

For the attention of all
Station and Revenue Control staff



The Ticketing & Revenue Update December 2017



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Final countdown to the JANUARY FARES REVISION



As we rapidly approach the end of another year, we turn our attention to the forthcoming January Fares Revision on 02 January 2018.

In last month's edition ([TRU105](#)) we included a four page special feature covering some of the main changes included in this year's main fares revision.



Inside this edition on Pages 2 and 3, we include updated information and further details on some aspects of the fares revision changes that we did not cover last month.

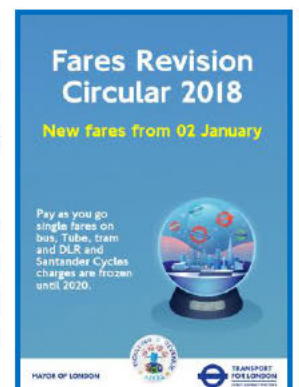
Stations should have now received printed copies of the [2018 Fares Revision Circular](#).



The content of this can also be accessed or printed from the T&R Pages of the Intranet, or simply [click here](#).

Please take this opportunity to update yourself with the new prices, changes and what will offer best value to customers.

In this way you will be able to accurately answer any questions our customers may ask in the run up to the fares change, or immediately afterwards.



KEY STORIES INSIDE

Page 5 [ALL CHANGE!](#)

We provide an update on some late changes to the revised process for ordering change and report on progress on the re-tendering of our current contract for station cash collections.

Page 6 & 7 [POM OVERPAYMENTS](#)

We report on the annual distribution of the proceeds from customer overpayments on our POMs and two recent cheque presentations to our nominated charities.

Page 12 [SKIMMING DEVICES ARE BACK](#)

This month's *Crimewatch* again turns its focus to skimming devices on our POMs. We update you on recent devices that have been found and what to look out for.

Page 14 [MFM UPDATES](#)

We outline plans for a further MFM upgrade next year and update you on the current problems with note acceptance on devices with the BNA.

Page 16 [TVM ROLLOUT](#)

We provide a brief update on the rollout of the new Cubic TVM at RSLU stations on the Bakerloo line.

**We would like to wish
all our readers a very
Merry Christmas and a
Happy New Year**



Written and compiled by

JANUARY FARES REVISION

As promised in our last edition, we are bringing you up to date with some additional information on the forthcoming January Fares Revision.

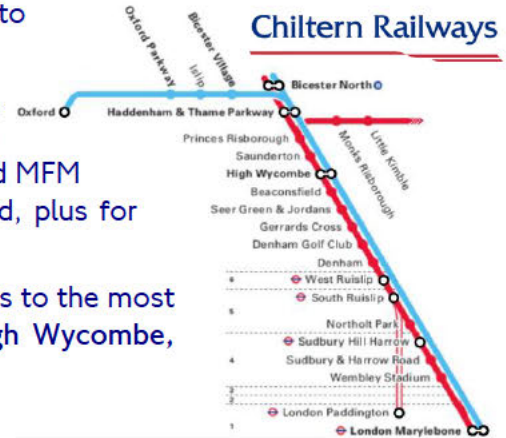
MARYLEBONE POM CHANGES



Since our item in [TRU105](#), the scope of the changes being made to the POMs at Marylebone have been changed slightly. Since writing the last article it has been agreed that the option of purchasing tickets to Oxford via Paddington and Great Western services will be removed from POMs at Marylebone, but it will now be possible for customers at the station to buy tickets to Oxford via the direct Chiltern Railways service.

Due to capacity problems with Chiltern's own NR TVMs at Marylebone, they have also asked for destinations served by Chiltern services from Marylebone to be added to our POMs. So from 02 January the AFMs and MFM will offer tickets to all stations between Wembley Stadium and Oxford, plus for completeness, tickets to Monks Risborough and Little Kimble.

The change will also see the addition of Boundary Zone Extension tickets to the most popular destinations (e.g. Beaconsfield, Gerrards Cross, Denham, High Wycombe, Oxford, Bicester North / Village).



Station	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
A																				
B																				
C																				
D																				
E																				
F																				

STAFF FARES LISTS 2018

New staff fares lists showing 2018 fares are now available online from the T&R Intranet pages and can also be viewed or printed off by [clicking here](#).

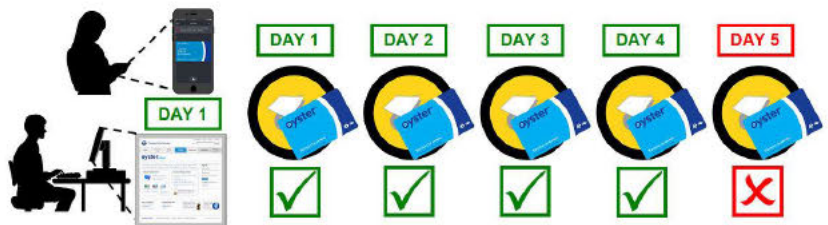
The fares lists appear by station / NLC and each has two lists. One covering fares to other LU stations plus other stations on the TfL fares scale, the other covering through fares to NR stations within the London area.

- the first starting SOO followed by the last 3 digits of the station NLC – containing fares to LU, DLR and other stations on the TfL fare scale for which "Station of Origin" tickets are issued
- the second starting SOD followed by the last 3 digits of the station NLC – containing fares NR stations for which "Point to Point" or "Station of Destination" tickets are issued.

ONLINE PURCHASES

In our fares revision coverage in [TRU105](#), we also outlined that customers buying or renewing season tickets online or via the new TfL ticketing app would be sold the ticket at the new 2018 prices, if they bought them in advance during the run-up to the fares revision.

However, one piece of information that we failed to include was that the "collection window" (the period during which the product is held by the readers on the gates, PVALs and now buses) would not be extended this year.



