

MEETING REPORTS

HOW LONDON UNDERGROUND MANAGES MAJOR CLOSURES

by Mark Curran

**Senior Planner for Major Closures, London Underground
Ltd.**

**A report of the LURS meeting at All Souls Club House on 10 June
2008**

Mark began the lecture by outlining how he came to be in the job, studying Transport Management at Aston University in Birmingham followed by 6 years with the Transport Planning Consultancy in Birmingham. He got the job in London Underground in June 2007 – 10 months ago at the time of the lecture.

Mark prefaced the lecture by stating that the amount of maintenance work was not only ongoing but the amount of work being carried out and closures as a result of this were increasing: there is now more of a political will to improve the underground than there has been historically. However, as there is an increasing number of people being carried, this inevitably means engineering closures are also more frequent, especially at the weekend, causing lots of frustration. Several statistics were stated to make it clear how passenger journeys are increasing: LU now carry as many people on a Saturday as ten years ago were carried on a weekday. There are also now over a billion passengers a year, which is forecast to increase by up to 40%. LU also carries more passengers than the rest of the rail network put together, which works out between three-and-a-half to four million people a day. A graph was also shown illustrating the one billion passengers a year carried today, with this then projected to rise 40%. At the same time, projected network capacity is forecast to rise 28%, prompting hopes for more off-peak and Sunday travel!

As part of the ongoing maintenance of the Underground, the PPP (Public Private Partnership) contract with Metronet and Tube Lines is for its day-to-day maintenance, as well as upgrading work: an example given is that signalling on the Circle and Hammersmith & City is over fifty years old causing problems at pinch points such as Edgware Road and Baker Street.

Mark then gave a summary of past, current and future works carried out on the Underground, beginning with the Waterloo & City line now running 5 trains in service rather than 4, the Jubilee Line upgrade, the new Victoria Line trains and signalling system, Northern Line signalling and ATO upgrades, with the Sub-Surface Lines work being scheduled to start by 2015. Mark made the point that this plan be superseded as the Victoria Line is progressing quickly. Station modernisation, the Connect radio technology, upgrades to major stations such as Oxford Circus and Tottenham Court Road, step-free access schemes, installation of mobility impaired lifts, power systems from EDF energy and adding cooling technology were other examples of works to improve passengers' experience. This was summed up by saying that compared to before then was essentially twice the investment being made in half the time.

Prior to PPP it was the timetable section who looked after weekend closures, in a similar manner to Train Operating Companies (TOCs) do today. As the demand for

closures grew under the PPP, a dedicated team was required. This now known as Events & Closures. The current team involves 10-15 people at 55 Broadway, who are the planning end of an operational team, with one overall manager and five senior planners who deal with every possession and closure Metronet and Tube Lines want, from closing an entire line to closing a passageway within a station for a weekend. They work closely with sister companies: London Rail, DLR, London Buses as well as events' organisers such as the O₂ and Wembley, all the London boroughs, Royal Parks and other train companies, e.g. Network Rail, to co-ordinate closures as well as possible.

All work types are dealt with, from replacement of tracks, line upgrades, stations modifications, congestion relief, network extensions such as Heathrow Terminal 5 and station accessibility projects. In terms of working with Infracos they have defined closure regime: for minor closures (weekends or after 21.00 and before 06.00) LU are obliged to give time if it is required, although there is a notional currency to stop too many works happening at once: Infracos have a certain allocation of lost customer hours which also counts unplanned closures, although in reality they don't really 'run out'.

The process of applying for a minor closure was then explained: attend and agree dates and possessions at a regular meeting with Events & Closures, then submit a closure request on a Closure Request Form. If the closure is for lift and/or escalator work, 90 days' notice is required, which rarely results in closure. To apply for a minor closure of the station or to work on the track, in theory 222 days' notice in advance is required. There is also a limit of two track closures per Infraco per weekend. A major closure, however, is always the discretion of LU. These are counted as closures of station or track on weekdays between 06.00 and 21.00. Although these are avoided as far as possible, they can be accommodated where it will facilitate more efficient working even if it will cause significant customer disruption in the short term. The planners require 540 days' notice (a year and a half), and indications are that these shall become more common.

