

UNDERGROUND

July
2016

t&r update

Issue no:
93

NIGHT TUBE LAUNCHES

As outlined in our last edition, we are now in the final countdown to the launch of through the Night Tube services at weekends on the Central and Victoria lines.

As promised, we have devoted Pages 10 to 12 inside, to re-run a lot of the ticketing related information we originally published in the TRU last year. We have also included a couple of recent updates linked to nocturnal activities.

However, it isn't just Night Tube that is arriving. Over the next couple of months we will also see a number of significant POM upgrades including work to enable our devices to handle polymer banknotes being introduced in September.

On Page 7, we have the third instalment of our series of articles, which this month focusses on activities planned over August and September to ensure we are ready to accept the new £5 notes once they come into circulation and an insight on the new Scottish notes.



September will also see our next planned Fares Revision on **Sunday 04 September**, further details of this will be included in TRU94 in August.



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We report on the recent upgrade of RTD software and of a Vanguard of changes to reduce the risk of the wrong card being read, when a customer presents a wallet to the reader.

Page 4 Secure Suite Log Book

We provide a first glimpse of the new design of Log Book that will be trialled at 3 stations starting next month. If successful this will eventually replace the current TOLB.

Page 5 Contactless Update

We update you on another option for customers to pay for their travel and take another look at how contactless payments are being used by customers on the network.

Pages 13 MFM Upgrades

We update you on changes to the implementation of a number of upgrades on the MFM and our other POMs.

Page 16 Oyster Refund Fraud

We update you on further recent fraudulent activity and what we are doing to counter this.

It has been quite a while since we undertook a survey of TRU readers. The last was in 2009.

Over the last year, as more staff have been issued with iPads and their usage has increased, we have been looking at how best to distribute the TRU.



Ticketing & Revenue Update READER SURVEY 2016



Traditionally we have distributed around 1250 copies of each edition via the internal mail system, but this can be quite a slow process and we are aware that the number of copies sent means that there may not be a paper copy for everyone to see.

In the centre of this edition, you should find an A4 Reader Survey form, for you to provide your feedback on TRU. If you are accessing this edition, the survey form can be completed / printed off from the T&R Update page of the intranet or via the following link:

http://luintranet.tfl/static/documents/coo/TRU_Readers_survey_2016.pdf

Please take the 5 or 10 minutes of your time to complete this for us, so we can ensure that we can continue to supply the latest T&R news and information to you in the most effective way.

**THIS PUBLICATION IS WRITTEN
AND COMPILED BY**

READER UPGRADE

On **Sunday 17 July** a network wide update of the RTD (reader) software took place, following an initial Vanguard at around 40 sample sites across all modes. This upgrade, referred to as FTP Day2 was successfully implemented at all stations, with only 17 readers failing to take the upgrade and remaining on the previous software version. Cubic arranged for these units to be replaced over the following 48 hours, so that rollout of the upgrade was completed on Monday 18 July. They are also progressively replacing 65 RTDs at the Vanguard stations, a task that they are expected to complete before the end of July.

One other issue that did occur on the Sunday morning affected Heathrow Express gates including the gates at our **Heathrow Terminal 5** station. All of the HEX gates failed to upload the new software in full resulting, in them being temporarily unable to process contactless payment transactions. The issue was resolved by a Cubic engineer manually uploading the software on site. The reasons why this occurred is currently being investigated by Cubic.

Performance of the readers is currently being compared against those for previous weeks, but initial indications are that the new software may have reduced instances of POD Code "70" from 3% to around 0.3%. Overall the level of POD Code occurrences appears to have fallen from 12.8% to 9.12%. One area of concern currently being investigated, is the level of POD Reject Code "99" (transaction creating delay) which have been identified. This has not been introduced by the new software, but improved monitoring and reporting has highlighted this concern.

Sunday 17 July 2016 also saw the start of an initial Vanguard on gates at **St James Park**, of changes to the way that the RTD works, to slightly increase the time that the reader is enlivened to read each card. The aim of this change is to try and reduce instances where a customer presents a wallet containing multiple cards and the RTD reads the nearest card and processes the transaction, before any cards that are further away are detected.

At present the TfL Customer Experience team are dealing with a lot of transactions where customers have inadvertently been charged on the wrong card for their journey, as a result of presenting a wallet or card holder containing more than one card. The change in timing will mean the reader will be live to detect cards longer and therefore another card further back within the wallet may then be detected.

A potential downside of the change, may be an increase in the number of rejected validations where Reject Code "71" (Multiple cards) is displayed. However, it is probably better to do this than charge the wrong card. It also gives gateline staff the opportunity of highlighting to customers that they should only present the card they wish to use to the RTD.

When we are talking about increasing the transaction times in this way, we are talking about milliseconds per transaction, so this should be barely noticeable to staff or customers.

This Vanguard was extended to the following gatelines from start of traffic on **Sunday 24 July 2016**.

KINGS CROSS (Northern)	STRATFORD (East)	VICTORIA (Vic)
LEICESTER SQUARE (Northern)	STRATFORD (Mezzanine)	VICTORIA (District)
LEICESTER SQUARE (Piccadilly)	STRATFORD (North)	

Part 1 – Our feature opposite and one of this month's Ask Olly letters focus on NR Railcard discounts, so linked to this...

Q1) What extra benefits do holders of a NR Disabled Persons Railcard get compared to other Railcard holders?

A	Travel at discounted PAYG at all times	B	Benefit from a lower Off Peak cap
C	Can buy Child Day Travelcard for an escort	D	Can purchase a Discounted Day Travelcard (Off Peak) for

Answers on Page 15



RAILCARD DISCOUNTS

One of the most common sources of customer complaints regarding ticketing issues has been the inability of customers to get a discount entitlement added to their Oyster card.

Unfortunately, in the case of holders of Privilege facilities and NR Railcards, they generally tend to know what they are entitled to and (not unreasonably) will quickly highlight instances when we fail to deliver the service they want.

