BWB CONSULTING

# TRANSPORT

USS
Manchester Fort,
Manchester

Transport Statement

BWB Consulting Ltd
3-4 Kayes Walk
The Lace Market
Nottingham
NG1 1PY
0115 9241100

12 JUN 2008

Ref: DAC/PW/NTT153

Date: December 2006

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| P4 | final version | PW | DAC | DAC | 07.12.06 |

# MANCHESTER FORT

# TRANSPORT STATEMENT

## 1.0 INTRODUCTION

1.1 BWB Consulting Limited were appointed by USS to provide highways advice in support of a planning application for the proposed extension of the Manchester Fort shopping park. It is proposed that the gross floor area (GFA) would increase by 748 sqm and would include the introduction of a new access internally within the site, to provide a direct access to the southwestern 'Phase 2' car park.

1.2 During pre-application enquiries regarding the proposed development, Manchester City Council (MCC) have confirmed that they would need to be reassured that the:

- number of right turning vehicles into the southwestern car park would not result in any queuing on the main access road into the site
- reduction in car parking as a result of the proposed extension would not cause congestion or result in a lack of car parking at the site.

1.3 As a result, this Transport Statement examines the following:

- existing conditions
- proposed development
- traffic generation
- operation of the proposed internal junction
- car parking.

## 2.0 EXISTING CONDITIONS

2.1 The site is located to the north of Manchester City Centre, accessed via A665 Cheetham Hill Road, as presented in Figure 1. Appendix A includes the existing site layout plan.

2.2 Vehicles access the site via the signal controlled junction on Cheetham Hill Road and a mini-roundabout within the site, which provides access to the four areas of car parking. There is also a left turn only slip road provided for shoppers to exit the southwestern car park without having to use the mini-roundabout. It is understood that the signal controlled junction can be re-phased automatically by MCC if there is congestion within the Manchester Fort site.

2.3 Table 1 presents the number of vehicles arriving to and departing from the site, extracted from the loop counters present on the main access road into the site, for the weeks commencing 25 September 2006 and 2 October 2006. The table confirms that the peak hour recorded during the two week period was between 1400 and 1500 hours on Sunday 8 October 2006.

2.4 Table 2 presents the current breakdown of the units at the site. In summary, there are currently 36 units with a total GFA of 29,707 sqm. However, four of these units, with a total GFA of 2,024 sqm, are vacant.

2.5 Table 3 presents, amongst other things, the split of the parking spaces at the site. In summary, there is a total of 1,203 parking spaces for visitors to Manchester Fort (not including staff parking spaces), divided as follows:

- northeastern car park = 175
- southeastern car park = 198
- southwestern car park = 488
- northwestern car park = 342.

## 3.0 PROPOSED DEVELOPMENT

### 3.1 Introduction

3.1.1 USS propose to extend the Manchester Fort shopping park by 748 sqm GFA and introduce a new access internally within the site to provide a direct access to the southwestern car park. This would reduce the number of parking spaces by 62 spaces from 1,203 to 1,141. Appendix B includes a masterplan with the five additional units proposed within the southwestern section of the site.

3.1.2 Table 2 presents the breakdown of the proposed units, which in summary includes an additional 279 sqm GFA of A1/A3 and 469 sqm GFA of A3/A5 retail. The introduction of these additional five units would result in a total GFA of 30,455 sqm at the site.

### 3.2 Access

3.2.1 The masterplan included in Appendix B includes the proposed ghost island right turn lane into the southwestern car park. The left turn only slip road currently provided for shoppers to exit the southwestern car park to the west of the mini-roundabout would be removed. The ghost island right turn measures 15 metres in length, i.e. three car lengths. This is proposed because there are currently 488 parking spaces on the southwestern car park, but visitors wanting to access Unit 35 (Pizza Hut), for example, currently have to enter the site and travel east to the mini-roundabout to travel back in the direction they came from. Because of this, and also the low retail occupancy in this section of the site, the southwestern car park is underused. Parking is examined in greater detail in Section 5 below.

3.2.2 A number of different options were examined to create a more direct access southwestern car park and the ghost island right turn lane, as depicted in Appendix B, was considered the most favourable option for enhancing access to this section of the site. The forecast operation of the ghost island junction is examined in the following sections.

## 4.0 TRAFFIC GENERATION

### 4.1 Existing traffic generation

4.1.1 Figure 2 summarises the traffic flows recorded during the peak hour recorded during the two week period. This hour was chosen to provide a worst-case, robust assessment.

