

TICKETING & REVENUE UPDATE

UNDERGROUND

JULY /
AUGUST
2020

ISSUE
127

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AND FINALLY

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STRANGE TIMES CONTINUE

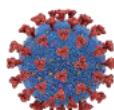
We begin a further edition of TRU, which is again dominated by issues related to the on-going COVID19 pandemic and the slow journey back towards recovery.



Although customer numbers are slowly increasing, customer levels that the network had been carrying last year.

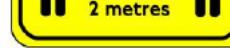


usage is still below 30% of the traffic



The re-opening of Retail and Hospitality sectors has obviously had an impact on customer numbers, particularly at stations close to major shopping areas or areas which are major destinations for bars, pubs and restaurants.

There are some small steps towards resuming more normal activities and we have recently recommended the setting of the Young Visitor discount on POMs, to cater for young customers from outside of the London area, who may be visiting or staying with relatives in London during the school



summer holiday period.



On Pages 4 & 5 inside this edition, we provide a summary of what activities can currently be performed by staff on the front of POMs and which activities still remain restricted, to minimise interactions between customers and staff.

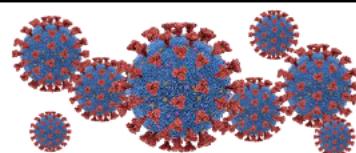
Some of these restrictions remain under review and any procedural changes will be communicated through the weekly *Hot Issues Bulletin* published each Friday.



Another sign of a return towards some form of normality is the forthcoming return from "furlough leave" of the first batch of our colleagues within the LU Revenue Control team.



We hope to be able to provide further information on this phased return and the duties they will initially be undertaking in our next edition.



KEY STORIES INSIDE

Page 6

[POM SCREEN IMPROVEMENT](#)

Following changes implemented in July, we take a quick look at some further possible changes we are planning for POM screens.

Pages 8 & 9

[SEPTEMBER FARES REVISION](#)

We give you a quick preview of some of the main items included within this September's Fares Revision.

Pages 10 & 11

[CARD PAYMENTS](#)

We take a look back at the recent history of card payments and how things have changed over the years.

Page 12

[MFM NHU REPLACEMENT](#)

We provide an update on the plans to deploy a new note handling unit for MFMs.

Pages 13 & 14

[GATE UPGRADES](#)

We provide updates on several planned improvements to our gates.

REVIEW OF 12 JULY CHANGES

In [TRU126](#), we provided details of several POM screen changes that were due to be implemented on Sunday 12 July.

Depending upon which way you view these, they were either delivered as late items from the very truncated May Fares Revision or were elements of the forthcoming September Fares Revision which were delivered early by Cubic.

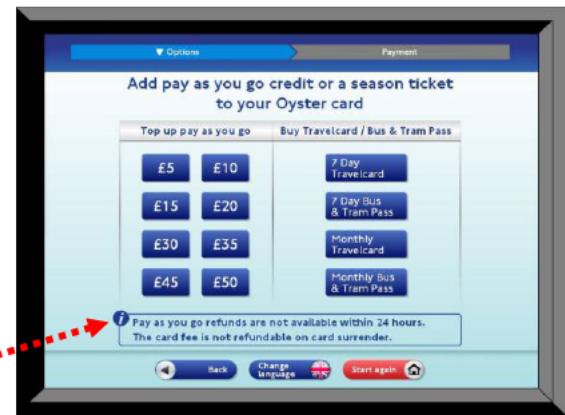
Either way, the changes were successfully implemented across LU devices as planned.

As a reminder there were 5 main changes delivered:

- Standardisation of messages displayed when any cancelled or disabled Oyster card is checked on a POM
- Standardisation of Travelcard ranges displayed on POMs and TVMs at all LU stations to reflect most popular zonal combinations from each station
- Update of Refund information on screen displayed when a new Oyster card is purchased
- Removal of the 2- and 3-Day Visitor Ticket option from trial stations
- Standardisation of PAYG top-up buttons at stations that had participated in a previous trial of a £3 button.



PAYG refunds are not available within 24 hours.
The card fee is not refundable on card surrender



UNSCHEDULED G4S VISITS

One of the most common topics of emails and calls to the T&R team over the last few weeks, has been around unscheduled G4S visits to stations. These fell in to two main categories, visits to stations that had temporarily gone cashless and had successfully completed their final collection and visits to stations that are still accepting cash, on days that we had asked to be removed from the schedule back in April, when customer numbers had fallen sharply and less money was being accepted by our POMs.

Unfortunately, due to limitations within the G4S scheduling system, they couldn't suspend services indefinitely, so in many cases our collections were suspended by their scheduling team for a maximum 8-week period. Unfortunately, the volume of change requests we had submitted from different dates, led to a batch of suspensions "expiring" and services automatically being reinstated. This led to a sudden surge in the number of reports of G4S Custodians turning up when we weren't expecting them.

We have since met with G4S to try and resolve the issue and they now believe that they have cross checked all our requirements with their schedules. We are therefore hopeful that there will not be any further unscheduled visits after 05 August.

Changes in other sectors served by G4S mean that their services have been under considerable pressure for additional collections and it has therefore been quite difficult for them to respond to requests for reinstatement of services, or for additional collections to be made from sites, so please bear with us whilst we try to get these sorted out.



Part I – The RSLU stations (Queens Park to Harrow & Wealdstone on the Bakerloo, plus Kew Gardens and Gunnersbury on the District Line) are now operated by LU...

Q1) ...but do you know which franchise operated these stations prior to London Underground?

A	Arriva	B	LOROL
C	North London Railways	D	Silverlink Metro



Answers on Page 15

GREATER ANGLIA ITSO

Greater Anglia smartcards were originally launched back in January 2016 and as with other ITSO cards issued by Train Operating Companies (TOCs) customers can use them on a variety of TfL services.

