

Under the Resource Management Act 1991  
In the matter of Notices of Requirement to enable the construction, operation and  
maintenance of the City Rail Link

Between

**Auckland Transport**

Requiring Authority

and

**Auckland Council**

Consent Authority

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**Statement of Evidence of Fiona Carol Blight**

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## Qualifications and Experience

1. My full name is Fiona Carol Blight. I am employed by Beca Limited (Beca), and hold the position of Technical Director - Planning. In will complete 8 years' service with Beca on 5 September 2013. I am based in Auckland and work throughout New Zealand.
2. My qualifications include the degree of Bachelor of Resource and Environmental Planning (BREP) from Massey University, New Zealand (1995). I am a Full Member of the New Zealand Planning Institute (NZPI).
3. I maintain my professional development through active participation in the NZPI. I have been a full member of the NZPI since 2007 and a member of the Auckland Branch Committee of the NZPI since March 2010. I also maintain my professional development through membership to the New Zealand Resource Management Law Association and involvement in a Statutory Planning Technical Discipline Group within Beca, which disseminates best practice statutory planning practices throughout the New Zealand and Australian Beca Planning businesses.
4. My professional planning experience spans approximately 15 years, predominantly in the field of statutory planning in New Zealand. The first half of my professional planning experience was working in local government employment in the resource consent divisions of three local and one regional authority in New Zealand (Horowhenua and Wanganui District Councils, Manawatu-Wanganui Regional Council, and the former Auckland City Council). The second half of my professional planning experience has been working as a planning consultant for Beca.
5. Attachment 1 of my evidence contains my qualifications and a summary of my planning experience relevant to my role on the City Rail Link Project (CRL or Project) as the Independent Planning expert for Auckland Transport assessing the actual and potential environmental effects of the Project to support the Notices of Requirement (NoR) to designate the CRL in the Auckland District Plan: Central Area and Isthmus sections. Of particular relevance I was the independent planning expert for New Zealand Railways Corporations

(NZRC or KiwiRail) on the Marsden Rail Link<sup>1</sup> Notice of Requirement (NoR) and resource consents. I have been an expert planning witness in the Environment Court and in Council Hearings.

6. I have read the Code of Conduct for Expert Witnesses as contained in the Environment Court Practice Note (2011), and I agree to comply with it as if this hearing was before the Environment Court. I confirm that the issues addressed in this brief of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

### **Involvement in the CRL Project**

7. I have been involved in the CRL Project since 2009. During 2009 and 2010 the New Zealand Railways Corporation (NZRC or KiwiRail) and the former Auckland Regional Transport Authority (ARTA) undertook investigations to determine a preferred route and station locations for the CRL. I was the senior planner in the AECOM, Parsons Brinkerhoff, and Beca (APB&B) team which assisted KiwiRail and ARTA with the investigations. Of relevance to this NoR, the investigations undertaken included an option evaluation process to determine a preferred route, number of stations and station locations<sup>2</sup>. I supported Bryce Julyan in undertaking the planning work involved in this option evaluation. The evidence of Bryce Julyan of Beca addresses the assessment of alternative sites, routes or methods for the CRL NoR in accordance with Section 171(b).
8. I was appointed by Auckland Transport as its Independent Planning Expert for the CRL NoR in January 2012. For the CRL Project I report directly to Aimee Barwick, Planning Integration Manager for Auckland Transport. My role is to undertake an independent planning assessment of the actual and potential effects on the environment from the CRL Project to support the NoR

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<sup>1</sup> KiwiRail obtained in 2011 both a designation and regional resource consents with a lapsing period of 20 years for a new 20 km rail corridor linking the North Auckland Rail line south of Whangarei with the port at Marsden Port.

<sup>2</sup> The Option Evaluation Report which summarises the option evaluation process undertaken during this time is contained in Appendix 11, Volume 3 of the CRL NoR suite of documents.

using the Concept Design Report and associated plans<sup>3</sup>, along with the technical expert assessments<sup>4</sup>.

9. Additionally, to undertake the assessment of actual and potential effects on the environment from the CRL Project I have also considered the existing environment, effects permitted by the District Plan<sup>5</sup>, and consultation undertaken by myself and separately by Auckland Transport. I am the author of the Assessment of Effects on the Environment report<sup>6</sup> (AEE) which supports the CRL NoR. I also prepared the draft proposed suite of NoR conditions<sup>7</sup>, seeking input from Auckland Transport and it's Technical Expert team as necessary.
10. My role has also included input into the identification of the land requirement footprint for the proposed designation (developed in conjunction with Bryce Julyan), the structure of the NoR (i.e. the six NoR and their surface, strata or sub-strata status)<sup>8</sup>, the refinement of the location for Karangahape and Newton Stations, and have assisted Auckland Transport with some of the consultation undertaken on the Project<sup>9</sup>.
11. I have visited the Project site and the wider locality multiple times since 2009.

## Introduction

12. This stage of the Project is seeking the designation of the CRL for future construction, operation and maintenance. The CRL comprises of a 3.4km underground passenger railway (including two tracks and three stations underground) running between Britomart Station and the North Auckland Line (NAL) in the vicinity of the existing Mount Eden Station, and an additional 850m of track modifications to the North Auckland Rail Line (NAL)<sup>10</sup>.

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<sup>3</sup> Appendix 12, Volume 3 of the CRL NoR suite of documents.

<sup>4</sup> Appendix 6, Volume 2 and Appendices 2 to 10, Volume 3 of the CRL NoR suite of documents.

<sup>5</sup> Auckland Council District Plan: Central Area Section and Isthmus Section.

<sup>6</sup> Volume 2 of the CRL NoR Suite of Documents.

<sup>7</sup> Attachment 2 of my evidence.

<sup>8</sup> The evidence of Bryce Julyan provides a description of the CRL NoR.

<sup>9</sup> Consultation I have been involved in is described in the next section of my evidence.

<sup>10</sup> See evidence of Bryce Julyan for the explanation on the scope of these works under the CRL NoR.

13. For ease of reference in my evidence I refer to the stations included in the NoR as Aotea Station, Karangahape Station, and Newton Station. I understand from Auckland Transport that the stations will be formally named in the future.
14. Auckland Transport is not seeking resource consents under sections 9<sup>11</sup>, 14<sup>12</sup> and 15<sup>13</sup> of the Resource Management Act 1991 (RMA) for the CRL at this time. There is no requirement under the RMA to seek designations and resource consents at the same time. Site investigations and design will be undertaken to support the resource consent applications.
15. I have read the Council Officer Report<sup>14</sup> and comment on this report further in paragraphs 276 to 286 of my evidence.