4.1.2 A survey was undertaken on the afternoon of Sunday 8 October 2006 at the mini-roundabout within the site to record the distribution of arrivals. The results were as follows:

- left (towards B&Q) = 20%
- straight on (towards Boots) = 64%
- right (towards The Link) = 16%

4.2 Proposed traffic generation

4.2.1 Table 2 presents the assignment of the forecast traffic flows at the proposed ghost island junction with the proposed development traffic in place, and the traffic flows are summarised in Figure 3. In summary, the following methodology has been used to calculate these flows:

- The traffic flows presented in Figure 2 are attributed to the 32 of the 36 units currently open, i.e. a GFA of 27,683 sqm.
- Should the four vacant units be let and the four proposed units be built and occupied, the total GFA would be 30,455 sqm, i.e. a 10% increase (30,455/27,683). As a result, the traffic flows presented in Figure 2 are increased by 10% in Table 2.
- To determine a suitable distribution pattern for the forecast level of traffic, the site was divided into the four quadrants detailed in paragraph 2.4 above. The fourth column of Table 3 presents the percentage split of the total proposed GFA at the site, and the fifth column the percentage split of the existing number of parking spaces. Because the location of the stores dictates which section of the site shoppers travel to rather than the number of parking spaces, the sixth column presents the chosen distribution pattern, which is based on the percentage split of the total proposed GFA at the site:
  - northeastern car park = 13.1%
  - southeastern car park = 25.4%
  - southwestern car park = 27.8%
  - northwestern car park = 33.7%
  - total = 100%

4.2.2 In comparison, Table 3 concludes that 27.8% would turn right to the southwestern car park, compared to 16% recorded. As a result of the above, the distribution pattern calculated in Table 3 and summarised in paragraph 4.2.1 above is robust. Likewise, the capacity assessment included in Section 5.0 below assumes, as a worst-case, that all traffic wishing to travel to and from the southwestern car park would use the new junction and that none would use the roundabout. In reality, shoppers parking at the eastern end of the southwestern car park would still use the mini-roundabout.

## 5.0 OPERATION OF THE PROPOSED INTERNAL JUNCTION

5.1 Appendix C includes the results of a PICADY assessment of the proposed ghost island right turn lane junction presented in Appendix B with the worst-case traffic presented in Figure 3. The results are presented in Table 4 and confirm that using the worst-case traffic flows, the junction would operate within capacity.

5.2 The resultant queue of two passenger car units entering the southwestern car park from the site access, which equates to 10 metres based on there only being cars entering the car park, would not extend beyond the 15 metres length provided. As a result, the proposed access would not result in any queuing and should be acceptable to MCC.

## 6.0 CAR PARKING

6.1 MCC were also concerned that the reduction in car parking as a result of the proposed extension would cause congestion or result in a lack of car parking at the site. There are currently a total of 1,203 parking spaces at the site; 488 of which are located at the southwestern car park. These figures would reduce to 1,141 and 426 respectively as a result of the proposed development.

6.2 Table 5 presents the results of parking surveys undertaken at the peak periods at the site (weekends at 1200, 1600 and 1800 hours). It also examines the forecast number of parking spaces that would be used as a result of the currently empty and the proposed units being rented, which would increase the GFA at the southwestern quadrant by 42.5% (from 5,941 sqm to 8,471 sqm). It confirms that at present, at the peak period for parking demand at the southwestern car park is 283 spaces, recorded on Sunday 8 October 2006 at 1200 hours. This equates to the southwestern car park being 58% full (283/488).

6.3 Table 5 also confirms that the forecast peak parking demand would increase to 403, which would result in the southwestern car park being 95% full (403/426). As a result, this, coupled with the fact that there would still be parking spaces available in the other quadrants of the site, should satisfy MCC that the revised number of parking spaces would satisfy the forecasted demand.

## 7.0 SUMMARY AND CONCLUSIONS

7.1 USS propose to extend the GFA at the Manchester Fort shopping park by 748 sqm and introduce a new access internally within the site to provide a direct access to the southwestern car park. This would reduce the number of parking spaces from 1,203 to 1,141.

7.2 With regards to MCC's concerns about the operation of the new access internally within the site, the junction would operate within capacity. The resultant queue of two passenger car units entering the southwestern car park from the site access, which equates to 10 metres based on there only being cars entering the car park, would not extend beyond the 15 metres length provided.