In previous years the normal 4 day collection windows had been extended to take account of services not running on Christmas Day and many customers not being at work during the holiday period.

Since the introduction of Faster Universal Load (FUL), the greater availability to pick up purchases and PAYG from any reader after 30 minutes of completing the purchase means that this year the normal 4 day collection window will not be extended.

As a result any online or app purchases must be picked up within 4 days of the purchase, otherwise the product will not be loaded and the customer will be automatically refunded. The pick-up window for Zip Oyster Photocard holders will however be extended by three days, allowing them seven days to pick up their product over the holiday period.

JANUARY FARES REVISION

ALTERNATIVE CHARGEABLE ROUTES WITHDRAWN

Historically Travelcard holders have often been given the benefit of the doubt as to which route they have used, where a journey can be made via two differently priced routes.

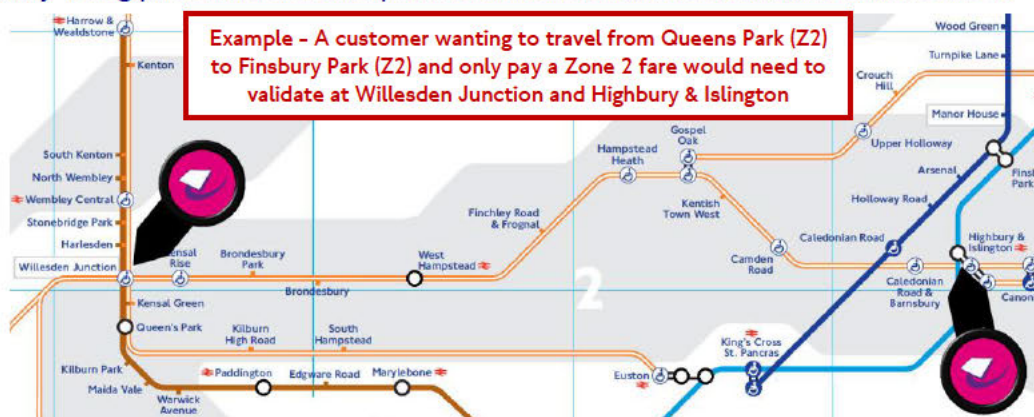
This is achieved by having;

- 1 Chargeable routes - the most logical route between two stations
- 2 Alternative Chargeable routes - where the same journey can also be made via a route which may be longer but cheaper

Typically these involve journeys across London, which are normally priced via Zone 1, but can also be completed via an orbital non-Zone 1 route.

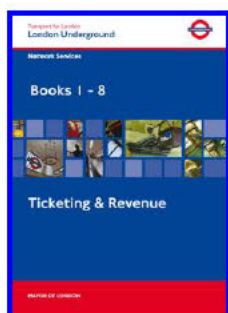
As part of the last fares revision on 03 September, we tightened up on some of these journeys by removing alternative chargeable routes for a raft of journeys between stations north of Highbury & Islington to stations east of Stratford.

Since the change, Travelcard holders have to use the Route Validators at both Highbury and Stratford to be able to get the benefit of their journey being priced via the cheaper North London line route, rather than Zone 1.



For the January Fares Revision a further batch of journeys will be treated in a similar manner. This time the change will affect customers travelling from stations on the Bakerloo line and London Overground north of Willesden Junction to destinations either north of Highbury or east of Stratford.

After 02 January, Travelcard using customers making journeys between these points will be required to use the Route Validator at Willesden Junction and again when changing at Highbury & Islington or Stratford as appropriate, in order that they can continue to travel at the cheaper non-Zone 1 fare. If they fail to validate, they will automatically be charged the via Zone 1 fare.



T&R BOOK UPDATES

Due to problems in getting the T&R Books printed and distributed over the Christmas holiday period, we have made the decision to delay publication of the January 2018 Fares Revision Update Pack until the end of January.

This will also allow us to include some changes which are scheduled to be implemented early in the New Year within the updated books.

We currently plan to reprint the following books;

Book	Title
1	Security
2	LU Ticketing
3	POMs
4	ESAF and Cash Handling

Book	Title
5	Ticketing Procedures
6	Ticket Issuing /Acceptance for Other Operators
7	T&R Supervision
8	Helping Customers

We will publish a summary of the major changes being incorporated into the reprinted books in TRU107, which is due for publication around the time the new books will be distributed to areas.

IN THE NEWS

ALL CHANGE ON LONDON MIDLAND AND GREAT WESTERN

From Sunday 10 December 2017 the local services from Euston that were previously operated by London Midland saw a change to a new operator, London Northwestern Railway.

This new operator is a consortium made up of three companies; Abellio, JR East and Mitsui.



The new name has been chosen as a nod to the original London and North Western Railway, who were responsible for the construction of much of what now forms the West Coast Main Line running out of Euston.



Other former London Midland services, operating in and around the Birmingham area, are being rebranded to West Midlands Railway.

In a second recent change, which also took place on Sunday 10 December 2017 and in preparation for the eventual transfer of some of the suburban train services out of Paddington to be operated by TfL Rail next year, a number of stations on the line out of Paddington transferred from the previous operator Great Western Railway to MTR Crossrail, who already operate train services on the eastern part of what will become the Elizabeth line.



The stations concerned are;

	ACTON MAIN LINE	EALING BROADWAY
	HANWELL	HAYES & HARLINGTON
	WEST DRAYTON	WEST EALING

Although these stations will now be operated by MTR Crossrail, they will initially continue to be served by trains operated by Great Western Railway until May 2018, when Crossrail / Elizabeth line services are scheduled to start operating between Heathrow and Paddington, in place of the current Heathrow Connect service.

