



## INSIDE THIS EDITION

### FARES REVISION OVERVIEW

Pages 2&3 → What went well / not so well?

### IN THE NEWS

Pages 4-7 → The latest T&R news

### OYSTER EXPLAINED

Page 8-9 → In & Out at the same station

### SPECIAL FEATURE

Pages 10-11 → TRU Reader Survey Results

### ASK OLLY!

Pages 12-13 → More of your letters answered

### PROJECT UPDATES

Pages 14-19 → POMs → Gates → Device Monitoring

### LATE NEWS

Page 20 → CHD Rollout → Looking ahead to TRU96

TRIVIA - Pages 2, 5 & 15  
Answers on Page 19

# FTP4 NEXT STEPS IN THE FUTURE OF TICKETING

The next stage of the implementation of the Future Ticketing Project (FTP) will see a major upgrade of the card reader software and major improvements to the way customers can load products to their Oyster card.



Currently customers wishing to buy a season ticket or top-up their PAYG balance on-line, have to nominate a station to pick up their purchase from and wait until the following morning before they can collect their purchase.

If they miss the cut off which is around 20:00 hours then it will not be available for collection until two days later.

The new facility known as **Fast Universal Load (FUL)** will dramatically improve this with purchases being available for collection from any station or bus **30 minutes** after the completion of the purchase.

The facility will be trialled in conjunction with a new TfL ticketing app from November and LU operational staff have the opportunity of participating in the forthcoming trial of both. Further details can be found on **Page 7**.



## KEY STORIES INSIDE

Page 2 & 3

### FARES REVISION REVIEW

We take our customary look at the implementation of the recent September Fares Revision and what went well and what didn't go so well. We also take a more detailed look at a couple of the changes that were implemented last month.

Page 5

### MORE WAYS TO USE CONTACTLESS

The range of different methods of using contactless payment to travel has been further expanded with the launch of **Vodafone Pay**. As contactless usage continues to grow, we also highlight a new campaign to reduce the risk of "card clash" and customers potentially being charged on the wrong card or device.

Page 10-11

### TRU READER SURVEY

In this month's **Special Feature** we provide some feedback on the results of the recent TRU Reader survey and compare these with some of the results from our previous reader survey in 2009.

Pages 14-16

### POM UPGRADES

We bring you updates on a number of recent upgrades to the MFM and some further changes, including the rollout of a new Chip & PIN unit affecting all POMs. These changes are due to be implemented on all devices in the coming months.

Pages 18 & 19

### GATE UPGRADES

We provide a further update on progress on the project to install the new LCP in all of our gates and an update on programmes to upgrade components on EI gates and install additional WAGs.

Page 20

### CHD ROLLOUT NEARS FINISHING LINE

As the CHD rollout nears completion, we provide an update on recent progress and further information on a new type of 'slimline' note acceptor unit that will be installed at a small number of stations shortly.



SEPTEMBER FARES REVISION

WHAT WENT WELL

In general the September Fares Revision on Sunday 04 September 2016 went extremely smoothly, with only one reported problem on an LU device. The only issues occurred;

- Paddington VIC - The station computer was offline and an engineer had to be sent to site after the VIC opened at 08.15 hrs. The Fault had been cleared by 1100.
- Moorgate - PVal 81 was not updated with the new fare tables. However this fault was also cleared by 1100.



Three further sites; Mansion House and Emerson Park and Lea Bridge on NR had communication problems due to their station routers being offline. None of these had any impact on the fares revision implementation as all of the associated devices had already loaded the new fares tables.

Fortunately, this fare revision we were not beset by problems with devices and AFMs in particular not accepting new tables. As previously documented in TRU, we have had issues in the past with the AFM not accepting large table updates, particular when we have implemented screen upgrades. A fix for this is included in the next AFM software release, which will be a service release to fix previously identified issues rather than allied to a project or upgrade programme.

Further details of this forthcoming AFM upgrade are included on Page 16 of the Project Updates section of this edition of TRU. Our aim is to roll this software out to all AFMs well before the 02 January Fares Revision table loading takes place. This will hopefully avoid any reoccurrence of the problems we have previously suffered.

WHAT DIDN'T GO SO WELL

One aspect of the fares revision changes that we reported on in TRU94, involved the pilot expansion of the range of Boundary Zone Extension tickets to NR destinations outside of the zonal area, which had been planned for Buckhurst Hill.



Although the Buckhurst Hill POMS were upgraded to have Off Peak NR Railcard discounts available, the change to expand the range of extension tickets was deferred from the 04 September changes and is now scheduled to be implemented as part of a forthcoming base data update on Sunday 13 November.



A consequence of this later deployment is that the plans to extend the enhanced range of extensions to other stations as part of the forthcoming January Fares Revision have had to be postponed, as there is now insufficient time between the 13 November upgrade and the deadlines for changes to be included in the scope for the January Revision.

This now means that the planned expansion of the enhanced range of Boundary Zone Extensions to other stations, will have to be included in the May 2017 Fares Revision.

On the topic of Fares Revisions, we hope to be able to provide an initial overview of changes planned for 02 January 2017 in the November issue of TRU, once new Travelcard prices have been finalised. Following the new Mayor's election promise of a "fares freeze" for customers, some people may have been under the misapprehension that all prices would remain unchanged. Unfortunately life isn't that simple and the fact that some fares are set by other train operators and Travelcard pricing is the subject of complex agreements with other operators, means that we have no alternative but to increase prices of certain Day Travelcards, Travelcard Season tickets and through tickets to NR stations outside of London.

Part 1 – On the subject of fares revision changes and of changes to PAYG ...

Q1) When were the separate Peak and Off Peak tariffs for PAYG or PrePay as it was originally called, introduced?

A January 2003

B January 2005

C January 2008

D May 2009

Ticketing & Revenue

T&R

Trivia

Answers on Page 19

...In the news...In the news

BUS HOPPER LAUNCH

Hot on the heels of the September Fares Revision, the new 'Bus Hopper' fare for PAYG customers was successfully implemented on Sunday 11 September.

PAYG users can now get the benefit of being able to make a second bus trip without further charge, if they commence the second journey within 60 minutes of their first journey. This arrangement does not apply if a customer makes a rail journey in between the two bus trips.

The new arrangements should be beneficial to many bus users and in particular those that have to use two buses to complete their journey.

This means that some Oyster customers who had previously always bought a Bus & Tram Pass to cover their journeys to and from work may now find that by taking advantage of the 'Bus Hopper' facility it may be cheaper to use PAYG instead.



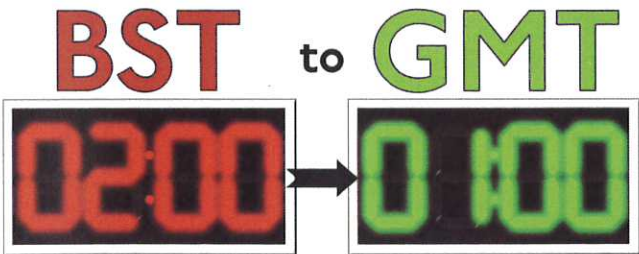
Fare Type	Total
7 Day Bus & Tram	£21.20
5 x Daily PAYG Bus & Tram Cap	£22.50
5 x Return journeys using 'Bus Hopper'	£15.00

This is illustrated in the table on the left, which compares the cost of a 7 Day Bus & Tram Pass with 5 Daily Bus & Tram caps and 5 Return journeys for a customer taking 2 buses to work and 2 buses home from work each day.

Customers using contactless payment will always get the best value over a Monday\* to Sunday period, so will never pay more than the £21.20 cost of a Bus & Tram Pass.

TIME CHANGE

Having successfully negotiated the recent fares revision, the next event on the calendar is the switch from British Summer Time to Greenwich Mean Time in the early hours of Sunday 30 October.



This will be the first time that we have implemented a time change whilst Night Tube services are in operation. In terms of Traffic Days, the time change will actually occur on Saturday 29 October, with customers effectively getting the benefit of an extra hours travel.

More details of the forthcoming time change will appear in the weekly Hot Issues Bulletin.

PRIVILEGE (NR ONLY) DISCOUNT LAUNCHED

One feature of the recent fares revision that we have given very little coverage to is the introduction of a new type of Privilege rate discount entitlement on Oyster. The Priv (NR only) discount has been introduced to cater for Train Operating Company (TOC) staff who are not entitled to full privilege facilities and are issued with the red TOC PTAC illustrated below.

These have no availability on LU, so holders have to pay full fare on our services.

It is for this reason that the new discount cannot be set at LU stations and does not appear on the POM discounts menu.

