

For the attention  
of all Station  
and Revenue  
Control  
staff



NOVEMBER  
2019

## INSIDE THIS EDITION

### IN THE NEWS

Pages 1-9 → Fares Revision Preview → TfL to Reading  
→ Express Validation → PAYG Expansion → Charity Results

### SPECIAL FEATURES

Pages 10-11 → Setting Discounts → Skimming Devices

### ASK OLLY!

Pages 12-13 → More of your queries answered

### OYSTER EXPLAINED

Page 14-15 → Text → Text

### PROJECT UPDATES

Pages 16-23 → POM Upgrades → MFM Note Handlers  
→ Polymer Notes → Gate PODs → Gate Upgrades

### LATE NEWS

Page 24 → Missed Collections → Looking Ahead to TRU122

### TRIVIA - Pages 4, 7 & 10

Answers on Page 23

# COUNTDOWN TO JANUARY 2020 FARES REVISION



It's that time of year again, when the evenings are darker, the temperature is dropping and Christmas items seem to be filling every shop!

As in previous years, we have devoted a chunk of our November edition of the T&R Update to taking a first look at the plans for the main fares revision which, as in previous years, is scheduled to take place on Thursday 02 January 2020.

Details of the main changes and some sample fares are outlined on Pages 2 to 4 inside.

This January's fares revision is the last fares revision covered by the current Mayor's "Fares freeze", which was promised for the 4 year period he has been in office.

## JANUARY FARES REVISION

As a result, all fares set by TfL (Bus, LU Singles etc.) will again be frozen (as reflected in the Fares Revision graphic above).

As in previous years, Travelcard prices and through fares to NR destinations, which are set by or in conjunction with other operators, will on average rise in line with the July 2019 Retail Price Index (RPI).

As in previous years, some fares may rise slightly more than the average and some less, due to the need to round prices to the nearest 10p unit.

THURSDAY

02 JAN 20

FARES REVISION!

### KEY STORIES INSIDE

Page 5

#### TfL RAIL TO READING

We give an overview on the ticketing arrangements for the westward expansion of TfL services.

Page 9

#### CHARITY RESULTS

Following on from our October edition, we feature the results of some recent charity events.

Page 10

#### SETTING DISCOUNTS

In our third feature looking at 2019/20 T&R key priorities, we look at the setting of discounts on POMs.

Pages 17-19

#### POM UPGRADES

We take a detailed look at the current POM upgrade programmes underway.

Page 22

#### GATE POD UPGRADE

We provide the latest update on the programme to replace PODs on E1 and Pneumatic gates.

# JANUARY FARES REVISION

**PRE**

**THURSDAY**

**02 JAN 20**

**FARES REVISION!**

Over the following three pages we outline some of the main changes included within this year's main fares revision and some initial information on the 2020 fares.

A comprehensive breakdown of all fares will be published within the January 2020 edition of the *Fares Revision Circular*, which is due for publication at the beginning of December. To simplify some of the tables in this year's edition, we will not be including some of the non-standard PAYG charges to NR stations outside of the numbered zones.

## PRICE CHANGES

### PAYG FARES ↓

PAYG charges for journeys wholly on TfL services will again be frozen at the 2016 prices.

Journeys wholly on NR and through journeys involving travel on both TfL and NR services will both change, as a result of the TOC element being increased. The revised TfL+NR PAYG fares are shown in the table to the right.

ZONES	TfL+NR PAYG Standard		TfL+NR PAYG Reduced	
	2019	2020	2019	2020
I	£4.40	£4.50	£3.80	£3.90
I+2	£4.60	£4.70	£4.00	£4.10
I-3	£5.30	£5.40	£4.30	£4.40
I-4	£5.90	£6.00	£4.60	£4.70
I-5	£7.00	£7.10	£5.00	£5.10
I-6	£8.20	£8.40	£5.60	£5.70
2+3	£2.30	£2.40	£2.30	£2.40
2-4	£3.10	£3.20	£2.50	£2.60
2-5	£3.80	£3.90	£2.80	£2.90
2-6	£4.40	£4.50	£3.00	£3.10

### DAILY PAYG CAPS ↓

In line with fares increases on the NR network, the prices of the Anytime Daily PAYG caps will rise between 20p and 40p depending upon the zones chosen.

ZONES	ADULT DAILY CAP		
	2019	2020	Increase
I+2	£7.00	£7.20	2.9%
I-3	£8.20	£8.50	3.7%
I-4	£10.10	£10.40	3.0%
I-5	£12.00	£12.30	2.5%
I-6	£12.80	£13.20	3.1%

### ↓ TRAVELCARD SEASON TICKETS

Unlike Bus & Tram fares which are set exclusively by TfL, Travelcard prices cannot be frozen, as fares covering National Rail journeys are not covered by the Mayor's Fares Freeze. As a result, the prices of Travelcard season tickets will increase by an average of 2.8%. The Weekly PAYG caps for users of contactless payments will also increase by the same amounts.

ADULT 7 DAY T/CARD & WEEKLY CAP			
ZONES	2019	2020	Increase
I+2	£35.10	£36.10	2.8%
I-3	£41.10	£42.40	2.9%
I-4	£50.50	£51.90	2.8%
I-5	£60.00	£61.70	2.8%
I-6	£64.20	£66.00	2.8%
2-3, 3-4, 4-5, 5-6	£26.30	£27.00	2.7%
2-4, 3-5, 4-6	£29.10	£29.90	2.7%
2-5, 3-6	£34.90	£35.90	2.9%
2-6	£43.90	£45.10	2.7%

### ↓ DAY TRAVELCARDS

The prices of One Day Travelcards will also increase in accordance with the Retail Price Index (RPI).

This means that One Day Travelcards within Zones I-6 will increase by 40p (Anytime) or 40p (Off Peak) and within Zones I-9 by either 70p or 40p.

ZONES	ADULT DAY TRAVELCARD			
	(ANYTIME)		(OFF PEAK)	
	2019	2020	2019	2020
I-4	£13.10	£13.50		
I-6	£18.60	£19.10	£13.10	£13.10
I-9	£23.50	£24.20	£13.90	£13.90

## FARES REVISION.... continued

### CHANGE TO EXIT THRESHOLD AT OVERGROUND & TfL RAIL STATIONS

As part of the fares revision changes on 02 January, changes will be made to the "Exit threshold" at London Overground and TfL Rail stations to mirror changes already made to stations managed by LU earlier in the year. Once implemented at these stations, it will allow customers that have failed to touch-in, to exit through the gates even if their PAYG balance is less than the minimum fare. Currently their card would be rejected with reject code 36.

The change may result in some cards having a larger negative balance, but will mean that customers are treated more consistently across the rail modes.



### POM DESCRIPTIONS

As part of the 02 January changes to POM screens, some minor adjustments will be made to improve the accuracy of information displayed.

**West Hampstead** - In a short stretch of road in North West London, there are three separate stations bearing the name "West Hampstead"; West Hampstead (London Underground), West Hampstead (London Overground) and West Hampstead (Thameslink). When trying to select the destination on the POMs, the West Hampstead (London Overground) field is currently too long to fit in the text box and only displays a portion of the name, which in some case may result in customers selecting the wrong station and routing. To resolve this issue the station name on the POM display will in future be abbreviated to West Hampstead (LO).

**Privilege Season Tickets** – The current POM screen description of "Priv Season – NR & TfL Rail" will be simplified to "Priv Season" to reflect the fact that it has been the only type of Privilege Season ticket available from our POMs for a number of years. The distinction was required to distinguish the product covering both TfL and NR services from a product for holders of restricted TfL rail only PTACs, who now cannot buy season tickets.

### NOT INCLUDED FOR JANUARY!

#### VISITOR TICKETING TRIAL

Unfortunately attempts to withdraw the sale of 2 and 3 Day Visitor tickets from POMs at the designated "Gateway" and tourist stations, have been unsuccessful and although sales of these have been very low they will now continue to be available until the May Fares Revision, which is the next opportunity to withdraw this product.



Hopefully in support of the desire to reduce dependence on magnetic ticketing, these will be finally withdrawn then.

#### POM OPTIONS

We had hoped that as part of the January Fares Revision package we would also be able to implement a change to LU POMs to allow customers buying a Travelcard season ticket, to clear a negative PAYG balance on their card within the same transaction, as is already the case on the TVMs.

Currently there are occasions where having not realised that their season ticket has run out, a customer may run down their limited PAYG balance and end up with a negative PAYG balance before they realise. Unfortunately at present, even if they add a Travelcard to their Oyster card, it will not work until the negative PAYG balance has been cleared.

Implementation of this change requires end to end testing to ensure that POM transactions are reported correctly to the Central System, but testing resources were not available to allow this change to be included for January. The item has therefore been added to the "shopping list" of items for the May 2020 Fares Revision, but we are hopeful that this element can be delivered as an early item to spread the workload, as happens from time to time.

## FARES REVISION... Continued

### PAYG EXPANSION TO READING

One of the most significant changes included in this January's fares revision changes is the expansion of PAYG acceptance for contactless payment users on the new TfL Rail service to Reading and at intermediate station between West Drayton and Reading from Thursday 2 January 2020. Daily and weekly capping will not apply when PAYG is launched, but is expected to be implemented later in the spring of 2020.

The PAYG fares to be charged are yet to be published and we will be looking to include these in our December edition (TRU122), along with detail of some temporary arrangements that will be in place for contactless users until capping is introduced.

Further information on ticketing on this new TfL Rail service is included on Page 5 (opposite).

Outside

### AUTO TOP UP

One aspect of the January Fares Revision scope that has already been delivered early is a change to the Auto Top Up (ATU) threshold, as Cubic had indicated that it would be preferable to deliver this aspect ahead of the main revision. As part of a base data release on Sunday 17 November, the threshold for triggering a top-up on cards on which ATU has been set was increased from £10 to £20.