### **Scope of Evidence**

16. My evidence focuses on the assessment of actual and potential effects on the environment from the CRL Project and the methods proposed to manage adverse effects. I will refer to the CRL NoR suite of documents<sup>15</sup>, and particularly in the AEE and associated technical reports where relevant. Additionally I have referred where appropriate to the planning evidence of Bryce Julyan and to the technical evidence provided in support of the NoR.
17. In forming my evidence I have relied on my evaluation of the assessment of actual and potential effects, the technical assessments that form part of the CRL NoR suite of

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<sup>11</sup> Restrictions of use of land – for the CRL anticipated that resource consents will be required for (including but not limited to) earthworks, trenching, sediment control.

<sup>12</sup> Restrictions relating to water (i.e. take, use, dam, or divert) – for the CRL anticipated that resource consents will be required for (including but not limited to) groundwater diversion (for the construction of the tunnel); groundwater drilling (for monitoring and groundwater take for the construction of the tunnel, and disturbing archaeological sites); and ground water take and use.

<sup>13</sup> Discharge of contaminants into environment – for the CRL anticipated that resource consents will be required for (including but not limited to) Air discharges (in relation to contaminants and dust, the mixing of cement powder and the manufacture of concrete, temporary crushing of concrete and/or aggregates with a mobile crusher (the TBM / road header machine)); Stormwater discharges; contaminants to land and water (from excavation works); and contaminant remediation.

<sup>14</sup> Section 42A Hearing Report dated Tuesday 11 June 2013 (referred to hereafter in my evidence as the “S42A report”).

<sup>15</sup> Volume 1 Notices of Requirement (NoR); Volume 2 Assessment of Effects on the Environment (AEE) and associated appendices; and Volume 3 Technical Reports supporting the AEE and NoR.

documents<sup>16</sup>, the evidence provided by Auckland Transport, the planning evidence provided by Bryce Julyan, the evidence provided by the other Auckland Transport technical experts for this Hearing, and taken into consideration of the assessment included within the S42A report.

18. My evidence will address the following:

- a. Summary of evidence;
- b. Consultation to understand actual and potential effects;
- c. The Actual and Potential Effects of the Project:
  - Section 42A Report review of actual and potential effects;
  - Approach to assessing effects;
  - Approach to managing adverse effects;
  - The environmental effects and proposed mitigation;
- d. Part 2 RMA Assessment;
- e. Response to the submissions lodged to the CRL NoR;
- f. Response to Section 42A Report; and
- g. Concluding statement.

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<sup>16</sup> Ibid.

## Summary of Evidence

19. Auckland Transport's key objective for this stage of the CRL Project is to secure the designation under the RMA of the preferred route and station locations for future construction, operation and maintenance. To designate the CRL route and station locations in the Auckland District Plan<sup>17</sup>, Auckland Transport has served six (6) NoR on Auckland Council<sup>18</sup>.
20. In my opinion there will be both, actual and potential, positive and adverse environmental effects which will result from the construction, operation and maintenance of the CRL. There will be a number of positive effects and benefits<sup>19</sup> which will result from the construction, operation and maintenance of the CRL. The majority of these will be permanent effects and for a long term duration. A key positive effect and benefit is that the CRL will assist in promoting and supporting intensification of land uses around stations, a key proponent of the Auckland Plan, the City Centre Master Plan (CCMP), and the Auckland Regional Policy Statement (RPS).
21. In terms of the actual and potential adverse environmental effects, I consider these to be of a predominantly temporary nature, occurring largely during the construction of the CRL. These adverse effects will also be localised (i.e. to the vicinity where they are occurring). The majority of the adverse effects are construction related and will occur only where surface works are taking place or where tunnelling is occurring, and only for the duration of the construction in that locality.

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<sup>17</sup> The Central Area and Isthmus sections.

<sup>18</sup> The six (6) NoR can be found in Volume 1 of the CRL NoR suite of documents. The evidence of Bryce Julian also explains the six (6) NoR.

<sup>19</sup> These are discussed at paragraph 68 and 69 of my evidence. Additionally, the evidence of David Warburton, Chris Meale, John Williamson, Aimee Barwick, Ian Clark and Bryce Julian also address the positive effects and benefits of the CRL.

22. The adverse environmental effects occurring during construction of the CRL will not be dissimilar to those adverse effects experienced during the construction of other similar sized infrastructure in Auckland<sup>20</sup>.

23. While the effects may be similar to those experienced during the construction of other infrastructure projects in Auckland, I acknowledge that the adverse effects during construction are likely to be significant because of the location (i.e. in the City Centre area). I do note that the use of a Tunnel Boring Machine (TBM) to construct the majority of the CRL underground will avoid a number of adverse effects that would otherwise occur if other construction methods from the surface down were employed for the majority of the route.

24. In summary, I consider the temporary adverse effects resulting during the construction of the CRL to be:

- Disruptions to the road transport network for public and private vehicles, pedestrians and cyclists causing congestion and travel delays;
- Disruptions to accessing private property;
- Disturbance and annoyance from noise and vibration (particularly on notable receivers<sup>21</sup>);
- Potential damage to built heritage<sup>22</sup> and the loss or damage of archaeological remains;
- Potential impacts on human health and annoyance from the discovery and removal of contaminated soil and associated odour / hazardous air pollutants, as well as from dust generated from construction works;

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<sup>20</sup> Such as the construction of the new Newmarket Viaduct, Victoria Park tunnel, State highway 20 Waterview Connection and tunnel currently under construction, and the Vector tunnel located between Newmarket and the northern end of Hobson Street in the central city area.

<sup>21</sup> Notable noise and vibration receivers are defined as: public performance theatres; and in relation to sensitive equipment – recording studios (both sound and television), medical facilities and scientific laboratories.

<sup>22</sup> Built Heritage is discussed in the evidence of Bruce Petry.

- A potential reduction in the urban amenity<sup>23</sup> from the removal or relocation of trees and vegetation;
  - Potential social and economic effects including a reduction in urban amenity, impacts to business operations, and the potential of “blighting”.
25. Draft NoR conditions<sup>24</sup> are proposed to manage and mitigate the actual and potential temporary adverse effects during the construction of the CRL.
26. There will be some permanent potential adverse effects as a result of the operation of the CRL. I consider these to be:
- The loss of heritage from the removal of the scheduled<sup>25</sup> men’s toilets located under Albert Street<sup>26</sup>;
  - The loss of character supporting buildings<sup>27</sup> through the removal of the buildings known as Martha’s Corner<sup>28</sup>, the Griffiths Building<sup>29</sup>, the old toilets<sup>30</sup> located in Beresford Square, and the annexes located on the back of the buildings fronting Symonds Street<sup>31</sup>;

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<sup>23</sup> Defined in the RMA as: those natural or physical qualities and characteristics of an area that contribute to people’s appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.

<sup>24</sup> Attachment 2 of my evidence.

<sup>25</sup> These toilets are scheduled under the Auckland Council District Plan: Central Area Section. See the Built Heritage report provided as part of the CRL NoR suite of documents and the evidence of Bruce Petry.

<sup>26</sup> Located between Victoria Street and Wyndham Street at the western end of Durham Street west.