7.3 With regards to MCC's concerns about the parking provision at the site as a result of the proposed development, the forecast peak parking demand would increase to 403, which would result in the southwestern car park being 95% full. As a result, this, coupled with the fact that there would still be parking spaces available in the other quadrants of the site, should satisfy MCC that the revised number of parking spaces would satisfy the forecast demand.

7.4 As a result of the above, the proposed extension of the GFA at the Manchester Fort shopping park should be acceptable to the local highway authority, MCC.

Hourly By Entrance - week commencing 2 October 2006
Location Address: Manchester Fort
Entrance Name: Main Entrance

| | Mon | | | Tue | | | Wed | | | Thu | | | Fri | | | Sat | | | Sun | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total |
| 00:00 | 0 | 0 | 0 | 11 | 4 | 15 | 15 | 2 | 17 | 11 | 1 | 12 | 8 | 1 | 9 | 8 | 1 | 9 | 6 | 0 | 6 |
| 01:00 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:00 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 0 |
| 05:00 | 10 | 2 | 12 | 12 | 2 | 14 | 13 | 4 | 17 | 11 | 2 | 13 | 13 | 2 | 15 | 8 | 0 | 8 | 0 | 0 | 0 |
| 06:00 | 10 | 1 | 11 | 12 | 2 | 14 | 15 | 4 | 19 | 16 | 4 | 20 | 17 | 5 | 22 | 9 | 5 | 14 | 3 | 1 | 4 |
| 07:00 | 54 | 26 | 80 | 54 | 28 | 82 | 63 | 30 | 93 | 57 | 29 | 86 | 58 | 34 | 92 | 32 | 12 | 44 | 7 | 2 | 9 |
| 08:00 | 118 | 62 | 180 | 111 | 66 | 177 | 132 | 85 | 217 | 110 | 66 | 176 | 148 | 88 | 236 | 159 | 80 | 239 | 27 | 10 | 37 |
| 09:00 | 310 | 197 | 507 | 332 | 196 | 528 | 351 | 230 | 581 | 344 | 205 | 549 | 356 | 230 | 586 | 312 | 200 | 512 | 88 | 41 | 129 |
| 10:00 | 400 | 326 | 732 | 511 | 421 | 932 | 499 | 356 | 855 | 472 | 395 | 867 | 503 | 399 | 902 | 563 | 396 | 959 | 451 | 216 | 667 |
| 11:00 | 568 | 482 | 1050 | 846 | 535 | 1081 | 560 | 560 | 1120 | 561 | 501 | 1062 | 638 | 540 | 1178 | 739 | 594 | 1333 | 866 | 592 | 1458 |
| 12:00 | 642 | 659 | 1301 | 706 | 630 | 1336 | 727 | 653 | 1380 | 672 | 648 | 1320 | 680 | 699 | 1379 | 862 | 793 | 1655 | 992 | 880 | 1872 |
| 13:00 | 660 | 667 | 1327 | 741 | 740 | 1481 | 696 | 734 | 1430 | 699 | 717 | 1416 | 736 | 786 | 1522 | 980 | 939 | 1919 | 1020 | 1004 | 2024 |
| 14:00 | 552 | 688 | 1240 | 613 | 752 | 1365 | 618 | 732 | 1350 | 578 | 736 | 1314 | 612 | 774 | 1386 | 1053 | 996 | 2049 | 995 | 1120 | 2115 |
| 15:00 | 492 | 548 | 1040 | 535 | 643 | 1178 | 508 | 591 | 1099 | 487 | 607 | 1094 | 557 | 652 | 1209 | 937 | 1099 | 2036 | 838 | 1125 | 1963 |
| 16:00 | 493 | 551 | 1044 | 504 | 580 | 1084 | 563 | 610 | 1173 | 490 | 517 | 1007 | 582 | 620 | 1202 | 731 | 1065 | 1796 | 374 | 886 | 1260 |
| 17:00 | 511 | 540 | 1051 | 514 | 565 | 1079 | 533 | 580 | 1113 | 483 | 540 | 1023 | 473 | 554 | 1027 | 443 | 752 | 1195 | 88 | 256 | 344 |
| 18:00 | 439 | 517 | 956 | 480 | 536 | 1016 | 482 | 598 | 1080 | 468 | 519 | 987 | 376 | 469 | 845 | 220 | 460 | 680 | 35 | 63 | 98 |
| 19:00 | 272 | 440 | 712 | 320 | 503 | 823 | 312 | 485 | 797 | 291 | 465 | 756 | 222 | 367 | 589 | 91 | 136 | 227 | 18 | 33 | 51 |
| 20:00 | 61 | 162 | 223 | 75 | 190 | 265 | 95 | 202 | 297 | 99 | 211 | 310 | 58 | 163 | 221 | 23 | 57 | 80 | 10 | 18 | 28 |
| 21:00 | 10 | 32 | 42 | 18 | 36 | 54 | 13 | 37 | 50 | 17 | 44 | 61 | 17 | 39 | 56 | 12 | 19 | 31 | 7 | 10 | 17 |
| 22:00 | 4 | 4 | 8 | 7 | 12 | 19 | 19 | 1 | 20 | 1 | 2 | 3 | 8 | 5 | 13 | 1 | 1 | 2 | 1 | 2 | 3 |
| 23:00 | 2 | 5 | 7 | 1 | 2 | 3 | 4 | 2 | 6 | 0 | 1 | 1 | 3 | 3 | 6 | 2 | 2 | 4 | 0 | 0 | 0 |
| TOTAL | 5614 | 5909 | 11523 | 6107 | 6443 | 12550 | 6219 | 6496 | 12715 | 5870 | 6210 | 12080 | 6072 | 6430 | 12502 | 7187 | 7607 | 14794 | 5826 | 6259 | 12085 |