This has been done largely due to a number of expansions of Oyster PAYG acceptance where higher fares apply (many above £10). This would potentially result in customers with ATU set, still ending up with a negative PAYG balance due to the fare exceeding the previous threshold.

The number of customers using ATU is relatively small and since the launch of the Faster Universal Load (FUL) facility, it is a lot easier for customers to top-up either on line or via the TfL Oyster app.

The higher threshold means that cards with ATU set will have to maintain a PAYG balance of more than £20 at all times.

### OYSTER CARD DEPOSIT

As mentioned in a number of the POM upgrade items in the *Project Updates* section of this edition, it is planned to make changes to the current Oyster card deposit arrangements early in the New Year. This change doesn't actually form part of the January Fares Revision, but is likely to be implemented not long afterwards.

Pages 17-20 provide a detailed update on the preparatory work being carried out to our station devices in readiness for this change and the software changes will be dormant until triggered by the implementation date.

The date for this change has yet to be finalised by TfL and has dependencies on updates also being made to the Central System and TfL back-office systems. It is expected that a public announcement of the change and the date that it will be implemented, will be made in early December and our next edition TRU122, which is due to be published just before Christmas, will hopefully be able to provide more detail on the implementation and how the changes to the deposit will operate in the future.

**Part I – Following on from the complexity of multiple stations with the same name..**

- Q.1** How many other London Underground stations (excluding those that are direct interchanges with NR stations) can you name, that share their name with another station?  
- There are 5... but we'll allow a couple of potential ones.



Answers on Page 23

## TfL RAIL TICKET ACCEPTANCE

As we outlined in [TRU120](#), from Sunday 15 December TfL will take over the operation of the current Great Western Railway (GWR) stopping services between London Paddington and Reading.

This service is transferring to TfL Rail ahead of it eventually becoming part of the Elizabeth line. GWR will continue to run other services from Paddington including some stopping services to Reading.

As previously outlined in earlier editions of TRU, customer Oyster cards will now not be valid on services beyond the Zone 6 boundary at West Drayton. Acceptance of PAYG for contactless payment users will not be available until after the implementation of the January Fares Revision on Thursday 02 January.

We have summarised below what will and will not be accepted for travel on the new service west of West Drayton.

Ticket or card type	Validity	Comments
Oyster Travelcard Season	✗	Extension ticket required for journeys beyond Zone 6
Oyster PAYG		Not valid beyond West Drayton
Contactless payment		Not accepted until 02 January 2020
Staff, Bus Operator Nominees, Retired Staff Oyster cards	✓	On TfL Rail services only. Visual inspection required at stations beyond West Drayton
5-10, 11-15 Oyster Photocard	✗	Buy Child rate Extension ticket or Single ticket
16+ Oyster Photocard	✗	Holders of 16-17 Saver can buy half adult rate tickets
18+ Oyster Photocard	✗	
Apprentice Oyster Photocard	✗	
60+ Oyster Photocard	✗	Buy Adult rate ticket
Elite Athlete Oyster Photocard	✗	
Freedom Pass	✓	On TfL Rail services only. Visual inspection required at stations beyond West Drayton
Veterans Oyster Photocard	✓	
Armed Forces (In full uniform with ID)	✓	

Ticketing arrangements on GWR services are unchanged and although some tickets will be valid on both TfL Rail and GWR services, there will not be universal inter-availability of all tickets as there are on some of the other joint NR and TfL routes.

From 15 December, the £80 Penalty Fare and TfL Penalty Fare rules will apply on the TfL Rail services, whereas GWR will continue to apply the existing NR scheme with a penalty of either £20 or twice the single fare to the next station the train is due to call at.



Further information on contactless PAYG fares, Entry and Exit charges applicable from Thursday 02 January 2020 and the interim arrangements until Daily and Weekly caps are introduced later in 2020, will be included within TRU122 and the January 2020 Fares Revision Circular.



## EXPRESS VALIDATION

An initial Vanguard of new card reader (RTD) software was implemented over two nights at the following stations;

Tue 05 Nov	EAST HAM	ELM PARK	FAIRLOP	HORNCHURCH
Thu 07 Nov	CANADA WATER	CANARY WHARF		CANNING TOWN

This, combined with an extensive Vanguard on Bus readers, allowed approval to be given for the deployment of this latest version of TR3 software to be given on Tuesday 18 November for the go ahead to be given for a full rollout to every card reader,

Deployment took place in the lead up to the night of Saturday 23 November with all devices then switching over to the new software for start of traffic on Sunday 24 November. On the Monday morning 99.3% of the 5946 rail readers have been upgraded, with the remaining 40 being by engineers that day. A total of 12121 bus readers were also upgraded representing 99.2% of the bus RTD stock.

Completion of this reader upgrade should improve general reader performance, but more significantly it paves the way for the launch of Express Validation for Apple Pay users. We had originally hoped to launch this feature earlier in the year, but issues with the previous version of RTD software forced us to take the decision to reverse the upgrade and revert all Rail and Bus readers to the previous version of software, due to concerns around reader performance and the level of failed card reads being reported.

The Express Validation feature should speed up validations at the gateline, by allowing Apple Pay users to validate their contactless payment, without the need to select and initiate the validation each time. Not only will this speed up the user's journey, but it will also benefit other customers by removing the "dither factor" where Apple Pay users previously had to wait for their device to be ready before validating and therefore delayed other customers waiting behind them.

Use of the new facility will require Apple Pay customers to have a compatible iPhone updated to the latest operating system scheduled to be released to customers on the evening of Sunday 01 December and to select the facility.



## YOU THOUGHT ONLY WAGS HAD FCFS MODE?

The recent installation of the new SCU at Sloane Square highlighted a rather strange issue, which appears to have existed since the new gateline at the station was installed. After the SCU was commissioned, it was discovered that it was displaying most of the gates as WAGs, with the corresponding buttons being a slightly different shade of green to conventional walkways.

It was initially thought that the issue was a base data related problem, but Cubic quickly established that the base data was in fact correct. The true cause of the problem was identified as being down to an error when the gateline had been commissioned and the wrong configuration data had been entered for most of the gates, resulting in them thinking they were WAGs.



Historically it had been believed that if this occurred, the gate would fail and display a corresponding error, but recent testing at the Cubic System test facility established that if the WAG data was input into a normal walkway, the gate worked correctly on both entry and exit despite being configured wrongly.

In a further test it was established that the gate would also operate in "First Come First Served (FCFS) mode, something that had not been noticed at the station.

The situation has since been rectified by a further engineer visit to re-enter the correct configuration data into each gate. All gates are now reporting correctly shown on the SCU as Reversible Gates rather than as WAGs.



## CHANGE DELIVERY DISCREPANCIES

Although we “recycle” large amounts of coin, many of our stations rely on deliveries of change each week, to keep POMs floated. When bags of coin that have been delivered by G4S are subsequently opened, we sometime find that the contents are not correct or they may contain invalid coins which the CHD then rejects.



Our procedures require discrepancies in change deliveries to be reported to the FSC (Financial Services Centre - which is shortly to be renamed Business Support Services following a further restructuring of this area of TfL). Up until now this has had to be done via a phone call, but as highlighted within an [Ask Olly](#) letter in [TRU119](#), this is often difficult if the discrepancy is discovered outside of office hours.

Although these discrepancies may be small, one coin missing from a each of a large number of bags can soon mount up and in the past we have been able to claim back such losses from the institutions that supply us with change.

As a result a new process is being introduced with effect from Sunday 01 December, under which instead of reporting discrepancies via the phone, they will instead be reported using a new online form. This can be accessed either via the T&R section of the Intranet, where it can be found on the same tab as the intranet version of the Missed Collection Notification, or by [clicking here](#).

When completing the proforma, you will only need to complete the following mandatory fields;

1. Secure Suite (select from the dropdown list)
2. Date (Automatically populated with Today's date, change if required)
3. Your TSID card number
4. Bag number (enter the bag number only no hyphen, field will be formatted automatically)
5. Denomination of coin within the bag
6. Actual contents of the bag (the amount and type of discrepancy will then be automatically populated).

Once completed use the submit button at the bottom to email the form directly to the new dedicated mailbox. A reference number will no longer be given, but the email submission will provide a record that you have submitted the discrepancy. As with the previous procedure, details will need to be recorded in the Secure Suite Log Book and the bag and a note identifying the date and amount of the discrepancy placed in the correspondence multi-safe bag.

In cases where foreign or invalid coins are found, when remitting these in an Invalid Currency bag, please ensure that the source of the coin (e.g. Change Delivered) is written on the outside of the multi-safe bag.

TRANSPORT FOR LONDON TRANSPORT FOR LONDON TRANSPORT FOR LONDON

»TUBE : TICKET : TRIVIA«

Number 180560 02 0567 Issue date 21/11/19 0803 Price £17.00

London Transport issued subject to conditions - see over.

Q2 – Do you remember the colour for each area?

Match the number to the letter.

**Part 2 – To help identify irregular travel, tickets and Travelcards used to be issued on magnetic stock with coloured sector triangles that were unrelated to the Zones. Staff could then visually identify from which one of the 5 London areas it had been issued.**

1		No triangles
2	▲▲▲▲	Blue triangles
3	▲▲▲▲	Green triangles
4	▲▲▲▲	Red triangles
5	▲▲▲▲	Yellow triangles

Ticketing & Revenue  
**T & R**  
Trivia

Answers on Page 23.

A	NORTH LONDON
B	EAST LONDON
C	SOUTH LONDON
D	WEST LONDON
E	CENTRAL LONDON

## CONTACTLESS PAYG EXPANSION GOES FURTHER

From Tuesday 26 November PAYG was expanded for Contactless payment users on Great Northern services to Welham Green station and both Thameslink and Great Northern services to Hatfield and Welwyn Garden City stations.



