A London TravelWatch Report

The voice of London transport users

London TravelWatch responses to the questions asked in the DfT consultation on the extension of PAYG

Contents

Introduction

London TravelWatch is the statutory consumer watchdog representing the interests of passengers in and around London, both on the Transport for London (TfL) network and on the National Rail network in the wider London Railway Area[1].

Fares and ticketing issues form around 40% of the appeal cases that we receive on an annual basis[2]. Passenger satisfaction on services in London and the South East with value for money is poor compared to those in other metropolitan regions and inter-city / regional train services[3]. Research that we have previously carried out on the needs of annual season ticket holders, people on low-incomes in outer London and the root causes of poor satisfaction with value for money indicates that there is compelling case for the reform of fares and ticketing in general and in and around London in particular.

1. The extent of the problem

Fares and tickets in and around London on the National Rail network have never been entirely consistent in their availability and consistency, even in the era of British Rail as a nationalised industry. However, since the privatisation of British Rail in the 1990's, there has been a significant divergence in the way in which policy has developed and the pricing of individual journeys. This has come about due to the differing policies of individual franchise train operators, the application of government policies and whether a service falls under the remit of TfL or not.

This has resulted in the cost of journeys for similar distances and journey purposes varying widely. This is illustrated in the table of season ticket rates below for journeys around 20 miles from a central London termini:-

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[1] http://www.londontravelwatch.org.uk/documents/get_lob?id=4694&field=file

[2] http://www.londontravelwatch.org.uk/documents/get_lob?id=4739&age=&field=file 38% (4868 total) of appeal cases 2014-2018

[3] http://www.londontravelwatch.org.uk/documents/get_lob?id=4740&age=&field=file

Commuter fare anomalies 2019

Station	Distance to London Terminus	Weekly season ticket price 2019 £	Operator(s)	Passengers using station each year (millions) 2017/18
Hemel Hempstead	21	95.80	LNWR	1.96
Harlow Town	22	93.30	Greater Anglia	1.9
Amersham	23.5	91.50	Chiltern / London Underground	1.9
Sevenoaks	21	90.20	Southeastern	4.15
Gatwick Airport	26.75	84.30	GTR	20.3
Woking	24.5	83.70	Southwestern Railway	7.64
Shenfield	20.25	78.70	TfL Rail / Greater Anglia	3.87
Welwyn Garden City	20	75.40	GTR	2.96
Redhill	21	70.70	GTR	3.55
Slough	18.5	67.80	Great Western	5.54
Staines	19	67.40	South Western	2.75
Grays	19.5	61.20	c2c	4.05
Oxted	20	58.90	GTR	1.57

In addition, even within London fares will vary according to whether a journey uses a national rail train or TfL service or a combination of both. The table below shows the differences for typical journeys at peak times to Oxford Circus.

London fares anomalies

Zone 6	**Oyster single PAYG peak fare to Oxford Circus £**
Epping	5.10
Coulsdon South	8.20
Zone 5	
Buckhurst Hill	4.70
East Croydon	7.00
Zone 4	
Woodford	3.90
Selhurst	5.90
Zone 3	

Leyton	3.30
Norbury	5.30
Zone 2	
Mile End	2.90
Battersea Park	4.60

For passengers living in areas served primarily by National Rail services this represents a significant cost penalty and disincentive to use rail. This is significant in and around London where use of public transport is often the only realistic method of travelling to and from work, education, shopping or social activity, given the levels of congestion on the road network.

Passenger dissatisfaction with fares and ticketing is linked to the complexity of the system and the lack of trust that operators will give them the best fare for their journey. The current system does not meet passenger expectations. This can be seen the levels of 'incomplete journeys' and Penalty Fares issued to users of Oyster / Contactless bank cards, where passengers have expected that their destination station would be within the London system, but is not at present.

In the case of airports, prior to the introduction of Oyster / Contactless to Gatwick Airport in 2016 around 5,000 Penalty Fares were issued a year to passengers arriving at Gatwick Airport who had travelled there using Oyster / Contactless cards. Since then this has been eradicated. However, at Stansted Airport, in the same period the numbers of Penalty Fares have risen from a few hundred per year to 16,000 in 2018; again from passengers not realising that Oyster / Contactless was not valid at this location. This is matched by a reduction of 39% in the numbers of 'incomplete journeys' at stations most associated with the extension to Gatwick Airport in the same period e.g. Victoria National Rail station from 415,982 journeys in 2015 to 254,331 in 2018. Conversely, between 2011 and 2018 the station most associated with Stansted Airport (and not affected by other changes) – Tottenham Hale saw an increase of 847% from 7,066 journeys in 2011 to 66,920 in 2018 (a decline from 85,997 in 2015). Appendix A shows the change in distribution of 'incomplete journeys' between 2011 and 2018.

These figures show that passengers prefer the simplicity and ease of use of the Oyster / Contactless system, particularly for journeys to and from London's airports. However, this applies equally to other journeys within the London commuter area e.g. places served by TfL buses such as Staines, Esher, Denham or Potters Bar: or where the service pattern is part of a 'Metro' service such as the Shepperton branch or the Darenth Valley and stopping services to Sevenoaks.

The complexity of the current fares and ticketing system is a major concern for passengers, even for those passengers who use season tickets, which bring an element of simplicity to the ticketing process. Research for London TravelWatch

in 2017 on the needs of Annual Season Ticket holders[4] showed that passengers buying these tickets:-

- Were largely unaware of the full range of products available to them
- Had little idea of the financial benefit to them of purchasing an annual season ticket and how to calculate this
- Felt they had no choice as to when to travel or how much to pay, with little incentive on operators to treat them as customers
- Were not rewarded for their loyalty to the transport network or compensated easily when things go wrong
- Were penalised by a system that has not recognised changes to working patterns
- Had few incentives to change travel behaviour and make best use of capacity
- Were faced with a poor purchasing environment.

The extension of PAYG addresses these issues by:-

- Greater transparency of ticket types and costs
- Recognising new working patterns that include greater home working or variations in work hours
- Potential to incentivise travel outside of peak times
- Ability to give prompt and easily administered compensation for disruption to services
- Giving a better purchasing environment.

The numbers of existing passengers that could benefit from this change is a very large number (over 227million journeys a year) from the stations that would be included in the scheme (set out in Appendix B). However, a further benefit comes from new passengers that would be attracted to rail as a result of simplifying fares and tickets. These new passengers will offset any financial barriers to train operators embracing the proposal.

Experience from previous simplification exercises in 2007, 2010 and 2014 in the London Travelcard area resulted in above average increases in passenger numbers. These included zonalisation of fares in 2007, the extension of Oyster PAYG to the National Rail network in 2010 and the introduction of Contactless cards in 2014. Additional extensions of Oyster/Contactless have also resulted in additional passengers.

These extra passengers were attracted by the greater transparency of ticket types, cost and the ease of use of this technology. Some of them were previously private car users and others would not have previously made the journey.

However, the rail industry has on each of these occasions been very risk averse, and has insisted on complicated legal and financial guarantees that have far as

[4] http://www.londontravelwatch.org.uk/documents/get_lob?id=4438&field=file

London TravelWatch is aware never been activated, in order to protect its perceived interests. This conservatism and suspicion that passengers by default wish to deny the rail industry the correct fare, led to the introduction of Oyster Extension Permits (OEPs) alongside the introduction of Oyster PAYG in 2010. These were extremely unpopular with passengers, and were found to be unnecessary within months of their introduction, but had been insisted upon by the train company community. Below are a series of quotes from passengers who made appeal complaints based on their experience of these permits:-

Initially TfL was adamant that I could set an OEP at a SW Train ticket office - as you will see below the only stations with this facility are Richmond and Wimbledon and you can't set the OEP anywhere other than at a station.

I have a Zone 2-5 season ticket, and pay as you go, on my Oyster so to travel into London Waterloo my options are:

If I purchase a valid paper ticket for Vauxhall to Waterloo I can't touch out at Vauxhall
If I touch out at Waterloo I will be charged £1.90 i.e. the correct fare therefore I have paid twice
I do not travel in Zone 1 often enough to warrant a Zone 1-6 season ticket
I do not want to go back to a paper season ticket'. South West Trains passenger August 2010.

'Yesterday I boarded a train from Vauxhall with GBP 4.90 in credit on my oyster card and a Zone 1-4 travel card valid till 3rd-Feb. My usual journey of late had seen me disembark at Richmond of late. Yesterday however I needed to get off at Feltham.

Having seen the notice regarding PAYG on South West Trains, I naturally expected this to work as it does on the tube (if I have to queue at a machine again, then how is it actually PAYG).

The single journey fare from Vaux to Feltham is GBP 3.40 (so I had sufficient credit on my oyster card to cover a single trip) and I expected the deduction at Feltham to be somewhat smaller than that based on my travel card.

