Ticket queuing times at major rail stations

Summary of research commissioned by Passenger Focus

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Foreword

The ever-growing number of people using rail means that the ease of purchasing a ticket is increasingly becoming a concern for passengers. The Autumn 2007 National Passenger Survey, found that almost one in six rated ticket-buying facilities as poor. Most passengers have to pay a penalty if they fail to buy a ticket before boarding the train: this emphasises the need for train companies to sell tickets without delaying passengers.

Passenger Focus is looking closely at the issue of ticket retailing. Our report *'Ticketing for the future?'* looked at potential new forms of ticketing technologies such as smart cards and tickets via mobile phones[1]. We are also undertaking joint research with South West Trains (SWT) to understand the barriers to using ticket machines and what can be done to reduce queuing times at stations.

However, many people still rely on the station ticket office and for these users the issue of queuing times to purchase tickets is topmost priority. This is far from being an isolated concern. In 2007 our research into national priorities for improvement found that improvements to queuing times was the sixth highest priority out of 30 different criteria tested, coming just behind traditional priorities such as fares, punctuality, getting a seat and information[2].

The rail industry standards on queuing time are that the industry must make 'reasonable endeavours' so that no one has to queue for more than five minutes during peak periods and three minutes during off-peak periods. Mystery shopping carried out by Passenger Focus in early 2007 indicated that these standards were being exceeded at certain times, especially at larger stations[3].

It was for this reason that Passenger Focus commissioned the current research which takes a more detailed look at queuing times at 12 major Category A stations[4] across Britain. The results will help us to identify what can be done to make buying a ticket easier for passengers.

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[1] *Ticketing for the future?*, Passenger Focus, January 2008
[2] *Passengers' priorities for improvements in rail services,* Passenger Focus, July 2007
[3] *Mystery shop of rail ticket retailing,* Passenger Focus, March 2007
[4] Rail groups stations into six groups (A-F) on the basis of both size and facilities. A-Category stations are the largest (e.g. London Victoria), with F being the smallest (e.g. Taffs Well).

Executive summary

In September 2007, Passenger Focus commissioned independent market research agency TNS to undertake a study to measure queuing times at 12 major Category A stations that were found to be the poorest performers in the mystery shopping research undertaken in March 2007. The aim was to get a broad picture of queuing times across all times of the day and the days of the week at both ticket machines and ticket offices. This data would provide useful insight into whether the service is currently meeting the industry's Ticketing and Settlement Agreement (TSA) standard, which states that passengers should not queue for more than five minutes during the peak and three minutes during the off-peak to buy tickets at stations.

Our research found varying results between individual stations. However, there were two distinct groups, with stations outside London performing better than stations within London:

Peak vs. off-peak

- The off-peak queuing times were longer than the peak, with one in six passengers queuing longer than three minutes compared to only 5% of passengers queuing for more than five minutes during the peak.

- During peak time, passengers at Birmingham New Street did not have to wait more than five minutes. Whereas at London Kings Cross, one in seven passengers had to queue longer than five minutes.

- Across all stations, weekends had the longest queues with one in five (21%) passengers queuing for more than three minutes. Almost two out of five passengers at London Victoria had to wait longer than three minutes at the weekend.

Ticket machines vs. ticket offices

- Generally ticket offices had longer queues compared to ticket machines. The average queuing time at ticket offices was over two minutes compared with only one minute at ticket machines.

- 41% of all timings observed at ticket machines did not have a queue, whereas only 18% of all timings taken at ticket offices reported no queues.

- For ticket offices, nearly three out of 10 passengers queued more than three minutes during the off-peak compared with 9% during the peak. London Kings Cross had the worst queuing times during the peak and off-peak (one in four waited more than five minutes in the peak and three out of five queued more than three minutes in the off-peak).

- During the weekend, London Victoria had the worst queue lengths at ticket offices with three out of five passengers queuing more than three minutes.

- Birmingham New Street had no passengers queuing more than five minutes during the peak to use a ticket machine.

Introduction

The latest results of the National Passenger Survey (NPS) undertaken by Passenger Focus indicate that almost one in six passengers (15%) is dissatisfied with ticket-buying facilities offered at stations[5]. Research undertaken early in 2007[6] highlighted that the largest stations had the longest queues. Following this, Passenger Focus commissioned TNS to undertake follow-up research to measure queuing times at 12 Category A[7] stations, which were found to be the poorest performers in the previous research.

A long wait to purchase a ticket not only increases the overall journey time but also can be stressful to the passenger and it undermines the attractiveness of rail as a travel option. Where ticket queues exceed expected length, passengers may run the risk of missing their intended train.