Hourly By Entrance - week commencing 25 September 2006
Location Address: Manchester Fort
Entrance Name: Main Entrance

| | Mon | | | Tue | | | Wed | | | Thu | | | Fri | | | Sat | | | Sun | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total | In | Out | Total |
| 00:00 | 0 | 0 | 0 | 9 | 0 | 9 | 9 | 1 | 10 | 10 | 1 | 11 | 14 | 1 | 15 | 6 | 1 | 7 | 4 | 0 | 4 |
| 01:00 | 0 | 0 | 0 | 2 | 6 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 |
| 05:00 | 9 | 0 | 9 | 15 | 2 | 17 | 13 | 2 | 15 | 11 | 4 | 15 | 16 | 2 | 18 | 8 | 5 | 13 | 1 | 0 | 1 |
| 06:00 | 16 | 4 | 20 | 20 | 5 | 25 | 17 | 4 | 21 | 13 | 5 | 18 | 15 | 4 | 19 | 42 | 10 | 52 | 5 | 4 | 9 |
| 07:00 | 44 | 22 | 66 | 58 | 37 | 95 | 47 | 28 | 75 | 47 | 23 | 70 | 53 | 24 | 77 | 94 | 69 | 163 | 7 | 3 | 10 |
| 08:00 | 116 | 65 | 181 | 99 | 63 | 162 | 126 | 65 | 191 | 135 | 72 | 207 | 127 | 80 | 207 | 183 | 113 | 296 | 42 | 25 | 67 |
| 09:00 | 319 | 190 | 509 | 340 | 194 | 534 | 355 | 240 | 595 | 331 | 217 | 548 | 358 | 242 | 600 | 381 | 261 | 642 | 140 | 68 | 208 |
| 10:00 | 445 | 352 | 797 | 466 | 356 | 822 | 507 | 409 | 916 | 466 | 376 | 842 | 497 | 397 | 894 | 658 | 460 | 1118 | 552 | 277 | 829 |
| 11:00 | 531 | 505 | 1036 | 567 | 539 | 1106 | 598 | 527 | 1125 | 569 | 527 | 1096 | 598 | 544 | 1142 | 772 | 640 | 1412 | 970 | 699 | 1669 |
| 12:00 | 692 | 672 | 1364 | 695 | 653 | 1348 | 747 | 704 | 1451 | 684 | 638 | 1322 | 712 | 636 | 1348 | 961 | 888 | 1849 | 978 | 982 | 1960 |
| 13:00 | 684 | 707 | 1391 | 680 | 741 | 1421 | 716 | 778 | 1494 | 670 | 725 | 1395 | 691 | 744 | 1435 | 979 | 963 | 1942 | 1035 | 1039 | 2074 |
| 14:00 | 572 | 668 | 1240 | 578 | 673 | 1251 | 572 | 734 | 1306 | 563 | 674 | 1237 | 626 | 734 | 1360 | 995 | 1033 | 2028 | 995 | 1081 | 2076 |
| 15:00 | 522 | 624 | 1146 | 490 | 584 | 1074 | 542 | 600 | 1142 | 587 | 568 | 1155 | 571 | 640 | 1211 | 964 | 1107 | 2071 | 846 | 1138 | 1984 |
| 16:00 | 528 | 596 | 1124 | 501 | 567 | 1068 | 493 | 584 | 1077 | 534 | 630 | 1164 | 580 | 632 | 1212 | 825 | 1159 | 1984 | 376 | 950 | 1326 |
| 17:00 | 502 | 519 | 1021 | 514 | 535 | 1049 | 528 | 537 | 1065 | 493 | 572 | 1065 | 466 | 547 | 1013 | 549 | 894 | 1443 | 94 | 235 | 329 |
| 18:00 | 512 | 542 | 1054 | 484 | 543 | 1027 | 473 | 553 | 1026 | 465 | 554 | 1019 | 392 | 478 | 870 | 260 | 559 | 819 | 55 | 68 | 123 |
| 19:00 | 280 | 515 | 795 | 266 | 438 | 704 | 287 | 442 | 729 | 288 | 474 | 762 | 251 | 412 | 663 | 84 | 146 | 230 | 22 | 31 | 53 |
| 20:00 | 59 | 160 | 219 | 77 | 190 | 267 | 82 | 202 | 284 | 77 | 200 | 277 | 57 | 149 | 206 | 29 | 49 | 78 | 5 | 18 | 23 |
| 21:00 | 11 | 35 | 46 | 4 | 28 | 32 | 13 | 41 | 54 | 20 | 48 | 68 | 18 | 41 | 59 | 15 | 19 | 34 | 4 | 6 | 10 |
| 22:00 | 4 | 6 | 10 | 1 | 1 | 2 | 5 | 2 | 7 | 2 | 6 | 8 | 0 | 1 | 1 | 5 | 11 | 16 | 0 | 0 | 0 |
| 23:00 | 2 | 2 | 4 | 2 | 3 | 5 | 1 | 2 | 3 | 1 | 5 | 6 | 3 | 2 | 5 | 2 | 3 | 5 | 0 | 0 | 0 |
| TOTAL | 5848 | 6184 | 12032 | 5868 | 6158 | 12026 | 6132 | 6455 | 12587 | 5966 | 6319 | 12285 | 6043 | 6310 | 12353 | 7813 | 8391 | 16204 | 6131 | 6625 | 12756 |