Imagine the frustration when I was stopped and asked to pay a GBP 20 fine. I support this sort of action to combat fare dodgers, but a customer of 7 years with a travel card valid for 80% of the journey and credit to cover the entire journey being fined is somewhat incredible.

Let alone the fact that getting an OEP costs nothing by itself (and therefore should just be enabled by default on such journeys). However, the most irritating issue is that fact that had I not had a season ticket on my oyster card, I would have got through without any issues at all (as the oyster card would have seen a single fare deducted)'. South West Trains passenger February 2010

'What went wrong: I had an Oyster card (zone 3-6) with some PAYG money and I needed to go to Charing Cross. There was a queue at Greenwich station when the train approached so I got on the train, with a plan to use the PAYG money or buy a ticket at Charing Cross station. When I arrived at Charing Cross, I decided to buy a daily travel card for central zones instead of using PAYG so I went to the ticket office straight away and asked to buy a ticket but I was refused and issued a penalty ticket instead, saying that I'm not allowed: I bought tickets in April at Charing Cross station upon arrival at least twice and I could always top up my Oyster card if the money runs low at tube stations but I was refused by the revenue protection officer, claiming that there are new rules introduced, that I should seek "extension permit" before travel and they claimed that lots of people don't know that. I appealed to IPFAS on 2 grounds: 1) I bought tickets at Charing Cross even in April, if there are new rules introduced from Southeast afterwards, I'm not made aware of that, and most of people are not made aware of that, there weren't any such announcements at the station; 2) I had an Oyster card and to my understanding of one ticket for tube, train and bus on Oyster, I should be able to use PAYG on London trains and I didn't know that to use PAYG on trains, I need to set extension permit first! I never knew that!
Service provider response: The service provider -IPFAS, who claimed to be independent but not independent at all, refused my appeal on the ground mainly that customer should set "extension permit" to use PAYG as evidence of their intention to make the journey. They completely ignored the fact of the queue. They also completely ignored the fact that I was able to buy tickets at Charing Cross in April before and I wasn't made aware of the "extension permit" thing at all'. Southeastern passenger June 2010.

The evidence from the ORR's statistics on rail finances and passengers usage shows that in each financial year following these changes, revenues and passenger numbers rose faster and in greater volume in the London and South East sector than other parts of the rail industry[5]. This was despite the changes being restricted to the London Travelcard area, and not including journeys in, to, from or through the wider South East area.

Reform of rail fares is vital to the success of other government policies aimed at improving access to jobs and housing. Analysis by London TravelWatch shows that in the absence of a more logical system of fares, areas where the cost of travelling to employment is a high proportion of average weekly pay, tend to have higher levels of unemployment and lower levels of participation in the economy. This is set out in Appendix C.

[5] http://dataportal.orr.gov.uk/displayreport/report/html/a578fd7d-bd90-4e28-bfbc-da153157e196 and http://dataportal.orr.gov.uk/displayreport/report/html/a10e3c7b-7766-40ae-a87a-14c56cf85a63

Reform of fares would enable higher levels of participation in the economy, and expand the potential pool of employees available to employers. It would also give a much greater choice of housing, opening up areas where the cost of travel was previously prohibitive. There are numerous historical precedents for this, such as 'workman' tickets on the Great Eastern Railway that encouraged the growth of housing in areas such Enfield, Haringey, Hackney and Waltham Forest.

Previous research by London TravelWatch, London Councils and Trust for London (Living on the edge) [6] showed that:-

- 36% of all Londoners who commute to zone 1 (central London), around 500,000 people per day, did not use the quickest or best journey available to them, in order to reduce the cost of travel.
- One in five (156,000 people per day) commuting to zone 1 had to cut other spending in order to pay for travel to and from work.
- London residents earning more than £600 per month have to work approximately 20 minutes every day they work to pay for that day's commuting costs. This increases sharply to 54 minutes for those earning £200 to £599 and 1 hour 56 minutes for those earning less than £200.

2. Addressing the issue

Passengers in the London area consistently report[7] that they do not feel that they get value for money for the price of the ticket they pay. London TravelWatch conducted two pieces of research in 2013 to further understand this[8]. The studies concluded that there are many factors that contribute to this, and equally there are many ways to improve satisfaction. Simplification of fares and extension of Pay As You Go Oyster / Contactless bank cards will be a significant contribution to this. It would do this by a fairer, more transparent system of pricing, using a zonal structure, and simple, easy to use technology and procedures. It gives flexibility to passengers to plan their journeys and the assurance that they will have paid the correct fare / bought the right ticket for their journey.

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6 http://www.londontravelwatch.org.uk/documents/get_lob?id=4100&age=&field=file

7 http://www.londontravelwatch.org.uk/documents/get_lob?id=4740&age=&field=file

8 http://www.londontravelwatch.org.uk/documents/get_lob?id=3734&field=file and http://www.londontravelwatch.org.uk/documents/get_lob?id=3896&field=file

3. Other areas of concern

Oyster cards (or replacement equivalent) have the capacity to add discounts of varying types such as Railcards or age related benefits that can be applied at different times of day or week. At present contactless bank cards do not have this functionality and it is questionable whether the banking industry would agree to such a change without central government direction or funding. This is against a background of increasing take up of railcards of all types and the introduction of new Railcards such as the 26-30 and Two Together products.

Freedom Passes are concessionary passes issued by London boroughs to eligible elderly or disabled persons for use on the transport network in London. The technology used is the same as Oyster but there is no facility for additional PAYG journeys outside of the current area of validity. This means that passengers wishing to use some services must instead purchase extension paper tickets or use an alternative Oyster card / contactless bank card at a higher cost e.g. Oyster PAYG is available to Gatwick Airport, but a Freedom Pass is only valid to Coulsdon South. The solution to this issue would be to remove the block on additional PAYG on Freedom Passes. This would bring alignment with other concessionary passes such as TfL's Zipcard for under 16s that does have the ability to include PAYG for out of area or time / mode of validity that the Freedom Pass does not currently allow access to.

The natural boundaries of the any scheme should allow the use of stations within walking distance of each other for interchange purposes, or as in the case of Edenbridge or Edenbridge Town where passengers may use one station to travel one way and return to the other station.

Regulation of fares will need to change to allow the reforms that are proposed in this consultation. The existing regulations were put in place at a time when systems such as Oyster and contactless bank cards were not foreseen, nor was the growth in passenger usage. The continuation of the regulations in their current form is a passenger dis-benefit as the regulations preserve anomalies in the current system and prevent innovation using new technologies.

This also applies to the process for determining the requirements of ticket retailing such as ticket office opening hours. The current schedule 17 process is being used in a way that was never conceived when it was devised. London TravelWatch recently has dealt with the proposed closure of 51 ticket offices by Arriva Rail London, which represents the vast majority of stations operated by them. When the process was devised it was thought that it would only apply to a small number of stations where the hours would be varied by small amounts.

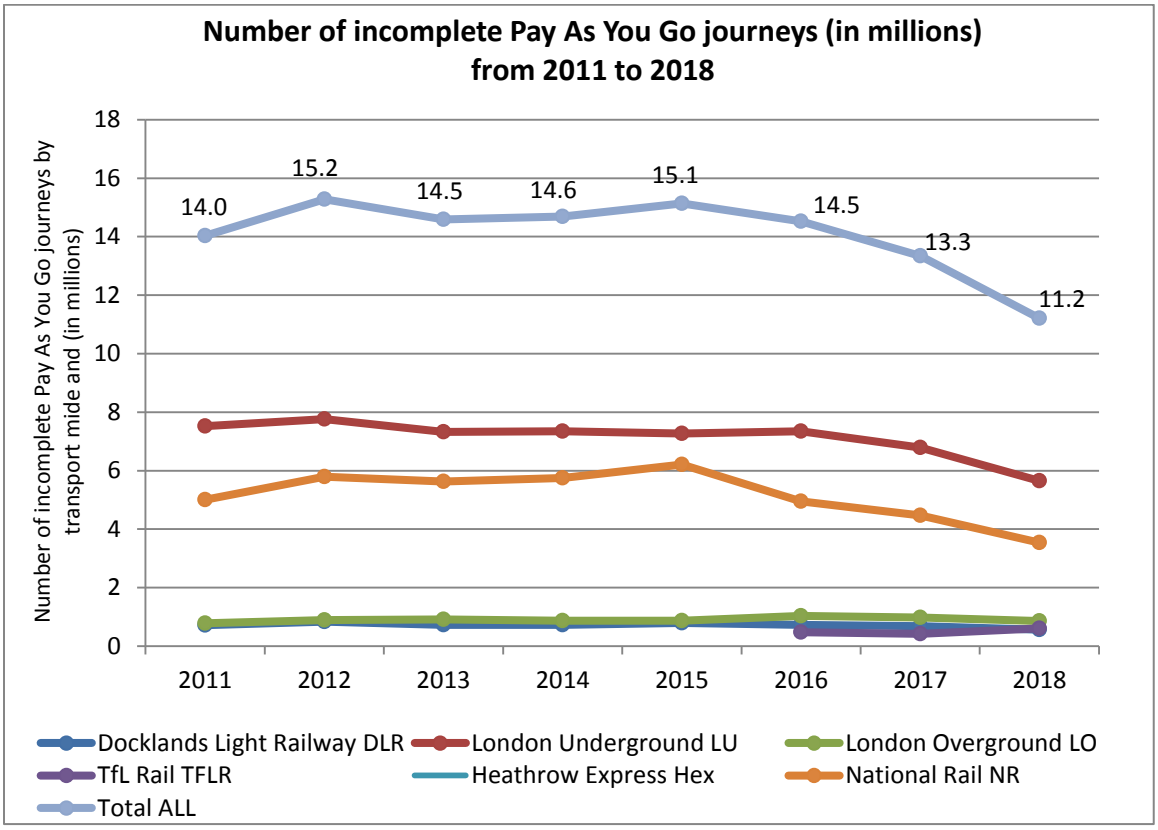
There are thus significant passenger benefits to be gained through the extension of Pay As You Go capability in the London and South East region.