These cards may be loaded with Travelcard products which are valid for travel on LU services. If the card fails to work the gates, the reject code must be checked. ITSO cards can also be checked on a POM or TOM, but products cannot be added on LU devices.

Since June 2020, a new design of GA ITSO card has been available to customers bearing the "GA hare" logo as shown in image 2 on the right.

Both designs of Greater Anglia Smart Card show the holders name but not their photo, as such customers must carry an accompanying National Rail photocard on all journeys made using a Smart Card. To be valid, the name on the smartcard and the National Rail photocard must match.

DID YOU KNOW?

The GA Hare forms the backbone of a marketing campaign promoting the introduction of their 'Hare Fares' and a modern fleet of trains.

The Brown hare, with its long, black-tipped ears is a familiar sight in East Anglia, is the UK's fastest land animal and responsible for the Easter Bunny and the Mad March hare characters. In decline since the 1960's, East Anglia remains one of the UK's last strongholds for this magical leporidae.



All ITSO smartcards can be read by RCI Revenue Inspection Devices (RIDs), LU Passenger Operated Machines and the TOM.

Customers can find more information on this card and fares from www.greateranglia.co.uk/smart.

Any GA ITSO holders reporting issues with their Smartcard, must be advised to contact Greater Anglia Smartcard Support team or visit the website above.

HAPPY 20TH BIRTHDAY TO TfL

As we have stated in previous editions of TRU, over the last few months the news in general and a lot of the stories we have carried, have been very much dominated by the COVID19 Pandemic.

Under normal circumstances, we would have celebrated the 20th Anniversary of TfL on 03 July. The organisation was formed on 03 July 2000 to bring all of London's Transport under one umbrella and saw London Underground become a subsidiary of the new undertaking.

It had been planned to celebrate the event with a further "limited edition" Oyster card, but the pandemic meant that the supply of cards which had already been produced have not been distributed. So you could say that they are an "extremely limited edition". We haven't even seen the proposed design, so we will leave you to speculate or come up with your own suggestions!



Part 2 – Stations within Zone 1 used to have an additional piece of equipment called a SARI alarm fitted to the rear of their POMs which highlighted the activation of the old seek assistance alarm by a customer, to any staff who may be working within the POM room behind the device....

Ticketing & Revenue Trivia

Q2) ... do you remember what SARI stood for?

- | | |
|--|------------------------------------|
| A Siren Activated - Response Important | B Seek Assistance Repeat Indicator |
| C Sounding Alarm Requires Input | D Select Automatic Reset Icon |

Answers on Page 15

SOCIAL DISTANCING - THE DO'S AND DON'TS OF POM STAFF FUNCTIONS

In order to comply with government guidelines on social distancing the following measures have been put in place when assisting customers at POMs.



5 Golden Rules

1. Maintain social distancing.
2. Ensure you and the customer both have a face covering in place.
3. Keep at least 2 metres apart from customers.
4. Avoid handling a customer's cash and / or tickets.
5. Wash your hands afterwards.



THE FOLLOWING POM STAFF FUNCTIONS ARE TEMPORARILY SUSPENDED

RESOLVING JOURNEYS	Do not resolve journeys on POMs and instead advise customers to access their online account and resolve their journeys from there or call the Customer Contact Centre. <i>Please note this is a change to the current procedure listed in T&R Book 3, Section 7.</i>
FAILED OYSTER CARDS	Do not replace failed Oyster cards via the POMs. Customers should be advised to obtain a new Oyster card and link this to their old card using their online account.

THE FOLLOWING POM STAFF FUNCTIONS CAN STILL BE CARRIED OUT BY STAFF

FARE PAID TICKETS	<ul style="list-style-type: none"> • Sign on to staff facilities on the POM using your Staff Oyster card • After signing-on, select the Fare Paid option and input the appropriate charge. • Move away and ask the customer to make the payment. • When the customer has moved away select confirm to finalise the transaction. <p><i>If you don't have a TSID or CSID and are unable to add a discount for a customer, you must advise them when a qualified member of staff will be available to assist them or where a discount can be added.</i></p>
ADDING / UPDATING PRIV DISCOUNTS	<p>When a customer requests the setting of a Privilege discount on their Oyster card, you must:</p> <ul style="list-style-type: none"> ➢ Sign on to staff facilities on the POM using your Staff Oyster card ➢ Check the customer's Privilege Ticket Authority Card (PTAC) or NR Staff Travel Card ➢ Ensure that the customer has a fully completed and authorised Privilege Discount Application form or Privilege Season Ticket Application form if setting the Privilege discount for the first time. (If the Privilege discount is being updated then an authorisation form is not required) ➢ Move away from the POM and ask the customer to touch their Oyster card onto the reader. ➢ Ask the customer to move away from the POM. ➢ Update the photocard number field with the serial number shown on the PTAC or NR Staff Travel Card not the number of the supporting photocard (do not use any other sequence such as 1234 or XXXX). ➢ When setting the discount, ensure the correct type of discount is set; Priv All Rail for employee and child dependants and Priv All Rail N for spouse / partner. ➢ Take care not to overwrite any other valid discount entitlement. ➢ Update the expiry date of the discount with the date shown on the supporting PTAC, NR Staff Travel Card or the expiry date of the season ticket as shown on Privilege Season Ticket Application ➢ Move away from the POM and ask the customer to touch their card onto the reader to finalise the transaction.
ADDING / UPDATING OTHER DISCOUNTS	<p>When a customer requests the setting of a discount entitlement on their Oyster card, you must:</p> <ul style="list-style-type: none"> ➢ Sign on to staff facilities on the POM using your Staff Oyster card ➢ Check the customer's discount entitlement to ensure the date is valid and other details are correct. ➢ Move away from the POM and ask the customer to touch their Oyster card onto the reader. ➢ Ask the customer to move away from the POM. ➢ Update the photocard number field with the serial number shown on the Railcard number or supporting photocard number (do not use any other sequence such as 1234 or XXXX). ➢ When setting the discount, ensure the correct type of discount is set. ➢ Take care not to overwrite any other valid discount entitlement. ➢ Update the expiry date of the discount with the date shown on the supporting Photocard. ➢ Move away from the POM and ask the customer to touch their card onto the reader to finalise the transaction.