<sup>27</sup> The Built Heritage technical report (Appendix 4, Volume 3 CRL NoR suite of documents), which supports the NoR lists these buildings as Type C, which is defined as character supporting. These buildings are not formally scheduled.

<sup>28</sup> Located on the northwest corner of Albert Street and Victoria Street intersection. The Built Heritage report provided as part of the CRL NoR suite of documents lists this building as being unscheduled but of built heritage merit.

<sup>29</sup> Located on the southeast corner of Albert Street and Wellesley Street intersection. The Built Heritage report provided as part of the CRL NoR suite of documents lists this building as being unscheduled but of built heritage merit.

<sup>30</sup> The Built Heritage report provided as part of the CRL NoR suite of documents lists this building as being unscheduled but of built heritage merit and within a precinct.

- Disturbance and annoyance resulting from operational rail vibration (reradiated noise), on notable receivers<sup>32</sup>, potentially impacting their ability to operate;
- Disturbance and annoyance from operational noise from ventilation plant proposed in Queen Elizabeth II Square and associated with Aotea, Karangahape and Newton Station buildings;
- Physical and metaphysical impacts on tangata whenua cultural values, including but not limited to, effects on two known scheduled cultural sites<sup>33</sup>, and from the need to remove the rock art known as “Te Ahi Ka Roa” from Queen Elizabeth II Square;
- Permanent loss of private property and associated social effects; and
- Changes to vehicle driving practices as a result of the permanent closure of Beresford Street at its eastern end to vehicles.

27. Draft NoR conditions<sup>34</sup> are proposed to mitigate these permanent potential adverse effects.

28. Auckland Transport is seeking a 20 year lapse period for the CRL designations<sup>35</sup>. A potential adverse effect arising from the 20 year lapse period is “blighting” of the land. The proposed draft CRL NoR conditions<sup>36</sup> include measures to avoid or mitigate the actual and potential effects of “blighting”. I consider that there will be no cumulative adverse effects as a result of a 20 year lapse period as any adverse effects will only begin when construction starts and will be temporary for the construction duration.

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<sup>31</sup> Land Requirement Plan numbers 178, 180, 181 (NoR 5, Volume 1 CRL NoR suite of documents). The Built Heritage report provided as part of the CRL NoR suite of documents lists this building as being unscheduled but of built heritage merit and within a character area under the Auckland District Plan: Isthmus section.

<sup>32</sup> Notable noise and vibration receivers are defined as: public performance theatres; and in relation to sensitive equipment – recording studios (both sound and television), medical facilities and scientific laboratories, and the Auckland District Court in Albert Street.

<sup>33</sup> One site is located at the intersection of Albert and Customs Street (which the two tunnels will be constructed through), and the other site is located adjacent the construction of the two tunnels at 87-89 Albert Street.

<sup>34</sup> Ibid.

<sup>35</sup> The 20 year lapse period is discussed further in the evidence of Bryce Julyan.

<sup>36</sup> Attachment 2 of my evidence.

29. I have undertaken an assessment of the CRL against the matters in Part 2 of the RMA and conclude that the Purpose of the RMA is achieved and the Project is consistent with its Principles.

### **Consultation to Understand Actual and Potential Effects**

30. I support the Project's consultation principles with directly affected parties, affected in proximity parties, and the wider community. I recognise consultation is important for informing assessments of environmental effects. In particular it assists in identifying the actual and potential effects, the weighing up and balancing of the effects, and in confirming appropriate methods to manage and mitigate adverse effects.

31. Since 2012 I have been involved in the following consultation:

- During March, April and May 2012 I attended or facilitated the following:
  - Two meetings with representatives from the New Zealand Historic Places Trust (NZHPT) and Auckland Council's Heritage Department to discuss the Project and the actual and potential effects on built heritage and archaeology;
  - A walk over of the CRL route and station locations with representatives from the New Zealand Historic Places Trust and Auckland Council's Heritage Department;
  - An Auckland Transport organised regular monthly hui<sup>37</sup> with iwi to introduce the CRL Project;
  - A walk over of the CRL route and station locations with representatives from Ngai Tai ki Tamaki, Ngati Te Ata, Ngati Whatua o Orakei, Te Akitai and Ngati Tamaoho<sup>38</sup>;
- In September 2012 I attended and spoke with directly affected and affected in proximity landowners at invited meetings;

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<sup>37</sup> Which discusses a range of major projects with Auckland (refer page 11 of the Consultation Report, Appendix 5 Volume 2 CRL NoR suite of documents).

<sup>38</sup> The Consultation Report (Appendix 5 Volume 2 CRL NoR suite of documents) sets out the process undertaken to engage with iwi and those iwi or mana whenua who identified that they wished to engage on the CRL project.

- During the public submission period in early 2013 I attended three open day sessions and engaged with attendees;
  - May and June 2013 I attended 17 consultation meetings with submitters to the CRL NoR.
32. This consultation has enhanced my understanding of the actual and potential effects, particularly the adverse effects. I have also obtained a greater understanding of how these effects may be managed and mitigated to acceptable levels.
33. In reviewing the submissions I note there is strong support for the Project, and in particular an appreciation of the positive effects and benefits it will provide once constructed and operating. Where concerns have been raised, these predominantly relate to effects that will occur during construction, and in particular how these are to be managed and mitigated. My impression on reviewing submissions is that construction noise and vibration (including structural damage from vibration and excavation), along with the management of access to properties and the transport network are the predominant concerns raised. I discuss the actual and potential effects from the CRL in paragraphs 68 to 231 of my evidence.
34. The CRL designation and conditions are the primary mechanism for providing for the management of any adverse effects from the construction and operation of the CRL. I discuss the proposed draft NoR conditions throughout my evidence and the full suite of proposed draft NoR conditions is attached as Attachment 2 to my evidence.

## **The Actual and Potential Effects on the Environment**

### ***S42A Report Review of Actual and Potential Effects***

35. The Auckland Council has reviewed the NoR and accompanying documents and prepared a section 42A report. In general, I agree with the findings of this report with some exceptions, including the overall recommendation to not confirm the NoR. I address some matters (including those with which I do not agree) that are raised in the report in paragraphs 68 to 231 below (under the actual and potential effects on the environment), in responding to the

submissions received (paragraphs 239 to 275 of my evidence), and additionally in paragraphs 276 to 286 of my evidence (response to section 42A report).

### ***Approach for Assessing the Effects on Environment***

36. Section 2.2.5 of the AEE<sup>39</sup> sets out the approach undertaken to assess the actual and potential effects on the environment from the construction, operation and maintenance of the CRL. In this section of my evidence I highlight the key aspects of the approach I have undertaken.
37. Auckland Transport's approach to delivering the CRL Project is to secure the route and station locations for future construction, operation and maintenance by way of a designation in the Auckland District Plan<sup>40</sup>. The designation mechanism is available to Auckland Transport under the provisions of section 167 of the RMA. It has done this by serving six (6) NoR<sup>41</sup> on Auckland Council to designate the CRL.
38. The NoR are supported by an engineering and architectural concept design<sup>42</sup> which contains sufficient investigations and design to identify and assess an "envelope"<sup>43</sup> of actual and potential effects. I consider the adoption of a conservative effects envelope approach is appropriate for the NoR because:
- It is important to identify and secure the land required for the CRL at this time to control development occurring in the City Centre area which could otherwise prevent or hinder the CRL being constructed, operated or maintained in the future<sup>44</sup>;

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<sup>39</sup> Page 36, Volume 2 CRL NoR suite of documents.

