

## **Technical Note For Nishkam School West London.**

### **Planning Application reference:- P/2015/2516**

**Comparison of PTAL accessibility rating for the school sites used to derive the multi modal travel mode split information and vehicular trip rates.**

#### **Introduction**

The LB of Hounslow has requested that further consideration be given to the derivation of the mode split data and vehicular trip rates taking into account a review of the PTAL rating for the school sites used in comparison to the proposed school PTAL. This assessment is contained in this Technical Note.

The proposed school PTAL for the Wood Lane access point is 1b. In this case for pupils using public bus services the most convenient bus stops would be those on Wood Lane which is served by the H28 and the routing of this bus service can be seen on Figure 5. The Wood Lane pedestrian access point would be closer to the school building and would be more convenient for bus stops on the Great West Road (H91 high frequency service) where the walking distances would be approximately 190m (eastbound) and 240m (westbound). The postcode plot at Figure 8 shows where current pupils live. This assessment therefore relates to the PTAL rating for the Wood Lane access point as the most accessible part of the site by public transport modes.

The mode split information from schools in Hounslow and the existing school travel survey in conjunction with information about where current pupils live has then been used to assess the potential travel mode split for the proposed school. This is presented later in this Technical Note.

Junction capacity assessments have been undertaken for local junctions including two major junctions on the Great West Road which was based on vehicular trip rate data derived from the TRICS Database, a nationally recognised source of information of vehicular and multimodal survey data for many types of uses, including schools. The data from the TRICS database has been used to support trip rate predictions for many planning applications for schools in the Greater London Area and also Hounslow (Reach Academy 2013) and therefore considered an acceptable and appropriate source of information. The Council has asked if the vehicular trip rates derived from this data can be examined having regard to the results of the travel mode split assessment. This has been undertaken and also used to inform the assessment of the potential travel mode split for the proposed school.

#### **Multimodal Travel Mode Assessment**

The travel modal split assessment presented in the Transport Assessment report was based on 3 sources of data:-

- Multi modal data from the TRICS database, three primary school surveys and four secondary school sites.
- Mode split data from five secondary and four primary school travel plans in Hounslow.

- Data from pupil travel survey (reception and years 1 and 2) for the existing Nishkam School West London site at 390 London Road.

The PTAL ratings for the schools have been taken to the main school pedestrian access point for consistency and calculated from the TfL web site <http://www.webptals.org.uk>. The PTAL ratings for the schools used in this information is presented below.

### TRICS Data

A summary of the three primary school and four secondary schools for which there is multimodal survey data in the TRICS database is given in the two tables below:-

| Primary Schools      | Pupils | Staff | Parking | PTAL | TP  | Inner London |
|----------------------|--------|-------|---------|------|-----|--------------|
| BN-04-A-01 (Barnet)  | 90     | 28    | 22      | 1b   | No  | N            |
| CN-04-A-01 (Camden)  | 403    | 49    | 2       | 2    | No  | Y            |
| HK-04-A-01 (Hackney) | 410    | 59    | 1       | 5    | Yes | Y            |

**Table 1:- Multimodal TRICS Data – Primary Schools**

| Secondary Schools          | Pupils | Staff | Parking | PTAL | TP | Inner London |
|----------------------------|--------|-------|---------|------|----|--------------|
| BN-04-N-01 (E. Barnet)     | 1200   | 76    | 0       | 1b   | No | N            |
| LB-04-B-01 (Vauxhall)      | 624    | 34    | 29      | 6b   | No | Y            |
| IS-04-B-01 (Finsbury Park) | 850    | 120   | 22      | 2    | No | Y            |
| HM-04-B-01 (Fulham)        | 610    | 62    | 0       | 3    | No | Y            |

**Table 2:- Multimodal TRICS Data – Secondary Schools**

As can be seen the primary school multimodal survey sites have PTAL ratings of 1b, 2 and 5 and for the secondary schools the PTAL rates are 1b, 2, 3 and 6b. With respect to the primary schools only one school (Hackney PTAL 5) is significantly higher than the proposed school and having regard to the secondary schools, one is significantly higher (Vauxhall PTAL 6b) and one (Fulham PTAL 3) is slightly higher. These schools are situated in inner London boroughs with the exception of the primary and secondary schools in Barnet.

### Travel Plan Mode Split Data

Travel Mode Split Data was obtained from School Travel Plans for five secondary schools (Isleworth and Syon School For Boys, Lampton School, Heston Community School, Gumley

House RC Convent School and The Heathland School) together with four primary schools these being Hounslow Town, Isleworth Town, Alexandra and Spring Grove.

A summary of the data for the four primary and five secondary schools taken from the School Travel Plans together with the school PTAL rating is given in the two tables below:-

| Primary School           | Date of survey | No of Respondents | Pupils | Staff | Parking | PTAL |
|--------------------------|----------------|-------------------|--------|-------|---------|------|
| Hounslow Town (TW3 1SR)  | 2012           | 515               | 584    | 30    | 15      | 6a   |
| Isleworth Town (TW7 6AB) | 2011           | 498               | 513    | 71    | 25      | 3    |
| Alexandra (TW3 4DU)      | 2009/10        | 349               | 411    | ns    | ns      | 3    |
| Spring Grove (TW7 4HB)   | 2010           | 147               | 235    | 26    | 18      | 5    |

**Table 3:- Travel Plan Mode Split Data – Primary Schools**

| Secondary School                | Date of survey | No of Respondents | Pupils | Staff | Parking | PTAL |
|---------------------------------|----------------|-------------------|--------|-------|---------|------|
| Isleworth & Syon Boys (TW7 5LJ) | 2011           | 506               | 1057   | 80    | 60      | 2    |
| Lampton (TW3 4EP)               | 2009/10        | 814               | 1385   | ns    | ns      | 2    |
| Heston Community (TW5 0QR)      | 2008           | 999               | ns     | ns    | ns      | 2    |
| Gumley (TW7 6PN)                | 2012           | 314               | 1152   | 155   | 55      | 2    |
| The HeathLand (TW4 5JD)         | 2011           | 983               | 1828   | 200   | 137     | 2    |

**Table 4:- Travel Plan Mode Split Data – Secondary Schools**

Note: - ns = not stated

As can be seen the primary schools have PTAL ratings of 6a, 3, 3 and 5 and for the five secondary schools the PTAL rates are all 2. With respect to the primary schools two schools (Hounslow Town PTAL 6 & Spring Grove PTAL 5) are higher than the proposed school with two slightly higher with a PTAL of 3. Having regard to the secondary schools, these are all PTAL 2 and considered to be only slightly above that (PTAL 1b) for the proposed school.

#### Existing Pupil Travel Survey 390 London Road

The PTAL rating for the existing school at 390 London Road is 4 and the travel survey results are presented in the Transport Assessment.

### Review of Multimodal Travel Mode Assessment

In consultation with Hounslow Council the mode split from School Travel Plans in Hounslow have been reviewed with regard to the selection of primary schools and also to use more recent travel plan data, where it is available, for both primary and secondary schools. In this situation data from other primary schools, with lower PTAL ratings, have been considered and for the secondary schools more recent information has been used together with data from 2 additional schools.