POM SIGNAGE TRIAL

As part of LU's response to the London Travelwatch review of ticket office closures and concerns they have raised about POMs and information to customers trying to use them, S&SD and the former Customer Experience team have been looking to develop new signage for our POMs.

Westminster has been used as a Vanguard for the new design of signage as shown in the photograph on the right.

Similar signage has also been implemented in the ticket halls at both Euston and King's Cross (Western).

At the moment two changes are planned to the initial designs, which will see the purple refund badge made larger and to provide a clearer demarcation between different machines, so that the signage doesn't look like one long piece of wallpaper.



FARES REVISION CIRCULAR

A typing error has been detected in the printed version of this year's [Fares Revision Circular](#), which was recently delivered to stations.

On Page 7, The Zone 1-4 Weekly PAYG cap for contactless users is wrongly shown as being £49.90. The cap from 02 January 2018 will actually be **£49.00**; this is the same as the Zone 1-4 7 Day Travelcard price shown on Page 5 of the document.

We apologise for any confusion caused by this. The online version of the document has now been corrected to show the correct price.

LATE CHANGE TO CHANGE DEADLINES

In [TRU105](#), we outlined revised arrangements for ordering change that should see stations receive their amended orders much quicker than was previously the case.

Unfortunately at the very last minute, despite months of discussions about the change, it emerged that the collection of the week's coin order by G4S, was scheduled on Thursday, rather than Friday as we had previously been led to believe.

As the proposed Friday pick-up did not allow G4S sufficient time to distribute the bags of coin to their local depots in time for them to make their first deliveries on the Monday morning, we have had to juggle the new timetable slightly.

The change means that the cut off time for new requests or amendments to existing orders is now Tuesday 12.00 hrs instead of Wednesday as we had originally communicated.

Frequency of collection	Order placed by Tuesday 12.00 (Week 1)	
	Previous Arrangement	New Arrangement
Fortnightly collection (Wed weeks 2&4)	Wednesday of Week 4	Wednesday of Week 2
Once a week collection (Thu)	Thursday of Week 3	Thursday of Week 2
3 collections per week (Mon/ Wed/Sat)	Monday of Week 3	Monday of Week 2
Daily collections	Monday of Week 3	Monday of Week 2

An illustration of the revised impact of this change of deadline is shown in the updated example above. This new deadline has already been reflected in the change delivery deadlines for the Christmas and New Year period, which were communicated via the [Hot Issues Bulletin](#).

It is probably worth using this opportunity, with the forthcoming fares changes, to remind all of our stations to review their change deliveries.

- [Are you getting too much coin delivered?](#)
- [Are you receiving the right denominations?](#)

Any changes need to be requested via your CSM, who can submit a request, or amend or cancel an existing order via Mi-apps.



Don't forget you can reduce consumption of £2 coins, by ensuring that the MFM is floated up with more £1 coins than £2 coins.

The device will then dispense change based on the proportion of each coin available.

CASH COLLECTION CONTRACT CHANGES

As reported in [TRU102](#), we are currently in the process of retendering our Cash in Transit and Cash Processing contracts; these cover the delivery of change and collection of cash from our stations and the subsequent processing of money so that it can be paid into TfL's bank accounts.

Both activities are currently undertaken by G4S under a single contract, but the current tendering process has given us the option to split the collection and transportation elements from the processing of the cash at a later date, as TfL is also looking to retender its banking arrangements next year.

We had hoped that by this edition we would be able to reveal the name of the successful bidder, but negotiations with prospective bidders have unfortunately not yet been completed.

In parallel with this process we have also been undertaking our annual review of the collection frequencies for each of our sites, but a decision has now be taken to defer these changes until the new contract begins at the end of February 2018.

This should avoid the need for multiple changes, should we need to make adjustments to the current collection windows, as may be required by a new operator.

Hopefully we will be able to provide a more detailed update on both aspects in TRU107 in January.



CHARITY UPDATE – THOSE PENNIES HAVE MOUNTED UP AGAIN!

As we approach Christmas, it is again the time of year that we total up the value of overpayments made by customers when on our POMs are not able to give change.

Despite the huge growth in the use of contactless payments, other advances in ticketing and the fact that the percentage of ticketing transactions paid for with cash continuing to fall, the total amount of the overpayments made by customers over the last twelve months was slightly up on last year's figure.

As in previous year's the proceeds have been evenly split between two charities; Railway Children and Global's Make Some Noise, with each of the charities receiving a cheque for £20,628.84.

Since the facility for customers to overpay by up to 30p on their purchases was first introduced nearly 10 years ago, the total amount that we have donated to charity via this initiative has swelled to a staggering £268.5K.

Year	Railway Children	Global Make Some Noise*	Total
2008 – 2009	£9,533.00	£9,533.00	£19,066.00
2009 – 2010	£7,306.00	£7,306.00	£14,612.00
2011 – 2012 †	£19,355.35	£19,355.35	£38,710.70
2012 - 2013	£12,161.00	£12,161.00	£24,322.00
2013 - 2014	£20,081.66	£20,081.66	£40,163.32
2014 - 2015	£24,731.54	£24,731.54	£49,463.08
2015 - 2016	£20,472.40	£20,472.40	£40,944.80
2016-2017	£20,628.84	£20,628.84	£41,257.68
Total	£134,269.79	£134,269.79	£268,539.58

† 18 month period

* Previously Capital Help a London Child

This year's presentation to Railway Children was made on Thursday 14 December, at 14 Pier Walk in North Greenwich, when representatives of the Financial Services Centre (FSC) and Ticketing & Revenue team handed over a cheque to [REDACTED], our long standing contact with Railway Children. Following the presentation, [REDACTED] told TRU that;

"Railway Children are so proud and grateful for the fantastic support we continue to receive from London Underground including the Overpayment scheme as it really does change lives".