Although we do not set this new discount, there is a chance that holders of the TOC PTAC version may approach LU staff to have the discount added to their Oyster card. If this does happen they should be referred to the Rail Staff Travel website; <http://www.atoc.org/about-atoc/rail-staff-travel/>

Do not attempt to load one of the other privilege discounts, as they have different availability and would potentially allow the holder to make journeys at a reduced rate that they are not eligible for.

The simple message: Red TOC PTAC = not valid on LU, no discounts can be set on Oyster cards at LU stations.





## POLYMER BANK NOTE LAUNCH

As previously reported in TRU, the Bank of England launched the new polymer £5 note on **Tuesday 13 September**. Prior to this Cubic and Scancoin had completed upgrades to all our POMs and Cash Handling Devices (CHD) to enable them to handle the new notes.

During testing it was identified that the set of note images loaded onto the CHDs by Scancoin, did not include images of the new polymer notes being introduced by the three Scottish banks. This was quickly rectified by loading a new set of note images onto all the CHDs at stations where the MFM is equipped with a Bank Note Recycler (BNR), since these are currently the only stations where POMs can accept Scottish and Irish notes.

A further upgrade of all our devices is scheduled to take place in early 2017, to load new note sets in readiness for the launch of the new polymer £10 note later in 2017. This will hopefully see the MFM software modified to accept a larger note set and allow devices with the older Bank Note Acceptor (BNA) units to also accept Scottish and Irish notes. These upgrades will also include images of 'street quality' polymer £5 notes, as the initial note set only includes images of 'bank quality' notes.

As highlighted in one of our *Ask Olly* letters on **Page 12**, since the launch of the polymer notes, we have had quite a lot of reports from stations with BNA units concerning a notable increase in note jams on the MFM and the fact that a number of the polymer notes retrieved from devices were badly creased. These issues have been raised with Cubic, who are currently investigating the exact causes of these problems.

One item to reconfirm is that at stations with MFMs fitted with BNRs, is that the device will store the polymer and paper notes on different rollers and will always dispense a polymer note, if available, in preference to a paper note.

## CASH COLLECTIONS

Over the last few weeks, we have had a large number of queries and requests relating to security collections.

The period has seen some poor performance by G4S in a couple of geographical areas and certain sites having regular had missed collections. At a number of these locations, particularly at the eastern end of the District line, this has largely been due to the custodians not being trained on the CHD. Both aspects are being followed up with G4S.



The issue of missed collections has been compounded by another issue; the note recycler unit of the CHD not being completely emptied. Here problems have arisen for one of two main reasons;

- Staff not transferring notes to the collection sack and in particular, not moving notes from the mixed roller (containing £20 notes) after the completion of POM servicing activities
- G4S Custodians refusing to take second cash sack from the CHD.

On this second issue, G4S have confirmed that the custodian should return to remove a second cash sack, providing there is not an unreasonable delay.

In reality the situation is not a lot different to the previous arrangements, where if there was more than one Cash Transportation sack to be collected, the Custodian would have been required to make a number of trips to their vehicle.

If followed, this should mean that the note unit is completely emptied, rather than leaving it with a large amount on the recycler rollers, which when transferred, means that the collection sack immediately becomes half full, which then leads to the sack becoming completely full long before the next collection is due. This in itself should not prevent further notes being deposited, as the recyclers can hold a considerable sum of money in addition to the notes within the collection sack.



## VODAFONE PAY GOES LIVE

From **Monday 03 October 2016**, Vodafone customers with an Android phone will be able to add their PayPal account or Visa or MasterCard credit or debit card to their **Vodafone Pay** app to make contactless payments.

However, unlike other mobile payment apps, Vodafone Pay uses the phone's SIM card... **so it can be used even when the phone is switched off or the battery has run out.**



More than one eligible credit or debit card can be added to the mobile app and customers can **switch** between which card is live for payment.

The slight downside of this is that must make sure they use the same card for travel to avoid incomplete journeys and benefit from daily and Monday to Sunday capping. If they don't journeys could be recorded separately on different payment devices.

Similarly if customers keep a contactless payment or Oyster card in their phone case, they should remove it before touching their Vodafone Pay enabled phone on a yellow card reader. If they don't, they could pay for their travel with a card they did not intend to use.

As with all contactless payment methods customers must touch in and out for all tube journeys to avoid being charged a maximum / penalty fare.

Customers enquiring about how to set up Vodafone Wallet and Vodafone Pay or any other information about the scheme should be referred to the Vodafone website.

## CARD CLASH

Until further notice, at weekends only a simple Public Address announcement is to be made at all Zone 1 stations aimed at reminding / advising customers that if they touch their purse or wallet containing more than one contactless payment card (including an Oyster card) onto a reader they could be affected by card clash and could be charged on the wrong card.



**"Please only touch one card on the reader  
to avoid paying with a card you did not intend to use."**

EVERY 10 MINUTES

ZONE 1 STATIONS ONLY

WEEKENDS ONLY

### How Does Card Clash Occur?

When two contactless payment devices and / or smartcards are presented at the same time to the card reader, it simply cannot differentiate between which one to read and as a result;

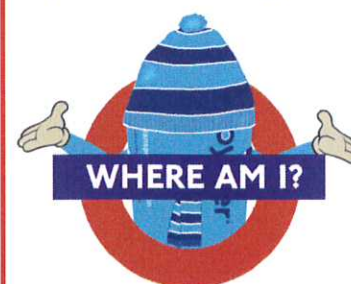
- The cards may keep being rejected by the gate
- Payment could be taken from a card that a customer did not intend to pay with
- A customer could be charged two maximum fares on two different cards for their journey.

**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 19

Ticketing & Revenue  
**T&R**  
Trivia



Pts	I'm at a station which...
5	opened on 20 November 1939 and is now Grade II listed
4	when it opened, two nearby stations closed
3	was originally intended to be called Acacia Road
2	transferred from one line to another in 1979
1	has a famous studio and more famous Zebra-crossing nearby



## STAFF OYSTER CARDS

In TRU93 we outlined that there were plans to eventually phase out all of the remaining MiFare Oyster cards, which would include a number of older Staff Oyster cards. However, there is no great urgency to do this whilst there are large volumes of standard MiFare cards still being used by customers.

We have recently received a number of queries from staff who have seen a poster/intranet item indicating the need to change their Staff Oyster card if it is not one of the more recently issued DesFire format cards.

These communications were sent out incorrectly and rather prematurely and have since been withdrawn.

To clarify, Station staff should continue using their current Staff Oyster card unless it actually fails.

Special arrangements will be made to replace MiFare format Staff Oyster cards issued to station staff at a later date, to ensure there is minimal disruption to access to the staff facilities on the POMs. These arrangements will be communicated to staff affected via future editions of TRU once they have been finalised.

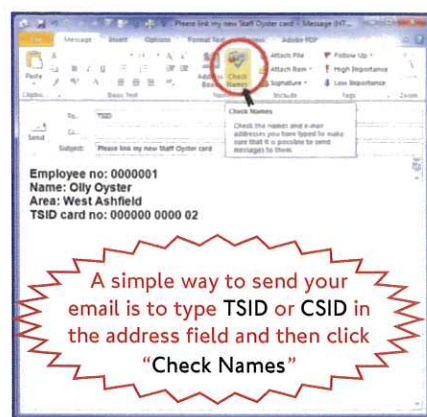
If you do change your Staff Oyster card for any other reason;

- If you have a TSID, you will need to email the **TSID inbox** with the following details to ensure that your TSID is correctly linked to your new Staff Oyster card:

- ❖ Employee No
- ❖ Area
- ❖ New Staff Oyster card number
- ❖ Name
- ❖ TSID card number

- If you do not have a TSID, but have access to the reduced facilities available to CSID holders, the following details need to be emailed to the **CSID inbox**:

- ❖ Employee No
- ❖ Area
- ❖ New Staff Oyster card numbers
- ❖ Name



The CE Service Desk are no longer involved in the activation or linking of TSID cards or CSIDs.

- **Ensure** emails are directed to the correct inbox so they can be dealt with efficiently.
- **Do not** call or email individual members of the T&R team, as if they are not available it may delay your query being resolved.

## GATELINE SECURITY

It has recently been highlighted that a number of video clips have appeared on the Internet showing customers entering a LU station by accessing the service panel within the gate.

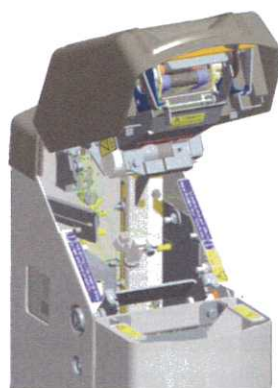
Although there is a separate issue of the relevant codes being circulated via social media, the root cause of this issue is with gateline staff leaving the lids of WAGs and E2 gates unlocked.