At most of the stations surveyed automatic gates prevent ticketless passengers from reaching platforms. However, if they do manage to board trains without tickets from most of these stations such as London Victoria, penalty fares apply[8]. On services from other stations such as Manchester Piccadilly, passengers are generally charged the standard fare without any reduced-rate options if they board without a ticket.

The research aimed to get an in-depth picture of queuing times at these stations at all times of the day and days of the week, at ticket machines and at ticket offices.

How was the research carried out?

Between December 2007 and January 2008 a team of specially-trained fieldworkers employed by TNS undertook shifts at 12 stations during the peak and off-peak period[9]. The shifts involved alternating between ticket offices and ticket machines every hour. Timings were taken every three minutes by selecting a person as they joined the queue and recording the time elapsed before they were served. The fieldworkers were assigned specially programmed handheld devices to record the timings. If there was no queue, this was also recorded.

The observations were undertaken at 12 stations:

- Birmingham New Street
- Cardiff Central
- Glasgow Central[10]
- Leeds
- Liverpool Lime Street
- London Bridge
- London Cannon Street
- London Kings Cross[11]
- London Liverpool Street
- London Victoria
- London Waterloo
- Manchester Piccadilly

[5] *National Rail Passenger Survey,* Passenger Focus, Autumn 2007
[6] *Mystery shop of rail ticket retailing,* Passenger Focus, March 2007
[7] Rail groups stations into six groups (A-F) on the basis of both size and facilities. Category A stations are the largest (e.g. London Victoria), with F being the smallest (e.g. Taffs Well).
[8] Penalty fare – e.g. a fixed charge of £20 or twice the full single fare. The higher fare of the two applies.
[9] Peak hour defined as 7am-10am and 4pm-7pm, Monday to Friday. Off-peak hours are defined as all other times.
[10] First ScotRail ticket office and ticket machines were observed.
[11] National Express East Coast ticket office and ticket machines were observed.

Key findings

The target was to collect 2,000 measurements at each station, evenly split between ticket offices and ticket machines. A total of 27,266 timings were collected across the 12 stations with 13,406 timings observed at ticket offices and 13,860 at ticket machines.

Throughout the report we have compared the findings with the TSA standard, which states that rail passengers purchasing tickets at stations should expect to queue no longer than five minutes during peak times and three minutes during off-peak periods.

Overall measurements

The average queuing time varied by station with the non-London stations performing better than the London stations. However, actual queuing times were very different with instances where passengers did not have to queue at all through to one occasion where a passenger queued for 23 minutes at London Kings Cross on a Sunday.

Stations with the highest passenger volumes are not necessarily the worst performers. London Waterloo is the busiest station with 61 million passengers a year but does not suffer from the longest queuing times. In fact it is just below the average, whereas London Kings Cross - with 20 million passengers - has the longest queuing times.

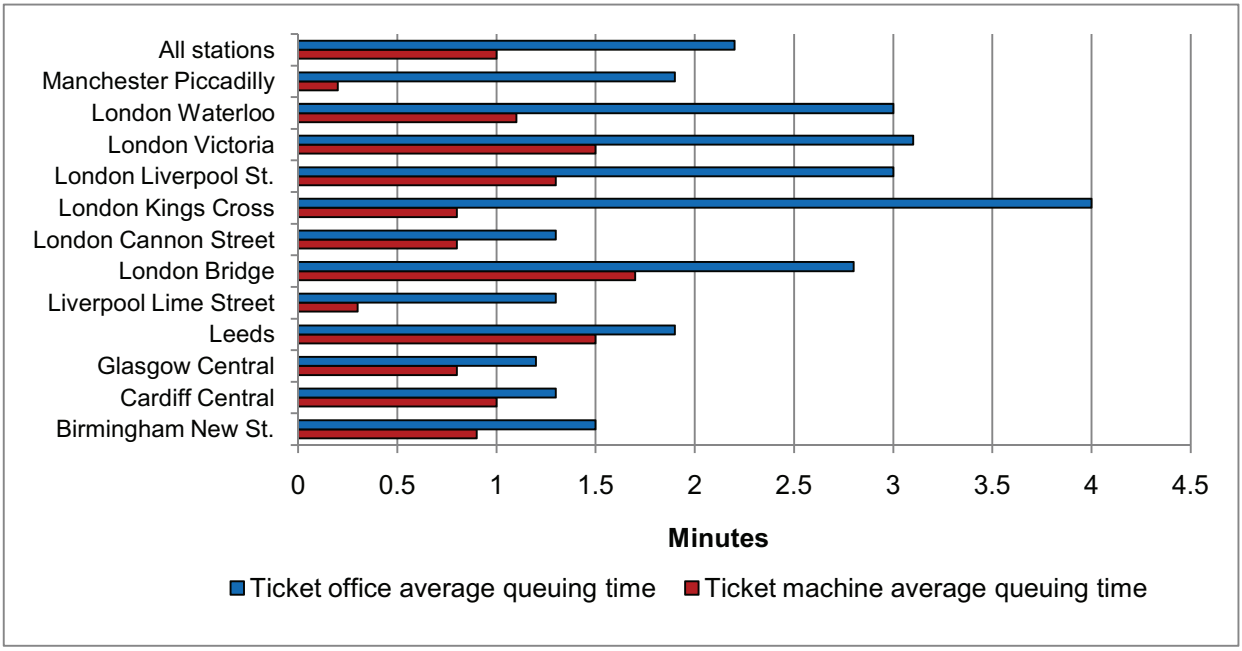
Table 1: Average queue lengths (in minutes) per station and passenger volume[12]