Photocard fields **must not contain any blank spaces**. Example - YV090820 (✓) and **not** YV 09 08 20 (✗)

THE FOLLOWING POM STAFF FUNCTIONS CAN STILL BE CARRIED OUT BY STAFF

YOUNG VISITOR DISCOUNT PHOTOCARD FIELD 	<p>Visitors to London with children under 16 years of age, who are not in possession of a Child Oyster Photocard, can have a temporary Young Visitor discount set on a standard Oyster or Visitor Oyster card.</p> <ul style="list-style-type: none"> ➤ <i>The discount can be set for the duration of their stay in the capital, up to a maximum of 14 days.</i> ➤ <i>Both the child and a responsible adult must be present at the time of application.</i> ➤ Sign on to staff facilities on the POM using your Staff Oyster card ➤ Move away from the POM and ask the customer to touch their Oyster card onto the reader. ➤ Ask the customer to move away from the POM. ➤ Update the photocard number field with the letters "YV" followed by the date the discount is set in the 6-digit format as shown in the image on the left (do not use any other sequence such as 1234 or XXXX). ➤ Ensure the date of expiry is set to no more than a maximum of 13 days following the date of issue. ➤ Move away from the POM and ask the customer to touch their card onto the reader to finalise the transaction. <p><i>Please note - if the Photocard field already has a date shown, this will be an indication that the card has previously had the YV discount set.</i></p>
PRIV SEASON TICKET RENEWALS	<p>Providing a customer has a valid PTAC or NR Staff Travel Card and an authorised Privilege Season Ticket application form, their discount must be updated using the following steps:</p> <ul style="list-style-type: none"> ➤ <i>Check the application form has been completed and authorised.</i> ➤ <i>Take the form and note the Staff Travel Card / PTAC number.</i> ➤ <i>Ask the customer to move at least 2 metres away from the POM and sign onto the POM staff screens.</i> ➤ <i>Select the Discount entitlement option.</i> ➤ <i>Move at least 2 metres away from the POM and ask the customer to touch their Oyster card onto the reader. Ask the customer to move away from the POM.</i> ➤ <i>Update the Priv discount entitlement expiry date to match the expiry date of the required season ticket.</i> ➤ <i>Check that the NR Staff Travel card / PTAC number is recorded correctly in the Photocard field. Confirm the details.</i> ➤ <i>Move away from the POM and ask the customer to touch their card onto the reader to finalise the transaction.</i> ➤ <i>Advise the customer that their discount entitlement has now been updated and that they should now be able to purchase their Privilege Season Ticket from the menu on the POM.</i> ➤ <i>Place the Privilege Season Ticket Application in your V&C bag.</i> ➤ <i>Ensure you wash your hands as required.</i>

CHECKING TICKETS

TICKETS NOT WORKING IN THE GATE	<p>Check all gateline POD codes and tickets from a safe distance. Allow any customers with valid tickets through the gates using the "One Shot" facility on either the gate or from the SCU.</p>
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OLLY ON FURLOUGH?

TRU readers may have noticed the absence of our normal Ask Olly feature from this edition. Unfortunately, since his workload has dried up recently, we have been forced to take the very hard decision of putting Olly on temporary Furlough leave. Well at least that means that the Government will be paying his salary for the time being.

Over the last couple of months enquiries to the Ask Olly email inbox have been relatively light, but we know life hasn't suddenly got simpler and we feel sure that lots of you have questions you would like answered, or have seen something that doesn't seem quite right. A number of issues which have previously been highlighted via Ask Olly, have subsequently resulted in changes being made to devices, customer screens on POMs and instructions.

So, it is a good vehicle for highlighting where improvements can possibly be made – although we can't guarantee that everything suggested can be implemented and some things may take a while to happen. Therefore if you have a query, or a different interpretation of a process to a colleague and you want an answer, then please send them to:

When Olly gets back, he will respond to you as soon as he has an answer and we aim to publish a further selection of enquiries in future editions of the TRU.

askolly@tube.tfl.gov.uk



POM SCREEN IMPROVEMENTS

On Page 2 of this edition, we take a quick look back at some of the recent POM changes that were implemented on Sunday 12 July.

Amongst the changes was an early attempt to clarify the messaging to customers buying a new Oyster card and highlighting at the time of purchase, that the £5 card fee is now not refundable if the card is surrendered.

A recent review with Cubic as part of the on-going work of the joint TfL / Cubic POM Storyboard Working Group, which progresses all changes to the customer screens on POMs, also identified that much of the information displayed to customers on the POM "Home" screen needs a bit of an update.

One particular issue is around highlighting the availability of contactless payment to customers considering the purchase of a Single ticket, Return, or obtaining an Oyster card.

Earlier this year, it was highlighted by staff at Heathrow, that if the "Quick ticket" button for a "Singles to Zone 1" was selected, customers were advised that contactless was available as an alternative, but this messaging did not appear if the Return to Zone 1 button was selected or for any other options.