Appendix A

Incomplete Pay As You Go journeys – 2011, 2015 and 2018

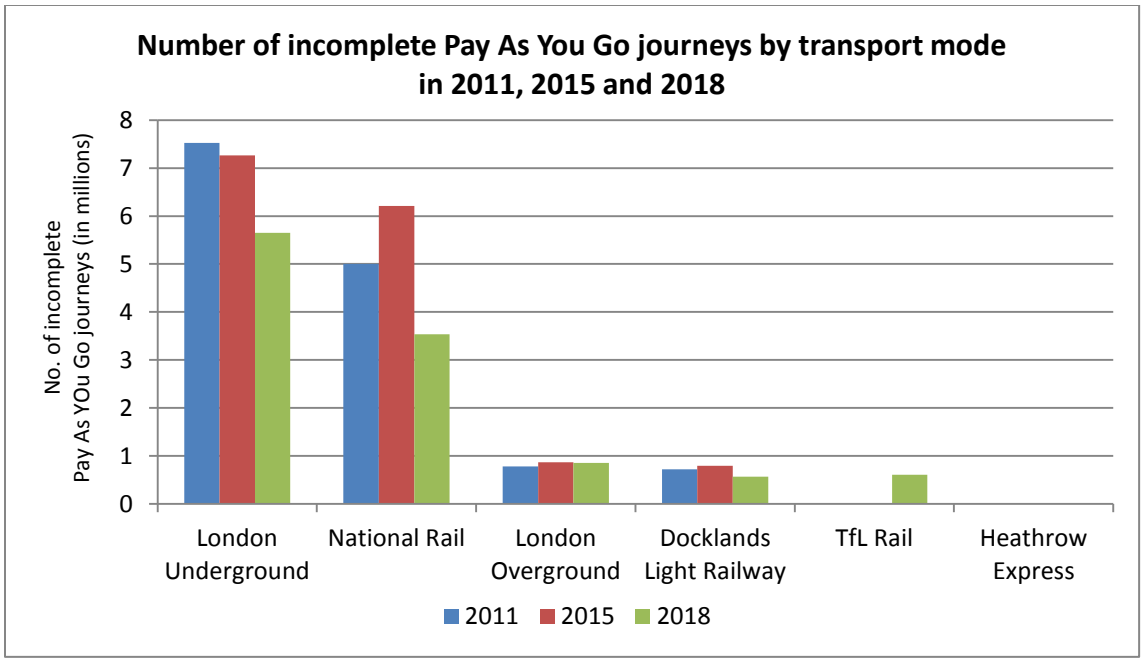
The below graph shows the number of incomplete journeys for each year from 2011 to 2018, by transport mode and the total figure per year.

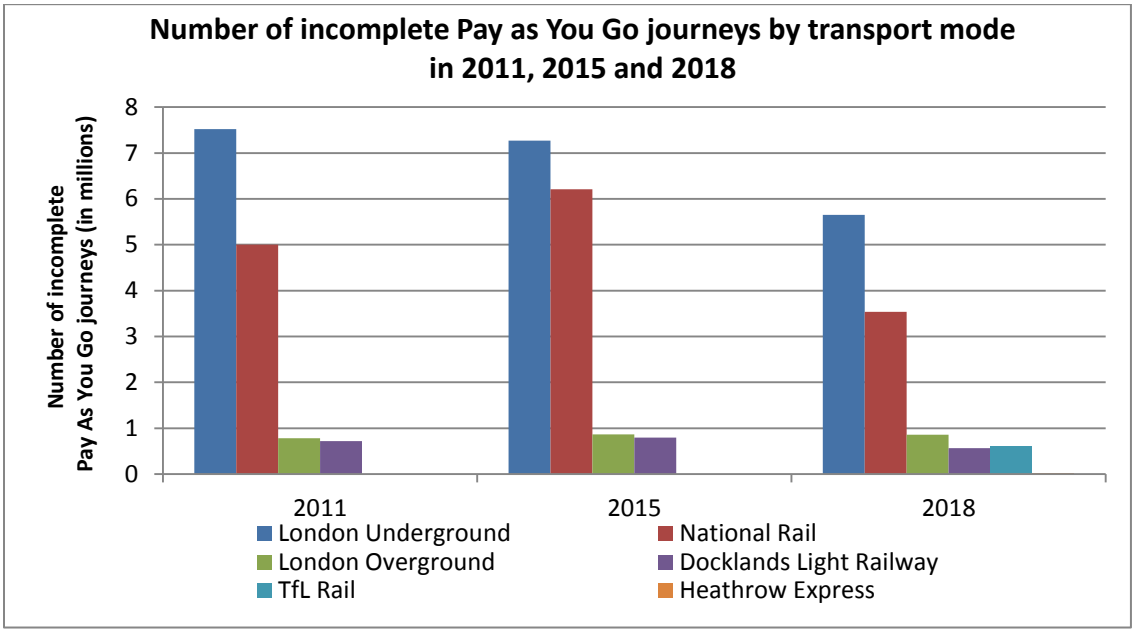
Since 2015, the number of incomplete journeys has dropped year on year. 2015 is therefore used within this analysis as a way to assess the shorter term trends from 2015 to 2018 in addition to the long term trends from 2011 to 2018.



Between 2011 and 2018 all transport modes (except London Overground) saw a reduction in the number of incomplete Pay As You Go journeys.

The graphs and table overleaf provide further detail for the period.


Number of incomplete Pay As You Go journeys by transport mode in 2011, 2015 and 2018
No. of incomplete Pay As YOu Go journeys (in millions)
0
1
2
3
4
5
6
7
8
London Underground
National Rail
London Overground
Docklands Light Railway
TfL Rail
Heathrow Express
2011
2015
2018


Number of incomplete Pay as You Go journeys by transport mode in 2011, 2015 and 2018
Number of incomplete Pay As You Go journeys (in millions)
0
1
2
3
4
5
6
7
8
2011
2015
2018
London Underground
National Rail
London Overground
Docklands Light Railway
TfL Rail
Heathrow Express

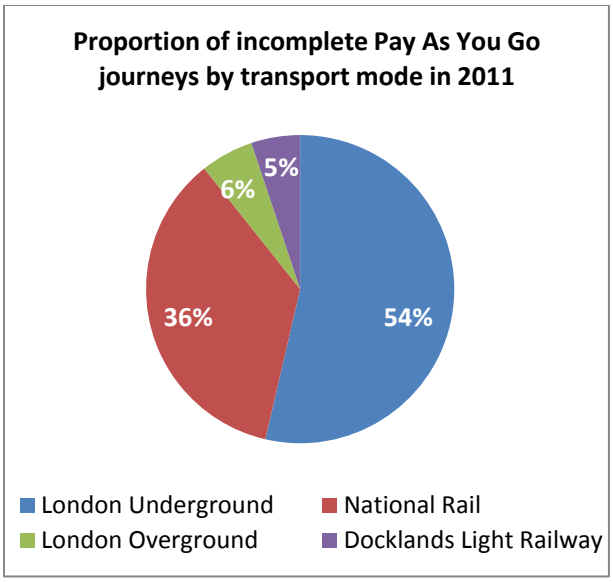
Operator	Number of incomplete journeys			% difference in number of incomplete journeys in 2018 compared to 2011
	2011	**2015**	**2018**	
London Underground	7,523,386	7,267,468	5,647,735	-24.9%
National Rail	5,004,169	6,212,157	3,536,355	-29.3%
London Overground	780,446	867,090	853,809	9.4%
Docklands Light Railway	719,810	792,031	567,367	-21.2%
TfL Rail	-	-	604,276	n/a
Heathrow Express	-	-	7	n/a
Total	**14,027,811**	**15,138,746**	**11,209,549**	**-20.1%**