	Total sample size	Ticket office	Ticket machine	Passenger volumes (millions)
Liverpool Lime St.	2065	1.3	0.3	14.4
Glasgow Central	2201	1.2	0.8	29.4
London Cannon St.	2100	1.3	0.8	17.6
Manchester Piccadilly	2237	1.9	0.2	21.2
Birmingham New St.	2126	1.5	0.9	17.3
Cardiff Central	2072	1.3	1.0	8.4
Leeds	2202	1.9	1.5	16.1
London Waterloo	2433	3.0	1.1	61.0
London Bridge	2315	2.8	1.7	37.4
London Liverpool St.	2585	3.0	1.3	47.3
London Victoria	2738	3.1	1.5	47.9
London Kings Cross	2192	4.0	0.8	20.3
All stations	**27266**	**2.2**	**1.0**	

[12] Passenger Volumes 2005/06 published by DeltaRail Group in May 2007.

Overall, the average queuing time at ticket offices was longer (in some cases almost double) than at ticket machines as shown in Chart A below.

Chart A: Average queuing times at ticket offices and ticket machines



Peak versus off-peak

Although the average data show that only 5% of passengers had to queue for more than five minutes during the peak, it does vary considerably by individual station. During the peak, London Kings Cross suffers the worst average queue length with one in seven (14%) passengers waiting more than five minutes, followed by London Waterloo (11%). Birmingham New Street on the other hand did not have any passengers queuing more than five minutes in the peak. In general, the queuing times at non-London stations were shorter than in the capital.

Table 2: Percentage of passengers queuing more than five minutes during the peak

	Peak times Percentage of passenger queuing more than five minutes	
	Base	**All peak**
Birmingham New St.	1002	0%
Liverpool Lime St.	1036	2%
Glasgow Central	1030	2%
Manchester Piccadilly	1022	2%
Cardiff Central	1003	2%
London Victoria	1215	3%
Leeds	1039	3%
London Cannon St.	991	4%
London Liverpool St.	1038	8%
London Bridge	1266	9%
London Waterloo	990	11%
London Kings Cross	1035	14%
All stations	**12667**	**5%**

The off-peak queuing times were significantly longer than the peak, with one in six passengers queuing for more than three minutes. Further analysis reveals that the weekend had the worst queuing times with one in five (21%) passengers queuing more than three minutes, which is longer than the TSA standard of three minutes or less. The busiest time over the weekend was between 11am and 3pm, with 26% of passengers queuing longer than three minutes.

