

TransPennine Express Ticketless Travel Report

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1 Executive Summary

This document contains the findings of a ticketless travel survey undertaken between 4th November and 30th November 2014 on the TransPennine Express (TPE) network. Specifically, a report on the levels of ticketless travel and revenue at risk is provided, along with an overview of the methodology adopted for the survey.

1.1 Key findings

A total of 57,091 observations were collected during the survey across 5 service groups and 5 time periods. The survey data collected has been used to produce weighted estimates of revenue at risk which produce representative estimates by service group, time period and for the TransPennine franchise as a whole. The estimate of revenue at risk is 4.1%.

Table 1 illustrates estimates of revenue at risk for each service group:

Table 1 Estimates of revenue at risk

#	Service Group Description	Revenue at risk (%)
EA01	North TransPennine	3.4
EA02	South TransPennine	2.7
EA03	North West	8.6
EA06	Manchester Airport – Blackpool North	5.7
EA07	Preston - Scotland	3.8
TOT	Overall	4.1

Source: *Sky High, 2013/14 LENNON database, CH2M HILL analysis*

Based on these estimates, our findings show that North West services had the highest revenue at risk rate (8.6%). The lowest revenue at risk rate was on South TransPennine services (2.7%).

Table 2 illustrates the revenue at risk rates by time period.

Table 2 Revenue at risk rate by time period

Time period.	Revenue at risk (%)
06:00 to 09:59	4.2
10:00 to 15:59	3.1
16:00 to 18:59	3.7
19:00 to 23:59	5.4
Weekend	4.8
Overall	4.1

Source: *Sky High, 2013/14 LENNON database, CH2M HILL analysis*

Based on these estimates, the revenue at risk rate is highest during the night-time peak (5.4%) and lowest during the Inter-Peak period (3.1%). The indicative revenue at risk in monetary terms for each service group is presented in Table 3.

Table 3 Indicative revenue at risk, £m

Service Group No.	Service Group Description	Revenue at risk (£m)
EA01	North TransPennine	4.1
EA02	South TransPennine	0.6
EA03	North West	1.9
EA06	Manchester Airport – Blackpool	0.7
EA07	Preston - Scotland	0.7
TOT	Overall	8.0

Source: *Sky High*, 2013/14 LENNON database, CH2M HILL analysis

Based on 2013/14 LENNON ticket sales data, indicative revenue at risk on the TPE franchise is £8.0m. The survey findings show that a total of 93.9% of passengers surveyed had a valid ticket. Of the remaining passengers, a total of 2.1% declared they had no ticket, 3.6% refused to show their ticket and 0.4% had an invalid ticket. Table 4 illustrates the main irregularities occurring on the TPE franchise in descending order of prevalence.

Table 4 Breakdown of irregularity types for passengers with invalid tickets or no tickets

Irregularity type	Irregularity rate (%)
No Ticket - Lack of time	1.2%
No Ticket - Lack of facilities at station	0.6%
No ticket - Does not have a ticket (no reason)	0.3%
Misuse of railcard: cannot present appropriate card	0.1%
Journey taken after valid date	0.1%
Ticket used at invalid time	0.1%
Overriding	0.1%

Source: *Sky High*, CH2M HILL

The most prevalent reason for an irregularity was passengers who did not have a ticket, giving the reason that there was a lack of time to purchase one (1.2%). This was followed by those stating that there was a lack of facilities at the station they came from (0.6%).

Overall, 0.6% of passengers surveyed had no ticket due to lack of facilities at the station – we have assumed that they do not purchase a ticket later on in their journey. We have also assumed that 50% of refusals (1.8%) imply not having a ticket. Whilst the central estimate of revenue at risk (4.1%) has a 95% confidence interval of +/- 0.02%, it should be noted that the aforementioned assumptions play a larger role in the potential uncertainty around our central estimate.

Table 14 illustrates the revenue weighted and un-weighted revenue at risk rates by time period and service group.

