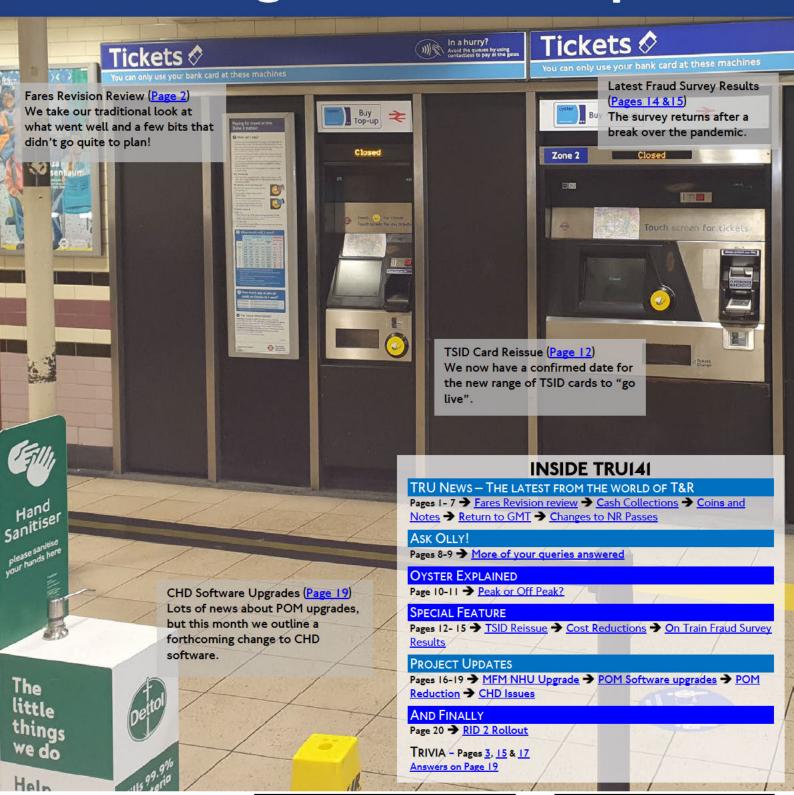
### **London Underground**



### Issue 141 - October 2022

# Ticketing & Revenue Update





# SEPTEMBER FARES REVISION

#### REVIEW - WHAT WENT WELL AND WHAT DIDN'T GO TO PLAN!

The last fares revision took place on Sunday 04 September and from an LU device prospective, was another revision that went very smoothly, with no devices failing to upload their new tables. This followed the pattern of other recent revisions and is a far cry for revisions a number of years ago, when there were always a number of gates and issuing devices that failed to load the new tables or switch over to the new fares on the revision day.



From an LU point of view, there were a couple of significant changes implemented as part of this fares revision, as we had outlined in <u>TRU140</u>. These included the removal of the reduced PAYG charges for Off Peak journeys Zone I-6 journeys to and from Heathrow Airport and the increase in the Oyster card fee from £5.00 to £7.00.

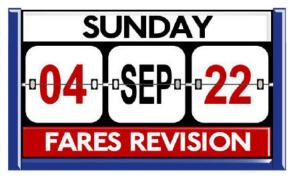


From a "What didn't go so well prospective" at LU stations the main issues were around the distribution of the new fares posters. Fortunately, we only had one station that managed to lose their posters between the date they were delivered by Cubic and the day of the fares change. However, on the day following the fares change we started to get a number of calls from stations that had received the wrong version of fares poster.

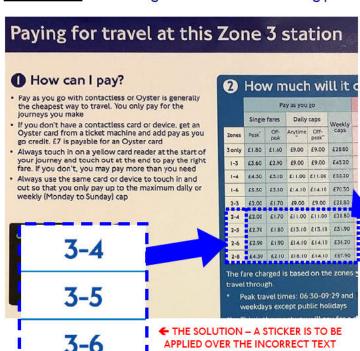


In all of the cases this affected the narrow 2 column format posters at stations that were on a zonal border (e.g. Zone 2/3 or Zone 3/4). Strangely this issue did not affect all of the stations sitting on zonal boundaries, with some stations receiving the correct version of poster and others for example receiving a Zone 2 poster instead of Zone 2/3.

To address this issue, Cubic were required to reprint the posters for the stations affected.



Following on from this, sharp eyed colleagues at a couple of Zone 3 stations then identified that not all of the fares displayed on their new poster were correct. Initially it was thought that this had been caused by one of the fares being repeated and the entries below being one line out. However, when investigated by Cubic, it was identified that this particular error was caused by the wrong zonal combination being printed on the left of the table concerned.



		Pay as you go					
	Singl	e fares	Daily	Weekly			
Zones	Peak	Off Peak	Anytime	Off Peak	caps		
3 only	£1.80	£1.60	£9.00	£9.00	£28.80		
1-3	£3.60	£2.90	£9.00	£9.00	£45.20		
1-4	£4.30	£3.10	£11.00	£11.00	£55.20		
1-6	£5.50	£3.50	£14.10	£14.10	£70.30		
2-3	£2.00	£1.70	£9.00	£9.00	£28.80		
2-4	£2.00	£1.70	£11.00	£11.00	£28.80		
2-5	£2.70	£1.80	£13.10	£13.10	£31.90		
2-6	£2.90	£1.90	£14.10	£14.10	£38.20		
2-8	£4.30	£2.10	£18.10	£14.10	£69.70		

↑ THE ISSUE – ZONE 2 JOURNEYS HIGHLIGHTED YELLOW ARE INCORRECT ALTHOUGH THE FARES ARE CORRECT FROM ZONE 3

To resolve this issue without the need to completely reprint all of the Zone 3 posters, Cubic have prepared a sticker with the correct zones and charges and will supply this to the stations affected. The sticker will need to be to be applied over the top of the incorrect information on the original poster.

Please do not throw the old poster away, as we are not planning to distribute additional posters and any replacement required would be charged to the relevant Area's cost centre.

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# SEPTEMBER FARES REVISION

#### SEPTEMBER FARES REVISION REVIEW (Continued...)

In other areas of the business there were some other issues following the fares revision.

The network of agents operating Oyster Ticket Stops had a large number of devices that failed to poll on the night of the revision and resulted in these devices not switching correctly to new fare tables. This arose due to an on-going issue with xPert devices used by these agents intermittently not polling at end of day.

As a result we had some reports from stations that customers that had obtained new Oyster cards after the fares revision, had still been charged the old £5.00 Oyster card fee. This was obviously an error in the customers favour so not likely to lead to any complaints.

It was estimated that this initially affected around 100 different locations, with this number gradually being reduced by manual polling of devices that had not polled.

However, on the afternoon of Monday 05 September, once the number of affected machines had reduced to around 38, a further issue was reported. It was discovered that every Oyster Card sale made via the xPert device that included the addition of a product, automatically resulted in the charging of the old £5.00 fee.

