

# YORK ROAD RE-OPENING STUDY

by Antony Badsey-Ellis

With the redevelopment of the large area to the north of King's Cross station, consideration has been given to ensuring that it has suitable transport links. Even though King's Cross Underground station has been greatly extended in the past few years it is still felt that congestion is a risk with so many Underground lines and main-line converging in one place. One proposal, first mooted in 1994, is the reopening of York Road underground station on the Piccadilly Line. In 2004 London Underground commissioned Halcrow Group to prepare a report giving details of the suggested costs and technical requirements that such a reopening would face.

York Road station closed on 17 September 1932, a victim of the Underground Group's desire to increase the average speed on the Piccadilly Line. It has low passenger numbers due in part to its location in a run-down, partly industrial area with few of the inhabitants having the types of work that would give them cause to commute on the Underground. The station had previously closed for five months during and after the General Strike of 1926, and was only reopened (along with Brompton Road) after questions were asked in the House of Commons. By the early-1930s the Piccadilly Line was being extended at both ends, and its lesser-used stations were being earmarked for closure.

After closure, the distinctive building clad in the ox-blood terracotta used by the architect Leslie Green remained on the surface. The tiled name friezes were removed shortly after closure, and inside the building the lifts and other equipment were decommissioned. Over the years blockwork walls were added, and offices were created on both floors. One lift shaft was reused for ventilating the running tunnels below while the other was capped with a concrete lid to increase the area of the offices. The station also had a shaft containing spiral stairs, which was outside the footprint of the building to the south, and accessed via steps in the basement. The original stairs were replaced by narrower spiral stairs with open mesh, allowing site access. Down below the platforms were demolished and the tiled walls painted over. A facing crossover immediately to the 'north' of the station was decommissioned in 1964.

The study first looked at the work that would be required to reopen the station. The building, shafts, and tunnels are all structurally sound, although there is some water leakage in the spiral stair tunnel. An advantage is that unlike the majority of the original Underground stations, the lifts descended to platform level, allowing easy provision of step-free access if the station reopened. The key problem is that the standards applying to new stations are somewhat different to those in force at the time that the station was in use, and so it would not be possible just to reinstate the lifts and platform (and give the place a clean).

In order to maintain the ventilation at the station, one shaft is required. The preferred, and cheaper, of the two scenarios considered by Halcrow was for the original stair shaft to be used for this purpose, with two 50-person lifts being installed in the southern lift shaft. The northern lift shaft would be fitted with a triangular spiral stairs (since spiral stairs as originally fitted would not be permitted at a 'new' station). If four lifts were required then a new stair shaft would be required to the north of the station, under Bingfield Road, adding considerably to the cost of the scheme.

The lift shaft would be fire-hardened and pressurized, with automatically closing doors on the cross-passages at platform level. This would ensure that in the event of a fire the lifts could still be used for evacuation and for access by fire crews.

To provide adequate platform ventilation an adit would be created southwards from near the foot of the former stair shaft, running parallel to the platforms. From this four short connections would be made with the ceilings of the platform tunnels (two to each), which together with one direct connection from each platform to the shaft would provide fresh air to the southern end of the platforms.

The platforms would need reinstatement, and because of their curvature would require permission from the Railway Inspectorate. Anti-suicide pits would be required, and cabling and signal equipment would need to be removed, hidden away, or resited.

At the surface, it was proposed to build a curving glass frontage onto the station, allowing the original façade to be seen. Ticket gates would be installed in the right-hand two arches, with passengers accessing the lifts from the left-hand side and leaving through the right. This space would extend into the first floor, forming a double-height area to make the station lighter and more spacious.

An emergency exit would run around the back of the station, connecting with the new spiral stairs and disgorging into Bingfield Street. A ticket office was not included in the plans, as LU only wanted ticket machines to be provided. However, the plans include space for such an office if this decision was reversed.

This scheme would allow a flow of around 4,200 passengers per hour. The Railway Inspectorate would have to permit their requirements to be breached in regard of the platform curvature and width, the width of the cross-passages, and the provision of only one emergency access route. This latter point would probably be dealt with through having fire-hardened lifts, and the other points have all been accepted at other similar Underground stations, such as Caledonian Road.

The report estimated the costs of reopening the station as just over £21.5 million. This excluded the cost of building the anti-suicide pit, as it was felt that this could be achieved during the Piccadilly Line upgrade works.

If a new building was required then demolition and reinstatement would almost double the initial figure. The costs would rise still further if the four-lift option was chosen, both because an additional stair shaft would be required, and also because further work would be required at platform level to ensure that the number of passengers could be handled safely.

Passenger modelling was carried out, and estimated that around 10 million passengers would use the station each year. In 2016 over 13,000 people would use the station in each morning peak, and just over 9,000 in each evening peak. Overall there would be very few extra journeys on the Underground resulting from the station opening, and those using the station would mostly be using it in place of bus travel.

Two key problems would arise from the opening of the station:

1. It would slow the Piccadilly Line down 'north' of King's Cross, i.e., reversing the original reason for closing the station. This section of line is already overcrowded in the peak hour, and adding an extra stop, more people, and more time to journeys would not help.
2. It would cause more interchange at King's Cross Underground station, and increase congestion at the lower levels of this station.

The small increase in overall revenue for TfL if the station was reopened would be outweighed by the two issues listed above combined with the annual operating costs (which is estimated at £620,000). It is therefore not surprising to find that the scheme has a very low benefit cost ratio (BCR) of 0.03 : 1 – in other words, for every pound spent, there is a benefit to society of just 3 pence. Calculations were also performed to look at less quantifiable aspects of reopening, such as the reduction in walking time to get to the Underground, the possibility that passenger numbers would be higher than estimated, and that congestion might not be caused at King's Cross. In none of the cases did the BCR exceed 0.8 : 1. Typically TfL requires the BCR to be 1.5 : 1 to justify major projects.

Overall, it is therefore very unlikely that York Road station will be reopening again, especially given the constraints on public spending at present.