When granting or refusing requests, planners look at several factors: events taking place in the local area (sports, concerts, etc), as well as other transport links so that no-one gets cut-off wherever possible. Reviews on business and customer impact and also how customers can be carried around using alternative means, such as buses, using other stations and using other platforms where a station has several (e.g. Stratford) are also examined. The planning department also procure additional staff – blue vests – to give out as much information as possible. Occasionally a request is refused, again for several potential reasons: a badly thought-out major closure: operationally unsafe, too many closures at once, more hours of closure than allowed, clashes with another closure or clashes with a major event, (e.g. Wembley).

During a closure there are many things to do, the timetable department must write special train timetables, the stakeholder communications department have the hardest jobs – reporting exactly what will be closed and when to organisations such as London TravelWatch, marketing information must be produced and displayed, (e.g. stickers, posters, etc.). There are also revenue issues to deal with, such as setting up different Oyster rules for having to exit twice at certain stations, as well as liaising with London Buses who co-ordinate bus operators and having discussions with the Line General Manager, Performance Managers, etc. who are affected by any closure.

As previously mentioned, closures are increasing and there are now between 3 and 5 track closures each weekend, many of which are extremely complex, e.g. the installation of transmission based train control (TBTC) system on the Jubilee Line. Although disruption is heightened, it often helps having consecutive weekends for engineering work as has happened recently on the Victoria and Jubilee lines, as it means things can be picked up where they were left off. However, it was stressed that plans tend to be relatively fluid: 2008/09 has been the busiest year yet with lots of closures and the 6 month lookahead on the TfL website often changes: events can get scheduled at the O₂ on fairly short notice although communication and co-ordination with the FA is good: the FA will plan local Premier League matches with an eye to what transport will or will not be available. Cricket matches, the London Marathon, the Boat Race, Chelsea Flower Show, ExCEL exhibitions, the Notting Hill Carnival, etc. means track closures can go 'out the window'. It was also stressed that there are no Zone 1 closures in December as having London accessible for the peak shopping time is considered a big commodity.

An overview of works given in the 2008 year were then expanded on, as 2008/09 will be the busiest year yet for track closure work:

- District Line: Ballast track renewal in the central areas as well as around Dagenham, near Richmond and west of Earl's Court for the renewal of the junction at Olympia.
- Metropolitan Line: The sub-surface upgrade has meant big closures with lots of complaints. Complete closures of Aldgate and Wembley Park (as all 4 tracks were needed) and a complete four-day closure over the Christmas period.
- Hammersmith and City Line: Not too much work needed other than over the Easter period.
- Circle: No closures on its own per se, but often suspended or curtailed due to renewal work on the District or Metropolitan.
- Bakerloo Line: Hasn't featured significantly for around two years, although Metronet want to renew the track. Network Rail are also upgrading their DC lines, meaning some closures need to take place.
- Central Line: Not many closures as an awful lot was done in the 1990s when the signalling was upgraded. Several one-day closures from Liverpool Street – Leytonstone have been for work to take place at Stratford.
- Victoria Line: Full line suspensions will take place every other weekend for the rest of year, plus early closing until late November, all related to the new 2009 Stock scheduled for introduction next year. These closures have also presented an opportunity to get other work completed such as station upgrades at Green Park, Victoria, Walthamstow and Brixton. Removal of asbestos has also taken place at Victoria station.
- Jubilee Line: 30 weekends of closures this year with the line upgraded by 2010. One compensating factor is that there are rarely any full line closures and currently only at the east end of the line at present.
- Northern Line: Several stations being renewed and the line upgrade starts next year. Several stations have been closed, e.g. Edgware, Goodge Street for access and modernisation works. Clapham Common and Oval stations will also have some early closures.
- Piccadilly: Fairly quiet in terms of upgrade works, with only few non-stopping weekends, at certain stations. There are also no significant works on the agenda as the Piccadilly upgrade will follow the Northern Line, starting 2011-2012.