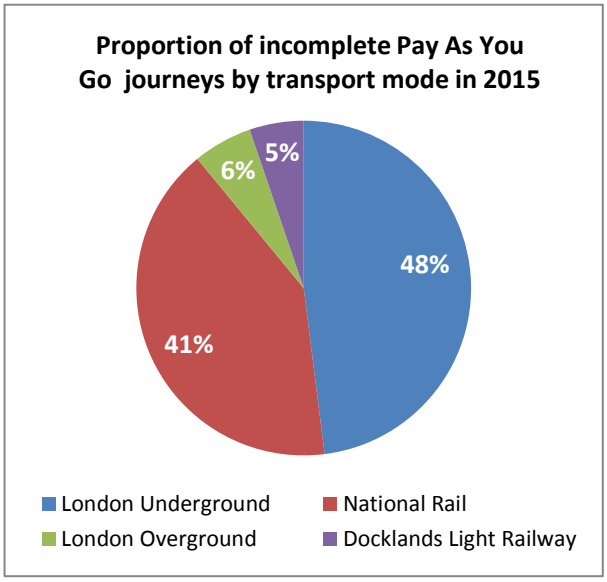
Between 2011 and 2018, the number of incomplete Pay As You Go journeys:

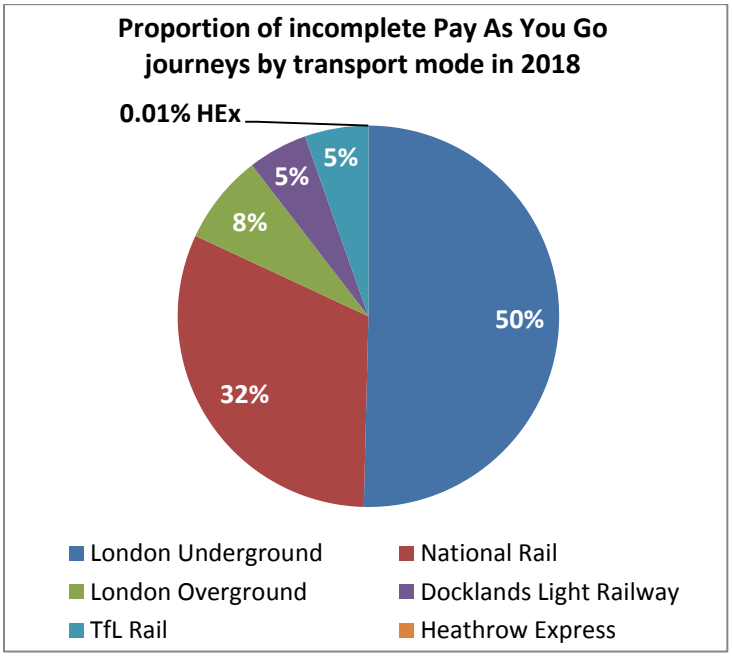
- Dropped on **London Underground** although the proportion of them slightly increased between 2015 and 2018, mainly due to the steeper decline in the number of incomplete journeys on National Rail
- Rose on **National Rail** between 2011 and 2015 but dropped by 9% between 2015 and 2018
- Increased on **London Overground** by 73,000. It is the only transport mode to have increased its proportion of incomplete journeys between 2011 and 2018
- Dropped by 150,000 on the **DLR**, although the proportion of incomplete journeys is broadly unchanged.

The first data for **TfL Rail** was in 2016, with 472,387 incomplete journeys. Although the number of incomplete journeys fell in 2017, it rose steeply in 2018. The 2018 figure is 28% higher than the 2016 figure and 44% higher than the 2017 figure. This can be partly explained by the transfer of services from **Great Western** in May 2018 and a greater level of enforcement as stations gates became staffed for longer

The only data for **Heathrow Express (Heathrow Connect)** (for 2018) shows 7 incomplete journeys.


Proportion of incomplete Pay As You Go journeys by transport mode in 2011
54%
36%
6%
5%
London Underground
National Rail
London Overground
Docklands Light Railway


Proportion of incomplete Pay As You Go journeys by transport mode in 2015
48%
41%
6%
5%
London Underground
National Rail
London Overground
Docklands Light Railway


Proportion of incomplete Pay As You Go journeys by transport mode in 2018
0.01% HEx
50%
32%
8%
5%
5%
London Underground
National Rail
London Overground
Docklands Light Railway
TfL Rail
Heathrow Express

Incomplete Pay As You Go journeys in 2011, 2015 and 2018 by operator

The below information is an analysis of incomplete Pay As You Go journeys by operator over the period 2011-2018, showing stations that experienced an **increase** over the period.

In addition to using the data from 2011 and 2018, 2015 is also included. 2015 was (with the exception of 2012), the highest year of incomplete journeys in the period 2011 to 2018. It is therefore a helpful point from which to judge whether the number of incomplete journeys for each station had fallen by 2018.

The stations in the tables are colour coded, as follows:

Direction of travel is improving:
The number of incomplete journeys at this station increased from 2011 to 2015. It then dropped by 2018 although the figure in 2018 was still higher than 2011.

Direction of travel is worsening:
The number of incomplete journeys at this station increased from 2011 to 2015. It then further increased from 2015 to 2018.

Direction of travel is worsening:
The number of incomplete journeys at this station dropped from 2011 to 2015. It then rose by 2018, with the figure higher in 2018 than 2011.

Where stations are multi modal, they are included under the operator to which the data has been assigned. For instance, Stratford is only listed as National Rail but Cannon Street has separate data for the London Underground and National Rail stations.

Docklands Light Railway

11 of the 40 DLR stations **(27%)** recorded an increase in the number of incomplete Pay As You Go journeys between 2011 and 2018. They are listed below, divided into their branches.

The stations with the largest number of incomplete journeys (**Tower Gateway, London City Airport, Royal Victoria and Prince Regent**) showed increases from 2011 to 2018 although they all showed an improvement compared to 2015.

The remaining stations collectively showed a 73% increase in incomplete journeys from 2011 to 2018 and a 31% increase from 2015 to 2018.

Those stations listed below on the Stratford International branch (**Abbey Road, Star lane and Stratford High Street**) saw large rises over the period. However, when looking at the 2011 figures it should be noted that these were new stations in 2011, only operating for part of that year. The number of incomplete journeys at these stations is also relatively small.

Stations	**2011**	**2015**	**2018**	% increase of incomplete journeys in 2018 compared to 2011
Tower Gateway	29,602	50,314	36,155	22%
Stratford Int'l branch				
Stratford High Street	613	2,483	3,609	489%
Abbey Road DLR	802	2,129	2,069	158%
Star Lane DLR	1,062	2,727	3,080	190%
Beckton Branch				
Royal Victoria	10,067	18,447	15,260	51%
Prince Regent	11,591	18,846	14,879	28%
Royal Albert	4,720	5,874	8,149	72%
Beckton Park	1,243	1,423	1,468	18%
Gallions Reach	4,648	3,962	4,798	3%
Woolwich branch				
Pontoon Dock DLR	3,287	4,145	5,876	78%
London City Airport	17,099	24,823	19,353	13%

London Overground

19 of the 90 London Overground stations **(21%)** recorded an increase in the number of incomplete Pay As You Go journeys between 2011 and 2018. They are listed below, divided into their branches/operational sections.

There has been a continued increase at **Walthamstow Central**, where the number of incomplete journeys has more than doubled from 2011 to 2018.

In the northern suburbs, **between White Hart Lane, Theobalds Grove and Enfield Town**, all the stations (except Bush Hill Park) experienced increases in the number of incomplete journeys over the period. The size of the increase at **Turkey Street**, a rise of 228%, is particularly striking. Ticket gates were also introduced at **Edmonton Green** over the period.

On the GOBLIN, both **South Tottenham** and **Wanstead Park** saw the number of incomplete journeys fall from 2011 to 2015 but have since risen again, especially at Wanstead Park. In 2017/18, the service was suspended for long periods.

Stations	**2011**	**2015**	**2018**	% increase of incomplete journeys in 2018 compared to 2011
Chingford branch				
Bethnal Green LO	4,875	6,060	5,012	3%
Walthamstow Central LO	10,302	16,433	21,438	108%
Cheshunt branch				
Theobalds Grove	-	2,644	3,908	48% (comparison to 2015)
Turkey Street	2,604	5,276	8,549	228%
Southbury	2,968	7,662	6,589	122%
Enfield Town branch				
Enfield Town	11,009	15,466	12,972	18%
Joint section				
Edmonton Green	9,705	20,546	15,542	60%
Silver Street	5,072	6,162	6,901	36%
White Hart Lane	4,782	4,886	4,839	1%
Gospel Oak to Barking				
South Tottenham	6,793	6,152	6,910	2%
Leyton Midland Road	4,680	6,237	4,741	1%
Leytonstone High Road	3,933	5,605	4,043	3%
Wanstead Park	3,505	3,396	4,636	32%
Other stations				
Shadwell LO	8,729	21,117	11,913	36%
Clapham High Street	2,211	14,670	6,146	178%
Wandsworth Road	2,052	3,975	2,187	7%
Kensington Olympia	14,242	28,700	18,174	28%
Anerley	2,684	3,156	2,782	4%
Bushey	7,591	10,264	8,573	13%
Headstone Lane	1,695	2,106	1,784	5%

London Underground

Only 19 of the 246 London Underground stations * **(7%)** recorded an increase in the number of incomplete Pay As You Go journeys between 2011 and 2018. They are listed below.