**TABLE 1 - TRAFFIC COUNT SURVEY RESULTS**

**Taken from The Harris Partnership drawing number 9111/SK04**

| EXISTING MANCHESTER FORT DEVELOPMENT | | |
|---|---|---|
| **Unit no.** | **Land use** | **Size in sqm GFA** |
| 1 | B+Q | 9575 |
| 2 | Comet | 1869 |
| 3 | Sports Soccer | 934 |
| 4 | ASDA George | 1182 |
| 6 | Boots | 937 |
| 7 | Lilley Skinner | 358 |
| 7a | Index | 567 |
| 8 | Mamas and Papas | 938 |
| 9 | TK MAXX | 2223 |
| 11 | Royal Doulton | 472 |
| 12 | Thorntons | 236 |
| 13 | TOG 24 | 242 |
| 14 | Empty | 242 |
| 15 | Lunn Poly | 348 |
| 16 | Martin Dawes | 347 |
| 17 | Maplin | 339 |
| 17a | The Link | 242 |
| 18 | Game | 237 |
| 19 | H Samuel | 219 |
| 20 | Jessops | 122 |
| 21 | Beaverbrooks | 140 |
| 22 | Next | 1397 |
| 23 | Empty | 680 |
| 24 | Clarks | 374 |
| 25 | Superdrug | 467 |
| 26 | Empty | 467 |
| 27 | Empty | 635 |
| 28 | Blacks | 750 |
| 29 | Borders | 1695 |
| 30 | Subway | 93 |
| 31 | O2 | 93 |
| 32 | Lloyds Phamacy | 93 |
| 33 | Going Places | 93 |
| 34 | Greggs | 93 |
| 35 | Pizza Hut | 312 |
| 36 | Halfords | 696 |
| | **TOTAL** | 29707 |

| PROPOSED ADDITIONAL FLOOR SPACE | | |
|---|---|---|
| **Unit no.** | **Land use** | **Size in sqm GFA** |
| 37 | A3/A5 Retail Unit | 279 |
| 38 | A1/A3 Retail Unit | 93 |
| 39 | A1/A3 Retail Unit | 93 |
| 40 | A1/A3 Retail Unit | 93 |
| 41 | A3/A5 Retail Unit | 190 |
| | **TOTAL** | 748 |