Not surprisingly it is not uncommon to find customers struggling to decide what is best for them but being unaware that they could actually use their contactless payment card or device to pay for their travel directly, at the same or a cheaper price.

Currently we are looking to revamp the "Home" screen, to make contactless a more prominent option, as it is felt that the current version (at the top of the page) tends to promote other options such as Oyster prominently, without providing information on contactless payment as a better alternative for customers.

The redesign of this important screen is at the early stages of discussion, but some possible options have been produced which are reproduced on the right.

The three screens all provide more prominent information on the option of using contactless payment when compared with the present home screen.

The third option probably best balances the main three travel options available to customers who are unfamiliar with the network.

More work is needed on the actual wording, but it is hoped that the change can be delivered as a relatively "quick win" possibly as part of a change planned for November.



CURRENT HOME SCREEN



OPTION 1



OPTION 2



OPTION 3

BANKING PILOT UPDATE

As part of the transition to a new TfL wide banking contract with HSBC, a pilot of revised banking arrangements started at 10 locations served by the G4S Harlow branch on Sunday 28 June.

We had originally planned to pilot the revised arrangements at around 40 locations served by Harlow, but a number of the stations originally selected for this pilot, are currently not accepting cash and therefore cannot participate.

The locations initially involved in this pilot were:

DAGENHAM HEATWAY	EAT HAM	PLAISTOW	UPTON PARK	STRATFORD (East)
STRATFORD (Mezzanine)	STRATFORD (North)	EPPING	LEYTON	LEYTONSTONE



Shortly after the pilot commenced, it was discovered that as a result of a recent G4S branch re-organisation, the number of LU sites serviced from the G4S Harlow branch had increased, with a number of these continuing to accept cash.

As a result, several additional stations which are now served by G4S Harlow were then added to the pilot at the start of the second period of operation.

We added the following locations to the pilot with effect from Sunday 26 July:

SEVEN SISTERS (High Rd)	SEVEN SISTERS (NR)	WALTHAMSTOW CENTRAL	TURNPIKE LANE	WOOD GREEN
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Within the first four weeks, things have generally settled down after some initial teething problems in the first week. This primarily involved incorrectly presented cash sacks being delivered to the new cash processing centre.

This involved sacks being unnecessarily over-bagged within a grey G4S Transportation Sack which then did not align with the number shown on the sack contents slip and a couple of instances of sacks removed from the CHD before the start of the pilot, being remitted without the necessary receipts.

All being well, we next plan to extend the pilot to a number of additional stations in the south and west of London, which are served by other smaller G4S depots at the end of August for the final 4 weeks of the 3-month pilot.

We then plan to start the progressive rollout of these new arrangements to all other stations in the autumn.

The programme must be completed before the end of the year, as Santander who currently process all our coin deposits, have advised us of their intention to withdraw from cash processing operations in December.



VAULTEX



THE KEY POINTS



The changes being implemented as part of this pilot are primarily around the processes followed by the Custodian when collecting from a station and how the cash is subsequently processed.

- ▶ CHD receipts will now include a barcode for sack number and bank account details
- ▶ CHD receipt is to be placed in a self-adhesive pouch and applied to the outside of the CHD sack when removed
- ▶ Note sacks and any Cash Transportation sacks created will now be processed by Vaultex rather than G4S
- ▶ Bulk coin bags will now be processed by Vaultex rather than Santander

Within the last couple of weeks there have been some teething problems with the paying in documentation for bulk coin and as a result we are currently exploring accelerating the process of moving all coin processing from Santander to Vaultex.

The new TfL banking contract already included the transfer of coin processing to Vaultex who operate cash centres on behalf of HSBC.

SEPTEMBER FARES REVISION

SEPTEMBER CHANGES

The next fares revision is scheduled to take place on Sunday 06 September and as we outlined in previous editions of TRU, many elements which we had originally intended to implement a part of the May Fares Revision, have been rolled forward to be included within this year's September Fares Revision.



As outlined on Page 02, some of the elements relating to changes to POM screens, have already been implemented by Cubic ahead of the September date, as part of a scheduled base data update on Sunday 12 July.

Other changes that are scheduled to be made as part of the September Fares Revision are:

- Changes on Heathrow Express, to charge Peak fares all day
- Changes to a small number of NR fares and through fares from LU to NR destinations. This means that there will be new versions of the Staff Fares lists showing NR fares.
- Provision of fares data for stations on the Northern line Battersea Power Station Extension which is currently under construction. This will include Out of Station Interchanges (OSIs) between the new LU Battersea Power Station and two nearby NR stations (Battersea Park and Queenstown Road). The new destinations will not appear on POMs at other stations yet, but the provision of the fares data will allow testing of devices at the new stations, once they are installed.
- A new same station OSI will also be provided at Highbury & Islington, to accommodate customers interchanging at the station, who may be required to leave the Overground platforms via a secondary exit and newly installed PVals, before re-entering through the gates in the ticket hall to change onto the Victoria line of Great Northern services.
- Removal of the Croydon stations as destinations from POM screens at Wimbledon Park and a number of other stations in Wimbledon/Morden area of south west London. These stations historically have not offered through fares to stations in Croydon on POMs, due the complexity of potential routes that could be used. Currently, as previously highlighted in an Ask Olly letter in [TRU125](#), the selection of any of the Croydon destinations at the stations affected, results in the customer being shown an error screen.

CHANGES TO CONCESSIONARY FARE SCHEMES

As part of a package of changes linked to the Government "bail-out" which we reported on in [TRU126](#), it had been proposed to make further changes to free travel concessions, with the next phase affecting holders of 16+ FTE (Fulltime Education) Oyster Photocards forming part of the September Fares Revision package.