With regard to the primary and secondary schools seven primary and seven secondary schools have been selected having regard to their PTAL rating of 2 or less. The School Travel Plans were obtained from Hounslow Council and also the Council's website (<http://www.hounslowtp.org/school.php>). A summary of the details for the primary and secondary schools (taken from the School Travel Plans) together with the school PTAL rating is given in the two tables below:-

| Primary School                   | Date of survey | No of Respondents | Pupils | Staff | Parking | PTAL | Pupils within 1 mile |
|----------------------------------|----------------|-------------------|--------|-------|---------|------|----------------------|
| Heston Primary (TW5 0QR)         | 2015           | 449               | 465    | 30    | 20      | 2    | 74%                  |
| Lionel Primary (TW8 9QT)         | 2013           | 355               | 399    | 68    | 18      | <1   | 42%                  |
| Hounslow Heath Primary (TW4 7BD) | 2014           | 466               | 521    | 55    | 28      | 2    | 78%                  |
| Westbrook (TW5 0NB)              | 2010           | 558               | 518    | 60    | 23      | 2    | 71%                  |
| The Blue Primary (TW7 6RQ)       | 2010           | 262               | 277    | 14    | 10      | 2    | 54%                  |
| Norwood Green (UB2 5RN)          | 2013           | 310               | 336    | 35    | 30      | 1b   | 70%                  |
| Berkeley (TW5 9HQ)               | 2012           | 408               | 460    | 40    | 30      | 2    | 78%                  |

**Table 5:- Travel Plan Mode Split Data – Primary Schools**

| Secondary Schools                | Date of survey | No of Respondents | Pupils | Staff | Parking | PTAL | Pupils within 1 mile |
|----------------------------------|----------------|-------------------|--------|-------|---------|------|----------------------|
| Isleworth & Syon Boys (TW7 5LJ)  | 2011           | 1050              | 999*   | 80    | 60      | 2    | 21%                  |
| Lampton (TW3 4EP)                | 2011           | 892               | 1467   | 150   | 70      | 2    | 25%                  |
| Heston Community Sch (TW5 0QR)   | 2014           | 145               | 1222   | 165   | 69      | 2    | 35%                  |
| Gumley (TW7 6PN)                 | 2015           | 864               | 900    | 165   | 55      | 2    | 12%                  |
| The HeathLand (TW4 5JD)          | 2013           | 778               | 1828   | 200   | 137     | 2    | 52%                  |
| Cranford Community Sch (TW5 9PD) | 2013           | 1043              | 1150   | 200   | 160     | 2    | 25%                  |
| Chiswick School (W4 3UN)         | 2015           | 679               | 1265   | 140   | 70      | 2    | 23%                  |

**Table 6:- Travel Plan Mode Split Data – Secondary Schools**

As can be seen all schools have a PTAL rating of 2 or less in comparison the proposed school site of 1b. It should also be noted that the pattern of where pupils live is currently based on information from 187 pupils and for future years will be influenced by the schools admissions criteria, which includes an oversubscribed distance criteria.

The average mode split for these seven primary schools has been calculated from the surveys in the School Travel Plans and a summary of the average results is shown in the table below together with the proportion of proposed pupils that might travel by these modes if these prevailed for the school. A copy of the full results is shown on Table A attached.

|                                   | Travel To School<br>average Primary |                 | 700 Pupils |
|-----------------------------------|-------------------------------------|-----------------|------------|
| Mode                              | Number of<br>Responses              | Percentage<br>% |            |
| Car/Taxi                          | 697                                 | 24.82           | 174        |
| Car Share                         | 93                                  | 3.31            | 23         |
| Bus                               | 191                                 | 6.80            | 48         |
| Train / Tube                      | 2                                   | 0.07            | 0          |
| Cycle                             | 125                                 | 4.45            | 31         |
| Walk                              | 1517                                | 54.02           | 378        |
| Park & Stride                     | 91                                  | 3.24            | 23         |
| Scooting                          | 92                                  | 3.28            | 23         |
| <b>Total</b>                      | 2808                                | 100.00          | 700        |
| <b>Total by non<br/>car modes</b> | 1927                                | 68.63           | 480        |

**Table 7:- Average Travel Plan Mode Split Data – Primary Schools**

The average mode split for the seven Secondary schools has been calculated from the surveys in the School Travel Plans and a summary of the average results is shown in the table below and again the proportion of proposed secondary pupils that might travel by these modes is also shown if these were to prevail for the secondary school. The full results are shown on Table B attached.

| Mode                          | Travel To School<br>Secondary average |              | 700 Pupils |
|-------------------------------|---------------------------------------|--------------|------------|
|                               | Number of Responses                   | Percentage % |            |
| Car/Taxi                      | 776                                   | 14.24        | 100        |
| Car Share                     | 118                                   | 2.16         | 15         |
| Bus                           | 2154                                  | 39.52        | 276        |
| Train / Tube                  | 272                                   | 4.99         | 35         |
| Cycle                         | 172                                   | 3.16         | 22         |
| Walk                          | 1938                                  | 35.55        | 249        |
| Park & Stride                 | 13                                    | 0.24         | 2          |
| Scooting                      | 8                                     | 0.15         | 1          |
| <b>Total</b>                  | 5451                                  | 100.00       | 700        |
| <b>Total by non car modes</b> | 4544                                  | 83.36        | 584        |

**Table 8:- Average Travel Plan Mode Split Data – Secondary Schools**

| Mode                          | Travel To School<br>averages for proposed<br>pupils |           | 1400 Pupils |
|-------------------------------|---|-----------|-------------|
|                               | Primary   | Secondary |             |
| Car/Taxi                      | 174   | 100       | 274         |
| Car Share                     | 23  | 15        | 38          |
| Bus                           | 48  | 276       | 324         |
| Train / Tube                  | 0   | 35        | 35          |
| Cycle                         | 31  | 22        | 53          |
| Walk                          | 378   | 249       | 627         |
| Park & Stride                 | 23  | 2         | 25          |
| Scooting                      | 23  | 1         | 24          |
| <b>Total</b>                  | 700   | 700       | 1400        |
| <b>Total by non car modes</b> | 480   | 584       | 1064        |

**Table 9:- Total Modal split generations Primary and Secondary**

The pupil survey data from the travel plans is understood to be based on a 'hands-up' survey in response to the question:-

**What is your USUAL mode of travel to and from school, based on the mode used most often to travel to and from school and the mode that covers the longest/most distance?**

With reference to the data for pupils if it is assumed that the pupils travelling by car would give the vehicle generation and that each pupil generates an arrival and departure trip in each of the AM and PM periods then the assumed trips for pupils would be 299 (274 + 25 Park & stride) arrivals and 299 departures a total of 598 in the AM and PM periods. In comparison for the morning period there are 125 arrivals and 66 departures a total of 191 trips based on the TRICS vehicular trip rate data. This aspect is considered further later in this Technical Note.

The opening hours of the school indicated in the Transport Assessment are noted as 0845 to 1530 (breakfast club from 0800) for primary and 0830 to 1600 for secondary which are considered traditional school times. From the hands-up survey it is not possible to say at what time a pupil travelled and whether they attended a breakfast club. Also a large proportion of secondary school staff are likely to arrive before pupils and probably before 0800 and would depart after pupils leave, perhaps 1600-1700. Some primary school staff are likely to arrive before 0800 particularly if breakfast club is offered. It should also be noted that some parents for the primary school would depart after 0900.