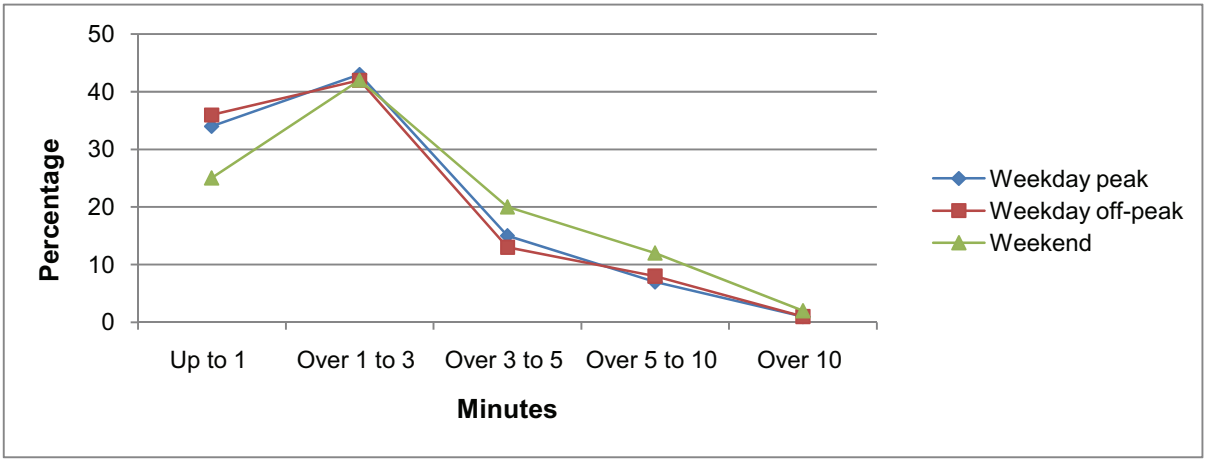
Liverpool Lime Street had the shortest queuing time (8% queuing more than three minutes) and London Victoria had the longest with almost two in five passengers queuing longer than three minutes at the weekend (see Table 3 below).

Table 3: Percentage of passengers queuing more than three minutes during the off-peak period

Off-peak times Percentage of passengers queuing more than three minutes	Base	All off-peak	Weekend	Weekday off-peak
Glasgow Central	1171	5%	9%	1%
Birmingham New St.	1124	7%	14%	3%
Cardiff Central	1069	8%	10%	6%
Liverpool Lime St.	1029	10%	8%	14%
London Cannon St.	1109	11%	* N/A	11%
Leeds	1163	15%	15%	15%
London Waterloo	1443	18%	16%	20%
Manchester Piccadilly	1215	18%	19%	18%
London Bridge	1049	23%	28%	16%
London Liverpool St.	1547	24%	28%	19%
London Victoria	1523	26%	37%	16%
London Kings Cross	1157	33%	31%	46%
All Stations	**14599**	**17%**	**21%**	**13%**

** London Cannon Street station is closed at weekends*

Chart B: Passenger queue lengths at ticket offices

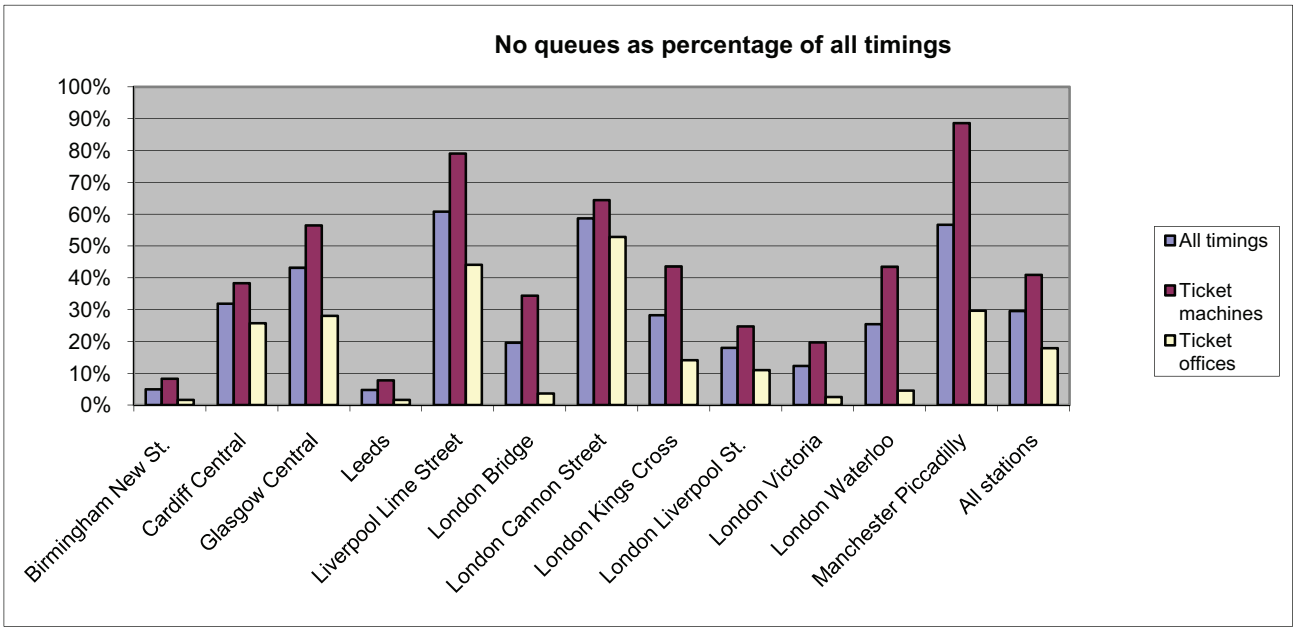


Passengers not queuing

On 8,066 occasions (30%) passengers did not have to wait at all. Ticket machines showed a higher percentage of passengers not having to queue (41%) compared with ticket offices (18%); see Chart C. Manchester Piccadilly and Liverpool Lime Street had the highest percentage of observations which had no queues at ticket machines. As far as ticket offices are concerned the lowest number of queues was reported at London Cannon Street.