Apart from the risk to our revenue through allowing ticketless travel, there is also a safety risk to customers and children in particular being able to access the working parts within the stanchion and of the unsupported lid falling on their hands or fingers.



Reminders have appeared in *Hot Issues Bulletins* 36-16 & 37-16, but we are still seeing instances of gate lids being left unsecured. All station and Revenue Control staff **must**:

- **After routine access** – check that the lids of E2 gate and WAG stanchions are secured, to prevent unauthorised access to the components within them and to ensure that injuries do not occur from snagging or trapping
- **Station gateline checks** – inspect all gates are securely closed and locked as part of standard gateline checks
- **Report** – any gates which cannot be locked due to a fault to the Cubic Helpdesk on Auto 1610.



## FAST UNIVERSAL LOAD & TfL TICKETING APP

Our lead article on **Page 1**, introduces a major change to the way in which Oyster customers will in the future be able to pick-up products purchased on line and any refunds they are due.

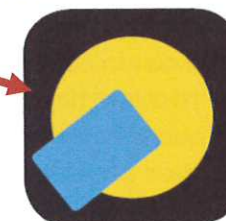
Currently these can only be collected from a nominated station when making a rail journey. In the case of online purchases, this requires the customer to complete their purchase before early evening, if they are to collect their product the next day.

This in particular probably accounts for why the percentage of purchases currently made online is so small.



The new Fast Universal Load facility will eventually allow the product or refund to be collected from any location, including buses, on the next occasion that the Oyster card is presented to an RTD (card reader).

To get to that point, there is a considerable amount of testing to be completed, with upgraded software required for the Central System, Station Computer (SC) and every RTD.



Upgrading of the SC software is scheduled for an initial Vanguard in **early November**, with full rollout taking place on **Thursday 01 December**. The Vanguard of the new RTD software on LU is scheduled to commence on **Wednesday 02 November**, initially at **St James Park, Euston and Waterloo**, but potentially being expanded to include around 24 other stations later in November.

Initially the new Fast Universal Load facility will be trialled by a group of customers involved in the trial of a new TfL ticketing app. Although various Oyster related apps have previously been developed through TfL's approach of allowing open access for developers, this is the first app developed in house within TfL and will allow customers to use it to make quick online purchases.

When launched to customers next spring, it should be possible for a customer to use the app to make an online purchase on the way to a station and 30 minutes later pick up their PAYG top-up or season ticket as they validate on entry. The app will also provide notifications of their PAYG balance and low balance warnings.

Before the launch, a trial of this new faster loading facility for users of the TfL app is scheduled to start at the end of November and there is an opportunity for up to 50 operational staff to participate in this. The stations used by trialists will impact upon the stations that are selected for the vanguard of the software changes outlined above. Early in 2017 up to 3,000 customers will progressively join the app trial and all being well, leading to a public launch in April 2017.

If you would like to volunteer to join the trial you will need to;

- have an **iPhone version 5 or above or an Android phone**
- travel on rail services where a **Staff Oyster card is valid**
- use the link below to apply  
<https://www.surveymonkey.co.uk/r/P3MNSWB>.

Successful applicants will be provided with;

- an **Oyster card to use for travel during the trial**
- reimbursement of their travel costs (refunded automatically on a weekly basis via a BACs transfer)
- a pack which lists all the information they need to know about taking part in the trial and how to provide feedback on this app.

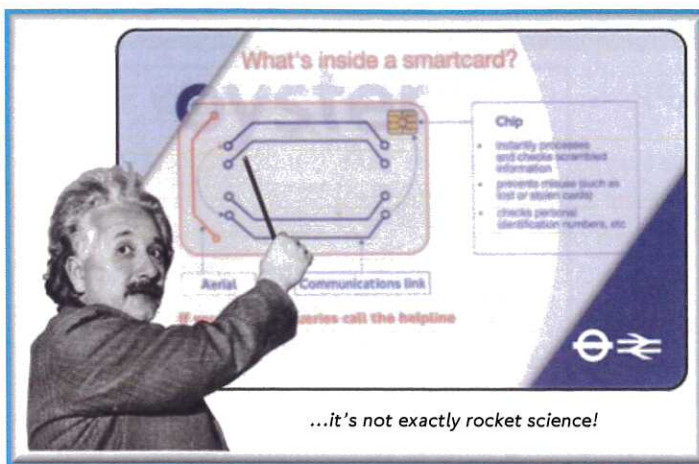
### THE KEY POINTS



When introduced FUL will allow;

- Pick up of purchases and refunds on buses
- Pick up from any station
- Pick up 30 mins after purchase
- Pick up on exit, even if product is not loaded on entry
- Ability to make purchases via the new TfL app



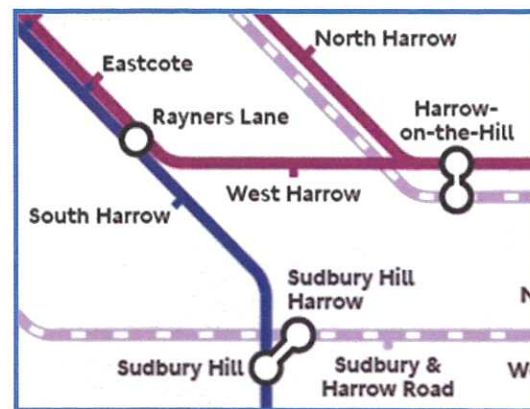


# OYSTER EXPLAINED

The inspiration for the topic for the return of our Oyster Explained feature this month is one of the Ask Olly letters featured on Page 13. The letter concerns issues which have come to light since the installation of a WAG at West Harrow during the summer, but a number of the scenarios may also happen at other sites from time to time. So this month we look at the complexities of:

## IN AND OUT AT THE SAME STATION

We last covered the topic of 'Same station' exits in *Oyster Explained* back in TRU72. However, it is probably time to look at this again. Following the installation of a new WAG at **West Harrow** in June, we received a number of emails from staff and managers on the Harrow on the Hill area, relating to the problems that had subsequently arisen with customers using the station, due largely to its fairly unique layout and position.



For those not familiar with this particular station, **West Harrow** is unusual in having two platforms each with its own entrance and no direct link between the platforms other than via the street.

At most other localities this wouldn't be too much of an issue, but as the station lies between two junctions (**Harrow on the Hill** and **Rayners Lane**), it rather uniquely has the potential for customers intending to travel to Watford or Amersham who have boarded the wrong train at Harrow or stations south thereof, to arrive on the westbound platform and customers from the Uxbridge direction who intended to use the Piccadilly line and board the wrong train or fail to change at Rayners Lane, to arrive on the eastbound platform.

In each of these scenarios, the customer concerned would need to cross to the other platform to retrace their steps back to either Harrow on the Hill or Rayners Lane to board the correct service. The absence of both a footbridge and subway means that they actually have to exit the station and then re-enter on the opposite side of the station.

Added to these, there is also a risk that customers who are unfamiliar with the station and wishing to travel towards either Baker Street or Uxbridge may simply go to the wrong platform.

As an ungated station, this did not cause any particular issues as customers could move freely between the two sides of the station, but subsequent gating, greater control of access to and from the platforms and the move towards Oyster has created its own issues here. We now examine the two main problems that arise through the use of Oyster PAYG.

## THE WRONG PLATFORM

This scenario is not dissimilar to what sometimes happens at other stations, where customers enter through the gates and realise they have forgotten something, exit and then try to enter for a second time.

At gated stations, the gate software is designed to prevent a second entry on the same card or ticket and identifies this as a 'Zig Zag' (In - Out - In) and displays a 'Seek assistance' message. Season ticket holders would need to simply be let in, but PAYG users are recorded as having a 'same station exit' and will incur a charge which will be either the maximum or minimum fare, depending upon the length of time between their entry and exit.

Where a PVal is involved, the software operates slightly differently, as the PVal has to make allowances for customers validating more than once and has to operate in both entry and exit modes.



