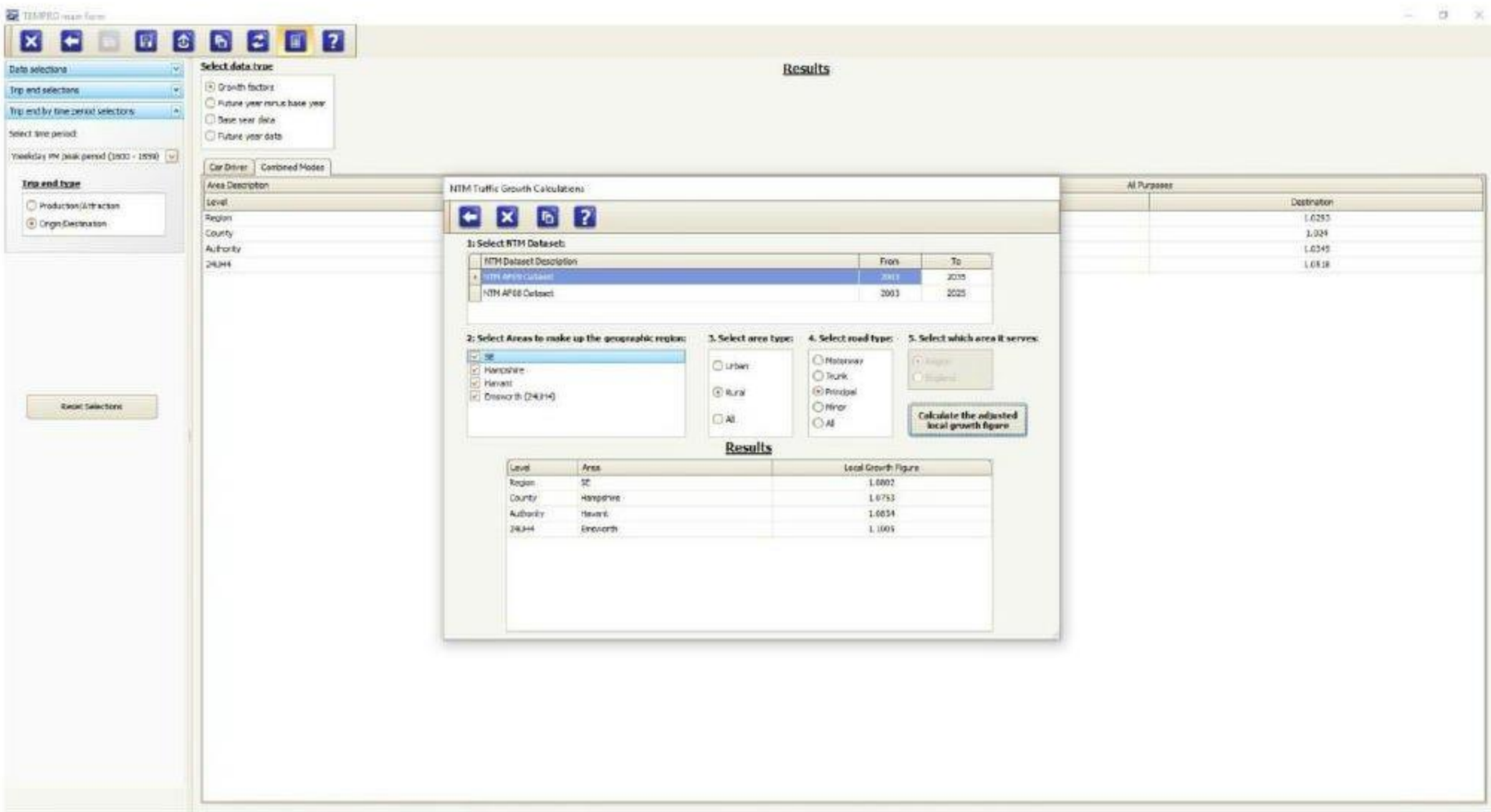
### Parameter summary

| | |
|---|---|
| Trip rate parameter range selected: | 51 - 129 (units: ) |
| Survey date date range: | 01/01/08 - 28/09/15 |
| Number of weekdays (Monday-Friday): | 13 |
| Number of Saturdays: | 0 |
| Number of Sundays: | 0 |
| Surveys manually removed from selection: | 1 |

*This section displays a quick summary of some of the data filtering selections made by the TRICS© user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.*

# Appendix L


Results
NTM Traffic Growth Calculations
1: Select NTM Dataset:
2: Select Areas to make up the geographic region:
3. Select area type:
4. Select road type:
5. Select which area it serves:
Calculate the adjusted local growth figure
Results


Results
NTM Traffic Growth Calculations
1: Select NTM Dataset:
2: Select Areas to make up the geographic region:
3. Select area type:
4. Select road type:
5. Select which area it serves:
Calculate the adjusted local growth figure
Results

# Appendix M

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

P_CADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

ADAPTED FROM P_CADY/3 WHICH IS CROWN COPYRIGHT
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TRL SOFTWARE SALES
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"C:\Users\Stewart\Desktop\Warblington\Site Access\2021 with development P_CADY.vpi"
(drive-on-the-left) at 10:09:27 on Friday, 8 July 2016

RUN INFORMATION
**********

| | |
|---|---|
| RUN TITLE | : 2021 with development |
| LOCATION | : Havant Road, Emsworth |
| DATE | : 14/06/16 |
| CLIENT | : Barratts |
| ENUMERATOR | : Stewart [STEWART-PC] |
| JOB NUMBER | : 041.0025 |
| STATUS | : |
| DESCRIPTION | : |

MAJOR/MINOR JUNCTION CAPACITY AND DELAY
**********

INPUT DATA
---

```
                    MAJOR ROAD (ARM C) --------------------- MAJOR ROAD (ARM A)
                                                  -
                                                  -
                                                  -
                                                  -
                                                  -
                                                  -
                                          MINOR ROAD (ARM B)
```

ARM A IS Havant Road (Eastbound)
ARM B IS Site Access
ARM C IS Havant Road (Westbound)

STREAM LABELLING CONVENTION
---

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

| DATA ITEM | MINOR ROAD B |
|---|---|
| TOTAL MAJOR ROAD CARRIAGEWAY WIDTH | ( W ) 7.00 M. |
| CENTRAL RESERVE WIDTH | (WCR ) 0.00 M. |
| MAJOR ROAD RIGHT TURN - WIDTH | (WC-B) 2.20 M. |
| - VISIBILITY | (VC-B) 0.00 M. |
| - BLOCKS TRAFFIC (SPACES) | YES ( 2) |
| MINOR ROAD - VISIBILITY TO LEFT | (VB-C) 100.0 M. |
| - VISIBILITY TO RIGHT | (VB-A) 100.0 M. |
| - LANE 1 WIDTH | (WB-C) 2.20 M. |
| - LANE 2 WIDTH | (WB-A) 0.00 M. |

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

| Intercept For STREAM B-C | Slope For Opposing STREAM A-C | Slope For Opposing STREAM A-B |
|---|---|---|
| 631.87 | 0.23 | 0.09 |

| Intercept For STREAM B-A | Slope For Opposing STREAM A-C | Slope For Opposing STREAM A-B | Slope For Opposing STREAM C-A | Slope For Opposing STREAM C-B |
|---|---|---|---|---|
| 515.84 | 0.23 | 0.09 | 0.14 | 0.32 |

| Intercept For STREAM C-B | Slope For Opposing STREAM A-C | Slope For Opposing STREAM A-B |
|---|---|---|
| 573.96 | 0.21 | 0.21 |

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

| ARM | FLOW SCALE(%) |
|---|---|
| A | 100 |
| B | 100 |
| C | 100 |

Demand set: 2021 with development

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

| ARM | NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE | TOP OF PEAK IS REACHED | FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | AT TOP OF PEAK | AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 10.00 | 15.00 | 10.00 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.96 | 1.44 | 0.96 |
| ARM C | 15.00 | 45.00 | 75.00 | 14.05 | 21.08 | 14.05 |