At present, despite the longer term objective of having all our station staff trained to TSID card level, we currently have a number of staff that don't have either a TSID or a CSID PIN.

This makes the customer proposition inconsistent and it is extremely difficult to promise customers that they will be able to get a discount applied to their Oyster card at a particular station. We can however, do a lot better in providing good customer service and the correct information to customers.

Anyone with a current TSID card or CSID PIN can add discounts via the pink staff screens on the POMs.

The biggest source of complaints is where the customer encounters a station where no one with either a CSID or TSID is available. In such cases we need to advise them on how they can get their discount added. This may be to return at a time when someone will definitely be available to assist them or confirming with another station that will have someone available to set the discount required immediately.

On no account should customers be directed to either NR stations or to the Oyster Helpline, as neither are able to set discounts on Oyster. Nor do they have any visibility of the availability of staff at other stations to be able to set discounts.

When setting a discount, here are some useful points to remember:

- The Oyster card has to be registered before any discount can be applied.
- The discount must not be set to expire later than the expiry date shown on the supporting documents.
- Young Visitor discount must only be set for a maximum of 14 days.
- New Privilege discounts can only be set if the holder has an authorised application form or Privilege Season ticket application.
- For renewals of Privilege discounts, the holder does not need to submit a new application form.
- An authorised Privilege Season Ticket application can be used as authorisation to set the privilege discount to the expiry date of the required ticket, even if this is beyond the date shown on the supporting PTAC or NR Staff Travel Card.
- Holders of Network, Family & Friends and Two Together Railcards are not entitled to have the Railcard discount set on an Oyster card.

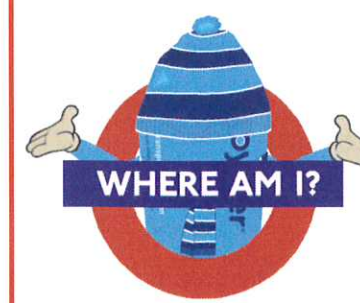
Enter PIN (3)

1	2	3
4	5	6
7	8	9
C	0	E

Further information on setting discount entitlements on Oyster cards is included within T&R Book 2 Section 4.

Part 2 – Below are 5 clues to a station Olly has visited this month. Guess the station after the first clue and award yourself 5 points, 4 points if you require the second clue and so on until after the 5th and last clue you get just 1 point.

If you still haven't guessed after all 5 clues then it is "Nil Point".



Answers on Page 15

Points	I'm at a station which...
5	strangely, only has one platform
4	is on the outer fringes of the tube network
3	wasn't meant as a terminus, trains stop here before returning to London
2	has a gateline made up entirely of WAGs
1	is one of 3 stations with similar names.

Ticketing & Revenue
T&R
Trivia

COLLECTION CHANGES

From **Sunday 31 July**, cash collection schedules for many stations will be changing, following the completion of the annual review of the schedule. As reported in TRU92, this will see an overall reduction of around 20% in the number of collections per week.

Check with your Area Manager or CSM if you are unaware of the collection arrangements for the station you are working at. Unfortunately very late in the day, G4S have made us aware that a couple of their depots will be unable to implement all of the proposed changes on 31 July, so this will mean that at around 40 sites the changes will not be implemented until two weeks later, from **Sunday 14 August**. Details of the stations affected by this have been communicated to CSMs for the areas concerned.



Despite more than half of our stations now having Cash Handling Devices and a greater degree of flexibility around collecting notes, the new schedule maintains the principle of a 2 hour contractual collection window for G4S. At CHD sites if the custodian arrives outside of the contractual window, they should still be able to collect the notes from the device.



At stations with Cash Handling Devices, even if a TSID card holder is not present the security collection can still go ahead as planned.

Just a reminder that from **31 July**, the process for preparing an uncounted bag at the end of the shift will be withdrawn. From this date cash must only be remitted in counted bags.

When preparing a counted bag, the contents slip generated by the TOM/SAF must be placed inside the bag before it is sealed.

SECURE SUITE LOG BOOKS

Following the ticket hall transformation programme, one of the outstanding items on the 'Things to do' list was to update and rename the Ticket Office Log Book, now that LU no longer has ticket offices. As there was a large amount of books in stock, it has been of a lesser priority... until now.

One of the key changes of the new working model is that the secure suite is now accessed on a less frequent basis and there are a number of stations where staff do not enter the secure suite every day. As the current logbook covers a calendar month and requires an entry to be made for every day of each month, this means that there may be a lot of unused pages. This was not very economical, practical or very good for the environment.

Therefore the new book allows for entries to be made only on days when the secure suite has to be accessed by TSID card holders or visitors in the course of their duties. Key controls and records of events remain the same, but we have removed the Supervisor / Manager checks (as these are covered elsewhere) and all entries are visible over two facing pages. The **Emergency Safe Contents Register** has also been incorporated within the logbook, with simplified entries and a guideline for completion.

As always, staff feedback on the new book is essential and therefore a six week Vanguard of the new Secure Suite logbook is planned to take place at the following stations from **Wednesday 04 August 2016**;

EUSTON NEWBURY PARK ST JAMES PARK

Key changes to the logbook;

- Now produced as a 'portrait' design instead of landscape.
- Entries are made over 2 pages instead of 4
- 100 daily entries instead of 31 calendar days
- Now includes the Emergency Safe Contents Register.



'WATCH' OUT FOR bPAY CONTACTLESS

Barclaycard in partnership with Garmin and Mondaine watch manufacturers have teamed up to promote the new bPay loop, which turns any compatible watch or fitness band into a way to make convenient contactless payments.



The bPay loop simply slides onto the watch-strap (as circled in the image on the left) and the wearer no longer needs to carry cash or a bankcard if they need to make contactless payments of £30 and under.

Although intended to be a quick and convenient way to make small purchases, such as buying a bottle of water when out on a run, it is likely that it will prove a very convenient method of payment for commuters and occasional PAYG journeys, as the bPay loop simply needs to be presented to the Oyster card reader and removes the need to take a bank card out of a bag, pocket, wallet or purse.