<sup>40</sup> Central Area and Isthmus sections.

<sup>41</sup> The evidence of Bryce Julyan provides a description of the CRL NoR.

<sup>42</sup> Concept Design Report, Appendix 13 Volume 3 CRL NoR suite of documents.

<sup>43</sup> To set the conservative limits of the "effects envelope" the "worst case" or prudent effects that may result have been identified and assessed.

<sup>44</sup> In my opinion delaying the designation process for the future could result in substantially greater adverse effects on development which may have occurred between now and the designation process being instigated. This could result in additional private property being directly required for the CRL and / or a more dense built environment being subject to the temporary effects of construction (i.e. noise, vibration, disruptions to property access, congestion and travel delays on the road network).

- Further investigations and design is still to be undertaken, including detailed investigation and design to inform and support future resource consents<sup>45</sup>;
  - The final design and form of construction and operation (within the scope of the CRL designations) is not yet known, and it is important to retain flexibility to enable future potential construction and design innovations to be provided for; and
  - Funding to construct the CRL is not yet confirmed.
39. The construction of the CRL will involve works typical of large infrastructure projects and major construction projects. Consequently there is a need to consider a number of competing interests, benefits and effects. This is particularly relevant for the CRL where surface construction works are proposed. For instance different land uses may “prefer” construction to occur at different times<sup>46</sup> to avoid or minimise disruption on their particular activity.
40. The evidence of Bill Newns sets out the indicative construction methodology and programme<sup>47</sup>. The construction period for the Project is anticipated to be between 5 and 6 years in duration. I have undertaken the assessment of the temporary adverse effects during construction in consideration of this duration.
41. On page 114 of the AEE<sup>48</sup>, I set out those matters that I took into consideration in undertaking the assessment of actual and potential effects on the environment. Without repeating these in my evidence, I will now briefly highlight key aspects of those matters.

### Statutory Context

42. The evidence of Bryce Julyan sets out, broadly, the statutory and planning context in which the NoR are being assessed. In particular his evidence covers those matters set out in section 171

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<sup>45</sup> Footnotes 11, 12 and 13 of my evidence sets out the anticipated resource consents that will be required.

<sup>46</sup> i.e. keeping Auckland’s central business district operating during the day Monday to Friday with as little disruption as possible, and providing a level of reasonable amenity in evenings and at weekends to residential and accommodation premises. (Refer footnote 23 of my evidence for the definition of amenity).

<sup>47</sup> Additionally, the Concept Design Report (Appendix 13, Volume 3 CRL NoR suite of documents) contains an indicative construction methodology and programme.

<sup>48</sup> Volume 2 CRL NoR suite of documents.

of the RMA. In accordance with section 171, and subject to Part 2 of the RMA, an assessment of environmental effects on the environment is required to be undertaken. For the assessment of effects on the environment I have considered the actual and potential positive and adverse effects in seeking a designation.

### The Proposal

43. A full description of the CRL Project is provided within the Concept Design Report<sup>49</sup>, Section 4 of the AEE<sup>50</sup> which supports the NoR, and the evidence provided in support of the NoR highlights the key aspects of the CRL Project.
44. The Concept Design for the CRL has been developed to support the NoR by being a component in both determining a prudent footprint<sup>51</sup> and the conservative “envelope” of actual and potential effects.

### The Site and Locality / Existing Environment

45. Like the description of the Proposal above, a description of the CRL Project site, locality and existing environment is provided within Section 6<sup>52</sup> of the AEE which supports the NoR. Additionally the evidence provided in support of the NoR highlights the key aspects of the site locality and existing environment.
46. In summary key features are:
- The CRL is to be constructed, operated and maintained within a built up urban environment containing a mix of commercial, residential and light industrial activities;

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<sup>49</sup> Appendix 13, Volume 3 CRL NoR suite of documents.

<sup>50</sup> Starting at page 64, Volume 2 CRL NoR suite of documents.

<sup>51</sup> For land required to construct, operate and maintain the CRL. This land is reflected as the Land Requirement Footprint for the CRL designations as attached to NoR 1 through to 6, Volume 1 CRL NoR suite of documents.

<sup>52</sup> Starting at page 84, Volume 2 CRL NoR suite of documents.

- Approximately half of the CRL will be located within the core central business district of Auckland, an area confirmed in the Auckland Plan to be the main employment centre for the Auckland region, containing commercial, residential and accommodation activities;
- Ambient noise and vibration levels in the areas through which the CRL traverses are anticipated under the District Plan to be higher than more traditional residential areas located outside the city centre area, due to the mix of land use activities and by virtue of being in the city centre area;
- The road network, under which CRL is located or in the vicinity of, contains a number of key routes carrying traffic<sup>53</sup> to and from the City Centre area as well as links through the City Centre area to other city destinations;
- The area between Britomart and Aotea Station contains a mix of commercial office blocks, shops, hotels, residential apartments, and restaurants and cafés;
- The Central City area contains a mix of modern buildings and more historic buildings, some of which are scheduled under the New Zealand Historic Places Trust and / or the Auckland District Plan, or in some cases are considered to be character defining or character supporting<sup>54</sup>.

#### Effects that are permitted or anticipated by the District Plan

47. The construction, operation and maintenance of the CRL is not specifically provided for within the current Auckland District Plan<sup>55</sup>. However, it is included in policy documents<sup>56</sup> that the District Plan and proposed Unitary Plan have to have regard to, and thus in my view the CRL

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<sup>53</sup> Both public and private vehicles, coaches and freight vehicles, and cyclists.

<sup>54</sup> Character defining and character supporting are discussed in the Built Heritage report, Appendix 4, Volume 3 CRL NoR suite of documents.

<sup>55</sup> Both the Central Area and Isthmus sections.

<sup>56</sup> The evidence of Bryce Julyan contains a summary of those policy documents in which the CRL is anticipated to be constructed and operated at some stage in the future.

is contemplated by the planning policy instruments. While not specifically providing for the CRL it is clearly anticipated that the District Plan should provide for it subject to an appropriate assessments of effects. In my view this anticipates that (at least broadly) the resulting effects will occur at some time.

