# TRU

## ISSUE 110

### UNDERGROUND

## TICKETING & REVENUE UPDATE

### JUNE 2018

For the attention of all Station and Revenue Control Staff

# TfL RAIL EXPANSION TO HEATHROW COMPLETED

As we outlined in TRU109, the fares revision on **Sunday 20 May** saw the successful expansion of TfL Rail services and PAYG acceptance to the former Heathrow Connect service between Paddington and Heathrow Airport.

On **Page 2** inside, we have our customary review of the recent fares revision and examine what went well and anything that didn't go quite as planned.

**TFL·RAIL**

As you will read, given the level of the changes being implemented the revision generally went very well, with only a couple of minor issues which were quickly addressed.

The changes don't finish there, as since the fares revision we had another batch of changes implemented as part of a scheduled base data update on **Sunday 24 June**. This included the launch of a trial of the new 2 and 3 Day Visitor tickets, which we again feature on **Page 4** of this edition of the TRU.

There will be further changes in September as part of the next fares revision on **Sunday 02 September** and we will be covering the detail of what is planned for September in the next edition of TRU.

Later in the year there will also be further changes for the planned opening of Elizabeth line services, the expansion of PAYG acceptance to Heathrow Express services and the planned implementation of Weekly price capping for Oyster PAYG users. As always we will update you on each of these in future editions of TRU.

**Written and compiled by** ███████████████

## KEY STORIES INSIDE

| Page 3 | POM SAFETY ALERT |
|---|---|

*Following a couple of recent incidents, we outline the cause and some tell tale signs to look out for, ahead of the device actually failing.*

| Page 4 | VISITOR TICKETING LAUNCH |
|---|---|

*We take a further look at the recent launch of the new Visitor Tickets, what they will look like, how they will be promoted and who should buy them.*

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| Pages 13/15 | POM UPGRADES |
|---|---|

*We update you on a number of POM changes which have recently been completed.*

| Page 14 | SCU UPGRADE |
|---|---|

*We provide a further update on progress towards the start of a Vanguard of the new SCU.*

# IN THE NEWS...

## MAY FARES REVISION – REVIEWED

### WHAT WENT WELL?

The most recent fares revision on Sunday 20 May went very well considering the complexity of some of the changes that were included to facilitate the takeover of the Heathrow Connect service by TfL and the acceptance of PAYG on TfL Rail services to the airport.

Following the trend of previous fares revisions, which have also gone well, there were no instances of devices anywhere on the network that did not accept their new fare tables on the morning of the fares revision.

There were however, a few other issues that were identified following implementation

### WHAT DIDN'T GO SO WELL?

At **South Wimbledon** it was identified that both the AFM and MFM were charging incorrect Oyster season ticket prices. This was subsequently investigated by Cubic, resulting in new tables being downloaded for this site to rectify the issue. No other stations were affected by this problem.

Away from LU, the **Emirates Airline** reported that they were unable to sell Single or Return magnetic tickets for the cable car on their Retail Terminals. Again this was rectified by Cubic downloading corrected tables to the devices.

There were also a couple of issues identified on newly commissioned TfL devices at Heathrow Airport. The quick search option for tickets to Paddington and other TfL destinations on all Heathrow TVM's was initially greyed out in error. This was also resolved by amended tables being downloaded.

There was also an issue of magnetic tickets which had been sold in advance on TVMs prior to the fares revision not being accepted at the Heathrow gates. This was caused by a change of NLC (National Location Code) and was rectified by a fix being applied via a new set of gate tables. There were also some reports of the TfL app showing journeys through the new Heathrow gatelines as "Unknown location". We believe this was subsequently resolved by updating the location list with the new NLCs.

## BAYSWATER / QUEENSWAY OSI IMPLEMENTED

Just three weeks after the Fares Revision and as part of a base data load, on **Sunday 10 June** a new permanent Out of Station Interchange (OSI) was introduced between **Queensway** and **Bayswater** stations.

The new OSI now means that customers will no longer need to change lines at Notting Hill Gate and can instead walk the short distance between the two stations at street level, without incurring two separate fares.
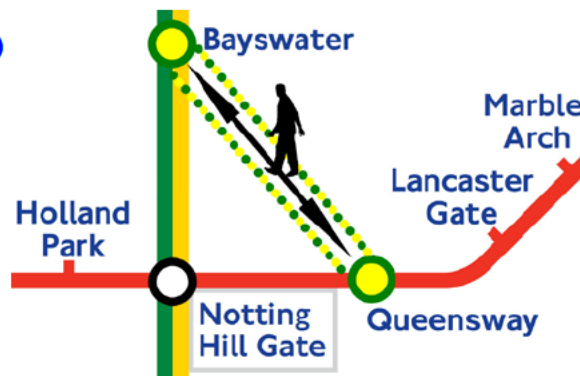
The PAYG map, which includes all the major OSIs, has been updated to show this OSI as well as the acceptance of PAYG on the TfL Rail route to Heathrow, formerly known as Heathrow Connect.

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

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**Part 1** – Following on from our coverage of the recent PAYG expansion to Heathrow..

**Q1)** What would a PAYG customer making a return journey after 09.30 from Zone1 to Heathrow via TfL Rail pay?

| A | £ 6.20 | B | £ 10.10 |
|---|--------|---|---------|
| C | £ 12.50 | D | £ 20.20 |

**Ticketing & Revenue**
**T & R**
Trivia

# POM BACKBONE SAFETY ALERT

We have had a couple of recent incidents where members of staff servicing POMs have pulled one of the back bones backwards to access components within the device, only to find that the whole panel has become detached from the device and fallen into the POM Room.

Incidents of this nature have previously been quite rare but recent events and subsequent enquiries into the cause of these failures, have identified that this can occur when the sliding mechanism becomes worn.