It had been proposed that holders of these 16+ Zip cards would no longer be able to travel free on buses and trams and when their card was validated on a bus or tram reader, the holder would instead be charged a 'Half Adult' rate fare for their journey.



The issue that has potentially complicated matters, is around those pupils who are entitled to free travel to and from their school and how their requirements can be accommodated.

There was initially a question mark as to whether the whole of the September Fares Revision package might be deferred to a later date, but that in itself could have resulted in a number of complications particularly where TOCs changed some of their fares and we didn't.

Although we had delayed publication of this edition hoping for clarification, at the time of going to press with this TRU, no final decision had been made. A number of possible options were still under consideration, but it seems likely that this element of the fares revision will be deferred until a date later in the year, to allow more time to provide a technical solution to this free travel issue.

We will provide further updates via TRU128 or the weekly *Hot Issues Bulletin*.



The proposals relate purely to bus and tram travel and there are no proposals to change fares charged for journeys made by 16+ holders on LU or other Rail modes.

SEPTEMBER FARES REVISION

THE NAME IS THE SAME... BUT MAYBE NOT??

A lot of the changes that we feature in TRU are fairly visible changes to either hardware, the software or the functionality of our equipment. However, recently some work has been undertaken with colleagues in Cubic and TfL's Tech & Data team, to improve the reporting of information and standardise the description of individual locations across the network.

An initial review highlighted many inconsistencies in our data and lots of room for improvement and over the first couple of months of this workstream, we have been able to make some excellent steps forward.

On Sunday 28 June, we were able to make several changes to the Central System data, to ensure that stations reported against the right Areas and Lines. Something that had been wrong for around 4 1/2 years, since the last round of station ownership changes as part of the Fit for Future Stations process. This exercise also verified that all LU station names were consistent in both Cubic base data and the Central System.

As a follow on from this, we also identified some minor inconsistencies in the format of some station names and changes to address these are being incorporated into the September Fares Revision. These are not station name changes as such, but changes that we need to make to ensure consistency across all reports.

The stations affected are:

Station	NLC	Current Description	September Change
CANARY WHARF	0852	CANARY WHARF (E1) LU	CANARY WHARF LU
TOTTERIDGE & WHETSTONE	0730	TOTTERIDGE	TOTTERIDGE & WHETSTONE
LIVERPOOL STREET	0689	LIVERPOOL STREET BROADGATE LU	LIVERPOOL STREET LU(BROADGATE)
VICTORIA	0722	VICTORIA LU D	VICTORIA LU (DISTRICT)

The change at Canary Wharf is in preparation for the migration of all devices onto a single NLC (National Location Code), once changes to the gateline layout have been completed at the station later this year. Presently all devices, including POMs, on the main 0852 NLC are described with the location "Canary Wharf (E1) LU", whilst the Mezzanine gateline which has its own NLC, is described as "Canary Wharf (E2) LU".

The format of the descriptions for the new Liverpool Street (Broadgate) and Victoria (District) ticket halls which have their own NLCs will be amended to be consistent with the format of the names of other LU locations which have multiple NLCs.

Totteridge & Whetstone will in future reflect its full name in all reports, in a similar manner to the other comparable stations, Chalfont & Latimer and Harrow & Wealdstone.

These changes will take effect from Sunday 06 September. Although the impact of these changes will be limited to reporting, there may be some minor impact on journey transaction data as a result.

OTHER FARES REVISION ITEMS

❖ NR STAFF FARES REISSUE

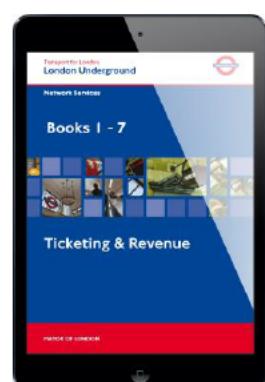
The fact that some fares set by other Train Operators (TOCs) are changing from Sunday 06 September, means that there will be new versions of the NR version of the Staff Fares lists. These will be uploaded onto the T&R Intranet pages on 'Platform' shortly before the fares revision and can also be accessed by [clicking here](#). Please note – LU fares are not changing and these fare lists are still valid.

❖ FARES REVISION CIRCULAR

A number of minor changes will also be made to the FRC in advance of the fares revision and will be available from 'Platform' or by [clicking here](#) from 06 September.

❖ T&R BOOKS & APPENDICES

We are aiming to publish updated versions towards the end of September. Publication has again been delayed by technical difficulties through not being able to access our offices at Pier Walk and on-going uncertainty around some of the changes that we need to incorporate, as outlined elsewhere in this edition.



SPECIAL FEATURE

THE CHANGING FACE OF CARD PAYMENTS

One area of payments where there has probably been the greatest amount of change over the years is in the use of bankcards to pay for travel.

Prior to the early 1990's Credit cards were only accepted at our ticket offices and then only for the purchase of a season ticket valid for a month or more.

The process for accepting them was somewhat cumbersome with the use of carbonated vouchers and a card imprinter device which took an impression of the embossed details of the customers card (card number, expiry date, issue number and customers name).



MANUAL CARD AND
VOUCHER IMPRINTER

Authorisation then had to be sought for the transaction by staff having to call an authorisation number. Once authorised the authorisation number was then written on the voucher.

Following completion of the transaction copies of the vouchers were then sent off to be processed at Head Office and if the voucher wasn't completed properly or was lost or damaged, LU potentially would not receive the money it was due. The process also meant there could be quite a time lag between the sale taking place and LU receiving the funds into its account.

The system was also highly reliant on the Ticket Seller (then Booking Clerk) checking the signature on the voucher matched that on the back of the credit card. The process also had an element of risk to potential frauds, such as the use of someone else's card, which if contested, would again result in LU not receiving payment, with little chance of then being able to stop the ticket that had been purchased.