Cubic identified an error on their part, which testing had not picked up and that needed to be rectified. A revised set of tables was then developed, and these were progressively downloaded to all of the xPert devices starting on the night of Wednesday 07 September.



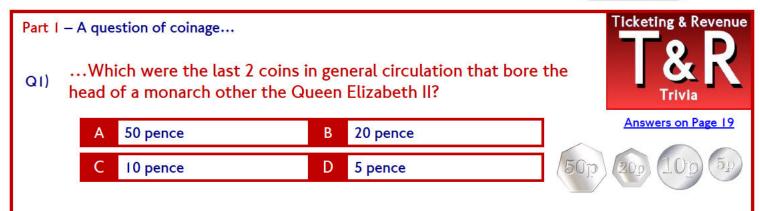
Due to the previously mentioned issues with the polling window, it took until the weekend to get this to every xPert device.

A second issue was highlighted on the day of the revision when around 112 files affecting contactless users travelling to four Southern operated stations on the line between Redhill and Gatwick Airport (Horley, Salfords, Earlswood and Merstham) that were not successfully processed within the Revenue Apportionment system. These files contained journeys where fares revenue has to be split between TfL and the Train Operating Companies.

As part of the September Fares Revision changes, GTR had requested the removal of the cap for journeys covering these stations and it was subsequently discovered that relevant reference data was missing, and this prevented the revenue for these journeys being correctly apportioned.

By Thursday 08 September, a Master Data fix had been successfully tested by TfL and Cubic technical teams and was deployed to allow files to be successfully processed. During assurance checks it was discovered that fares data for Contactless journeys between London Victoria and Gatwick / Redhill were inaccurate and a further data fix was needed.







#### TIME FOR CHANGE - OR NOT?

The completion of the MFM Note Handler Unit (NHU) replacement programme (as outlined on Page 16) has seen the number of devices fitted with Bank Note Recycler (BNR) units expand from 100 MFMs to 167 devices.

One of the advantages of the expansion of the number of devices fitted with BNR units, is that these devices can dispense notes as change or when making an Oyster card refund to a customer.

This then reduces the amount of coin the device is dispensing and the frequency at which it needs to be re-floated with coin.

This should mean that some stations that have previously had to have regular deliveries of change to keep their devices floated, may no longer need to have change delivered or may not require the same amount or denominations, to keep their POMs in "change giving" mode.

If you haven't already done so, please review your requirements for change deliveries to ensure that you not ordering money that is not needed.

Please remember that it costs LU to buy in and have changed delivered by G4S and similarly, there is an additional cost for any money that is not needed and is subsequently banked.

If you do need to cancel or amend an existing change order, this can be done by a CSM via the change delivery order facility on Mi-apps.











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#### **NOTES AND COINS**

News last month was largely dominated by the sad news of the sudden death of Queen Elizabeth II, only days after her last public appearance to meet the new (now former) Prime Minister.

On the face of it, this historic event and the succession of Charles, the former Prince of Wales to the throne, doesn't have a lot to do with Ticketing and Revenue, but having been on the throne for such a long period of time, Queen Elizabeth's image appears on the face of every coin and bank not in circulation.

Now King Charles III has become King, planning is underway, to update coinage and ensure notes issued in the future are issued with King Charles on them rather than Queen Elizabeth. Changes to the "head" side of the current range of coins should not present any major issues, as there are already many different versions of 50 pence and £2 coins in circulation commemorating various events.

Our validation equipment can cope with these differing coins and as long as there is no change to the composition, size, weight or shape of coins, they should be able to deal with any new Charles III coins without any modification or upgrade being required.

Prior to decimalisation in February 1971, the coins in circulation included coins bearing the face of previous monarchs, including back as far as Queen Victoria. There is therefore the likelihood that even when new coins bearing the profile of King Charles appear (as illustrated to the right), coins bearing the image of Queen Elizabeth are likely to be around for many years. Particularly as coins are durable and tend to last many years.

In the case of notes, when a new design of note is eventually introduced, we will have to go through an upgrade programme to load new note sets containing images of the new notes to devices. This will take place in a similar way to the deployment of the new note sets removing acceptance of the paper version of the £20 note (as outlined on Page 16).







#### MONEY LAUNDERING

Back in <u>TRU134</u>, we reported on a fairly catastrophic leak that had occurred at <u>Maida Vale</u> about this time last year, when water from restaurant above the station flooded the POM Room and caused extensive damage to our equipment.

Although Cubic were quickly able to return the POMs to service once the devices had been "dried out" and components had been replaced. However, the Cash Handling Device (CHD) at the station fared less well, due to the amount of water that had entered the coin and note units of the device. Subsequently, we were forced to replace the whole of the CHD to allow the station to return to accepting cash, initially borrowing a device from Knightsbridge (West) which wasn't being used at that time.

Removal of the damaged units from site established that both parts of the CHD were probably beyond economic repair, given the amount of water that had got inside, but Pay Complete then encountered a lot of difficulty in being able to access the note unit, as the electronic lock on the door had been severely damaged. Several months later, they were eventually able to get into the safe where the note sack and note recyclers could be accessed, but unfortunately the CHD note sack contained as much contaminated water as bank notes.

Since removal, attempts have been made to wash and disinfect the polymer notes taken out of the device, but paper notes that had been deposited had not survived as well and were fused into one discoloured mass. We are currently arranging for all of this contaminated money to be returned to the Bank of England, as they do not want it to remain in circulation.

MAIDA VALE



#### RDG LAUNCH NEW RAIL STAFF LEISURE CARDS AND RESIDENTIAL PASSES

The Rail Delivery Group (RDG) have recently released two updated versions of cards that they issue to National rail staff. The latest version of the Rail Staff Leisure Card (illustrated) is issued to NR employees that are not entitled to Privilege Travel facilities and allows discounted leisure journeys on NR.

They can also have a Privilege NR Only discount set on their Oyster card at London Overground or MTR operated Elizabeth line stations, which then allows them to make PAYG journeys on NR services at privilege rate.



Holders are not entitled to any discount for LU journeys and the discount entitlement cannot be applied at LU operated stations.

The second change will see Residential Passes issued to NR employees to allow free travel on designated journeys, is now being issued on ITSO format smartcards, which means that in future they should be accepted by gates at stations on the routes on which they are valid.

As illustrated, the front of the card shows both the holders photograph and details of the journeys for which the pass is valid.

Validity may include a number of sections of LU where they can be used.



#### CLOCKS FELL BACK FOR... ER... FALL

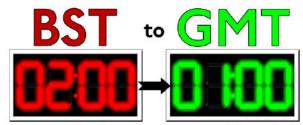


At 02.00 hrs on Sunday 30 October, British Summer Time (BST) officially came to a close and clocks in the UK reverted back to Greenwich Mean Time (GMT).