As Oyster card readers are situated on the right hand stanchion of all our gates, we may see an increase of watches worn on the right wrist!!

bPay (which we first covered back in TRU85) has been accepted for contactless payments on LU since July 2015. These loops can be read by the gate RTD and the RID used by RCI's in the same way as a contactless payment card. As such, customers should touch-in and out with their bPay device in exactly the same way as they would with an Oyster or contactless payment card.



CONTACTLESS UPDATE

Our feature above outlines a further option for customers to pay for their travel using contactless payment, but it is not just the options for paying that are increasing.

Since contactless payment were launched on LU and rail modes in September 2014, we have seen a huge growth in use for PAYG journeys, with some of our existing customers switching from Oyster and many first time users seeing contactless payment as a convenient option, without the need to obtain an Oyster card, worry about the balance on their card, or having to obtain a refund on any unused balance at the end of their stay.

We have included below some headline facts about the use of contactless payments and how use has grown over the last year.

- 31.5%** PAYG journeys now made using contactless payments (for some stations this is nearly 50%)
- 5 %** of contactless transactions now made using mobile devices rather than cards
- 13 million** different contactless cards/devices used since the launch on rail modes
- 500 million** total number of journeys made using contactless
- 1 million** average number of contactless journeys made per day
- 90** number of countries from which customers have used contactless payment

So keep promoting contactless to customers as a way of speeding up their journey and avoiding the need to queue.

In the next edition of the TRU we hope to be able to report on an exciting initiative that will not only support the switch to contactless, but will also hopefully provide a financial boost for one of our nominated charities.



SPRING CLEAN – Part III – POM ROOMS

In this the third of our Spring Clean articles we revisit POM rooms and take a look at the signage and stickers that should be present on the ticket issuing equipment we use. As this signage is not customer-facing, much of it is produced in-house and replacements can either be printed from the T&R Intranet pages or ordered directly from the T&R team.

GENERAL

All information posters and device stickers displayed on any LU equipment should be official and in good condition. You should immediately remove and / or replace any unofficial items or notices that;

- are dirty, scratched, torn, defaced, faded or simply illegible
- have no relation to secure suite equipment or functions
- refer to any equipment or information that is out of date, refers to obsolete equipment / procedures or is incorrect

POMs

- On the rear of at least one POM there must be a **Manual Handling – Emptying a Coin Vault (1)** poster, showing in six illustrated steps the optimal technique for lifting coin vaults out of POMs. This information can also be useful for lifting other equipment within the room and preventing injury.
- **POM float stickers (2)** showing the composition of the float for the MFM should be displayed on the door of the device.
- The last, but not least sticker is the very useful **POM common error codes (3)** sticker and once again there must be at least one of these displayed within each POM room.

TOM/SAF

- Over the last 18 months, TOMs and SAFs have been combined in most of our secure suites. The **TOM/SAF should always operate in TOM mode (4)**, but in case of a TOM failure, staff (once authorised by Cubic) are able to switch over to the SAF mode via a KVM (Keyboard-Video-Mouse) switch. These instructions should be clearly displayed near the device's monitor.

SAFES

- Although we have changed the way in which we use our safes, secure suites which have retained roll-top Deposit Safes, need to ensure that a sticker warning staff to **keep their fingers clear of the chute mechanism (5)** is clearly displayed at the top of the door.
- Once the Lark lock has been replaced with a key-operated lock, any previous stickers stating **"This safe is time locked..."** must be removed.

CASH HANDLING DEVICES

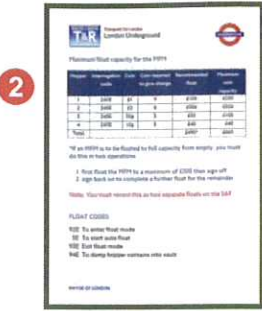
- The 200+ secure suites that have CHDs should also have **Fault Reporting and assistance (6)** and **Golden Rules for CHD (7)** laminates clearly displayed on the wall near to the CHD. These laminates are delivered either at the time of installation or staff briefings.

SECURITY POSTERS



- Details to check before granting security collection staff access to the secure suite should be displayed near to the door of the secure suite, but not within view of customers.
- Only the official T&R version (8) should be displayed, and not versions supplied by G4S, as some details are not appropriate to LU.

Additional copies of all of the above can be obtained from the T&R team.



POLYMER NOTES (Part 3)

In the third instalment of our special feature on the forthcoming introduction of polymer banknotes, we take a look at two further aspects of the changes.

As with any new banknotes that are introduced, all cash-handling businesses such as LU will need to plan and prepare for the introduction of the new, smaller polymer £5 note. Staff and machines will need to be able to recognise and authenticate these notes and adapt accordingly.

Note Handling

Polymer notes feel quite different from paper notes but can be handled just as easily. Like paper notes, new polymer notes can sometimes stick together. Fanning, tapping them on a desk and general handling of the notes will reduce this risk, making them easier handle.

Checking and Counting Machines

All our POMs and CHDs will need to be adapted to allow for polymer notes and both Cubic and Scancoin will be undertaking upgrades so devices are ready to accept polymer notes issued by both the Bank of England and the 3 Scottish issuing banks.

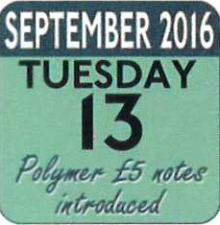
Devices will need to be able to accept and store both polymer and paper notes, until the latter is officially withdrawn in May 2017.

STERLING BANK NOTES LU WILL NEED TO ACCEPT				
Issuer	Paper £5	Polymer £5	Paper £10	Paper £20
Bank of England	✓	✓	✓	✓
Ulster Bank	✓	n/a	✓	✓
First Trust Bank	✓		✓	✓
Bank of Ireland	✓		✓	✓
Northern Bank*	✓		✓	✓
Danske Bank	✓		✓	✓
Clydesdale Bank	✓	✓	✓	✓
Bank of Scotland	✓	✓	✓	✓
Royal Bank of Scotland	✓	✓	✓	✓

Successful witness testing of the MFM Bank Note Recycler has already taken place in a controlled environment at Cubic's test centre in Salfords and are now due to be rolled out to devices between **Monday 01 August and Tuesday 09 August**. The upgrade will take place during traffic hours and take about 45 minutes per device to complete.