**Notes**

Overall total 30455 sqm GFA

**TABLE 2 - MANCHESTER FORT ACCOMMODATION SCHEDULE**

| Quadrant | GFA of existing units rented (sqm) | % | Total GFA of existing units (sqm) | % | Total GFA of units, including those proposed (sqm) | % | Existing parking spaces | % | Chosen distribution pattern | Assignment of total traffic Arrivals | Departures |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Northeastern | 3985 | 14.4 | 3985 | 13.4 | 3985 | 13.1 | 175 | 14.5 | 13.1 | 143 | 161 |
| Southeastern | 7486 | 27 | 7728 | 26 | 7728 | 25.4 | 198 | 16.4 | 25.4 | 278 | 313 |
| Southwestern | 5941 | 21.5 | 7723 | 26 | 8471 | 27.8 | 488 | 40.5 | 27.8 | 304 | 342 |
| Northwestern | 10271 | 37.1 | 10271 | 34.6 | 10271 | 33.7 | 343 | 28.5 | 33.7 | 369 | 415 |
| **Total** | **27683** | **100** | **29707** | **100** | **30455** | **100** | **1204** | **100** | **100** | **1094** | **1231** |

**Note**

| | | |
|---|---|---|
| Traffic generation would increase by | 10.00% | if all of the existing stores were rented and the proposed ones were built |
| The peak recorded arrivals was | 995 | vehicles recorded on Sun 8 October 2006 at 1400 hours |
| The arrivals figure would increase to | 1095 | if all of the existing stores were rented and the proposed ones were built |
| The peak recorded departures was | 1120 | vehicles recorded on Sun 8 October 2006 at 1400 hours |
| The departures figure would increase to | 1232 | if all of the existing stores were rented and the proposed ones were built |

**TABLE 3 - TOTAL TRAFFIC GENERATION, DISTRIBUTION AND ASSIGNMENT AT THE MANCHESTER FORT SITE**

| Peak | Scenario | | Phase 2 car park access | Site access right turn |
|---|---|---|---|---|
| Overall peak hour | worst-case scenario | degree of saturation | 82.8% | 71.5% |
| (Sunday; 1400 to 1500 hours) | | max queue (veh) | 4.2 | 2.4 |
| | | av delay (mins/veh) | 0.40 | 0.29 |

**TABLE 4 - PICADY SUMMARY OF PROPOSED ACCESS**

| Day | Time of the day | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1200 hours | | | | | 1600 hours | | | | | 1800 hours | | | | |
| | Spaces currently free | Spaces currently used | Current % occupation | Forecasted no. of spaces used | Forecasted % occupation | Spaces currently free | Spaces currently used | Current % occupation | Forecasted no. of spaces used | Forecasted % occupation | Spaces currently free | Spaces currently used | Current % occupation | Forecasted no. of spaces used | Forecasted % occupation |
| Thursday 21 September 2006 | 333 | 155 | 32 | 221 | 52 | 389 | 99 | 20 | 141 | 33 | 401 | 87 | 18 | 124 | 29 |
| Friday 22 September 2006 | 374 | 114 | 23 | 163 | 38 | 392 | 96 | 20 | 137 | 32 | 411 | 77 | 16 | 110 | 26 |
| Saturday 23 September 2006 | 260 | 228 | 47 | 325 | 76 | 241 | 247 | 51 | 352 | 83 | 408 | 80 | 16 | 114 | 27 |
| Sunday 24 September 2006 | 323 | 165 | 34 | 235 | 55 | 273 | 215 | 44 | 307 | 72 | 471 | 17 | 3 | 24 | 6 |
| Thursday 5 October 2006 | 358 | 130 | 27 | 185 | 43 | 306 | 182 | 37 | 260 | 61 | 375 | 113 | 23 | 161 | 38 |
| Friday 6 October 2006 | 376 | 112 | 23 | 160 | 38 | 370 | 118 | 24 | 168 | 39 | 381 | 107 | 22 | 153 | 36 |
| Saturday 7 October 2006 | 315 | 173 | 35 | 247 | 58 | 245 | 243 | 50 | 346 | 81 | 400 | 88 | 18 | 125 | 29 |
| Sunday 8 October 2006 | 204 | 284 | 58 | 405 | 95 | 284 | 204 | 42 | 291 | 68 | 459 | 29 | 6 | 41 | 10 |

