

**Before a Board of Inquiry  
Northern Corridor Improvements Project**

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Under the Resource Management Act 1991 ('the Act')

In the matter of a Board of Inquiry appointed under section 149J of the Act to consider notices of requirement for designations and resource consent applications by the New Zealand Transport Agency for the Northern Corridor Improvements Project

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**Summary statement of Terry Philip Church for the New Zealand  
Transport Agency (Transportation - Design)**

Dated 19 July 2017

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## **SUMMARY STATEMENT OF TERRY PHILIP CHURCH FOR THE NEW ZEALAND TRANSPORT AGENCY**

### **1 Introduction**

- 1.1 This statement provides a summary of my Evidence In Chief ('EIC'), dated 20 April and my rebuttal evidence, dated 15 June 2017. It provides the Board with a summary of matters that have been addressed as a result of expert conferencing.
- 1.2 I note that my evidence and position remains unchanged, and additional information presented at conferencing (as captured within the Joint Witness Statement) has resolved the concerns Mr Tindall (for Auckland Council) raised with respect to my evidence.

### **2 Summary of evidence in chief<sup>1</sup>**

- 2.1 My evidence assesses the methodology used to assess the design of the Project. I have been involved with the assessment of alternatives through each of the design phases, including the Strategic Study (2011), the Auckland Accelerated Projects Schematic Plan (2013), the Indicative Business Case (2015), and the preferred and alternative options considered in the Detailed Business Case (2015).
- 2.2 The assessment of alternative options, including the refinement of the Project design, has been assessed using a consistent platform, being the Upper Harbour SATURN traffic model. The model has been peer reviewed as being fit for purpose.
- 2.3 My evidence also responds to matters raised by submitters on design elements of the Project, specifically:
- a SH18 to SH1 south facing motorway connections;
  - b Caribbean Drive/Paul Matthews Road Intersection performance; and
  - c Greville Interchange SH17 to SH1 motorway connections.

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<sup>1</sup> EIC, section 5.

- 2.4 With regards to the SH18 to SH1 (south) motorway connections, the Project does not preclude south facing connections from being constructed. The timing of the southbound connection is dependent on the receiving environment being able to cater for current and forecast traffic volumes.
- 2.5 The implementation of the northbound connection is less reliant on the receiving environment, and as such may be implemented sooner, subject to further investigation, funding and obtaining the necessary consents. Even though the Project does not provide these ramp connections, it will provide some benefits for these traffic movements.
- 2.6 The exclusion of south facing connections between SH18 and SH1 (south) requires traffic on this route to remain on UHH and use the SH1/Upper Harbour Interchange, as required today. The Caribbean Intersection, while increasing in size and phasing sequences, will have reduced traffic volumes and is predicted to operate satisfactorily with an overall intersection Level of Service ('LOS') D. Further, travel times for motorists travelling between SH18 to SH1 (south) and vice versa are predicted to generally reduce with the Project.
- 2.7 The Project does not provide direct motorway connections between SH17 and SH1 at the Greville Interchange. While these connections do not form part of the Project, improvements to the Greville Interchange are proposed. Improvements in performance of the Greville Interchange are predicted through the following upgrades:
- a Widening of SH1 through Greville Interchange (from two lanes to three lanes southbound);
  - b Widening of the section of SH1 between Greville Interchange and the downstream interchange (from 2 lanes to 4 lanes); and
  - c Signalising the eastern intersection of Greville Interchange.
- 2.8 These improvements will increase southbound traffic capacity and will assist in improving the performance of the Greville Interchange which currently requires meter signals to operate on the on ramp as a means to manage SH1 southbound throughput. While the meter signals will

remain, their operation will likely alter as a result of the improved southbound capacity on SH1.

### **3 Summary of rebuttal evidence**

3.1 In my rebuttal evidence, I addressed matters raised in the evidence of:

- a Auckland Council;
- b Mr Peter Fogarty; and
- c Mr David Willmott.

### **4 Changes to evidence as a result of conferencing**

4.1 I took part in the following expert conferencing sessions:

- a Transport and Traffic: General/Design/Layout/Model/Alternatives on 21 and 26 June 2017; and
- b Transport and Traffic: Construction on 22 June 2017.

4.2 Mr Tindall (for Auckland Council) raised matters in his evidence in relation to the performance of the SH18/Paul Matthews Road intersection, where he was concerned that queues would extend to or potentially through the Barbados Drive roundabout. This issue is discussed in my rebuttal evidence at Paragraphs 3.2 and 3.3.

4.3 During conferencing I presented Mr Tindall with observed queue survey information (as recorded in August 2016) of the existing SH18/Caribbean Drive intersection and Caribbean Drive/Barbados Drive intersection. As a result of this additional information, and as summarised in Paragraph 8(l) of the Joint Witness Statement<sup>2</sup> ('JWS'), we both agreed that the issue associated with the queue length is resolved, with Mr Tindall noting that this relied on the detailed design of Caribbean Drive recognising the importance of the queue length on Caribbean Drive. The condition proposed by Mr Tindall at paragraph 8.1 of his EIC is therefore not required.

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<sup>2</sup> Joint Witness Statement: Transport and Traffic General/Design/Layout/Model/Alternatives, dated 26 June 2017.

- 4.4 Another matter raised by Mr Tindall's evidence related to weaving along State Highway 1 as addressed in Paragraph 3.4 of my rebuttal evidence. Following discussions held at conferencing, as summarised in Paragraph 8(o) of the JWS, Mr Tindall was satisfied that the performance of the weave will be reviewed through additional safety audits required for the NCI Project. These will likely be at detailed design, pre construction and post construction. This position was on the basis that 5 northbound traffic lanes is delivered, as included in the lodged design.



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**Terry Philip Church**

**19 July 2017**