With the launch on **Tuesday 13 September** getting ever closer, a field test for the Bank Note Recycler on MFMs and Bank Note Acceptors and Bank Note Recyclers on the CHD is planned to take place at **Liverpool Street** in early August with a representative from the Bank of England present.

An upgrade of other MFMs is scheduled to be undertaken from mid-August and will then see the older NHUs accepting Scottish and Northern Irish notes for the first time.



THE KEY POINTS
Separating myths from facts



- Burning through money will, literally, be more difficult – Notes will not burn as easily as the current £5, and are designed to withstand temperatures of at least 140°C before 'melting'.
- They are difficult to tear – Very... however, once they have a small nick in them, they will.
- They last about five years – and then some, More than 30 countries already use polymer notes and all evidence shows they last much longer. The Bank of England (BoE) has stated that polymer notes will last at least 2.5 times longer than current notes.
- There are no plans for any of the Northern Ireland banks to switch to polymer, but new polymer £5 notes will be accepted there.
- They are nice and clean – If you dip a current £5 in red wine, the Queen's face permanently changes colour. On polymer, it can just be wiped clean as its non-fibrous nature means it repels dirt and moisture.
- They are 15% smaller than the current £5 note – This continues with a historical trend and smaller notes also reduce printing and storage costs. The BoE maintain that our notes are large compared with other currencies, and it may please Brexiters to know that English notes will remain slightly larger than euro notes. But they will be smaller than US dollars. The first £5 note, issued in 1793, was as tall as a man and twice as wide. The 1945-57 £5 notes were nearly double the size of the new fivers.
- The existing £5 notes will still be legal tender – but only until May 2017, by which most will have already been withdrawn. However that stash of fivers you've stuffed in the mattress will remain payable at face value with the BoE, as stated in the Governor's declaration on each note "I promise to pay the bearer the sum of..."

NORTH OF THE BORDER

Let's say this quickly and then not mention it again... the Scots got there first! – Way back in March 2015, the Clydesdale bank circulated a total of 2 million special edition polymer £5 notes. However you will be lucky to see any of these, as they were quickly snapped up by collectors and have traded for ridiculous sums since.

All 3 Scottish banks are close on the heels of the BoE and will issue their own polymer £5 notes as follows;

Bank	Launch date
CLYDESDALE	15 September 2016
BANK OF SCOTLAND	04 October 2016
ROYAL BANK OF SCOTLAND	November 2016

Examples of the Scottish notes will be included within TRU94 and the T&R section of the intranet from September.



askolly@tube.tfl.gov.uk



From: [REDACTED]
Sent: 05 July 2016 02:53
To: Ask Olly
Subject: MFM 30 Algorithm

Dear Olly,

MFM 30 has had its algorithm tweaked whereby if you assume it is fully floated with all coin denomination, the £1 coins depletes at a much faster rate compared to £2 or 50p. I have observed this phenomenon since last year and also at my new location. As a consequence the device indicates "No Change Available" on a regular basis despite having for example £200 of £2 coins and £99 of 50p. I have read the relevant T&R update about the aforementioned modification and reasoning behind it but the reality contradicts the intended benefit described.

The device will indicate 'No Change Given' mode as the £1 coin drops to a very low level irrespective of whether you have high levels of £2 & 50p coins respectively. The latter coin denominations will not be dispensed.

This was never the case until at least a year or so. Can you kindly raise this issue with Cubic?

Is this tweak intentional on the part of the company in order to force our customers to use Oyster and Contactless cards respectively (cynic in me believes so)?

Thanks and Kind Regards.

[REDACTED]

Hi Nick,

Thank you for your email.

In the last edition (TRU92) we outlined that the planned upgrades in May had been delayed.

The work on the AFM has since been further delayed and is currently scheduled to be Vanguarded in mid-September and should now be complete by early October.

Regards

Olly Oyster

Hi [REDACTED],

The change you are referring to was made as part of a series of upgrades at the beginning of 2015, to better use the change within the device. The mechanism of how this works was explained in TRU 86 during the rollout.

Prior to this modification, the device always gave the customer the lowest numbers of coins, so would always dispense £2 coins in preference to £1 coins. The MFM now dispenses £1 coins if the number of £1 coins in the change hopper is more than 10% higher than the level of £2 coins. Once the level of £1 drops, the device will then dispense a mix of £1 and £2 coins depending upon what change needs to be given.

The operation of this algorithm has recently been tested at the Cubic test facility at Salfords and was found to work as specified. However, one issue that may cause confusion is that the algorithm works on the number of coins not the value.

Space does not permit the provision of a more detailed explanation here, but we will include more detailed information in TRU94.

Regards

Olly Oyster

From: [REDACTED]
Sent: 28 June 2016 02:44
To: Ask Olly
Subject: AFM not accepting coins.

Hi Olly,

TRU91 dated April 2016 stated that on or around 23 May 2016, a POM software upgrade would take place. Did this happen?

At Acton Town station one of our AFMs is still sometimes rejecting coins straight into the bowl. A signing on and off fixes the problem, but I hoped this upgrade would fully solve this problem.

[REDACTED]

From: [REDACTED]
Sent: 20 May 2016 10:20
To: Ask Olly
Subject: NR Railcards linked to Oyster cards

Hi Olly,

Why is it that customers can purchase Railcards through National Rail for more than a two year period yet when we try to pair up the Railcard with the Oyster card on the POM's, the limit is set to a maximum of two years?

This is really inconvenient for the customer as we have to put it through as two years which could well be a whole year earlier than the expiry states on their Railcard. This earlier date could well be forgotten in those two years which means customers could end up being charged more through no fault of their own when the date we set expires. These issues are going to affect customers and us in two years' time.