## SAME STATION EXIT TIMINGS

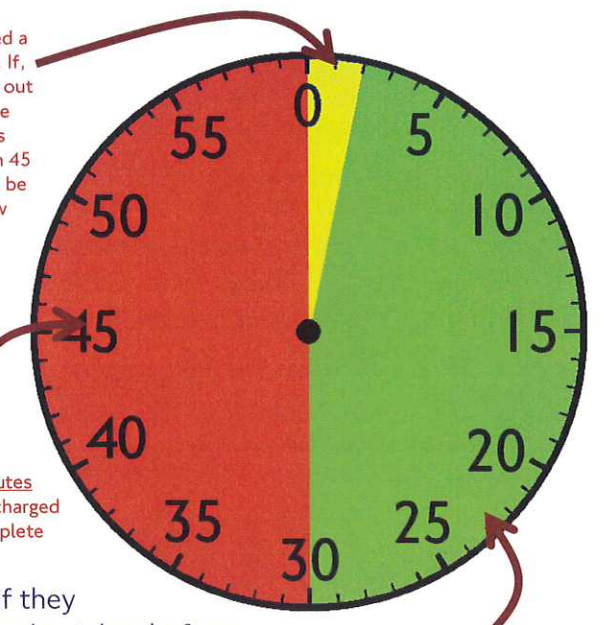
As shown in the diagram to the right, if the customer enters and then immediately exits, they will incur a 'same station exit' and a maximum fare. However, if they realise their error and subsequently touch-in within a 45 minute period, the original 'same station exit' will be removed and the customer will be able to start their journey without further penalty. This facility also applies at times of disruption when customers decide to exit the station and use an alternative station nearby and avoids the need for staff to have to intervene to void PAYG transactions.

In the West Harrow wrong platform scenario, the re-entry after the same station exit should avoid the customer from being overcharged, but problems may occur if they touch-in, then fail to touch-out before attempting to touch-in on the right platform.

**Under 2 minutes**  
Customers are charged a maximum PAYG fare. If, having touched in and out within 2 minutes the customer re-enters another station within 45 minutes, the fare will be refunded and a new journey started.

**Over 30 minutes**  
Customers are charged for two incomplete journeys

**Between 2 and 30 minutes**  
Customers are charged the minimum fare from that station



## THE WRONG PLATFORM

This is a slightly more difficult problem to resolve at the station. In cases where a customer has boarded the wrong train and realising their error alight at West Harrow, they will already have an open PAYG journey. Consequently, when they touch-out to cross to the other platform, their journey will be closed and they will be charged the PAYG fare to West Harrow from the station they started their journey at. If they then touch-in on the opposite side of the station, a second journey will be started, so the customer will then potentially be charged another fare from West Harrow to the station that they intended to travel to.

If the customer realises that by exiting their journey has been closed before touching-in again, it would be possible for a member of staff to void the last PAYG event (their exit) on the TOM and then by allowing the customer through the gate via a 'One Shot Release' or using their Staff Oyster card, allow the customer to resume their original journey and pay the correct PAYG charge when exiting at their destination.

As outlined in the *Ask Olly* response on **Page 13**, recent analysis has shown that the problems outlines affect as many as 20-40 customers per day and as a result a decision has been taken to introduce a 'Out of Station Interchange' (OSI) facility between the two parts of the station. This is scheduled to be implemented as part of the January Fares Revision changes on **Monday 02 January 2017**.

## OUT OF STATION INTERCHANGES

OSIs are not uncommon and give customers the facility to interchange between services, where it is necessary to pass through a gateline or leave a station and for their journey to be treated as one continuous journey. Generally on LU this applies to locations where there is an interchange outside of the gateline with NR services, but there are a few examples where interchange is permitted between nearby stations (e.g. **Hammersmith (C&H)** and **Hammersmith (D&P)** and **Paddington** and **Lancaster Gate**). It is however, relatively rare to have an OSI between different parts of the same station.

From time to time, there are requests to set up interchanges between different gatelines within a station, but where lower level interchanges exist between lines, these are generally not practical. The main reason behind this is that although the OSI facility works very well for customers that use it to interchange, there is a very big downside, particularly at stations which are a major traffic objective. The root cause of this is that when applying the OSI functionality, the gate cannot distinguish between customers who are genuinely interchanging and those who may have exited to go somewhere for a very short period and then touched-in again to make another journey. As previously documented in TRU, this can result in customers who have made two journeys only being charged for one, but more worryingly if the two journeys are actually a return trip back to the station they started at, will result in the customer incurring two separate maximum fares as a result of the 'Same station exit' functionality identified above. Fortunately at West Harrow there are likely to be very few customers who inadvertently have separate journeys to and from the station joined together in this way.



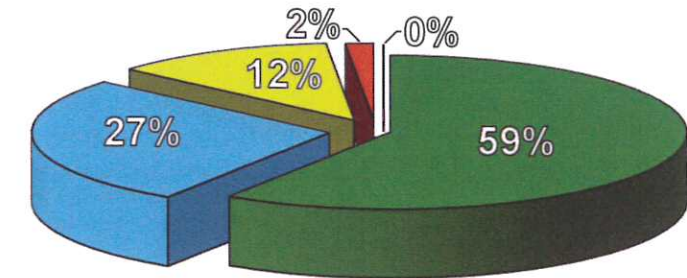
TRU READER SURVEY RESULTS

Throughout August we ran a TRU Readers' survey, our first since 2009 to find out what you think of the TRU, what you enjoy and what you think we can improve.

Over the next two pages, we have produced some of the results starting with the grades of staff who responded;

The graph on the right shows the grades of staff who completed the survey, with CSM / CSS making up more than 70% of respondents.

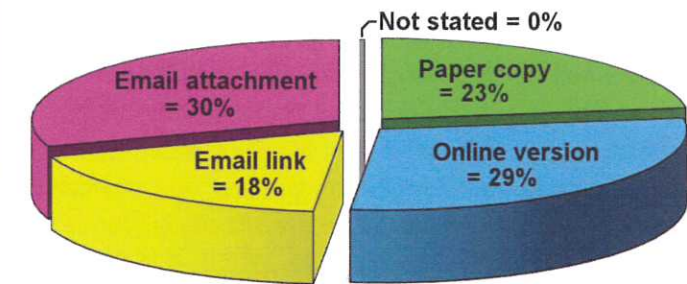
A major difference from the last survey is that only 15% of responses came from CSAs this year, compared with 56% in 2009.



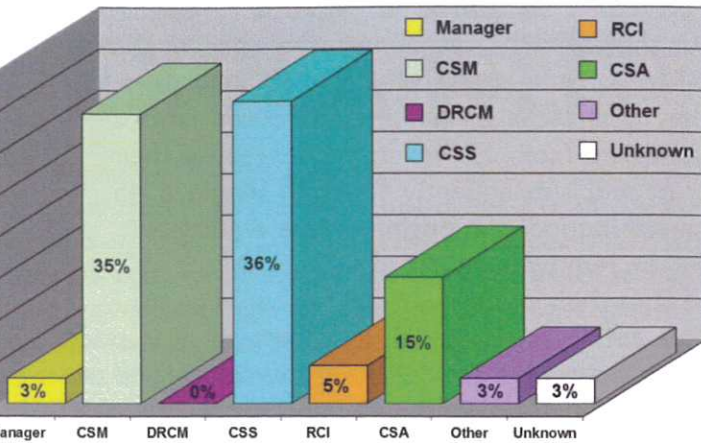
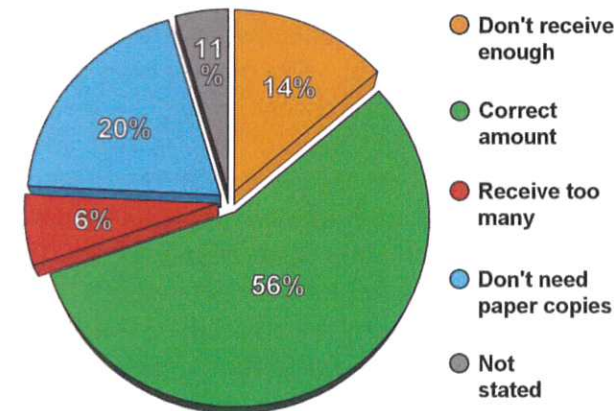
In what format do you read the TRU? ➔

This was a particularly relevant question for this survey following the issue of iPads to station staff. We also wanted to learn if we need to adjust the number of paper copies we issue to stations.

In 2009 78% of respondents read a paper copy, but 7 years later 76% now read the TRU electronically.



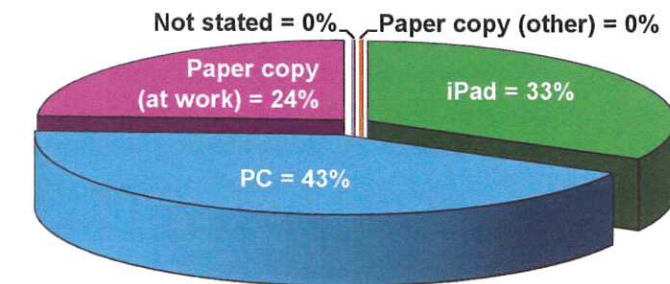
We will therefore need to do some further analysis to determine how we can ensure that paper copies go to the stations that need them most. ↓



How often do you read the TRU?

We asked you about the frequency that you read copies of the TRU and 86% stated they read all or most editions.