As all our ticketing related systems rely heavily on accurate time keeping devices, there is always the potential for things to go wrong if devices do not switch over as they are supposed to.

Having pointed that out, this is actually something we have become very good at over the years and there are generally no reports of any clock related disasters from start of traffic. However, staff are strongly encouraged to check their personal devices such as phones, iPads and Revenue Inspection Devices (RIDs) and report any that have failed to revert to GMT.



From this point onwards, we will start to miss the blue skies of summer, the days start to get colder and the trees start to shed their leaves... but for this one Sunday morning, you do get to spend an extra hour in bed.

### Daylight Saving Time (DST)

Although first suggested as an idea by American statesman Benjamin Franklin in 1784, Germany became the first country in 1916 to adopt Daylight Saving Time in order to increase productivity during the First World War (1914–18), followed by the UK and other nations a few weeks later.

Within a few years, many countries across the world adopted DST and around 70 continue the practice. However, the benefits of it have been an ongoing debate ever since. In large cities such as London it is reasoned that as a 24-hour city with the benefit of well-lit houses, streets, transportation and offices it is no longer necessary. Farmers have expressed concerns that livestock are affected by the changes to their body clocks, thereby affecting productivity. Longer evenings also means that as people stay up longer, they increase their energy consumption which may contribute to global warming.



Here are a few little-known facts...

- In 2002 The EU ruled that all member states should change their clocks on the last Sunday in March and October. Iceland
  was the only country excluded, due to its extreme variations in daylight and darkness.
- 2. Countries on and near the equator have nothing to benefit from DST as they see very little change in daylight duration across the year.
- 3. When first introduced in the UK, the Government was worried about claims for clocks damaged by people forcing the hands back.
- 4. Between the years 1968 and 1971, clocks went forward... but did not go back.

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#### CASH COLLECTION RETENDERING

Further to our last update in <u>TRU139</u>, the process of retendering the current contract for cash collections and change deliveries for LU stations is still continuing and transition to the new contract which will see LU collections split into a number of smaller packages of work, will now be implemented later than the November date that we had originally planned. Further information will be provided once final negotiations have been completed.

We will also shortly be undertaking our annual review of cash collection frequencies, based on the cash take levels for each station over the last year, since most LU returned to taking cash payments. Once completed, full details will be shared with each area, but given that cash takings at many stations have not returned to the volumes we were taking in 2019, prior to the pandemic, it is likely that many sites will see a reduction in their current collection frequencies.

We are also likely to expand the number of very low volume stations where we operate a "Dynamic Collection" schedule, with a collection being triggered when cash levels in the CHD reach a trigger point. This has been trialled with some success at stations on the east end of the Central and north end of the Metropolitan lines and has only been hampered by reliability issues caused by staff shortages at the local G4S depot. These changes are due to be implemented early in the new year and further information will be published in future editions of TRU.



**@tube.tfl.gov.uk** 

Got a ticketing and revenue related question, problem or simply noticed something you think your colleagues should know about?

Why not test the knowledge of Olly - our resident ticketing guru.



From:

Sent: 14 October 2022 17:24

To: Ask Olly

Subject: Magnetic ticket failures on gates

Hello Olly,

No doubt this has been covered previously, but can you confirm why so many paper tickets fail / get rejected on the gates?

I have been told it is because the ticket has likely been near the customer's phone, and this has interfered with the magnetic strip - is this true?

I look forward to your response.

Best regards,

Hi

Thanks for your email and query.

The reason that a particular magnetic ticket has been rejected by a gate should always be checked against the code displayed on the Passenger Orientated Display (POD).

In some cases, the rejection may be caused by incorrect coding of the ticket by the issuer or the ticket simply not covering the journey made.

In cases where the ticket is rejected and reject code "07" is displayed, this normally indicates that the coding on the magnetic stripe has been damaged in some way. As you say, this is most commonly caused by contact with some sort of magnet.

Historically the main source of this type of problem was the ticket passing close to a magnetic catch on a bag when the ticket was being put into or out of the bag.

Similar issues may also be caused by some phone holders that contain a magnetic device to shut the phone off when it is closed.

Best advice to any customers that are regularly having problems with ticket being decoded, is to keep them away from any form of magnet.

Regards

Olly Oyster

Hi

Thanks for your email and enquiry.

You are correct in that cards on which the Young Visitor discount has been set will be capped at half the adult rate.

So you are correct, that for Zones 1&2 the Daily Cap is £3.85.

Full details of all Daily and Weekly caps are included in the Fares Revision Circular (now incorporated into **T&R Book Appendix 1**).

Regards

Olly Oyster

From:

Sent: 23 September 2022 17:13

To: Ask Olly

Subject: Young Visitor discount

Hi Olly.

I'm aware that applying a Young Visitor discount gives the holder a 50% discount off any adult single fare.

However, as an adult gets a cap (£7.70 in Zones 1&2), does the Young Visitor get an equivalent cap: i.e. £3.85 in Z1&2?

Many thanks,



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From:

Sent: 20 September 2022 18:02

To: Ask Olly

Subject: Oyster Card Registration

Good evening,

I have a question about customers who wish to link their Railcard to an Oyster card.

Should the Oyster card be registered online or via the app before we link it, or would registration on the POMs be enough?

Kind regards,

Hi

Thank you for your email.

When adding a NR Railcard discount to an Oyster card, if the card is not indicated as being registered when presented to the POM, you will need the customer to enter their chosen password and postcode on the POM screen to set the registration flag on their card. They should then be encouraged to complete the full registration online or via the Oyster app to fully protect their card.

If they have already completed the registration online, the registration flag will still need to be set on the card before the discount can be added.

Regards

Olly Oyster

Hi

Thanks for your email and query.

Entering the last 9 digits of the railcard number should enable anyone checking the card, to check the validity against the number on the supporting photocard.

Providing the photocard number was recorded in this way on the previous card, it should also enable cards with duplicated photocard numbers to be identified within the central system.

Regards

Olly Oyster

From:

Sent: 30 October 2022 17:19

To: Ask Olly

Subject: Railcard discounts

Hi Olly,

We have a lot of requests to add Railcard discounts to Oyster Cards at our stations and regularly for customers who have lost their existing Oyster Card that had the discount added.

Once the customer purchases a new Oyster, we add the discount and put the last 9 digits from the Railcard number as per procedure, is this enough to ensure any previous Oyster Cards have the appropriate Railcard discounts removed and duplicate discounts aren't being given?

Many thanks,

From:

Sent: 12 October 2022 18:28

To: Ask Olly

Subject: RE: Inability to Pay Fare Form

Hi Olly.

I am seeking some clarification regarding the Inability to Pay Fare (ITPF) forms.

ITPF form was completed today for a customer who was in distress having no access to funds as his last source of funding had just stopped working.

The forms that we have on site have, what I believe to be "obsolete information" on them.

Please advise where I should send the white form and any advice for completing future ITPF forms.