The early 1990's saw the arrival of the first technology for processing card payments in our ticket offices, with the arrival of the Barclaycard PDQ machine, a terminal connected via a dedicated telephone line to Barclaycard. The customer's card was swiped through a magnetic card reader on the device and details of the transaction were then keyed in.

Authorisation was then sought and confirmed automatically, and a printed sales slip produced for the customer to sign. Providing the signature matched, the transaction was then confirmed and at "End of Day" all transactions were transmitted electronically to Barclaycard for processing. The slips from the PDQ machine were retained but were only really used to verify a transaction if it was contested by the card holder.



Initially introduced at Marylebone to cope with a high volume of National rail ticket sales and then at Northfields and stations at the west end of the Piccadilly line, devices were subsequently installed at all LU ticket offices.

Although completely separate from the Ticket Office Machine (TOM) the new device was a great improvement and greatly reduced the risk of non-payment compared to the manual voucher system it replaced. Apart from improving processing the technology also allowed card payments to be accepted for 7 Day and other tickets for the first time and allowed LU to start accepting Debit cards for the first time.

Further technological developments saw the processing of bankcard transactions incorporated into the new TOM and subsequently the ability to pay by bankcard added to MFM's.



↑ ORIGINAL MFM CARD ACCEPTOR

The initial mechanism for card acceptance on the MFM involved the customer inserting their card into the device for it to be read, processed and then returned to them at the end of the transaction.

The MFM also had the facility to retain cards if instructed to by the card issuer, so the device had a captured card bin which needed to be emptied when the device was serviced.

Unfortunately, one downside of the mechanism was that cards could occasionally get jammed and not returned to the customer.

SPECIAL FEATURE

THE CHANGING FACE OF CARD PAYMENTS continued.....



↑ OLD MFM CHIP & PIN UNIT

Further advances in technology saw the introduction of the first bankcard only device the Queue Buster Machine (QBM) and later the implementation of Chip & PIN technology on both POMs and TOMs to improve the security of card payments.

The first generation of Chip & PIN units were distinguished by a green "throat" into which the customer inserted their card to be read.

These avoided the card going completely into the device and processed the chip via a reader and read the magnetic stripe on non-chip cards as they were removed.

From 2016 all devices were progressively upgraded with the new Chip & PIN units currently in use.

Probably the biggest change in card payments came with the introduction of contactless payment, allowing customers to pay for their travel directly with a contactless bankcard, rather than having to buy a ticket or transfer funds onto their Oyster card.

Since its introduction on buses in December 2012, contactless payments have been extended to include all rail modes and additional features such as daily and weekly capping have been added, resulting in usage steadily increasing.

CURRENT MFM CHIP & PIN UNIT →



CHANGES TO THE 60+ LONDON OYSTER PHOTOCARD SCHEME

Since August 2019 all new applicants for the 60+ London Oyster photocard scheme have had to provide proof that they reside at an eligible London address on an annual basis. There is a £10 administration fee for each address check.

On the anniversary of the date their application was approved, holders will be sent an email with instructions on how to upload current proof of their London borough address via their online account and have 6 weeks to provide this proof, with a 3 week reminder.

The acceptable proofs of their name and address that can be uploaded are;



Dated in the last three months, in their name:	Current document in their name:
<ul style="list-style-type: none">➤ Residential utility bill;➤ Bank, building society or credit card statement;➤ Department for Work and Pensions letter;➤ HM Revenue and Customs letter; or➤ Occupational pension letter.	<ul style="list-style-type: none">➤ Council Tax bill;➤ Television licence;➤ Driving licence;➤ Council or Housing Association rent book or statement.

Customers who didn't make their original application for a 60+ photocard online will be offered an Identity and Verification letter by post which customers will need to complete and take along with an accepted form of proof of their London borough address to any Post Office in London.

This information will be added to T&R Book 8, Section 10 at the next official update.

REVENUE PROJECTS

NHU REPLACEMENT UPDATE

Our original plans to undertake a further Vanguard of the new Suzohapp 'Bill to Bill' note handling unit in 6 of our MFM's at various locations earlier this year, were rather derailed by the onset of the Covid19 Pandemic, which in March led to the suspension of installation work, after only 4 of the units had been installed at stations (2 BNA units at Vauxhall, 1 BNA at Pimlico and the first BNR unit at Camden Town).

The Vanguard stations saw a huge drop off in customers and POM transactions, whilst Pimlico was one of a number of stations that were closed to customers for an extended period.



Although Pimlico was one of the first stations to re-open, subsequently as part of the LU recovery plan, all of the planned Vanguard sites other than Pimlico are temporarily operating with POMs in card only mode. As a result, there has been very little useful data on the performance or reliability of the new units in the station environment since they were installed. Unfortunately the decision to temporarily stop accepting cash at a number of stations, has delayed the implementation of an improvement that would benefit staff at stations which are still taking cash. One of the main staff concerns has been the perceived frequency of note jams on the older note handlers and the number of resulting customer interactions in resolving issues for customers.

The new unit should be significantly more reliable and easier for staff to use, when compared to the current units we have in use. As a result, we are keen to restart the NHU Replacement Vanguard at a location which is currently accepting cash and has a reasonable level of customer usage. We are therefore planning to restart this Vanguard at Liverpool Street. This station has a mix of devices fitted with BNA and BNR units and one of the devices in the Main ticket hall is of the non-standard JLE design, which requires a slightly different hardware solution to accommodate the new note unit. Cubic were keen to include at least one of the JLE style devices within the Vanguard, to ensure the modified design was acceptable, before we attempted other sites.