- Stations: Shepherds Bush closed for complete refurbishment, Blackfriars to close on 5 January 2009¹ for Network Rail to build a new mainline station.
- Escalators: Bank refurbishment as well as Clapham Common.
- Olympics: Stratford and the DLR are being worked on extensively and so travel is difficult at the moment when looking at the Jubilee upgrade as well, but planners are trying to keep two out of the three transport options open.

Shared tracks, such as those on the Bakerloo, Wimbledon and Richmond areas of the District and the parts of the Metropolitan Line are shared with other TOCs. This partnership with regard to engineering work is not always smooth as it could be but provision for other services and joint publicity is done together. National Rail also use 'Rules of the Route', which means their closures can be planned up to three years in advance, much more than London Underground's. Questions remain about whether these shared routes are maximising benefits of closures, non-Christmas closures and TOCs not putting out announcements and other publicity material. Event planners (Wembley, O₂), etc. also tend to work only on a 3-month timescale and as a result it isn't uncommon for them to put events on top of a closure even though they know it is already taking place.

In summary, whereas with only 1-2 closures taking place per weekend it was relatively easy, now with 5-6 things become much more complicated and difficult.

MAJOR CLOSURES

An impression of an artist's impression of Shepherd's Bush station was shown. Mark again summed up that a major closure was a closure that took place between 06.00 and 21.00 on a working day. These generally took place because of the scale of work to be carried out and the length of time this would take, examples being installing a new lift shaft, new escalators, etc. or upgrading many things at once for the sake of efficiency such as track, signal, and station work. The closure of Shepherd's Bush station was *very* short notice, as was the escalator work at Bank/Monument.

The process of planning for a major closure is very detailed and a great amount of discussion takes place, including talks with the Chief Procurement Office (which monitor suppliers and contractors), Infracos, directors, stakeholders (MPs, London TravelWatch, local authorities, etc). Getting feedback and informal advice at this stage is extremely important.

Infracos also need to show definite needs and benefits for a major closure – why this needs doing during the working day and that there is no other practical way of carrying out the work during the weekend or other down time. Nobody has any entitlement to major closures and it is not written in the PPP contract – rather it is something to be discussed. The overriding factor is that it can be done if it has major, long-term benefits.

From a planner's point of view, the most important issues are:

- Can passengers be moved by other means?
- Will other routes become too crowded? Will people simply drive instead? Speaking to sister companies, such as London Buses, is very important here.
- Clashes with existing work and opportunities for other works. Is it possible to mesh 5 or 6 other projects together get things done all at once?

¹ Actually closed at close of traffic on 27 February 2009.

Within LU, when planning a major closure, there are several problems to be considered, apart from actually physically moving passengers around:

- Staff displacement: At Shepherd's Bush staff were moved within the station group to other stations. Health and Safety issues are also paramount with trains running adjacent (as close as 1 metre) to a worksite.
- Revision of train services, including timetables for up to 2-3 months.
- Predicting where customers will go – will they walk or drive further to be able to get onto the tube rather than take rail replacement buses?
- Implementation: A lot of care needs to go into how and when you tell people. The worst scenario is staff finding out from the Evening Standard. Mark feels a good solution is to get out and talk to people. It's not just 'front-line' staff that need the information, Customer Services need to know the background to stories as they get a lot of questions from customers. Disseminating information to customers is harder as posters simply don't work: the information is often missed.

Managing on the day is also vitally important, getting out and be seen makes a big difference as well as speaking to Station Supervisors, Customer Service Assistants, rail replacement bus managers, etc to get feedback. Group Station Managers are vital in major closures working well. Within LU, there remain some issues with suits versus operational staff: Mark felt 'suits' have to get out and ensure they understand the issues in the 'real world'.