With regard to the end of the school day the trip rates from the TRICS data are less in the period 1500-1600 than the morning, which is logical since many schools run after school clubs and staff would leave after pupils. Also Sanderson Associates have obtained travel survey data for the first three year groups of a new secondary school in London which shows that pupil travel by car is lower in the afternoon than in the morning. Travel survey questions asked how pupils travel to school and also from school separately. This again is logical since parents / carers may drop-off children in the morning, on their way to work, but would be unable to pick up at the end of the school day because they are still at work. In this case secondary aged pupils would tend to travel home independently in the afternoon and for primary aged pupils another person may collect pupils in the afternoon travelling by a different mode. It is therefore not considered appropriate to use the hands-up survey to predict the level of pupils travelling by car in the PM period since it does not follow they will all travel at the same time or by the same mode.

A further point is that these flows do not take into account shared or linked trips for parents dropping off children at school on the way to work or for some other trip purpose, nor for the reverse trip after school or where pupils have older/younger brothers or sisters attending the same school.

Given this background it is therefore considered that the TRICS data would be more representative for vehicular trips and as can be seen the PTAL ratings for the TRICS surveys are similar to the proposed school with some located in both inner and outer London. Nevertheless, the mode split data has been used in conjunction with the TRICS vehicular trip rate data to inform the mode split assessment for the school and this is presented later in this Technical Note.



### TRICS Survey sites used to derive Vehicular Trip rates.

A summary of the data for the eight primary and six secondary schools taken from the TRICS database together with their trip rates and PTAL rating is given in the two tables below:-

| Primary School           | Pupils | Staff | Parking | PTAL | TP  | Inner London |    | Arrivals | Departure | Total |
|--------------------------|--------|-------|---------|------|-----|--------------|----|----------|-----------|-------|
| EN-04-A-01<br>(Enfield)  | 180    | 16    | 0       | 2    | No  | N            | AM | 0.222    | 0.189     | 0.411 |
|                          |        |       |         |      |     |              | PM | 0.022    | 0.272     | 0.294 |
| BN-04-A-01<br>(Barnet)   | 90     | 28    | 22      | 1b   | No  | N            | AM | 0.256    | 0.067     | 0.323 |
|                          |        |       |         |      |     |              | PM | 0.022    | 0.211     | 0.233 |
| LW-04-A-01<br>(Lewisham) | 461    | 78    | 22      | 2    | No  | Y            | AM | 0.117    | 0.074     | 0.191 |
|                          |        |       |         |      |     |              | PM | 0.08     | 0.102     | 0.182 |
| HO-04-A-01<br>(Hounslow) | 320    | 50    | 20      | 1b   | No  | N            | AM | 0.034    | 0.003     | 0.037 |
|                          |        |       |         |      |     |              | PM | 0.009    | 0.009     | 0.018 |
| CN-04-A-01<br>(Camden)   | 403    | 49    | 2       | 2    | No  | Y            | AM | 0.089    | 0.052     | 0.141 |
|                          |        |       |         |      |     |              | PM | 0.082    | 0.084     | 0.166 |
| HK-04-A-01<br>(Hackney)  | 410    | 59    | 1       | 5    | Yes | Y            | AM | 0.061    | 0.002     | 0.063 |
|                          |        |       |         |      |     |              | PM | 0.056    | 0.100     | 0.156 |
| NH-04-A-01<br>(Newham)   | 422    | 78    | 12      | 2    | No  | Y            | AM | 0.076    | 0.047     | 0.123 |
|                          |        |       |         |      |     |              | PM | 0.031    | 0.045     | 0.076 |
| RD-04-A-01<br>(Richmond) | 412    | 35    | 0       | 2    | No  | N            | AM | 0.063    | 0.027     | 0.090 |
|                          |        |       |         |      |     |              | PM | 0.032    | 0.039     | 0.071 |

**Table 10:- Vehicular TRICS Data – Primary Schools**

| Secondary School              | Pupils | Staff | Parking | PTAL | TP  | Inner London |    | Arrivals | Departure | Total |
|-------------------------------|--------|-------|---------|------|-----|--------------|----|----------|-----------|-------|
| BN-04-N-01<br>(E. Barnet)     | 1200   | 76    | 0       | 1b   | No  | N            | AM | 0.145    | 0.049     | 0.194 |
|                               |        |       |         |      |     |              | PM | 0.026    | 0.102     | 0.128 |
| LB-04-B-01<br>(Vauxhall)      | 624    | 34    | 29      | 6b   | No  | Y            | AM | 0.074    | 0.083     | 0.157 |
|                               |        |       |         |      |     |              | PM | 0.014    | 0.029     | 0.043 |
| IS-04-B-01<br>(Finsbury Park) | 850    | 120   | 22      | 2    | No  | Y            | AM | 0.048    | 0.033     | 0.081 |
|                               |        |       |         |      |     |              | PM | 0.001    | 0.013     | 0.014 |
| RD-04-B-01<br>(Twickenham)    | 1027   | 127   | 70      | 3    | Yes | N            | AM | 0.089    | 0.06      | 0.149 |
|                               |        |       |         |      |     |              | PM | 0.013    | 0.029     | 0.042 |
| HO-04-B-01<br>(Hounslow)      | 1395   | 88    | 50      | 2    | No  | N            | AM | 0.059    | 0.021     | 0.08  |
|                               |        |       |         |      |     |              | PM | 0.029    | 0.030     | 0.059 |
| HM-04-B-01<br>(Fulham)        | 610    | 62    | 0       | 3    | No  | Y            | AM | 0.041    | 0.026     | 0.067 |
|                               |        |       |         |      |     |              | PM | 0.020    | 0.030     | 0.050 |

**Table 11:- Vehicular TRICS Data – Secondary Schools**

As can be seen from the tables above the eight primary schools have PTAL ratings of 2, 1b, 2, 1b, 2, 5, 2, and 2 and for the six secondary schools the PTAL rates are 1b, 6b, 2, 3, 2, and 3. For the primary schools four out of eight are outside in inner London and three out of six secondary schools are outside inner London. With respect to the primary schools only one school (Hackney PTAL 5) is significantly higher than the proposed school and would be ranked (high to low) 7<sup>th</sup> out of 8 in terms of the total trip rate for the AM period and 5<sup>th</sup> out of 8 for the PM period. For the secondary schools, one site is significantly higher (Vauxhall PTAL 6b) and two (Twickenham & Fulham both PTAL 3) are slightly higher. The Vauxhall site would be ranked 2<sup>nd</sup> out of 6 in terms of the total trip rate for the AM period and 4<sup>th</sup> out of 6 for the PM

period. Included in the secondary school selection is a school in Hounslow (ref HO-04-B-01 - Lampton School) which is also one of the secondary schools used to assess mode split information from school travel plans.

As a sensitivity test the survey sites with the higher PTAL rates have been omitted from the selection and the trip rates recalculated. The primary school Hackney PTAL 5 and secondary school Vauxhall PTAL 6b, which both in inner London, have been omitted from the respective selections. In this selection of surveys four out of seven primary schools are outside inner London and three out of five secondary schools are also outside inner London. One secondary school (Lampton) is located in Hounslow.