** This relates to the designation of operator in the data not the total of tube stations served.*

The District line serves 12 stations where there had been an increase in the number of incomplete journeys between 2011 and 2018. Significantly, this includes all LU-owned stations **east of Barking**. At all but Elm Park (where the number of journeys rose from 2011 to 2015 and continued rising to 2018), the number of incomplete journeys actually fell between 2011 and 2015 before rising again by 2018.

To complete the LU stations on this line section, Hornchurch does not appear on this list as the number of incomplete journeys fell by 16% between 2011 and 2018. However, it should be noted that there has been a 3% increase in the number of incomplete journeys since 2015.

Of the remaining stations, the sharp rise of incomplete journeys at **Tottenham Court Road** reflects a particularly low number in 2015 when the station was affected by Crossrail works. A more realistic comparison would be to 2017, where there were 95,799 incomplete journeys; this then dropped by 11% in 2018.

The alteration of National Rail services during the rebuilding of London Bridge station is reflected in the significant increases at **Cannon Street** and **Southwark** (for passengers to/from Waterloo East).

The continued rise at **Wembley Park** reflects the additional use of Wembley Stadium by Tottenham Hotspur FC since August 2017.

Stations	Tube line(s) serving station	**2011**	**2015**	**2018**	% increase of incomplete journeys in 2018 compared to 2011
Upminster Bridge	District	2,986	2,904	3,441	15%
Elm Park	District	9,698	10,122	11,054	14%
Dagenham East	District	12,203	11,531	12,953	6%
Dagenham Heathway	District	24,945	24,716	26,306	5%
Becontree	District	13,587	12,947	15,006	10%
Upney	District	8,339	8,002	8,398	1%

Stations	Tube line(s) serving station	2011	2015	2018	% increase of incomplete journeys in 2018 compared to 2011
Bromley-by-Bow	District, H & City	6,911	7,552	7,110	3%
Cannon Street LU	Circle, District	5,167	11,044	8,489	64%
Canons Park	Jubilee	6,439	7,316	6,981	8%
Chesham	Metropolitan	3,880	4,554	4,200	8%
Latimer Road	Circle, H & City	3,341	5,447	4,059	21%
Monument	Circle, District	37,572	50,440	39,264	5%
Paddington LU	Bakerloo, Circle District, H & City	99,166	157,323	111,352	12%
Southwark	Jubilee	29,347	88,913	71,335	143%
Tottenham Court Road	Central Northern	82,807	31,714	84,659	2%
Tower Hill	Circle, District	47,393	65,896	52,686	11%
Vauxhall LU	Victoria	40,345	47,683	42,232	5%
Wembley Park	Jubilee Metropolitan	42,391	49,622	51,266	21%
Westminster	Circle, District Jubilee	56,746	74,669	66,732	18%

TfL Rail

6 of the 23 TfL Rail stations **(26%)** recorded an increase in the number of incomplete Pay As You Go journeys between 2011 and 2018. TfL Rail began on the eastern section in May 2015 (replacing Greater Anglia services) and on the western section in May 2018 (replacing Heathrow Connect services). The earlier data therefore refers to when the stations were under National Rail.

The 6 stations with increases are listed below, divided into their operational sections.

The first specific TfL Rail data was in 2016, when there were 472,000 incomplete journeys. This fell to 419,000 in 2017 then rose steeply to 604,000 in 2018. The 2018 figure is 28% higher than the 2016 figure and 44% higher than the 2017 figure.

Emerson Park, which experienced the largest percentage increase in the number of incomplete journeys, does not have ticket gates. The number of incomplete journeys at **Harold Wood, Chadwell Heath** and **Seven Kings** in the

east, and at **Hayes & Harlington** in the west is higher in 2018 than in 2011 but lower than in 2015.

TfL Rail	**2011**	**2015**	**2018**	% increase of incomplete journeys in 2018 compared to 2011
Liverpool Street to Shenfield				
Harold Wood	5,201	10,394	7,651	47%
Chadwell Heath	8,719	16,362	11,784	35%
Seven Kings	7,671	11,920	8,973	17%
Brentwood	-	6,585	6,706	1% (comparison to 2015)
Romford to Upminster				
Emerson Park	406	624	736	81%
Paddington to Heathrow Airport				
Hayes & Harlington	24,379	29,997	26,761	10%

National Rail

98 of the 229 **National Rail** stations (**42%**) recorded an increase in the number of incomplete Pay As You Go journeys between 2011 and 2018. 26 of the 98 saw an increased number of incomplete journeys between 2015 and 2018. This reflects the introduction of Contactless bank cards to the system and the higher use of this method of ticket purchase on National Rail.

The 26 stations are listed below, grouped by TOC and route. Also named are stations which showed an increase in the number of incomplete journeys between 2011 and 2018 but where the number was lower in 2018 than in 2015.

Southeastern	**2011**	**2015**	**2018**	% increase of incomplete journeys in 2018 compared to 2011
Dartford lines				
Woolwich branch				
Abbey Wood	15,760	16,221	23,430	49%
Belvedere	4,087	5,430	5,802	42%
Slade Green	2,702	3,994	4,361	61%
In addition to the above, the following station on this branch showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: Erith				
Eltham branch				

Barnehurst	3,046	3,815	4,184	37%
In addition to the above, the following station on this branch showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: Kidbrooke				
Sidcup branch				
New Eltham	5,452	5,862	6,027	11%
Bexley	3,517	4,332	4,868	38%
In addition to the above, the following stations on this branch showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: Albany Park, Crayford and Sidcup				
Hayes branch				
Hayes	2,962	3,431	3,608	22%
West Wickham	2,659	2,767	2,771	4%
In addition to the above, the following station on this branch showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: Eden Park				
Services to Bromley South, Orpington and Sevenoaks				
Elmstead Woods	2,147	2,244	2,297	7%
Kent House	2,679	3,827	4,239	58%
Petts Wood	4,641	5,648	5,795	25%
Sydenham Hill	2,506	3,040	3,496	40%
In addition to the above, the following stations showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: Beckenham Hill*, Beckenham Junction, Bellingham*, Bickley, Bromley South, Catford, Chelsfield, Denmark Hill, Grove Park, Knockholt, Orpington, Peckham Rye, Penge East, Ravensbourne*, St. Mary Cray and Shortlands * limited Southeastern service; main service by Thameslink				

Southern	**2011**	**2015**	**2018**	% increase of incomplete journeys in 2018 compared to 2011
Birkbeck	625	865	693	11%
Queens Road (Peckham)	5,705	10,023	10,631	86%
Ticket gates were introduced at Queens Road (Peckham) during the period, and in 2012 the East London Line services of London Overground increased service levels.				
Tattenham Corner branch				
Woodmansterne	613	725	800	31%
In addition to the above, the following stations on this branch showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: Tattenham Corner,				

Tadworth, Chipstead, Coulsdon Town and Reedham				
Caterham branch				
Caterham	2,164	3,288	3,550	64%
In addition to the above, the following stations on this branch showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: Kenley, Whyteleafe and Whyteleafe South				
East Grinstead branch				
Riddlesdown	580	857	874	51%
Sanderstead	1,566	2,433	3,096	98%
In addition to the above, the following station on this branch showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: Upper Warlingham				
South Croydon to Coulsdon South				
Coulsdon South	3,441	4,467	4,631	35%
In addition to the above, the following station on this route showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: South Croydon, Purley Oaks and Purley				

SWR	**2011**	**2015**	**2018**	% increase of incomplete journeys in 2018 compared to 2011
Malden Manor	1,247	2,030	2,250	80%
In addition to the above, the following SWR stations showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: • Chessington branch: Motspur Park, Malden Manor, Tolworth, Chessington North, and Chessington South • Epsom branch: Worcester Park, Stoneleigh and Ewell West • Feltham, Hounslow and Whitton • Wimbledon – Thames Ditton (inclusive): Wimbledon, Raynes Park, New Malden, Berrylands, Surbiton and Thames Ditton				

Thameslink Sutton/Wimbledon loop	**2011**	**2015**	**2018**	% increase of incomplete journeys in 2018 compared to 2011
Loughborough	3,513	4,905	5,573	59%
Ticket gates were introduced at Loughborough Junction during the period. Usage of the station has also grown as a result of the expansion of the Kings' College bio-medical campus nearby.				

