

# **CAPACITY AND CROWDING ON THE LONDON UNDERGROUND**

**by Mike Strzelecki**

**A report of the LURS meeting at All Souls Club House on 9 June  
2009**

Mike Strzelecki is Director of Safety with London Underground.

London Travelwatch calls the situation “overcrowding”. London Underground calls it the result of the Underground being a Mass Rapid Transit System, designed to ‘transport lots of people quickly’ – it may be crowded but it is not over-crowded.

London is a growing city, it is predicted that by 2026 there will be over one million more people employed in Greater London than at present and the resident population will have also grown by a similar number. LU plans to deal with this prediction mainly by modernising and improving the capacity of signalling and control systems and by providing more trains with better performance than present fleets. There are currently 27 programmes (which can be broken down in to the following six headings) which are all on target at present. However, there may be funding issues due to the collapse of Metronet. Mike explained that to increase capacity by building new tunnels, double or quadruple tracks and make associated changes to bridges is too costly to change compared to its benefits.

## **AIR CONDITIONING**

Unfortunately, plans for this have been curtailed due to reductions in funding. Cooling works to increase ventilation on the Victoria Line are in progress with other measures under trial such as the cooling units suspended from the ceiling of the lower escalator concourse at the interchange to the District and Circle Lines and temporary measures such as big blue industrial fans installed at a number of stations around the network. However, all other substantive cooling works have stopped. LU is in discussion with Central Government for a replacement to PPP funds, but the current economic situation makes their provision very uncertain.

The new trains for the sub-surface lines have air conditioning and are currently undergoing testing. Research is still in progress on an air-conditioning system for deep-level lines, which remain a very significant technical challenge.

## **LINE AND STATION UPGRADES**

The Victoria Line upgrade is in progress but slightly behind schedule. Once completed it will see a 20% increase in capacity, new trains (which will be entering public service soon) will initially operate on the old control systems. The new control system will be commissioned when all the old trains have been removed in several years time. The Victoria Line was the first automated system in the world and this is the first upgrade on such a system! Victoria station upgrade has started and will have a new, additional ticket hall, new corridors, more escalators and MIP lifts to all lines.

The Jubilee Line Extension has shown that the larger the station the more easily large numbers of passengers move through it.

Customers regularly complain that a line will be shut down for the weekend but on Monday they don't see any changes. This is usually because the work has been

upgrading the control systems, but the effects will not be seen until the system is switched on once all the upgrade work is complete.

There were originally plans for eight Station Congestion Relief Schemes, but four have been postponed beyond the ten year funding horizon due to reductions in funding.

## **CROSSRAIL**

This has been planned for over 30 years but has now started and is expected to open in 2017. However, if there is a change of Government this is not guaranteed! Mike's view is that Crossrail will make it easier for people to get into/out of Central London from the outskirts, but this will mean more crowding in the centre without increasing capacity.

## **LEVEL ACCESS**

The raised areas on platforms have been very successful. They have actually reduced accidents on platforms as people seem to take more care where they are walking.

The target is to have 25% of stations step free by 2010 and we are currently right on programme to achieve this.

Research has shown that MIP systems assist both in accessibility and increasing a station's capacity.

## **COMMUNICATION**

The Connect Digital Radio system is much better in terms of quality, efficiency and reliability than the system used previously and covers all lines and stations entirely

## **SAFETY**

The last 10 years have seen safety performance increase by 10 times. From statistics, in 1999 there was a major incident an average of every 29 days, now it is only one every 300+ days.

In conclusion:

- London is a busy growing city.
- Public transport is the sustainable way to support London's growth.
- The Underground is a vital part of London's transport system.
- It is a mass transit system.
- Crowded trains and stations are here to stay.
- But LU are expert at managing crowds safely.
- LU are adding capacity to meet demand.

A number of questions were asked of Mike Strzelecki such as "the definition of a major incident" – any fatality of customer (excluding suicides) staff or contractor, or more than three people taken to hospital from any one incident. Suicides have also reduced by 50% over the past 15 years, and the majority of people who attempt this now survive (although often with major injuries). Mike stressed that it can be a difficult balancing act between being respectful to the "one under" and getting the system re-opened with minimum delay to other customers – the needs of 1 compared to 100,000.

*How often are stations are closed due to overcrowding?* It varies greatly, for example at Victoria and King's Cross it is an almost daily occurrence, at Camden

Town it has become a fixture at weekends to cope with the number of visitors to the nearby "markets".

*What effect the Olympics/Para-Olympics will have on LU?* This will see a great increase in the number of first-time visitors to London. LU plan even more staff training in crowd control, employment of extra (temporary) staff and all staff, who wish to, may wear badges indicating which languages they speak. A delegation went to China to see their transport in action for the 2008 event. Of course, the volume carried on the Underground regularly reduces by 15% during the summer as regular commuters go on holiday.

*Will the new trains have more seats?* Broadly speaking it will be the same number. LT strive for a balance between journey length and customer profile. Mike personally hopes for a return to good manners in people giving up their seats for those less able to stand.

The meeting then thanked Mike Strzelecki in the usual manner.

**Amanda Day**