Table 5 Weight and un-weighted revenue at risk rate

Service Group No.	Service Group Description	Weekday				Weekend	Overall un-weighted	Overall weighted
		06:00 to 09:59	10:00 to 15:59	16:00 to 18:59	19:00 to 23:59			
EA01	North TransPennine	3.5%	2.7%	2.7%	5.0%	4.3%	3.4%	3.4%
EA02	South TransPennine	1.7%	1.5%	3.4%	4.6%	3.6%	2.6%	2.7%
EA03	North West	11.7%	7.4%	7.1%	7.5%	9.2%	8.7%	8.6%
EA06	Manchester Airport – Blackpool North	4.3%	4.3%	7.1%	7.7%	5.7%	5.5%	5.7%
EA07	Preston - Scotland	3.4%	2.3%	4.7%	5.2%	4.4%	4.0%	3.8%
TOT	Overall (unweighted)	4.2%	3.2%	3.6%	5.5%	5.2%	4.1%	4.2%
	Overall (weighted)	4.2%	3.1%	3.7%	5.4%	4.8%		4.1%

Source: Sky High, LENNON ticket sales data, CH2M HILL analysis

The service groups with the highest revenue at risk are North West (8.6%) and Manchester Airport to Blackpool North (5.7%) routes (see Table 6). The lowest revenue at risk rate is on South TransPennine services (2.7%). By time period, the revenue risk rate is highest in the night-time period (5.4%) and lowest in the Inter-Peak period (3.1%).

The AM peak irregularity rate for North West services (11.5%) is significantly higher than all other services – it is the only service to have a higher rate of ticketless travel in the morning compared to the night-time. This may be due to more congestion in the AM peak, which increases the chances of successfully fare evading. Analysing the reasons for no ticket and refusals by service group, we can see that North West services have the highest irregularities.

Table 6 Reasons for no ticket and refusals, percentage

Service Group No.	Service Group Description	No Ticket				Total (%)	Refusals (%)
		Lack of time (%)	Lack of facilities at station (%)	No reason given (%)			
EA01	North TransPennine	1.0%	0.4%	0.2%	1.6%	3.0%	
EA02	South TransPennine	0.8%	0.1%	0.3%	1.3%	2.3%	
EA03	North West	2.8%	2.4%	0.7%	6.0%	5.2%	

EA06	Manchester Airport – Blackpool North	0.9%	0.7%	0.5%	2.1%	6.4%
EA07	Preston - Scotland	1.1%	0.1%	0.3%	1.5%	4.5%
TOT	Overall	1.2%	0.6%	0.3%	2.1%	3.6%

Source: *Sky High, CH2M HILL*

Our findings show that lack of time (2.8%) and lack of facilities at stations (2.4%) are the main reasons given by passengers for ticketless travel on North West services. This may be explained by a total of 7 out of 29 stations on the North West network not having ticket vending machines.

1.2 Conclusions and next steps

The indicative revenue at risk estimates and ticketless travel rates provide an understanding of the service groups which represent more value for money additional revenue protection measures should be considered. There are a number of factors that could be driving the observed levels of irregularities across each service group:-

- A particular *service code* within a service group which has a substantially higher rate of ticketless travel compared to other codes within the same group;
- The number of destination stations without ticket gates/manual gate lines or origin stations without ticket vending machines;
- The levels of risk associated with fare evading e.g. short journeys are likely to carry less risk of getting caught;
- The price of an average fare relative to the disposable incomes of passengers using the service.

It is recommended that the above factors are explored further in order to understand the underlying differences in ticketless travel between the service groups.

2 Introduction, methodology and sample collected

This section sets out the purpose of the ticketless travel survey and the methodology that was undertaken. A qualitative report on the reasons for individual surveys recording a limited number of interviews due to certain conditions on board trains is also provided.

2.1 Introduction

The purpose of the survey is to provide an estimate of ticketless and fraudulent travel across the TPE franchise. In addition, we provide an indication of the relative levels of ticketless travel across service groups and time period. These rates are monetised in terms of the revenue at risk for each segment.

2.2 On-train survey methodologies – our approach explained

On-train surveys requiring surveyors to board and interview passengers on a randomly selected carriage were utilised. Surveyors were instructed to first seek out the conductor on board the train to present a letter of authority from TPE and also provide an explanation of the survey. In the event that the conductor was not located on the train, the survey was not started.

When beginning the survey, an announcement was made to all passengers in the carriage, stating that a survey looking at ticket usage was being conducted. Surveyors worked in pairs from either end of the carriage, checking each ticket until all were checked or the remaining passengers had alighted. Once a carriage was surveyed the team move to the next carriage until the entire train was surveyed or they had to alight themselves. After this, the survey is completed and the team board the next train on their schedule.