In addition to the above, the following stations on this route showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: Mitcham Eastfields, Hackbridge, St Helier, Morden South and Wimbledon Chase

c2c Grays via Rainham and Ockendon	**2011**	**2015**	**2018**	% increase of incomplete journeys in 2018 compared to 2011
Dagenham Dock	894	1,224	1,685	88%
Limehouse NR	6,827	8,236	9,270	36%
Ockendon	2,102	3,224	3,623	72%
Rainham Essex	4,322	6,367	6,751	56%
In addition to the above, the following station on this route showed an increase in the number of incomplete journeys between 2011 and 2018 although the number was lower in 2018 than in 2015: Grays				

The following table shows Central London stations with an increased number of incomplete journeys in 2018 compared to 2011. By contrast, Waterloo and Liverpool Street saw falls of 30% and 32% respectively, with a 1% reduction at King's Cross and Paddington.

Caution should be applied when looking at the increase of incomplete journeys at **Blackfriars** from a very low number in 2011 because the station was only part open in 2011.

Central London stations	**2011**	**2015**	**2018**	% increase of incomplete journeys in 2018 compared to 2011
Blackfriars NR	5,898	46,724	35,439	501%
Cannon Street NR	40,358	77,248	48,879	21%
Euston NR	51,828	103,230	53,935	4%
Marylebone NR	23,948	61,787	42,363	77%
St Pancras	46,450	80,559	73,823	59%
Victoria NR	251,152	415,982	254,331	1%
Waterloo East NR	35,219	81,194	43,079	22%

Across the shorter timescale between 2015 and 2018, each of the stations had a reduction in the number of incomplete journeys. The number of incomplete journeys at **Euston** and **Victoria** even returned close to the 2011 levels.

With regard to **Blackfriars, St Pancras International** and **Victoria**, the figures reflect the extension of Pay As You Go to Gatwick Airport in 2016.

The significant increases at **Cannon Street** and **Waterloo East** are related to the alteration of services during the rebuilding of London Bridge station.

Central London stations	% reduction of incomplete journeys in 2018 compared to 2015
Blackfriars NR	-24%
Cannon Street NR	-37%
Euston NR	-48%
Marylebone NR	-31%
St Pancras	-8%
Victoria NR	-39%
Waterloo East NR	-47%

The following table shows key interchange stations outside Zone 1.

The percentage rises at **Stratford International** and **Tottenham Hale** are the highest at any station of any operator between 2011 and 2018, albeit that there has been a reduction at Tottenham Hale since 2015.

Tottenham Hale is a key interchange station for passengers travelling to/from Stansted Airport especially via the Victoria line. Pay As You Go is still not permitted at Stansted Airport.

It should also be noted that the low number of incomplete journeys at **Stratford International** in 2011 was because the station was only open for part of that year.

Of the other stations, the completion of the Thameslink programme is reflected with the figures at **Elephant & Castle. West Hampstead** is a key interchange including for Luton and Gatwick Airports. Pay As You Go coverage dose not extend to Luton Airport Parkway whilst Pay As You Go was only introduced at Gatwick Airport in 2016.

The rise at **Limehouse** between 2011 and 2015 has continued until 2018.

Non-Zone 1 key interchanges	**2011**	**2015**	**2018**	% increase of incomplete journeys in 2018 compared to
Elephant & Castle NR	8,807	17,004	10,800	23%
Limehouse NR	6,827	8,236	9,270	36%
Stratford International	1,173	8,064	8,205	599%
Tottenham Hale NR	7,066	85,997	66,920	847%
Vauxhall NR	87,721	161,720	89,424	2%

Watford Junction	49,494	73,042	63,937	29%
West Hampstead NR	12,328	29,111	21,576	75%

Appendix B

2017/18 ORR station usage figures for stations within the proposed extended Pay As You Go travel area

Where there were more than 3 million entries and exits, and interchanges in 2017/18, **stations** are highlighted
Where there were 1 to 3 million entries and exits, and interchanges in 2017/18, **stations** are highlighted
Where there were more than 15 million entries and exits, and interchanges in 2017/18 per line, they are **in bold**

Where a station is on more than one line, it is included in the list of stations for each line

Line	Proposed extent of PAYG travel area	Station name	2017/18 entries & exits	2017/18 interchanges	Total entries & exits & interchanges per station	Total entries & exits & interchanges per line
Midland Mainline	Luton	Luton	3,696,064	137,099	3,833,163	3,833,163
East Coast Mainline	Stevenage (including Hertford North Branch)	Welwyn North	590,284	-	590,284	
		Knebworth	586,890	-	586,890	
		Watton-At-Stone	162,856	-	162,856	
		Stevenage	4,838,062	1,214,540	6,052,602	7,392,632
West Anglia	Stansted Airport	Roydon	130,634	-	130,634	
		Harlow Town	1,886,288	-	1,886,288	
		Harlow Mill	232,932	-	232,932	
		Sawbridgeworth	546,534	-	546,534	
		Bishop's Stortford	3,179,798	85,333	3,265,131	
		Stansted Mountfitchet	584,288	8,773	593,061	
		Stansted Airport	8,934,250	32,632	8,966,882	**15,621,462**
Great Eastern Main Line	Witham	Ingatestone	875,874	-	875,574	
		Chelmsford	8,619,956	56,798	8,676,754	
		Hatfield Peveral	419,264	-	419,264	
		Witham	2,331,630	127,219	2,458,849	12,430,441
Southend	Southend	Billericay	3,030,166	-	3,030,166	

Victoria line	Victoria	Wickford	2,256,070	515,336	2,771,406	11,070,985
		Rayleigh	1,310,668	-	1,310,668	
		Hockley	718,934	-	718,934	
		Rochford	483,304	-	483,304	
		Southend Airport	466,512	-	466,512	
		Prittlewell	188,044	-	188,044	
		Southend Victoria	2,098,654	3,297	2,101,951	
London, Tilbury and Southend	Sh'bryn'ss	Tilbury Town	1,173,778	107,629	1,281,407	**26,453,324**
		East Tilbury	443,966	-	443,966	
		Stanford-Le-Hope	1,109,214	-	1,109,214	
		West Horndon	416,398	-	416,398	
		Laindon	2,287,322	-	2,287,322	
		Basildon	3,233,788	-	3,233,788	
		Pitsea	1,270,792	260,242	1,531,034	
		Benfleet	3,680,038	-	3,680,038	
		Leigh-On-Sea	2,232,070	-	2,232,070	
		Chalkwell	1,968,412	-	1,968,412	
		Westcliff	1,299,104	-	1,299,104	
		Southend Central	3,396,032	14,729	3,410,761	
		Southend East	1,926,844	832	1,927,676	
		Thorpe Bay	885,608	-	885,608	
		Shoeburyness	746,526	-	746,526	
South Eastern (North Kent route)	Rainham	Stone Crossing	195,328	-	195,328	**18,049,428**
		Greenhithe	1,138,492	-	1,138,492	
		Swanscombe	176,442	-	176,442	
		Northfleet	110,000	-	110,000	
		Ebbsfleet International	1,961,528	57,476	2,019,004	
		Gravesend	2,989,304	191,415	3,180,719	
		Higham	196,936	-	196,936	
		Strood	1,071,564	508,291	1,579,855	
		Rochester	1,817,314	30,296	1,847,610	
		Chatham	2,730,506	17	2,730,523	
		Gillingham (Kent)	2,744,182	307,797	3,051,979	
		Rainham (Kent)	1,822,540	-	1,822,540	

South Eastern main line	Tunbridge Wells	Dunton Green	233,480	-	233,480	
		Sevenoaks	4,153,744	385,544	4,539,288	
		Hildenborough	582,574	-	582,574	
		Tonbridge	4,391,184	495,383	4,886,567	
		High Brooms	1,224,846	-	1,224,846	
		Tunbridge Wells	3,679,224	50,605	3,729,829	15,503,082
South Eastern Maidstone East and Medway Valley lines	Maidstone East/West	Eynsford	189,472	-	189,472	
		Shoreham (Kent)	55,082	-	55,082	
		Otford	426,400	54,884	481,284	
		Bat & Ball	128,908	-	128,908	
		Kemsing	25,366	-	25,366	
		Borough Green & Wrotham	431,936	-	431,936	
		West Malling	839,956	-	839,956	
		East Malling	102,640	-	102,640	
		Barming	142,338	-	142,338	
		Maidstone East	1,412,958	24,566	1,437,524	
		Strood	1,071,564	508,291	1,579,855	
		Cuxton	51,124	-	51,124	
		Halling	94,422	-	94,422	
		Snodland	325,322	-	325,322	
		New Hythe	161,968	-	161,968	
		Aylesford	144,792	-	144,792	
		Maidstone Barracks	281,524	214,105	495,629	
		Maidstone West	877,164	107,184	984,348	
		Farningham Road	208,728	-	208,728	
		Longfield	605,302	-	605,302	
		Meopham	328,456	-	328,456	
		Sole Street	64,338	-	64,338	8,878,790
Southern (branch lines)	East Grinstead	Woldingham	306,498	-	306,498	
		Oxted	1,571,614	-	1,571,614	
		Hurst Green	662,178	101,859	764,037	
		Lingfield	546,656	-	546,656	
		Dormans	111,060	-	111,060	
		East Grinstead	1,514,562	-	1,514,562	4,814,427
	Reigate	Reigate	1,223,378	-	1,223,378	6,671,287