	2016	2009
Every edition	59%	36%
Most editions	27%	38%
Occasionally	12%	16%
Rarely	2%	8%



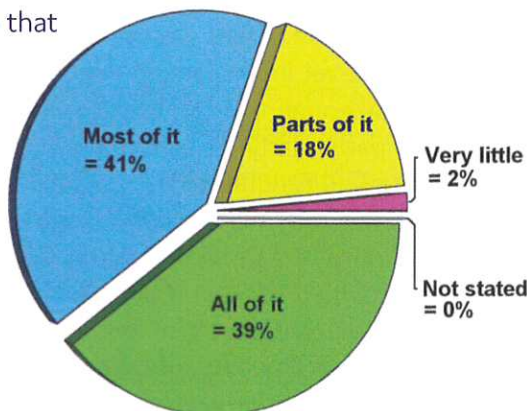
How would you prefer to read the TRU?

... and this was supported by your responses to the next question, which showed just under a quarter of you wish to receive a paper copy. When asked about the paper copies we distribute to stations, 56% of respondents seemed happy with the amounts they received, but 26% thought there were either too many or should be stopped completely.

How much of the TRU do you actually read? ↓

Receiving the TRU is one thing, but is it interesting to read and are the contents relevant to the job that you do?

80% of all respondents read all or most of it, with 18% finding parts to be of interest and only 2% finding only a little to be of use to them.



READER SURVEY RESULTS continued....

How did you rate different sections of the TRU? ➔

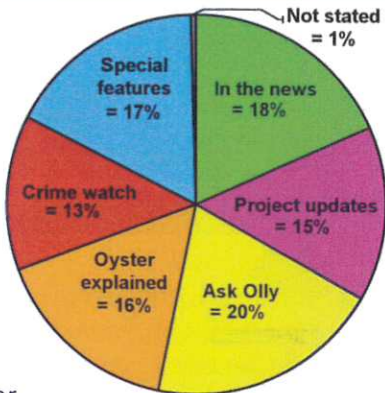
There was good balance here across all sections, but Olly Oyster will be very pleased to see that his 'Ask Olly' advice is the most popular category.

Although travel irregularities, fraudulent activity and POM attachments are items that staff frequently contact us about, Crimewatch polled the lowest rating.

Improvements and Suggestions ↓

Use of abbreviations and acronyms, comparisons with other modes, and better explanations of some of the more quirky T&R subjects are just a few of your suggestions for improving the TRU and to better cater for your needs.

We will be looking to take this feedback on board over the coming months



How did you rate aspects of the TRU? ↓

Approval ratings were quite high across all areas, with only the frequency of publication dropping below 80% of the 7-10 grading.

	2016	2009
Content	86%	82%
Format	84%	82%
Frequency	75%	n/a
Interest	86%	78%
Relevance	84%	73%
Information	86%	79%

Do you have any suggestions to improve the TRU?

All seems ok, you are doing all well and you respond well to staff queries. Maybe I will think of something for the future, for now you are doing an excellent job

Ask Olly could have additional pages

Assist with POM errors, found staff don't know bits in AFM MFM is yellow button

Does seem to be some repetition TRU / Hot Issues. Maybe too much information to digest

Keep up the good work, I like Ask Olly

Less project stuff, How do privs work?

Less writing not so crammed bullet points

Make it pocket size

More relevant information with regards to ticketing issues

no

No but only because it is so good already. Keep up the good work

no but only because it is very good already

No changes are needed though some might say why it is not produced in A5 size. Though for those with eye sight issues that may be unacceptable

No requirement for paper versions so to help the environment put it online/email

None to hand ->

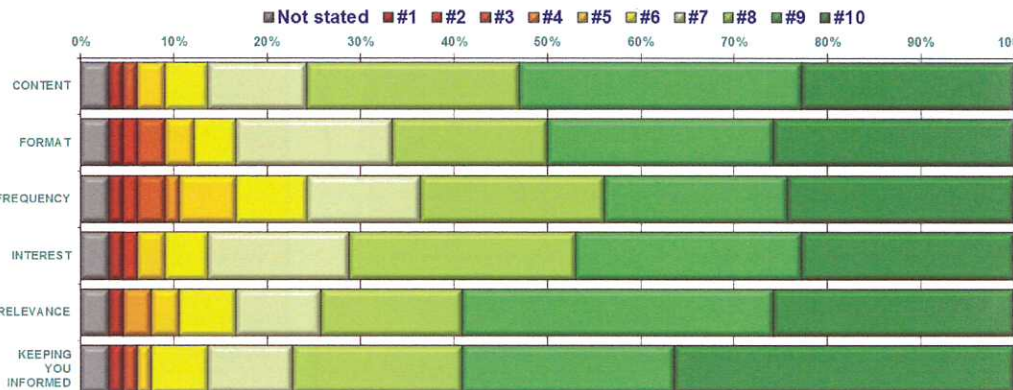
Nope

Often the hyperlinks on e version don't load. Many station staff don't have access to computers and rely on using iPad to access the information

Personally, I think the "all mixed up" quizzy questions distract from the core update messages

Priv staff travelcard who grades can have these

When using abbreviations, can you give the full name in brackets when first used. This will help new members of staff. For example, RUD must be the most widely used abbreviation but we are never told what RUD stands for



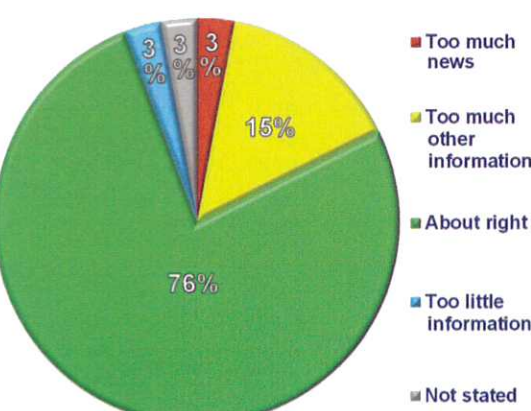
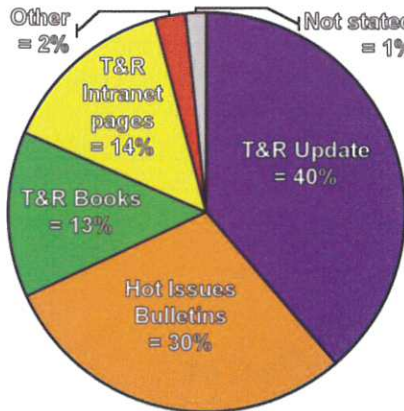
Where do you go to find your T&R information? ↓

The 2016 survey tells us that 40% of respondents rely on the TRU as their main source for T&R information, whereas back in 2009 this was only around 27%.

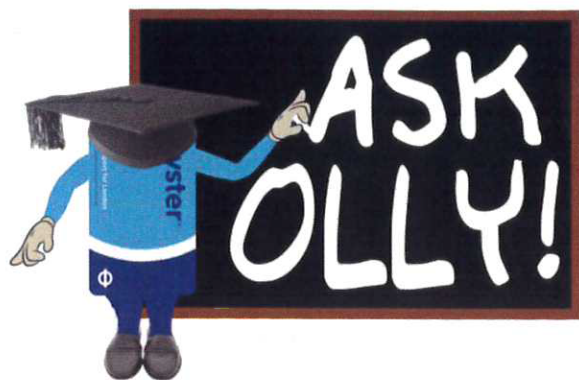
There have been a large number of changes in the T&R world over the past 4-5 years with the Fit for the Future Stations programme being the most recent.

The Hot Issues Bulletin informs staff of week by week changes, whereas the TRU provides detailed information of what is happening and why.

It is now more vital than ever that station staff keep up to date with changes, in order to provide customers with the best service and most accurate information.







askolly@tube.tfl.gov.uk



From: [REDACTED]  
Sent: 05 October 2016 22:18  
To: Ask Olly  
Subject: New £5 notes

Hi Olly,

I have noticed that the new £5 notes cause a lot of note jams, because they seem to crease up inside the NHU.

I think it's because of the size of the new notes. When a fault is raised with Cubic the Technicians cannot find an actual fault with the NHU.

I just wanted to bring this to your attention.

Best Regards

[REDACTED]

Hi [REDACTED]

Thank you for your email and query.

An extension for 2 non-adjacent zones (Zone 1 and Zone 5) as you describe, would cost the customer £4.10 at the Standard PAYG rate or £3.10 if the journey is made at the Reduced PAYG rate charged at off-peak times. If the customer is using a magnetic NR season ticket the price of £5.90 is the same as the Z1-5 Single fare.

This information is contained within a table of extension prices on Page 16 of last *January's Fares Revision Circular*.