With kind regards.

Hi

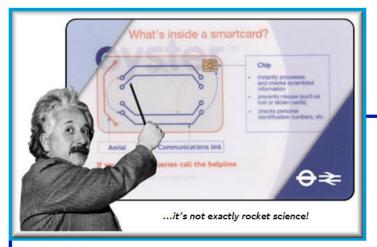
Thanks for your email. You are correct in that some of the text on the form is now out of date. The form and the overall process are currently under review.

The current instructions on the distribution of the completed forms are contained within T&R Book 7 Section 15.

We hope to include further details on changes we are looking to make to the Inability to Pay Form and process in the next edition of T&R Update.

Regards

Olly Oyster



# OYSTER EXPLAINED

For this month's Oyster Explained feature, we turn our attention to the subject of Peak and Off Peak travel and what customers using PAYG will be charged.

It's a topic that has become quite complex and often one that people misunderstand or forget about!

### PEAK OR OFF PEAK? THAT IS THE QUESTION

It is fairly safe to say that before the introduction of Oyster and PAYG, the designation of Peak and Off Peak travel was generally quite straight forward. On Monday to Friday, Peak fares area charged before 09.30, after which cheaper Off Peak fares applied, in most cases courtesy of an Off Peak Day Travelcard or a Cheap Day Return.

Going back much further into history, we did have evening restrictions, including Freedom Passes not being valid to start bus journeys after 16.00 hours, but more recently apart from a few Train Operating Companies having evening peak restrictions and charging higher fares to customers departing from London terminus stations between 17.00 and 19.00 hours, generally Off Peak fares have applied throughout the rest of the day after the magical time of 09.30 and at all times during weekends and public holidays.

Post Oyster, the situation is now a lot less straight forward. Since the introduction of PAYG, the boundaries between Peak and Off Peak travel have become a little blurred, most recently through the imposition of all day "Peak fares" for Zone I-6 journeys to and from Heathrow Airport, which were introduced as part of the September Fares Revision (as outlined in TRU140).



This is one of the main reasons why when talking about PAYG we try to avoid using the terms" Peak" and "Off Peak" and instead refer to "Standard rate PAYG" and "Reduced rate" charges being made.

When looking at PAYG journeys one of the first points to note, is that PAYG was configured to help encourage travel outside of our busy morning and evening peak periods and to encourage travel at other times through less expensive journeys. This is the case for early morning journeys on Monday to Fridays starting before 06.30 hours, which are charged at the Reduced PAYG rate. However, please note that although charged at the lower rate, they do not contribute towards an Off Peak Cap, where these apply, but are included in the calculation of Adult and other All Day Price Caps.

The introduction of PAYG also allowed the introduction of higher charges for journeys made during the evening peak, making fares the same going home, as commuters would have paid on their way to work in the morning. Standard PAYG charges therefore apply Monday to Friday between 06:30 to 09:29 hours and 16:00 to 18:59 hours

Customers starting journeys between 09:30 and 15:59 and after 19:00 hours Monday to Friday get the benefit of the Reduced rate of PAYG.



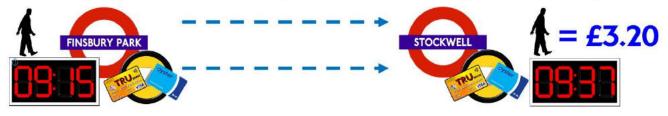
One important fact to note at this point, is that it is the time that a customer touches in to start their journey, which determines what they are charged when they touch-out.

This is illustrated on the page opposite, by four different customers making the same Zones 1& 2 journey between Finsbury Park and Stockwell, but starting at slightly different times. The third journey, although finishing at a time that customers would be charged Standard PAYG fares, is charged at the Reduced PAYG rate as it commenced before 16:00 hours.

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#### PEAK OR OFF PEAK ... Continued

Time started	From	То	Time completed	Charge
09:15	FINSBURY PARK	STOCKWELL	09:37	£3.20
09:31	FINSBURY PARK	STOCKWELL	09:51	£2.60
15:55	FINSBURY PARK	STOCKWELL	16:17	£2.60
16:10	FINSBURY PARK	STOCKWELL	16:32	£3.20



If that all seems fairly straight forward, then we will go on to the more complicated aspects of PAYG charges.

One of the next developments with PAYG charging that we implemented, was the introduction of "directional PAYG charges". This utilised the facility to charge different fares depending on which direction a customer was making a journey and was initially implemented on the London Overground route between Euston and Watford Junction, which serves a number of our stations. On this section of line, journeys made against the 'peak traffic flow' are charged at the Reduced PAYG rate.

So at 08:00 hours during the morning peak period, a customer starting their journey at Euston (NR) and travelling to Harlesden, will be charged at the Reduced PAYG rate, whereas a customer making the same journey, but in the opposite direction from Harlesden to Euston will be charged at the Standard PAYG rate.

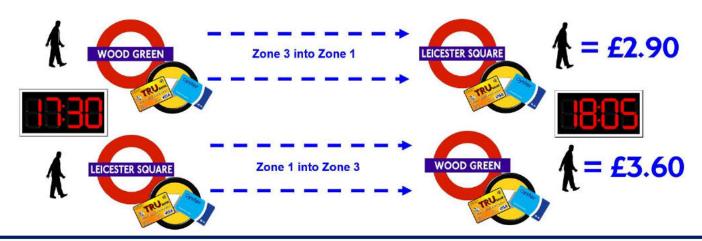
The opposite applies during the evening peak period, where a journey from Wembley Central to Queens Park would be charged at the Reduced PAYG rate, whilst a journey in the opposite direction from Queens Park to Wembley Central would be charged at Standard PAYG rate.

Time started	From	То	Time completed	Charge
08:00	EUSTON (NR)	HARLESDEN (Z1-3)	08:25	£2.90
08:00	HARLESDEN (Z1-3)	EUSTON (NR)	08:25	£3.60
16:30	WEMBLEY CENTRAL (Z1-4)	QUEENS PARK (Z2-4)	17:00	£1.80
16:30	QUEENS PARK (Z2-4)	WEMBLEY CENTRAL (Z1-4)	17:00	£2.70

The concept of directional PAYG charges was subsequently extended to include all journeys made during the evening peak which start at stations outside of Zone I and finishing in Zone I being charged at the Reduced PAYG rate.

Journeys starting in Zone I in the opposite direction continue to be charged at Standard PAYG rate. This obviously provides cheaper leisure journeys for people travelling into central London in the evening, but also benefits customers who work outside of central London and have a "reverse commute" journey.

Time started	From	То	Time completed	Charge
17:30	WOOD GREEN	LEICESTER SQUARE	18:05	£2.90
17:30	LEICESTER SQUARE	WOOD GREEN	18:05	£3.60



#### TSID CARD REISSUE

As we outlined in TRU e to a new series of cards and do a full reissue of cards to all current users. The new cards will be numbered in the 22xxxx range, rather than 23xxxx as we indicated in our previous article. Unfortunately, the limitations set within our ticketing system restrict the number of cards that can be live at any one time and prevent additional cards being added to the end of the range.