The absence of queues at ticket offices were most frequently reported during the weekday morning peak (24%) and weekday off-peak (22%) period, which suggests that the busiest times were during the evening peak hours (4pm – 7pm) and weekends.

Chart C: Percentage of timings with no queues



Ticket offices vs. ticket machines

Ticket offices had longer queuing times than ticket machines throughout the peak and off-peak periods. During the off-peak, almost three out of 10 passengers had to queue for more than three minutes at ticket offices compared to ticket machines where only 6% of passengers had to queue. Glasgow Central and Cardiff Central had the shortest queuing times at ticket offices during the off-peak with only 8% of passengers queuing for more than three minutes.

However, London Kings Cross had the longest average queuing times at ticket offices during the peak and off-peak period. One in four passengers had to queue for more than five minutes during the peak and almost three out of five passengers queued for more than three minutes in the off-peak as shown in Table 4. In contrast, queues at ticket machines were rare at this station.

The worst queue lengths occurred at weekends compared with the weekday off-peak, with 34% of passengers queuing more than three minutes. London Victoria had the longest ticket office queuing times over the weekend with three out of five passengers queuing more than three minutes; of these, 8% had to queue for more than 10 minutes.

During the peak, passengers at Birmingham New Street did not have to queue for more than five minutes at either ticket offices or ticket machines. In addition to Birmingham New Street, Cardiff Central, Leeds, London Victoria and Manchester Piccadilly also recorded no queues over five minutes during the peak at ticket machines.

Overall, ticket machine average queuing times were shorter than those at ticket offices as shown in Table 5 below.

Table 4: Percentage of passengers queuing during the peak and off-peak for ticket machines and ticket offices

	Peak times % queuing more than five minutes		Off-peak times % queuing more than three minutes	
	Ticket office	Ticket machines	Ticket office	Ticket machines
Birmingham New St.	0%	0%	11%	1%
Liverpool Lime St.	3%	1%	18%	3%
Glasgow Central	2%	1%	8%	2%
Manchester Piccadilly	3%	0%	31%	1%
Cardiff Central	3%	0%	8%	8%
London Victoria	6%	0%	46%	13%
Leeds	5%	0%	20%	10%
London Cannon St.	8%	2%	18%	1%
London Liverpool St.	15%	1%	37%	11%
London Bridge	14%	4%	37%	11%
London Waterloo	13%	9%	34%	4%
London Kings Cross	26%	1%	62%	2%
All stations	**9%**	**2%**	**28%**	**6%**

Table 5: Average queuing times (in minutes) at ticket offices and ticket machines

	Ticket Offices			Ticket Machines		
	Weekday peak	**Weekday off-peak**	**Weekend**	**Weekday peak**	**Weekday off-peak**	**Weekend**
Liverpool Lime St.	0.9	2.1	1.5	0.3	0.4	0.3
Glasgow Central	1.2	0.5	1.8	1.0	0.4	0.7
London Cannon St.	1.6	1.1	N/A	0.7	0.8	N/A
Manchester Piccadilly	1.4	2.6	2.1	0.2	0	0.5
Birmingham New St.	1.1	1.4	2.3	1.0	0.8	1.0
Cardiff Central	1.4	0.9	1.6	0.8	1.3	1.2
Leeds	2.1	1.7	1.8	1.3	1.6	1.6
London Waterloo	3.1	4.3	2.5	1.5	0.8	1.0
London Bridge	3.0	1.3	3.5	1.6	2.5	1.4
London Liverpool St.	3.1	2.7	3.1	1.1	1.2	1.7
London Victoria	2.5	3.1	4.3	1.6	1.3	1.8
London Kings Cross	3.6	5.1	4.0	0.7	0.9	1.0
All stations	**2.1**	**1.9**	**2.7**	**1.0**	**1.0**	**1.2**

Days of the week

Across all stations, performance at weekends was worse than on weekdays and especially in the peak. The London stations performed worse than the non-London stations. See Charts D and E below, which shows the queuing times broken down by day of the week.