Surveys were conducted on the following dates:-

- All days between Tuesday 4th November and Sunday 30th November 2014 inclusive

2.3 Limitations of the on-train survey methodology

A proportion of the TPE network serves un-gated stations which have no ticketing facilities (i.e. ticket vending machines and/or an open ticket office) which may encourage ticketless travel unintentionally. In order to mitigate this, conductors checks and sell tickets on TPE trains. Our on-train survey methodology captures the presence of the conductor on board the train to a certain extent. Passengers who have already had their tickets checked or been sold a ticket by the conductor are included in the survey. Those passengers boarding a train without a ticket during the survey are recorded as ticketless travel if they are interviewed and **still have no ticket**.

Of course, it is not clear whether individuals on the train will eventually purchase a ticket from the conductor or whether they will alight before they have the opportunity to do so. Nor is it clear whether they will buy a ticket from the station they are alighting at.

Furthermore, in our survey there are instances where passengers refuse to show their ticket. We therefore have to make assumptions about the proportion of these passengers which are travelling without a ticket. In this study, we have assumed that 50% of refusals do not have a ticket.

2.4 Sample collected

Between 3rd November and 30th November 2014, a total of 57,091 observations were collected against a sample target of 45,000. A sample target of 45,000 was chosen to ensure that robust estimates of ticketless travel was obtain for each service group by time period.

A proportion of surveys were suspended for the reasons outlined in Table 7 which illustrates the frequency of incidents leading to a either none or a limited number of records being collected for 425 surveys on the TPE network.

Table 7 Frequency of incidents preventing surveys being completed or limited data being collected

Service Group No.	Service Group Description	Train too congested	Guard halted/prevented survey	Delayed/cancelled train	Other
EA01	North TransPennine	85%	4%	4%	8%
EA02	South TransPennine	81%	5%	5%	9%
EA03	North West	69%	8%	16%	7%
EA06	Manchester Airport – Blackpool North	87%	8%	4%	7%
EA07	Preston - Scotland	74%	6%	6%	15%
TOT	Total	76%	6%	10%	8%

Source: *Sky High, CH2M HILL analysis*

Our findings show that 76% of surveys were suspended (or limited data was collected) due to trains being too congested. Table 8 shows the sample collected for each service group by time period.

Table 8 shows the sample collected for each service group by time period.

Table 8 Sample size by service group and time period

Service Group No.	Service Group Description	Weekday				Weekend	Total
		06:00 to 09:59	10:00 to 15:59	16:00 to 18:59	19:00 to 23:59		
EA01	North TransPennine	8,284	9,411	8,220	4,151	5,577	35,643
EA02	South TransPennine	1,710	1,416	1,231	798	561	5,716
EA03	North West	1,433	1,487	1,101	634	1,625	6,280
EA06	Manchester Airport – Blackpool North	925	1,413	701	709	901	4,649
EA07	Preston - Scotland	1,050	1,096	777	821	1,059	4,803
TOT	Total	13,402	14,823	12,030	7,113	9,723	57,091

Source: *Sky High, CH2M HILL analysis*

Table 9 illustrates the proportion of the target sample obtained for each service group and time period.

Table 9 Sample size obtained against target

Service Group No.	Service Group Description	Weekday				Weekend	Total
		06:00 to 09:59	10:00 to 15:59	16:00 to 18:59	19:00 to 23:59		
EA01	North TransPennine	128%	133%	111%	130%	123%	126%
EA02	South TransPennine	159%	120%	100%	151%	79%	121%
EA03	North West	110%	105%	74%	99%	190%	110%
EA06	Manchester Airport – Blackpool North	90%	126%	60%	141%	134%	103%
EA07	Preston - Scotland	266%	253%	172%	421%	407%	277%
TOT	Total	128%	133%	111%	130%	123%	126%

Source: *Sky High*, CH2M HILL analysis

North West and Manchester Airport to Blackpool North services during the PM peak proved most difficult to obtain survey data for. For North West services, this was down to a proportion of surveyed trains being re-allocated to Preston-Scotland services¹. This was because around half of the surveyed trains' starting service codes identified as Barrow/Windermere trains were in fact running to Scotland. Furthermore, the route between Oxenholme and Windermere lasts for around 20 minutes over 5 stops, which limits the capture time available to survey boarding passengers. For Manchester Airport to Blackpool North services, a significant proportion of the trains surveyed in the PM peak were too congested to survey, resulting in a lower sample collected.