48. For the CRL Project, the effects that are anticipated or permitted by the District Plan<sup>57</sup> include demolition<sup>58</sup>, construction work, including ancillary activities. While I acknowledge these may not be specifically anticipated in the road corridor, (although it could be reasonable to assume construction of transport facilities may take place in the road corridor), the proposed construction work and activities are not unique activities to occur in the Central City area. For example, the redevelopment of property and the construction of a number of buildings, structures and other infrastructure projects can all be contemplated as activities that may occur from time to time. These effects, as applicable have been taken into account in my effects assessment contained in paragraphs 70 to 231 of my evidence.
49. I recognise that where the CRL connects to the North Auckland Rail Line (NAL)<sup>59</sup> the demolition of a number of buildings in the vicinity is required. This demolition, while permitted under the Auckland District Plan: Isthmus section<sup>60</sup>, is not necessarily anticipated on this scale in one area. For this reason it was assessed in the AEE.
50. I have taken into the account effects permitted or anticipated by the District Plan in the assessment of effects on the environment set out in paragraphs 70 to 231 of my evidence.

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<sup>57</sup> Auckland District Plan: Central Area and Isthmus Sections.

<sup>58</sup> Excepting where demolition requires a resource consent for scheduled heritage buildings or structures, or under the Auckland District Plan: Central Area Section.

<sup>59</sup> The area of land within the CRL designation footprint located between the NAL in the south, Mt Eden Road in the east, Nikau Street in the North, and Porters Ave in the west.

<sup>60</sup> Permitted with the exception of scheduled heritage buildings and structures.

### ***Approach to Managing the Adverse Effects on the Environment from the CRL***

51. The key approach being undertaken to manage and mitigate adverse effects from the CRL is the use of conditions on the proposed designations. These include:

- The establishment of performance criteria to set the limits against which the adverse effects at the time of construction and operation are measured and monitored;
- The requirement for the development, implementation and monitoring of management plans (using the performance criteria established), during the construction period and once operational; and
- The implementation and monitoring of other designation conditions which address the management or mitigation of specific adverse effects during construction and / or operation.

52. As noted the proposed draft NoR conditions are contained in Attachment 2 to my evidence and are a further update to those provided as part of the Section 42A report. I discuss the proposed draft NoR conditions throughout paragraphs 70 to 231 of my evidence (the environmental effects and proposed mitigation).

53. I developed the structure for these draft conditions and prepared the first set of draft conditions provided to Auckland Council on 1 May 2013. In drafting the conditions I sought input from Auckland Transport and its technical expert team. The Auckland Transport team including myself have reviewed the changes proposed by Auckland Council as part of the Section 42A Report to these draft conditions.

54. When developing the proposed structure and content of the draft NoR conditions, I considered the following:

- That the CRL may be constructed and operating in the imminent future or at any stage over the next 20 years, and therefore the conditions and how they will be implemented and monitored need to be understandable and applicable over this time period;

- The predominant adverse effects will be temporary and occur during the construction of the CRL. Therefore the management and mitigation of these effects will only be required during this period;
- There are six (6) CRL NoR which will result in six (6) designations which authorise different works and / or different restrictions;
- Conditions specific to a particular NoR can be imposed on those designations, enabling localised adverse effects to be managed, mitigated and monitored;
- Conditions associated with future required resource consents can follow a similar condition structure which aid the integrated delivery of the Project by Auckland Transport at construction and operation, as well as aiding Auckland Council to administer and undertake compliance monitoring of the conditions.

55. With the above in mind the draft NoR conditions are structured as follows:

- General Administration Conditions
- Pre-Construction Communication and Consultation Conditions
- Conditions Associated with the Construction of the CRL:
  - Outline Plan Information
  - Monitoring
  - Construction Communication and Consultation Conditions
  - Construction Environmental Management Plan
  - Urban Design and Landscape Conditions
  - Station Plan
  - Bluestone Wall Management Plan
  - Other specific construction conditions
  - Advice Notes relating to construction
- Conditions for the on-going operation of the CRL:
  - Operational Conditions

- Advice Notes for the on-going operation of the CRL

56. Different conditions under the above structure apply to the relevant NoR.

57. I developed an explanation document<sup>61</sup> to assist in understanding the proposed draft NoR condition structure and how it is proposed to manage the adverse effects under the CRL designation conditions.

58. The evidence of Bryce Julyan discusses the general use of management plans as a tool to manage and mitigate adverse effects on large infrastructure projects such as the CRL.

59. The key reasons why I have developed and support the use of management plans as part of the CRL designation conditions are:

- The actual date of construction and start of the CRL is still unknown and could occur in the imminent future or at any stage in the next 20 years<sup>62</sup>;
- The methods of mitigation are variable and consequently mitigation of “how” the adverse effects of construction and operation on the CRL will be implemented is appropriately flexible<sup>63</sup>;
- Management Plans allow for certainty that the adverse effects will be managed within an “envelope” of effects defined at NoR stage whilst:
  - Retaining flexibility to make best use of the changes in practice and innovation in design and construction methods at the time of construction and operation; and
  - Allowing the adverse effects to be managed in a flexible and responsive manner.

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<sup>61</sup> Explanation of Proposed Draft NoR Conditions is attached to the conditions in the Section 42A Report.

<sup>62</sup> Reflecting both that full funding has not been confirmed for construction, and the 20 year designation lapse period.

<sup>63</sup> Noting that any unforeseen adverse effects at construction and operation time outside the conservative “envelope” of effects defined at NoR stage would trigger either an alteration to designation or the seeking of a resource consent under current RMA legislation.

60. Where it is not appropriate to provide management or mitigation of an adverse effect under a management plan, a separate specific condition is proposed.
61. It is important when imposing a management plan system as part of designation conditions it is important that clear objectives, and where necessary and appropriate performance criteria, are included in the content of the condition to provide the intended outcome. I also agree that communication and consultation is an important undertaking related to the implementation of a management plan system.
62. The NoR documents included a description of the proposed management and mitigation of any adverse effects<sup>64</sup>. This includes the development and implementation of an Environmental Management Framework (EMF). The EMF has been developed by Auckland Transport for its internal use as part of the management of the Project delivery. The evidence of Aimee Barwick discusses Auckland Transport's intended use of the EMF.
63. From the EMF I have identified that the key methods for managing and mitigating the adverse effects resulting from the CRL are the Construction Environmental Management Plan (CEMP) and the Communication and Consultation Plan. The requirement to develop, implement and monitor these plans has been included in the proposed draft CRL NoR conditions. Additionally, Urban Design and Landscaping Plan(s), and Station Plan(s) are included in the draft NoR conditions to manage and mitigate adverse effects.
64. The designation conditions will take effect from the time the designations are confirmed. Some of the designation conditions will need to be considered in the next stages of design, while others will not need to be implemented until construction and / or operation occurs. In my view it is important to retain flexibility for future design and construction stages for reasons given above. Auckland Council has recommended in the section 42A report that, for clearer interpretation of the conditions, the proposed CEMP be prepared through a number of separate management plans. I am aware that this is different to Auckland Transport's

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<sup>64</sup> Section 2.2.6 of the AEE, Volume 2 and Appendix 1 Volume 3 CRL NoR suite of documents.

preference. Consequently I have attempted to clarify this approach in the draft conditions contained in Attachment 2 to my evidence, where:

- Draft **condition [4]**:
  - Provides that the Requiring Authority may choose to submit one or more CEMP(s) (in whole or as a number of plans) reflecting construction undertaken at different times or works in a particular area; and
  - If the CEMP is submitted in parts it needs to clearly show the integration with adjacent CRL construction works and interrelated activities.
- Draft **condition [14A]** requires that the management of key adverse environmental effects be detailed in specific sections to the CEMP or in individual plans, being:
  - Noise and vibration;
  - Built Heritage;
  - Trees and vegetation;
  - Contamination;
  - Air quality;
  - Network utility management;
  - Public art management.