This can be accessed and printed from the T&R pages on the intranet, or via the link below.

[http://luintranet.tfl/static/documents/coo/2016-01\\_Fares\\_Revision\\_Circular\\_v2.pdf](http://luintranet.tfl/static/documents/coo/2016-01_Fares_Revision_Circular_v2.pdf)

Regards

Olly Oyster

Hi [REDACTED]

Thank you for your email and for highlighting this problem.

As the number of the new polymer £5 notes in circulation has increased, we have had quite a number of similar reports from other stations with MFMs fitted with the standard Bank Note Acceptor (BNA) units, reporting notes jamming in their devices. A common feature of these reports has been that the notes were badly creased when retrieved.

At present the cause of this problem is being investigated by Cubic and we are currently monitoring the number of these faults to determine how big an issue this is. During the extensive testing that was completed prior to the rollout of polymer acceptance across all MFMs, we did not see issues with notes being jammed, but it is likely that the test notes used by Cubic were kept in a better condition than some now being used by customers.

We will keep everyone updated with investigations and what is planned to resolve these issues via future editions of the TRU and the weekly Hot Issues Bulletin.

Regards

Olly Oyster

From: [REDACTED]  
Sent: 19 September 2016 18:39  
To: Ask Olly  
Subject: PAYG question

Hi Olly,

If a customer has a period ticket that covers them for Zones 2-4 and the customer wants to travel from Hatton Cross (Zone 5) to King's Cross (Zone 1) how much PAYG would they need to top-up with for travelling both peak & off-peak?

Thanks in advance

[REDACTED]

From: [REDACTED]  
Date: 2 July 2016 at 20:50:40 BST  
To: Ask Olly  
Subject: West Harrow interchange

Good Afternoon,

Since the introduction of the WAG at West Harrow I have noticed a lot of people are tapping in on the gateline and then exiting, looking for the Westbound platform, or they have boarded a train at Rayners Lane meaning to go on the Piccadilly line. In the past, a lot of people would avoid this by going through the manual gate but when confronted by the closed gates they are just exiting. The main problem with this lies in the fact that they do not seek help until after going through the automated gate. The other downside to this is that their journey is now complete and we are unable to reopen completed journeys on the POMs so the customer is either given authority to travel or has to pay twice.

I was wondering if we could arrange a kind of Out of Station interchange between Platform 1 and 2 like they have at other stations where interchanges are outside of the gateline?

Please can you also clarify what customers will be charged if they touch back in to go back on the correct side of the station?

Regards

[REDACTED]

Hi [REDACTED]

Thanks for your further email and highlighting this issue.

We were not aware of the PAYG balance remaining on the POD, as you describe, but have seen many examples of the "Ticket soon to expire message" staying on E2 gates and WAGs long after the customer concerned has gone. This has recently been raised with Cubic who will be including a fix for this issue in the next release of E2/WAG software.

It is possible that the root cause of both problems may be down to the display not clearing at the conclusion of a transaction. Once the paddles close, the display should go back to the Enter or Exit screen. This is now being investigated by Cubic.

Regards

Olly Oyster

askolly@tube.tfl.gov.uk

Hi [REDACTED]

Following discussions with the TfL Rail Fares team, some analysis has been completed to identify roughly how many customers are likely to be affected by this issue. It looks as if this impacts on around 20-40 customers per day.

As a result we are going to progress setting the station up as an Out of Station interchange, but we will now not be able to implement this change until the January Fares Revision, as we had missed the cut off for the fares revision in September.

In the short-term, please can you make staff working at the station aware, that if a customer touches in on the wrong side of the station, then touches out again, they should be able to enter on the correct side of the station without being overcharged. A same station exit allows re-entry within 45 minutes and wipes of the previous charge.

We have used this topic as the basis of the Oyster Explained feature on Pages 8&9 of this edition of TRU.

Regards

Olly Oyster

From: [REDACTED]  
Sent: 12 October 2016 17:16  
To: Ask Olly  
Subject: E2 gate and WAG displays

Dear Olly,

I have noticed that the second line of the text display on E2 gates and WAGs sometimes gets stuck and confuses customers.

Recently at Parsons Green, the WAG continued to show a balance of £8.80 even though it had been closed for some minutes. When I then used my Staff Oyster card to open it and the message remained making it look as if I had a balance of £8.80!

Sometimes the reverse happens to PAYG customers who ask me what it means that their ticket soon expires. Is there any way this problem can be corrected?

Yours

[REDACTED]



# PROJECT UPDATES

## POM UPGRADES

As we went to print with TRU94, we had to update our report on the wave of POM upgrades to reflect the discovery of a couple of separate issues affecting the MFM.

The first of these affected the 97 MFMs with Bank Note Recycler (BNR) units and had resulted in a number of devices not dispensing notes until reset. This was successfully addressed in a software update deployed to each of these MFMs between **Thursday 01 and Friday 09 September 2016**.

Unfortunately it was not possible to include a second "fix" within this initial release, to address an issue which had prevented customers holding certain recently issued DesFire Oyster cards from obtaining refunds. As a result, a further software release was required to resolve this problem.

This upgrade was initially deployed to two devices at **Paddington** (one with a BNR, the other with a BNA) on the night of **Monday 12 September**.



After on site testing to confirm that cards in the affected range could now be refunded on the MFM, the rollout of the new software commenced on the night of **Tuesday 20 September**, initially with a further 30 devices (mainly at Gateway locations), before continuing at a rate of 50 MFMs per night.

The upgrade was completed on schedule, with the last 50 MFMs upgraded on the night of **Tuesday 27 September**.

Further changes on the MFM are also on the way, with the start of the Vanguard of the new Chip & PIN unit or PED (PIN Entry Device).

## COIN VALIDATOR UPGRADE

As previously reported in TRU88 we have been trialling a new design of coin validator in 4 MFMs at **Euston, Oxford Circus, Liverpool Street and Heathrow T123**.

Performance of these Vanguard devices had been good and during testing they showed much better rates of rejecting some of the common foreign coins that are regularly fed into POMs.

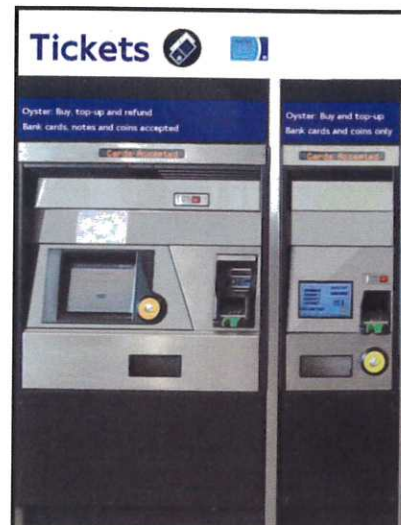
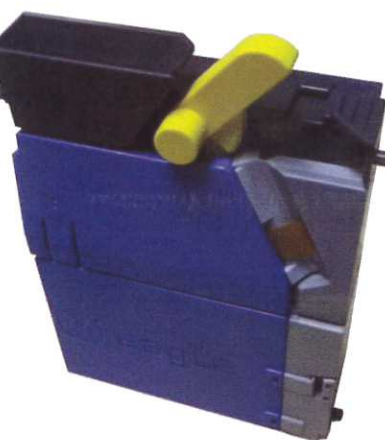
Our original plan was to purchase an initial batch of the new validators and use these to replace a number of the current MFM validators and in turn use the units removed from the MFMs to support the current validators on AFMs which are becoming increasingly difficult to maintain.

The AFM requires a modification to a bracket to be able to fit the new validator, so it had been proposed that we would fit the bracket as part of the AFM PED upgrade, then allowing us to fit these new Eagle validators at a later date.

This plan has recently changed and it has now been decided to purchase enough of the new validators to upgrade all AFMs and MFMs. This change of strategy means that we will be replacing the coin validators on all AFMs and MFMs as part of the forthcoming PED upgrade (see **Pages 15 & 16** for more details) and will avoid the need for multiple visits to the same machines.

The new validators are being supplied already enabled to accept both the current and the new version of the £1 coin, which is due to be introduced by the Royal Mint in **March 2017**.

This will hopefully mean that a majority of POMs will not require a further visit to prepare them for the new coinage. This is subject to final confirmation that the coin hoppers within the MFM are able to accommodate and dispense both versions of the pound coin. Initial testing with pre-production sample coins has shown this to be the case, but this will need to be checked with production versions when they are available.



# PROJECT UPDATES

## STATION COMPUTER UPGRADE VANGUARD

Having nearly completed the deployment of a new version of Station Computer (the SC3) to ungated NR and DLR stations, Cubic are now planning to install the first of these units at 4 LU stations.