2.5 Cleaning and validation of survey data

The quality of the data collected from the on-train surveys is subject to any input errors or failure of surveyors to identify valid and/or invalid tickets. Although all surveyors are trained to recognise and validate all types of tickets on TPE, it is still possible that there are some incorrectly coded interviews that could subsequently affect the overall rate of ticketless travel unless the data is cleaned and validated. A list of the types of validation undertaken are presented below:-

- The validity of all ticket types logged as Off-Peak were changed to 'used at an invalid time' if passenger was surveyed during a peak time and the origin and destination of the ticket are within Peak Zones.
- The validity of all irregularities logged as 'child impersonation' was changed to 'valid' if an 'Adult' ticket was in fact recorded by the surveyor.
- The validity of all irregularities logged as 'overriding' was changed to 'valid' if the origin and destination of the ticket was within the stops the passenger was being surveyed at.
- The validity of all irregularities logged as 'misuse of railcard' was changed to 'valid' if the ticket did not in fact require a railcard.

¹ The survey methodology uses realtimetrains.co.uk to identify which service codes each train is running on. These service codes are then mapped to service groups.

3 Results

This section summarises the results of the ticketless travel survey, presenting the irregularity rates and revenue at risk by service group and time period. In addition, conclusions from the survey and next steps are provided.

3.1 Irregularity rates by time period and service group

The irregularity rate is the proportion of passengers that have an invalid ticket or no ticket at all. The results of the survey are weighted by the demand by time period and service group according to i) time of day data from key station termini and ii) 2013/14 LENNON ticket sales data by service group.

The survey results have been weighted so that the overall rate of ticketless travel is representative by service group and time period. The weightings used apply more importance to survey data collected during times where more journeys are made by passengers. The weightings are also used to apply more importance to service groups which carry more passengers so that the overall rate of ticketless travel is representative of the entire TPE franchise. Appendix A provides the demand weightings used.

Table 10 illustrates the estimates of demand weighted irregularity rates by time period and service group.

Table 10 Weighted and un-weighted irregularity rates

Service Group No.	Service Group Description	Weekday				Weekend	Overall un-weighted	Overall weighted
		06:00 to 09:59	10:00 to 15:59	16:00 to 18:59	19:00 to 23:59			
EA01	North TransPennine	3.7%	3.1%	3.3%	5.5%	4.5%	3.8%	3.8%
EA02	South TransPennine	1.9%	1.6%	3.9%	4.8%	3.8%	2.8%	3.0%
EA03	North West	11.5%	7.4%	7.2%	7.5%	9.3%	8.8%	8.6%
EA06	Manchester Airport – Blackpool North	4.2%	4.8%	9.1%	7.8%	6.3%	6.1%	6.3%
EA07	Preston - Scotland	3.4%	2.4%	5.5%	5.8%	4.5%	4.2%	4.1%
TOT	Overall (unweighted)	4.3%	3.5%	4.2%	5.9%	5.4%	4.5%	3.4%
	Overall (weighted)	4.5%	3.6%	4.5%	5.9%	5.2%		4.6%

Source: Sky High, LENNON ticket sales data, CH2M HILL analysis

The findings show that the overall demand weighted irregularity rate for TPE 4.6%. The service groups with the highest irregularity rates are North West (8.6%) and Manchester Airport to Blackpool North (6.3%) services. The lowest irregularity rates are on South TransPennine services (3.0%). By time period, the irregularity rate is highest in the night-time period (5.9%) and lowest in the Inter-Peak period (3.6%). The AM peak irregularity rate for North West services (11.5%) is significantly higher than all other services – it is the only service to have a higher rate of ticketless travel in the morning compared to the night-time. This may be due to more congestion in the AM peak, which increases the chances of successfully fare evading.

The survey findings show that a total of 93.9% of passengers surveyed had a valid ticket. Of the remaining passengers, a total of 2.1% declared they had no ticket, 3.6% refused to show their ticket and 0.4% had an invalid ticket. Table 4 illustrates the main irregularities occurring on the TPE franchise in descending order of prevalence.

Table 11 Breakdown of irregularity types for passengers with invalid tickets and no tickets

Irregularity type	Irregularity rate (%)
No Ticket - Lack of time	1.2%
No Ticket - Lack of facilities at station	0.6%
No ticket - Does not have a ticket (no reason)	0.3%
Misuse of railcard: cannot present appropriate card	0.1%
Journey taken after valid date	0.1%
Ticket used at invalid time	0.1%
Overriding	0.1%

Source: *Sky High, CH2M HILL*

The most prevalent reason for an irregularity was passengers who did not have a ticket, giving the reason that there was a lack of time to purchase one (1.2%). This was followed by those stating that there was a lack of facilities at the station they came from (0.6%). Analysing the reasons for no ticket and refusals by service group, we can see that North West services have the highest irregularities.