Demand set: 2021 with development

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| | | TURNING PROPORTIONS<br>TURNING COUNTS<br>(PERCENTAGE OF H.V.S) | | |
| 07.45 - 09.15 | ARM A | 0.000<br>0.0<br>( 0.0) | 0.027<br>22.0<br>( 10.0) | 0.973<br>778.0<br>( 10.0) |
| | ARM B | 0.701<br>54.0<br>( 10.0) | 0.000<br>0.0<br>( 0.0) | 0.299<br>23.0<br>( 10.0) |
| | ARM C | 0.992<br>1115.0<br>( 10.0) | 0.008<br>9.0<br>( 10.0) | 0.000<br>0.0<br>( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 07.45-08.00 | | | | | | | | | |
| B-AC | 0.97 | 4.18 | 0.231 | | 0.00 | 0.29 | 4.1 | | 0.31 |
| C-AB | 0.11 | 6.56 | 0.017 | | 0.00 | 0.02 | 0.3 | | 0.16 |
| A-B | 0.28 | | | | | | | | |
| A-C | 9.76 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.00-08.15 | | | | | | | | | |
| B-AC | 1.15 | 3.30 | 0.349 | | 0.29 | 0.51 | 7.2 | | 0.46 |
| C-AB | 0.13 | 6.15 | 0.022 | | 0.02 | 0.02 | 0.3 | | 0.17 |
| A-B | 0.33 | | | | | | | | |
| A-C | 11.66 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.15-08.30 | | | | | | | | | |
| B-AC | 1.41 | 2.01 | 0.704 | | 0.51 | 1.82 | 21.9 | | 1.33 |
| C-AB | 0.17 | 5.57 | 0.030 | | 0.02 | 0.03 | 0.5 | | 0.19 |
| A-B | 0.40 | | | | | | | | |
| A-C | 14.28 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.30-08.45 | | | | | | | | | |
| B-AC | 1.41 | 2.01 | 0.704 | | 1.82 | 2.04 | 29.2 | | 1.57 |
| C-AB | 0.17 | 5.57 | 0.030 | | 0.03 | 0.03 | 0.5 | | 0.19 |
| A-B | 0.40 | | | | | | | | |
| A-C | 14.28 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 08.45-09.00 | | | | | | | | | |
| B-AC | 1.15 | 3.30 | 0.350 | | 2.04 | 0.56 | 10.1 | | 0.51 |
| C-AB | 0.13 | 6.15 | 0.022 | | 0.03 | 0.02 | 0.3 | | 0.17 |
| A-B | 0.33 | | | | | | | | |
| A-C | 11.66 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 09.00-09.15 | | | | | | | | | |
| B-AC | 0.97 | 4.18 | 0.231 | | 0.56 | 0.31 | 4.9 | | 0.31 |
| C-AB | 0.11 | 6.56 | 0.017 | | 0.02 | 0.02 | 0.3 | | 0.16 |
| A-B | 0.28 | | | | | | | | |
| A-C | 9.76 | | | | | | | | |

*WARNING* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 08.00 | 0.3 | |
| 08.15 | 0.5 | * |
| 08.30 | 1.8 | ** |
| 08.45 | 2.0 | ** |
| 09.00 | 0.6 | * |
| 09.15 | 0.3 | |

QUEUE FOR STREAM C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 08.00 | 0.0 |
| 08.15 | 0.0 |
| 08.30 | 0.0 |
| 08.45 | 0.0 |
| 09.00 | 0.0 |
| 09.15 | 0.0 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND (VEH) | TOTAL DEMAND (VEH/H) | * QUEUEING * DELAY * (MIN) | * QUEUEING * DELAY * (MIN/VEH) | * INCLUSIVE QUEUEING * DELAY * (MIN) | * INCLUSIVE QUEUEING * DELAY * (MIN/VEH) |
|---|---|---|---|---|---|---|
| B-AC | 106.0 | 70.7 | 77.4 | 0.73 | 77.4 | 0.73 |
| C-AB | 12.4 | 8.3 | 2.1 | 0.17 | 2.1 | 0.17 |
| A-B | 30.3 | 20.2 | | | | |
| A-C | 1070.9 | 713.9 | | | | |
| ALL | 2754.2 | 1836.2 | 79.5 | 0.03 | 79.5 | 0.03 |

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

| Intercept For STREAM B-C | Slope For Opposing STREAM A-C | Slope For Opposing STREAM A-B |
|---|---|---|
| 631.87 | 0.23 | 0.09 |

| Intercept For STREAM B-A | Slope For Opposing STREAM A-C | Slope For Opposing STREAM A-B | Slope For Opposing STREAM C-A | Slope For Opposing STREAM C-B |
|---|---|---|---|---|
| 515.84 | 0.23 | 0.09 | 0.14 | 0.32 |

| Intercept For STREAM C-B | Slope For Opposing STREAM A-C | Slope For Opposing STREAM A-B |
|---|---|---|
| 573.96 | 0.21 | 0.21 |

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

| ARM | FLOW SCALE(%) |
|---|---|
| A | 100 |
| B | 100 |
| C | 100 |

Demand set: 2021 with development Demand Set

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

| ARM | NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE | TOP OF PEAK IS REACHED | FLOW STOPS FALLING | RATE OF FLOW (VEH/MIN) BEFORE PEAK | AT TOP OF PEAK | AFTER PEAK |
|---|---|---|---|---|---|---|
| ARM A | 15.00 | 45.00 | 75.00 | 14.18 | 21.26 | 14.18 |
| ARM B | 15.00 | 45.00 | 75.00 | 0.45 | 0.67 | 0.45 |
| ARM C | 15.00 | 45.00 | 75.00 | 9.51 | 14.27 | 9.51 |

Demand set: 2021 with development Demand Set

| TIME | FROM/TO | ARM A | ARM B | ARM C |
|---|---|---|---|---|
| | | TURNING PROPORTIONS<br>TURNING COUNTS<br>(PERCENTAGE OF H.V.S) | | |
| 16.45 - 18.15 | ARM A | 0.000<br>0.0<br>( 0.0) | 0.042<br>48.0<br>( 10.0) | 0.958<br>1086.0<br>( 10.0) |
| | ARM B | 0.694<br>25.0<br>( 10.0) | 0.000<br>0.0<br>( 0.0) | 0.306<br>11.0<br>( 10.0) |
| | ARM C | 0.972<br>740.0<br>( 10.0) | 0.028<br>21.0<br>( 10.0) | 0.000<br>0.0<br>( 0.0) |

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 16.45-17.00 | | | | | | | | | |
| B-AC | 0.45 | 3.82 | 0.118 | | 0.00 | 0.13 | 1.8 | | 0.30 |
| C-AB | 0.26 | 5.67 | 0.046 | | 0.00 | 0.05 | 0.7 | | 0.18 |
| A-B | 0.60 | | | | | | | | |
| A-C | 13.63 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.00-17.15 | | | | | | | | | |
| B-AC | 0.54 | 2.88 | 0.187 | | 0.13 | 0.22 | 3.1 | | 0.42 |
| C-AB | 0.31 | 5.08 | 0.062 | | 0.05 | 0.07 | 1.0 | | 0.21 |
| A-B | 0.72 | | | | | | | | |
| A-C | 16.27 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.15-17.30 | | | | | | | | | |
| B-AC | 0.66 | 1.49 | 0.443 | | 0.22 | 0.70 | 9.0 | | 1.12 |
| C-AB | 0.39 | 4.27 | 0.090 | | 0.07 | 0.10 | 1.5 | | 0.26 |
| A-B | 0.88 | | | | | | | | |
| A-C | 19.93 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.30-17.45 | | | | | | | | | |
| B-AC | 0.66 | 1.49 | 0.443 | | 0.70 | 0.75 | 10.9 | | 1.19 |
| C-AB | 0.39 | 4.27 | 0.090 | | 0.10 | 0.10 | 1.5 | | 0.26 |
| A-B | 0.88 | | | | | | | | |
| A-C | 19.93 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 17.45-18.00 | | | | | | | | | |
| B-AC | 0.54 | 2.88 | 0.187 | | 0.75 | 0.24 | 4.0 | | 0.44 |
| C-AB | 0.31 | 5.08 | 0.062 | | 0.10 | 0.07 | 1.0 | | 0.21 |
| A-B | 0.72 | | | | | | | | |
| A-C | 16.27 | | | | | | | | |

| TIME | DEMAND (VEH/MIN) | CAPACITY (VEH/MIN) | DEMAND/ CAPACITY (RFC) | PEDESTRIAN FLOW (PEDS/MIN) | START QUEUE (VEHS) | END QUEUE (VEHS) | DELAY (VEH.MIN/ TIME SEGMENT) | GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT) | AVERAGE DELAY PER ARRIVING VEHICLE (MIN) |
|---|---|---|---|---|---|---|---|---|---|
| 18.00-18.15 | | | | | | | | | |
| B-AC | 0.45 | 3.82 | 0.118 | | 0.24 | 0.14 | 2.2 | | 0.30 |
| C-AB | 0.26 | 5.67 | 0.046 | | 0.07 | 0.05 | 0.7 | | 0.18 |
| A-B | 0.60 | | | | | | | | |
| A-C | 13.63 | | | | | | | | |