65. I support a flexible approach to how the CEMP is prepared. In my opinion the outcome is important and this is not dependant on whether the CEMP is prepared as one document, in stages, or in separate management plans.

### ***The Environmental Effects and Proposed Mitigation***

66. In my opinion there will be both actual and potential positive and adverse environmental effects which will result from the construction, operation and maintenance of the CRL.

67. In paragraphs 68 to 231 of my evidence I discuss the assessment of actual and potential effects, and for the adverse effects, the proposed methods to manage and mitigate these under the following categories:

- Positive effects and benefits;
- Temporary adverse effects;
- Permanent effects; and
- Cumulative Adverse Effects Resulting from the Extended Lapse Period.

### **Positive Effects and Benefits from the CRL**

68. There will be a number of positive effects and benefits which will result from the construction, operation and maintenance of the CRL. The majority of these will be permanent effects. The evidence provided by Auckland Transport<sup>65</sup> and Bryce Julyan explains the positive effects and benefits of the CRL Project.

69. In summary I consider the positive effects and benefits resulting from the CRL Project to include the following:

- The CRL will unlock the existing capacity constraint at Britomart by removing the “cul-de-sac” arrangement and providing for through train travel;
- As a result of the above, the ability to provide more service flexibility and to increase capacity on the Auckland rail network allowing:
  - More frequent passenger trains;
  - The ability to accommodate other future rail links<sup>66</sup>; and

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<sup>65</sup> David Warburton, Chris Meale, John Williamson, Aimee Barwick, and Ian Clark.

<sup>66</sup> Such as a rail link to Auckland Airport and Auckland Northshore.

- Encouraging the sustainable mode share targets to be reached (as set by the New Zealand Transport Strategy (NZTS) and the Auckland Regional Land Transport Strategy 2010 – 2040 (RLTS));
- The CRL will provide a more direct passenger rail link between Britomart and stations located on the NAL which will:
  - Reduce passenger rail travel times;
  - Allow a greater frequency of passenger trains;
  - Reduce the current capacity constraints on the rail network at the Newmarket and Quay Park Junctions;
  - Provide more direct and better access by passenger trains to:
    - the city centre mid-town area through provision of Aotea Station<sup>67</sup> and central city locations through provision of Karangahape and Newton Stations;
  - Enable many more rail trips across Auckland to take place as a continuous ride, without the need for passengers to transfer.
- The CRL will promote and support land use intensification around the stations, a key proponent (being the compact city model) of the Auckland Regional Policy Statement, the Auckland Plan, and City Centre Master Plan (CCMP);
- The majority of the City Centre area will be within a 10 minute walk of a railway station;
- Assist in building more resilient regional infrastructure, an objective of the Auckland Plan, the RLTS, the Auckland Economic Development Strategy, the Auckland Sustainability Framework, and the Auckland Transport Plan;
- The CRL will assist in providing an integrated transport solution for Auckland through provision of alternative modes which complement the investment in Auckland's strategic transport network (including freeing up road space for freight and other (e.g. commercial and recreational) trips);

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<sup>67</sup> The Auckland Plan promotes the Auckland central city area as the main employment centre for future growth in Auckland. The evidence of Bryce Julyan addresses this further.

- The CRL will assist in meeting the environmental and health objectives, notably air quality standards, sought by the Auckland Plan, the RLTS, the Auckland Regional Policy Statement and the Auckland Regional Air, Land and Water Plan;
- It will also assist in reducing regional carbon emissions stemming from the transport system, a key component of climate change, and an objective of the NZTS.

### **Temporary Adverse Effects**

70. As noted previously, I consider the adverse environmental effects of construction of the CRL to be the predominant cause of adverse effects. Such effects in my opinion will not be dissimilar to those adverse effects experienced during the construction of other similar sized infrastructure projects in Auckland<sup>68</sup>. The scale and duration of the Project is significant. While I acknowledge this, I consider that the majority of effects are still temporary and can be mitigated through the implementation and monitoring of the NoR conditions relating to construction<sup>69</sup>.

71. The use of a Tunnel Boring Machine (TBM) to construct the majority of the two 3.4km underground tunnels will avoid a number of adverse effects that would otherwise occur if other construction methods from the surface down were employed. Using only surface construction methods to construct the CRL would result in significantly greater adverse effects on:

- Public and private property – including the requirement to demolish buildings and structures; the temporary and permanent removal of people and land use activities; the disruption to people’s amenity values<sup>70</sup> from increased noise and vibration and construction dust; the potential “blighting” of the land both prior to construction, during construction, and post construction, and the social effects associated with this; and

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<sup>68</sup> Such as the construction of the new Newmarket Viaduct, the Victoria Park tunnel, State highway 20 Waterview Connection and tunnel currently under construction, and the Vector tunnel located between Newmarket and the northern end of Hobson Street in the central city area.

<sup>69</sup> I discuss the proposed draft NoR conditions in throughout my evidence and a full suite of the proposed draft conditions proposed by Auckland Transport is contained in Attachment 2 to my evidence.

<sup>70</sup> Footnote 23 of my evidence provides the definition of amenity.

- The road network – including the closure of roads for significant periods of time and the resultant disruptions and congestion for public and private vehicle movements, cycling and pedestrian movements; and restrictions and closure of private and public property access (which could result in the requirement for additional private land to be designated) as construction from the surface down is undertaken.

72. However, adverse effects at the surface will occur during the construction of the Project between Britomart Station and Aotea Station, the Karangahape and Newton Station areas, and in the area where the CRL tunnels connect to the NAL (the main construction site). I note the evidence of Bill Newns which states construction is proposed in stages and will not occur continuously at all surface areas. In other words, construction activities will change and shift as the Project progresses. The evidence of Bill Newns also sets out an indicative construction methodology and programme, and states that predominantly the 5 to 6 year construction programme is driven by the length of TBM works and the construction of Aotea Station.