He added "This scheme is such a great example of how many people doing a little, can really create such a lot. As well as raising such a fantastic amount of money, the scheme has created even greater awareness of the work of Railway Children and we can't thank LU and their customers enough."

[REDACTED] went on to explain that *"the funds collected through POM overpayments, would have a very real impact on the lives of the many vulnerable children we work with in Africa, India and also here in the UK.*

The incredible amount of £20,628.84 presented to us this year, could on its own pay for food, educational materials and other equipment at one of our shelters in India, capable of caring for 30 children every day for a whole year.

The difference that makes to these children will genuinely change their lives and for that I really hope everyone involved at London Underground is incredibly proud".

We will provide some further background on the valuable work performed by Railway Children and how you can support them, in a future edition of TRU in the spring, when we will be covering a further presentation of the proceeds from the Oyster Card Charity Donation Box scheme.



(left to right) [REDACTED] - [REDACTED]

CHARITY UPDATE (2)

The second presentation to our other nominated charity Global's Make Some Noise, took place at Global Radio's headquarters in Leicester Square on Tuesday 19 December.

██████████ from the Financial Services Centre (FSC) and ██████████ from the Ticketing & Revenue team handed over a cheque to Radio X presenter ██████████ and ██████████ the Partnerships Development Manager for Global Make Some Noise.

██████████ from the Make Some Noise team, outlined two charities that are currently being helped by the charity.



(left to right)

Case Study 1 – BRENT CARERS CENTRE

Brent has the second largest number of young carers in London, 38% of them have had problems with their mental health. They often feel different or isolated from their peers and can experience bullying and harassment. Being a young carer can also negatively affect education through lateness, absences and reduced concentration.

This reduces the young person's ability to achieve in schools and limits their future prospects. Brent Carers Centre aims to improve their lives through providing practical and emotional support with a range of services including counselling, support groups and advice.

Make Some Noise will aim to fund for at least 1 year, a Counselling Coordinator and an Educational Support Officer as core roles in the 'Make Some Noise and Achieve Project' to identify more hidden young carers and offer emotional and practical support.

Reece is a Young Carer supported by the Brent Carers Centre. He is 11 and a carer for his mum who has sickle cell anaemia and various other problems which affect her mobility on a daily basis. During a sickle cell crisis she is bed-bound. He also has a two-year-old sister and they are a single parent family. There is little help from elsewhere and when Mum is unwell Reece takes on the role of young carer and parent for his sibling. This can include all domestic tasks and often the Young Carer is left with little time for himself.

Reece comes to our Young Carers activities when he can and enjoys some time to chill out and have fun!



Case Study 2 – DEAFINITELY THEATRE

The UK's leading deaf theatre company, producing bilingual theatre in British Sign Language (BSL) and spoken English, and training a new generation of deaf actors, writers and audiences. The charity runs training and production programmes for young people and adults, filling a vital gap in their education and creating an important forum for deaf young people to flourish. It has produced 32 theatre productions in London and touring regionally, delivered more than 50 youth projects, and worked with over 100 deaf young people.

Make Some Noise aim to fund a part-time Youth Coordinator for 2 years, to assist in organising and running bilingual arts and theatre activities/workshops through the Deafinitely Youth Theatre and Summer programme.

William Grint is deaf and first participated in a Deafinitely Theatre workshop aged 13. After taking part in a series of productions and training opportunities, he auditioned for The Globe's 2016 production "Imogen" and became the first deaf actor to perform in a mainstream play. Now 19, William has gained a part in the national tour of "Tommy (2017)".

William says, "I took the chance to join Deafinitely Youth Theatre when I was 13 and I haven't looked back - learning to perform on stage in some brilliant theatres with other young deaf people has given me so many skills: team working, commitment and confidence in myself. Being in the group has also made me ambitious for my future as a young deaf actor and I am enjoying being part of Deafinitely Hub which is helping me to build my skills. I cannot imagine my life without Deafinitely Theatre."





askolly@tube.tfl.gov.uk

From: [REDACTED]
Sent: 11 November 2017 13:31
To: Ask Olly
Subject: Contactless issue - Highgate

Hi Olly,

On Saturday 11 November, while I was on the gateline at Highgate, a customer touched a Barclay's contactless payment card on the entry reader. It was rejected showing reject code "74" (Contact TFL Helpdesk).

I told customer to contact the TFL Helpdesk and she told me her card is fine. She then reached over to one of the exit gates and touched the card on the reader and the gate open. She told me that she is always doing the same and it always works on exit but never on entry.

Can you advise?

Regards

[REDACTED]
Customer Service Supervisor 2
High Barnet Area

Hi [REDACTED]

Thank you for your email and highlighting this incident.

An investigation into this has established that the contactless card concerned had been added to the "TfL Denied List" as a result of a number of failed Revenue Inspections. These occur where the card is presented to a RID used by Revenue Control / Protection staff having not previously been used to enter the system and is intended to block further use on the system.

In this case, the card would have been correctly rejected by the entry gate. It should have been similarly rejected by the reader of the exit gate and we do not currently understand why this was not the case.

Further investigations are being undertaken to establish whether this has highlighted a bug in the system.

Regards

Olly Oyster

Hi [REDACTED]

Thank you for your email and query. We have actually had a couple of recent enquiries about this particular issue.

Historically there hasn't been an interchange between **Queensway** and **Bayswater**, as although these stations are very close together, there is an advertised interchange between the two lines at **Notting Hill Gate**, which is the next station.

We are making enquiries with the TfL Fares Policy team to see what the levels of customer usage of the interchange between the two stations currently is and whether it would warrant adding this as an Out of Station Interchange (OSI) for Oyster users, if capacity to do so exists.