In general, Thursdays had the lowest average queue length (0.9 minutes) and Saturdays were the worst (1.4 minutes). There were exceptions to this at some stations.

Non-London stations:

- Birmingham New Street and Cardiff Central had the longest queue lengths on Sundays
- Leeds had the longest queues on Fridays.

London stations:

- Kings Cross had the longest queues on Fridays. However, Liverpool Street was worst on Sundays and Waterloo on Wednesdays.

London Victoria has particular problems on Saturdays, when its average queuing time is 3.6 minutes.

Chart D: Average queuing times (in minutes) by day of the week for non-London stations

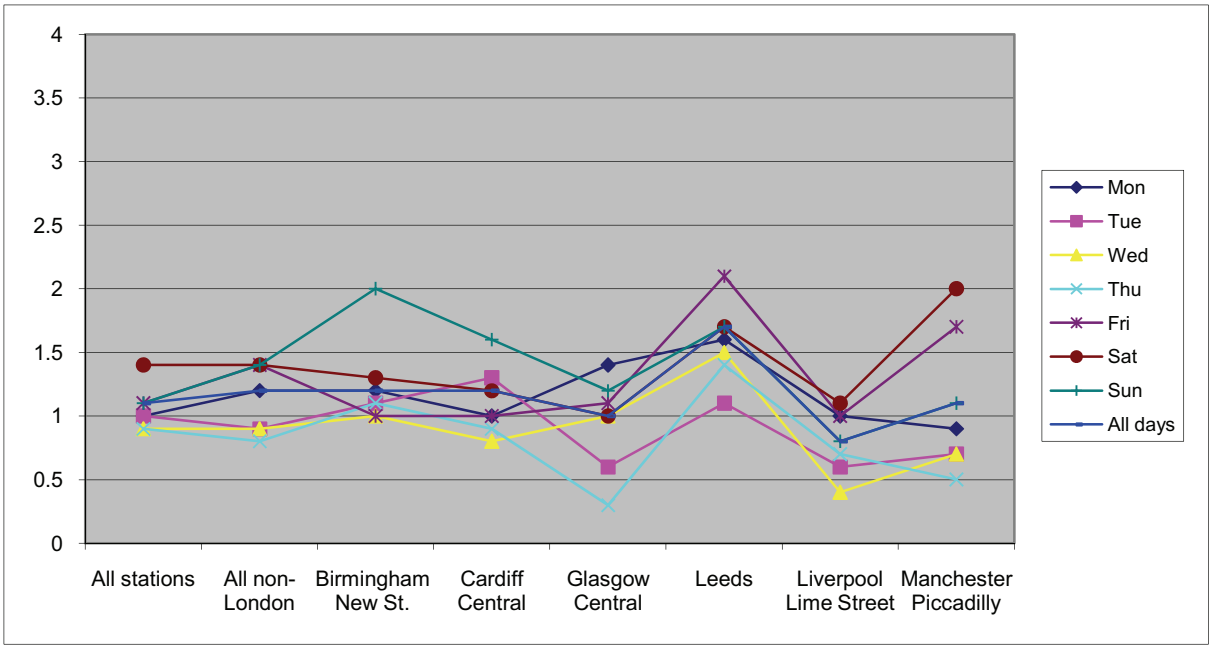
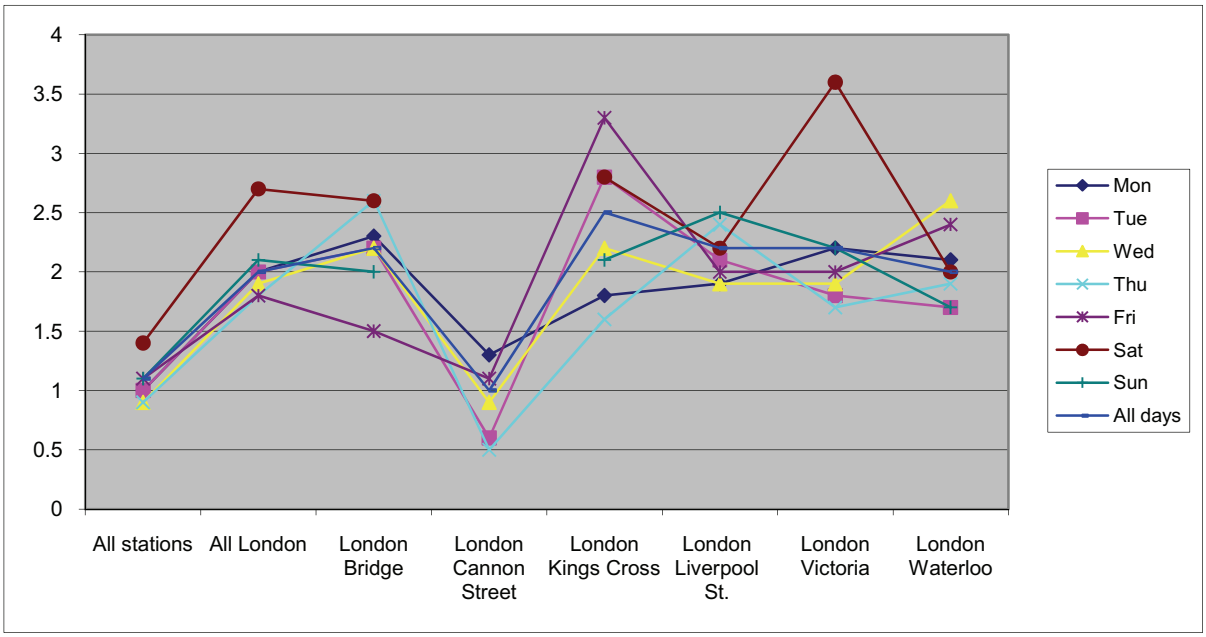