It is an element that Cubic engineers should check when performing preventative maintenance on POMs, but we thought it was worth highlighting a couple of tell-tale signs to lookout for, which may indicate that the mechanism needs to be replaced:

➢ *Scraping or screeching noise when backbone is pulled out or pushed in*
➢ *Presence of ball bearings from the slider mechanism on the POM Room floor or within the device.*

If you become aware of either of these symptoms, please report this to the Cubic Helpdesk immediately.

Hopefully this may help identify further units before the mechanism actually fails.

# RAF ANNIVERSARY FREE TRAVEL

*Tuesday 10 July 2018* marks the centenary of the RAF and to celebrate an event will be held at Westminster Abbey for around 2000 RAF personnel and their friends and family.

TfL have agreed to allow free travel for attendees subject to the following;

➢ *Free travel to the event from start of traffic on LU, DLR, LO and TfL Rail services to Embankment, Charing Cross, Green Park, Hyde Park, St James's Park, Victoria and Westminster stations only.*
➢ *Free travel from any of these stations on their way home - they must complete their return journey by 1830*
➢ *Free travel is only to / from the event ie two single journeys.*
➢ *No changes to free travel for Armed Forces – they must be in uniform and presenting their military ID*
➢ *Free travel for family members, friends and dignitaries must only to be given on presentation of an event ticket. Each person will have their own personalised ticket.*

Further details (including a sample event ticket) will be provided in the *Hot Issues Bulletin*.

# SCANCOIN RENAMING

Anyone that has had need to call the Scancoin fault report centre (**Auto 12261**) recently, may have been slightly confused by their operators answering the phone using a different name.
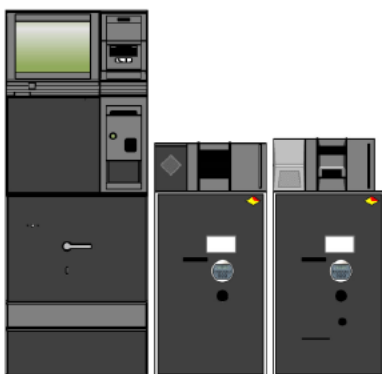
Although in 2015, Scancoin was taken over by an American company **Suzohapp**, it continued to operate as a subsidiary under their previous Scancoin trade name.In early June it was announced that the Scancoin part of the business, would now trade under the main Suzohapp brand name.

Unfortunately this announcement came too late for us to include the new name within the updated T&R Books, but this will be amended at the next reprint (probably January 2019). Other references to Scancoin including on laminated notices will be progressively updated, as reprints are required.

All elements of the service remain unchanged; it's just the name that will be different.

# IN THE NEWS...

## VISITOR TICKETING LAUNCH

We have given over quite a few column inches in previous editions of TRU to the launch of the new range of visitor tickets launched on Sunday 24 June.


**Trial Started – SUNDAY 24 JUNE 2018**

```
⊖ Transport for London
05JUN18      02DAYS VISITOR PASS STD
06 JUN 18    »123456«
2DAYVISITORPASS==NOT VALID ON NR  OFF-PEAK

000003  83  0828   05JUN18  1431  £25:40M

This side up · Not for resale · Issued subject to conditions - see over
```
*2 Day Visitor Pass (VIC version)*

```
⊖London Underground   ⊖London Underground
05JUN18       03DAYS VISITOR PASS  STD
07 JUN 18     »123456«
3DAYVISITORPASS==NOT VALID ON NR  OFF-PEAK

000006  84  0828   05JUN18  1435  £38:10H

This side up · Not for resale    This side up · Not for resale
Issued subject to conditions - see over   Issued subject to conditions - see over
```
*3 Day Visitor Pass (POM version)*

| Visitor Pass | | |
|---|---|---|
| | 2 Day | 3 Day |
| Adult | £25.40 | £38.10 |
| Child | £12.60 | £18.90 |

The new 2 and 3 Day tickets are aimed primarily at short term visitors to London, who have not previously sorted out their ticketing arrangements and offers a single purchase covering all their travel without the need to obtain an Oyster card and obtain a refund of the deposit and any remaining balance before leaving London.

As these new 2 and 3 day tickets are priced at twice or three times the Day Travelcard price there is no saving on buying Day Travelcards for individual days.

| | | | |
|---|---|---|---|
| BAKER STREET | HEATHROW T2&3 | MARBLE ARCH | VICTORIA |
| BAYSWATER | HEATHROW T4 | PADDINGTON | WATERLOO |
| EARLS COURT | KINGS CROSS | QUEENSWAY | |
| EUSTON | LIVERPOOL STREET | RUSSELL SQUARE | |
| GLOUCESTER ROAD | LONDON BRIDGE | SOUTH KENSINGTON | |

The launch of the new tickets will be supported by a poster campaign similar to the one illustrated on the right ➡.



Visiting London?
Get unlimited
off-peak travel
with a 2 Day or
3 Day Visitor Pass

## So who should buy the new tickets?

In terms of guidance to customers, if the customer has a contactless payment card or mobile device linked to a payment card, then they will get the benefit of cheaper PAYG fares and will only pay for the actual journeys made.