73. The adverse temporary effects likely to occur during the construction period of the CRL in relation to the NoR include<sup>71</sup>:

- Disruptions to the road network for public and private vehicles, cyclists and pedestrians from construction works and machinery occurring in the road network, particularly in the Albert Street area, generating congestion and delays to travel;
- Disruptions to access to private property resulting from construction works occurring in the road network adjacent to property accesses, particularly in the Albert Street area;
- Disturbance and annoyance for notable receivers, due to the noise and vibration generated from construction machinery and activities, while operating:
  - Sound and television recording studios, particularly in relation to sensitive equipment, in the vicinity of Albert Street, the secondary shaft at Newton Station, and the construction of the tunnels within the main construction site area;

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<sup>71</sup> These adverse effects are further discussed in paragraphs 70 to 231 of my evidence and additionally within the Technical evidence supporting the CRL NOR, and in section 7 of the AEE (Volume 2 CRL NoR suite of documents).

- Performance theatres<sup>72</sup> in the vicinity of the Aotea Station and the secondary shaft at Karangahape Station;
- The Auckland District Court, particularly in relation to recording statements from traumatised witnesses, in the location of the Albert Street works;
- Sensitive equipment associated with medical facilities and scientific laboratories;
- Annoyance and disturbance for people from noise and vibration generated from construction machinery undertaking road excavation works and piling at the localised surface areas: Albert Street area, Aotea Station, Karangahape Station, Newton Station, and the connection of the CRL to the NAL;
- Potential damage to built heritage from vibration and settlement, experienced as a result of construction machinery undertaking construction works;
- The loss or damage of archaeological remains where surface construction works are occurring;
- Impacts on human health and annoyance from the discovery and removal of contaminated soil and associated odour / hazardous air pollutants, as well as from dust generated from construction works;
- A reduction in the urban amenity from the removal or relocation of trees and vegetation located within the surface designation footprint;
- Potential social and economic effects including a reduction in urban amenity, impacts to business operations, and the potential for blighting of properties.

74. The following sections of my evidence are based on Auckland Transport's technical expert team assessments and evidence provided to support the NoR. My evidence provides key planning comments to further supplement those assessments, evidence, and the methods to

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<sup>72</sup> Performance Theatres currently affected by the CRL works are the Aotea Centre and the Mercury Theatre.

manage and mitigate adverse effects. My evidence also refers to and supplements the assessment I undertook in preparing the AEE which supports the CRL NoR.

**a. Transport Network**

75. Actual and potential adverse effects on the transport network are:

- Disruptions from reduced road capacity potentially causing congestion, diversions and travel delays:
  - To cross town movements;
  - To City Centre circulations;
- Disruptions to private property access.

76. The transport network section (or separate management plan) of the CEMP is the proposed tool for managing and mitigating the adverse effects on the environment. This is reflected in proposed draft conditions 16, 17, 18, 19, and 20. Draft condition 16 contains performance criteria that apply to the management and mitigation of adverse effects on the transport network. Draft conditions 17 through to 20 provide additional performance criteria relating to specific areas of surface construction works and I discuss these in the paragraphs below under geographic areas.

77. Additionally, draft conditions 3C and 8 relating to pre-construction and construction communication and consultation, include requirements for consultation with persons affected by the Project in respect of the development of the transport network section (or separate plan) which addresses the management of traffic effects and access to property.

78. In my opinion overall, based on the evidence of Ian Clark and comments made below, the implementation of the recommended performance criteria, along with other mitigation proposed in the NoR conditions, will mitigate the actual and potential adverse effects on the transport network.

### Disruptions causing congestion, diversions and travel delays

79. Mr Ian Clark has assessed the actual and potential adverse effects of disruptions from reduced road capacity potentially causing congestion, diversions and travel delays during the construction of the CRL. This assessment is contained in the Integrated Transport Assessment (ITA)<sup>73</sup>, undertaken and provided to support the NoR, the supplementary ITA report provided to Auckland Council<sup>74</sup>, and in his evidence supporting the NoR.
80. I discuss these effects by geographic area below.
81. With regard to managing and mitigating these effects on the wider network, draft condition 12 has been proposed requiring Auckland Transport to work with the New Zealand Transport Agency (NZTA) during the preparation of the transport network sections (or separate plan) of the CEMP to confirm the management of adverse transport effects on the road network. This draft condition was developed in collaboration with NZTA.

#### *Albert Street Construction Works*

82. As described in the evidence of Mr Bill Newns, cut and cover and top down construction methodology is proposed between Britomart and the southern side of Aotea Station. These construction works result in impacts to the transport network of Albert Street and cross streets such as Wellesley, Victoria, and Customs Streets, which provide key access routes into / out of, and across, the main employment and commercial area of the City Centre.
83. The modelling work undertaken by Mr Clark confirms that the east to west and west to east traffic flows across Wellesley, Victoria and Customs Street are the key transport movement, particularly at peak times. The effect of construction on these movements may include disruption and diversion to normal travel patterns, congestion and travel delays for people travelling to and from the City Centre area or through it. There will also be these effects on movements which circulate within the City Centre area.

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<sup>73</sup> Appendix 5, Volume 3 CRL NoR suite of documents.

<sup>74</sup> Provided to Auckland Council in May 2013.

84. In his evidence, Mr Clark recommends performance criteria to assist in managing and mitigating the adverse effects I describe above. It is acknowledged that even with the implementation of these performance criteria to guide the management of construction works along Albert Street, adverse effects will still be experienced in terms of disruptions from reduced road capacity potentially causing congestion, diversions and travel delays.
85. In my opinion, based on the evidence of Mr Clark, the implementation of the recommended performance criteria, along with other mitigation proposed in the NoR conditions (which I discuss further below), will reduce these effects to ones that would be anticipated by construction works of this large scale occurring in this location.
86. The draft NoR conditions include the performance criteria recommended by Mr Clark. These are set out in draft condition 17<sup>75</sup>, including the following which, in my view particularly addresses the management and mitigation of adverse effects described above:
- The east-west / west-east connection is to be maintained in each direction at two of the identified intersections during the period when the third intersection is fully closed; and
  - The left turn from Customs Street into Albert Street (when travelling from the east), and the left turn from Customs Street into Albert Street (when travelling from the west), are to be retained during the otherwise full closure of the Albert Street / Customs Street intersection.

*Karangahape and Newton Stations*

87. As described in the evidence of Mr Newns, surface construction works are required to construct the two entry shafts at Karangahape and Newton Stations. At Karangahape Station surface works are required within the Pitt Street and Mercury Lane road corridors. At Newton Station all construction works are proposed on private land.

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<sup>75</sup> Attachment 2 to my evidence.

88. The effect of construction on the transport network, as assessed by Mr Clark, in the vicinity of these works may include disruption and diversion to normal travel patterns, congestion and travel delays for people travelling:

- Along Pitt Street and Karangahape Road, and those roads which feed into these, such as Mercury Lane and East Street;
- Dundonald Street and Basque Road; and
- Symonds Street, New North Road and Mt Eden Roads in the vicinity of where they intersect.