Letters have already been sent out to each Area Manager to confirm a list of the current TSID card holders on their area. This will then be used by the T&R team to allocate a new card to each user, once they are received.



Cubic are expecting to deliver the new range of cards to us during the first week of November, after which they will need to be sorted and batched by area, ready for despatch to the nominated delivery point previously agreed.

This should then allow around four weeks for cards to be issued to individual members of staff ahead of the "golive" date for the new range.

This has now been confirmed as being the night of Saturday 10 December.

Any staff who transfer location during the period before the new cards are activated, may need to contact their previous location to arrange collection of their new card.

During this period, we will not be issuing any further new cards, but where possible we will try to provide replacement cards and PIN reminders for existing users.

Anyone that has completed TMS training during this period will have a card for the new range prepared for them, but these will not be distributed until after the switch-over to the new card range in December.

Any staff that have recently been issued with a TSID card, but are yet to activate the card, should do so as soon as possible by emailing the <u>TSID card mailbox</u>, to ensure that they receive a new card for use after 10 December.

Further details of the procedures to be followed on the night we swap over to the new range will be published in TRU142 at the end of November.

If you have not received your need TSID card by the end of November, you should first contact your Area Manger or local T&R Champion, rather than contacting the T&R team directly.

Please note that staff who do not hold a TSID card, but who have the limited function CSID PIN to undertake staff functions only on the front of POMs, are not affected by this change and can continue to use their Staff Oyster card and CSID PIN for these functions.

#### THE KEY POINTS

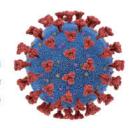


- New 22xxxx series cards cannot be used before 11 December
- The new cards will be automatically activated on the night of 10/11 December
- The new card will be supplied with a new PIN, which holders will have to use with their new card
- It will not be possible to use 18xxxx series cards and current PIN after 10 December
- Current Staff Oyster cards will automatically be linked to the member of staff's new TSID card
- CHD users will be mapped to their new TSID card on the night of the changeover, but will need to log-on with their existing CHD PIN and change this to match their new TSID PIN on the first sign-on after the changeover takes place.

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#### COST REDUCTIONS

It cannot have escaped anyone's attention that since the onset of the Covid 19 Pandemic, TfL and LU have faced a number of funding challenges, resulting from a dramatic drop in revenue and customer numbers compared to 2019. Although funding agreements have been agreed between the Department for Transport (DfT) and TfL, LU is expected to achieve cost savings and reduce expenditure to help bridge the shortfall in funding.





Within the Ticketing & Revenue area, our focus is generally more on the other side of the balance sheet, in bringing in and protecting revenue. However, the need to reduce costs also applies to T&R activities and in recent months we have been exploring a number of areas where costs savings can be achieved. These really fall in three main areas, some of which you can read about in more detail in other parts of this edition of TRU. The areas of cost savings we have been exploring are as follows:

CASH COLLECTIONS — As outlined on Page 7, since 04 July we have been trialling reductions in the frequency of cash collections at stations on the Central and Metropolitan lines, with low volume sites having collections every 4 weeks rather than every other week, or only having collections when they are needed, based on cash sales.



Moving forward as part of an annual review of collection frequencies, we will be looking to reduce the frequency of collections at sites where the cash take has fallen dramatically since the pandemic and this will undoubtable see a reduction in collection frequencies at some stations and an increase in the number of locations where we operate a "dynamic collection schedule" with visits arranged as and when needed, rather than on a fixed schedule.

The net reduction in the number of collections per week, which we plan to implement in early January, should provide a significant saving over the course of the next financial year.

POM AND GATE MAINTENANCE - As outlined on Page 18, following two previous programmes to remove under used POMs from stations, we are shortly to embark on two further phases of work, which should lead to the mothballing of a number of AFMs and the removal of the small number of QBMs that remain on the network. This work should contribute to a sizeable reduction in the costs of maintaining these POMs in service and will potentially utilise a number of devices currently in store, for which TfL have to meet storage costs.

In another drive to reduce costs, we are also still considering reducing the number of gates that can accept magnetic tickets at a number of stations outside of central London, where the daily usage of magnetic tickets has declined to a very low level. The removal of ticket handling devices from some gates at these stations should also contribute to further reductions in maintenance charges on these assets.



CONSUMABLES – The T&R team have previously achieved considerable savings, by reallocating stocks of ticket rolls, Oyster cards and other items from stations that had large surpluses to locations with higher demand which needed extra stock. Recently, attention has moved to Bulk Coin and V&C bags and a recent survey has highlighted that stock holdings across the network should last us for several years based on the current rate of consumption. In the case of Bulk Coin bags, our previous supplier provided these as part of our old banking contract with Santander, whilst the provision of bags does not fall within our current banking contract.



We have been exploring options of producing a new series of bags to meet LU requirements in the future, but there are set-up costs for the new designs and minimum quantities of each denomination that would need to be ordered. The survey has highlighted that there is less urgency to obtain a new series of bags than we first thought, providing we can sensibly spread the existing stocks around the network.

It is a similar picture with V&C bags, the future usage of which is currently being reviewed, both to reduce costs and the amount of plastic used for a diminishing requirement. Again there is ample opportunity to use existing stock, rather than making further purchases and to assist with the pooling of resources, the T&R team are encouraging different sections of each line to set up local hubs to store stocks of consumables and supply other stations on their areas. 4 Hubs have already been successfully established, covering nearly 40 stations and another 5 locations are close to being operational, with hopefully more to follow. This should hopefully avoid expenditure on items that we, as a company, don't need to buy.

### TICKET IRREGULARITY SURVEY



After a break of  $2\frac{1}{2}$  years we are very pleased to welcome back the results of on-train fraud survey in the TRU.

Survey	Customers checked	Number of Irregularities
Feb 2019	50,375	1,910
May 2019	46,754	1,372
Nov 2019	46,135	1,441
May 2022	39,833	1,228
Average	45,774	1,488

Although a February 2020 survey was conducted prior to the COVID pandemic, the data could not be collated due to some information not making it to the main Revenue Control Offices in the days following the national lockdown. We still hope to retrieve and publish these for you in the near future.

As a reminder, the on-train surveys are undertaken by teams of RCIs, following set criteria for each line. Customers are surveyed on LU trains 7 days per week, from the first train out of a depot to the last one back in at night.

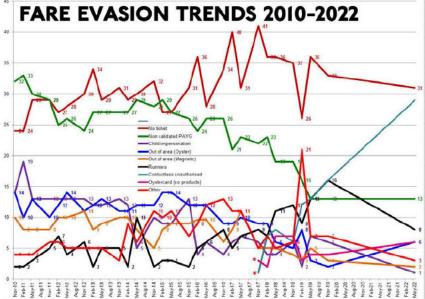
We have reproduced the data from the survey in various charts and tables along with a brief analysis of how they have been interpreted.