Below we have provided a guidance table, which according to the journeys that visitors intend to make during their stay, can be used to help choose the best value option that is right for them.

| Customer's travel plans | Visitor ticket | | Detail |
|---|---|---|---|
| | 2 Day | 3 Day | |
| Includes National Rail services | ✗ | ✗ | Visitor tickets are not valid on NR |
| Only on TfL services | ✓ | ✓ | |
| Travelling before 09:30 | ✗ | ✗ | |
| Within Z1-6 over next 2 days | ✓ | ✗ | |
| Only within Z1-2 over next 2 days | ✗ | ✗ | Oyster is likely to be cheaper |
| Within Z1-6 over next 3 days | ✗ | ✓ | |
| Only within Z1-2 over next 3 days | ✗ | ✗ | Oyster is likely to be cheaper |
| Unsure will use public transport each day | ✗ | ✗ | Use Oyster or buy a Day Travelcard for the days they are actually travelling |
| Unsure of travel plans during their stay | ✗ | ✗ | |
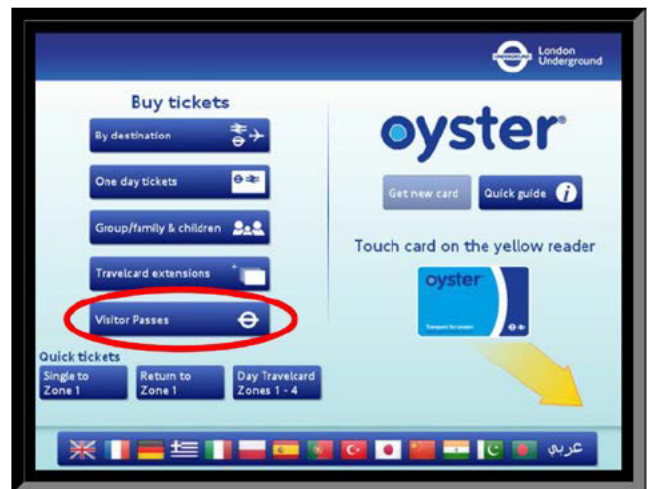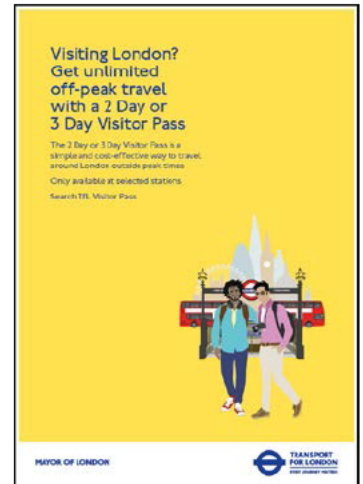

*POM Home Screen ⬆*

ⓘ Recent Refunds of 2 or 3 day tickets must be processed by selecting the '7 Day' option from the drop-down menu.

## TRAMS GO CASHLESS

From **Monday 16 July 2018**, Trams will go cashless and will no longer sell paper tickets at Tram stops.

This move follows from a public consultation in 2017, when it was revealed that as few as 66 tickets per day were bought from ticket stop machines and customers were currently much more likely to use contactless or Oyster to make their Tram journey.

This has a lot to do with the fact that a paper ticket currently costs £2.60, compared with the £1.50 PAYG fare, which represents a significant saving, especially when daily and weekly capping is also taken into account.

Moreover, when a recent sample of sales from ticket stops was analysed it highlighted that around 71% of the paper tickets bought used a bank card that was also contactless.

To ensure customers are aware that Trams are cashless, TfL plan to issue press releases and publications within the area covered by the Tram network from **Monday 02 July**. This will be followed by a further campaign after implementation between **16 July and 02 August**. Marketing activity includes tram advertising panels, posters near tram stops, wallet-sized hand-outs, and emails to tram users. "Ways to pay" posters will be displayed in trams and on tram platforms.

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**Part 2 – On the subject of going cashless…**

**Ticketing & Revenue**

# T&R
**Trivia**

**Q2)    … when did Buses stop accepting cash payments?**

| A | July 2014 | B | September 2015 |
|---|-----------|---|----------------|
| C | November 2016 | D | May 2017 |

Answers on

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**From:** ████████████████
**Sent:** 25 April 2018 10:06
**To:** █████████████
**Subject:** Procedure for dealing with code 36

Hi Olly,

The new procedure for dealing with code 36 on Oyster cards is very time consuming, awkward, quite intimidating to staff and customers, and is never gonna get you the revenue you think it could. Plus the manual charge button was never designed for this particular function as LU well knows and they should have realised this would be an issue years ago when closing ticket offices.

If a customer doesn't have the correct change which is near enough always then you have to use the MFM and as most ticket halls only have one MFM, it can be very time consuming having to wait in line whilst everyone does their stuff first. Now if you're at a small station or even a larger one at some times leaving the physical gateline for any amount of time can cause lots of other issues. Are we meant to run back and forth from the queue to the gateline, swiping someone out, then back to the queue, then back to gateline to give directions, then back to queue and so on. I think this sets up the legitimate paying public to feel quite awkward and the staff potentially to be acting like "repo men".

What I think would be much better is if we could use a new CSID function to manually put a charge on the customer's Oyster card, we could then use AFMs and MFMs which will cause less delays to legitimate customers and allow staff to get back to our actual work much quicker. It would make it easier for us to charge actual fare dodgers who at present turn up and use every excuse under the sun, starting with the classic "I haven't got any money on me". (The whole idea of the £5 deposit is protect revenue against people who could use the Oyster to pay less for a journey and then discarding them). We could charge the customer's Oyster card through a new function and if they decide to not top-up and pay it, then then they'll never get the deposit back or get to use the card again. We could maybe even set up some software that gives them a week to top up the card and clear the negative balance or it will cancel the card and the money be kept by LU. Within the same software we could have a limit i.e. only twice a month can it be done or whatever thresholds we want to set. I think overall this would lead to much more revenue being recouped than at present for code 36.

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CSA 1
Bank Station

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████████████

The procedure you describe is not new and the Manual Charge facility was added to POMs to allow the collection of fares where the customer had either been unable to buy a ticket or had travelled without validating their Oyster card. The number of Oyster cards with Reject Code 36 on exit has grown recently and has led to this being a focus for attention in trying to ensure that the revenue we are due is collected.