The JLE style MFM's have slightly different components and internal dimensions are different. During development of the solution to accommodate the new Bill to Bill unit within our MFM's, it was identified that the fitting of the new unit was obstructed by the back of the Chip & PIN unit (PED). As a result in the drawing above right we have had to bring the PED unit slightly forward on these devices. However, we have had to try and do this in a way that makes the modified panel look as if it is an integral part of the device and not something someone has potentially attached to the device.

For MFM's which are currently fitted with a BNR unit, the new note handler can be fitted onto the existing note handler backbone. Devices which currently have a BNA unit will need to have the whole backbone replaced with a new backbone capable of holding the Suzohapp unit.



As we have previously outlined in earlier TRU coverage of the new note handler (NHU), the new devices will have the capability of being converted between Note Acceptor and Note Recycler by the addition of a recycler module to the unit. The Note vaults and servicing arrangements will be the same for all devices.

Installations were planned for week commencing 03 August, but this was delayed slightly due to an issue with some of the covers and supporting metalwork required, which needed to be modified before installation.

The first installations are currently planned to take place during the week commencing Monday 17 August instead. Three MFM's will be upgraded initially (MFM's 30, 33 and 34) with the update of the fourth a JLE style device (MFM31) likely to take place a couple of weeks later, when the modified JLE device solution has been fully approved.

Ahead of installation, some staff from the Liverpool Street area have been given the opportunity to view a unit already installed at Ashfield House, whilst Cubic are currently investigating the provision of a short video to assist with the briefing of staff on other areas, in the use of the new equipment. We are keen to ensure staff are well prepared but want to minimise the need for visits between stations, as we would normally do, for a similar type of upgrade.

GATE UPGRADES

EI AND PNEUMATIC GATE PODS

The rollout of the new E2 gate style Passenger Orientated Display to EI gates resumed at the end of May and to date, stations on the north end of the Metropolitan, western branches of the Piccadilly line, eastern end of the Piccadilly line and the northern part of the Bakerloo line have been completed.

Unfortunately, we have recently had to suspend this programme after a component issue was identified. This involved a missing insulation washer during the assembly of the new PODs within the Cubic workshop.

The impact of this, is that it can cause a low voltage current (less than 12v) to be fed into an insulated area of the display. If this does occur, it can cause the LED to go blank and then require replacement.



There is no safety risk involved, but the sites which have already been upgraded are now being revisited as part of a retrofit programme to correct this issue. This will involve the swapping of the current POD with one with the correct insulating washers fitted.

The units removed will then be returned to the workshop for modification, before being used to upgrade other sites. All the sites previously upgraded, will be retrofitted before we resume the upgrade programme. This is likely to take about three or four weeks to complete.

We are then hopeful of being able to commence the upgrade of stations in Zone 1 with the older Pneumatic gates, as we have previously explained in earlier editions of TRU, the improvement in information on the POD for both customers and staff is considerably greater on the upgraded pneumatic gate than on EI type gates.



The upgrade on these gates also requires the replacement of the Exit RTD, which currently has a small built in LED to show customers PAYG details on exit.



In future this information will be displayed on the new POD on both entry and exit.



EI BEAM LOGIC UNIT VANGUARD

After a number of different trials of various changes to the light beam arrangements which were undertaken on gates at various stations last year, Cubic have recently commenced the Vanguard of what we hope is the best option for improving the reliability and performance of the Beam Logic Unit (BLU), the set of light beams that detect the movement of customers through the walkway and control the opening and closing of the gate paddles.

The new arrangement was initially installed on all gates at Manor House and Swiss Cottage, whilst these stations were closed to customers. This was a useful training exercise for the installation teams and identified a number of issues arising from the different options previously trialled. Although not being used by customers, the gates were still exposed to dust blown at them by trains passing through the stations and when checked, it was confirmed that dust had not penetrated behind the new protective shrouds.

Following on from these two initial installations, the new arrangement has now also been applied to all the EI gates in the Paddington (Main) ticket hall. The rollout to other stations with EI gates is currently scheduled to commence on Monday 14 September, and we are likely to prioritise other deep tube stations at which dust levels are known to be higher and where BLU failures are traditionally higher. During the same visit, these gates will also be upgraded with the new Paddle Control software outlined on Page 14.

REVENUE PROJECTS

GATE UPGRADES – PADDLE CONTROL SOFTWARE

Another long running gate related project which we have previously outlined in several editions of TRU, involves the software that controls the operation of the paddles when an obstruction is detected as they are closing.

Revised software has been on Vanguard on E2 gates at Euston Square, Stratford (North), and Embankment for over a year and on the WAGs at these stations plus St James Park since the end of January. No issues or negative feedback has been reported during the extended Vanguard and therefore approved the start of the deployment of this software to other stations with E2 gates from Sunday 26 July.



Although this is a software change, it requires a visit to each gate by an engineer to replace a module on which the gate control software is housed. Initially we will be focussing the first 102 modules on stations with large E2 gatelines: Liverpool St (Main), Moorgate, Blackfriars, Charing Cross, Highbury & Islington and Old Street.



In parallel with this, we have continued an EI gate Paddle Control software Vanguard at Waterloo (Colonnade), Westminster, Bermondsey and Acton Town, in preparation for the rollout of this software to other sites with EI gates.

As previously outlined, the change affects how the paddles react to an obstruction being detected when closing and should reduce instances of customers or their property being caught between the paddles, as the gate continues to try to close. Deployment to other EI gates will commence on Monday 14 September, combined with the rollout of a modification to the Beams that control paddle movements on EI gates (as outlined on Page 13).



GATE PADDLES

A further forthcoming gate trial will see the trial of a new light weight design of gate paddle, made of a composite material. There have been a number of delays to this project, primarily whilst fire testing was completed and more recently in the supply of the paddles by the manufacturers, due to the COVID19 restrictions.

