1 Accessibility

Public Transport Accessibility

Introduction

1.1 Public Transport Accessibility Levels (PTALs) are a detailed and accurate measure of the accessibility of a point to the public transport network, taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport network at a particular point.

1.2 The current methodology was developed in 1992, by the London Borough of Hammersmith & Fulham. The model has been thoroughly reviewed and tested, and has been agreed by the London Borough-led PTAL development group as the most appropriate use across London.

1.3 The results of a PTAL calculation assign a Level of between 1a, representing very low public transport accessibility and 6b, representing very high public transport accessibility, to any given site or Point of Interest (POI).

1.4 Transport for London (TfL) currently have the capability to produce PTAL mapping only at borough-level, although by March 2005 ward-level mapping will also be available.

1.5 An edition of the PTAL TfL-produced map for LB Waltham Forest can be found at Appendix E. This map shows the Blackhorse Lane area to have PTALs ranging from Level 1a in the centre of the Higham Hill residential area to Level 3 close to Blackhorse Road Station.

1.6 The TfL-produced mapping gives a broad picture of the public transport accessibility of a borough. However, they also produce guidance on calculating the PTAL of any individual location, enabling a closer look at localised areas. The map in Appendix E supplies the locations of 6 points which JMP have performed individual PTAL calculations, that relate to 6 area's of specific interest.

Methodology

1.7 Calculating the PTAL of a site involves a number of different factors including the proximity of the site to public transport stations or stops (known as Service Access Points) for different public transport modes and route, and the AM peak frequency of those services. The calculation gives a Public Transport Accessibility Index (PTAI). These indices can be allocated to bands of PTAL as shown in the **Table 1.1** below.

T 1.1 PTAL Bands

PTAL	Range of Index
1a (Low)	0.01 – 2.50
1b	2.51 – 5.00
2	5.01 – 10.00
3	10.01 – 15.00
4	15.01 – 20.00
5	20.01 – 25.00
6a	25.01 – 40.00
6b (High)	40.01 +

1.8 Using the TfL guidance a PTAL calculation has been carried out for a total of 6 sites around the Blackhorse Lane area. These sites are:

- Blackhorse Lane South Industrial Area (around Hookers Road);
- Sutherland Road Industrial Area (north of Highams Lodge Business Centre);
- Blackhorse Lane North Industrial Area (north of the Uplands Business Park);
- Billet Road West Industrial Area (east of Kimberly Road);
- Billet Road East Industrial Area (off Waltham Park Way); and,
- Billet Road West Residential Area (centred on Lawrence Avenue).

Blackhorse Lane South Industrial Area

1.9 This site is within walking distance of Blackhorse Road Station, served by the Victoria Line LUL and the North London Line National Rail, as well as bus stops serving bus routes 123, 158 and 230.

1.10 This gives it a PTAI of 10.38, representing a PTAL of 3. However, as its PTAL falls only just into the PTAL 3 band, any reduction in service accessibility, such as increased walk distance to a bus stop or increased wait times caused by reduced service frequency, could result in a reduction in its PTAL to Level 2.

Sutherland Road Industrial Area

1.11 Although this site is a longer walk from Blackhorse Road Station than Blackhorse Lane South it is still within PTALs maximum walk distance. It is also within walking distance of bus stops serving two different routes – the 158 and the W15.

1.12 Its PTAI is therefore slightly lower than that of the Blackhorse Lane South with an index of 8.48, giving it a PTAL of 2. Bus service frequencies along Blackhorse Lane and Billet road would need to be significantly increased to raise the PTAL of this site to Level 3.

Blackhorse Lane North Industrial Area

1.13 This site is outside walking distance of Blackhorse Road Station and so the only SAPs accessible in terms of the PTAL calculation are bus stops on Route 158 and W15.

1.14 As such it has a PTAI of only 4.23, representing a PTAL of 1b, although with an increase in service frequency along the bus routes, in particular the 158, the PTAL of this site could be increased to 2.

Billet Road West Industrial Area

1.15 This industrial area is not within walking distance of any station but is within walking distance of bus stops serving three different routes – the 158, the W11 and the W15.

1.16 It has a PTAI of 6.39, equating to a PTAL of 2.

Billet Road Industrial Area

1.17 This site is within walking distance of the busy Crooked Billet roundabout and, as such, is within walking distance of bus stops for the six different bus routes that use the roundabout – routes 158, 215, 34, 97, 357 and W11.

1.18 The high number of bus services gives the site a relatively high PTAI, considering that the site is not within walking distance of a station. Its PTAI is 8.87, representing a PTAL of 2.

Billet Road West Residential Area

1.19 This residential area is to the north of Billet Road, a little east of its dog-leg, and is centred on Lawrence Avenue. It is within walking distance of bus stops serving only two routes – the 158 and the W15.

1.20 It has a PTAI of 5.00, which is at the very top of PTAL band 1b. With a very slight improvement to either of these bus services the PTAL of this site could be raised to 2.

1.21 Table 1.2 gives a summary of the PTAIs and PTALs of the six different sites.

T 1.2 PTAI and PTAL Summary

	PTAI	PTAL
Blackhorse Lane South Industrial Area	10.32	3
Sutherland Road Industrial Area	8.44	2
Blackhorse Lane North Industrial Area	4.23	1b
Billet Road West Industrial Area	6.39	2
Billet Road East Industrial Area	8.87	2
Billet Road West Residential Area	5.00	1b

Trip Rate Analysis

Introduction

1.22 Traffic movement counts are informative on the level of traffic flows and demand at junctions. However, they do not differentiate between non-local and locally generated traffic. An understanding of this split is fundamental to establishing an appropriate traffic management strategy for the area.

1.23 So far, traffic movement and routing analysis appears to imply a significant level of through-traffic along the B179. There are two potential approaches to understanding the base level split between non-local and local traffic:

- Origin – Destination surveys
- Trip rate analysis of surrounding developments

1.24 The former extends the method of direct observation to identify routing of individual vehicles through the local road network. This method can prove expensive in terms of data collection, depending upon the extent to which routing needs to be understood. In the case of understanding the use of the B179 for through movements, observation points would be required at:

- Blackhorse Station junction Blackhorse Lane (N) arm and Forest Road (E) arm
- Junction Higham Hill / Billet Road all arms
- Crooked Billet Roundabout entry/exit arm to Billet Road

1.25 The number-plate matching techniques for collecting accurate origin-destination data are demanding on surveyors, and also require a significant degree of post-processing of data.

1.26 The latter works by separate estimation of the levels of locally generated traffic. These estimates can be validated by some ad-hoc surveys, and can be subsequently compared with total traffic counts to establish the split between non-local through traffic and locally generated traffic.