Note

There are a total of 488 parking spaces in the southwestern 'Phase 2' car park

This would reduce to 428 parking spaces in the southwestern 'Phase 2' car park as a result of the proposed development

The size of the development in the southwestern 'Phase 2' section of the proposed development would increase by 42.59% as a result of the proposals and the empty units being rented

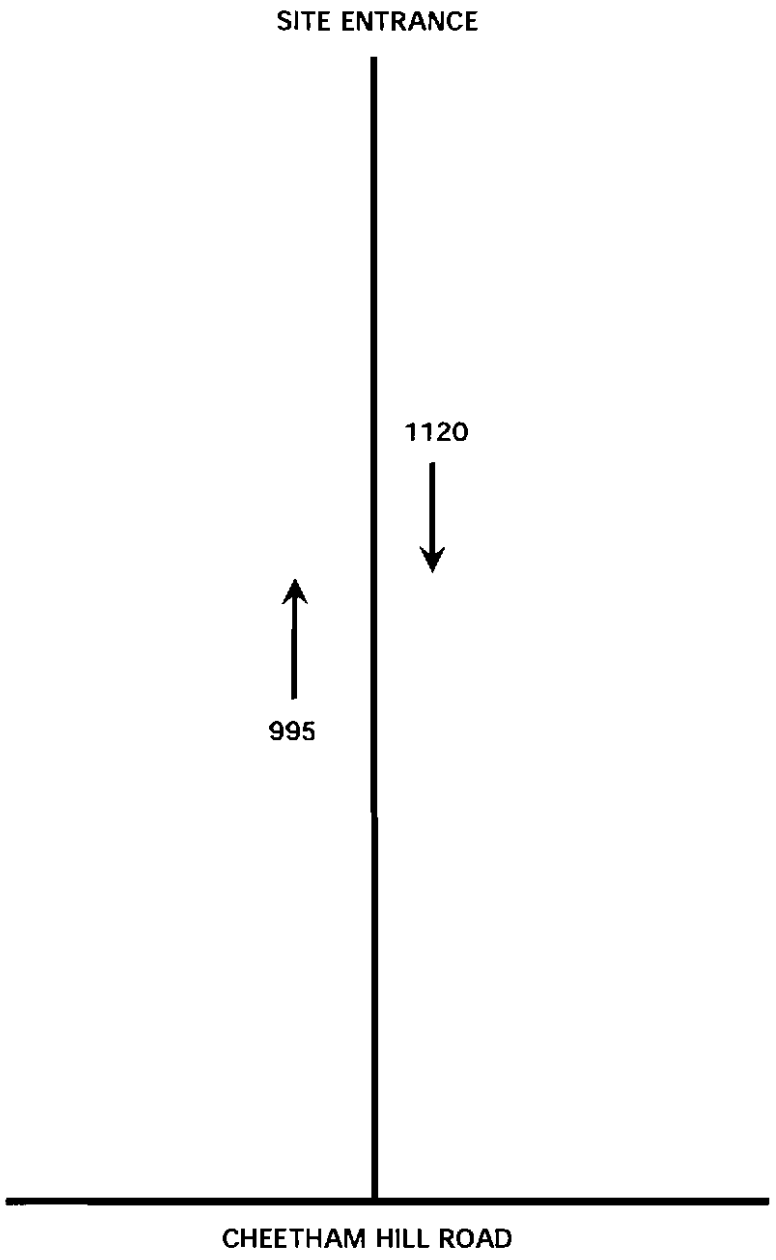
**TABLE 5 - PARKING ASSESSMENT**




BWB CONSULTING LIMITED
3-4 KAYES WALK
THE LACE MARKET
NOTTINGHAM
NG1 1PY

TEL: 0115 924 1100
FAX: 0115 950 3666

| | | | |
|---|---|---|---|
| Project | MANCHESTER FORT | | |
| Title | General site location | | |
| Drawn | AJO | Approved | DAC |
| Checked | PW | Date | 11.10.06 |
| Scale | NTS | Drg. No. | FIGURE 1 |
| Rev. | | | |




| | | | | |
|---|---|---|---|---|
| Project | MANCHESTER FORT | | | |
| Title | Existing traffic flows | Drawn | AJO | Approved | DAC |
| | | Checked | PW | Date | 11.10.06 |