RECENT CLOSURES IN DETAIL

SHEPHERD'S BUSH

It was felt that this was a unique opportunity. The original plan was a station refurbishment at platform level done at weekends for over two years. A new ticket hall was scheduled to be built while the old one was still working and then escalator renewal, which had to take place in 2011 and that would have resulted in a closure for several months anyway. In November 2007 the decision was taken to do it all at once. In context, this was a good idea, although there was a lot of scepticism and the 'Meet the Manager' event there was fairly hostile with the Central Line Manager being harangued by 20+ customers! During the closure, buses from Shepherd's Bush to White City were laid on, and LU paid for additional buses from Notting Hill Gate and Holland Park to Shepherd's Bush on the 148 bus.

VICTORIA

The station closed for 16 days in total over the Christmas period as there was asbestos at top of escalators that had to be removed – the only feasible way of this being done was with a major closure. Plenty of notice was given including posters, stickers on maps, details in travel magazines, leafleting, etc. It was found that announcements don't work well and that by having 15-20 people in the station putting a leaflet into every customer's hand gets message across much better. In this instance this was done with Broadway staff so they didn't look like a promotional person handing out free papers or a credit card! Correct information was also stuck to literally every floor, ceiling and spare wall space, and although it was admitted that this did look very temporary, it got the message across perfectly. In general, the closure worked well with a high-frequency shuttle to Pimlico and lots of Customer Service Assistants. This closure drew very few complaints.

CLOSURE OF THE EAST LONDON LINE

The line closed on Saturday 22 December 2007, with the Crossgate flyover having been built, a new depot being constructed and trains delivered on site from July

2009, then operating by June 2010. The closure affects 37,000 passengers a day plus approximately 160 staff.

The line itself had quite a family and friendly atmosphere and feels quite divorced from rest of network – this meant that the transition would be quite difficult, there being lots of questions and issues, such as where staff would be working in future and keeping staff motivated throughout the closure period, as well as questions about the last day, etc. Station managers, service control staff, drivers, signallers, administration staff, etc. had a choice of where they would like to be moved.

Alternative transport needed to be put into place as customers needed to travel and Underground links needed to be maintained as the East London Line was a feeder to the rest of the network (Shadwell onto the DLR, Whitechapel onto the District and Hammersmith & City, Canada Water onto the Jubilee). 37,000 passengers a day were using the line which had doubled in numbers carried since 1998. However, the line did the same number of journeys in one day as the Victoria Line did in an hour and so is a relatively small operation in LU terms. Planners, however, had big fears about the last train and thought it would be crowded like at Shoreditch and so on the last Saturday ran a full weekday service, although it turns out demand was fairly low!

Cross-river links were looked at carefully although there are limited road routes available to follow the route of the ELL. A boat service was also examined but cost of building a new pier was too expensive and impractical. Running a bus through the Rotherhithe tunnel was also impractical as according to statistics, less than 100 customers a day would have had a quicker journey as opposed to using other Underground links.

In the end, three different shuttle buses were decided on linking the old route to the Jubilee Line and DLR. Problems were also encountered with ticketing: it was difficult to buy tickets, travelcards and topping up their Prepay cards as the ticket offices had closed and many customers also wanted a Zone 1 exemption to get to where they wanted via Tower Hill/Tower Gateway.

Information was trickle-fed to begin with and was put up in August 2007 followed by the publicity launch leaflet on 17 September 2007. This ran into problems however, for example the people using Wapping didn't think it would be closed and that the enormous posters were jokes! With six weeks to go, stickers were placed in windows of carriages, on tube maps, in stations on any bits of walls, etc. Ticket offices were closed a week before the rest of the line.

Since the closure has taken place, the planning department has tried to respond to customers: it seems 90% of customers are now going through London Bridge station and so bus routes, such as the 381, have changed due to customer feedback. On 18 July 2008 the ELS contract ended, meaning some of the replacement bus services would be combined, as well as using smaller vehicles which wouldn't block roads as much as had been happening previously. Mark acknowledged that this closure had been difficult and hard on local residents, although did state that sometimes closure is necessary to improve things for the greater good.

In summary, Mark felt that closures are at their maximum at the moment without lots of further disruption, although demand for major closures is likely to grow: informal discussions with Infracos indicate this.

Michael Woodside