Fares to these stations are set by Govia Thameslink and sample fares to Zone 1 are provided below;

Contactless PAYG will be valid to travel to:		
HATFIELD	WELWYN GARDEN CITY	WELHAM GREEN
For customer facing purposes, these stations are outside the Zones and 'special fares' apply.		
Adult Single PAYG fares	Standard	Reduced
Great Northern Welham Green to Zone 1	£9.90	£7.30
Thameslink Hatfield to Zone 1	£11.10	
Great Northern Welwyn Garden City to Zone 1	£11.50	£8.90

- Welwyn North
- Welwyn Garden City
- Hatfield
- Welham Green
- Brookmans Park

Daily and Weekly Caps will not be available on these routes until a later date. Price Caps will still be applied for any journeys made within the PAYG Capping area. **Oyster cards are not valid at these stations nor at Brookmans Park.**

Zone	Current Single Fares		PAYG valid on		Within Capping area
	Peak	Off-Peak			
Special Fares Apply	WELWYN GARDEN CITY	£11.50	£8.90	✗	✓
	HATFIELD	£11.10		✗	✓
	WELHAM GREEN			✗	✓
	BROOKMANS PARK	£9.90	£7.30	✗	✓
	POTTERS BAR			✓	✓
	HADLEY WOOD	6	£8.20	£5.60	✓
	NEW BARNET	5	£7.00	£5.00	✓
	OAKLEIGH PARK			✓	✓
	NEW SOUTHGATE	4	£5.90	£4.60	✓

The latest version of the PAYG Map is available from the [T&R Intranet pages](#) or by [clicking here](#).

## FEWER STICKERS!

The recent POM software upgrade (as outlined in more detail on Pages 17 to 19), means that we no longer need to have the small card scheme logo stickers (illustrated below) on our POMs, as this information now appears at the top the home screen.

These stickers should therefore be removed from devices, once they have been updated.



Recent station visits have also highlighted that a number of stations still have devices which are still displaying very out of date versions of the previous PED sticker.

Apart from the customer instructions being wrong, they also feature out of date card scheme logos. These should be removed immediately.

Following our articles in previous TRUs this year it was discovered that many of the stickers were not available from the quoted suppliers or had run out of stock and not been refreshed. T&R are currently assisting with the drafting of a new "Stickers" standard showing what stickers are required on POMs and Gates and where they can be obtained. This information will be published in both the Hot Issues Bulletin and TRU once formalised and agreed.



## ROYAL BRITISH LEGION – 2019 LONDON POPPY DAY RESULTS

In last month's TRU, we focussed a lot of our attention on a number of charity initiatives that were due to take place during the month of October. However, we failed to cover the British Legion London Poppy Day which this year took place on Halloween (Thursday 31 October) rather than in November, when a majority of the Remembrance activities take place.

As in previous years, London Underground supported the Royal British Legion by allowing collections at many of our stations and allowing the processing of the money collected at a number of stations to be processed via our Cash Handling Devices (CHDs).

The final results are still being finalised, but the amounts collected and processed at our stations are displayed in the table below.



Station	Amount
ALDGATE	£4,643.66
BAKER STREET	£3,305.04
BOND STREET	£12,261.71
CHANCERY LANE	£4,774.33
CHARING CROSS	£6,584.75
COVENT GARDEN	£4,107.84
EUSTON	£13,891.02
FARRINGDON	£985.40
GREAT PORTLAND STREET	£7,545.10
GREEN PARK	£8,358.10
HOLBORN	£7,675.56
KINGS CROSS	£16,113.44
KNIGHTSBRIDGE	£2,587.16
LEICESTER SQUARE	£4,949.29
MANSION HOUSE	£5,303.74

Station	Amount
MARYLEBONE	£13,903.09
MOORGATE	£7,727.65
OXFORD CIRCUS	£7,856.60
PADDINGTON	£19,004.49
PICCADILLY CIRCUS	£6,298.88
SLOANE SQUARE	£6,697.44
ST JAMES PARK	£5,974.68
ST PAULS	£6,377.74
TEMPLE	£1,869.90
TOTTENHAM COURT ROAD	£5,350.34
VAUXHALL	£3,446.36
VICTORIA	£23,243.23
WATERLOO	£45,021.90
WESTMINSTER	£6,030.33
<b>TOTAL (subject to final confirmation)</b>	<b>£261,888.55</b>

## WE MADE SOME NOISE

As we reported in [TRU120](#), on Friday 11 October Global's Make Some Noise charity held their annual "Make Some Noise Day".

The event which was featured on all of Global's radio stations was a huge success raising over £4 million pounds for the various small charities that are supported by Make Some Noise.



Everyone on the Make Some Noise team just wanted to say a **HUGE THANK YOU** to [REDACTED] and [REDACTED] of the LU T&R Team for volunteering in our call centre on Make Some Noise Day.

With their help, we took a phenomenal 1,816 calls in total and raised over £63k in phone donations.

All of this helped us to raise an incredible total of £4,097,325 on the day! The money you've helped us to raise will make a huge difference to the projects we're funding across the UK, supporting disadvantaged children, young people and their families.

This includes projects like The Children's Respite Trust, who provide a range of play opportunities and activities for children with disabilities, whilst giving the rest of the family the chance to benefit from much-needed respite time and counselling.

We would also like to thank any of our readers who supported the event and contributed to the phenomenal amount raised.

# SPECIAL FEATURE

## 2019-2020 PRIORITIES – PART 3

For the third in our series of articles focussing on some of the 2019/20 T&R priorities, we turn our attention this month to the subject of...

### SETTING DISCOUNTS

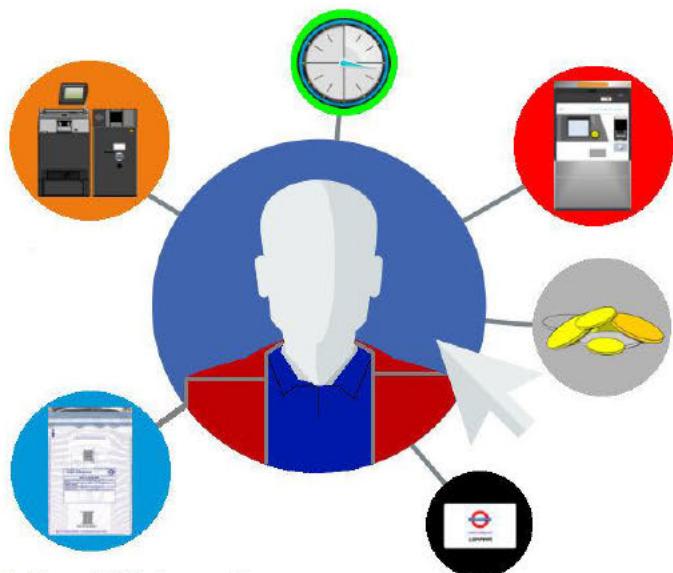
Recent reviews have highlighted a couple of potential concerns with this function. One from a customer service point of view, where eligible customers requiring a discount to be added to their Oyster card, regularly report that they are unable to get this done after visiting one or more stations.

This is a common complaint, particularly from holders of NR Staff Travel Cards.

Currently over 78% of station staff hold a TSID card and a further 19% have the restricted CSID PIN, so the percentage of staff who are not able to assist customers at the POMs should be very small (around 2%).

In the rare event of not being able to set the discount the customer requires, station staff should be arranging for another qualified member of staff to assist the customer, or confirming when / where someone will be available to set the discount for the customer.

The other major area of concern is around discounts being applied incorrectly, which may on occasions mean that a customer does not receive a discount they are entitled to, but more often than not results in a customer receiving a discount that they should not have and them then paying less than they should on all following journeys.



### 2019/20 PRIORITIES

- Reducing Discrepancies
- Failed Card replacements
- Settings Discounts
- PAYG Journey resolution
- Gateline management
- Ticketless travel



This obviously can represent a considerable loss of revenue to LU, if the discount is set for a long period of time. A number of recent cases of fraudulent use of discounts have been identified and are currently under investigation.

Some common areas in which errors are made are:

- Setting Young Visitor discount when not entitled (should not be used as a temporary replacement for a Zip card)
- Setting Young Visitor discount for a longer period than the 14 day maximum
- Setting the wrong type of Privilege discount (there are a number of different entitlements)
- Setting discounts without the supporting card or photocard being presented
- Entering an incorrect expiry date for the discount
- Not recording the correct PTAC/Staff Travel Card or photocard number

Part 3 – PAYG acceptance was expanded to 3 more National Rail stations in November; Welham Green, Hatfield and Welwyn Garden City. Without referring back to the article...