Over the last few months, we have already seen a significant increase in the amount of money collected in respect of such journeys. It is also worth bearing in mind that a high proportion of cards that are rejected with Code 36 are one off events as a result of a customer forgetting to top-up or touch-in correctly and such customers will generally pay for the journey they have made.

The process concerned involves a single transaction at the POM and is considerably quicker and more convenient than some of the processes previously observed, which involved the customers card being topped up at the POM, then touched on an exit gate reader and the resulting incomplete journey being resolved back at the POM. Unfortunately as the MFM is the only device that can take notes and give change, you would have to use the MFM if the customer didn't have the correct money for the fare due.

In regard to your suggested change to the POM functionality, this would require a significant change to the POM, reader and possibly reporting systems, which are likely to be expensive to implement.

The other significant issue is that in cases where a card has been rejected with a Code 36, the card will by nature of its rejection, have little or no PAYG available to pay a fare. It may also already have a negative balance which will have eaten into the value of the card deposit. Taking further money is likely to then lead to the customer disposing of the card rather than topping it up.

Hope this explains the position.

Regards

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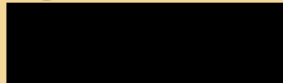
**From:** ▮▮▮▮▮▮▮▮
**Sent:** 12 June 2018 13:52
**To:** ▮▮▮▮▮▮
**Subject:** CODE 36!!

Hi Olly,

There is one common scenario that I'm struggling to find how to resolve as regards the new code 36 issue: "if someone travels from point A to B and comes back without touching out at point B (may be travel to meet a friend at the station (B) and didn't touch out), the person's oyster card now comes up as code 36 and there is incomplete journey on the card".

I was informed by my CSM that I should apply manual charge for the return journey, separate from the incomplete journey on the card. However, most customers in that situation want you to resolve their incomplete journey and they will say they don't have money to pay separately.

QUESTION: Is there any way to charge their Oyster card for unpaid journey after resolving the incomplete journey and putting back money on their Oyster card? OR How can we apply manual charge for return journey (point B to point A) before/during/after resolving the incomplete journey?

Thanks for your prompt response.

Regards,

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The scenario you describe is one that we have covered a number of times in the TRU, where the customer's card basically has a journey from Station A to Station A, which exceeds the time allowance for a "same station exit". This normally happens when an Emergency Out of Station Interchange has been set at station B and results in two incomplete journeys on their card. An unfinished journey following their touch-in and then an un-started journey when they attempt to touch out at the same station. This would normally result in two maximum fares being charged, but if they have insufficient money on the card to cover the minimum fare from the station, then they will not be allowed to exit and reject code 36 will be displayed.

If 2 max fares have been charged, you won't be able to resolve the issue at the station and would need to refer the customer to the Customer Contact Centre. However, if their exit has been prevented then it should be possible to resolve the incomplete journey on their card by charging them the A-B fare for their outward journey and then carry out a manual charge for their B-A return journey. This will require them to pay for this additionally, but the resolution of the incomplete journey will put some money back onto the card.

Regards

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Hi Ravindra,

It is very difficult to give a definitive answer on this question, as it will largely depend upon what the customer does afterwards and how long there is between their touch-in and touch-out.

For PAYG using contactless payment, the same basic rules apply as Oyster. So if the customer has a same station exit due to service disruption and then re-enters at another station within 45 minutes, they would only be charged for the following journey and the same station exit would be cancelled. The main advantage of contactless is that the decision on what to charge the customer is not made until the end of day, so a more informative decision can be made based on the whole picture, whereas at present on Oyster, the charge has to be made immediately based on the previous validations.

Any customers querying charges or asking for a refund on a contactless transaction should be referred to the Customer Contact Centre.

Regards

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**From:** ▮▮▮▮▮▮
**Sent:** 25 April 2018 13:34
**To:** ▮▮▮▮▮▮
**Subject:** **Contactless Payment**

Hi Olly,

If a customer touches in with their Contactless bank card and then decides not to travel and touches out, can you please explain how much they will be charged and how they can get a refund for this?

Many thanks,

▮▮▮▮▮▮

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**From:** ▮▮▮▮▮▮
**Sent:** 27 June 2018 20:51
**To:** Ask Olly
**Subject:** Fare to Gatwick Airport for 60+ holders

Hi Olly,

I had a customer with one of the above cards, who'd been quoted £17 for a journey from Central London (Zone 1). We worked out that's the full Oyster price, so what should it be?

National Rail cost at the specific time of day he travels, from Coulsdon South to Gatwick Airport? Would the gentleman need to jump off at Coulsdon South to tap out at the extreme of his 60+ limit ?!

Many thanks

▮▮▮▮▮▮

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The customer should be able to buy a magnetic extension ticket from the boundary of Zone 6 to Gatwick, as their 60+ card covers them until the edge of Zone 6.

They wouldn't need to pay from Zone 1 unless they intend to use the Gatwick Express service on which higher fares apply.

Regards

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# SPECIAL FEATURE

## OYSTER 15th ANNIVERSARY

Although the first Oyster cards were issued to staff in September 2002, 2018 marks the 15th anniversary of the public launch of Oyster on the LU network.