*WARNING* NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE | |
|---|---|---|
| 17.00 | 0.1 | |
| 17.15 | 0.2 | |
| 17.30 | 0.7 | * |
| 17.45 | 0.7 | * |
| 18.00 | 0.2 | |
| 18.15 | 0.1 | |

QUEUE FOR STREAM C-AB

| TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE |
|---|---|
| 17.00 | 0.0 |
| 17.15 | 0.1 |
| 17.30 | 0.1 |
| 17.45 | 0.1 |
| 18.00 | 0.1 |
| 18.15 | 0.0 |

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

| STREAM | TOTAL DEMAND | | * QUEUEING * DELAY * | | * INCLUSIVE QUEUEING * DELAY * | |
|---|---|---|---|---|---|---|
| | (VEH) | (VEH/H) | (MIN) | (MIN/VEH) | (MIN) | (MIN/VEH) |
| B-AC | 49.6 | 33.0 | 31.1 | 0.63 | 31.1 | 0.63 |
| C-AB | 28.9 | 19.3 | 6.5 | 0.22 | 6.5 | 0.22 |
| A-B | 66.1 | 44.0 | | | | |
| A-C | 1494.8 | 996.5 | | | | |
| ALL | 2657.9 | 1771.9 | 37.6 | 0.01 | 37.6 | 0.01 |

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

---------- end of file ----------

Printed at 10:09:53 on 08/07/2016

# Appendix N

# ARCADY 7

Version: 7.1.0.228 [21st Feb 2011]
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**File:** E:\Projects\040-049\041 Barratt Homes\041.0025 Warblington Meadows, Havant\Reports\ARCADY\EMSWORTH RBT 27TH MAY 2021 BASELINE.arc7
**Report generation date:** 27/05/2016 12:59:46

« A1 - (Default Analysis Set) - D2 - 2021 BASELINE, PM
» Roundabout Network
» Arms
» Traffic Flows
» Entry Flows
» Turning Proportions
» Vehicle Mix
» Results

## Summary of roundabout performance

| | AM | | | PM | | |
|---|---|---|---|---|---|---|
| | Queue (Veh) | Delay (min) | RFC | Queue (Veh) | Delay (min) | RFC |
| | (Default Analysis Set) - 2021 BASELINE | | | | | |
| Arm NORTH | 2.27 | 0.18 | 0.70 | 0.86 | 0.10 | 0.46 |
| Arm A259E | 2.21 | 0.16 | 0.69 | 1.66 | 0.12 | 0.63 |
| Arm HIGH | 0.42 | 0.13 | 0.30 | 0.58 | 0.12 | 0.37 |
| Arm ARM 4 | 1.64 | 0.10 | 0.62 | 3.70 | 0.20 | 0.79 |

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

*2021 BASELINE - AM* runs from 07:45:00 to 09:15:00
*2021 BASELINE - PM* runs from 16:45:00 to 18:15:00

## File summary

### File Description

| | |
|---|---|
| Title | 2021 BASELINE |
| Location | EMSWORTH ROUNDABOUT |
| Site Number | 041.0025 |
| Date | 27/05/2016 |
| Version | |
| Status | (new file) |
| Identifier | |
| Client | |
| Jobnumber | 041.0025 |
| Enumerator | BETH |
| Description | |

## Analysis Options

| RFC Threshold | Vehicle Length (m) | Do Queue Variations |
|---|---|---|
| 0.85 | 5.75 | False |

## Sorting and Display

| Show Arm Names | Arm Grouping | Sorting Direction | Sorting Type | Data Matrix Style | Time Style |
|---|---|---|---|---|---|
| False | Order | Ascending | Numerical | By Destination | Absolute Time |

## Units

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

# A1 - (Default Analysis Set) - D2 - 2021 BASELINE, PM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Include In Report | Use Specific Demand Set | Demand Set | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|---|---|---|---|
| (Default Analysis Set) | | True | False | (D1) | False | 100.000 | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Locked | Run Automatically | Use Relationship | Relationship | Start Time (HH:mm) | Finish Time (HH:mm) | Time Period Length (min) | Time Segment Length (min) | Traffic Profile Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021 BASELINE, PM | 2021 BASELINE | PM | | False | True | False | | 16:45 | 18:15 | 90 | 15 | ONE HOUR |

# Roundabout Network

## Roundabout Type(s)

| ID | Name | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|---|---|---|---|---|---|---|
| 1 | (untitled) | NORTH,A259E,HIGH,ARM 4 | Standard | False | False | False |

## Roundabout Network Options

| Driving Side | Lighting | Road Surface | In London |
|---|---|---|---|
| Left | Normal/unknown | ((Mini-roundabouts only)) | ((Mini-roundabouts only)) |

# Arms

## Arms

| ID | Name | Description |
|---|---|---|
| NORTH | ARM 1 NORTH STREET | |
| A259E | ARM 2 A259 EAST | |
| HIGH | ARM 3 HIGH STREET | |
| ARM 4 | ARM 4 A259 WEST | |

## Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|---|---|---|---|---|
| NORTH | 0.00 | 99999.00 | False | 0.00 |

| | | | | |
|---|---|---|---|---|
| A259E | 0.00 | 99999.00 | False | 0.00 |
| HIGH | 0.00 | 99999.00 | False | 0.00 |
| ARM 4 | 0.00 | 99999.00 | False | 0.00 |

## Standard 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 |
|---|---|---|---|---|---|---|---|
| NORTH | 3.90 | 8.10 | 13.30 | 33.80 | 29.00 | 45.00 | False |
| A259E | 3.45 | 7.82 | 29.15 | 62.49 | 29.00 | 49.00 | False |
| HIGH | 3.81 | 7.33 | 14.80 | 10.04 | 29.00 | 38.00 | False |
| ARM 4 | 4.10 | 7.78 | 24.05 | 18.10 | 29.00 | 35.00 | False |

## Mini Roundabout Geometry

| Arm | Approach road half-width (m) | Minimum approach road half-width (m) | Entry width (m) | Effective flare length (m) | Distance to next arm (m) | Entry corner kerb line distance (m) | Gradient over 50m (%) | Kerbed central island |
|---|---|---|---|---|---|---|---|---|
| NORTH | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |
| A259E | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |
| HIGH | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |
| ARM 4 | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| NORTH | (0.00) | (0.00) |
| A259E | (0.00) | (0.00) |
| HIGH | (0.00) | (0.00) |
| ARM 4 | (0.00) | (0.00) |

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| NORTH | None |
| A259E | None |
| HIGH | None |
| ARM 4 | None |

## Zebra Crossings

| Arm | Space between crossing and junction entry (PCU) | Vehicles queueing on exit (PCU) | Central Refuge | Crossing Data Type | Crossing length (m) | Crossing time (s) | Crossing length (entry side) (m) | Crossing time (entry side) (s) | Crossing length (exit side) (m) | Crossing time (exit side) (s) |
|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| A259E | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| HIGH | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| ARM 4 | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |

## Pelican/ Puffin Crossings

| Arm | Amber time preceding red (s) | Amber time regarded as green (s) | Time from traffic red start to green man start (s) | Time period green man shown (s) | Clearance Period (s) | Traffic minimum green (s) | Space between crossing and junction entry (PCU) |
|---|---|---|---|---|---|---|---|
| NORTH | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |
| A259E | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |
| HIGH | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |
| ARM 4 | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |

## Arm Slope/ Intercept and Capacity

### Slope and Intercept used in model

| Arm | Enter Directly | Slope | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| NORTH | False | ((calculated)) | ((calculated)) | 0.660 | 1756.445 |
| A259E | False | ((calculated)) | ((calculated)) | 0.685 | 1876.779 |
| HIGH | False | ((calculated)) | ((calculated)) | 0.620 | 1625.818 |
| ARM 4 | False | ((calculated)) | ((calculated)) | 0.702 | 1946.066 |