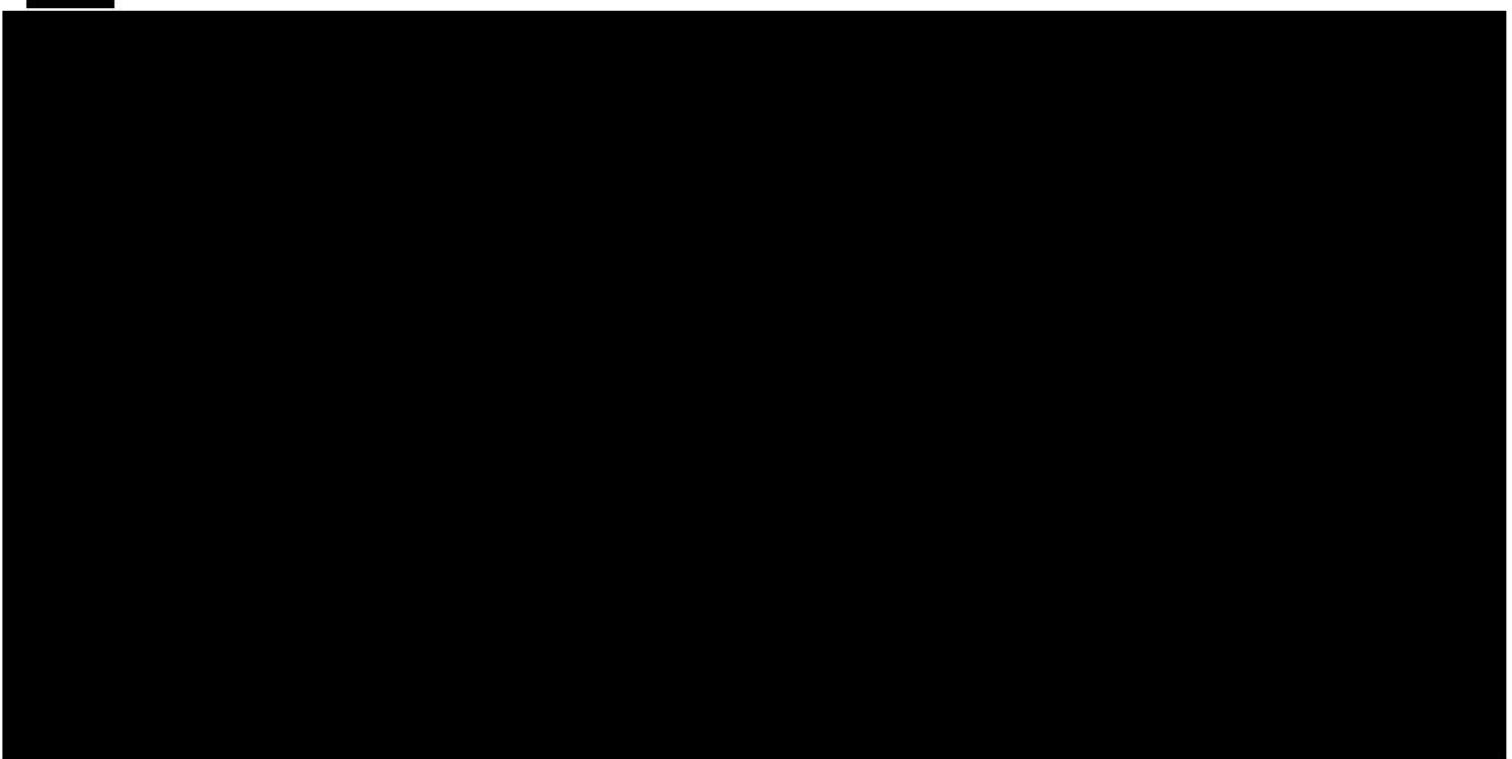
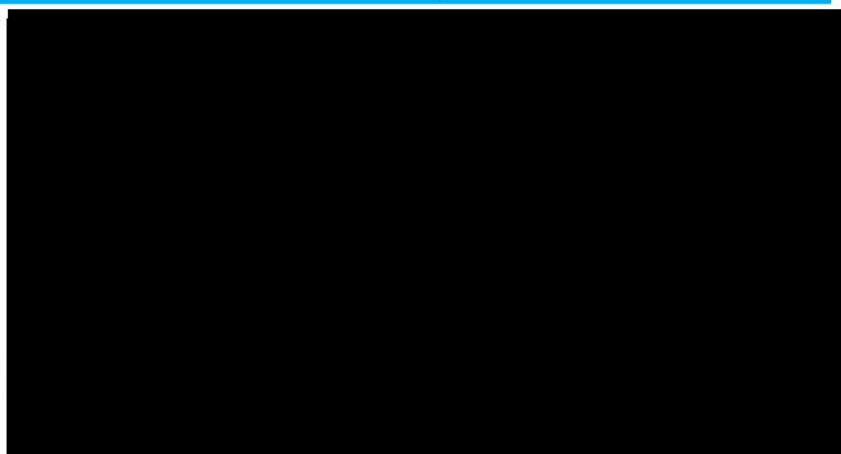
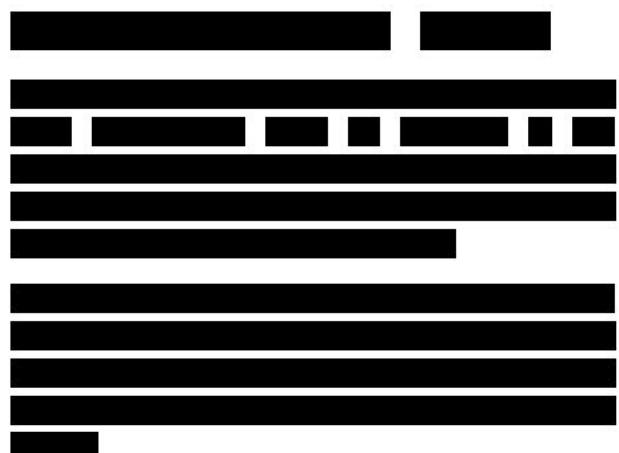
Q3) Which type of PAYG is now accepted to these stations?

- A Contactless only
- B oyster® only
- C oyster® & Contactless
- D None

Answers on Page 23

# SPECIAL FEATURE

## CRIMEWATCH SPECIAL FEATURE





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: [REDACTED]  
Sent: 19 November 2019 15:00  
To: Ask Olly  
Subject: TfL Rail Receipt / Refund

Hi Olly,

I'm working at Greenford and have been approached by a customer with a TfL Rail receipt, of payment of £10 via card. The lady tells me it didn't go onto her son's card.

I have asked her to bring the Oyster card with her next time to double check however this is the first time I've come across a TfL Rail receipt.

She wanted a refund and was adamant that someone told her to come to us and we could deal with it. Hypothetically if it didn't go onto the oyster could we refund it or should it be dealt with by TfL Rail?

Surely it should be dealt with where/on the machine she had made the purchase on?

Kind Regards,

[REDACTED]  
CSS  
Greenford Area

Hi [REDACTED].

Thank you for your email.

If she doesn't believe that she has received the top-up concerned and has been charged for it, she would need to take this up with the TfL Rail station where the transaction was undertaken.

On Oyster top-up transactions the bankcard is not normally debited until the actual product has been loaded onto the card.

As the transaction was undertaken at another operators station LU would not have received this money, so we cannot make a refund to the customer.

Regards

*Olly Oyster*

Hi [REDACTED]

Thank you for your email and query.

It is correct that holders of a CSID PIN should not be replacing failed Oyster cards.

The process should be to advise the customer to purchase a new card and then link their old and new cards online via their Oyster account. Products and the outstanding PAYG balance will then be transferred onto the replacement card.

In exceptional circumstances where the customer has no money or means of travel, a TSID card holder can replace the failed card, as they have the facility to check the balance and validity of the card, which **holders of the restricted CSID PIN do not have access to**.

Unfortunately there have been cases where cards have been replaced wrongly or customers have been credited with balance that they were not entitled to.

Regards

*Olly Oyster*

From: [REDACTED]  
Sent: 06 October 2019 07:25  
To: Ask Olly  
Subject: Replacing Failed Oyster Cards

Hi Olly,

I was approached this morning by my manager, who asked me not to replace Oyster cards anymore with my CSID card because as per procedure cards can only be replaced from the TOM so with a TSID card. Can you clarify on that please?

Every time that I have replaced a intermittently readable Oyster card I make sure that the replaced cards is cancelled; can that be checked on the system or there is no way for the system to find out that a card is replaced like for like and the replaced card is cancelled?

Because words like fraud were mentioned in the briefing my manager gave me and that was very upsetting and shocking to hear providing the fact that when I was trained four and half years ago the Replace Failed Oyster Card function button was introduced as counter measure for the closure of the ticket offices in the interest of customer service.

Regards

[REDACTED]  
CSA  
Balham Area

From: [REDACTED]  
Sent: 24 October 2019 15:49  
To: Ask Olly  
Subject: Charity Oyster refund option

Hi Olly.

I love the idea that customers will be able to donate their deposits to the Railway Children charity soon via the Oyster refund facility.

My only worry is that given the large number of foreign tourists and non – English speaking customers in general, that they are going to mistakenly press the charity refund button without realising what they're doing.

I think this has been previously demonstrated by the large number of people buying Bus & Tram cards by mistake. Potentially even more may make the mistake when the refund options are right next to each other on the MFM screens. (Even absent minded English speakers could press the wrong button and not realise before it's too late.)

Unlike the Bus & Tram cards, which could be refunded and the correct ticket sold, I assume there will be no way to refund an unwitting tourist who hits the donate button by mistake?

Will there be a warning message on screen, available in multiple languages, to prevent this? Or can the buttons be moved much further apart to distinguish between the 2 options? Otherwise I fear we will have numerous problems especially on stations such as Blackfriars that serve 2 airports.

Regards

[REDACTED]  
CSA1  
Blackfriars Area

Hi [REDACTED]

Thank you for your email and the points you have raised. Glad you like the idea of the new facility we plan to add to the MFM next year.

You are correct that we did have issues with overseas visitors misunderstanding the term "tram" as there are obviously differences between ours and networks that operate in other countries where the same vehicles often operate on the street and on segregated rail lines.

Eventually the new screens offering the donation facility will be translated into each of the languages available on the POMs.

On the screens that have been tested so far, the customer wishing to cancel and obtain a refund on their Oyster card presses the current refund button, but in future will be offered the option of a cash refund or to donate it to charity. If they select the charity donation option they are asked to confirm this, before being asked to represent their Oyster card to complete the transaction.

Before a full rollout takes place we will be having a Vanguard of the facility and we will use this to keep an eye on the level of use and whether there is any confusion amongst customers using the device.