The average trip rates obtained from TRICS database for the seven primary school sites and five secondary school sites are tabulated below together with the traffic generation associated with 700 pupils for each of the primary and secondary school uses.

| Weekday Assessment Period | Trip Rate per Pupil |            | Traffic Generations for 700 Pupils |            | Total Trips |
|---------------------------|---------------------|------------|------------------------------------|------------|-------------|
|                           | Arrivals            | Departures | Arrivals                           | Departures |             |
| 0800-0900                 | 0.097               | 0.056      | 68                                 | 39         | <b>107</b>  |
| 1500-1600                 | 0.046               | 0.082      | 32                                 | 57         | <b>89</b>   |
| Daily                     | 0.271               | 0.269      | 190                                | 188        | <b>378</b>  |

**Table 12 - Average Primary Trip Rates and predicted trips obtained from TRICS**

| Weekday Assessment Period | Trip Rate per Pupil |            | Traffic Generations for 700 Pupils |            | Total Trips |
|---------------------------|---------------------|------------|------------------------------------|------------|-------------|
|                           | Arrivals            | Departures | Arrivals                           | Departures |             |
| 0800-0900                 | 0.081               | 0.038      | 57                                 | 27         | <b>84</b>   |
| 1500-1600                 | 0.019               | 0.044      | 13                                 | 31         | <b>44</b>   |
| Daily                     | 0.203               | 0.203      | 142                                | 142        | <b>284</b>  |

**Table 13 - Average Secondary Trip Rates and predicted trips obtained From TRICS**

The overall total traffic generation using the TRICS data excluding the two Primary and Secondary school sites with higher PTAL rates is summarised below:-

| Weekday Assessment Period | Traffic Generations for 1400 Pupils |            | Total Trips |
|---------------------------|-------------------------------------|------------|-------------|
|                           | Arrivals                            | Departures |             |
| 0800-0900                 | 125                                 | 66         | <b>191</b>  |
| 1500-1600                 | 45                                  | 88         | <b>133</b>  |
| Daily                     | 332                                 | 330        | <b>662</b>  |

**Table 14 - Average Overall predicted traffic generation using TRICS data for the Primary and Secondary schools**

For comparison the table below shows the total traffic generation which included the two sites with the higher PTAL rates. As can be seen from Tables 13 and 14, omission of the two sites increases the traffic generation by 8 two way trips in the AM (0800-0900) period and reduces it by 2 two way trips in the PM period (1500-1600).

| Weekday Assessment Period | Traffic Generations for 1400 Pupils |            | Total Trips |
|---------------------------|-------------------------------------|------------|-------------|
|                           | Arrivals                            | Departures |             |
| 0800-0900                 | 120                                 | 63         | <b>183</b>  |
| 1500-1600                 | 46                                  | 89         | <b>135</b>  |
| Daily                     | 323                                 | 322        | <b>645</b>  |

**Table 15 - Average Total predicted traffic generation using the TRICS data from the Transport Assessment.**

Considering the distribution of these trips in the AM peak there would be 3 arrivals from the north and 2 from the south together with 2 departures to the north and 1 to the south. With regard to the AM peak period junction capacity assessments these small differences would not make a material difference to the outcome of the capacity assessments taking in to account the 5 additional trips distributed to the north and on different arms of the Jersey Road / Windmill Lane junction together with 3 distributed to the south. With regard to the PM peak the original junction capacity assessments are considered appropriate. For a robust assessment the traffic distribution and capacity assessments were undertaken on the basis that all traffic would access the school site.

Given this review it is considered that the vehicular trip rates derived from the TRICS database are appropriate to assess the vehicular traffic generation which has been used for the junction capacity assessments. Nevertheless, the travel plan mode split data has been used in conjunction with the TRICS vehicular trip rate data to inform the mode split assessment for the school and this is presented in this Technical Note.

### **The Proposed School Travel Mode Split**

The potential mode split for the proposed school has been informed from the average mode split data from seven primary and seven secondary schools in Hounslow, where current pupils live, the existing school travel survey which is based on responses from 113 pupils and the average vehicular trip rate data from the TRICS database. The multimodal data from the TRICS database has not been used. The table which was presented in section 7 of the submitted School Travel Plan showing the proposed target mode split for the school has been revised in light of the travel mode split review which is set out in the preceding part of this Technical Note. The proposed mode split also takes into account the mitigation and initiatives proposed for the School indicated in the School Travel Plan.

No parking or arrangements for pupil pick-up and drop-off are proposed on site with the exception for pupils with disabilities or other mobility impairment. This accords with the thrust of local and regional policy although staff parking is proposed, recognising resident's existing concerns about on-street parking stress.

The School is proposing to introduce a school bus facility, which has support from present parents, which would drop-off and pick-up pupils within the school grounds. Also the school is seeking to secure up to three locations, in close proximity to the school for a Park and Stride scheme which has the benefit of reducing traffic immediately adjacent to the school grounds. A new access junction from Syon Lane is proposed which includes the provision of a right turn lane, and widening of the footways on the west side to the north and south of the proposed access as well as a formal zebra crossing on Syon Lane. Furthermore, it is proposed to promote with the Highway Authority, the provision of school zig-zag road markings and waiting restrictions together with a 20mph speed limit on the immediate Syon Lane frontage to the

school. In addition to access from Syon Lane a shared pedestrian / cycle access is proposed from Wood Lane together with the introduction of a formal zebra crossing.

The potential mode split for the proposed school has therefore also had regard to these proposals.

Table 16 below shows the average mode splits from the Hounslow primary and secondary schools, the existing school travel and the mode split for the proposed school.

| Mode                 | Travel To School average |             | Current Mode Split at London Road | Primary Pupil Target | 700 Primary Pupils | Secondary Pupil Target | 700 Secondary Pupils | 1400 Total Pupils | Proposed Average Mode Split |
|----------------------|--------------------------|-------------|-----------------------------------|----------------------|--------------------|------------------------|----------------------|-------------------|-----------------------------|
|                      | Primary %                | Secondary % | %                                 | %                    | pupils             | %                      | pupils               | pupils            | %                           |
| Car/Taxi             | 24.82                    | 14.24       | 23.01%                            | 0.00%                | 0                  | 0.00%                  | 0                    | 0                 | 0.00%                       |
| Car Share            | 3.31                     | 2.16        | 19.47%                            | 11.00%               | 77                 | 4.30%                  | 30.1                 | 107               | 7.64%                       |
| Bus                  | 6.80                     | 39.52       | 16.81%                            | 18.50%               | 129.5              | 32.80%                 | 229.6                | 359               | 25.64%                      |
| Dedicated School Bus |                          |             | 0.00%                             | 25.65%               | 179.55             | 27.60%                 | 193.2                | 373               | 26.64%                      |
| Train / Tube         | 0.07                     | 4.99        | 1.77%                             | 2.00%                | 14                 | 2.00%                  | 14                   | 28                | 2.00%                       |
| Cycle                | 4.45                     | 3.16        | 1.77%                             | 4.43%                | 31.01              | 4.43%                  | 31.01                | 62                | 4.43%                       |
| Walk                 | 54.02                    | 35.55       | 19.47%                            | 23.42%               | 163.94             | 23.57%                 | 164.99               | 329               | 23.50%                      |
| Park & Stride        | 3.24                     | 0.24        | 9.73%                             | 11.00%               | 77                 | 4.30%                  | 30.1                 | 107               | 7.64%                       |
| Scooting             | 3.28                     | 0.15        | 7.96%                             | 4.00%                | 28                 | 1.00%                  | 7                    | 35                | 2.50%                       |
| <b>Total</b>         | 100.00                   | 100.00      | 100.00                            | 100.00               | 700                | 100.00                 | 700                  | 1400              | 100.00                      |