Survey Date	On train irregularity	Estimated revenue loss
February 2019	3.30%	2.49%
May 2019	2.60%	1.91%
November 2019	3.50%	2.66%
MAY 2022	4.35%	4.03%
12 month average	3.14%	2.35%

As there has been such a big break between surveys, we again want to emphasise that the majority of our customers are honest. However, the trends have shown that travel irregularities and revenue loss continue to rise. Evasion types are also changing, often reflecting our ticketing systems and how we manage our gatelines.

The table below shows results from the survey on a line-by-line basis. The highest percentage of irregularities were found on the District Line and the fewest on the Piccadilly line.

MA\ 2022	Worst	No checked	R	NT	OAM	OAO	AC	PNV	CPNA	ONP	0	Total	% Invalid
BAKE	RLOO	3460	5	40	0	0	0	7	17	0	0	69	1.99
CENT	RAL	4480	12	80	0	15	5	6	28	7	7	160	3.50
CIRCL	.E	1994	0	8	2	8	0	- 11	- 11	2	4	46	2.31
DISTR	ICT	7931	50	63	6	12	9	50	110	42	3	345	4.32
HAMI	M & CITY	2348	1	12	5	14	0	20	29	3	1	85	3.61
JUBIL	.EE	3108	12	32	0	3	0	9	29	3	5	93	2.85
METR	OPOLITAN	5326	0	36	7	23	0	34	49	10	3	162	3.04
NORT	THERN	5840	13	60	0	2	1	24	80	3	4	187	3.18
PICCA	ADILLY	5346	0	52	0	- 1	3	1	8	2	14	81	1.52
VICTO	ORIA	0	0	0	0	0	0	0	0	0	0	0	N/A
	Total (all lines)	39833	93	383	20	78	18	162	361	72	41	1228	2.92
V	R = Runners	OAM:	OAM = Out of Area (Magnetic)			AC = Adult on Child ticket			CPNA – Contactless Payment not authorised			d	
Key	NT = No Tick	et OAO:	Out of A	rea (Oyste	r) P	NV - PAYG	not valida	ited C	NP - Oyste	r Card no	oroducts	0 = 0	ther



The chart on the left shows the fare evasion trends over the past 12 years for the major categories listed in the table below.

Irregularities 2010-2022	Ave %
No ticket	31
Non validated PAYG	24
Child impersonation	9
Out of area (Oyster)	10
Out of area (Magnetic)	7
Runners	6
Contactless (unauthorised) *	12
Oyster card (no products) *	5
Other	8

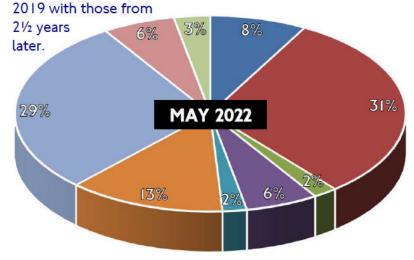
The break between the Feb 2020 survey and May 2022 was caused by the COVID pandemic.

\* categories included in survey from November 2017

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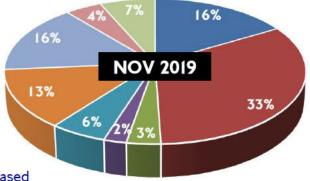
The pie charts below compare the irregularities of November

### **TICKET IRREGULARITY SURVEY**



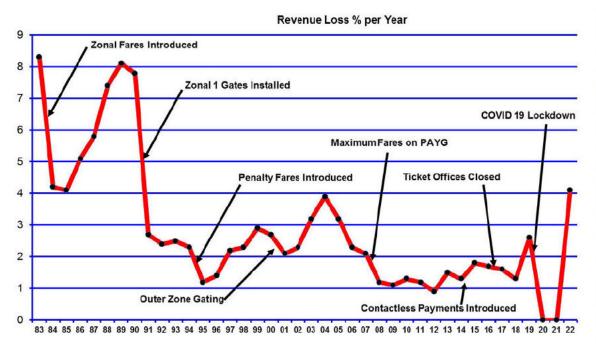
The May 2022 survey shows a number of fluctuations in most offences, with quite a significant rise in the number of "Contactless not valid" offences, and a 50% drop in "Runners". Most increases are in the use of Oyster and contactless payments and It will be interesting to gauge future surveys to see if this trend continues.

12 Month comparison	Nov 18 vs 19	+/-
RUNNERS	Ψ	-8%
NO TICKET	Ψ	-2%
OUT OF AREA (Magnetic)	Ψ	-1%
OUT OF AREA (Oyster)	•	+4%
ADULT ON CHILD TICKET	¥	-4%
PAYG NOT VALIDATED	<b>⇔</b>	0%
CONTACTLESS NOT VALID	<b>^</b>	+13%
OYSTER CARD (No products)	<b>^</b>	+2%
OTHER	Ψ	-4%



Our final chart shows key moments that have reduced or increased fare evasion trends and patterns over the past 40 years. The key initiative that reduced revenue loss was the introduction of gates within Zone I in the early 1990's and good gateline management still remains our best weapon to this date.

The latest survey shows that prior to COVID we had started to see a rise in offences, which has continued since London Underground resumed normal services surpassing 4% for the first time since the early 1990s.



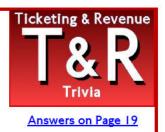
However, TfL has not been idle and many developments have started to be introduced, such as the introduction of better fare evasion analysis, open gatelines, forced paddle data and the use of CCTV to better target hotspots and network weaknesses.

All of which we hope to tell you more about in future editions of TRU.

Part 2 - And more on the subject of UK coins...

Q2) ... What was the last change to our coinage and when did it happen?

Α	Current 10p coin	В	Current 5p coin
С	New version of £1 coin	D	Current version of 50p





#### MFM NOTE HANDLER UPDATE

Although we have now completed the programme to rollout of the new Pay Complete Note Handling units to all of our MFMs and all of the previous design of Bank Note Accepter (BNA) units have now been withdrawn, there is still a bit more work to be done before we can conclude this piece of work.

As reported in previous editions of TRU, the rollout has since us increase the number of devices that can recycle notes from the 100 devices that had the old style BNR units to 167. So currently slightly more than half of these devices can now dispense notes for refunds or when giving change. There are a further 8 devices which are scheduled for upgrading from BNA to BNR, but units were not available to do these when the rollout was taking place and the long lead times for delivery of the additional units, means that the remaining machines are unlikely to be completed until towards the end of the year.