Chart E: Average queuing times (in minutes) by day of the week for London stations



Satisfaction with ticket-buying facilities

NPS records the overall satisfaction of rail passengers with ticket-buying facilities. Charts F and G shows the satisfaction scores for the London and non-London stations and is included here to give a complete picture. Generally the percentage of passengers satisfied is higher at the non-London stations than the London stations.

However, since the data are not weighted by station and have small sample sizes, it is not advisable to directly compare these data with the above research findings. London Cannon Street station has been excluded as the NPS sample size is too small.

Chart F: Satisfaction with ticket-buying facilities for non-London stations

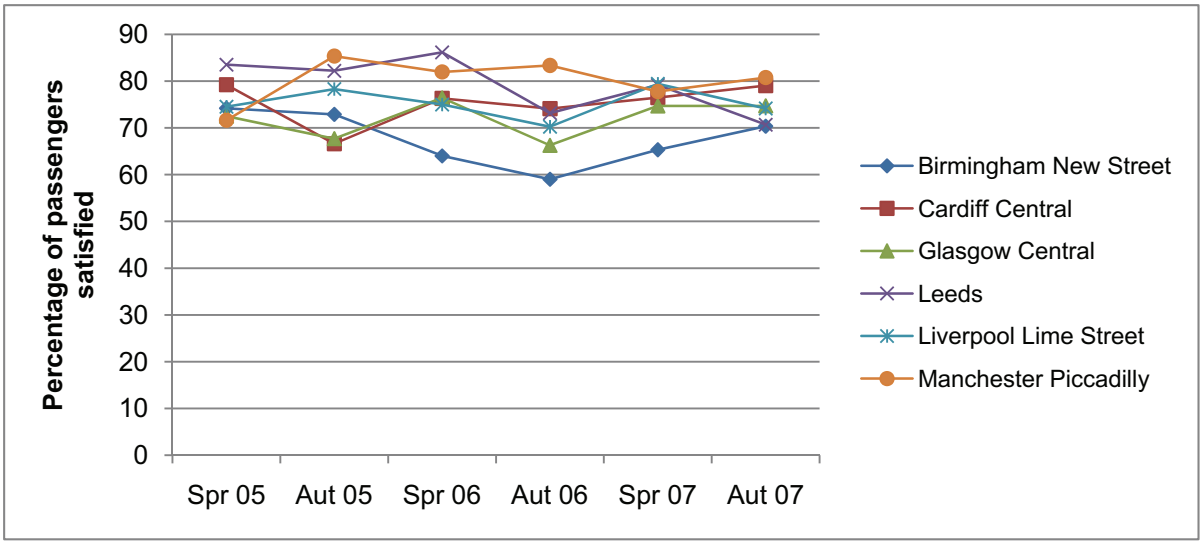
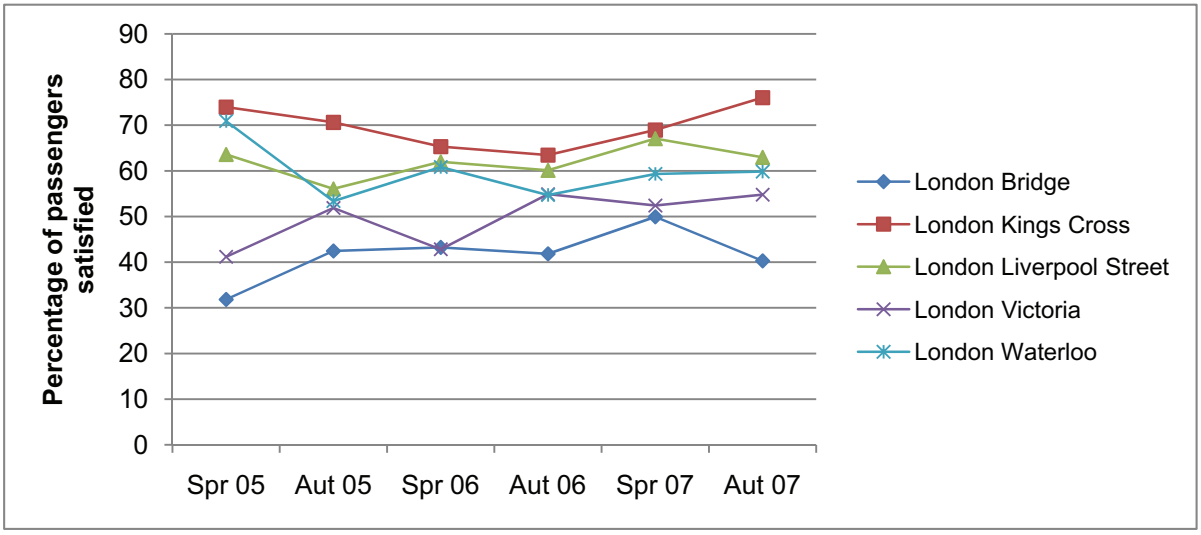