We will keep you advised of progress on this.

Regards

Olly Oyster

From: [REDACTED]
Sent: 29 November 2017 20:09
To: Ask Olly
Subject: **Bayswater-Queensway Interchange**

Dear Olly,

I would like to know why there is no arrangement for an Out of Station Interchange between **Bayswater** and **Queensway**?

These two stations are hardly 2 minutes walk apart.

How would it be possible to get this arranged?

Thank You.

Regards,

[REDACTED]
CSA1
Edgware Road Area

From: [Redacted]
Sent: 06 December 2017 11:36
To: Ask Olly
Subject: Oyster Extensions - spurious messages

Hi Olly,

I've noticed since moving to Kentish Town station that when a Freedom Pass holder touches their Oyster card onto the POMs and selects an extension fare to **Gatwick Airport** (it works for other stations too) – a message appears stating that the card is already valid for that journey.

Similarly, when selecting a Thameslink destination such as **Cricklewood**, it states that "You can use your existing Travelcard to travel to your destination." Despite Staff Oyster cards not being valid north of Kentish Town.

Is there a reason for this as it's possible that customers (and staff) would receive incorrect information and end up receiving a Penalty Fare or worse?

Regards,

[Redacted]
Customer Service Manager
Kentish Town Area

Hi [Redacted]

Thank you for your email and highlighting these two issues.

It has now been confirmed that the current POM storyboards for both Freedom Passes and Staff Oyster cards do not display the correct information when a destination outside of their area of validity is selected.

The issue is due to be raised with Cubic at the next POM Screen Workshop which is due to take place early in the New Year.

Hopefully they will be able to identify when these current screens can be changed and a solution implemented.

Thank you again for raising this issue.

Regards

Olly Oyster

Hi [Redacted]

I believe what you have described is the way the device has been designed to function.

In the run up to the introduction of Night Tube we made a change to the POMs to prevent customers from being able to select to buy a Day Travelcard between midnight and 04.30, as it starts to get very confusing as to what "Today" means as our "Traffic Day" continues until 04.30. So the button on the POM saying "Today" really means "yesterday" and the one for "Tomorrow" effectively means "later Today". There is also the issue that if you were to buy a Day Travelcard at 00.30, you are unlikely to be able to make enough journeys to achieve the best value from your purchase.

By selecting a return journey to Green Park (with the warning that you need to start the return before 04.30) the customer is selecting to buy a Return ticket, but in this case the Day Travelcard is offered as it is cheaper than the Return fare.

Bit confusing but it does mean someone making a quick trip into central London and then returning back before End of Day can at least buy a ticket covering this.
Hope this explains what you saw.

Regards

Olly Oyster

From: [Redacted]
Sent: 10 December 2017 00:16
To: Ask Olly
Subject: Day Travelcards after midnight

Hi Olly,

Something myself and CSA Peter Baggs have just noticed at Heathrow T123.

If you try to buy a Day Travelcard after midnight when night tube is running, it doesn't allow it saying 'Not available between midnight and 0430'.

However, if you now go to choose a destination, like Green Park for example, and select a return, it takes you to the prices screen where the Day Travelcard is shown and can be bought, albeit with a warning message that journeys must be completed before 0430.

Regards

[Redacted]
Customer Services Manager
Heathrow Area

[Redacted]
CSA
Heathrow Area

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SPECIAL FEATURE

TRU CHRISTMAS QUIZ 2018

As has become customary in the final TRU of the year, we have replaced our usual selection of T&R Trivia questions and anagrams with a Christmas T&R Quiz.

Hopefully it will be a bit of a test on how much of previous editions of TRU you have read and how much of the content you have remembered.

As a slight twist this year, we have used the theme of "The Twelve Days of Christmas" to pose 12 questions for you to answer. However there are no French Hens or Leaping Lords!

Day 01	How many sides does the new ONE pound coin have?	
	What are the TWO valid reasons for resolving an incomplete PAYG journey for less than the maximum fare?	Day 02
Day 03	Customers using PAYG for bus and tram journeys will be capped after making THREE journeys, but how much will they pay?	
	What are the FOUR ticket mediums accepted by LU gates?	Day 04
Day 05	Who replaced who on the FIVE pound note?	
	What will the prices of SIX zone (Z1-6) Day Travelcards be after the January Fares Revision?	Day 06
Day 07	The Weekly PAYG cap for contactless payment users, is calculated over what SEVEN day period?	
	Which of the EIGHT denominations of UK coin are not accepted by LU POMs?	Day 08
Day 09	How many stations are situated in Zone NINE and what are they?	
	What is the date after which the paper version of the TEN pound note will cease to be legal tender?	Day 10
Day 11	ELEVEN years ago in 2006, what was the price of a Child Zone 1-6 Day Travelcard (Off Peak)?	
And last but not least On		
	Which are the five categories of customers who are able to buy a TWELVE month (Annual) ticket?	Day 12

Check how you have done and calculate your points score. The answers are on Page 15.

LOOKING AHEAD TO 2018

Each year in our final TRU of the year, we look forward to what's in store for the year ahead.

As we approach the end of 2017 and look ahead towards 2018, we feel somewhat like we would be repeating ourselves if we were to say it us going to by a busy T&R year ahead. However, the reality is that with a number of major projects and initiatives planned, it does not look like it is going to be a quiet year!



So what can we expect in 2018?

Once the fares revision moratorium is lifted in January, we are planning to start the final phase of the very long running LCP3 rollout, with the deployment of the new LCP to stations with Pneumatic gates.

January will also see the reinstatement of LCP3 in the WAGs at Heathrow T4 and Heathrow T123. So by early February, we should have finally completed the rollout to all LU sites.