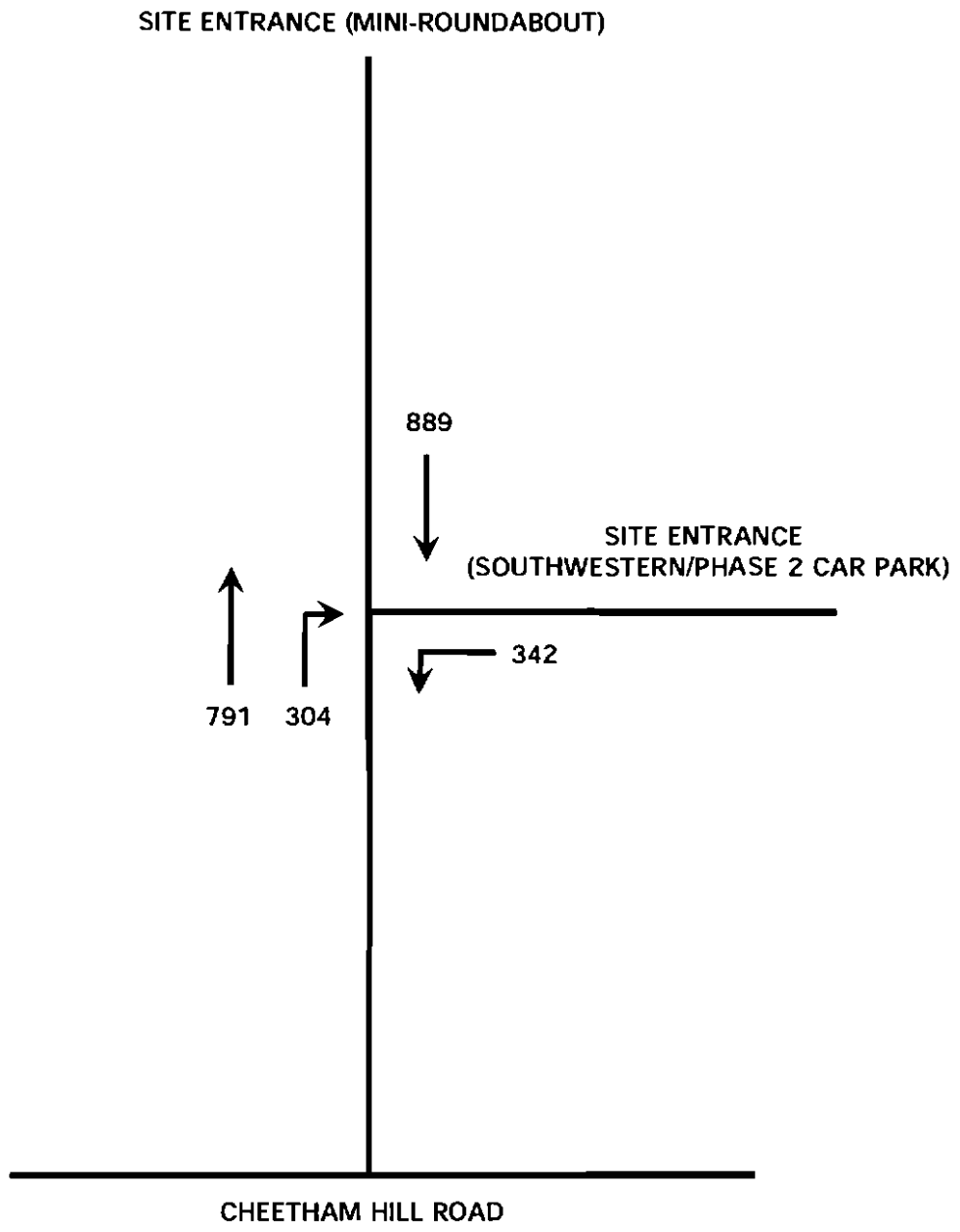
BWB CONSULTING LIMITED
3-4 KAYES WALK
THE LACE MARKET
NOTTINGHAM
NG1 1PY

TEL 0115 924 1100
FAX 0115 950 3966

Scale NTS

Drg. No.

FIGURE 2




| | | | | |
|---|---|---|---|---|
| Project | MANCHESTER FORT | | | |
| Title | Worst – case traffic distribution | Drawn | AJO | Approved | DAC |
| | | Checked | PW | Date | 11.10.06 |

BWB CONSULTING LIMITED
3-4 KAYES WALK
THE LACE MARKET
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Scale NTS

Drg. No.

FIGURE 3