For the Vanguard, a cross section of stations have been selected to reflect small, medium and large stations with varying numbers of devices. A JLE site has also been selected to include a station with an interface to the JLE (SIMs) station management system within the Vanguard.

The Vanguard is currently planned to start at the four stations shown on the right at the end of October/beginning of November.

CANARY WHARF

EUSTON

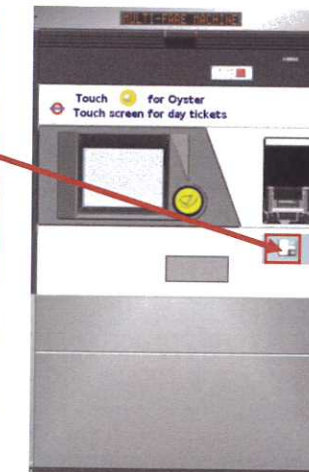
OXFORD CIRCUS

TOOTING BROADWAY

## CHIP & PIN UPGRADE

After several delays we will shortly be ready to start the Vanguard of the new PIN Entry device (PED) which will replace the existing Chip & PIN units on all of our POMs.

The new PED unit is noticeably different to the existing units, with the keypad and screen installed separately to the card reader.



The card reader is now flush to the front of the device, hopefully making it a lot more difficult to attach a skimming device and conspicuous if anyone does try to.

The new units also no longer have the capability of reading magnetic swipe bankcards.

As the units are different to what our customers have become used to, we have requested the production of a whiteboard poster to highlight the changes we are making and hopefully reassure anyone that might be concerned that an unusual device has been attached to the POM.

Following completion of the final round of testing, Cubic will be upgrading the first MFM, **MFM30 at Embankment** on the night of **Thursday 20 October**. Customers will then be able to use the new unit from start of traffic on Friday 21 October.

In addition to the installation of the new PED, the upgrade will also see some other changes being implemented:

- New device software written in a common code, so that all devices can operate with software that is basically identical. This should hopefully make the process of implementing future changes easier across all devices.
- Switch to a new method of processing bankcard transactions, rather than the conventional route via The Cubic Bank Card Processor (BCP)
- Upgrade of the Coin Validator with the new Eagle unit (as outlined in our article on Page 14).

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

**T&R**  
Trivia

(a) **KEEPS BRAZIL**

(b) **ROOK RAMP**

(c) **RUBY KNEW RAP**

(d) **CAVERN PARK TOURS**

(e) **UP TO PRANK**

Is there a connection?  
– You decide.  
Answers on Page 19.



## AFM UPGRADES

Although much attention has recently focussed on the various upgrades on the MFM to facilitate polymer note acceptance and to stop further refund fraud, some changes are also planned for the AFM.

In previous editions of TRU, we have covered a planned Service upgrade on the AFM. This represents a new way of implementing fixes to previous defects, which are not dependent on an upgrade project. The planned AFM service upgrade has been delayed a couple of times mainly due to pressure on the Cubic testing facilities and resources and conflicting priorities with other projects.

The AFM service release contains two significant changes; the implementation of the ability to change the maximum bankcard transaction limit (as already implemented on the MFM) and a fix to ease the process of downloading larger sized update files for screen and fares revision changes.

The first of these will have no immediate impact as the new table containing the variable limit will initially be set at the current figure of £655. In addition, the QBM will not receive this upgrade until the PED upgrade takes place on that device.

The second of these items is more pressing, since as we outline in the article on **Page 2**, at a number of recent fares revisions we have encountered issues with AFMs not taking the revised tables downloaded to them.

Typically this has required Cubic to either restart the devices involved or send an engineer to site. The origin of these issues is that the AFM does not currently cope very well with downloads of tables of over a certain size. It is therefore important that we get this aspect implemented in advance of the next fares revision on 02 January and the period during December when the new tables are downloaded in readiness for the actual fares revision.

It is currently planned to Vanguard the new AFM software towards the end of October / beginning of November, on the following 32 devices:

Station	AFM
ST JAMES PARK (Main)	28
ST JAMES PARK (Palmer Street)	29
EMBANKMENT *	28 29
BAYSWATER	28 29
ASHFIELD HOUSE * (Room A)	28
ASHFIELD HOUSE * (Room B)	29
GLOUCESTER ROAD	10 11 28
COVENT GARDEN	27 28 29

Station	AFM
HOLBORN	27 28 29
LEICESTER SQUARE	28 29
KNIGHTSBRIDGE	11 27 28
RUSSELL SQUARE	26 27 28
SLOANE SQUARE	26 27 28

\* Also earmarked for AFM PED Vanguard

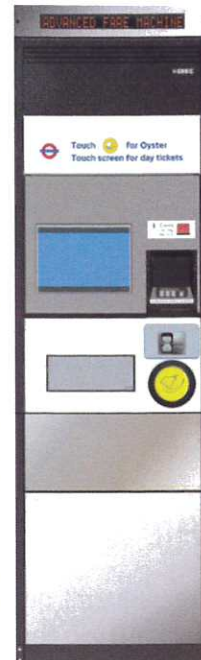


After a period of about two weeks we will then plan to deploy the new software to the other 580 AFMs over a period of two weeks. This will mean that all devices will have received this upgrade well in advance of the fares revision table loading process starting.

Progress on the testing for the PED upgrade for the AFM means that it is now likely that some of these devices which are also included within the AFM PED Vanguard will be upgraded with their new PED before we are ready to deploy the AFM software upgrade.

Since the PED software release includes all of the fixes built into the forthcoming service release, these devices will not need to receive a further upgrade, if they have already been fitted with the new PED.

We will be providing more information on the PED upgrade and in particular reminders of what to look out for when checking the exterior of POMs during your station checks, as we get nearer to the start of the rollout of the new units.



## DEVICE MONITORING APP

Since our last feature on the Device Monitoring App in TRU92, some changes have been made to the way that messages are displayed, to make the critical information much clearer to the user.

The messages displayed when an individual device is selected (as illustrated in the screen shot to the right) have been simplified by the removal of some of the less important entries which had previously appeared.

The structure of the message now appears in the following form:

<Incident Number> | <Device Type> | <Device No> | <Station Name> | <Ticket Hall / Gateline Name> | <Fault Category> | <Error Code>

This hopefully makes the device number, location and the actual error codes a lot easier to identify.

The facility to also monitor the status and report faults on Gates has also now been extended to include the gatelines at **Kings Cross, Stratford, Cannon Street, Embankment, Sloane Square and Waterloo (Colonnade)** in conjunction with the Vanguard of the latest versions of LCP software, as outlined in our update on **Page 18**.

Further stations will also be able to monitor and report gate faults shortly, as their gatelines are updated with the new LCP3.

At sites where gates already have the LCP fitted either at the time they were installed, or as part of the previous E2 gate upgrades, they will be added to the Device Monitoring app, as these gates are upgraded to the next version of E2 software. E1 and Pneumatic gate stations will be added when the hardware upgrade to install the LCP3 on these gates takes place.



A further change to make life easier for users of the app is scheduled to be implemented on **Saturday 29 October**, when a single sign-on facility will be implemented, as used on some of the other apps.

Following this change the app will remain signed on for a period of 30 days, avoiding the need to sign-on each time it is used. Around this date, app users will receive a message from IM to accept this update.

Before this can be loaded, you will need to check that you are using the current version of the app, by tapping on the icon to check the version number. If **Version 1.2** is **not** displayed, you will need to update your device to this version.

If you have any issues with access to the Device Monitoring app or in using it, please contact;

IM Service Desk - Auto 1555 or 0343 222 0033

or via Email to - [imservicedesk@tfl.gov.uk](mailto:imservicedesk@tfl.gov.uk)



# MYTH TRUTH

The Device Monitoring app on the iPad replaces the need for a Station Control Unit (SCU).

Although the new app provides status information and the ability to report faults to Cubic, it doesn't provide real time information.

There is no direct link between the iPad and the device being monitored, so the app poles for an update about every 15 minutes, so it can sometimes be quite a while before a fault is displayed on the iPad.

Although the iPad can log a job with Cubic, there is no communication route back to the actual device.

The SCU which is directly linked to the Station Computer (SC) has a live feed from each device connected to the SC and through this has the ability to send a command immediately to a device to open / close or change its mode of operation.





# PROJECT UPDATES

## LCP3

Plans to extend the vanguard of the latest version of E2 gate software from Cannon Street to Embankment and Sloane Square at the end of August had to be aborted when an issue occurred during the updating of the first gates at Embankment.

This was subsequently identified as being caused by a wrongly named file, but as we were then very close to the implementation of the September Fares Revision, no further attempt to upgrade the gates at the two stations could be made until mid-September.