Table 12 Reasons for no ticket and refusals, percentage

Service Group No.	Service Group Description	No Ticket				
		Lack of time (%)	Lack of facilities at station (%)	No reason given (%)	Total (%)	Refusals (%)
EA01	North TransPennine	1.0%	0.4%	0.2%	1.6%	3.0%
EA02	South TransPennine	0.8%	0.1%	0.3%	1.3%	2.3%
EA03	North West	2.8%	2.4%	0.7%	6.0%	5.2%
EA06	Manchester Airport – Blackpool North	0.9%	0.7%	0.5%	2.1%	6.4%
EA07	Preston - Scotland	1.1%	0.1%	0.3%	1.5%	4.5%
TOT	Overall	1.2%	0.6%	0.3%	2.1%	3.6%

Source: *Sky High, CH2M HILL*

Our findings show that lack of time (2.8%) and lack of facilities at stations (2.4%) are the main reasons given by passengers for ticketless travel on North West services. This may be explained by a total of 7 out of 29 stations on the North West network not having ticket vending machines.

3.2 Estimated revenue at risk rates

The revenue at risk rate is the proportion of revenue estimated to be lost as a result of ticketless travel. The amount of revenue lost from each irregularity is assumed to be proportional to the

average yield per passenger. A record of assumptions on the average loss of yield is presented in Table 13.

Table 13 Assumptions on average loss of yield by irregularity type

Ticket Type	Category	Irregularity Description	% Revenue loss	Underlying assumption
Valid ticket	1	Has a valid ticket	0%	No loss
No ticket	2a	Does not have a ticket (no reason)	100%	Assume 100% loss @ av. yield
	2b	Lack of facilities at station	100%	Assume 100% loss @ av. yield
	2c	Lack of facilities on train	100%	Assume 100% loss @ av. yield
	2d	Lack of time	100%	Assume 100% loss @ av. yield
Invalid ticket	3a	Journey taken after valid date	100%	Assume 100% loss @ av. yield
	3b	Overriding	90%	Assume 'short-ticketing' – cheapest fare is purchased in order to get through ticket gates
	3c	Misuse of railcard: cannot present appropriate card	33%	Assume railcards provide a third off on average
	3d	Transferred use: using someone else's pass	100%	Assume 100% loss @ av. yield
	3e	Child Impersonation	50%	Assume yield on child ticket is half of adult
	3f	Ticket used at invalid time	100%	Assume 100% loss @ av. yield
	3g	Journey taken before valid date	100%	Assume 100% loss @ av. yield
	3h	Forger/altered travel pass	100%	Assume 100% loss @ av. yield
	3i	No valid photo card	100%	Assume 100% loss @ av. yield
	3j	Stolen ticket or pass	100%	Assume 100% loss @ av. yield
Other	4a	Refusal	50%	Assume half of those who refuse to show ticket have an irregularity

Source: CH2M HILL

The results of the survey are weighted by the amount of revenue generated by service group according to 2013/14 LENNON ticket sales data. The survey results have been weighted so that the overall revenue at risk is representative by service group and time period. The revenue weightings apply more importance to service groups which generate more money so that the overall revenue at risk is representative of the entire TPE franchise. Appendix A provides the revenue weightings used.

Table 14 illustrates the revenue weighted and un-weighted revenue at risk rates by time period and service group.

Table 14 Weight and un-weighted revenue at risk rate

Service Group No.	Service Group Description	Weekday				Weekend	Overall un-weighted	Overall weighted
		06:00 to 09:59	10:00 to 15:59	16:00 to 18:59	19:00 to 23:59			
EA01	North TransPennine	3.5%	2.7%	2.7%	5.0%	4.3%	3.4%	3.4%
EA02	South TransPennine	1.7%	1.5%	3.4%	4.6%	3.6%	2.6%	2.7%
EA03	North West	11.7%	7.4%	7.1%	7.5%	9.2%	8.7%	8.6%
EA06	Manchester Airport – Blackpool North	4.3%	4.3%	7.1%	7.7%	5.7%	5.5%	5.7%
EA07	Preston - Scotland	3.4%	2.3%	4.7%	5.2%	4.4%	4.0%	3.8%
TOT	Overall (unweighted)	4.2%	3.2%	3.6%	5.5%	5.2%	4.1%	4.2%
	Overall (weighted)	4.2%	3.1%	3.7%	5.4%	4.8%		4.1%

Source: *Sky High, LENNON ticket sales data, CH2M HILL analysis*

The overall estimate of revenue at risk across the franchise is 4.1%. The service groups with the highest revenue at risk are North West (8.6%) and Manchester Airport to Blackpool North (5.7%) routes. The lowest revenue at risk rate is on South TransPennine services (2.7%). By time period, the revenue risk rate is highest in the night-time period (5.4%) and lowest in the Inter-Peak period (3.1%).

