

MELBOURNE METRO RAIL PROJECT ENVIRONMENT EFFECTS STATEMENT
INQUIRY AND ADVISORY COMMITTEE

MMRA TECHNICAL NOTE

TECHNICAL NOTE NUMBER: 063

DATE: 27 September 2016

PRECINCT: Domain Station Precinct

EES/MAP BOOK REFERENCE: EES Technical Appendix D (Transport Impact Assessment)

SUBJECT: Response to the 'Matters for further consideration and/or clarification' request dated 12 September 2016

(ii) Domain precinct traffic modelling

NOTE:

1. This Technical Note has been prepared to respond to issues raised by the Inquiry and Advisory Committee ("**IAC**") in the 'Matters for further consideration and/or clarification' request dated 12 September 2016.
2. For ease of reference, this Technical Note sets out each relevant request made by the IAC followed by a response from MMRA.

Request:

3. The IAC has requested:

TN020 provides an explanation for the reassignment of 1,000 vehicles away from St Kilda Road during the AM peak in the VITM model. The reporting of the Vissim modelling appears to lose a further 4,000 trips in the AM peak hour during construction. For example, Table 5-18 in Appendix D, completed trips in the AM peak drops from 18,190 to 13,090. The IAC seeks clarification on how the loss of 4000 vehicles is accounted.

Response:

4. The reduction of 1,000 vehicles referred to in Technical Note 020, and highlighted by the Peer Reviewer, is for traffic on St Kilda Road northbound

during the AM peak over a **one hour** period from the VITM model. This traffic redistributes to other roads as described in the Technical Note.

5. Table 5-18 of EES Technical Appendix D refers to completed trips on **all** roads, not just St Kilda Road, in the AM peak over a **two hour** period from the Domain Precinct microsimulation model.
6. During this time period, in addition to the northbound reductions, there are also reductions in southbound volumes along St Kilda Road as well as east-west movements using Park Street, Domain Road, Kings Way and Toorak Road. These reductions account for the differences in the volumes reported.
7. VITM is a strategic transport model whereas the Domain Precinct microsimulation is a more detailed Vissim microsimulation traffic model. They model traffic movement through their networks to different levels of detail, and are used for different purposes. As such, outputs are not directly comparable and are calculated differently.
8. MMRA's transport modelling approach applied the relative change between the 2021 base and construction cases forecast by VITM to the Domain Precinct microsimulation model matrices at the cordon level. The relative change was the percentage difference between each origin and destination of **all** trips through the Domain Precinct area. This was the starting point for inputs and changes to the original/destination matrix within the microsimulation model.
9. As VITM is a strategic model and does not include local roads, the microsimulation model matrix (and hence flows) is different from the Vissim microsimulation matrix. The modeler would apply detailed knowledge of the local network and, where required, would manually redistribute trips to further refine the matrix and optimise trips to and from local roads within the Domain Precinct microsimulation model.
10. Also, during the initial Domain Precinct microsimulation model runs, the modeller observes traffic movements through the model. Where imbalances are observed, the trip matrix is reviewed and if necessary augmented to provide a more balanced, and more realistic, travel pattern through the modelled area.
11. The result of this process is that volumes through the Domain Precinct microsimulation model will be different, but more accurate, than from the VITM strategic model.
12. For the 2021 Construction case, VITM identified a total reduction of trips through the Domain Precinct microsimulation model area of 3,700 over the 2-hr AM peak period. This equates to 1,850 trips per hour. VITM essentially reassigns these trips to the road network outside the Domain Precinct microsimulation model area, such as Kings Way and Queens Road, for trips that travel North and South. Trips that travel east-west through this precinct would be reassigned to other roads.

13. In addition, as mentioned previously, a number of smaller local roads are not included in VITM, such as Albert Road, Bowen Lane and Bowen Crescent. However, they are included in the Domain Precinct microsimulation model. As a result of the construction works, some existing movements into these roads are not allowed, for example the right turn from St Kilda Road into Bowen Crescent. As a result, traffic currently undertaking these movements will have to change their travel routes. A proportion of these trips are also reassigned outside the Domain Precinct microsimulation model.

CORRESPONDENCE:

No correspondence.

ATTACHMENTS:

No attachments.