*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 |
|---|---|---|---|---|---|---|---|---|---|---|
| True | False | True | True | HV Percentages | 2.00 | False | False | False | True | True |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (Veh/hr) | Flow Scaling Factor (%) | PHF |
|---|---|---|---|---|---|
| NORTH | ONE HOUR | True | 455.00 | 100.000 | N/A |
| A259E | ONE HOUR | True | 781.00 | 100.000 | N/A |
| HIGH | ONE HOUR | True | 263.00 | 100.000 | N/A |
| ARM 4 | ONE HOUR | True | 1036.00 | 100.000 | N/A |

# Turning Proportions

### Turning Counts or Proportions (Veh/hr) - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | ARM 4 |
| From | NORTH | 1.000 | 129.000 | 80.000 | 245.000 |
| | A259E | 260.000 | 3.000 | 13.000 | 505.000 |
| | HIGH | 89.000 | 67.000 | 7.000 | 100.000 |
| | ARM 4 | 404.000 | 521.000 | 105.000 | 6.000 |

### Turning Proportions (Veh) - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | ARM 4 |
| From | NORTH | 0.00 | 0.28 | 0.18 | 0.54 |
| | A259E | 0.33 | 0.00 | 0.02 | 0.65 |
| | HIGH | 0.34 | 0.25 | 0.03 | 0.38 |
| | ARM 4 | 0.39 | 0.50 | 0.10 | 0.01 |

# Vehicle Mix

### Average PCU Per Vehicle - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | ARM 4 |
| From | NORTH | 1.100 | 1.100 | 1.100 | 1.100 |
| | A259E | 1.100 | 1.100 | 1.100 | 1.100 |

| | | | | | |
|---|---|---|---|---|---|
| | HIGH | 1.100 | 1.100 | 1.100 | 1.100 |
| | ARM 4 | 1.100 | 1.100 | 1.100 | 1.100 |

### Heavy Vehicle Percentages - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | ARM 4 |
| From | NORTH | 10.000 | 10.000 | 10.000 | 10.000 |
| | A259E | 10.000 | 10.000 | 10.000 | 10.000 |
| | HIGH | 10.000 | 10.000 | 10.000 | 10.000 |
| | ARM 4 | 10.000 | 10.000 | 10.000 | 10.000 |

# Results

## Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (Veh) | Max LOS | Total Demand (Veh/hr) | Total Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (Veh-min/min) | Inclusive Queueing Total Delay (Veh-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 0.46 | 0.10 | 0.86 | A | 417.52 | 626.27 | 52.56 | 0.08 | 0.58 | 52.57 | 0.08 | 0.660 | 1756.445 |
| A259E | 0.63 | 0.12 | 1.66 | A | 716.66 | 1074.99 | 97.15 | 0.09 | 1.08 | 97.16 | 0.09 | 0.685 | 1876.779 |
| HIGH | 0.37 | 0.12 | 0.58 | A | 241.33 | 362.00 | 35.07 | 0.10 | 0.39 | 35.08 | 0.10 | 0.620 | 1625.818 |
| ARM 4 | 0.79 | 0.20 | 3.70 | B | 950.65 | 1425.98 | 184.31 | 0.13 | 2.05 | 184.33 | 0.13 | 0.702 | 1946.066 |

## Main Results

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 342.55 | 85.64 | 341.04 | 564.87 | 531.02 | 0.00 | 1246.04 | 983.58 | 0.275 | 0.00 | 0.38 |
| A259E | 587.98 | 146.99 | 585.36 | 539.34 | 332.73 | 0.00 | 1478.26 | 1119.51 | 0.398 | 0.00 | 0.66 |
| HIGH | 198.00 | 49.50 | 197.02 | 153.59 | 764.49 | 0.00 | 1004.05 | 461.13 | 0.197 | 0.00 | 0.24 |
| ARM 4 | 779.96 | 194.99 | 775.92 | 641.54 | 319.98 | 0.00 | 1544.43 | 1302.15 | 0.505 | 0.00 | 1.01 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 409.04 | 102.26 | 408.43 | 676.36 | 635.79 | 0.00 | 1176.85 | 983.58 | 0.348 | 0.38 | 0.53 |
| A259E | 702.10 | 175.53 | 700.92 | 645.78 | 398.44 | 0.00 | 1433.25 | 1119.51 | 0.490 | 0.66 | 0.95 |
| HIGH | 236.43 | 59.11 | 236.02 | 183.91 | 915.46 | 0.00 | 910.45 | 461.13 | 0.260 | 0.24 | 0.35 |
| ARM 4 | 931.34 | 232.84 | 928.95 | 768.27 | 383.21 | 0.00 | 1500.02 | 1302.15 | 0.621 | 1.01 | 1.61 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 500.96 | 125.24 | 499.69 | 825.83 | 775.51 | 0.00 | 1084.57 | 983.58 | 0.462 | 0.53 | 0.85 |
| A259E | 859.90 | 214.97 | 857.12 | 788.13 | 487.06 | 0.00 | 1372.55 | 1119.51 | 0.626 | 0.95 | 1.64 |
| HIGH | 289.57 | 72.39 | 288.65 | 224.61 | 1119.58 | 0.00 | 783.90 | 461.13 | 0.369 | 0.35 | 0.58 |
| ARM 4 | 1140.66 | 285.16 | 1132.71 | 939.60 | 468.63 | 0.00 | 1440.03 | 1302.15 | 0.792 | 1.61 | 3.59 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 500.96 | 125.24 | 500.93 | 829.97 | 780.35 | 0.00 | 1081.37 | 983.58 | 0.463 | 0.85 | 0.88 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A259E | 859.90 | 214.97 | 859.82 | 792.50 | 488.78 | 0.00 | 1371.38 | 1119.51 | 0.627 | 1.64 | 1.66 |
| HIGH | 289.57 | 72.39 | 289.55 | 225.66 | 1122.94 | 0.00 | 781.81 | 461.13 | 0.370 | 0.58 | 0.58 |
| ARM 4 | 1140.66 | 285.16 | 1140.22 | 942.39 | 470.10 | 0.00 | 1439.00 | 1302.15 | 0.793 | 3.59 | 3.70 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 409.04 | 102.26 | 410.30 | 682.23 | 642.60 | 0.00 | 1172.35 | 983.58 | 0.349 | 0.86 | 0.54 |
| A259E | 702.10 | 175.53 | 704.86 | 651.96 | 400.95 | 0.00 | 1431.54 | 1119.51 | 0.490 | 1.66 | 0.97 |
| HIGH | 236.43 | 59.11 | 237.35 | 185.41 | 920.41 | 0.00 | 907.38 | 461.13 | 0.261 | 0.58 | 0.36 |
| ARM 4 | 931.34 | 232.84 | 939.47 | 772.39 | 385.36 | 0.00 | 1498.51 | 1302.15 | 0.622 | 3.70 | 1.67 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 342.55 | 85.64 | 343.18 | 569.20 | 535.46 | 0.00 | 1243.11 | 983.58 | 0.276 | 0.54 | 0.38 |
| A259E | 587.98 | 146.99 | 589.20 | 543.63 | 335.00 | 0.00 | 1476.71 | 1119.51 | 0.398 | 0.97 | 0.67 |
| HIGH | 198.00 | 49.50 | 198.43 | 154.74 | 769.47 | 0.00 | 1000.96 | 461.13 | 0.198 | 0.36 | 0.25 |
| ARM 4 | 779.96 | 194.99 | 782.51 | 645.75 | 322.15 | 0.00 | 1542.90 | 1302.15 | 0.506 | 1.67 | 1.03 |

## Queueing Delay Results

### Queueing Delay results: (16:45-17:00)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 5.51 | 0.37 | 0.066 | A | A |
| A259E | 9.56 | 0.64 | 0.067 | A | A |
| HIGH | 3.57 | 0.24 | 0.074 | A | A |
| ARM 4 | 14.61 | 0.97 | 0.078 | A | A |

### Queueing Delay results: (17:00-17:15)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 7.76 | 0.52 | 0.078 | A | A |
| A259E | 13.88 | 0.93 | 0.082 | A | A |
| HIGH | 5.11 | 0.34 | 0.089 | A | A |
| ARM 4 | 23.18 | 1.55 | 0.105 | A | A |