January should also see the start of the delayed Vanguard of the new TOM software and hardware, together with the new configuration of the TOM and SAF PCs into one cabinet at 7 stations.

This Vanguard is due to continue until March, when all being well, we will commence the rollout to all other sites.



Another project due to be rolled out early in the New Year is the upgrade of all of our Station Computers to the new SC3 model. The Vanguard of the SC3 was completed at the end of 2016 and as reported in [TRU105](#), a number of sites have already been upgraded to address capacity issues.

In a further upgrade project, 2018 will also see the start of the Vanguard of the new style touch-screen PC SCU (Station Control Unit) in March, with a subsequent rollout to other sites due to be completed by the end of July.



The initial vanguard stations are due to be selected from stations which have already been upgraded with the new SC3, or are scheduled to be upgraded in the early part of that rollout programme.

In addition to these hardware upgrades, 2018 will also see the Vanguard of a new version of MFM software. The change is principally driven by a desire to improve the arrangements for customers to be able to obtain a refund on their Oyster card. Further information on this project is included within the [Project Updates](#) section of this edition (on Page 14).

It isn't just device related items that are set to change in 2018. As has already been highlighted in our fares revision round up in [TRU105](#), later in January the current Bus Hopper facility will be extended to cover multiple bus journeys within an hour of the first bus trip. There are also plans for a 2 and 3 Day Visitor ticket trial, starting in the spring, as we also outlined in our last edition. Later in the year, as part of the May Fares Revision there are plans to extend the capping arrangements for Oyster PAYG users, to bring them in line with the weekly cap currently enjoyed by those using contactless payment.

A further change next year is that everyone will receive a new TSID card in preparation for the switchover to a new series of sign-on cards, currently planned to take place in February / March. Further details on this, will be included in TRU107 in the New Year.



Following their initial deployment at the RSLU (Regulated Stations on London Underground) sites on the Bakerloo and District lines and at a number of TfL Rail stations, that will be served by the new Elizabeth line when it opens, there will be a Vanguard of an LU version of the TVM at Stratford (Mezzanine) in late January. There are also plans to deploy further TVMs later in the year. This will be undertaken in conjunction with preparatory works at LU stations to be served by the Elizabeth line and some other sites where major developments are to take place.

Further details on all of these forthcoming works will appear in future editions of the TRU throughout 2018.

SKIMMING DEVICES

Further to our coverage in [TRUI04](#), we have unfortunately had further instances reported, of skimming devices being fitted to our POMs.

It certainly doesn't seem to take long for those engaged in this type of fraud to adapt their techniques and despite some early failings which lead to the detection of the first devices attached to the new PED, more recent devices have been more difficult to detect.

Apart from a couple of fairly crude devices utilising a camera to capture PIN details, which were found at Barons Court and Kentish Town, most of the recent devices recovered have been relatively slim and inserted into the card reader slot.

As the device sits inside the slot they are quite difficult to detect and some have actually only been found once the unit had been returned to the Cubic workshop as a result of the POM being reported as not accepting bankcards.

At this time of year it is always worth checking POMs more regularly, as each year there is always a spate of devices found in the run-up to Christmas. This is particularly important if there are reports of a device not accepting cards.

One thing to be aware of is that the methods being used to retrieve data from these devices are slightly different.



KENTISH TOWN DEVICE – COMPLETE WITH APPLE BATTERY AND 16GB SD MEMORY CARD



SKIMMER RECOVERED FROM BAKER STREET

In the past a skimming device was attached and then removed sometime later to retrieve the card information it had captured.

In recent examples, the device has been left within the card slot for longer, with information being retrieved by the insertion of some sort of card into which captured information can be transferred.

When checking POMs pay special attention to the card slot and check for signs of anything being inserted into it (as illustrated in the images on the left).

The best check is undertaken with the aid of a torch and comparison with the readers on other POMs. It is very rare for skimming equipment to be found on more than one device at a location. In the example shown in the photograph above, the tab on the skimming device is metallic, but examples have been found where this tab is black and as a result is much more difficult to spot.

WHAT YOU MUST DO IF YOU DISCOVER A SKIMMING DEVICE

1. Inform the supervisor who will;
 - Contact the BTP and T&D Service Desk
 - Arrange for CCTV footage to be retained
 - Record details in the Station Log Book
2. Do not touch or attempt to remove the device, as vital evidence may be damaged
3. The POM must be set not to accept bank cards (to prevent use until the Police have removed the skimming device).



CHD NEWS

We finish the year with some good news stories in relation to our Cash Handling Devices (CHD).

As reported in [TRU105](#), Scancoin have commenced the process of upgrading the sorting wheel and plate on each of our devices, to rectify the problem that from time to time results in coins ending up in the wrong hopper. Since our last edition, Scancoin have confirmed delivery of all of the necessary components to complete this upgrade and they will therefore be able to increase the speed at which devices can be upgraded. This should address one of the major sources of complaints about CHD performance.

In early December we completed testing of a new Duress alarm facility on the CHD, which we are hoping will be deployed as devices are updated next year. Some aspects of the 'End to End' testing of this additional facility are yet to be fully tested and we need to finalise the procedures to be followed should an alarm be activated. Further information on this facility and when and how it should be used, will be provided to stations once the facility goes live next year.

We are also currently looking at a software change on the CHD, which will increase the facilities available to users to resolve problems when they occur.

At the moment if notes get jammed in the process of transferring them from the rollers of the recycler to the collection sack, there is little a user can do. There is a facility on the device to purge the notes to the sack, but this is currently only available to technicians. We are currently looking at the feasibility of adding this facility to the standard user menu, to enable staff to clear a problem more quickly and reduce technician callouts. This will hopefully be incorporated into the next software upgrade.