**Table 16 - Average mode split and mode split for the proposed school.**

In this case all pupil car trips are taken to fall into the park and stride mode category and a category for the school bus has been added. The total for the park and stride mode is 107 one direction (214 two way) and is based on the TRICS vehicle trip rate predictions which is 191 two way trips. Whilst this is slightly above the TRICS value it accounts for a small proportion of pupils sharing trips with other family members and also that some primary school trips would fall into the next time segment. Car sharing is the same as the Park and Stride with the school fostering car sharing between parents and is consistent with the high level of car sharing taking place now. The mode share for rail and tube is fairly low at this stage but the routing of the school bus would include a drop-off / pick up at this location if feasible and would be investigated if pupils use this travel mode. It should be noted that the H91 bus (east bound) stops right outside the Osterley tube station and the westbound stop can be accessed via the adjacent subway so pupils could use scheduled bus services. Walking is 23.5% which reflects the current proportion of pupils living within 1 mile of the school at the moment. Walking will be encouraged and it is possible that this could be increased as more pupils are admitted to the school. Cycling is 4.43% which is broadly the same as the average from the Hounslow schools.

To conclude this Technical Note has examined the PTAL rates for the school sites that have been used to derive travel mode split and vehicle trip rate information from the TRICS database in comparison to the proposed school PTAL of 1b. Details for the school sites are set out in this Technical Note and these have been used to assess the proposed travel mode split for the school. Vehicular trips have been assessed based on surveys from the nationally recognised TRICS database and for the secondary school category this includes one school (Lampton) in Hounslow. This data does therefore include locally derived survey information and is used to determine the proportion of pupils that might use this mode of travel. The travel mode proportions have been informed from mode split data from schools in Hounslow and the TRICS database and are considered appropriate for this purpose.

Given the work undertaken in this Technical Note it is considered that the junction capacity assessments have been based on appropriate data from the TRICS database and the proposed mode split in Table 16 for trips by car takes this into account.

**TABLE A Primary**

|                               | Travel To School Heston Primary (2015) |              | Travel To School Lionel Primary (2013) |              | Travel To School Hounslow Heath Primary (2014) |              | Travel To School Westbrook Primary (2015) |              | Travel To School the Blue Primary (2010) |              | Travel To School Norwood Green Primary (2013) |              | Travel To School Berkeley Primary (2012) |              | Travel To School Primary average |              |
|-------------------------------|--|--------------|--|--------------|--|--------------|---|--------------|--|--------------|---|--------------|--|--------------|----------------------------------|--------------|
| PTAL                          | 2                                      |              | <1                                     |              | 2  |              | 2   |              | 2  |              | 1b  |              | 2  |              |                                  |              |
| Mode                          | Number of Responses                    | Percentage % | Number of Responses                    | Percentage % | Number of Responses                            | Percentage % | Number of Responses                       | Percentage % | Number of Responses                      | Percentage % | Number of Responses                           | Percentage % | Number of Responses                      | Percentage % | Number of Responses              | Percentage % |
| Car/Taxi                      | 138                                    | 30.73        | 101                                    | 28.45        | 84   | 18.03        | 163                                       | 29.21        | 49                                       | 18.70        | 94  | 30.32        | 68                                       | 16.67        | 697                              | 24.82        |
| Car Share                     | 8                                      | 1.78         | 8                                      | 2.25         | 8  | 1.72         | 3   | 0.54         | 46                                       | 17.56        | 20  | 6.45         | 0  | 0.00         | 93                               | 3.31         |
| Bus                           | 25                                     | 5.57         | 18                                     | 5.07         | 41   | 8.80         | 54  | 9.68         | 6  | 2.29         | 13  | 4.19         | 34                                       | 8.33         | 191                              | 6.80         |
| Train / Tube                  | 1                                      | 0.22         | 1                                      | 0.28         | 0  | 0.00         | 0   | 0.00         | 0  | 0.00         | 0   | 0.00         | 0  | 0.00         | 2                                | 0.07         |
| Cycle                         | 21                                     | 4.68         | 7                                      | 1.97         | 17   | 3.65         | 29  | 5.20         | 7  | 2.67         | 23  | 7.42         | 21                                       | 5.15         | 125                              | 4.45         |
| Walk                          | 234                                    | 52.12        | 215                                    | 60.56        | 283  | 60.73        | 276                                       | 49.46        | 117                                      | 44.66        | 127   | 40.97        | 265                                      | 64.95        | 1517                             | 54.02        |
| Park & Stride                 | 8                                      | 1.78         | 0                                      | 0.00         | 24   | 5.15         | 12  | 2.15         | 22                                       | 8.40         | 23  | 7.42         | 2  | 0.49         | 91                               | 3.24         |
| Scotting                      | 14                                     | 3.12         | 5                                      | 1.41         | 9  | 1.93         | 21  | 3.76         | 15                                       | 5.73         | 10  | 3.23         | 18                                       | 4.41         | 92                               | 3.28         |
| <b>Total</b>                  | 449                                    | 100.00       | 355                                    | 100.00       | 466  | 100.00       | 558                                       | 100.00       | 262                                      | 100.00       | 310   | 100.00       | 408                                      | 100.00       | 2808                             | 100.00       |
| <b>Total by non car modes</b> | 295                                    | 65.70        | 246                                    | 69.30        | 350  | 75.11        | 380                                       | 68.10        | 145                                      | 55.34        | 173   | 55.81        | 338                                      | 82.84        | 1927                             | 68.63        |

