

RESIGNALLING BIRMINGHAM NEW STREET

The new atrium above the station has space for 175,000 passengers a day. The 'new' station of the 1960s was designed for just 60,000 – and that 60,000 figure is still largely reflected at the level below. Not much has changed to the track and signalling, designed for 650 trains a day – except that there are now about 1,200!

It's a tribute to the signallers that the station continues to operate, with so many trains and 1960s equipment. There is, for example, no Automatic Route Setting. For every train, the route has to be set up by pushing buttons, then pulling them up again when the train has passed. All the other Power Boxes in the region of that decade have been replaced, from Coventry in 2007 to Wolverhampton last year. Most of the region is now controlled from West Midlands Signalling Centre at Saltley, so why not New Street?

It is due to happen over Christmas 2018, with the fringes transferring earlier:

November 2016 Cross City South [part of this is still controlled from the old Saltley PSB, which actually gained some new trackwork and signalling when the Alvechurch loop was commissioned]

December 2017 The Wolverhampton line from Soho to Tipton [with Galton Junction remodelled this Easter]

December 2017 The Grand Junction line from Stechford direct to Aston and along the Walsall line to Hamstead

May 2018 The Coventry line from Proof House Junction to Hampton-in-Arden [This, and New Street itself, may need rescheduling if skills and resources are needed at Euston for HS2 related work]

Whilst capacity at concourse level has been increased, there is very little scope below. Platform 4c was created as a bay for four coach trains – and that's about all that is realistic. [The original plans in the 1960s included a Platform 13, where West Dock used to be.] HS2 will give a bit of relief, as might the Camp Hill Chords, but there are more aspirations for improved or new services than released capacity.

Surprisingly perhaps, resignalling with state of the art equipment to modern standards could significantly reduce the number of trains New Street can handle. Safety dictates an overlap of 45 metres beyond a signal where the line speed is 10 mph [as it is through New Street], but that would reduce the working length of the platforms, as they all have points at the immediate platform end. Without the overlap, points should be locked for 45 metres beyond the signal until the train has come to a stand. Even in the 1960s, that was more than the timetable would bear, so there are no overlaps in the station area.



A 1960s official poster of New Street signal box. Note the curious description, 'Discover yesterday's forgotten future'. Its five storeys of corrugated concrete will survive its redundancy because it is Grade II listed.

Similar issues relate to two trains using the same platform, one coming into the 'a' end, the other into the 'b' end. There are even times when there are three trains, with one being shown as 4M [for middle, but guaranteed to confuse rail users]. There are no overlaps for the mid platform signals and no way that the normal safety standards can be met without it becoming one train per platform. New Street needed derogations from these standards in the 1960s. They are much harder to justify in the risk averse culture of 2018.

Rather than track circuits, axle counters are to be used to detect where a train is. In the station area, it can happen that a train stops with a wheel exactly alongside the measuring head of the axle counter, which can generate a mis-count. A solution is being trialled at Coventry.

After 2018, Cross City North will still be signalled from Aston [it is actually the signal box at the south end of Duddeston station, that has an NX panel in it]. Transferring this line to WMSC has been deferred to a yet to be decided date beyond 2019.

West Midlands Signalling Centre was built as a bombproof structure for the West Coast Upgrade in 2007 which included 140 mph running. It was intended to control all the way from London Euston to Carlisle from here. Although it works well at present, the building is not big enough for a Railway Operating Centre, so WMSC's work may transfer to the ROC at Rugby, but that is probably quite a long way off.

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