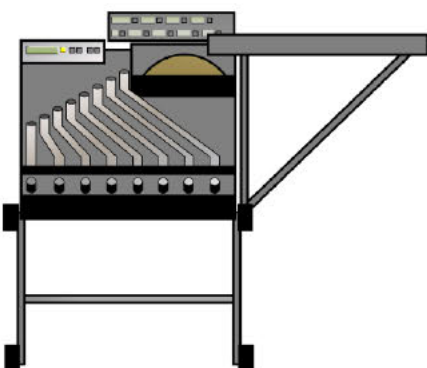
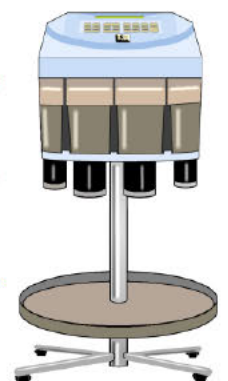
A number of planned station changes next year in conjunction with works being undertaken by Commercial Development will see POMs at several stations consolidated from two separate rooms into one. A net result of this is that we will potentially have some CHD units freed up for use elsewhere.

We are currently finalising a strategy with Scancoin to relocate some of these units during 2018 and this will hopefully gradually enable us to phase out the four slim line note units installed at Chorleywood, Hanger Lane, Kilburn and West Ruislip, during the course of the year. Recent surveys of these four stations have shown that with minor changes, the standard Note Recycler unit can be accommodated within the POM Room.

COIN COUNTER REMOVALS

Since the completion of the CHD rollout, we have been pursuing the removal of a number of old coin counters from stations.

Most of these devices were supposed to have been removed by the contractors responsible for delivering the new CHD, either at that time or during a follow up visit once the CHD was in use. The good news is that following recent discussions with Scancoin and the TfL Tech & Data team, we have established that the original variation request covering removal of redundant equipment is still open, so in the New Year we should hopefully be able to programme the removal of most of these units.



None of the devices concerned have been upgraded to count the new £1 coin, but we have identified some models which can be cost effectively upgraded and maintained for possible future use at the RSLU (Regulated Stations on London Underground) sites, as these weren't covered by the CHD rollout.

The current round of POM suite surveys being undertaken by the T&R team in preparation for next year's TOM and SCU upgrades is identifying coin counters that need to be removed, so by mid-January we should have an up to date list of what needs to be collected. Previous information supplied to us by the CHD project team having proved to be very unreliable.

REVENUE PROJECTS

FURTHER UPGRADE TO MFM

As mentioned in our review of some of the major projects planned for 2018 on Page 11, the MFM is scheduled for a further software upgrade early in 2018.

This latest change is focused on implementing changes to the processes for dealing with refunds and is largely a response to one of the items raised in the London Travel Watch report into LU ticket office closures.

At present, to prevent fraud, holders of the older Mifare format Oyster cards and customers who have purchased their Oyster card in the preceding 48 hours are prevented from obtaining a refund at our POMs.

This is obviously a disadvantage to short term visitors to London, particularly those taking a weekend break in the capital.

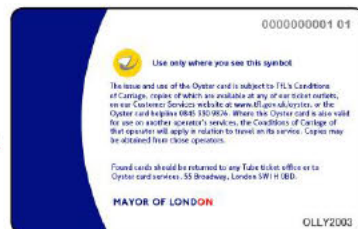
The change being implemented will aim to use a new web service to check the Oyster card details before processing a refund and should allow instances of an Oyster card that has already been refunded or is the subject of a suspicious bankcard transaction to be immediately blocked from being refunded.



The revised arrangements are due to be a two week Vanguard on the following seven MFM's in March 2018:



MIFARE OYSTER CARD



Station	MFM	
CANARY WHARF (East)	30	
CANARY WHARF (West)	31	32
EAST HAM	30	
KILBURN	30	
NORTH GREENWICH	30	31

Following this there will be a similar two week Vanguard on TVMs at Gunnersbury and Kew Gardens, in parallel with the deployment of the new facility to the remaining LU MFM's.

UPDATE ON MFM NOTE ISSUES

Since the initial introduction of the polymer £5 note last year, the note handling units on our MFM's and in particular the Bank Note Acceptor (BNA) units have been beset with problems.

In a number of previous editions of TRU, we have outlined various initiatives taken by Cubic to address these problems.

Although issues have been largely rectified on the newer Bank Note Recycler (BNR) units, we are still receiving regular escalations from various stations with older BNA units, due to repeated note jams on their MFM's.

The issue has severely dented device performance and Cubic have recently taken the issue up with the manufacturers of these units. Following a productive meeting between the two parties, a possible cause of some of the note jams has been identified.

A £5 POLYMER NOTE
RETRIEVED FROM A BNA



As a result, Cubic are looking to implement a revised workshop maintenance process for dealing with failed units that are returned to them.

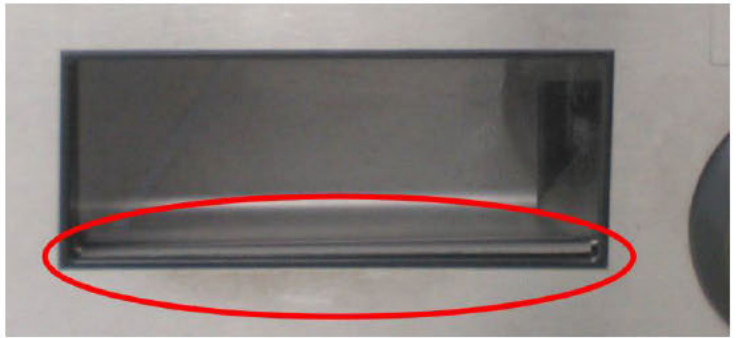
They are also planning to deploy an updated version of BNA firmware to each of the devices in the New Year, to improve the way that the unit handles notes.