**TABLE B Secondary**

|                               | Travel To School Isleworth Syon boys (2011 from 2015 TP) |              | Travel To School Lampton (2011) |              | Travel To School Heston (2014) |              | Travel To School Gumley (2015) |              | Travel To School The Heathland (2013) |              | Travel To School Cranford Community College (2013) |              | Travel To School Chiswick Sch (2015) |              | Travel To School - Secondary Average |              |
|-------------------------------|--|--------------|---------------------------------|--------------|--------------------------------|--------------|--------------------------------|--------------|---------------------------------------|--------------|--|--------------|--------------------------------------|--------------|--------------------------------------|--------------|
| PTAL                          | 2  |              | 2                               |              | 2                              |              | 2                              |              | 2                                     |              | 2  |              | 2                                    |              |                                      |              |
| Mode                          | Number of Responses                                      | Percentage % | Number of Responses             | Percentage % | Number of Responses            | Percentage % | Number of Responses            | Percentage % | Number of Responses                   | Percentage % | Number of Responses                                | Percentage % | Number of Responses                  | Percentage % | Number of Responses                  | Percentage % |
| Car/Taxi                      | 131  | 12.48        | 157                             | 17.60        | 29                             | 20.00        | 109                            | 12.62        | 107                                   | 13.75        | 197  | 18.89        | 46                                   | 6.77         | 776                                  | 14.24        |
| Car Share                     | 30   | 2.86         | 27                              | 3.03         | 3                              | 2.07         | 12                             | 1.39         | 13                                    | 1.67         | 29   | 2.78         | 4                                    | 0.59         | 118                                  | 2.16         |
| Bus                           | 457  | 43.52        | 205                             | 22.98        | 49                             | 33.79        | 545                            | 63.08        | 115                                   | 14.78        | 515  | 49.38        | 268                                  | 39.47        | 2154                                 | 39.52        |
| Train / Tube                  | 74   | 7.05         | 7                               | 0.78         | 0                              | 0.00         | 56                             | 6.48         | 2                                     | 0.26         | 10   | 0.96         | 123                                  | 18.11        | 272                                  | 4.99         |
| Cycle                         | 65   | 6.19         | 25                              | 2.80         | 0                              | 0.00         | 2                              | 0.23         | 46                                    | 5.91         | 8  | 0.77         | 26                                   | 3.83         | 172                                  | 3.16         |
| Walk                          | 293  | 27.90        | 471                             | 52.80        | 61                             | 42.07        | 133                            | 15.39        | 492                                   | 63.24        | 278  | 26.65        | 210                                  | 30.93        | 1938                                 | 35.55        |
| Park & Stride                 | 0  | 0.00         | 0                               | 0.00         | 3                              | 2.07         | 3                              | 0.35         | 2                                     | 0.26         | 4  | 0.38         | 1                                    | 0.15         | 13                                   | 0.24         |
| Scooting                      | 0  | 0.00         | 0                               | 0.00         | 0                              | 0.00         | 4                              | 0.46         | 1                                     | 0.13         | 2  | 0.19         | 1                                    | 0.15         | 8                                    | 0.15         |
| <b>Total</b>                  | 1050   | 100.00       | 892                             | 100.00       | 145                            | 100.00       | 864                            | 100.00       | 778                                   | 100.00       | 1043   | 100.00       | 679                                  | 100.00       | 5451                                 | 100.00       |
| <b>Total by non car modes</b> | 889  | 84.67        | 708                             | 79.37        | 110                            | 75.86        | 740                            | 85.65        | 656                                   | 84.32        | 813  | 77.95        | 628                                  | 92.49        | 4544                                 | 83.36        |

Calculation Reference: AUDIT-311901-150802-0821

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION  
 Category : B - SECONDARY  
**VEHICLES**

Selected regions and areas:

|    |                           |        |
|----|---------------------------|--------|
| 01 | GREATER LONDON            |        |
|    | BN BARNET                 | 1 days |
|    | HM HAMMERSMITH AND FULHAM | 1 days |
|    | HO HOUNSLOW               | 1 days |
|    | IS ISLINGTON              | 1 days |
|    | RD RICHMOND               | 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 pupils  
 Actual Range: 610 to 1395 (units: )  
 Range Selected by User: 610 to 1395 (units: )

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 14/05/12

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    | 1 days |
| Wednesday | 3 days |
| Thursday  | 1 days |

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

Selected survey types:

|                       |        |
|-----------------------|--------|
| Manual count          | 5 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 undertaken using machines.

Selected Locations:

|                                    |   |
|------------------------------------|---|
| Suburban Area (PPS6 Out of Centre) | 5 |
|------------------------------------|---|

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 | 5 |
|------------------|---|

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:

D1 5 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:

10,001 to 15,000 1 days  
25,001 to 50,000 2 days  
50,001 to 100,000 2 days

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

Population within 5 miles:

125,001 to 250,000 1 days  
500,001 or More 4 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 4 days  
1.1 to 1.5 1 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:

Not Known 1 days  
Yes 1 days  
No 3 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 | BN-04-B-01<br>SECONDARY SCHOOL<br>CHESTNUT GROVE  | BARNET                 |
|   | EAST BARNET<br>Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total Number of pupils: 1200<br>Survey date: WEDNESDAY 19/10/05  | Survey Type: MANUAL    |
| 2 | HM-04-B-01<br>SECONDARY SCHOOL<br>KINGWOOD ROAD   | HAMMERSMITH AND FULHAM |
|   | FULHAM<br>Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total Number of pupils: 610<br>Survey date: WEDNESDAY 04/12/02        | Survey Type: MANUAL    |
| 3 | HO-04-B-01<br>LAMPTON SCHOOL<br>LAMPTON AVENUE  | HOUNSLOW               |
|   | HOUNSLOW<br>Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total Number of pupils: 1395<br>Survey date: MONDAY 14/05/12        | Survey Type: MANUAL    |
| 4 | IS-04-B-01<br>SECONDARY SCH.<br>TURLE ROAD  | ISLINGTON              |
|   | FINSBURY PARK<br>Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total Number of pupils: 850<br>Survey date: WEDNESDAY 25/11/09 | Survey Type: MANUAL    |
| 5 | RD-04-B-01<br>SECONDARY SCH.<br>FIFTH CROSS ROAD  | RICHMOND               |
|   | TWICKENHAM<br>Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total Number of pupils: 1027<br>Survey date: THURSDAY 29/11/07    | 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.

MANUALLY DESELECTED SITES

| Site Ref   | Reason for Deselection |
|------------|------------------------|
| LB-04-B-01 | ptal rating 6b         |

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY  
VEHICLES

Calculation factor: 1 PUPILS

BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |             |           | DEPARTURES |             |           | TOTALS   |             |           |
|---------------------|----------|-------------|-----------|------------|-------------|-----------|----------|-------------|-----------|
|                     | No. Days | Ave. PUPILS | Trip Rate | No. Days   | Ave. PUPILS | Trip Rate | No. Days | Ave. PUPILS | 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       | 5        | 1016        | 0.018     | 5          | 1016        | 0.004     | 5        | 1016        | 0.022     |
| 08:00 - 09:00       | 5        | 1016        | 0.081     | 5          | 1016        | 0.038     | 5        | 1016        | 0.119     |
| 09:00 - 10:00       | 5        | 1016        | 0.018     | 5          | 1016        | 0.011     | 5        | 1016        | 0.029     |
| 10:00 - 11:00       | 5        | 1016        | 0.012     | 5          | 1016        | 0.008     | 5        | 1016        | 0.020     |
| 11:00 - 12:00       | 5        | 1016        | 0.007     | 5          | 1016        | 0.009     | 5        | 1016        | 0.016     |
| 12:00 - 13:00       | 5        | 1016        | 0.010     | 5          | 1016        | 0.008     | 5        | 1016        | 0.018     |
| 13:00 - 14:00       | 5        | 1016        | 0.010     | 5          | 1016        | 0.009     | 5        | 1016        | 0.019     |
| 14:00 - 15:00       | 5        | 1016        | 0.014     | 5          | 1016        | 0.020     | 5        | 1016        | 0.034     |
| 15:00 - 16:00       | 5        | 1016        | 0.019     | 5          | 1016        | 0.044     | 5        | 1016        | 0.063     |
| 16:00 - 17:00       | 5        | 1016        | 0.006     | 5          | 1016        | 0.030     | 5        | 1016        | 0.036     |
| 17:00 - 18:00       | 5        | 1016        | 0.003     | 5          | 1016        | 0.013     | 5        | 1016        | 0.016     |
| 18:00 - 19:00       | 4        | 1118        | 0.005     | 4          | 1118        | 0.007     | 4        | 1118        | 0.012     |
| 19:00 - 20:00       |          |             |           |            |             |           |          |             |           |
| 20:00 - 21:00       |          |             |           |            |             |           |          |             |           |
| 21:00 - 22:00       |          |             |           |            |             |           |          |             |           |
| 22:00 - 23:00       |          |             |           |            |             |           |          |             |           |
| 23:00 - 24:00       |          |             |           |            |             |           |          |             |           |
| <b>Total Rates:</b> |          |             | 0.203     |            |             | 0.201     |          |             | 0.404     |