3.3 Confidence intervals around our estimates

A sample size of 57,091 provides a relatively high level of confidence around our central estimates. Table 15 shows the 95% confidence intervals for the revenue at risk estimates i.e. there being a 95% probability that the true estimate lies between the upper and lower bound. Note that this is notwithstanding the limitations of the survey methodology outlined in Section 2.3.

Table 15 95% confidence intervals around revenue at risk

Service Group No.	Service Group Description	Central estimate	
		Revenue at risk (%)	95% confidence interval (+/-)
EA01	North TransPennine	3.38%	0.01%
EA02	South TransPennine	2.69%	0.03%
EA03	North West	8.56%	0.05%
EA06	Manchester Airport - Blackpool North	5.65%	0.04%
EA07	Preston - Scotland	3.83%	0.03%
TOT	Total	4.06%	0.02%

Source: *Sky High, CH2M HILL analysis*

The estimate of revenue at risk is 4.06% with a 95% confidence interval of +/-0.02%.

However, it should be noted that there is greater uncertainty around this estimate stemming from the assumptions made in Table 13. In particular, we have assumed that passengers without a ticket due to lack of facilities may buy one later in their journey and we have assumed 50% of refusals imply no ticket.

3.4 Estimated revenue at risk in monetary terms

Using 2013/14 LENNON ticket sales data, we are able to estimate the indicative order of magnitude of the revenue at risk in monetary terms by service group (see Table 16).

Table 16 Indicative revenue at risk in monetary terms

Service Group No.	Service Group Description	2013/14 Revenue (£m)	Revenue at risk (£m)
EA01	North TransPennine	116.6	4.1
EA02	South TransPennine	21.0	0.6
EA03	North West	20.7	1.9
EA06	Manchester Airport - Blackpool North	11.6	0.7
EA07	Preston - Scotland	18.8	0.7
TOT	Total	230.6	8.0

Source: *Sky High, 2013/14 LENNON data, CH2M HILL analysis*

Our findings show that the revenue at risk on the TPE franchise is equal to £8.0m. North TransPennine (£4.1m) and North West (£1.9m) have the highest revenue at risk.

4 Appendix A

The following tables provide the demand and revenue weightings used to calculate weighted irregularity and revenue at risk rates by service group and time period.

Demand weighting matrix

#	Service Group Description	06:00 to 09:59	10:00 to 15:59	16:00 to 18:59	19:00 to 23:59	Weekend	Total
EA01	North TransPennine	14.4%	15.7%	16.4%	7.1%	9.5%	63.0%
EA02	South TransPennine	2.4%	2.6%	2.7%	1.2%	1.6%	10.5%
EA03	North West	2.9%	3.2%	3.3%	1.4%	1.9%	12.7%
EA06	Manchester Airport - Blackpool North	2.3%	2.5%	2.6%	1.1%	1.5%	10.0%
EA07	Preston - Scotland	0.9%	1.0%	1.0%	0.4%	0.6%	3.9%
TOT	Total	22.8%	24.9%	26.1%	11.2%	15.0%	100.0%

Revenue weighting matrix

#	Service Group Description	06:00 to 09:59	10:00 to 15:59	16:00 to 18:59	19:00 to 23:59	Weekend	Total
EA01	North TransPennine	14.1%	15.4%	16.1%	6.9%	9.3%	61.8%
EA02	South TransPennine	2.5%	2.8%	2.9%	1.2%	1.7%	11.1%
EA03	North West	2.5%	2.7%	2.9%	1.2%	1.6%	11.0%
EA06	Manchester Airport - Blackpool North	1.4%	1.5%	1.6%	0.7%	0.9%	6.1%
EA07	Preston - Scotland	2.3%	2.5%	2.6%	1.1%	1.5%	10.0%
TOT	Total	22.8%	24.9%	26.1%	11.2%	15.0%	100.0%