To celebrate this latest milestone in traditional TRU fashion, we thought we should take a look back over some of the major milestones in the development of Oyster over those 15 years.

| Date | | Milestone |
|---|---|---|
| 27.05.2003 | - | First Annual tickets issued off system. |
| 05.09.2003 | - | Ticket Offices start to sell Monthly, Period and Annual Travelcards and Bus Passes. |
| 17.10.2003 | - | Monthly and longer period tickets mandated to Oyster. |
| 04.01.2004 | - | Launch of PAYG (then known as Pre Pay) for LU journeys. |
| 16.05.2004 | - | PAYG expanded to Buses and Trams. |
| 27.02.2005 | - | PAYG Daily Capping launched. |
| 01.09.2005 | - | Oyster PAYG and season tickets extended to include children. |
| 25.09.2005 | - | 7 Day Travelcards mandated to Oyster. |
| 02.07.2006 | - | Introduction of Privilege rate PAYG. |

| Date | | Milestone |
|---|---|---|
| 19.11.2006 | - | Maximum fares implemented for incomplete PAYG journeys. |
| 02.01.2007 | - | Visitor Oyster cards launched. |
| 02.01.2009 | - | Introduction of reduced rate PAYG for journeys between Peak hours. |
| 17.05.2009 | - | £3 deposit introduced for all Oyster cards. |
| 02.01.2010 | - | Expansion of PAYG onto NR services within the London zones |
| 03.04.2011 | - | First Oyster card dispensers installed in AFMs |
| 18.04.2011 | - | Launch of first 'limited edition' Oyster card to celebrate the Royal Wedding. |
| 01.05.2012 | - | Limited edition Oyster cards unveiled to celebrate the Queen's Diamond Jubilee and the 2012 London Olympics. |

| Date | | Milestone |
|---|---|---|
| 01.11.2012 | - | 60+ Oyster Photocard launched to give free travel to London residents who are not quite old enough for a Freedom Pass. |
| 10.12.2012 | - | Issue of limited edition Oyster card for 2013 to celebrate 150th anniversary of LU. |
| 11.03.2013 | - | Launch of Apprentice Oyster card. |
| 19.01.2014 | - | A late Fares Revision saw the first Privilege Season tickets issued on Oyster. |
| 01.03.2014 | - | Launch of limited edition "Year of the Bus" Oyster card. |
| 01.08.2014 | - | Metropolitan Police Officers were mandated to use their Police Oyster cards for travel, rather than showing their warrant card. |

And although Contactless Payment was launched on LU in September 2014, the development and expansion of Oyster has continued since then.

# OYSTER 15th ANNIVERSARY

| | | |
|---|---|---|
| 02.08.2015 | - | Temporary Young Visitor Discount extended to all LU stations. |
| 11.01.2016 | - | Expansion of Oyster acceptance to Gatwick Airport and intermediate stations between the airport and Zone 6. |
| 09.03.2016 | - | Oyster expansion beyond Z6 to include Swanley. |
| 11.09.2016 | - | Launch of 'Bus Hopper', giving bus users a free second bus journey if made within one hour. |
| 19.08.2016 | - | Night Tube launched - Oyster changes made to ensure customers making through the night journeys are not overcharged. |
| 08.09.2017 | - | TfL Ticketing app and Faster Universal Load launched, allowing customers to buy and load products quicker than ever before. |
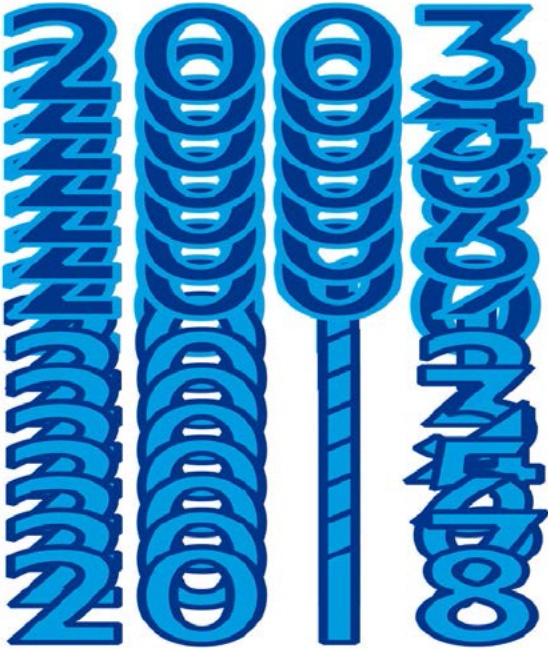
## SO WHAT DOES THE FUTURE HOLD?

Despite a huge growth in the use of contactless payments, we still issue huge numbers of cards and customers make very large volumes of journeys using Oyster.

Development of Oyster continues, with the recent extension of Oyster acceptance on the TfL Rail service to Heathrow and further expansion planned onto Heathrow Express later this year and with the opening of the new Elizabeth line.

One of the main differences between PAYG customers using Oyster and those using contactless payment, will also be removed with the planned introduction of Weekly capping for Oyster users. Some of the technical changes needed for this will be implemented as part of the forthcoming September Fares Revision changes, but no date has yet been announced for the public launch.

*2008*

*2009*

*The Olly Roger*

*It's a PAYG thing man!*

*2014*

*2015*

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## LAL MXIDE PU

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

**Ticketing & Revenue**
# T&R
**Trivia**

(a) **HOT PALM RANCH**

(b) **ILL DEACON**
*Is there a connection? – You decide.*
Answers on page 15.