Hopefully this has allayed some of your fears?

Regards

*Olly Oyster*

Hi [REDACTED]

Thank you for your email and raising this issue.

We have had issues with overseas visitors in particular misunderstanding the term "tram" and to address this, we made changes to the POM screens if the Bus & Tram Pass was selected to highlight that this was not valid on LU or other rail services. This significantly reduced the number of incidents where the wrong product was purchased, but obviously hasn't total eradicated it.

It is unlikely that we would be able to totally remove the word Tram as this may confuse those customers who genuinely might intend to use tram services.

Regards

*Olly Oyster*

From: [REDACTED]  
Sent: 15 October 2019 05:44  
To: Ask Olly  
Subject: Bus & Tram Pass

Hi Olly,

Is it possible that we can have the word "TRAM" removed from the description on the POM screens, as customers are purchasing this product thinking that they can use it on the Tube?

Regards

[REDACTED]  
CSS  
Acton Town Area

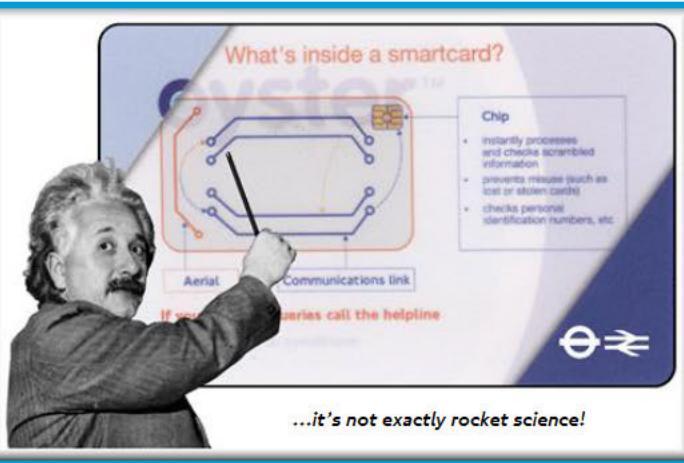
Join our **email Distribution List** to ensure you get the benefits from:

- the most recent edition of the TRU, on the same day it goes to the printers.
- having your own personal copy.
- access to archived copies.

- Send an email to: [REDACTED] [@tube.tfl.gov.uk today.](mailto:@tube.tfl.gov.uk)



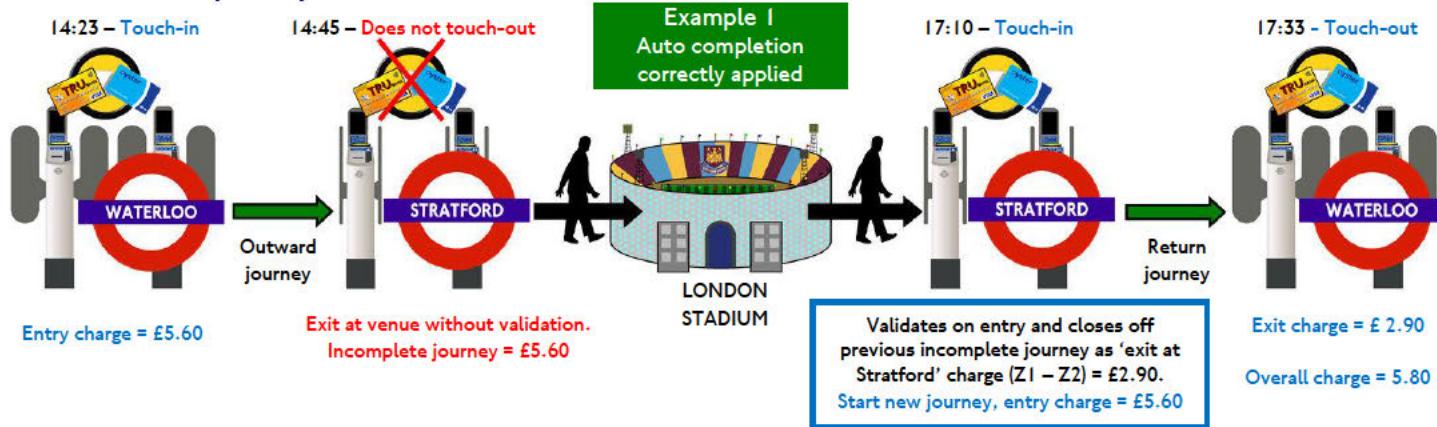
# OYSTER EXPLAINED



From time to time we receive requests to cover a particular topic in one of our Oyster Explained features. This month as a result of such a request we revisit a topic that we last partially covered in TRU100. Over time people forget the finer details of things and since then we have also had a lot of new staff join our stations team, so it's certainly worth going over things again.

## AUTO COMPETITION & AUTO CONTINUATION

Probably many of you will be familiar with the "Auto Completion" facility, as it is often used in conjunction with major events near stations or at times of disruption when it is not possible for customers to validate at the end of their journey.



The facility will automatically close off an unfinished journey that has occurred on that day, when the customer touches-in at the start of their return journey. This works very well for football and concert traffic, when there is a need to get customers out of the station as quickly as possible, but where the way-in flow needs to be more controlled to avoid over-crowding on platforms etc.

For the "Auto Completion" facility to work, there are some key points that you need to remember ➔

A variant of "Auto Completion" is "Selective Auto Completion" (SAC) which can only be set centrally and allows unfinished journeys occurring within certain time bands to be automatically closed off, over a period longer than the same traffic day. This helps where an incident happens late at night, and affects customers that are unlikely to be making a further rail journey during that traffic day. The facility is particularly useful for events like Notting Hill Carnival where customers may not make a return rail journey on the event day.

Auto Completion can be set centrally by the Cubic Help Desk or at station level from the new SCU which is currently being rolled out to stations. If set locally we need to be sure we are applying it for the right reasons and that it is removed when it is no longer required. If left on for too long, it will potentially resolve an incomplete journey that occurred elsewhere and customers might be charged incorrectly.

When setting, the new touchscreen SCU will display the following array button...

### THE KEY POINTS



- ▶ The facility only works for "Unfinished journeys", it will resolve an "unstarted journey" where the customer failed to touch-in.
- ▶ To work effectively, customers must touch-in at the start of their return journey. There have been occasions where customers have been prevented or discouraged from validating on the way in and this has prevented the setting working correctly and resulted in large numbers of customers being overcharged.
- ▶ It will only resolve an incomplete journey that has occurred on the same traffic day. Using the facility in the morning will not resolve unfinished journeys that happened the night before.
- ▶ The setting needs to be left in place to cover the period that affected customers are likely to be returning to the station (this is likely to be considerably longer than the actual event that triggered the setting being used)

Auto Complete

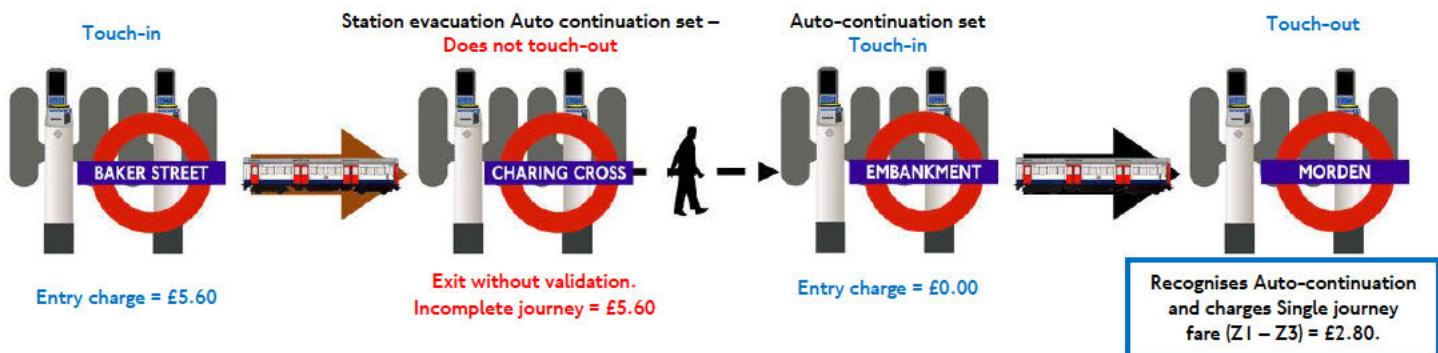
## AUTO COMPETITION & AUTO CONTINUATION

"Auto Continuation" is perhaps a less well known feature and one that has been known to cause some confusion amongst users.

This facility basically allows PAYG customers that have a current open journey, to enter a station and continue their original journey without incurring a further entry charge. It therefore works in a similar way to the Out of Station Interchange (OSI) function, but in this case the customer doesn't have to have touched out at a station where an interchange setting is in place.

### Example 2 Auto continuation correctly applied

Auto Continuation isn't used as frequently as Auto Completion, but is particularly useful where a large number of customers are ejected from the network without being able to touch out and then want to continue their journey from another station close by.



So in the event of a major power failure closing Charing Cross LU station resulting in the evacuation of the station and preventing any customers from being able to touch-out when leaving the station, the setting of Auto Continuation on the gates at Embankment would enable any customers who wanted to continue their journey from Embankment, to enter that station and continue their journey (as in the example above).

As with Auto Completion, the Auto Continuation facility is normally set centrally by the Cubic Help Desk, but can be set at station level on the new SCU. However, particular care should be taken that it is applied correctly and promptly removed when no longer required.

When setting, the new touchscreen SCU will display the following button on the array...



Unfortunately we have recently come across a couple of cases of gatelines having Auto Continuation wrongly applied, instead of the Auto Completion facility. This could have the effect of allowing a customer who had failed to touch out, being able to continue their original journey and if they return to the station where they originally touched-in, this will then be treated as a "Same Station Exit" or "here to here journey" and is likely to result in them incurring two separate maximum fares.