In recent weeks feedback from stations and a dip in MFM device performance has been attributed to an increase in the number of note jams occurring on the new units. The precise cause of this is currently unclear and is being investigated by Cubic. Some steps to improve reliability have already been taken, including an increase in the cleaning regime for the note handlers. Hopefully we will be able to provide a further update in our next edition.

#### MFM SOFTWARE

Station	Station			
BAKER STREET	(Bak)	32		
DANER STREET	(Met)	30		
DAGENHAM HEA	YAWHTA	30	,	
EUSTON		30	31	32
EUSTON		33	i.	<i>y</i>
HAMMERSMITH	HAMMERSMITH (Main)			
D	(South)	32		
KINGS CROSS (N	33	34	35	
OXFORD CIRCUS	(Remote)	30	32	33
QUEENSW.	AY	30	,	
STRATFORD	(East)	30		k %
STRATFORD	(North)	31		20
TOWER HI	LL	30		30
VICTORIA (	32	33	34	
VICTORIA	35	36		
WILLESDEN G	REEN	30		3 6

Unrelated to the MFM upgrade above and following on from the completion of a previous software upgrade, which was reported on in <u>TRU140</u>, we are now embarking on a further change to MFM software, this time to address an on-going issue affecting bankcard acceptance.



The latest change will ensure that if communication between the device and the bankcard server is lost during a transaction, the PED will now attempt to reconnect until authorisation is given, rather than the transaction being aborted as previously occurred.

This new software was deployed remotely to 26 devices listed below on the evening of Thursday 13 October, taking effect from start of traffic the following morning.

The Vanguard is scheduled to continue until Wednesday 09 November, at which point performance will be reviewed and hopefully approval will be given to rollout the software to all other MFMs from mid-November.

#### £20 UPDATE

As outlined in previous editions of TRU, the paper version of the £20 note ceased to be legal tender on Friday 30 September. As a result, we need to update all of our devices that accept notes with new bill sets that will prevent paper versions of the £20 note being accepted in future.

As we were not able to make wholesale changes to our devices whilst the notes were still useable, we were initially restricted to a limited Vanguard on 6 MFMs and 4 TVMs, starting on Monday 26 September, but following successful upgrades to this first batch of devices, the Vanguard was expanded to cover other devices at the Vanguard

locations in the first week of October. This added a further 20 MFMs and 8 LU TVMs to the Vanguard.

Next steps are to progress to rolling out the new note set to all devices starting from Tuesday 01 November. As with the Vanguard devices, this will be implemented by a remote download of the new bill set to all MFMs, but will require an engineer visit to each TVM in order to update the relevant file containing the notes to be accepted. Stations will be notified of the dates their devices are due to be updated by email.

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#### OTHER POM CHANGES



The software change being applied to MFMs to address interruptions to the authorisation process (outlined on Page 16), also needs to be applied to our AFMs and QBMs as well, since both of these types of device process bankcard payments and are known to suffer similar issues if connection to the bankcard processing server is lost during the authorisation process.

Progress on the development, testing and deployment of new software for the AFM and QBM are a little behind that for MFMs and TVMs and as a result, the Vanguard of the new software on a small number of AFMs is not scheduled to commence until early November. All being well, this will allow the rollout to the remainder of our AFMs to start in early December, with a target to complete this deployment by Monday 12 December.

The development of a new version of QBM software with a similar fix incorporated into it, is about a month further behind and is currently scheduled to go to Vanguard around Wednesday 30 November. As there are now only a small number of QBMs left in service, the rollout of the new software following completion of the Vanguard, is likely to be very quick and will hopefully also be completed before Christmas.

A further change involving the software used within the Chip & PIN unit (PED) of our devices has been on Vanguard on devices at a number of our stations since 13 September and we had expected to be progressing to also rolling this out to other devices from the start of November. A decision on the rollout of this bankcard software is due to be taken in the first week of November and involves deployment to all types of POMs. It will therefore need to be coordinated with the above changes.

#### TVM SOFTWARE UPDATE

Last but not least, we are also set to embark on a programme to update software used by our TVMs as well.

The TVM has lagged a little behind the MFM due to some issues discovered during testing and the forthcoming upgrade to TVM software will actually mop up three different elements. This new software was remotely downloaded to devices listed below, during Thursday 13 October to take effect from start of traffic on Friday 14 October.



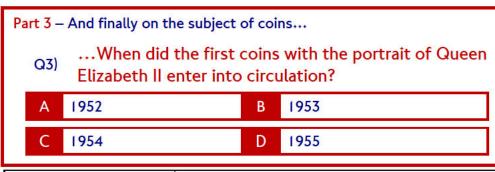
This latest software update includes some fixes to issues that only affect non-LU devices, but also includes two changes that affect LU devices. One of these mirrors a previous software update on the MFM and restores the connection between the device and the webserver which checks Oyster card details before a refund on the device is authorised.

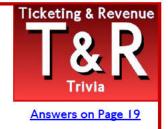
Previously a change in Microsoft security certificates had prevented connection to the server and resulted in refunds on certain cards not being authorised.

The second change affects bankcard transactions and mirrors the latest change being made on MFMs to deal interruptions to the link between the device and the bankcard payment server.

Station		TVM		
BATTERSEA POWER STATION		37	38	
KEW GARDENS		39		
WEMBLEY CENTRAL		38		b.
BOND STREET	(Marylebone Lane)	38	39	
	(Hanover Square)	32	33	34
	(West)	35	36	37

Following completion of the Vanguard, the new software is scheduled to be remotely deployed to all TVMs from Tuesday 15 November.





# REVENUE PROJECTS

#### POM REDUCTIONS

Way back in <u>TRU136</u>, we outlined plans for a third phase of work to reduce the number of POMs with the planned mothballing of 54 of our AFMs. This followed successful completion of the first two phases of POM reductions, where we removed a large number of QBMs from stations, as well as consolidating POMs at a number of locations where they had previously been split across two locations in the same ticket hall.



Following consultation with the areas affected to identify which AFM was best to mothball, progress ground to a halt and we have since been waiting on approval of additional funding to undertake the works and confirmation of costs by Cubic.

In the last couple of months, things have started to move forward again and we are working to mothball these devices early in the new year, to allow a full year of the associated costs savings in the next financial year, through not maintaining these devices. Unlike previous rounds of work, this time round, the devices will not be physically removed from site. However, key components such as the Chip & PIN unit (PED) and the RTD will be removed, the device will be isolated from its power supply and will be covered over with a blanking panel to hide it from customers.

This will potentially allow a device to be reinstated, should there be an unexpected increase in demand, beyond that predicted by the TfL Transport Planning team. Since the predicted maximum utilisation of POMs following the reduction in the number of devices was still very low at these sites, it is fairly unlikely that we will need to reinstate these machines, particularly as machine usage has continued to decline.