Is this going to be amended on the POM's?

Thanks

[REDACTED]

Hi [REDACTED]

Thank you for your email and feedback, which has been passed on to the Project team and to Cubic to look into.

They are currently investigating why the jobs that you have quoted were not automatically transmitted to Cubic's maintenance team, as it should not be necessary for your or your colleagues to phone and report such POM faults.

In relation to the status of individual devices on your station, we have had a couple of other stations report devices as staying red even after a fault has been cleared. Cubic are currently looking into the devices at Oxford Circus to determine why the correct status isn't being shown on the iPad.

Within the last week some further changes have been implemented to improve the structure and clarity of the fault messages displayed on the iPad. Unfortunately the details were released too late for inclusion in this edition, but we hope to be able to provide a more detailed update in TRU94 next month.

Regards

Olly Oyster

askolly@tube.tfl.gov.uk

Hi [REDACTED]

Thank you for your email and enquiry.

Each of the discount entitlements that can be set on the POMs have a maximum validity period, largely to legislate against users entering an incorrect date or setting a date well beyond the expiry date. This was initially set up with the maximum period for each discount with NR Railcard discounts set at two years to coincide with the maximum life of these.

Having done some further research on this issue, it has been confirmed that changes to the maximum duration of each discount entitlement were successfully implemented on 31 May 2015. It should therefore be possible to set a discount for a NR Disabled Persons or NR Railcard holder for a maximum period of 36 months.

We have had a couple of other recent enquiries from staff who were having difficulty in entering expiry dates for a discount, but it appears that this may have been down to the m not entering the date in the required (DD/MM/YYYY) format.

Regards

Olly Oyster

From: [REDACTED]
Sent: 27 July 2016 19:13
To: Ask Olly
Subject: Incident reporting via Device Monitoring App

Hi Olly,

Yesterday, staff at Oxford Circus raised 3 incidents via the Device Monitoring App. On checking with Cubic today, those jobs had not been escalated to them so the POMS were still faulty at the start of my duty today.

It is also worth noting that the app shows the status of all the Oxford Circus AFMs and MFMs as red, but these are due to incidents not being closed by Cubic. I did have a discussion with Cubic staff on this a number of months ago and they were to look into the process. (This was shortly after launch and staff at Cubic were not aware of the app). If you are aware of actions we should be taking to ensure the jobs are closed (e.g. acknowledging an incident) please advise.

Kind regards,

[REDACTED]

NIGHT TUBE

Coverage of plans for a 24 hour tube service on the Central and Victoria lines (and later in the year on the Piccadilly, Jubilee, and Northern lines) and the implications and remedies for the T&R world, started back in TRU86 (May 2014)... and in many publications since.

Night Tube was originally intended to go live on Saturday 12 September 2015, but was delayed due to ongoing discussions with Trade Unions and other issues. Now resolved, the Capital's first all night Tube services will start on Friday 19 August 2016.

June 2015
SUNDAY
14
End of Day time change!

04:30



August 2016
FRIDAY
19
Night Tube services begin

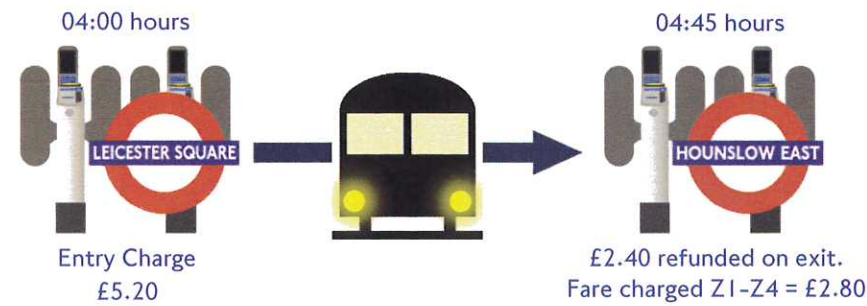
Therefore we thought it would be a timely reminder to provide you with an overview of the main points from our previous articles and how the revised software deployed in readiness for Night Tube operations, will address the correct charging of Oyster and contactless payment users in the following ways:

Journeys starting before 04.29, but finishing after 04.30.

In the example below, the customer starts their journey at Leicester Square at 04.00hrs on Saturday morning and then travels to Hounslow East, but doesn't touch out until 04.45hrs. Previously the customer was charged £10.40 for 2 incomplete journeys, as the exit would have been treated as a Saturday journey.

The new software treats the journey as being entirely within the first traffic day (Friday) and the customer is charged the correct fare of £2.80.

If the customer had touched in much earlier and the time between their entry and exit validations exceeds the Maximum Journey Time (MJT) allowed for the journey, then they would continue to be charged separate entry and exit charges.



For Night Tube services, Maximum Journey Times will be exactly the same as that for the corresponding journey undertaken during the evening Off Peak period. The current MJT allowances are quite generous, as they cater for travel on NR services which are much less frequent than those we will be operating.

Daily Price caps

One important area that has changed is with Daily price caps. The new arrangements follow the established PAYG principle, that it is the time that a journey commences which determines what the customer is charged.

In our second example below, a customer makes a number of journeys during the Friday morning and afternoon, reaching the Zone 1-4 cap after catching their third bus of the day at 17.15 hours. Their final journey commences from Green Park at 03.55 hours concluding at 04.45 on Saturday morning, which is technically in the next traffic day.

As the journey commenced before 04.29, it will be treated as being on the previous traffic day. As the customer had already reached a Z1-4 daily price cap, they will not be charged for this final trip.