	Tonbridge	Nutfield	84,096	-	84,096	
		Godstone	66,190	-	66,190	
		Edenbridge	257,530	76,928	334,458	
		Penshurst	34,854	-	34,854	
		Leigh	41,744	-	41,744	
		Tonbridge	4,391,184	495,383	4,886,567	
South Western Railway	Dorking	Ashtead	1,264,880	-	1,264,880	
		Leatherhead	1,964,658	53,986	2,018,644	
		Boxhill & Westhumble	98,210	-	98,210	
		Dorking	1,287,506	106,498	1,394,004	4,775,738
	Guildford	Hinchley Wood	358,196	-	358,196	
		Claygate	651,366	-	651,366	
		Cobham & Stoke D'abernon	592,248	-	592,248	
		Bookham	321,088	-	98,210	
		Effingham Junction	300,152	13,979	314,131	
		Horsley	434,840	-	434,840	
		Clandon	206,156	-	206,156	
		London Road Guildford	540,978	-	540,978	
		Esher	1,144,232	-	1,144,232	
		Hersham	822,040	-	822,040	
		Walton-On-Thames	2,856,710	-	2,856,710	
		Weybridge	2,318,280	672,901	2,991,181	
		Byfleet & New Haw	447,024	-	447,024	
		West Byfleet	1,384,952	-	1,384,952	
		Woking	7,642,076	1,381,032	9,023,108	
		Worplesdon	203,286	-	203,286	
		Guildford	7,954,618	1,017,357	8,971,975	**31,040,633**
	Reading	Ashford (Middlesex)	1,032,946	-	1,032,946	
		Staines	2,753,456	360,747	3,114,203	
		Egham	2,024,932	-	2,024,932	
		Virginia Water	575,532	85,913	661,445	
		Longcross	25,784	-	25,784	
		Sunningdale	650,626	-	650,626	**15,991,482**

		Ascot	1,212,682	286,707	1,499,389	
		Martins Heron	567,372	-	567,372	
		Bracknell	2,311,474	22	2,311,496	
		Wokingham	2,423,576	137,735	2,561,311	
		Winnersh	494,642	-	494,642	
		Winnersh Triangle	431,402	-	431,402	
		Earley	615,934	-	615,934	
	Windsor lines	Wraysbury	103,152	-	103,152	
		Sunnymeads	42,402	-	42,402	
		Datchet	333,790	-	333,790	
		Windsor & Eton Riverside	1,406,170	38,881	1,445,051	
		Kempton Park	55,924	-	55,924	
		Sunbury	423,614	-	423,614	
		Upper Halliford	125,180	-	125,180	
		Shepperton	418,554	-	418,554	
		Chertsey	697,206	-	697,206	
		Addlestone	429,944	-	429,944	
		Brookwood	1,016,392	52,215	1,068,607	
		Ash Vale	466,782	114,263	581,045	
		Aldershot	1,394,786	130,813	1,525,599	7,250,068
South Western Railway	Ascot to Guildford	Ascot	1,212,682	286,707	1,499,389	
		Bagshot	157,480	-	157,480	
		Camberley	414,680	-	414,680	
		Frimley	202,910	-	202,910	
		Ash Vale	466,782	114,263	581,045	
		Ash	261,276	36,561	297,837	
		Wanborough	105,118	-	105,118	
		Guildford	7,954,618	1,017,357	8,971,975	12,230,434
Great Western mainline	Reading	Windsor & Eton Central	1,888,098	35,520	1,923,618	
		Furze Platt	175,694	-	175,694	
		Cookham	210,040	-	210,040	
		Bourne End	243,296	96,873	340,169	
		Marlow	275,740	-	275,740	
		Wargrave	90,078	-	90,078	
		Shiplake	86,700	-	86,700	
		Henley-on-	745,422	-	745,422	4,296,123

		Thames				
		Reading West	434,004	14,658	448,662	
Great Western – Reading to Gatwick	Reading to Gatwick	Reigate	1,223,378	-	1,223,378	
		Betchworth	14,972	-	14,972	
		Dorking Deepdene	442,194	262,124	704,318	
		Dorking West	62,072	482	62,554	
		Gomshall	59,102	-	59,102	
		Chilworth	24,120	-	24,120	
		Shalford	128,672	-	128,672	
		Guildford	7,954,618	1,017,357	8,971,975	
		Wanborough	105,118	-	105,118	
		Ash	261,276	36,561	297,837	
		North Camp	378,440	-	378,440	
		Farnborough North	637,320	2,460	639,780	
		Blackwater	507,390	-	507,390	
		Sandhurst	152,402	-	152,402	
		Crowthorne	310,436	-	310,436	
		Wokingham	2,423,576	137,735	2,561,311	**16,141,805**

Chiltern Mainline	Aylesbury Vale Parkway	Great Missenden	582,442	-	582,442	
		Wendover	492,412	-	492,412	
		Stoke Mandeville	314,366	-	314,366	
		Aylesbury	1,178,490	5,184	1,183,674	
		Aylesbury Vale Pkway	185,748	-	185,748	2,758,642
	Princes Risborough	Denham	321,878	-	321,878	
		Denham Golf Club	29,346	-	29,346	
		Gerrards Cross	1,487,488	51,826	1,539,314	
		Seer Green	148,568	-	148,568	
		Beaconsfield	1,625,912	-	1,625,912	
		High Wycombe	2,999,522	86,580	3,086,102	
		Saunderton	56,126	-	56,126	
		Princes Risborough	579,844	30,985	610,829	
		Monks	20,966	-	20,966	8,628,127

		Risborough				
		Little Kimble	5,412	-	5,412	
Watford Junction to St Albans Abbey	St Albans Abbey	Watford North	101,716	-	101,716	
		Garston	80,540	-	80,540	
		Bricket Wood	28,618	-	28,618	
		How Wood	33,592	-	33,592	
		Park Street	21,428	-	21,428	
		St Albans Abbey	169,036	-	169,036	434,930
West Coast Mainline	Tring	King's Langley	709,548	-	709,548	
		Apsley	631,892	-	631,892	
		Hemel Hempstead	1,965,296	31,801	1,997,097	
		Berkhamsted	1,769,678	-	1,769,678	
		Tring	857,482	70	857,552	5,965,767

Appendix C

Labour Market statistics:
Analysis of 20 outer London councils * and 13 councils outside London **

***** *Barnet, Barking & Dagenham, Bexley, Brent, Bromley, Croydon, Ealing, Enfield, Haringey, Harrow, Havering, Hillingdon, Hounslow, Kingston, Merton, Newham, Redbridge, Richmond upon Thames, Sutton, Waltham Forest*
****** *Brentwood, Chiltern, Crawley, Dacorum, Harlow, Reigate and Banstead, Sevenoaks, Slough, Spelthorne, Tandridge, Thurrock, Welwyn Hatfield, Woking*

NB In references below to the 'London average', the figures include inner as well as outer London boroughs

Population aged 16-64
67% of the population is aged 16-64 according to the London average. Only five boroughs in this sample (Newham, Harringey, Waltham Forest, Brent and Merton) met or exceeded this figure. Chiltern (58%), Sevenoaks (59%) and Tandridge (60%) had the lowest percentage of population aged 16-64.

Economically active population aged 16-64
The four council areas with the highest rate of those who are economically active are all outside London (Woking, Spelthorne, Chiltern and Crawley). In total, six of the ten boroughs where the rate is highest are outside London.

By contrast, six of the ten council areas with the lowest rate are inside London. Three of the bottom four are in east London (Newham, Barking and Dagenham and Redbridge).

Employment rate aged 16-64
The councils with the highest employment rate (Spelthorne, Chiltern and Woking) are outside London whilst those with the lowest rate are in outer London (Enfield, Redbridge and Barking and Dagenham).

Six of the seven council areas with the highest male employment rate are outside London (Sutton being the exception). Seven of the ten councils with the lowest male employment rate are within London although Sevenoaks was lowest. The male employment rate is 13% lower in Enfield than in Sutton and 22% lower in Sevenoaks than in Woking.

The female employment rate is highest in three boroughs outside London and lowest in three boroughs in outer London. The female employment rate is 25% lower in Redbridge than in Chiltern and 20% lower in Newham than in Welwyn Hatfield.

Unemployment rate aged 16-64
The sample size is too small for a reliable estimate of unemployment rates of males or females in most of the council areas outside of London.