Fingers crossed that 2018 will be a much better year for note acceptance and MFM performance.

POST PED UPGRADE WORKS

In [TRU105](#), we outlined the recent discovery that during the recent completion of the PED upgrade on the AFM, a number of devices were found to have had their coin bowls fitted incorrectly.

Since our last edition Cubic have completed a survey of all 600 AFMs and have identified that just over half of the machines need some sort of attention, to either adjust or completely refit the unit.



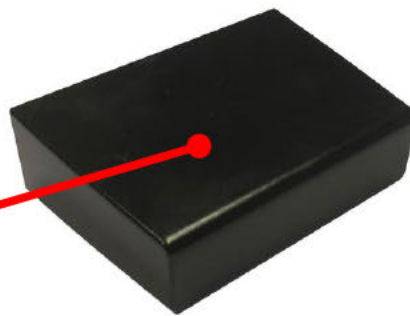
INCORRECTLY ALIGNED CASH BOWL ON AFM

Although a small number of devices have already been rectified, the bulk of devices will be visited during a programme of engineer visits in January.

This work will require staff to empty the AFM before the engineer can complete the work and stations will be informed of planned dates in the week before the scheduled visit.

Like the PED upgrade, this further programme will start with stations in central London being completed during the day, with outer London stations being completed later during engineering hours.

These visits should also address the devices that have been reported as having their infill blocks missing from their Chip & PIN units.



MISSING INFILL BLOCK FROM AN MFM

CHRISTMAS QUIZ ANSWERS

How did you do?

No	Answer	Award yourself
1	12	1 point
2	A known incident or A Recent customer error at the station	(1 point for each – 2 points for both)
3	£4.50	(1 point)
4	Magnetic ticket, Oyster, Contactless payment, ITSO	(1 point for each – 4 points for all)
5	Winston Churchill replaced Elizabeth Fry	(1 point for each – 2 points for both)
6	£18.10 (Anytime) and £12.70 (Off Peak)	(1 point for each – 2 points for both)
7	Monday to Sunday	(1 point)
8	1p, 2p and 5p	(1 point for each – 3 points for all)
9	3 (Amersham, Chesham and Brentwood)	(1 point for each – 3 points for all)
10	01 March 2018	(1 point)
11	£2.00 (11 years on the corresponding Child cap is 50p cheaper)	(1 point)
12	Adult, Adult Priv All Rail, Child Priv All Rail, 16+ and 18+	(1 point for each – 5 points for all)

The maximum points score available if you got everything right was 24. So how does your point score rate?

We thought we would classify your performance using stations with a bit of a Christmassy theme as our categories:

Total	Level achieved	Rating
20 – 24	STAR LANE	The top of our T&R Christmas tree. A shining light to your colleagues and clearly someone who reads their TRU.
15 – 19	ANGEL	You could have been top of the tree if you had just got a couple more right!
10 – 14	SEVEN KINGS	With a bit more study you could become one of the Wise Men!
5 – 9	PUDDING MILL LANE	You have definitely gone a bit off the boil
Under 5	TURKEY STREET	You need a lot of work to get ready for Xmas!

...AND FINALLY!

TVM DEPLOYMENT

In [TRU102](#), we reported on the installation of the first of a new Cubic design of Ticket Vending Machine (TVM) as a Vanguard at Gunnersbury and Kew Gardens in June 2017, ahead of a planned rollout to other sites.

Since their installation, there have been a number of performance and reliability problems with the initial devices, which have been gradually addressed by Cubic through a series of hardware and software modifications.

This delayed the original plan to deploy further units to the other 9 RSLU (Regulated Stations on London Underground) sites on the north end of the Bakerloo line.

As the TVMs installed at the two District lines stations have now achieved a more acceptable level of performance, the go-ahead was recently given to proceed with the installation of further TVMs at Harrow & Wealdstone, Queens Park and other stations on the Wembley Central and Queens Park Areas.

However, it has recently been identified that a number of the more recently installed machines have not received a number of safety related modifications, which had previously been identified and implemented on the Vanguard devices. Cubic have now hastily retrofitted the devices that had been missed allowing the planned deployment to other stations to continue.



As outlined in our look ahead to 2018 on [Page 11](#), there are plans to install similar devices initially at Stratford (Mezzanine) in the New Year, as a Vanguard of an LU variant of the TVMs we currently have at the RSLU stations.

The TVM shares a lot of common software with other LU POMs, but these devices will have a number of significant differences to the RSLU TVMs already in use:

- *They will offer a similar ticket range to the LU MFM / AFM, rather than the enhanced range of NR fares offered on the RSLU devices*
- *They will be linked to LU's system for accountancy and revenue apportionment purposes, rather than to the LENNON system used by NR*
- *At station level, devices will report into the LU SAF, for the recording of servicing and floating activities*
- *They will report to and can be controlled from LU station SCUs*
- *Their status will be reported to the Device Monitoring app*

Testing of the LU device is scheduled to take place in January, in preparation for the first planned installation towards the end of that month.

We will provide a further update on progress and device functionality in [TRU107](#).

LOOKING AHEAD TO TRU107

That's it for the TRU for 2017. We will be back in the New Year with our next edition [TRU107](#), a combined January / February, which is due for publication towards the end of January.

We plan to include:

- *T&R Book Major Changes*
- *A review of the major T&R events of 2017*
- *Our traditional look back at the January Fares Revision and what went well or not so well*
- *Updates on all of the projects planned for 2018*

Plus all of the usual T&R news and our regular features.

All that remains is for everyone in the Ticketing & Revenue Team to wish a very Merry Christmas and a...

HAPPY NEW YEAR TO ALL OUR READERS