EXAMPLE - With Cap	Time	Journey		PAYG Charge	Total Spend	
	10:40	Bus 43		£1.50	£1.50	
	10:55	Highgate	to Tottenham Court Road	£2.80	£4.30	
	11:50	Bus 24		£1.50	£5.80	
	16:35	Pimlico	to Green Park	£2.30	£8.10	
	17:15	Bus 38		£1.10	£9.20	Z 1-4 Cap
	03:20	Bus 38		£0.00	£9.20	
	03:55	Green Park	to Finsbury Park	£0.00	£9.20	



Night Tube articles

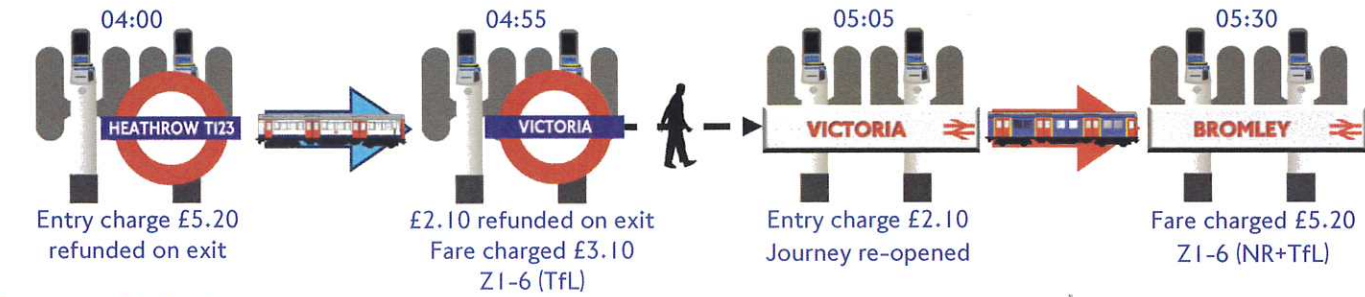
- TRU76
- TRU77
- TRU84
- TRU85
- TRU86
- TRU91
- TRU92

NIGHT TUBE (continued...)

More complex journeys

Overnight journeys involving the new Night Tube services may also involve interchange with other modes. Where this involves an Out of Station Interchange, the original journey will be reopened, even if it has now moved into the next traffic day.

In example 3 below, the customer commences their LU journey from Heathrow T123 on Saturday morning at 04.00hrs and touches out at Victoria (LU) at 04.55hrs. This journey is closed off as occurring on Friday (the previous traffic day). When the customer then touches in at Victoria (NR) 10 minutes later, to complete the final leg of their journey, their original journey is reopened and their final touch-out at Bromley South at 05.30hrs results in the whole journey being treated as taking place on the Friday.



Season tickets

Holders of Travelcard season tickets on Oyster will also be able to get the benefit of completing an overnight journey after their season ticket has technically expired. All Travelcards are valid until 04.29 on the day following the expiry date of the ticket. So a Travelcard dated to expire on Monday 01 August can currently be used until 04.29hrs.

Once Night Tube services begin in mid-August, providing the customer touched in before 04.29 they will be able to complete their journey within the zones covered without further charge, even if it is not completed until 05.00 or 05.30hrs. If travelling beyond the zones covered, they would simply be charged the PAYG fare for the zones not covered by their season ticket.

Travelcards issued in advance are valid from 00.01 hrs on the start date, so customers will effectively be able to make an overnight tube journey, which technically falls within the traffic day preceding the start of their ticket.

So if a 7 Day Travelcard is dated to commence on Sunday 21 August, the holder would be able to travel from 00.01 hrs on Sunday morning (or 24.01 hrs Saturday). This will effectively be recorded as having occurred during the traffic day of Saturday, even though the season ticket shows a start date of Sunday.

THE KEY POINTS

- Common End of Day for all stations.
- PAYG journeys commencing before 04.30 but completed after 04.30 will be charged and capped as part of the previous traffic day.
- Travelcards on Oyster will be valid to complete a journey, even if the product expires during the journey.
- No change to magnetic ticket software. Customers will be required to present their ticket for manual inspection if their journey is completed after 04.30.
- Day Travelcards will not be available from POMs between 00.01 and 04.30 hours. Gates and PVal's will go out of service briefly at 04.30, as the system switches from one day to the next.



NR TVM FIX

Just in time for the start of Night Tube services, it has been confirmed that the change to resolve an issue on NR TVMs that caused season tickets to be cancelled after midnight on the final day of validity, will be completed on all NR TVMs by 31 July.

The change will mean that if an Oyster card is checked or topped-up on a NR device, the product will no longer be marked as expired until 24 hours after it expires. Apart from avoiding an obvious issue when we start running services through the night, the change will also immediately benefit customers checking their card, before using Night Bus services.

POM SERVICING AT NIGHT

Linked to the start of Night Tube, we have had several queries about servicing POMs at night.

We therefore thought it would be useful to publish some quick reminders / clarifications of what can and can't be done.



- POMs can be floated or serviced during the night if this is a convenient time to undertake these activities.
- TSID card holders should avoid starting these activities between 04.15 and 04.35.
- If you service or float a device before the 04.30 End of Day, all money must be accounted for and remitted before 04.29.
- You can not carry money forward to the next traffic day. Your cash drawer must be emptied and your SAF account finalised before 04.29.
- If you need to undertake additional POM servicing or floating after 04.35, then this must be treated as being part of the new traffic day and will form part of a new account.

END OF DAY ON GATES AND POMs

For those of you that haven't been round much during the night, or haven't paid too much attention to ticket machines during this period of the day, there is a short period at End of Day, during which each device briefly goes out of service. This occurs whilst the device switches from one traffic day to the next.

This process does not normally have much impact and previously may have gone completely unnoticed.

However on Saturday and Sunday mornings, once Night Tube services commence, it will mean that at 04.30 hours there will be a very brief period at stations which are open through the night, where all gates and PVal's will not be available for validation and POMs will momentarily close.



When this does occur, customers should be advised to wait until devices return to service, which should be in no more than 30 seconds.

On no account should customers be let through gates or allowed to travel without tickets, as this is likely to cause bigger problems elsewhere.

LAL MXIDE PU

Part 3 – We've mixed up the letters in these station names. Can you work them out?