Chart G: Satisfaction with ticket-buying facilities for London stations



Note: London Cannon Street station is closed at weekends: therefore the sample size is too small.

Conclusions

The research has identified a number of areas to address:

- **Queuing strategy and monitoring**
  Queue lengths are likely to increase given the growth in passenger volumes. Therefore measures need to be put in place to deal with and monitor queuing times at busier stations.

  This should be done in an active way; we believe that the best way of ensuring this is for the Department for Transport to include a specific obligation in new franchise agreements, backed up by enforceable targets. We commend the requirement in the South Western franchise requiring SWT to work with London TravelWatch and Passenger Focus to produce a queuing standard. The work SWT has undertaken has, in part, led to an improvement at Waterloo station where the introduction of additional ticket machines and 'hosts'[13] as well as using 'queue busters' with portable ticket machines has reduced queuing times.

- **Staffing requirements**
  A key part of the above strategy will be staffing levels. While new forms of technology could reduce dependence on ticket office sales it is clear that it will remain the predominant source for many people. The July 2007 White Paper '*Delivering a Sustainable Railway'* acknowledged this when it said *"Train operators will therefore be required to maintain a strong staffing presence at stations to provide assistance and reassurance".*

  Clearly there will be times during peak periods when resources are at full stretch. However, the fact that the longest queuing times were observed during the off-peak, especially at weekends at London Victoria and London Kings Cross, suggests a need for a thorough review of staffing requirements in the off-peak.

- **Revenue protection**
  The National Rail Conditions of Carriage require passengers to buy tickets before boarding at stations where sales outlets are available. Penalty fare schemes also leave passengers little choice but to queue for their tickets before boarding. A long queue could mean that passengers board without a ticket to avoid missing the train and as a result may be required to pay a fine or a more expensive fare.

  We believe that active monitoring of queuing times should be a significantly more prominent element of any penalty fare scheme and such penalties should be suspended at times when queuing standards are not being met, exactly as penalty fare schemes stipulate should happen.

- **Ticket machines**
  The research shows that queues at ticket machines were shorter than at ticket windows. With train companies investing more and more in ticket machines this raises the question of why some ticket machines are under-used. A better understanding of the potential barriers to use will help ensure that ticket machines are better used.

[13] These are staff that help passengers to use ticket machines.

What next?

Passenger Focus will be discussing the findings from this research with the relevant train operating company to address specific issues raised on a station-by-station basis.

The wider strategic issues will be raised with the Department for Transport as part of Passenger Focus's input into the franchising process.

Passenger Focus is also currently undertaking joint research with SWT on the issue of ticket machines and how to reduce queuing times. The information gathered will help to identify passengers' attitudes towards ticket machines and alternative ticket purchasing means.

It is important to stress that this research looked only at major stations – clearly there may be a different position regarding suburban and provincial stations. This may be a future area to focus on in order to compare results between the different categories of station.

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