All gates at Embankment were subsequently upgraded on the night of Monday 12 September and the gates at Sloane Square on the night of Tuesday 13 September. The Vanguard at the three stations will now continue, allowing us to monitor the performance of these 28 gates whilst Cubic complete their formal factory testing on a version of the E2 software that can be deployed to all of the E2 gates fitted with the LCP3.

We have asked Cubic to include within this next software release a fix to the problem previously reported in TRU, where the customers display on the POD continues to show a "Ticket soon to expire" message, long after the customer concerned has entered or left the station. This has caused confusion to other customers at a number of stations where it has been observed.

Providing no issues are identified, this should lead to the new software being loaded initially to gates at Stratford (North) and Kings Cross (Northern) and then to all other E2 gates and WAGs that currently have the LCP3 fitted.

This now includes a number of WAGs and new E2 gates which have recently been installed as part of the WAG Phase IV programme (see article on Page 19).

At stations where all gates have been upgraded with the LCP3, we will be switching on the connection to allow these devices to report their status to the Device Monitoring app on the iPad, as we update each site to the latest gate software.

Initially this will cover the 3 E2 Vanguard stations above, plus the E1 Vanguard stations below, and each is upgraded. At these sites staff will be able to see gate status and report hate faults in the same way as they can already do for their POMs.

At other stations, users will continue to only see POMs until their gates are equipped with the new LVP or have their hate software upgraded. Details will be included in the notification email sent to each station/area in advance of these upgrades taking place.

Progress has also been made by moving the E1 Vanguard sites onto the latest version of E1 gate software. Again progress had been hampered by the change freeze prior to the recent Fares Revision. E1 gate software was updated on Vanguard gates at Tufnell Park and London Bridge on Monday 26 September and on both the E1 gatelines at Stratford on Thursday 29 September.

Waterloo (Colonnade) was also successfully brought into the Vanguard when the E1 gates there were fitted with the LCP3 and new Service Panel over the nights of Monday 02 and Tuesday 03 October. A review of the performance of the E1 gates fitted with the LCP3 is due to take place towards the end of October and will hopefully allow the long awaited start of the rollout of the LCP to other sites with E1 gates.

Progress towards implementing the LCP3 on the older Pneumatic gates has stalled following the upgrade of the first two gates at Green Park, as these devices have had a number of reliability issues.

Cubic are currently investigating whether these are hardware or software related, but until we have a clearer understanding and an updated version of software, we will not be updating anymore Pneumatic Gates.

UPDATE!

CANNON STREET

EMBANKMENT

SLOANE SQUARE



LONDON BRIDGE

TUFNELL PARK

STRATFORD

WATERLOO

GREEN PARK

## E1 GATE UPGRADE NEARS COMPLETION

The long running programme to replace the motors and paddle shafts on all of our E1 gates which started in June 2014 is now close to completion.

The final gates to receive new motors and paddle shafts are due to be upgraded during week commencing Sunday 16 October. However, there are a number of stations that Cubic need to revisit, as about eighteen months ago we suspended the replacement of motors due to some concerns over reliability.

During the period that this issue was being investigated, the programme continued with Cubic only replacing the paddle shafts on around 325 gates. We will need to go back and revisit each of these gates to now replace the motors. This is likely to take place once Cubic have completed the updating of a number of E1 gates at stations operated by LOROL.

That isn't all in terms of upgrades to the E1 gates, as these devices are scheduled to receive a new service panel, which will be fitted in conjunction with the LCP3 upgrade programme (as outlined on Page 18).

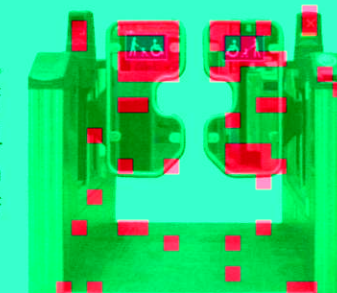
This will see the deployment of the new style of service panel (illustrated) which utilised the gate's POD (Passenger Orientated Display) to show error codes and descriptions to staff interrogating the gate.

## WAG INSTALLATION

UPDATE!

We are now just over half way through the programme to install a further batch of Wide Aisle Gates (WAGs). This fourth phase of installations is scheduled to install WAGs at a total of 74 locations, mainly stations which did not previously have a WAG. To date, work at 43 sites has been completed comprising a mixture of straight swaps of manual gates for WAGs and more complex sites where existing E1 gates have been removed to allow the installation of new E2 gates and a WAG.

The programme is currently scheduled to be completed by the end of April 2017 and the latter stages will see the removal of the pneumatic gatelines from 10 further stations. This will remove dependence on the air main that these gates use to open and close the paddles and will further reduce the number of this type of gate on the network.



## FAILED CARD PORTAL

On Page 4 of TRU 94, we reported that the delayed start of the Deployment of the new Failed Card Portal was due for release on Monday 19 September. This information was incorrect and at present the deployment to the initial batch of users is still on hold, whilst discussions continue around the most efficient manner to activate and reactivate user's accounts.

This does at least give more staff the opportunity of completing the "My role in privacy and data protection" module, so that they can be included within the next batch of staff to be granted access after the launch.

## ANSWERS TO T&R TRIVIA

Pt. 1

02 January 2005

## WHERE'S WOOLLY?

Pt. 2

ST JOHNS WOOD

Pt. 3

LAL MXIDE PU

All feature the word "Park"

(a)



(b)



(c)



(d)



(e)



How did you do?



## ...AND FINALLY!

### CASH HANDLING – INTO THE FINAL STRAIGHT!



As this edition of TRU goes to print, we are nearing the end of the programme for Scancoin to install Cash Handling Devices (CHDs) at all of our stations.

The CHD rollout began in early December 2015, following an initial Vanguard at the same four stations (**Acton Town, Euston, Gloucester Road** and **Hendon Central**) that were used for the original trial at the beginning of 2014. Nearly 3 years after we started this journey, we are rapidly approaching the finishing line.



As at **Monday 10 October**, 279 devices had been installed with 5 further devices due to be installed before the rollout is due to finish on **Thursday 20 October**. Of these final five installations, **London Bridge (Borough High St)** is a rearranged visit, due to the original installation date having to be postponed. This was due to the safe contractors being able to relocate the safe to accommodate the new device on the required date.

The other four stations listed on the right, are all sites where space within the POM Room is at a premium and as a result, they will be equipped with a 'slimline' note acceptor unit in place of the standard note recycler that we have at every other station.

HANGER LANE
KILBURN
CHORLEYWOOD
WEST RUISLIP

These 'slimline' devices are equipped with two note acceptor units, very similar to the equipment trialled at Hendon Central and Acton Town during the original CHD trials. These units use expandable pouches rather than the collection sacks used in all other CHDs, with the pouch being housed within a removable plastic cassette. On collection day this cassette is removed by the custodian, the pouch removed from inside it and an empty pouch inserted before each cassette is returned to the unit.

Since these units do not have any note recycling facility, it will not be possible for staff at the above stations to dispense notes from the CHD, as any notes deposited will go straight into the collection pouch. As a result, any refunds processed will need to be made in coin. However, the overall operation is somewhat simpler, as staff using these devices will not need to worry about transferring notes from the recyclers to the collection sack ready for collection, as once deposited, all notes are immediately available for G4S to collect.

G4S collection staff are being briefed on the arrangements for these sites, but fortunately all four sites are served from the same depot and custodians should already be familiar with this type of unit which is already in use elsewhere by other customers of theirs.

There are a couple of other sites where CHDs are yet to be installed due to ongoing project works; **Charing Cross (Strand)**, **Bromley by Bow** and the new **Victoria (North)** ticket hall will all have their CHDs installed once their new POM suites are completed.

At present the 11 RSLU stations (Regulated Stations on London Underground) on the District and Bakerloo lines are not in scope to receive CHDs and will continue with their current arrangements.

### NEXT ISSUE

TRU 96 is scheduled for publication in mid-November, but will be subject to the confirmation of several aspects of the January Fares Revision, as outlined in our Fares Revision review on **Page 2** of this edition. Apart from including a detailed overview of main changes that will be included in the **02 January 2107** Fares Revision and some further information on the forthcoming upgrades that will deliver the Fast Universal Load facility for customers, **TRU 96** will also include;

- Update on POM PED and software Vanguards
- Updates on other T&R projects
- A round up of other T&R news stories and issues
- ... Plus all our other regular features.



#### What's in a number?

- The **Bus** which runs from Bluewater to Woolwich
- The number of the U-boat in '**Das Boot**'
- The year (AD) **Emperor Domitian** was assassinated, ending the Flavian Dynasty.
- The name of the **tube stock** that operates on the Jubilee line.