More worryingly one of the side effects of incorrect use of Auto Continuation is that the facility potentially allows an Oyster card to be used more than once on entry, without being blocked by the "Passback" restriction on gates.

This is due to the fact that after the initial usage to touch-in, if the same card is represented, the gate will detect that the card already has a current open journey and allows the customer to continue this ignoring the fact that the journey commenced at the same station.

This has resulted in a couple of recent reports from stations that they had seen customers using the same card more than once and following investigation, this has been traced back to an erroneous setting still being applied to a Gate Array.

Under normal operating conditions the Gate Array buttons should not have any symbols displayed. If they do, these can be removed by selecting the Ticket Checking button and then the Normal button and selecting the Ticket Monitoring button and then the Normal button.



# REVENUE PROJECTS

## ST PAULS SECURE SUITES CONSOLIDATED

For many years St Paul's station has operated with two secure suites – St Pauls (Main) and St Paul's (Remote). The main secure suite which contained the ticket office had a very small POM room that was only big enough to hold a single MFM. In order to meet the demand for ticketing machines at the station, a much larger remote POM room was located next to the Station Office.



Following the ticket office closure programme, a large area of the main secure suite such as the former ticket office, mess room and toilet could not be used due to ticket issuing facilities (TIF) still being located within it, and it was not possible to separate and repurpose these unused rooms due to the unconventional layout of the area, the proximity to the gateline and secure key controls.

The best solution would have been to transfer all remaining TIF items over to the remote POM room, but although much larger and of a more conventional layout this room unfortunately contained a large ATM (cash machine) that extended deep into the room, making it difficult to relocate equipment there. Installing ATMs in POM rooms has never been a good partnership as the room's primary function is for ticketing, and ATM maintenance and servicing has been known to conflict with security collections and POM servicing and repairs.

What proved the catalyst for the consolidation of the equipment was a major programme to upgrade the escalators at the station and the need to provide adequate welfare facilities for L&E contractors for the duration of the works. The close proximity of the main secure suite to the escalators made this area an ideal location for them and the opportunity to reclassify this area for general usage and welfare meant that upon completion of the project, it could be converted into much needed office space.

As a well-known tourist area there are already a number of ATMs in the vicinity of St Pauls station and the decision was taken to remove the ATM completely and transfer both the MFM and CHD from the main secure suite into the space vacated by the device. The TOM/SAF, counters, secure storage and other items were also moved and installed across the back wall, meaning that for the first time, all POM related activities at the station could be carried out in one single secure area.

## IT'S SAFE TO REVEAL A NEW DESIGN OF SAFE

The St Pauls project also gave us the opportunity to introduce a new type of safe that is more practical for today's secure suite functions, than the safes that have served us well for the past 30 years.

Most stations no longer require a large deposit safe, due to the majority of money now being stored in Cash Handling Devices and the existing float safe being big enough to handle a relatively small amount of cash and other secure items. However, large safes have been retained where possible, as the built-in drop-hatch means that staff can make deposits without needing to open the safe and audit the contents, as you must do each time the float safe is opened.

The new safes are a little taller than float safes and incorporate a deposit drawer containing a rotary drum that simply drops the contents into the main body of the safe as the drawer is shut. This means the safe door only needs to be opened on occasions it is required to remove contents or carry out an audit. Enquiries can be sent to [REDACTED] [@tube.tfl.gov.uk](mailto:@tube.tfl.gov.uk)



Description	Specifications		
External - HxWxD (mm)	762	585	647
Internal - HxWxD (mm)	585	407	432
Weight (Kg)			618
Volume (Ltr)			103

# REVENUE PROJECTS

## POM UPGRADES



As we outlined in [TRU120](#), the forthcoming change to the Oyster card deposit requires software changes to be made to all devices, principally to change the terminology displayed on POM screens from the date that the change takes effect.

New software also needs to be deployed to TOMs to update screens displayed when issuing or refunding a card. Details of how the required changes are being rolled out are explained in detail over the following four pages.

The fact that all devices are being upgraded concurrently rather than one at a time, means that the current programme is probably one of the largest deployments we have ever undertaken and requires software to be deployed to more than 1100 LU devices. Well actually 1111 to be precise:

Device	AFM	MFM	QBM	TOM	TVM
Number	591	335	120	317	28

In parallel with the software deployment we are also upgrading the Chip & PIN unit (PED) on all POMs with an updated version of software to improve device performance.

It had also been planned to use this software release to prepare devices for the acceptance of a wider range of bankcards including Discover, Diners and China Pay, but the need for further changes to be made to the Barclaycard end of the card authorisation process has delayed implementation of this aspect of the programme until early in the New Year, as Barclaycard have a change freeze in place in the run up to Christmas. This will mean that there will have to be a further deployment of PED software to all POMs.

It is currently planned to Vanguard this further software release on selected POMs in January, with these devices being the first to offer acceptance of the wider range of cards towards the end of January. After successful deployment of the software to all POMs a further basedata release in February will activate acceptance of these cards at all other stations.

## MFM UPGRADE

The most significant software changes being implemented are on the MFM. In addition to the change of terminology from Oyster card "Deposit" to "Card Fee", the current software release also includes a number of other significant changes:

- Change to the way that refunds are handled on Oyster cards issued after the implementation date for the change to the Oyster card deposit, but there will be no change to any cards issued before the implementation date.
- New facility for customers to donate their PAYG balance and where applicable the card Deposit, to the Railway Children charity, rather than taking a cash refund
- Facility for customers to still be able to make a charity donation of the PAYG balance and Deposit, even if the device concerned is not able to process a cash refund
- Implementation of changes to POM screens to show up to date card scheme logos for all cards accepted on both the "home" and "payment" screens. This avoids the need for the temporary card scheme stickers applied to POMs and avoids the cost of changing these when the range of cards accepted is changed in the future.
- Fixes for a number of current MFM defects, principally resolution of the Error 190 on MFMs fitted with the current Bank Note Recycler (BNR) unit



The desire to address the Error 190 issue, which has impacted upon the performance of MFMs fitted with BNR, resulted in the early release of the new MFM software as an early Vanguard on 5 MFMs at the locations listed below, on the dates shown:

Station	VICTORIA (District)	ANGEL	STRATFORD (East) x2	STRATFORD (North)
Date	Tue 05 November	Mon 11 November		Wed 13 November

Once the new software had been deployed to these devices, it was followed by the deployment of the new PED software at Victoria (District) on Thursday 14 November and Angel on Friday 15 November.

# REVENUE PROJECTS

## MFM UPGRADE....

Following a base data release on Sunday

10 November, any devices that had already been upgraded with the new MFM software displayed the up to date card scheme logos on both the home and payment screens.

The MFM Vanguard was then expanded to cover a total of 31 devices (just under 10% of the MFM fleet) covering a number of central London stations, over two nights (Sunday 17 November and Monday 18 November) after which these devices would immediately display the card scheme logos on the screen. Updated PED software was then deployed to all the remaining Vanguard MFMs on the nights of Wednesday 20 and Thursday 21 November.

As most of the software changes identified at the foot of Page 17 are being made in advance of the actual planned implementation dates, most of the new functionality will effectively lay dormant in the device until January 2020, the actual Vanguard period for the new software was kept relatively short.

As no adverse effects were identified during or after its deployment, the approval for the rollout of the MFM software to the other 300 MFMs was given on Friday 22 November, with the rollout commencing on Thursday 28 November.

As with previous MFM software upgrades, the deployment will take place remotely overnight, at a rate of 30 devices per night, each night apart from Saturday night. The rollout has been geared to concentrate on non-night tube stations on the Friday nights, to avoid upgrades taking place during traffic hours. The final MFMs are scheduled to be upgraded on the night of Monday 09 December.

As in the Vanguard, the deployment of the updated PED software will usually follow 24 hours after the device software has been deployed, the exceptions being devices which have their software upgraded on Thursday night, which will have their PED upgrade on the Sunday night and those stations upgraded on Friday night which will be upgraded either the following Friday night or on the final day of deployment (Wednesday 11 December).

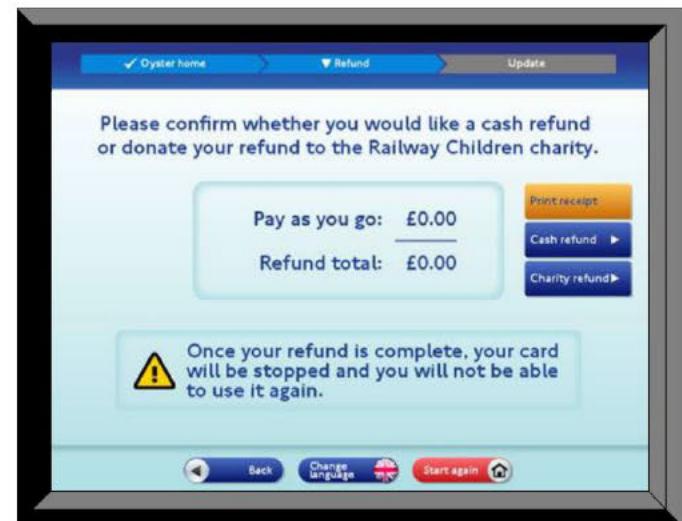
Timescales for completing both rollouts are very tight as we need to get the software deployed to all devices before Cubic begin the process of loading new fares tables to devices in advance of the January Fares Revision.

We had hoped that the deployment of the new MFM software during December would enable us to start a Vanguard of the charity options on a limited number of machines this year, to enable us to fully test the Oyster donation aspects of the software change on the network.

Unfortunately, we found that one of the interdependencies of this software change is that a Central System update is required to enable it to handle the new transaction type being generated from POMs. Due to the proximity of the fares revision, the Central System change is not due to be implemented until January.