Ticketing & Revenue
T&R Trivia

(a) ONCOMING MALE

(b) LOTUS RACER

(c) STONE A CAT

(d) ELK RAMP

(e) ENSURES QUOTAS

Is there a connection?
– You decide.
Answers on Page 15.

PED PROJECT DELAYED

The planned start of the Vanguard of the new Chip & PIN units (PIN Entry Device or PED) has been put back by approximately four weeks, following a number of defects which were identified during the latest round of testing.

Although the issues are not major, the need to change the software and then undertake further rounds of testing, both to verify the fixes and ensure that any changes have not impacted on other areas of the device, means that the initial MFM Vanguard is now not likely to start until mid-August, about 4 weeks later than we had been anticipating.

Revised dates for all three types of POM are shown in the table below. There has been some change to the phasing of the rollout, with the initial rate of MFM upgrades being reduced once the AFM PED is available for deployment, so that both types of device will be completed around the same time.



Device	Vanguard	Rollout	Completion
MFM	Mid-August	Mid September	March 2017
AFM	Early September	October	March 2017
QBM	End September	Mid October	End April 2017

The delay means that the upgrade to allow our MFMs to accept polymer notes is now being implemented separately to the PED upgrade, in order to meet the 13 September deadline for all MFMs to accept the new polymer notes. (For further information on this, please see our [Special Feature](#) on Page 7).

One positive element is that many of the faults that have been identified during MFM testing are also common to the AFM as well. This should hopefully mean that the fixes will have been applied, tested and incorporated into the AFM software, before the forthcoming AFM Vanguard, which has also unfortunately been delayed.

As the order in which a number of forthcoming POM upgrades had changed several times recently, we have included an updated summary of what will be happening and when, in the table in the article below.

POM UPGRADES **UPDATE!**

Our desire to consolidate a number of the planned POM changes into a single upgrade for each device, has been somewhat thwarted by shifting priorities and revised timescales for certain elements whilst Cubic attempt to resolve a number of issues identified during testing.

The urgency of the Oyster Refund fix to prevent refunds on MiFare Oyster cards (as outlined in our [Crimewatch](#) feature on Page 16) means that a number of elements which were due to be delivered as part of the forthcoming MFM PED upgrade will now be implemented ahead of the new PEDs being installed.

Device	Polymer notes update	Oyster refund fraud fix	Defect fixes	Increase of bankcard limit	PED Upgrade
AFM	N/A	N/A	Vanguard Mid Sept. Completion 05 October.	Deployed with Defect fixes.	Completion March 2017.
MFM	BNR → 01-09 August BNA → Mid-August – 10 September	Completion 19 August.	Deployed with Oyster refund fix.	Deployed with Oyster refund fix.	Vanguard Mid August. Rollout Sept 2016 – March 2017.
QBM	N/A	N/A	Rollout with PED upgrade.	To be advised	Completion End April 2017.

CHD ROLLOUT CONTINUES

By the time this edition of TRU is published, we will have clocked up another milestone, with the installation of the 200th CHD at **Willesden Green** on the night of **Wednesday 20 July**.

Since publication of **TRU92**, we have continued to have a number of issues with user PINs resetting, but following further discussions with Scancoin, we now have a clearer idea of what is happening and how to avoid it.



The main issues occur through devices which either goes off line for periods, or where the signal strength is intermittent. Any changes made whilst a device is not connected to the central computer, will now result in the local changes being discarded and the Central data being applied in preference.

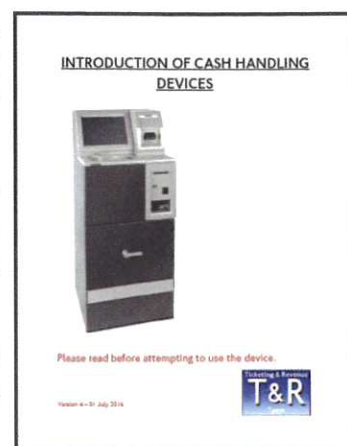
This will mean at the next attempt to sign onto the CHD, the user is likely to receive a wrong PIN message when they input their chosen PIN. They should however be able to successfully sign on, if they have retained a note of their initial PIN.

The change means that any users that are added at station level on devices which may be off line during CHD briefings by the T&R team, will also need to be added to the Central database. This will almost certainly result in the PIN being reset back to the initial PIN when the device synchronises.

An updated version of the CHD Briefing document is now available and can be viewed /printed from the ESAF page of the T&R section of the intranet, or via the link below;

http://uintranet.tfl/static/documents/coo/Introduction_of_CHD_v4.pdf

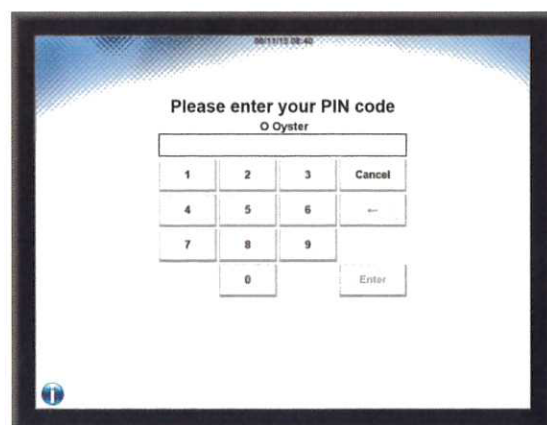
The revised version includes revised procedures for moving notes, flowcharts for most processes and the Golden Rules document featured in **TRU92**.



CHD PRIVACY SHIELD



A further change to the CHD which is currently being deployed by Scancoin will see all devices fitted with a privacy shield over the screen.



This takes the form of a thin film that is applied across the surface of the screen, without disrupting the touchscreens operation.

This simple modification, which was previously trialled on two of the original Scancoin CHDs at **Euston** and **Hendon Central**, prevents other people who may be in the POM Room, having visibility of the device screen when a user is entering their PIN.

The shield blocks the view of the screen from the side, but has no impact on visibility when the screen is viewed straight on.