We are also currently planning a further phase of reductions, which will hopefully follow on from the completion of the AFM mothballing. This phase which is in the process of being planned, is likely to include the removal or replacement of the last 20 QBMs, the possible reinstatement of 2nd MFMs at stations which had their devices removed for use at larger stations before the Fit for Future programme and the mothballing of some further AFMs at stations where previous Commercial Development schemes that had planned to remove a number of AFMs have not been taken forward.

Consultation with the local management and TU and H&S reps will shortly be undertaken to identify the number of devices to be mothballed and which particular devices should be sacrificed. Stations affected are all locations that currently have very large numbers of AFMs.

Further details on both of these forthcoming programmes will be published in TRU in the new year.

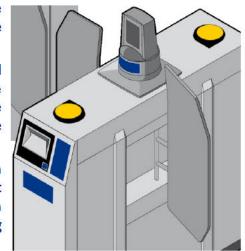
#### PNEUMATIC GATE BLU UPGRADE

Unfortunately, almost with the finishing line in sight, we were recently advised by Cubic that they had halted the programme to modify the light beams on the older pneumatic gates.

This upgrade of the Beam Logic Unit (BLU) was expected to improve gate reliability and in particular to reduce the number of failures attributable to the BLU.

However, within the last month or so, Cubic had seen an unexpected increase in BLU related faults on pneumatic gates and therefore took the decision to temporarily halt any further upgrades taking place after the night of Wednesday 12 October, when gates at Hyde Park Corner were completed.

Cubic are currently investigating the cause of this recent increase in faults and whether any modification is required to the arrangement that we have been rolling out. Once the reasons are known, they should then be in a position to resume the programme and complete the outstanding work at around 10 stations that are yet to be visited.



Unfortunately, this will mean that the programme that was due to be completed by the end of October, is now likely to continue a bit longer than had been planned. Hopefully we should be able to provide a further update in the next edition of TRU.

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### REVENUE PROJECTS

#### CHD ISSUES RESOLVED?

Further to our last update in <u>TRU140</u>, we have continued to see a high level of failures of the banknote validator (BV) unit within our Cash Handling Devices (CHD). This led to quite a large number of note recycler and note accepter units being out of service for several weeks, whilst Pay Complete were awaiting delivery of consignments of replacement parts from the manufacturers in Italy.

The good news as we go to press with this edition of TRU, is that we have recently seen the delivery of 2 separate consignments of parts, which have enabled Pay Complete to quickly replace all of the failed units that had previously been reported but could not be repaired.



Unfortunately, we are still seeing a number of these BV failures occurring and the level of outstanding faults has already eaten a big chunk out of the spares pool, which will hopefully keep us going until a further consignment of modules is delivered.

For those of you that are not familiar with the particular issue, the fault is generally identifiable by the disintegration of the black rubber belts that move the notes within the top portion of the CHD. Many sites that have encountered the issue have reported black residue being left on notes and the belts appearing to have melted.

Previous investigation of returned units by the manufacturers had identified a possible cause of the high level of failures against what we had seen pre-pandemic, as being down to chemicals within certain hand gels being left on the surface of notes that had been processed.

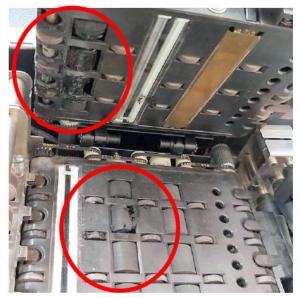
Looking ahead to a further piece of work affecting our CHDS; we have recently started discussions with Pay Complete regarding a planned upgrade of device and back-office software.

The software currently used by us, is now a number of years old and will cease to be supported by Pay Complete in 2023. First steps will see an initial demonstration of the new CHD device software and a review of the user interface screens in early November.

This will then be followed by a Vanguard of the new software at a small number of stations covering the various device configurations we use and a mix of stations that are connected by fixed line connections and those that are connected by a 3G/4G router.

These vanguard devices will be attached to the new back-office software and will mean that for a period of time we will be operating two parallel systems. This may mean that changes made on existing device software will not be reflected on vanguard devices connected to the new back office.

Pt.3



We are currently reviewing how best to implement that and the timing of the vanguard and rollout, particularly given that Tech & Data impose a change freeze over the Christmas / New Year period (between 13 December and 06 January).



Pt.1 C & Sp (I Shilling) and 10p (2 Shilling) coins continued in circulation after decimalisation and bore the head of King George VI.

Pt.2 D £1 coin – March 2017

In 1953



How did you do?

### ...AND FINALLY!

#### **RID 2 ROLLOUT**

Unfortunately, the planned rollout of the new Revenue Inspection Device (RID2) has been delayed by some further issues that were identified during the Vanguards undertaken on LU and other modes. The issue resulted in some of the validation taps that had been made on Vanguard devices, not reaching the TfL back-office for processing, as they should have done.

As we were going to publication with this edition of TRU, Cubic had released a further version of RID software, containing a fix to address this latest issue. This meant that the small number of Vanguard devices which had been supplied to the LU Revenue Control team and which been recalled ready for the start of the full rollout of the new units, had to be reissued to staff to allow some further on-system testing to be completed.

CURRENT RID

This was due to take place on Friday 28 October in connection with a major revenue control exercise that was due to take place that day.



Hopefully once transactions have been processed, the results from this operation will confirm that the latest software has successfully resolved the issue that had previously been seen and will then enable us to move forward with the full rollout of the RID2 device across all modes.

On LU there will be a programme for the T&R team at Pier Walk, to individually issue the new devices and withdraw the current RID units, over a period covering a number of weeks, during which there will be a dual running where transactions will be captured and processed from both RID and RID2 devices. Further details of how the exchange programme will be undertaken, will be supplied to Revenue Control staff once we have a confirmed date for the rollout to start.

All being well, at the conclusion of this rollout, all of the existing RIDs will have been withdrawn, allowing the support and back-office systems to be switched off.

#### **FARES REVISION CORRECTION**

In our Fares Revision preview in <u>TRU140</u>, within the article about the expansion of the Heathrow Airport free travel area to include Hatton Cross, we incorrectly stated that the scheme included both bus and rail travel.

Although the scheme originally covered bus journeys in and around the airport, this was withdrawn several years ago. Free travel now only applies to Piccadilly, Elizabeth line and Heathrow Express journeys between the stations serving the airport.



On the same topic. the inclusion of Hatton Cross also prompted some coverage in the national press, with the Daily mail highlighting how customers could potentially save money by breaking their journey and resuming it at Hatton X, to effectively only pay for a Zone 1-5 Off Peak journey rather than the all day Z1-6 Standard PAYG charge.

#### LOOKING AHEAD TO TRU142

Our next edition of T&R Update is scheduled to appear at the end of November and will include:

- Full details of the forthcoming reissue of TSID cards
- Updates on current projects and software changes
- Update on our T&R Charity initiatives
- A look ahead to what might be in store in 2023.

Plus more of your queries sent to Ask Olly and a selection of our other regular features and T&R news stories.



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