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: 610 - 1395 (units: )  
 Survey date date range: 01/01/00 - 14/05/12  
 Number of weekdays (Monday-Friday): 5  
 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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRICS 7.2.2

Trip Rate P Number of pupils

RANK ORDER for Land Use 04 - EDUCATION/B - SECONDARY

Ranking Type: TOTALS Time Range: 08:00-09:00

85th/15th Percentile Survey Not Highlighted

| Rank | Site Ref     | Description      | Town/City     | PUPILS | Day       | Date       | Arrivals | Departures | Totals | PTAL |
|------|--------------|------------------|---------------|--------|-----------|------------|----------|------------|--------|------|
|      | 1 BN-04-B-01 | SECONDARY SCHOOL | EAST BARNET   | 1200   | Wednesday | 19/10/2005 | 0.145    | 0.049      | 0.194  | 1b   |
|      | 2 RD-04-B-01 | SECONDARY SCH.   | TWICKENHAM    | 1027   | Thursday  | 29/11/2007 | 0.089    | 0.06       | 0.149  | 3    |
|      | 3 IS-04-B-01 | SECONDARY SCH.   | FINSBURY PARK | 850    | Wednesday | 25/11/2009 | 0.048    | 0.033      | 0.081  | 2    |
|      | 4 HO-04-B-01 | LAMPTON SCHOOL   | HOUNSLOW      | 1395   | Monday    | 14/05/2012 | 0.059    | 0.021      | 0.08   | 2    |
|      | 5 HM-04-B-01 | SECONDARY SCHOOL | FULHAM        | 610    | Wednesday | 04/12/2002 | 0.041    | 0.026      | 0.067  | 3    |

RANK ORDER for Land Use 04 - EDUCATION/B - SECONDARY

Ranking Type: TOTALS Time Range: 15:00-16:00

85th/15th Percentile Survey Not Highlighted

| Rank | Site Ref     | Description      | Town/City     | PUPILS | Day       | Date       | Arrivals | Departures | Totals |    |
|------|--------------|------------------|---------------|--------|-----------|------------|----------|------------|--------|----|
|      | 1 BN-04-B-01 | SECONDARY SCHOOL | EAST BARNET   | 1200   | Wednesday | 19/10/2005 | 0.026    | 0.102      | 0.128  | 1b |
|      | 2 HO-04-B-01 | LAMPTON SCHOOL   | HOUNSLOW      | 1395   | Monday    | 14/05/2012 | 0.029    | 0.03       | 0.059  | 2  |
|      | 3 HM-04-B-01 | SECONDARY SCHOOL | FULHAM        | 610    | Wednesday | 04/12/2002 | 0.02     | 0.03       | 0.05   | 3  |
|      | 4 RD-04-B-01 | SECONDARY SCH.   | TWICKENHAM    | 1027   | Thursday  | 29/11/2007 | 0.013    | 0.029      | 0.042  | 3  |
|      | 5 IS-04-B-01 | SECONDARY SCH.   | FINSBURY PARK | 850    | Wednesday | 25/11/2009 | 0.001    | 0.013      | 0.014  | 2  |

Calculation Reference: AUDIT-311901-150802-0831

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION

Category : A - PRIMARY

## VEHICLES

Selected regions and areas:

|    |                |          |        |
|----|----------------|----------|--------|
| 01 | GREATER LONDON |          |        |
|    | BN             | BARNET   | 1 days |
|    | CN             | CAMDEN   | 1 days |
|    | EN             | ENFIELD  | 1 days |
|    | HO             | HOUNSLOW | 1 days |
|    | LW             | LEWISHAM | 1 days |
|    | NH             | NEWHAM   | 1 days |
|    | RD             | RICHMOND | 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 pupils  
 Actual Range: 90 to 461 (units: )  
 Range Selected by User: 90 to 461 (units: )

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/03 to 18/11/13

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   | 1 days |
| Wednesday | 1 days |
| Thursday  | 1 days |
| Friday    | 1 days |

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

Selected survey types:

|                       |        |
|-----------------------|--------|
| Manual count          | 7 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 undertaken using machines.

Selected Locations:

|  |   |
|--|---|
| Edge of Town Centre                      | 1 |
| Suburban Area (PPS6 Out of Centre)       | 4 |
| Edge of Town                             | 1 |
| Neighbourhood Centre (PPS6 Local Centre) | 1 |

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 | 6 |
| Built-Up Zone    | 1 |

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:

D1 7 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:

10,001 to 15,000 1 days  
25,001 to 50,000 4 days  
50,001 to 100,000 2 days

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

Population within 5 miles:

125,001 to 250,000 1 days  
250,001 to 500,000 1 days  
500,001 or More 5 days

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

Car ownership within 5 miles:

0.5 or Less 1 days  
0.6 to 1.0 5 days  
1.1 to 1.5 1 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 7 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 | BN-04-A-01<br>CHASE SIDE  | PRIMARY SCHOOL |  | BARNET                          |
|   | EAST BARNET<br>Edge of Town<br>Residential Zone<br>Total Number of pupils: 90<br>Survey date: FRIDAY 07/10/05                             |                |  |                                 |
| 2 | CN-04-A-01<br>PRINCESS ROAD   | PRIMARY SCHOOL |  | CAMDEN<br>Survey Type: MANUAL   |
|   | PRIMROSE HILL<br>Edge of Town Centre<br>Residential Zone<br>Total Number of pupils: 403<br>Survey date: MONDAY 10/12/12                   |                |  |                                 |
| 3 | EN-04-A-01<br>CUCKOO HALL LANE  | PRIMARY SCHOOL |  | ENFIELD<br>Survey Type: MANUAL  |
|   | EDMONTON<br>Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total Number of pupils: 180<br>Survey date: WEDNESDAY 16/05/12      |                |  |                                 |
| 4 | HO-04-A-01<br>BUCKINGHAM ROAD   | PRIMARY SCHOOL |  | HOUNSLOW<br>Survey Type: MANUAL |
|   | HANWORTH<br>Neighbourhood Centre (PPS6 Local Centre)<br>Residential Zone<br>Total Number of pupils: 320<br>Survey date: THURSDAY 29/11/07 |                |  |                                 |
| 5 | LW-04-A-01<br>EVELYN STREET   | PRIMARY SCHOOL |  | LEWISHAM<br>Survey Type: MANUAL |
|   | LEWISHAM<br>Suburban Area (PPS6 Out of Centre)<br>Built-Up Zone<br>Total Number of pupils: 461<br>Survey date: TUESDAY 27/02/07           |                |  |                                 |
| 6 | NH-04-A-01<br>HOSKINS CLOSE   | PRIMARY SCHOOL |  | NEWHAM<br>Survey Type: MANUAL   |
|   | BECKTON<br>Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total Number of pupils: 422<br>Survey date: MONDAY 18/11/13          |                |  |                                 |
| 7 | RD-04-A-01<br>UPPER RICHMOND RD W.  | PRIMARY SCHOOL |  | RICHMOND<br>Survey Type: MANUAL |
|   | EAST SHEEN<br>Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total Number of pupils: 412<br>Survey date: MONDAY 24/03/03       |                |  |                                 |

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.