(c) **ONCE GRAND VET**

(d) **ADORING A BYELAW**

(e) **YET AN UPSET**

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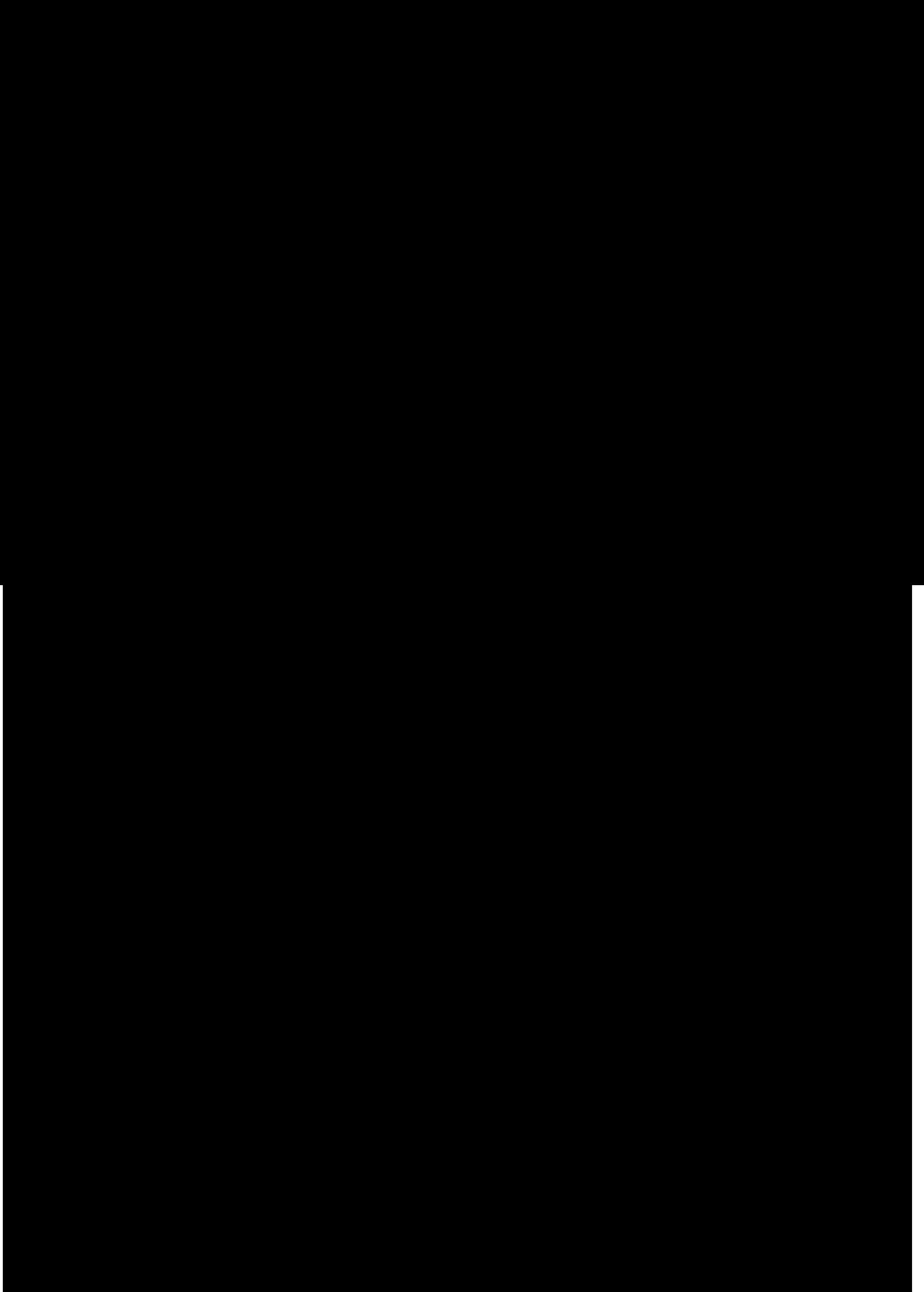
# REVENUE PROJECTS

## PADDLE SOFTWARE VANGUARD EXTENDED

Following the successful implementation of a Vanguard on a single E2 gate at Euston Square (as reported in TRU108 and TRU109) a decision was recently taken to expand this Vanguard and also deploy the new paddle control software to the other E2 gates and the WAG at **Euston Square** and then to also update the entire **Stratford (North)** gateline during the week commencing **Sunday 03 June**.

**EUSTON SQUARE**

**STRATFORD**

The Vanguard is in preparation for a trial of a new design of gate paddle, scheduled to take place later this year and incorporates the following changes:

> *The gate will still close within the same time as it currently does*
> *Customers will experience a reduced force if the gate closes on them for any reason*
> *The 'Break through' force from paid to unpaid side will be slightly reduced*
> *The 'Break through' force from unpaid to paid side remains the same.*

## GATE UPGRADES

Two further recent upgrades have also taken place on gates.

In the first of these all of the E1 gates at **London Bridge** were upgraded with a new version of software containing increased event logging. This was deployed remotely on the night of **Thursday 31 May**, to enable Cubic to capture and extract more detailed information from gates than is usually available.

**LONDON BRIDGE**

It is hoped that this will provide their engineering team with information as to what is happening within the gate and in particular the card reader (RTD), when the reader freezes. This issue has become a common and disruptive problem across all 3 types of gate.

Hopefully if the cause of the problem can be traced and then solved on the E1 gate, a solution can then also be rolled out to E2 and Pneumatic gates.

The second recent change on E1 gates, saw a relocation of one of the light beams that detect customer movements through the walkway and control the opening and closing of the gate paddles, on gates at **Swiss Cottage** and **Paddington (Main)**.

**SWISS COTTAGE**

All of the E1 gates at these two locations were modified during the week commencing **28 May** and are currently being monitored for a period of 4 weeks, to determine whether the change in beam position improves the performance of these gates.

**PADDINGTON**

Initial results from **Swiss Cottage** have been very positive, with no instances of Error code 246, being reported in the first few weeks.

The results from **Paddington (Main)** have been much less conclusive, with a couple of gates continuing to report high levels of beam related errors, which is obviously disappointing. However, a subsequent site visit to look at the gates involved, identified that maintenance contractors undertaking work within the ceiling area of the main ticket hall, had been working directly above the worst performing gates. It is therefore felt that dust from this work may have adversely affected the repositioned beams on these gates.