It is currently planned to commence the Vanguard of this new design of paddle on all of the E2 gates and WAGs at Embankment towards the end of August. This is separate to the proposed trial of a higher gate paddle on gates at Stonebridge Park,

Hopefully in TRU128 we will be able to bring you some images of the updated gateline at Embankment and feedback on how this vanguard is going.

SCU COMPLETION

COMPLETED ✓

As we reported in [TRU126](#), the project to deploy the new touchscreen SCU to all LU stations is all but complete. At the time of going to press we have one outstanding installation to complete at Wembley Central, which has been hampered by the need to engage a specialist contractor to remove ceiling panels, before Cubic could run the new SCU cabling for the final device there.

We also have a small number of sites where we need to add an additional SCU to a Station Office, but these devices are unlikely to be completed until after the change freeze for the September Fares Revision has been lifted, as we need to arrange for base data to be updated to accommodate these devices correctly.

The long awaited SCU software upgrade, which will hopefully resolve a number of issues we have previously outlined in TRU, has been further delayed, whilst the resolution of the status of Route Validators being shown incorrectly will be dependent on the deployment of the SR8 reader software (see article on Page 15 opposite).



REVENUE PROJECTS

SR8 UPGRADE ON HOLD

As we went to print with TRU126, plans to extend the initial Vanguard of the SR8 card reader (RTD) upgrade were put on hold following the discovery of an issue with ITSO card “Flexi-pass” acceptance at some of the TfL Rail sites that were Vanguarding the upgrade.

Subsequently a decision was also taken that from the night of Monday 13 July, the two LU stations that had participated in the Vanguard (Buckhurst Hill and Fairlop) would have their card readers reverted to standard RTD software along with the TfL Rail sites which were also part of the Vanguard.



WHAT IS AN ITSO FLEXIPASS?

- A Flexipass allows customers to make 10 journeys on the same National Rail route within one month.
- Allows travel at anytime and saves money when compared to buying single or return tickets.
- Can be used any day of the week.
- There is no need to buy a ticket every time they travel.
- It is aimed at customers who work part-time or from home but need to make occasional work-related journeys.

Cubic are currently working on a fix for the issue “Flexi-pass” acceptance issue, which will then need to be put through a further cycle of testing before it can be released into a further Vanguard.

Although the use of these products are not really relevant to LU stations, it is understood that a number of the Train Operators (TOCs) will be promoting the use of such products in the autumn, in preference to standard period season tickets.

It was also discovered recently, that during the process of separating the SR8 upgrade from the contactless payment “Denied Exit charge” change, some of the reader fixes which had been incorporated into the “Denied Exit charge” element, had not been included within the SR8 release. Hopefully these defect fixes can now be included within the new SR8 Vanguard when it restarts.

Unfortunately, the timing of these events has not been great. We had a very limited time window to deploy the new reader software ahead of the September fares Revision and there is now insufficient time to restart the vanguard and complete the planned deployment of the reader upgrade before the fares revision.

As a result, we are currently expecting the new Vanguard to commence around Monday 14 September and providing that no further issues are identified, for the rollout to all other RTDs to take place a month later, on Monday 12 October.

As with previous RTD upgrades this would be achieved by a global release to all devices.



ANSWERS TO T&R TRIVIA

How did you do?

Pt.1	Q1	D	SILVERLINK METRO (founded 1997, ceased operations 2007)
Pt.2	Q2	B	SEEK ASSISTANCE REPEAT INDICATOR

...AND FINALLY!

MANUAL GATE UPDATE

This is another project which has been pushed back by this year's exceptional events, combined with the need to complete the testing and rollout of other projects.

We currently have two main types of Manual Gate at various stations around the network and due to components no longer being available for the older ABP design of Manual Gate (the mainly black version) as shown in the image to the right), Cubic have made the decision to remove or replace the remaining examples.

To achieve this, we have been jointly developing a programme to replace all of the ABP Manual Gates and either install fixed glass barriers, newer Cubic designed Manual Gates (silver versions) or in a couple of cases, to install a WAG where an entrance currently doesn't have one.



Since the resumption of installation work in May, we have continued to review the proposals for each location and are continuing to consult with the local areas concerned. Some concerns have been raised about the planned removal of Manual Gates at a couple of locations and we have therefore had to revise a couple of our original proposals.

Further discussions will continue, as there are also several stations where we are yet to complete the local consultation process due to the interruption of business caused by the COVID19 lockdown.

A further workshop was recently held with Cubic to firm up some of the schemes and help establish which components will be required to complete the programme. The programme will also involve the removal of the last of a non-standard JLE design of Manual Gate, which have their mechanism buried under the ticket hall floor and are incredibly difficult to maintain when they fail.

At some locations there is an opportunity to reduce the number of glass panels currently in place, as there is no longer a need to include the site of the old ticket office assistance window within the "paid area". We would welcome feedback from stations where such a change could be made. Hopefully spare panels "donated" from these locations can be re-used elsewhere where fixed glass panels are required to reduce the overall costs to the programme.

It now seems likely that the first installation work will not be possible before the middle of October and at present there is a lot of competition for labour resources with other projects which are quickly gaining momentum.

We will of course update you further on progress and likely dates for work to commence in the next edition of TRU.

LOOKING AHEAD TO TRU128

Our next edition of TRU is scheduled for publication towards the end of September and will include:

- A review of how the September Fares Revision went
- A feature on recent Charity donations
- Fraud Survey Results
- Updates on progress with projects
- A couple of further special features

Plus all of the latest T&R news stories and a selection of our other Regular TRU features.

And don't forget those questions to Ask Olly!.....

