NORTH EAST LINK PROJECT ENVIRONMENT EFFECTS STATEMENT
INQUIRY AND ADVISORY COMMITTEE

NELP TECHNICAL NOTE

TECHNICAL NOTE NUMBER: 55
DATE: 10 September 2019
LOCATION: N/A
EES/MAP BOOK REFERENCE: N/A

NOTE: Technical Note 31 was prepared in respect of the S.M.A.R.T. Taxpayer Design. It addresses the feasibility of that design, the beneficial and detrimental environmental effects of that design (by comparison to the reference project), and the cost and other consequences of that design.

Technical Note 48 was prepared in respect of the Lower Plenty Road interchange and tunnelling options beneath the Simpson Barracks. It explains, amongst other things, why it is not possible to locate the surface road components of the Lower Plenty Road interchange outside of the Simpson Barracks without resulting in substantial impacts to the south of Lower Plenty Road.

A number of submissions made to the IAC during week 6 of the hearing have contended that the ‘possible future’ interchange contemplated in the S.M.A.R.T. Design could be provided to the north of Lower Plenty Road and with minimal impact on the Simpson Barracks.

This technical note explains why this is not feasible.

REQUEST: N/A

RESPONSE: The S.M.A.R.T. Taxpayer Design proposes to remove the Lower Plenty Road Interchange and to extend the bored twin tunnels approximately 3.2 kilometres further to the north. Provision is made in the design for a ‘possible future’ tunnelled interchange that would be provided if and when required.

Technical Note 31 explains the implications of not providing that interchange as part of the Project and of attempting to introduce that interchange at an unspecified time in the future. Technical Note 48 separately explains, amongst other things, why it is not possible to locate the surface road components of the interchange outside of the Simpson Barracks without resulting in substantial impacts to the south of Lower Plenty Road.

The possible future interchange shown in the S.M.A.R.T. Design is situated partially on and to the west of the Simpson Barracks. It would involve the diversion of Blamey Road and the provision of separate ramps entering and exiting the tunnel structures extending a considerable distance to the north and south of the proposed interchange location. The northern extent of the tunnelling works associated with the northern ramp structures would extend approximately 250m north of Yallambie Road. The
interchange itself would require that all vehicles entering and exiting the tunnels, in both the northern and southern approaches, pass through a single intersection connecting the entry and exit ramps to Greensborough Road (see Drawing MP 10, Issue E).

As Mr Buono explained, the S.M.A.R.T. Design was not prepared with input from a traffic engineer. Analysis completed by NELP in the preparation of the reference project showed that this type of configuration was not feasible. In short, an intersection of this type is unable to accommodate the forecast traffic demands, and would result in substantial queues and very poor levels of service.

The layout of the interchange is extremely inefficient from a traffic signal operation perspective. The two exit ramps conflict with one another, meaning that only one ramp can operate at a time. Furthermore, the dimensions of the intersection would mean that the inter-green period (yellow and all red lights) is extended beyond the typical amount of time, to allow sufficient time for vehicles to clear the intersection. This inter-green time is effectively lost time and reduces traffic performance.

The layout is also atypical of interchanges across the network and has the potential to create a safety hazard. There is likely to be weaving vehicles within the shared road space between Greensborough Road and the ramps, further impacting safety and performance.

The intersection would need to be widened considerably on both sides of the alignment to address these deficiencies. This would result in a comparable impact on the Simpson Barracks as would arise from the reference project or Lower Plenty Road Alternate Design as well as additional impacts on the western side of the alignment.

NELP accordingly reiterates the position set out in Technical Note 48 that, in order to avoid the considerable impacts to the south of Lower Plenty Road associated with the provision of a traditional diamond interchange, impacts of the type associated with the reference project or the Lower Plenty Road Alternate Design (Technical Note R33, Document 101) cannot be avoided within the Simpson Barracks.

**CORRESPONDENCE:** N/A

**ATTACHMENTS:** N/A