### Queueing Delay results: (17:15-17:30)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 12.32 | 0.82 | 0.102 | A | A |
| A259E | 23.57 | 1.57 | 0.116 | A | A |
| HIGH | 8.40 | 0.56 | 0.121 | A | A |
| ARM 4 | 49.09 | 3.27 | 0.190 | B | B |

### Queueing Delay results: (17:30-17:45)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 12.80 | 0.85 | 0.103 | A | A |
| A259E | 24.84 | 1.66 | 0.117 | A | A |
| HIGH | 8.73 | 0.58 | 0.122 | A | A |
| ARM 4 | 54.92 | 3.66 | 0.200 | B | B |

### Queueing Delay results: (17:45-18:00)

## Queueing Delay results: (17:45-18:00)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 8.31 | 0.55 | 0.079 | A | A |
| A259E | 15.08 | 1.01 | 0.083 | A | A |
| HIGH | 5.47 | 0.36 | 0.090 | A | A |
| ARM 4 | 26.52 | 1.77 | 0.109 | A | A |

## Queueing Delay results: (18:00-18:15)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 5.85 | 0.39 | 0.067 | A | A |
| A259E | 10.23 | 0.68 | 0.068 | A | A |
| HIGH | 3.80 | 0.25 | 0.075 | A | A |
| ARM 4 | 15.99 | 1.07 | 0.079 | A | A |

# ARCADY 7

Version: 7.1.0.228 [21st Feb 2011]
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

**File:** C:\Users\Stewart\Desktop\Warblington\Emsworth Rbt\EMSWORTH RBT 27TH MAY 2021 WITH DEV.arc7
**Report generation date:** 08/07/2016 09:46:17

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» A1 - 2021 WITH DEV Analysis Set) - D1 - 2021 WITH DEV, AM
» A1 - 2021 WITH DEV Analysis Set) - D2 - 2021 WITH DEV, PM

## Summary of roundabout performance

| | AM | | | PM | | |
|---|---|---|---|---|---|---|
| | Queue (Veh) | Delay (min) | RFC | Queue (Veh) | Delay (min) | RFC |
| | 2021 WITH DEV Analysis Set) - 2021 WITH DEV | | | | | |
| Arm NORTH | 2.39 | 0.19 | 0.71 | 0.89 | 0.11 | 0.47 |
| Arm A259E | 2.29 | 0.16 | 0.70 | 1.77 | 0.12 | 0.64 |
| Arm HIGH | 0.43 | 0.13 | 0.30 | 0.61 | 0.13 | 0.38 |
| Arm A259W | 1.76 | 0.11 | 0.64 | 3.89 | 0.21 | 0.80 |

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

*2021 WITH DEV - AM* runs from 07:45:00 to 09:15:00
*2021 WITH DEV - PM* runs from 16:45:00 to 18:15:00

## File summary

### File Description

| | |
|---|---|
| Title | 2021 WITH DEVELOPMENT |
| Location | EMSWORTH ROUNDABOUT |
| Site Number | 041.0025 |
| Date | 27/05/2016 |
| Version | |
| Status | (new file) |
| Identifier | |
| Client | |
| Jobnumber | 041.0025 |
| Enumerator | BETH |
| Description | |

## Analysis Options

| RFC Threshold | Vehicle Length (m) | Do Queue Variations |
|---|---|---|
| 0.85 | 5.75 | False |

## Sorting and Display

| Show Arm Names | Arm Grouping | Sorting Direction | Sorting Type | Data Matrix Style | Time Style |
|---|---|---|---|---|---|
| False | Order | Ascending | Numerical | By Destination | Absolute Time |

## Units

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

# A1 - 2021 WITH DEV Analysis Set) - D1 - 2021 WITH DEV, AM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Include In Report | Use Specific Demand Set | Demand Set | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|---|---|---|---|
| 2021 WITH DEV Analysis Set) | | True | False | (D1) | False | 100.000 | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Locked | Run Automatically | Use Relationship | Relationship | Start Time (HH:mm) | Finish Time (HH:mm) | Time Period Length (min) | Time Segment Length (min) | Traffic Profile Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021 WITH DEV, AM | 2021 WITH DEV | AM | | False | True | False | | 07:45 | 09:15 | 90 | 15 | ONE HOUR |

# Roundabout Network

## Roundabout Type(s)

| ID | Name | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|---|---|---|---|---|---|---|
| 1 | (untitled) | NORTH,A259E,HIGH,A259W | Standard | False | False | False |

## Roundabout Network Options

| Driving Side | Lighting | Road Surface | In London |
|---|---|---|---|
| Left | Normal/unknown | ((Mini-roundabouts only)) | ((Mini-roundabouts only)) |

# Arms

## Arms

| ID | Name | Description |
|---|---|---|
| NORTH | ARM 1 NORTH ST | |
| A259E | ARM 2 A259 EB | |
| HIGH | ARM 3 HIGH ST | |
| A259W | ARM 4 A259WB | |

## Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|---|---|---|---|---|
| **NORTH** | 0.00 | 99999.00 | False | 0.00 |
| **A259E** | 0.00 | 99999.00 | False | 0.00 |
| **HIGH** | 0.00 | 99999.00 | False | 0.00 |
| **A259W** | 0.00 | 99999.00 | False | 0.00 |

## Standard 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 |
|---|---|---|---|---|---|---|---|
| NORTH | 3.90 | 8.10 | 13.30 | 33.80 | 29.00 | 45.00 | False |
| A259E | 3.45 | 7.82 | 29.15 | 62.49 | 29.00 | 49.00 | False |
| HIGH | 3.81 | 7.33 | 14.80 | 10.04 | 29.00 | 38.00 | False |
| A259W | 4.10 | 7.78 | 24.05 | 18.10 | 29.00 | 35.00 | False |

## Mini Roundabout Geometry

| Arm | Approach road half-width (m) | Minimum approach road half-width (m) | Entry width (m) | Effective flare length (m) | Distance to next arm (m) | Entry corner kerb line distance (m) | Gradient over 50m (%) | Kerbed central island |
|---|---|---|---|---|---|---|---|---|
| NORTH | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |
| A259E | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |
| HIGH | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |
| A259W | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| NORTH | (0.00) | (0.00) |
| A259E | (0.00) | (0.00) |
| HIGH | (0.00) | (0.00) |
| A259W | (0.00) | (0.00) |

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| NORTH | None |
| A259E | None |
| HIGH | None |
| A259W | None |

## Zebra Crossings

| Arm | Space between crossing and junction entry (PCU) | Vehicles queueing on exit (PCU) | Central Refuge | Crossing Data Type | Crossing length (m) | Crossing time (s) | Crossing length (entry side) (m) | Crossing time (entry side) (s) | Crossing length (exit side) (m) | Crossing time (exit side) (s) |
|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| A259E | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| HIGH | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| A259W | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |

## Pelican/ Puffin Crossings

| Arm | Amber time preceding red (s) | Amber time regarded as green (s) | Time from traffic red start to green man start (s) | Time period green man shown (s) | Clearance Period (s) | Traffic minimum green (s) | Space between crossing and junction entry (PCU) |
|---|---|---|---|---|---|---|---|
| NORTH | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |
| A259E | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |
| HIGH | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |
| A259W | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |

## Arm Slope/ Intercept and Capacity

### Slope and Intercept used in model

| Arm | Enter Directly | Slope | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| NORTH | False | ((calculated)) | ((calculated)) | 0.660 | 1756.445 |
| A259E | False | ((calculated)) | ((calculated)) | 0.685 | 1876.779 |

| | | | | | |
|---|---|---|---|---|---|
| HIGH | False | ((calculated)) | ((calculated)) | 0.620 | 1625.818 |
| A259W | False | ((calculated)) | ((calculated)) | 0.702 | 1946.066 |

*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 |
|---|---|---|---|---|---|---|---|---|---|---|
| True | False | True | True | HV Percentages | 2.00 | False | False | False | True | True |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (Veh/hr) | Flow Scaling Factor (%) | PHF |
|---|---|---|---|---|---|
| NORTH | ONE HOUR | True | 462.00 | 100.000 | N/A |
| A259E | ONE HOUR | True | 795.00 | 100.000 | N/A |
| HIGH | ONE HOUR | True | 265.00 | 100.000 | N/A |
| A259W | ONE HOUR | True | 1047.00 | 100.000 | N/A |