As a result, we have asked if another site can be added to the Vanguard, but as there is a lead time of about two weeks for the necessary components, the first phase of the vanguard would have affectively finished before any additional devices could be added.

We will however continue to push for at least one more site to be added in parallel to the second phase of the vanguard, to validate that the positive results seen at **Swiss Cottage** are not just a "one off".

The second phase of work at both current Vanguard stations is to replace all of the current beam units on their gates and tehn undertake a further period of monitoring of these devices.

# AFM SOFTWARE UPGRADE

Following an initial Vanguard on the 6 AFMs listed on the right, approval was recently given for Cubic to deploy this latest version of AFM software to all other AFMs across the network.

These particular devices had previously been identified as having high levels of error 96 (card jammed in PED).

| Station | AFM |
|---|---|
| BECONTREE | 29 |
| CANARY WHARF | 14 |
| LEICESTER SQUARE | 28 |
| SOUTH EALING | 29 |
| MARBLE ARCH | 28 |
| NORTHOLT | 29 |



The rollout was due to start on the night of **Monday 04 June**, initially with a further 20 devices, picking up the other AFMs at the Vanguard locations and some other stations which had also seen high level of error 96 issues.

However, deployment was postponed when it became apparent that a further software change was required to update the security keys for bankcard transactions (as outlined on **Page 15**). The rollout was therefore delayed for 7 days, instead commencing on the night of **Monday 11 June** with the first 20 AFMs.

The rollout then continued at a rate of 50 machines per night, covering a number of our busier stations with large numbers of AFMs in the following nights.

The rollout was then scheduled to be completed over a total of 13 nights with the final devices due to be upgraded on the night of **Wednesday 27 June.** Other system upgrades meant that we were unable to progress any updates on a couple of nights during this period.

Apart from resolving the error 96 issue, this latest AFM upgrade also included a number of other changes;
- *A fix to ensure accurate reporting of transactions on back-office reports*
- *A fix to ensure local blacklist of TSID cards is cleared at End of Day*
- *Resolution of a screen freeze issue*

# NEW PED BLOCK TO BE TRIALLED

Following the completion of the PED (Chip & PIN unit) upgrade, we identified a number of devices where the infill block that should have been inserted to fill the gap left by replacement of the previous Chip & PIN unit, had either not been fitted or had gone missing.

We had been waiting for Cubic to arrange for an engineer to refit the missing blocks, but during this period their engineering team have been looking at alternative options for fitting these blocks.

The original method used during the PED upgrade programme, was to use a strong adhesive, which needed to be mixed on site before being applied to the block.



From sample blocks which had subsequently come loose, it became clear that in some cases the adhesive had either not been mixed correctly, or insufficient had been applied to secure the metal block into the PED housing.



Following development work, an alternative option has been identified, which will also see two securing screws applied to fix the infill block onto the metal base plate of the housing. It is planned to trial the new fixing on 2 devices that currently have the blocks missing; MFM31 at Charing Cross (Trafalgar Square) and MFM31 at Piccadilly Circus.

The newly fitted units will be quite recognisable, as they will have two raised caps over the top of the securing screws as illustrated on the left.

If the new method of securing the infill blocks proves successful, then Cubic will use the new fixing to fit missing blocks to the other 65 POMs which require replacement blocks to be fitted.

# REVENUE PROJECTS

## NEW SCU UPGRADE

Since our last edition, we have continued to make progress towards the planned Vanguard of the new SAF, but it has been slightly slower than we had hoped and means that the first stations are now not likely to receive the new units until towards the end of July.
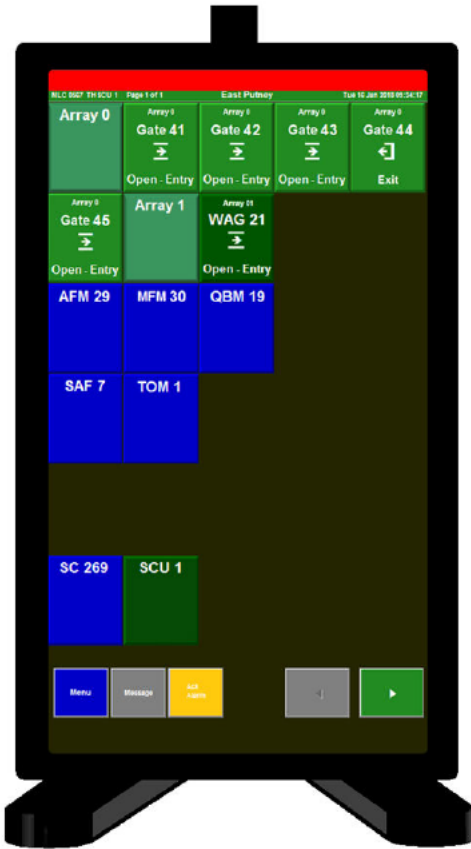
One of the reasons behind this further delay is the discovery of some issues with the device software freezing, which were found during the initial round of engineering testing undertaken by Cubic. The cause of this issue is currently being investigated.

On a more positive note, a lot of progress has been made on finalising the screen layouts and base data changes needed to support the introduction of the new SCU.

The first four of the six Vanguard locations are due to have updated base data loaded as part of a scheduled base data upgrade on **Sunday 24 June**, with the final two more complex sites (**London Bridge** and **Euston**) being loaded in the following base data load on **Sunday 07 July**.