MANUALLY DESELECTED SITES

| Site Ref   | Reason for Deselection |
|------------|------------------------|
| HK-04-A-01 | PTAL 5                 |



TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY  
VEHICLES

Calculation factor: 1 PUPILS

BOLD print indicates peak (busiest) period

| Time Range          | ARRIVALS |             |           | DEPARTURES |             |           | TOTALS   |             |           |
|---------------------|----------|-------------|-----------|------------|-------------|-----------|----------|-------------|-----------|
|                     | No. Days | Ave. PUPILS | Trip Rate | No. Days   | Ave. PUPILS | Trip Rate | No. Days | Ave. PUPILS | 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       | 7        | 327         | 0.024     | 7          | 327         | 0.003     | 7        | 327         | 0.027     |
| 08:00 - 09:00       | 7        | 327         | 0.097     | 7          | 327         | 0.056     | 7        | 327         | 0.153     |
| 09:00 - 10:00       | 7        | 327         | 0.019     | 7          | 327         | 0.027     | 7        | 327         | 0.046     |
| 10:00 - 11:00       | 7        | 327         | 0.006     | 7          | 327         | 0.005     | 7        | 327         | 0.011     |
| 11:00 - 12:00       | 7        | 327         | 0.007     | 7          | 327         | 0.007     | 7        | 327         | 0.014     |
| 12:00 - 13:00       | 7        | 327         | 0.022     | 7          | 327         | 0.014     | 7        | 327         | 0.036     |
| 13:00 - 14:00       | 7        | 327         | 0.020     | 7          | 327         | 0.023     | 7        | 327         | 0.043     |
| 14:00 - 15:00       | 7        | 327         | 0.023     | 7          | 327         | 0.014     | 7        | 327         | 0.037     |
| 15:00 - 16:00       | 7        | 327         | 0.046     | 7          | 327         | 0.082     | 7        | 327         | 0.128     |
| 16:00 - 17:00       | 7        | 327         | 0.006     | 7          | 327         | 0.025     | 7        | 327         | 0.031     |
| 17:00 - 18:00       | 7        | 327         | 0.001     | 7          | 327         | 0.010     | 7        | 327         | 0.011     |
| 18:00 - 19:00       | 6        | 313         | 0.000     | 6          | 313         | 0.003     | 6        | 313         | 0.003     |
| 19:00 - 20:00       |          |             |           |            |             |           |          |             |           |
| 20:00 - 21:00       |          |             |           |            |             |           |          |             |           |
| 21:00 - 22:00       |          |             |           |            |             |           |          |             |           |
| 22:00 - 23:00       |          |             |           |            |             |           |          |             |           |
| 23:00 - 24:00       |          |             |           |            |             |           |          |             |           |
| <b>Total Rates:</b> |          |             | 0.271     |            |             | 0.269     |          |             | 0.540     |

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: 90 - 461 (units: )  
 Survey date date range: 01/01/03 - 18/11/13  
 Number of weekdays (Monday-Friday): 7  
 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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRICS 7.2.2

Trip Rate Pair Number of pupils

RANK ORDER for Land Use 04 - EDUCATION/A - PRIMARY

Ranking Type: TOTALS Time Range: 08:00-09:00

85th/15th Percentile Survey Not Highlighted

| Rank | Site Ref   | Description    | Town/City     | PUPILS | Day       | Date       | Arrivals | Departures | Totals | PTAL |
|------|------------|----------------|---------------|--------|-----------|------------|----------|------------|--------|------|
| 1    | EN-04-A-01 | PRIMARY SCHOOL | EDMONTON      | 180    | Wednesday | 16/05/2012 | 0.222    | 0.189      | 0.411  | 2    |
| 2    | BN-04-A-01 | PRIMARY SCHOOL | EAST BARNET   | 90     | Friday    | 07/10/2005 | 0.256    | 0.067      | 0.323  | 1b   |
| 3    | LW-04-A-01 | PRIMARY SCHOOL | LEWISHAM      | 461    | Tuesday   | 27/02/2007 | 0.117    | 0.074      | 0.191  | 2    |
| 4    | CN-04-A-01 | PRIMARY SCHOOL | PRIMROSE HILL | 403    | Monday    | 10/12/2012 | 0.089    | 0.052      | 0.141  | 2    |
| 5    | NH-04-A-01 | PRIMARY SCHOOL | BECKTON       | 422    | Monday    | 18/11/2013 | 0.076    | 0.047      | 0.123  | 2    |
| 6    | RD-04-A-01 | PRIMARY SCHOOL | EAST SHEEN    | 412    | Monday    | 24/03/2003 | 0.063    | 0.027      | 0.09   | 2    |
| 7    | HO-04-A-01 | PRIMARY SCHOOL | HANWORTH      | 320    | Thursday  | 29/11/2007 | 0.034    | 0.003      | 0.037  | 1b   |

RANK ORDER for Land Use 04 - EDUCATION/A - PRIMARY

Ranking Type: TOTALS Time Range: 15:00-16:00

85th/15th Percentile Survey Not Highlighted

| Rank | Site Ref   | Description    | Town/City     | PUPILS | Day       | Date       | Arrivals | Departures | Totals | PTAL |
|------|------------|----------------|---------------|--------|-----------|------------|----------|------------|--------|------|
| 1    | EN-04-A-01 | PRIMARY SCHOOL | EDMONTON      | 180    | Wednesday | 16/05/2012 | 0.022    | 0.272      | 0.294  | 2    |
| 2    | BN-04-A-01 | PRIMARY SCHOOL | EAST BARNET   | 90     | Friday    | 07/10/2005 | 0.022    | 0.211      | 0.233  | 1b   |
| 3    | LW-04-A-01 | PRIMARY SCHOOL | LEWISHAM      | 461    | Tuesday   | 27/02/2007 | 0.08     | 0.102      | 0.182  | 2    |
| 4    | CN-04-A-01 | PRIMARY SCHOOL | PRIMROSE HILL | 403    | Monday    | 10/12/2012 | 0.082    | 0.084      | 0.166  | 2    |
| 5    | NH-04-A-01 | PRIMARY SCHOOL | BECKTON       | 422    | Monday    | 18/11/2013 | 0.031    | 0.045      | 0.076  | 2    |
| 6    | RD-04-A-01 | PRIMARY SCHOOL | EAST SHEEN    | 412    | Monday    | 24/03/2003 | 0.032    | 0.039      | 0.071  | 2    |
| 7    | HO-04-A-01 | PRIMARY SCHOOL | HANWORTH      | 320    | Thursday  | 29/11/2007 | 0.009    | 0.009      | 0.018  | 1b   |