# Turning Proportions

### Turning Counts or Proportions (Veh/hr) - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | A259W |
| From | NORTH | 1.000 | 129.000 | 80.000 | 252.000 |
| | A259E | 260.000 | 3.000 | 13.000 | 519.000 |
| | HIGH | 89.000 | 67.000 | 7.000 | 102.000 |
| | A259W | 408.000 | 527.000 | 106.000 | 6.000 |

### Turning Proportions (Veh) - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | A259W |
| From | NORTH | 0.00 | 0.30 | 0.13 | 0.57 |
| | A259E | 0.24 | 0.01 | 0.02 | 0.73 |
| | HIGH | 0.33 | 0.25 | 0.02 | 0.40 |
| | A259W | 0.29 | 0.56 | 0.14 | 0.01 |

# Vehicle Mix

### Average PCU Per Vehicle - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | A259W |
| From | NORTH | 1.100 | 1.100 | 1.100 | 1.100 |
| | A259E | 1.100 | 1.100 | 1.100 | 1.100 |
| | HIGH | 1.100 | 1.100 | 1.100 | 1.100 |
| | A259W | 1.100 | 1.100 | 1.100 | 1.100 |

### Heavy Vehicle Percentages - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | A259W |
| From | NORTH | 10.000 | 10.000 | 10.000 | 10.000 |
| | A259E | 10.000 | 10.000 | 10.000 | 10.000 |
| | HIGH | 10.000 | 10.000 | 10.000 | 10.000 |
| | A259W | 10.000 | 10.000 | 10.000 | 10.000 |

# Results

## Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (Veh) | Max LOS | Total Demand (Veh/hr) | Total Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (Veh-min/min) | Inclusive Queueing Total Delay (Veh-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 0.47 | 0.11 | 0.89 | A | 423.94 | 635.91 | 54.26 | 0.09 | 0.60 | 54.26 | 0.09 | 0.660 | 1756.445 |
| A259E | 0.64 | 0.12 | 1.77 | A | 729.51 | 1094.26 | 101.97 | 0.09 | 1.13 | 101.98 | 0.09 | 0.685 | 1876.779 |
| HIGH | 0.38 | 0.13 | 0.61 | A | 243.17 | 364.75 | 36.24 | 0.10 | 0.40 | 36.24 | 0.10 | 0.620 | 1625.818 |
| A259W | 0.80 | 0.21 | 3.89 | B | 960.75 | 1441.12 | 191.31 | 0.13 | 2.13 | 191.33 | 0.13 | 0.702 | 1946.066 |

## Main Results

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 347.82 | 86.95 | 346.27 | 567.83 | 536.24 | 0.00 | 1242.60 | 981.37 | 0.280 | 0.00 | 0.39 |
| A259E | 598.52 | 149.63 | 595.80 | 543.80 | 338.71 | 0.00 | 1474.17 | 1117.40 | 0.406 | 0.00 | 0.68 |
| HIGH | 199.51 | 49.88 | 198.51 | 154.33 | 780.18 | 0.00 | 994.32 | 458.74 | 0.201 | 0.00 | 0.25 |
| A259W | 788.24 | 197.06 | 784.11 | 658.74 | 319.95 | 0.00 | 1544.44 | 1309.88 | 0.510 | 0.00 | 1.03 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 415.33 | 103.83 | 414.70 | 679.90 | 642.02 | 0.00 | 1172.73 | 981.37 | 0.354 | 0.39 | 0.54 |
| A259E | 714.69 | 178.67 | 713.44 | 651.12 | 405.61 | 0.00 | 1428.35 | 1117.40 | 0.500 | 0.68 | 0.99 |
| HIGH | 238.23 | 59.56 | 237.80 | 184.80 | 934.25 | 0.00 | 898.80 | 458.74 | 0.265 | 0.25 | 0.36 |
| A259W | 941.23 | 235.31 | 938.74 | 788.86 | 383.18 | 0.00 | 1500.04 | 1309.88 | 0.627 | 1.03 | 1.65 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 508.67 | 127.17 | 507.33 | 829.96 | 782.88 | 0.00 | 1079.70 | 981.37 | 0.471 | 0.54 | 0.88 |
| A259E | 875.31 | 218.83 | 872.30 | 794.45 | 495.76 | 0.00 | 1366.59 | 1117.40 | 0.641 | 0.99 | 1.74 |
| HIGH | 291.77 | 72.94 | 290.79 | 225.65 | 1142.42 | 0.00 | 769.74 | 458.74 | 0.379 | 0.36 | 0.60 |
| A259W | 1152.77 | 288.19 | 1144.31 | 964.67 | 468.53 | 0.00 | 1440.09 | 1309.88 | 0.800 | 1.65 | 3.77 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 508.67 | 127.17 | 508.63 | 834.34 | 788.02 | 0.00 | 1076.30 | 981.37 | 0.473 | 0.88 | 0.89 |
| A259E | 875.31 | 218.83 | 875.22 | 799.07 | 497.58 | 0.00 | 1365.35 | 1117.40 | 0.641 | 1.74 | 1.77 |
| HIGH | 291.77 | 72.94 | 291.75 | 226.75 | 1146.05 | 0.00 | 767.49 | 458.74 | 0.380 | 0.60 | 0.61 |
| A259W | 1152.77 | 288.19 | 1152.27 | 967.71 | 470.09 | 0.00 | 1439.00 | 1309.88 | 0.801 | 3.77 | 3.89 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 415.33 | 103.83 | 416.66 | 686.12 | 649.25 | 0.00 | 1167.96 | 981.37 | 0.356 | 0.89 | 0.56 |
| A259E | 714.69 | 178.67 | 717.69 | 657.66 | 408.25 | 0.00 | 1426.53 | 1117.40 | 0.501 | 1.77 | 1.02 |
| HIGH | 238.23 | 59.56 | 239.20 | 186.37 | 939.57 | 0.00 | 895.50 | 458.74 | 0.266 | 0.61 | 0.37 |
| A259W | 941.23 | 235.31 | 949.92 | 793.31 | 385.46 | 0.00 | 1498.44 | 1309.88 | 0.628 | 3.89 | 1.72 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 347.82 | 86.95 | 348.47 | 572.28 | 540.80 | 0.00 | 1239.59 | 981.37 | 0.281 | 0.56 | 0.39 |
| A259E | 598.52 | 149.63 | 599.82 | 548.21 | 341.06 | 0.00 | 1472.56 | 1117.40 | 0.406 | 1.02 | 0.69 |
| HIGH | 199.51 | 49.88 | 199.95 | 155.50 | 785.37 | 0.00 | 991.10 | 458.74 | 0.201 | 0.37 | 0.25 |
| A259W | 788.24 | 197.06 | 790.90 | 663.15 | 322.17 | 0.00 | 1542.88 | 1309.88 | 0.511 | 1.72 | 1.06 |

## Queueing Delay Results

### Queueing Delay results: (07:45-08:00)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 5.65 | 0.38 | 0.067 | A | A |
| A259E | 9.88 | 0.66 | 0.068 | A | A |
| HIGH | 3.65 | 0.24 | 0.075 | A | A |
| A259W | 14.91 | 0.99 | 0.078 | A | A |

### Queueing Delay results: (08:00-08:15)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 7.98 | 0.53 | 0.079 | A | A |
| A259E | 14.45 | 0.96 | 0.084 | A | A |
| HIGH | 5.25 | 0.35 | 0.091 | A | A |
| A259W | 23.80 | 1.59 | 0.106 | A | A |

### Queueing Delay results: (08:15-08:30)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 12.76 | 0.85 | 0.105 | A | A |
| A259E | 24.93 | 1.66 | 0.121 | A | A |
| HIGH | 8.73 | 0.58 | 0.125 | A | A |
| A259W | 51.23 | 3.42 | 0.197 | B | B |

### Queueing Delay results: (08:30-08:45)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 13.29 | 0.89 | 0.106 | A | A |
| A259E | 26.36 | 1.76 | 0.122 | A | A |
| HIGH | 9.10 | 0.61 | 0.126 | A | A |
| A259W | 57.65 | 3.84 | 0.208 | B | B |