However, six of the seven council areas with the male unemployment rate above the London average are within London. The exception is Crawley, which had the highest rate of 8.3%. By contrast, the lowest rate (1.8%) was in Harrow.

Crawley also had the highest female unemployment rate (at 9.8%), with ten other councils having an unemployment rate above the London average. The lowest rates were in Hillingdon and Harrow, which were half the London average.

Earnings by place of residence
The average London gross weekly pay by place of residence is £670. Workers in 11 council areas in this sample exceed that figure, split almost equally between those within London and those outside London. The two council areas with the lowest earning residents are Crawley and Harlow, both of whom pay some of the highest train fares into London.

Full time workers living in Richmond upon Thames earn on average 50% more than in Harlow, 35% more in Brentwood than in Crawley and 31% more in Bromley than in Brent.

See Appendix for Tables 1, 2 and 3 showing further analysis of earnings and season ticket prices.

Earnings by place of work
Workers employed in this sample of councils earn an average of £594 in gross weekly pay, which is 20% less than the London average of £713.

Of the 13 councils with the highest gross weekly pay, eight are outside London (although Hounslow has the highest gross weekly salary average of £693). Four of the six lowest paying areas are also outside London (although Redbridge has the lowest average of £526).

Claimant count by age/gender
The eight councils with the lowest percentage of claimants are all outside London. You are four times more likely to be a claimant in Croydon than in Chiltern or Woking, and three times more likely to be a claimant in Barking and Dagenham than in Sevenoaks or Spelthorne. Of the nine boroughs with claimant percentage rates higher than the London average of 2.4%, only Thurrock and Harlow are outside London.

The highest number of claimants (9,480) was in Croydon, a figure greater than the combined total (7,820) for the ten councils with the lowest number of claimants. Each of those ten councils are outside London.

There are seven councils where the percentage claimant rate for both men and women is higher than the London average but Harlow is the only one of these councils outside London. Croydon has the highest percentage claimant rate for both men and women. The ten councils with the lowest percentage claimant rate for both men and women are outside London.

Jobs density (the ratio of total jobs to the population aged 16-64)
There is a jobs density higher than the London average of 1.02% in four council areas. The first and third highest rates are in Crawley (covering Gatwick Airport) and Hillingdon (covering Heathrow Airport) respectively. Welwyn Hatfield and Hounslow (the latter the adjacent council to Hillingdon) complete the four. Slough and Harlow, which are close to Heathrow and Stansted Airports respecitively, have the fifth and seventh highest job densities. In all, 10 of the 14 boroughs with the highest jobs density are outside London.

The 12 council areas with the lowest job density are all in outer London. Four of the bottom five are clustered together in east London (Newham, Redbridge, Barking and Dagenham and Waltham Forest) and all have a jobs density less than half that of the London average.

% with NVQ4+ aged 16-64
The councils with the highest resident populations with at least a NVQ level 4 qualification are Richmond upon Thames, Woking and Chiltern. Each of these councils have more than twice as many residents with this level of qualification compared to in the lowest three councils – Havering, Thurrock and Harlow.

% with no qualifications (NVQ) aged 16-64
The four council areas with the highest percentage of resident population with no qualifications are in either east London (Newham and Barking and Dagenham) or Essex (Thurrock and Harlow). Compared to the London average, you are twice as likely to have no qualifications in those areas.

The councils with the lowest resident population with no qualfication were outside London, in Chiltern and Dacroum.

Workless households
Ten councils have a percentage of workless households above the London average of 11.3%, with Enfield (17.7%) and Haringey (16.4%) having the highest percentage. Chiltern (6.1%), Welwyn Hatfield (6.2%) and Woking (6.7%) have the lowest percentages, each at less than half the rate at Enfield and Haringey.

Table 1 - Percentage of gross weekly pay required to purchase a weekly season ticket for residents of selected councils outside London

Council	Commuter station	Full Time Workers gross weekly pay by council of residence	Weekly season ticket price	% of weekly pay required to purchase a weekly season ticket
Harlow	Harlow Town	£532.1	£93.3	17.5%
Sevenoaks	Sevenoaks	£580.5	£90.2	15.5%
Crawley	Gatwick Airport	£558.7	£84.3	15.1%
Dacorum	Hemel Hempstead	£670.8	£95.8	14.3%
Chiltern	Amersham	£717.7	£91.5	12.7%
Welwyn Hatfield	Welwyn Garden City	£625.4	£75.4	12.1%
Slough	Slough	£604.6	£67.8	11.2%
Woking	Woking	£765.0	£83.7	10.9%
Spelthorne	Staines	£627.8	£67.4	10.7%
Thurrock	Grays	£579.3	£61.2	10.6%
Brentwood	Shenfield	£754.1	£78.7	10.4%
Reigate and Banstead	Redhill	£682.8	£70.7	10.4%
Tandridge	Oxted	£680.1	£58.9	8.7%

highest % of salary paid for a weekly season ticket

lowest % of salary paid for a weekly season ticket

A commuter living in Harlow and commuting from Harlow Town will pay twice as much for their weekly ticket as a percentage of their gross weekly pay compared to a commuter living in Tandridge and commuting from Oxted.

Commuters from either Sevenoaks or Gatwick will need to contribute 15% of their gross weekly pay to the cost of their weekly season ticket.

Table 2 – Percentage of gross weekly pay required to purchase a weekly season ticket for residents of outer London boroughs

		% of weekly pay required to purchase a weekly season ticket for…			
Council	**Full Time Workers gross weekly pay by council of residence**	**Zones 1-3 (£41.20)**	**Zones 1-4 (£50.50)**	**Zones 1-5 (£60.00)**	**Zones 1-6 (64.20)**
Barking & Dagenham	£571.5		8.8%	10.5%	
Brent	£575.5	7.2%	8.8%		
Enfield	£595.3		8.5%	10.1%	10.8%
Newham	£598.8	6.9%			
Hillingdon	£606.6			9.9%	10.6%
Hounslow	£620.9	6.6%	8.1%	9.7%	
Waltham Forest	£622.9	6.6%	8.1%	9.6%	
Ealing	£632.1	6.5%	8.0%		
Redbridge	£633.2		8.0%		
Havering	£642.0				10.0%
Bexley	£642.6		7.9%	9.3%	10.0%
Haringey	£654.1	6.3%	7.7%		
Sutton	£654.2		7.7%	9.2%	
Croydon	£654.3		7.7%	9.2%	9.8%
Harrow	£671.7		7.5%	8.9%	9.6%
Barnet	£674.1	6.1%	7.5%	8.9%	
Merton	£688.0	6.0%	7.3%		
Kingston upon Thames	£736.9		6.9%	8.1%	8.7%
Bromley	£755.5		6.7%	7.9%	8.5%
Richmond upon Thames	£800.9	5.1%	6.3%	7.5%	
LONDON AVERAGE	*£670.8*	*6.1%*	*7.5%*	*8.9%*	*9.6%*

highest % of salary paid for each season ticket

lowest % of salary paid for each season ticket

Of all outer London boroughs, residents of Barking and Dagenham, Brent and Enfield pay the largest percentage of their gross weekly salary on a weekly season ticket.

Residents of Bromley and Richmond upon Thames pay the smallest percentage of their gross weekly salary on a weekly season ticket.

Table 3 - Council areas in outer London and outside London where residents pay the highest percentage of their weekly gross salary on a weekly season ticket

Rank	Council (and Commuter station for councils outside London or zones for councils within London) London councils in blue	Full Time Workers gross weekly pay by council of residence	Weekly season ticket price	% of weekly pay required to purchase a weekly season ticket
1	Harlow (Harlow Town)	£532.1	£93.3	17.5%
2	Sevenoaks (Sevenoaks)	£580.5	£90.2	15.5%
3	Crawley (Gatwick Airport)	£558.7	£84.3	15.1%
4	Dacorum (Hemel Hempstead)	£670.8	£95.8	14.3%
5	Chiltern (Amersham)	£717.7	£91.5	12.7%
6	Welwyn Hatfield (Welwyn Garden City)	£625.4	£75.4	12.1%
7	Slough (Slough)	£604.6	£67.8	11.2%
8	Woking (Woking)	£765.0	£83.7	10.9%
9	Enfield zones 1-6	£595.3	£64.2	10.8%
10	Spelthorne (Staines)	£627.8	£67.4	10.7%
11=	Thurrock (Grays)	£579.3	£61.2	10.6%
11=	Hillingdon zones 1-6	£606.6	£64.2	10.6%
13	Barking & Dagenham zones 1-5	£571.5	£60.0	10.5%
14=	Brentwood (Shenfield)	£754.1	£78.7	10.4%
14=	Reigate and Banstead (Redhill)	£682.8	£70.7	10.4%

Of the 15 instances where residents pay the highest percentage of their weekly gross salary on a weekly season ticket, 12 of them are for council areas outside London