Apart from the changes required to support the new SAF, we are also taking the opportunity to correct a number of other long running short comings within the base data:

 ➢ *reconfiguration of gate arrays to separate WAGs onto a different array to the other gates. This will allow application of Revenue Control staff to apply blocks on certain ticket types to be applied only to gates, allowing supervised validation via WAGs.*
 ➢ *reconfiguration and renumbering of some gate arrays*
 ➢ *correction of incorrect location descriptions within base data*
 ➢ *updating of SAF safe details for Southfields*
 ➢ *removal of redundant devices from base data.*

Following the installation of the new SCU, a further base data change will be required to remove details relating to the traditional UTS SCU set-up. Unfortunately one of the constraints of the current SCU is that if a device is removed, the following devices in the numbering sequence will potentially renumber themselves.

So for example, the removal of SCU02, would then result in SCU03 becoming SCU02 and SCU04 becoming SCU03. Since the base data determines what devices are displayed on each screen/page, this would potentially result in incorrect devices being displayed on the screen.

At present this is averted by tricking the Station Computer into believing the SCU is still present. Implementation of the new style SCU will resolve this and enable us to remove details of SCUs that no longer exist from the system.

## WAN MIGRATION PROJECT

The project to carry out network improvements which involved switching the gate and ticket machines over from routers to the TfL IM network connection is now complete. This new connection provides an alternative routing of data between the Station Computer and Data Gathering Centre (DGC), by routing data via the TfL IM network rather than via a dedicated connection.

The project dates back to **December 2015** with a initial trial at **Regents Park** and all but 15 stations have now been successfully changed over, of which 9 are the LU operated stations listed below;

| FINSBURY PARK | PADDINGTON (Main) | SOUTH KENTON | TOTTENHAM COURT RD | WOODFORD |
| KEW GARDENS | PARSONS GREEN | STONEBRIDGE PARK | WOODSIDE PARK | |

These stations had to be deferred due to a variety of reasons and will now be corrected during the forthcoming Network Transformation programme that is being led by Capita.

## POM BANKCARD ACCEPTANCE UPDATE

Fairly late in the day, it became apparent that it would be necessary to update the security keys used by each device that accepts bankcard payments, before the current keys expire on **Sunday 08 July.**

As a result it was necessary to quickly plan a short vanguard before deployment of the updated security keys to each type of device. Fortunately as LU TOMs no longer take card payments, we only needed to update the 2 TOMs at **Stanmore.** However upgrades were required for all of our AFM, MFM, QBM and TVMs.

As we were about to embark on a programme to update software on all AFMs, a decision was taken to postpone this for one week to allow deployment of both the software upgrade and security keys together.

This saw the new software being down loaded during the evening and being stored by the device ready to switch in around end of day. Following successful completion, the file containing the new security keys was then downloaded to each device around 05.00 hours.

Further details on the AFM software upgrade can be found on **Page 13.**

For MFMs and QBMs the task was slightly simpler, with the new security keys being sent to the device in advance and being loaded via a restart of the device in the early hours of the morning.

The updates were deployed at a rate of around 50 AFMs, 30 MFMs and 15 QBMs per night from **Monday 11 June** through to **Wednesday 27 June**, excluding Saturday nights and a couple of nights where system upgrades prevented upgrades taking place.

Non-Night Tube stations being tackled on Friday nights to avoid the need to restart devices during traffic hours.

The rollout of the updates to all 3 main device types were coordinated, so that where possible, all devices at a location were upgraded on the same night.

Due to imbalances in the numbers of each type of device, some stations had devices upgraded over two different nights.

## ANSWERS TO T&R TRIVIA

| Pt.1 | C | £12.50 (Although the Single fare is £10.10, the card will cap at the Z1-6 Daily cap | See Page 2 |
| --- | --- | --- | --- |
| Pt.2 | A | JULY 2014 | See Page 5 |

| Pt.3 | LAL MXIDE PU | See Page 9 |
| --- | --- | --- |

### How did you do?

(a) CLAPHAM NORTH
(b) COLINDALE
(c) COVENT GARDEN
(d) EALING BROADWAY
(e) EAST PUTNEY

# ...AND FINALLY!



## TOM/SAF UPGRADE PROGRESS

Progress on the TOM/SAF hardware and software programme continues and in the middle of June Cubic were able to allocate some additional installation resource to increase the rate of the upgrades from 2 sites to 4 sites per night.

Unfortunately their workshop who have to assemble and prepare the new units ready for each installation are only able to prepare 16 units per week, so we have had to limit the installations to four nights per week, leaving the remaining night available should there be a need to revisit a site that has been missed or not fully completed.

This does still mean that we will be increasing the sites completed by over 50% from 10 to 16. This should hopefully enable us to shorten the overall programme, which we are now hoping to finish by **mid-September**.

Click here to access the TOM/SAF overview document.



Apologies to readers of TRU109. In our haste to publish something went wrong with the back page of the last edition and some of the text disappeared.

As a result in our article about the new gate paddle software, an image of a damaged gate paddle was included, without any explanatory text to link this to the item being discussed.

To explain the reasons behind the new design of paddle; apart from being much lighter than the existing design and therefore causing less stress on the motors and gearboxes of the gate, we also have issues with the current rubber coating splitting (as in the photo) after a prolonged period of use or impact from objects as customers pass through.

This can leave sharp edges or the possibility of clothing etc. catching on the paddle, which obviously presents a hazard to customers.



Should you see any damage to a gate paddle, please report this to the Cubic Helpdesk as soon as possible.

## LOOKING AHEAD TO TRU111

Our next edition of the Ticketing & Revenue Update will be a combined July / August edition, which we are looking to publish in mid-August.

**TRU111 will contain:**

➢ *An overview of the forthcoming September Fares Revision changes*
➢ *Update on the Vanguard of the new SCU, which will hopefully be underway by then*

Plus updates on other ongoing T&R projects, a further selection of readers letters and email enquiries and some of our other regular features.