### Queueing Delay results: (08:45-09:00)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 8.57 | 0.57 | 0.080 | A | A |

| | | | | | |
|---|---|---|---|---|---|
| A259E | 15.75 | 1.05 | 0.085 | A | A |
| HIGH | 5.63 | 0.38 | 0.092 | A | A |
| A259W | 27.37 | 1.82 | 0.111 | A | A |

### Queueing Delay results: (09:00-09:15)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 6.00 | 0.40 | 0.067 | A | A |
| A259E | 10.60 | 0.71 | 0.069 | A | A |
| HIGH | 3.88 | 0.26 | 0.076 | A | A |
| A259W | 16.35 | 1.09 | 0.080 | A | A |

# A1 - 2021 WITH DEV Analysis Set) - D2 - 2021 WITH DEV, PM

## Data Errors and Warnings

*No errors or warnings*

## Analysis Set Details

| Name | Description | Include In Report | Use Specific Demand Set | Demand Set | Locked | Network Flow Scaling Factor (%) | Network Capacity Scaling Factor (%) | Reason For Scaling Factors |
|---|---|---|---|---|---|---|---|---|
| 2021 WITH DEV Analysis Set) | | True | False | (D1) | False | 100.000 | 100.000 | |

## Demand Set Details

| Name | Scenario Name | Time Period Name | Description | Locked | Run Automatically | Use Relationship | Relationship | Start Time (HH:mm) | Finish Time (HH:mm) | Time Period Length (min) | Time Segment Length (min) | Traffic Profile Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021 WITH DEV, PM | 2021 WITH DEV | PM | | False | True | False | | 16:45 | 18:15 | 90 | 15 | ONE HOUR |

# Roundabout Network

## Roundabout Type(s)

| ID | Name | Arm Order | Roundabout Type | Grade Separated | Large Roundabout | Do Geometric Delay |
|---|---|---|---|---|---|---|
| 1 | (untitled) | NORTH,A259E,HIGH,A259W | Standard | False | False | False |

## Roundabout Network Options

| Driving Side | Lighting | Road Surface | In London |
|---|---|---|---|
| Left | Normal/unknown | ((Mini-roundabouts only)) | ((Mini-roundabouts only)) |

# Arms

## Arms

| ID | Name | Description |
|---|---|---|
| NORTH | ARM 1 NORTH ST | |
| A259E | ARM 2 A259 EB | |
| HIGH | ARM 3 HIGH ST | |

| | | |
|---|---|---|
| A259W | ARM 4 A259WB | |

## Capacity Options

| Arm | Minimum Capacity (PCU/hr) | Maximum Capacity (PCU/hr) | Assume Flat Start Profile | Initial Queue (PCU) |
|---|---|---|---|---|
| NORTH | 0.00 | 99999.00 | False | 0.00 |
| A259E | 0.00 | 99999.00 | False | 0.00 |
| HIGH | 0.00 | 99999.00 | False | 0.00 |
| A259W | 0.00 | 99999.00 | False | 0.00 |

## Standard 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 |
|---|---|---|---|---|---|---|---|
| NORTH | 3.90 | 8.10 | 13.30 | 33.80 | 29.00 | 45.00 | False |
| A259E | 3.45 | 7.82 | 29.15 | 62.49 | 29.00 | 49.00 | False |
| HIGH | 3.81 | 7.33 | 14.80 | 10.04 | 29.00 | 38.00 | False |
| A259W | 4.10 | 7.78 | 24.05 | 18.10 | 29.00 | 35.00 | False |

## Mini Roundabout Geometry

| Arm | Approach road half-width (m) | Minimum approach road half-width (m) | Entry width (m) | Effective flare length (m) | Distance to next arm (m) | Entry corner kerb line distance (m) | Gradient over 50m (%) | Kerbed central island |
|---|---|---|---|---|---|---|---|---|
| NORTH | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |
| A259E | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |
| HIGH | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |
| A259W | (3.00) | (3.00) | (3.00) | (0.00) | (5.00) | (2.00) | (0.00) | (False) |

## Large Roundabout Data

| Arm | Circulating flow (PCU/hr) | Entry-to-exit separation (m) |
|---|---|---|
| NORTH | (0.00) | (0.00) |
| A259E | (0.00) | (0.00) |
| HIGH | (0.00) | (0.00) |
| A259W | (0.00) | (0.00) |

## Pedestrian Crossings

| Arm | Crossing Type |
|---|---|
| NORTH | None |
| A259E | None |
| HIGH | None |
| A259W | None |

## Zebra Crossings

| Arm | Space between crossing and junction entry (PCU) | Vehicles queueing on exit (PCU) | Central Refuge | Crossing Data Type | Crossing length (m) | Crossing time (s) | Crossing length (entry side) (m) | Crossing time (entry side) (s) | Crossing length (exit side) (m) | Crossing time (exit side) (s) |
|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| A259E | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| HIGH | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| A259W | (0.00) | (0.00) | (False) | (Distance) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |

## Pelican/ Puffin Crossings

| Arm | Amber time preceding red (s) | Amber time regarded as green (s) | Time from traffic red start to green man start (s) | Time period green man shown (s) | Clearance Period (s) | Traffic minimum green (s) | Space between crossing and junction entry (PCU) |
|---|---|---|---|---|---|---|---|
| NORTH | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |
| A259E | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |
| HIGH | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HIGH | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |
| A259W | (3.00) | (2.90) | (1.00) | (6.00) | (6.00) | (7.00) | (0.00) |

## Arm Slope/ Intercept and Capacity

### Slope and Intercept used in model

| Arm | Enter Directly | Slope | Intercept (PCU/hr) | Final Slope | Final Intercept (PCU/hr) |
|---|---|---|---|---|---|
| NORTH | False | ((calculated)) | ((calculated)) | 0.660 | 1756.445 |
| A259E | False | ((calculated)) | ((calculated)) | 0.685 | 1876.779 |
| HIGH | False | ((calculated)) | ((calculated)) | 0.620 | 1625.818 |
| A259W | False | ((calculated)) | ((calculated)) | 0.702 | 1946.066 |

*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 |
|---|---|---|---|---|---|---|---|---|---|---|
| True | False | True | True | HV Percentages | 2.00 | False | False | False | True | True |

# Entry Flows

## General Flows Data

| Arm | Profile Type | Use Turning Counts | Average Demand Flow (Veh/hr) | Flow Scaling Factor (%) | PHF |
|---|---|---|---|---|---|
| NORTH | ONE HOUR | True | 462.00 | 100.000 | N/A |
| A259E | ONE HOUR | True | 795.00 | 100.000 | N/A |
| HIGH | ONE HOUR | True | 265.00 | 100.000 | N/A |
| A259W | ONE HOUR | True | 1047.00 | 100.000 | N/A |

# Turning Proportions

### Turning Counts or Proportions (Veh/hr) - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | A259W |
| From | NORTH | 1.000 | 129.000 | 80.000 | 252.000 |
| | A259E | 260.000 | 3.000 | 13.000 | 519.000 |
| | HIGH | 89.000 | 67.000 | 7.000 | 102.000 |
| | A259W | 408.000 | 527.000 | 106.000 | 6.000 |

### Turning Proportions (Veh) - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | A259W |
| From | NORTH | 0.00 | 0.28 | 0.17 | 0.55 |
| | A259E | 0.33 | 0.00 | 0.02 | 0.65 |
| | HIGH | 0.34 | 0.25 | 0.03 | 0.38 |
| | A259W | 0.39 | 0.50 | 0.10 | 0.01 |

# Vehicle Mix

### Average PCU Per Vehicle - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | A259W |
| From | NORTH | 1.100 | 1.100 | 1.100 | 1.100 |
| | A259E | 1.100 | 1.100 | 1.100 | 1.100 |
| | HIGH | 1.100 | 1.100 | 1.100 | 1.100 |
| | A259W | 1.100 | 1.100 | 1.100 | 1.100 |

### Heavy Vehicle Percentages - Roundabout 1 (for whole period)

| | | To | | | |
|---|---|---|---|---|---|
| | | NORTH | A259E | HIGH | A259W |
| From | NORTH | 10.000 | 10.000 | 10.000 | 10.000 |
| | A259E | 10.000 | 10.000 | 10.000 | 10.000 |
| | HIGH | 10.000 | 10.000 | 10.000 | 10.000 |
| | A259W | 10.000 | 10.000 | 10.000 | 10.000 |