Once this and the deposit change has been implemented, we will then be in position to enable the facility as a Vanguard, on a limited number of MFMs via a base data update, which will trigger this element of the software and the associated screens that support it, to be displayed.

The current plan is to start a two week Vanguard in late January and then two weeks later, in the next base data release, to activate the functionality on all other MFMs across the network.



# REVENUE PROJECTS



## AFM

The AFM also requires its device software to be updated for the changes to the handling of Oyster card Deposits in a similar way to the MFM, but the impact of the changes is much smaller and really only concerns how the deposit will be displayed on the screen once the change has been implemented. The new software also includes the same change as on the MFM, to display the up to date card scheme logos on the "home" and "payment" screens.

The updated AFM software was initially Vanguarded on a total of 20 AFMs at the stations listed below. The first three devices were upgraded on the night of Sunday 17 November with the remainder being upgraded the following night. The only noticeable change being that, after the upgrade the devices concerned displayed the card scheme logos on their home screens.

BAKER STREET (Bakerloo)	26	27	28	BAKER STREET (Met)	29	BLACKFRIARS	27
BANK (Central)	24	28	29	BANK (Monument)	28	BANK (Northern)	26
EMBANKMENT	28	29	EUSTON SQUARE		29	ST JAMES PARK	28
WESTMINSTER	14	15	WEST HAM		10		

In a similar manner to the MFM upgrade, these devices received the updated PED software over the two nights of Wednesday 20 and Thursday 21 November. As the immediate changes were relatively small, the Vanguard period was again kept to the minimum. Permission to proceed with the rollout was also given on Friday 22 November, with the AFM rollout beginning on the night of Tuesday 26 November to update a further 21 AFMs at London Bridge and North Greenwich, as these locations had previously featured in the MFM software Vanguard.

With nearly 600 AFMs to upgrade, we plan to remotely upgrade 50 AFMs per night, 6 days per week, so that the last AFMs will be upgraded on the night of Monday 09 December. The same day as the MFM rollout is due to be completed. The deployment of the new PED software will follow on after the device software has been completed.

To try and ensure a consistent experience for customers and minimise the number of sites impacted by upgrades each night, we have aimed to schedule all of the devices at a station to be upgraded the same night. However, due to large imbalances in the numbers of each type of device at stations, there will be a few stations where updates on the AFM and MFM may be done on different nights. Full details will be circulated to stations in advance and will be included in the weekly *Hot Issues Bulletin*.

## QBM

The software upgrade required on the QBM is very similar to that on the AFM (outlined above) and will be done in parallel with the AFM upgrades.

The QBM Vanguard also commenced on Sunday 17 November, initially with two QBMs at Paddington (Main) and Victoria (District) and was then expanded to a total of 10 QBMs by the addition of 8 further devices on the night of Monday 18 November.



Like the AFM the vanguard devices were then upgraded with the new PED software over the two nights of Wednesday 20 and Thursday 21 November.

The QBM rollout was scheduled to commence on the night of Thursday 28 November, at a rate of 20 devices per night and as the numbers of machines are smaller than the other device types, is scheduled to be completed on the night of Wednesday 04 December, with the last QBMs receiving their PED software upgrade on the night of Friday 06 December.

# REVENUE PROJECTS

## TVM SOFTWARE UPGRADE



Last but not least on the POM front, the forthcoming changes also require a new version of software for our TVMs. These devices already have the current card scheme logos displayed on their "home page", so this element of the changes being applied to the MFM is already in place.

The new TVM software will support the change to the Oyster card deposit in the New Year and the introduction of the Charity Oyster Card Donation facility on the LU TVMs. Unfortunately the charity donation facility will not be available on the TVMs at RSLU stations (Regulated Stations on London Underground) on the Bakerloo and District lines, as these have a different accounting and reporting system to their LU based relatives.

The Vanguard of the new TVM software commenced on Sunday 24 November with new software being remotely deployed to one of the TVMs at Stratford (Mezzanine) and one of the devices at Bond Street (Marylebone Lane).

A third device at Harrow & Wealdstone was also included when the Vanguard was extended to a larger number of TVMs across all modes on the night of Monday 25 November.

Following a short review period it is planned to start the deployment of the new software to all other TVMs starting on Sunday 01 December, with all LU devices scheduled to be completed on the night of Wednesday 11 December.

As with the other POM upgrades outlined on the previous three pages, the upgrade of the TVM device software will be followed the next night by the same devices receiving the updated PED software. The exception will be devices scheduled for upgrade on Thursday night which will not receive their PED upgrade until Sunday night.



## TOM SOFTWARE UPGRADE

Station	TOM	Date
BANK (Monument)	03	Tue 10 Dec
VICTORIA (District)	01	
PADDINGTON (Sub)	02	
BANK (Central)	01	
BANK (Northern)	02	
EMBANKMENT	01	
KINGS CROSS	(Northern)	01
		02
	(Tube)	01
		02
PADDINGTON	(Western)	01
		02
	(Main)	05
VICTORIA	(Praed St)	04
	(Bakerloo)	01
	(Remote)	01
WATERLOO	(Victoria)	02
		03
	(North)	04
	(Colonne)	01
WESTMINSTER	(Sthbank)	02
	(Main)	01
	(Assist)	04
		01

The final device affected by this recent glut of software changes is the TOM. New software is required to handle the revised refund rules to be implemented in the New Year and to ensure displays and receipts are changed to display "Card Fee" rather than "Deposit", once the change has been activated.



An initial Vanguard is planned to start with three devices being upgraded on the night of Tuesday 10 December, followed by a further 22 LU TOMs on the night of Wednesday 11 December.

As most LU stations now only have one TOM, we have opted to concentrate the Vanguard on stations with multiple ticket halls that have a number of TOMs, as this will achieve the largest number of devices for the Vanguard at a relatively small number of locations.

All being well, deployment of the software to other devices should take place around a week later.

TSID card holders should see no noticeable change to the operation of the TOM following deployment of the software. There will be no change to the SAF software as this device doesn't have Oyster card functionality.

## MORE UPGRADES TO FOLLOW!

As we have previously mentioned in earlier editions of TRU, there are two further important upgrades affecting the MFM coming up.



## £20 POLYMER NOTE UPGRADE

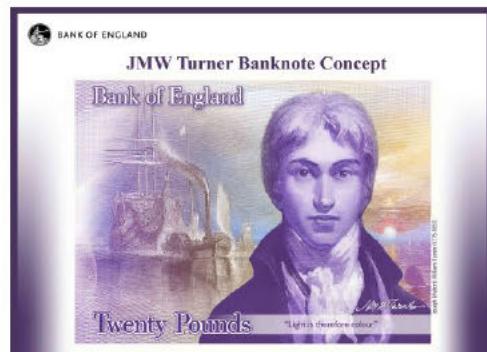
The new polymer £20 note is due to enter circulation fittingly on 20.02.2020.

In advance of this we need to get all of our note-handling equipment updated to handle the new notes. The first stage of this will see Suzohapp start a programme of station visits to update each Cash Handling Device (CHD) with a new note set including images of the new polymer notes being introduced. This programme of visits commenced on Monday 25 November and will continue over the next couple of months.

Cubic are currently undertaking off-system testing with samples of the new notes and this is currently slightly further advanced on the MFM Bank Note Acceptor (BNA) units, as the new bill set for these notes was received from the suppliers of the unit, earlier than that for the MFM Bank Note Recycler (BNR) units.

As with previous note upgrades, to add or remove notes from the current bill set held by the device, requires an engineer to visit each device to load the new bill set into the device from a laptop. Upgrades of BNA units will hopefully commence in mid-December and as before will be split between day and night shifts. In the first two weeks of the programme MFMs with BNA units within the inner London area will be upgraded during the day (usually between 10.00 and 16.00 hours), followed by two further weeks during which BNA devices in outer London will be updated at night. On this occasion, the upgrade will require each device to be emptied of cash before the upgrade can be completed.

The upgrading of the 100 MFMs fitted with BNR units is expected to begin in early January, immediately after the January Fares Revision. All devices fitted with BNR units will be upgraded during traffic hours to minimise inconvenience to customers and staff at the stations concerned. On this occasion notes will need to be dumped from the note recyclers into the note vault and the note vault then removed, but it will not be necessary to empty the whole device of coin. The number of devices involved and the speed of the actual upgrade means that the whole BNR programme should be completed in a period of 6 days.



The four LU TVMs that accept cash will also be upgraded at the same time as the MFMs at Bond Street and Stratford.



## NOTE HANDLER REPLACEMENT

Development work is also continuing in readiness for the planned rollout of the new Suzohapp Bill to Bill note unit, to all MFMs in 2020.

Cubic are currently working towards adapting the recently deployed MFM software to accommodate the operation of the new note unit, to facilitate an early Vanguard of this unit.

It is currently hoped to be able to deploy one unit before Christmas, but this will not have full functionality. It will initially work as a Bank Note Acceptor and like the BNA unit it is scheduled to replace, it will only accept Bank of England notes.

The Vanguard site has yet to be confirmed, but it is likely to be Vauxhall, as staff at that location already have experience of using the chosen unit, having trialled it at the station earlier in the year. The amount of familiarisation on the new equipment will therefore be less than at other sites.

The units will come ready to accept the £20 polymer note, so there will be no need for an onsite upgrade of these units to take place, if they are introduced before 20 February.

# REVENUE PROJECTS

## GATE POD UPGRADES...

Further to our last update in [TRU120](#), approval has recently been given for the deployment of the new EI gate software to all EI gates across the network. This new software allows EI gates to operate with either the existing Passenger Orientated Display (POD) or with the new E2 version which is now on Vanguard at Balham.