Privacy shields are being fitted to all new units as they are installed, with previously installed devices being fitted on a rolling program over the next few weeks.

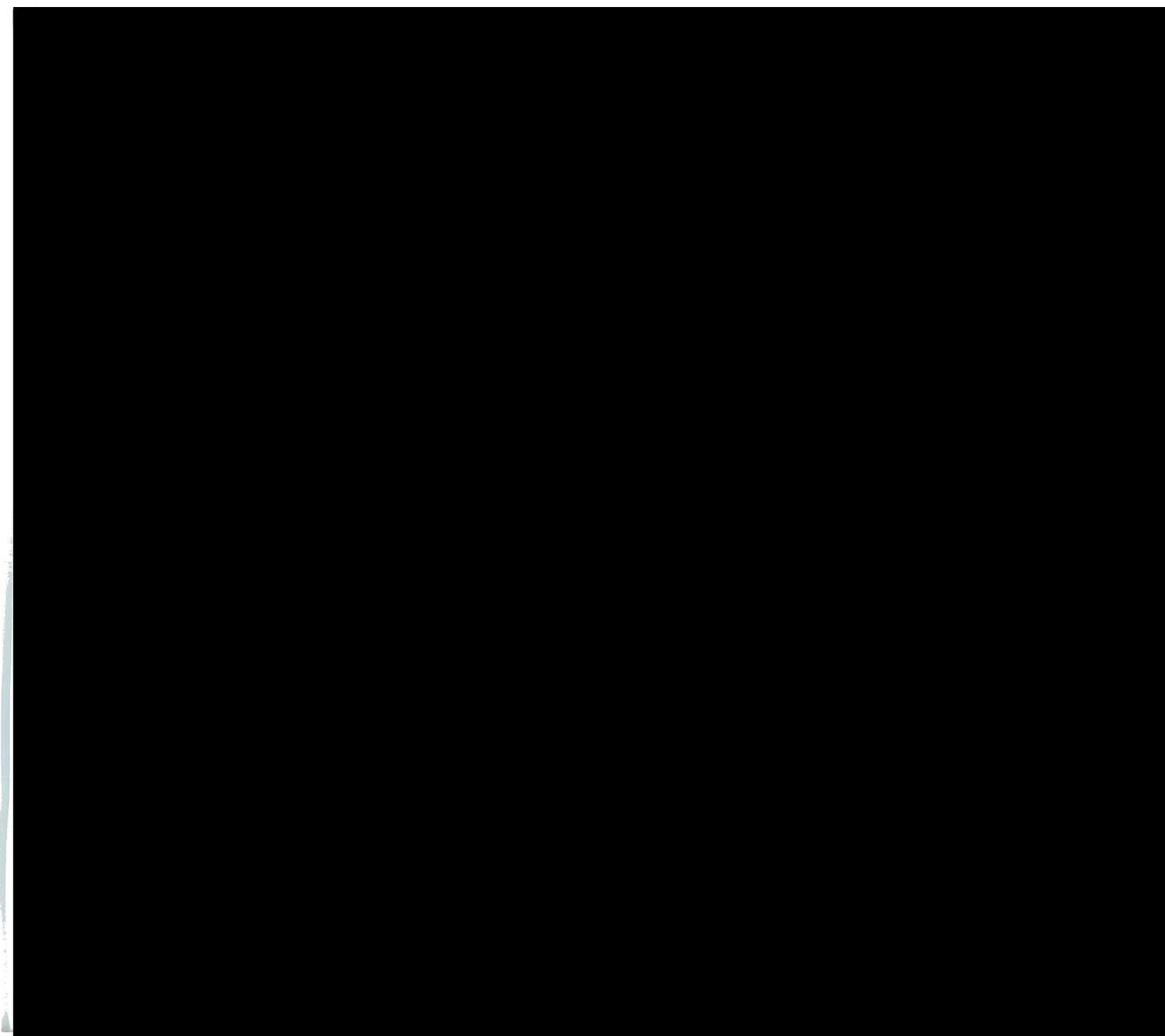
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OPENING AND CLOSING



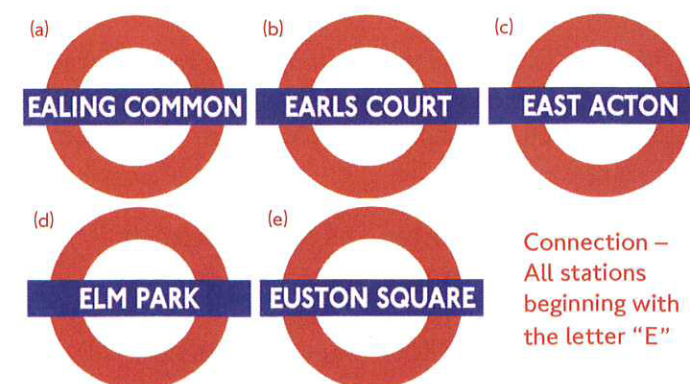
ANSWERS TO T&R TRIVIA

WHERE'S WOLLY?



Pt.1 **A&D** Discounted PAYG at all times and can buy Discounted Day Travelcard (Off Peak) for their escort.

Pt.3 **LAL MXIDE PU**



Connection – All stations beginning with the letter "E"

How did you do?



CRIMEWATCH



NEXT ISSUE

TRU 94 is scheduled to be published in late August and as outlined in this month's lead article, we will be carrying the usual detailed preview of all the changes planned for the forthcoming September Fares Revision on **Sunday 04 September**.

In addition, we will also be providing a more detailed update on the MFM programme to prepare the Bank Note Accepters (standard NHUs) ready for the launch of Polymer banknotes on **13 September**.

Plus;

- Updates on other T&R related projects
 - More of your recent letters to Ask Olly
 - Oyster card charity update
- and a number of our other regular features



What's in a number?

Before becoming the United Kingdom, for the period covering the 94 years between 1707 – 1801, England, Scotland, Wales and all outlying islands (excluding Ireland) were officially known by Act of Parliament as the Kingdom of Great Britain.