# Results

## Results Summary

| Arm | Max RFC | Max Delay (min) | Max Queue (Veh) | Max LOS | Total Demand (Veh/hr) | Total Arrivals (Veh) | Total Queueing Delay (Veh-min) | Average Queueing Delay (min) | Rate Of Queueing Delay (Veh-min/min) | Inclusive Queueing Total Delay (Veh-min) | Inclusive Queueing Average Delay (min) | Slope | Intercept (PCU/hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 0.47 | 0.11 | 0.89 | A | 423.94 | 635.91 | 54.26 | 0.09 | 0.60 | 54.26 | 0.09 | 0.660 | 1756.445 |
| A259E | 0.64 | 0.12 | 1.77 | A | 729.51 | 1094.26 | 101.97 | 0.09 | 1.13 | 101.98 | 0.09 | 0.685 | 1876.779 |
| HIGH | 0.38 | 0.13 | 0.61 | A | 243.17 | 364.75 | 36.24 | 0.10 | 0.40 | 36.24 | 0.10 | 0.620 | 1625.818 |
| A259W | 0.80 | 0.21 | 3.89 | B | 960.75 | 1441.12 | 191.31 | 0.13 | 2.13 | 191.33 | 0.13 | 0.702 | 1946.066 |

## Main Results

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 347.82 | 86.95 | 346.27 | 567.83 | 536.24 | 0.00 | 1242.60 | 981.37 | 0.280 | 0.00 | 0.39 |
| A259E | 598.52 | 149.63 | 595.80 | 543.80 | 338.71 | 0.00 | 1474.17 | 1117.40 | 0.406 | 0.00 | 0.68 |
| HIGH | 199.51 | 49.88 | 198.51 | 154.33 | 780.18 | 0.00 | 994.32 | 458.74 | 0.201 | 0.00 | 0.25 |
| A259W | 788.24 | 197.06 | 784.11 | 658.74 | 319.95 | 0.00 | 1544.44 | 1309.88 | 0.510 | 0.00 | 1.03 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 415.33 | 103.83 | 414.70 | 679.90 | 642.02 | 0.00 | 1172.73 | 981.37 | 0.354 | 0.39 | 0.54 |
| A259E | 714.69 | 178.67 | 713.44 | 651.12 | 405.61 | 0.00 | 1428.35 | 1117.40 | 0.500 | 0.68 | 0.99 |
| HIGH | 238.23 | 59.56 | 237.80 | 184.80 | 934.25 | 0.00 | 898.80 | 458.74 | 0.265 | 0.25 | 0.36 |
| A259W | 941.23 | 235.31 | 938.74 | 788.86 | 383.18 | 0.00 | 1500.04 | 1309.88 | 0.627 | 1.03 | 1.65 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 508.67 | 127.17 | 507.33 | 829.96 | 782.88 | 0.00 | 1079.70 | 981.37 | 0.471 | 0.54 | 0.88 |
| A259E | 875.31 | 218.83 | 872.30 | 794.45 | 495.76 | 0.00 | 1366.59 | 1117.40 | 0.641 | 0.99 | 1.74 |
| HIGH | 291.77 | 72.94 | 290.79 | 225.65 | 1142.42 | 0.00 | 769.74 | 458.74 | 0.379 | 0.36 | 0.60 |
| A259W | 1153.77 | 288.19 | 1144.31 | 964.67 | 468.53 | 0.00 | 1440.09 | 1309.88 | 0.800 | 1.65 | 3.77 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A259W | 1152.77 | 288.19 | 1144.31 | 984.67 | 466.53 | 0.00 | 1440.09 | 1309.88 | 0.800 | 1.85 | 3.77 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 508.67 | 127.17 | 508.63 | 834.34 | 788.02 | 0.00 | 1076.30 | 981.37 | 0.473 | 0.88 | 0.89 |
| A259E | 875.31 | 218.83 | 875.22 | 799.07 | 497.58 | 0.00 | 1365.35 | 1117.40 | 0.641 | 1.74 | 1.77 |
| HIGH | 291.77 | 72.94 | 291.75 | 226.75 | 1146.05 | 0.00 | 767.49 | 458.74 | 0.380 | 0.60 | 0.61 |
| A259W | 1152.77 | 288.19 | 1152.27 | 967.71 | 470.09 | 0.00 | 1439.00 | 1309.88 | 0.801 | 3.77 | 3.89 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 415.33 | 103.83 | 416.66 | 686.12 | 649.25 | 0.00 | 1167.96 | 981.37 | 0.356 | 0.89 | 0.56 |
| A259E | 714.69 | 178.67 | 717.69 | 657.66 | 408.25 | 0.00 | 1426.53 | 1117.40 | 0.501 | 1.77 | 1.02 |
| HIGH | 238.23 | 59.56 | 239.20 | 186.37 | 939.57 | 0.00 | 895.50 | 458.74 | 0.266 | 0.61 | 0.37 |
| A259W | 941.23 | 235.31 | 949.92 | 793.31 | 385.46 | 0.00 | 1498.44 | 1309.88 | 0.628 | 3.89 | 1.72 |

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

| Arm | Demand (Veh/hr) | Arrivals (Veh) | Entry Flow (Veh/hr) | Exit Flow (Veh/hr) | Circulating Flow (Veh/hr) | Pedestrian Demand (Ped/hr) | Capacity (Veh/hr) | Saturation Capacity (Veh/hr) | RFC | Start Queue (Veh) | End Queue (Veh) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTH | 347.82 | 86.95 | 348.47 | 572.28 | 540.80 | 0.00 | 1239.59 | 981.37 | 0.281 | 0.56 | 0.39 |
| A259E | 598.52 | 149.63 | 599.82 | 548.21 | 341.06 | 0.00 | 1472.56 | 1117.40 | 0.406 | 1.02 | 0.69 |
| HIGH | 199.51 | 49.88 | 199.95 | 155.50 | 785.37 | 0.00 | 991.10 | 458.74 | 0.201 | 0.37 | 0.25 |
| A259W | 788.24 | 197.06 | 790.90 | 663.15 | 322.17 | 0.00 | 1542.88 | 1309.88 | 0.511 | 1.72 | 1.06 |

## Queueing Delay Results

### Queueing Delay results: (16:45-17:00)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 5.65 | 0.38 | 0.067 | A | A |
| A259E | 9.88 | 0.66 | 0.068 | A | A |
| HIGH | 3.65 | 0.24 | 0.075 | A | A |
| A259W | 14.91 | 0.99 | 0.078 | A | A |

### Queueing Delay results: (17:00-17:15)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 7.98 | 0.53 | 0.079 | A | A |
| A259E | 14.45 | 0.96 | 0.084 | A | A |
| HIGH | 5.25 | 0.35 | 0.091 | A | A |
| A259W | 23.80 | 1.59 | 0.106 | A | A |

### Queueing Delay results: (17:15-17:30)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 12.76 | 0.85 | 0.105 | A | A |
| A259E | 24.93 | 1.66 | 0.121 | A | A |
| HIGH | 8.73 | 0.58 | 0.125 | A | A |
| A259W | 51.23 | 3.42 | 0.197 | B | B |

### Queueing Delay results: (17:30-17:45)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| NORTH | 13.29 | 0.89 | 0.106 | A | A |
| A259E | 26.36 | 1.76 | 0.122 | A | A |
| HIGH | 9.10 | 0.61 | 0.126 | A | A |
| A259W | 57.65 | 3.84 | 0.208 | B | B |

## Queueing Delay results: (17:45-18:00)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 8.57 | 0.57 | 0.080 | A | A |
| A259E | 15.75 | 1.05 | 0.085 | A | A |
| HIGH | 5.63 | 0.38 | 0.092 | A | A |
| A259W | 27.37 | 1.82 | 0.111 | A | A |

## Queueing Delay results: (18:00-18:15)

| Arm | Queueing Total Delay (Veh-min) | Queueing Rate Of Delay (Veh-min/min) | Average Delay Per Arriving Vehicle (min) | Unsignalised Level Of Service | Signalised Level Of Service |
|---|---|---|---|---|---|
| NORTH | 6.00 | 0.40 | 0.067 | A | A |
| A259E | 10.60 | 0.71 | 0.069 | A | A |
| HIGH | 3.88 | 0.26 | 0.076 | A | A |
| A259W | 16.35 | 1.09 | 0.080 | A | A |