The new EI software is scheduled to be deployed remotely to all EI gates, ready to switch in at start of traffic on Sunday 01 December. This will then pave the way for the installation of the new POD at other stations early in the New Year.

In the other POD workstream, following a vanguard of new pneumatic gate software, Cubic are scheduled to install the first of the new E2 PODs onto pneumatic gates at Marble Arch on the night of Thursday 28 November. This will mean that all of the gates on this gateline which has a mixture of older pneumatic gates and new E2 gates, will have the same style of display for customers.



NEW EI GATE POD



One major improvement for station and revenue control staff, is that gate reject codes will now be displayed on either side of the POD with the brief text description that is already displayed on the E2 gate POD. On the current pneumatic gate POD the reject code appears as a two digit code on the side of the POD and can only be viewed from one side of the gateline, meaning that anyone positioned mid-way along a set of pneumatic gates would only ever be able to see half of the reject code displays.

As part of this upgrade, Cubic will also be replacing the RTD (card reader) on the exit side of each pneumatic gate, with the standard design of gate RTD, since the customer's PAYG balance and other messages will now be displayed more clearly on the POD on both the entry and exit sides of the gate.



At present on the older pneumatic gates there is no information on their PAYG balance displayed to customers when touching-in, unlike all other types of gate.



NEW P-GATE POD

The next phase of the project will be to review the performance of the pneumatic gates at the stations currently involved in the Vanguard of the new pneumatic gate software, ahead of the planned rollout of this software to all other stations which still have pneumatic gates. This is currently planned for mid January.

As with the deployment of the EI gate software, this will then allow deployment of the new POD across the pneumatic gate stations later next year.

## EI GATE LIGHT BEAM REPLACEMENT

We have previously covered an initial Vanguard of modified light beams and reflectors on the walkways of a number of EI type gates at stations prone to high levels of dust and failure, including Swiss Cottage, Paddington and Manor House.

Despite the initial success of this Vanguard and a decision to rollout this solution more widely to help improve gate performance, frustratingly issues with the ordering of the necessary components has resulted in extended delays to the start of the planned works.

Fingers crossed things will start moving in the New Year and we may be able to report on the start of the units being deployed during routine preventative maintenance visits.

# REVENUE PROJECTS

## TRIAL OF GATE BEAM COUNTING

In an effort to better measure potential fare evasion through LU gates, Cubic have deployed a minor change to the software on the E2 gates at the stations listed below.

CALEDONIAN ROAD	HARROW & WEALDSTONE	LADBROKE GROVE	STANMORE
STONEBRIDGE PARK	STRATFORD (North)	WEMBLEY PARK	

The change logs the passage of customers through the light beams in each walkway following a credit being added (either via a card or magnetic ticket validation or the use of a one shot release). It is hoped that this will allow data to be extracted to compare the number of validations with the actual number of customers passing through each walkway. This could potentially give us a measurement of the number of customers passing through each of these stations without correctly validating.

The change is being adopted initially as a four week trial after which the software is scheduled to be removed and the gates involved will revert back to standard E2 gate software.

## HIGHER PADDLES!

Another planned trial which is currently under consideration, involves the installation of a different design of gate paddle on a set of our gates. The paddles involved (as illustrated on the right) are much higher than those we currently use.

Cubic already supply these taller paddles to their customers operating other Metro systems around the world and have indicated that this design of paddle can be relatively easily fitted to the current E1 and E2 stanchions.



Although making it more difficult for fare evaders to vault over the top of the gate, they do have a potential downside in that the weight of the paddles is significantly heavier than those currently in use and this may put a potential strain on the gate motors, particularly if the paddles suffer a high level of misuse by customers pushing through them. We have however, trialled modifications to the E2 Gate motor and it is likely that this modification will be deployed in conjunction with the installation of the new paddles.

A final decision on the station to be used for the trial is yet to be made, but we are currently looking at a couple of possible locations on the north end of the Bakerloo line. The site chosen needs to have a small gateline stretching from wall to wall, as other sites previously surveyed had lengths of fixed glass barrier, and these were seen to be unsuitable, as anyone intent on climbing over the gates would instead simply vault the glass barrier, which would still be at the current height.

## ANSWERS TO T&R TRIVIA

Pt I	Bethnal Green	Edgware Road	Hammersmith
Q.I	Shepherds Bush	Sudbury Hill	
(potentially also allow Elephant & Castle and Brixton ..as stations are separate)			

Q.3 A Contactless only

Pt.2		I + E		Central London
		2 + C		South London
		3 + B		East London
		4 + A		North London
		5 + D		West London

How did you do?

# ...AND FINALLY!

## MISSED COLLECTION NOTIFICATIONS

In a perfect world, security collections and deliveries to our stations would go seamlessly and there wouldn't be a need to complete a missed collection notification. However, the general nature of our business and the hectic roads of our capital city can mean that missed collections will occur for a variety of reasons.

Reporting of a missed collection on MiApps is extremely important, as it provides the Financial Services Centre and contract managers with:

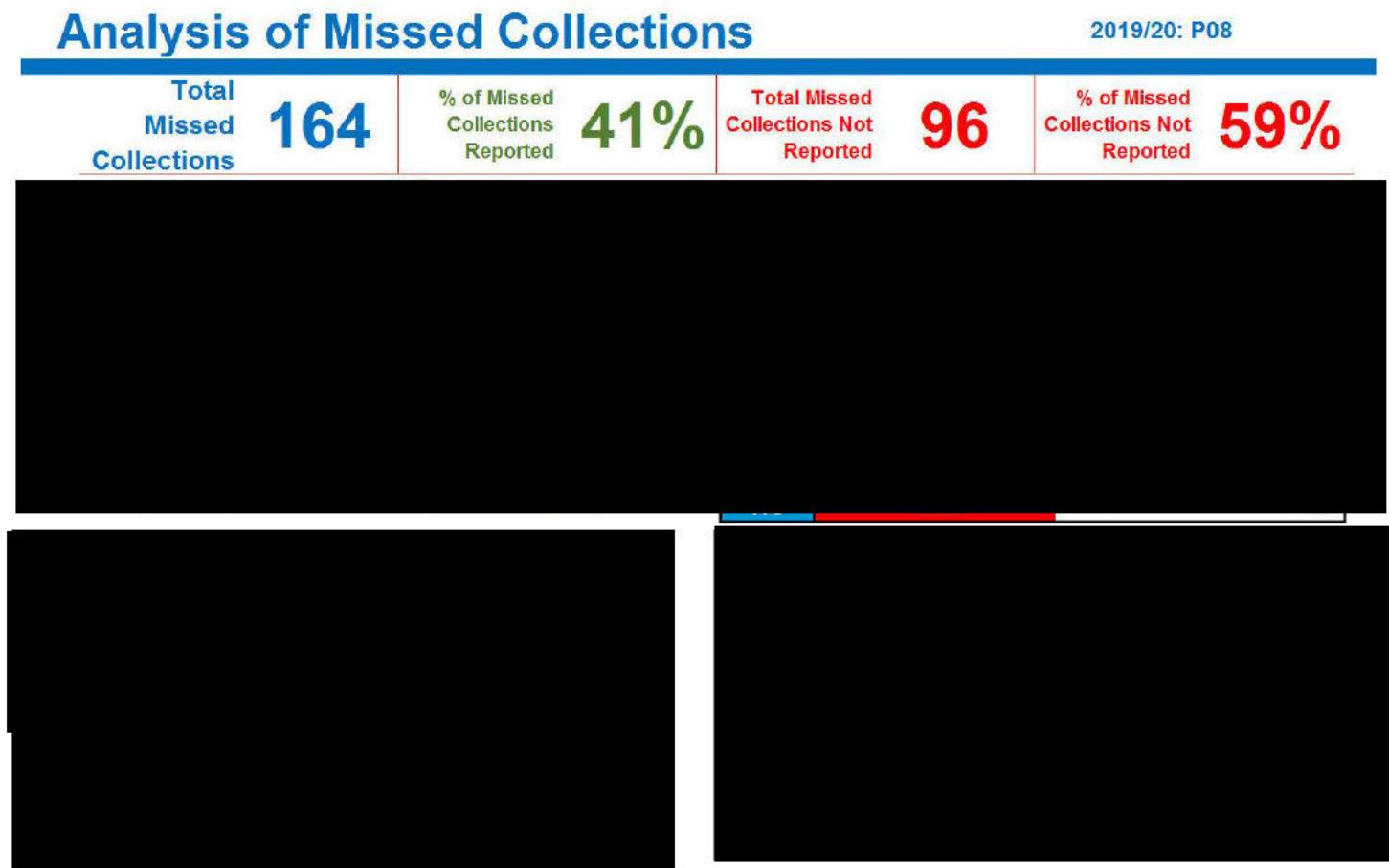
- A record / measure that the collection was missed
- The reason it was missed – e.g. No show, systems fault, incorrect identification etc.
- Can initiate a recovery collection if the collection was not completed due to an LU issue



Over the last couple of years, there has been a steady increase in the number of missed collections that have not been reported by stations, so much so that for the last few periods this figure has been well over 50%.

Despite a number of targeted notifications within the *Hot Issues Bulletin* and emails, there has been very little improvement and the Company has now decided to focus on improvement in this area, with results for each line and Area being monitored and analysed each period.

The graph below shows both the missed collections and the number that went unreported in Period 8.



## LOOKING AHEAD TO TRU122

TRU122 will be the last edition of 2019 and is scheduled for publication just before Christmas.

Our next edition will include:

- Final information on the January Fares Revision
- Our traditional look ahead to what is instore in 2020
- The annual T&R Trivia Quiz
- Further updates on both current and forthcoming projects

Plus our normal selection of T&R news, special features and correspondence from Olly's Inbox.

