

BANK AND MONUMENT STATIONS UPGRADE

by Viki James

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A report of the LURS meeting at All Souls Clubhouse on Tuesday 9 May 2017

The society meeting welcomed Viki James, Senior Project Manager for Consents and Land for London Underground who presented “**B**ank and Monument **S**tations **C**apacity **U**pgade” (BSCU).

London can be divided into two parts. The new part being the area surrounding Canary Wharf and the old heart of the City of London. LU presently has 1.17 billion passenger journeys per year. By 2026, 30 central London stations will experience crowding greater than four people per square metre (about the size of a telephone box). Currently 53% of journey time is spent in stations rather than actually travelling.

The Bank/Monument complex is at the edge of the tube map but at the heart of interchange within the network with the same number of lines as King’s Cross but with a negligible surface presence. Over 40% of the movement within the station is interchange, and station usage has increased by 50% in the last ten years. It is now the third busiest station the network behind Oxford Circus and Victoria. If operational measures are required at Bank this quickly spreads to surrounding stations making improvements at Bank key to keeping things moving. In common with other major projects, it is not undertaken in isolation but assessed to see how it will affect other parts of the network. For instance, there will be no benefit from increased frequency on the Northern Line without increased entry and exit capacity at Bank.

Apart from the Monument entrance on Fish Street Hill the station has no surface presence. Lines are largely built under roads to varying depths: District and Circle is cut and cover around five metres below the surface. The Central Line is 14-15m below ground. (The “Mind the Gap” announcements originated here due to the gap caused by platform curvature resulting from the requirement to go round the Bank of England vaults). The Waterloo and City Line is 18m below ground, the Northern Line 27m, and the newest addition, the DLR, 40m.

The Northern Line platforms are very narrow and the staircases to and from the line too small, only allowing people two abreast at some points. The flow of people coming from the DLR is difficult and bidirectional flows, such as people coming off the W&C, add to congestion. The station is over a kilometre from one end to the other and due to the nature of its ‘bit by bit’ development spanning more than 125 years, effectively squeezes passengers in and out.

Every morning peak Bank handles around 123,000 passengers. A further problem is the terminating W&C and DLR trains which discharge their passengers who are still exiting the station when the passengers from the next terminating trains join the queue.

Around 3% of UK building stock is listed but in the Bank area it is around 47% so an enormous amount of work was necessary in order to acquire the Transport and Works Order to ensure above ground considerations had equal consideration to those below ground. The two most significant grade 1 listed buildings are the Mansion House (home of the Lord Mayor) and the 16th century Wren church, St Mary Abchurch. The Bank project was first considered around 2003. Stakeholder engagement started in 2011 with the submission for powers not occurring until 2014.

The key requirements of the Bank upgrade are:

- Increase capacity at Bank station, with the aim of reducing journey times and congestion for passengers whilst ensuring resilience to surges in demand and train service interruption.
- Provide step-free access to the Northern Line platforms from street and DLR levels.
- Contribute to the objectives of the Mayor’s Transport Strategy.
- Improve emergency fire and evacuation protection measures for Northern line and DLR passengers.

A key aim is to future proof the upgrade so that it does not go up to full capacity as soon as it is complete like the M25 did, and LU are designing the upgrade to be sufficient until 2086.

Step free access for the Central Line is not a deliverable of the current upgrade project but a feasibility study will be commissioned once the upgrade works are complete.

The developers of the adjacent Bloomberg Building (in Cannon Street) were required to provide a new station box which will enable step-free access to the W&C Line. (This is a project separate to the Bank upgrade).

A 650 metre tunnel will be constructed to provide a new southbound Northern Line platform with increased interchange passageway capacity. The current platform tunnel will be backfilled in the invert and converted to a new concourse to increase circulation and interchange use. Construction is estimated to be complete in 2020. This will require a temporary blockade of the Northern Line between Moorgate and Kennington. As the two Northern Line tunnels are less than a metre apart, construction of the new tunnel, in particular the breakthrough to the existing, is not possible without closing both lines to traffic.

The closures are proposed as follows:

- 40 days in April and May 2020 – no trains between Moorgate and Kennington.
- 77 days May to August 2020 – northbound trains will not stop at Bank and there will be no southbound Northern Line from Moorgate to Kennington.

During the blockade, it is expected that passengers will use alternative stations and arrive in other areas of the city. Most track and signal work can be undertaken in advance and work during the closure is mainly connecting the new tunnel to the existing station infrastructure. The blockade itself is a significant part of the project and a sub team is already working on it including provision of passenger information, publicity etc.

Demolition work has now been completed on six buildings (bounded by Cannon Street, Abchurch Lane, King William Street and Nicholas Lane) to provide the worksite for the new entrance on Cannon Street which will have two lifts and two banks of triple escalators from street to Northern and DLR. In addition two moving walkways provide direct interchange between Northern and Central lines reducing journey and interchange times. Triple escalators are an improvement over current conditions offering service resilience for maintenance.

The City of London is a key economic area, on its own responsible of 13% of UK GDP. Growth can only continue with an effective transport system which the works at Bank will provide.

It takes around 32 months to obtain a Transport and Works Order. Among the requirements are:

- A draft order and explanatory memorandum.
- A statement of the aims of the proposal.
- A report summarising the consultation carried out.
- Plans and cross sections.
- An Environmental Statement.
- Consideration of alternatives.
- Townscape.
- Noise and vibration.
- Archaeology.
- Water resource and flood risk.
- Water management.
- Site and surroundings.
- Transport.
- Built heritage.
- Air quality.
- Land contamination.
- Cumulative effects.

Consultation events started in 2011 and took place over the next three years. Hundreds of meetings with stakeholders took place.

Submission of the TWAO application was in September 2014. The public inquiry followed in April 2015 despite the project having over 600 statutory objectors only 40 objections were received. These 40 written objections were reduced to nine and despite the expectation for the public inquiry to last 7-8 weeks only lasted five days of evidence was heard and none of that opposing evidence. In addition,

the speaker received more than 30 letters of support. She attributes this success to the team she works with and the extensive stakeholder engagement before the inquiry.

Work started on site in April 2016, the TWAO becoming effective three months earlier. The main shaft has been completed and transverse tunnelling is about to start. There is not enough room for a TBM so this will be hand dug. The whole project is due to be complete towards the end of 2021.

The speaker then showed a video showing details of construction including piling work that has to be undertaken

Questions were then taken from the audience and the speaker thanked for her presentation with a generous round of applause.

Martin Baumann