Appendix 3: MCSL - Key Corridor and Junction Issues

Moorgate Corridor Improvements

1.1 Moorgate corridor optioneering has been undertaken to investigate how the pedestrian environment can be improved while trying to balance the traffic need for the Moorgate corridor and London Wall. The corridor investigations focused on both footway and crossing options to accommodate the forecast pedestrian growth. The corridor options align to the Transport Strategy, which states that City footways and crossing should achieve a Pedestrian Comfort Level of B+.

1.2 The work looked at providing improved PCL levels along the Moorgate Corridor, which concluded that to provide the sufficient PCL for people walking meant that it would not be possible to provide the cycle improvements along this corridor without a significant reduction in traffic volumes. With current volumes of traffic, segregated cycleways are recommended.

1.3 Given the existing high volume of pedestrian flows throughout the area and the anticipated growth, the following scenarios have been worked through:

Pedestrian enhancements

1.4 To enhance the pedestrian environment and move towards a PCL of B+ on the footways along Moorgate, the footways would need to be widened along most of the length of the corridor to avoid pedestrian pinch points.

1.5 To enable this widening of the footways, there would then be limited opportunity to accommodate cycling improvements in both directions. We would be unable to provide segregated facilities which TfL cycling design standards would expect with the existing volume of traffic on the corridor.

1.6 Within this scenario, footway widening to meet the recommended comfort level would likely result in the need to redesign the police security checkpoint at the northern section of the corridor and assess whether the median island could be removed in order to retain the volume of traffic.

Cycle Superhighway 1 Moorgate connection

1.7 There was an initial desire to link Cycle Superhighway 1, located north of the MCSL project, through Moorgate and southbound through the City.

1.8 Due to the high vehicle flows along the corridor, the TfL cycle design standards indicate that segregated cycle lanes would be required. Segregated cycle lanes would limit footway widening for pedestrians. The challenge therefore is to develop designs that balance the competing needs of road users.

1.9 The inclusion of a segregated cycle lanes would result in the need to redesign the police security checkpoint and the central median to accommodate this.

1.10 As part of the Phase 2 COVID-19 temporary plus works programme, Moorgate has seen the introduction of a section of northbound cycle lanes These areas are segregated by the use of wands but are not continuous.

1.11 There is some footway widening north of London Wall as part of this temporary scheme. However, the footway widening at this location is minimal and illustrates that under 'normal' pedestrian conditions, limited improvement to pedestrian comfort levels would be achieved.

1.12 At the time of writing, the temporary plus measures at Moorgate will remain in place, but are not considered permanent and will be reviewed for applicability at a later date.

Junction enhancements

1.13 Work undertaken by the TfL Pedestrian and Traffic Modelling Teams focused on identifying whether crossing enhancements could be undertaken as 'quick-wins'. Quick-

wins included a review of existing signal timings and crossing layouts to better accommodate pedestrian flows at crossings.

1.14 Between the nine crossing arms assessed (Ropemaker Street/Moorgate junction and London Wall/Moorgate junction and the London Wall/Coleman street crossing) all but one arm registered a peak hour PCL of either D or E as the existing state. Without intervention, the forecast increases the number of PCL values of E to seven of the nine arms, which will result in very uncomfortable conditions for pedestrians.

1.15 A review of crossings at the junctions indicated that changes to signal timings would not provide the desired enhanced pedestrian benefits. With keeping the volume of traffic at the junctions, taking the time away from vehicle movements to give to pedestrians would cause significant impacts to traffic whilst not proving a suitable uplift in pedestrian comfort.

1.16 It was also determined that to improve the crossings to adequately accommodate forecast pedestrian flows, the crossings would need to be widened. This would involve redesigning and rebuilding the crossings to provide the additional crossing capacity. It is assumed that to achieve this the traffic signal infrastructure would need to be moved, which is likely to be expensive as a short-term measure. If this is the case, then this money would be better spent as part of a comprehensive junction redesign.

1.17 Changes to vehicle turning movements were also explored at both the London Wall/Moorgate junction and the Ropemaker Street/Moorgate junction. For the London Wall and Moorgate junction, it was determined that there was little to no scope of banning certain turns without impacts on the wider network that are also likely to be unwelcome. Whilst banning a turn would provide some extra time for pedestrians to cross in the signal phase, this still would not result in significant pedestrian comfort benefits around the junction.

1.18 There is more opportunity to explore turning movement changes at the Ropemaker Street and Moorgate junction, which could provide the opportunity for improved crossing times for pedestrians at this location. This would require further traffic modelling work to assess the impacts and benefits and further discussions with Islington Council.

<u>Modelling scenarios</u>

1.19 The modelling work undertaken focused on identifying differing traffic scenarios at the Moorgate/London Wall junction and the Moorgate/Ropemaker Street junction. The overall aim of this modelling exercise was to determine the scale of the likely impact on traffic flows and the scale of uplift for pedestrians of various traffic arrangements.

1.20 The scenarios reviewed ranged from a reduction in approach lanes to banned vehicular turning movements, including:

- Scenario 1: Single lane on all approaches to both junctions
- Scenario 2: Banned turning movements at both junctions
- Scenario 3: A combination of single lane approaches and banned vehicular turning movements at both junctions

1.21 For scenario 1, it was found that there was potential for enhanced footway widening and an improved PCLs at the Moorgate/Ropemaker Street junction. This junction would also operate within expected traffic capacity. However, the Moorgate/London Wall junction was found to operate over capacity, with initial traffic modelling results indicating increased vehicular congestion and queue lengths.

1.22 The modelling results further showed that bus journey times would be slowed with a single lane approach at the Moorgate/London Wall junction.

1.23 Banned turning vehicular turning movements, as shown in scenario 2, offers the opportunity to increase pedestrian crossing times at both junctions. The primary

constraint within this scenario was found to be traffic reassignment to different routes, thereby impacting junctions outside of the project study area.

1.24 The final scenario demonstrates benefits to the Moorgate/Ropemaker Street junction, with the opportunity to enhance footways and offer shorter crossing distances, as well as improve PCLs. The junction would also operate within capacity.

1.25 The Moorgate/London Wall junction already operates very close to capacity in the PM peak under normal operation. erefore without change sTherefore, without changes to the volume of traffic any change to favour pedestrians will force the junction to operate at over capacity which will result in an increase in traffic congestion and queue lengths and impact bus journey times.

1.26 Overall, there is more opportunity to explore traffic arrangement changes at the Ropemaker Street and Moorgate junction and improve the pedestrian experience at this location. This would require further traffic modelling work to assess the impacts and benefits.