89. The draft NoR conditions include performance criteria recommended by Mr Clark. As well as the performance criteria set out in draft condition 17, the mitigation of adverse effects on the transport network in this area will also be managed by the performance criteria set out in draft conditions 18 and 19<sup>76</sup>. Based on the evidence of Mr Clark, it is my opinion that the adverse effects on the transport network in these areas will be mitigated through the measures proposed in the NoR conditions

*The Main Construction Site Area*

90. Mr Newns in his evidence describes that the main construction site area will accommodate the main construction support area for the CRL, the support for the TBM including spoil stockpiling, and the construction of the tunnels to connect the CRL to the NAL.

91. Construction vehicles, including spoil removal trucks will enter and exit the site area. The evidence provided by Mr Newns provides the anticipated numbers of spoil trucks associated with this main construction site area. Mr Clark has undertaken an assessment of the adverse effects resulting from these anticipated truck movements. He has also undertaken an assessment of the adverse effects on the surrounding transport network from general construction vehicles entering and exiting the site.

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<sup>76</sup> Attachment 2 to my evidence.

92. The effect on the transport network of vehicles entering and exiting this main construction site area may include disruption and diversion to normal travel patterns (as some existing roads within the site area will be partially or fully closed), as well as congestion and travel delays for people travelling around the main construction site area.
93. Mr Clark recommends performance criteria to assist in managing and mitigating these adverse effects. The draft NoR conditions include the performance criteria that he has recommended. As stated above, this includes the performance criteria contained in draft condition 17 as well as performance criteria relating to this area, as set out in draft condition 20<sup>77</sup>. In my opinion, based on the evidence of Ian Clark, the implementation of the recommended performance criteria, along with other mitigation proposed in the NoR conditions, will mitigate these effects.

*Grade Separation of Normanby Road and Porters Avenue, and Replacement of Mt Eden Road Bridge*

94. The construction works to take place to grade separate both Normanby Road and Porters Avenue over the rail corridor, and to the replace Mt Eden Road road bridge to accommodate the CRL tracks below, are described in the evidence of Mr Newns. Normanby Road and Porters Avenue will need to be closed on either side of the rail corridor while the grade separation works are being undertaken.
95. The effect of construction on the transport network in the vicinity of these works may include disruption and diversion to normal travel patterns for people who use these roads to get to and from the City Centre area or to travel further to the east or west. These disruptions may cause congestion and travel delays. Mr Clark has assessed these adverse effects in his evidence and he recommends performance criteria to assist in managing and mitigating these adverse effects.

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<sup>77</sup> Attachment 2 to my evidence.

96. The performance criteria recommended by Mr Clark is included in draft condition 20<sup>78</sup>. The performance criteria in that draft conditions includes the following, which in my view particularly addresses the management and mitigation of adverse effects described above:

- The retention of at least two traffic lanes (one in either direction) on Mt Eden Road during construction of the replacement Mt Eden Road bridge;
- The grade separation of Normanby Road and Porters Avenue, and the reduction of any lanes on Mt Eden Road bridge, are to be undertaken at different times when vehicles, pedestrians and cyclists can be managed and accommodated on these roads (while one of them is closed or Mt Eden Road has reduced lanes), or on other roads in the vicinity such as Dominion Road.

97. In his evidence Mr Clark notes the significant permanent positive effects on the transport network which will result from the grade separation of both Normanby Road and Porters Avenue over the electrified rail corridor. In summary these positive effects include an increase in safety for vehicles, cyclists and pedestrians crossing the rail corridor, a reduction in congestion on these roads from the removal of the need to slow down and / or stop and queue while the rail crossing barrier is in action.

#### Disruptions to Private Property Access

98. Mr Clark has assessed the actual and potential adverse effects of disruptions to private property access which may cause diversions and travel delays during the construction of the CRL. This assessment is contained in the Integrated Transport Assessment (ITA)<sup>79</sup>, undertaken and provided to support the NoR, the supplementary ITA report provided to Auckland Council<sup>80</sup>, and in his evidence supporting the NoR.

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<sup>78</sup> Attachment 2 to my evidence.

<sup>79</sup> Appendix 5, Volume 3 CRL NoR suite of documents.

<sup>80</sup> Provided to Auckland Council in May 2013.

99. I discuss these effects and specific mitigation methods by geographic area further on in my evidence.
100. Draft conditions 16, 17, 18, 19 and 20 contain performance criteria that apply to the management and mitigation of these adverse effects, including the following which, in my view particularly address:

- Providing pedestrian and cycle access to private property at all times; and
- Providing vehicle access to private property as practicably as possible at all times, except for temporary closures where landowners and occupiers have been communicated and consulted with in reasonable advance of the closure.

Note: For the purposes of designation conditions [16, 17, 18, 19 and 20] “temporary closure” is defined as the following:

- In place for less than 12 hours, the Requiring Authority shall communicate and consult on the closure at least 24 hours in advance, but is not required to offer or provide alternative parking arrangements, though it may choose to offer this on a case by case basis in consultation with the affected party;
- In place for between 12-72 hours, the Requiring Authority shall communicate and consult on the closure at least 72 hours in advance, and will offer (and where agreed with the affected party) to provide alternative parking arrangements. In this case, Auckland Transport will endeavour to ensure that any alternative parking arrangement is as close to the site affected as is reasonably practicable, but the persons affected may need to walk to an alternative parking location; and
- Where unexpectedly an affected party finds their vehicle temporarily “blocked in”, the Requiring Authority shall (within reasonable limits) offer alternative transport such as a taxi, rental car, or City Hop car.

101. Based on the evidence of Mr Clark, the implementation of the recommended performance criteria, along with other mitigation proposed in the NoR conditions, will in my opinion mitigate these effects.

*Albert Street Construction Works*

102. Mr Newns in his evidence has described the indicative construction methodology for the construction of the two tunnels between Britomart and Aotea Station and for the construction of Aotea Station. These construction works are anticipated to result in disruptions to private property access, particularly along Albert Street, those properties whose access is on a road which feeds into Albert Street, and for properties located in Tyler and Galway Streets. These disruptions may cause diversions and travel delays. The indicative construction methodology described by Mr Newns notes how a footpath and vehicle access lane can be provided along both sides of Albert Street between Customs and Victoria Street, and for the construction of Aotea Station between Victoria and Wellesley Streets.

103. As stated above in paragraph [98], Mr Clark has undertaken an assessment of the disruptions which may cause diversions and travel delays to private property access.

Mr Clark recommends performance criteria to assist in managing and mitigating these adverse effects. The draft NoR conditions include the performance criteria that he has recommended. For this area these are set out in draft condition [17]<sup>81</sup>, including the following which, in my view particularly address the management and mitigation of adverse effects described above:

- The left turn from Customs Street into Albert Street (when travelling from the east) is to be retained during the otherwise full closure of the Albert Street / Customs Street intersection to maintain access into Mills Lane;
- Retaining local vehicle access to properties located along Albert Street (which may include a left in, left out access), except for temporary closures where landowners and occupiers have been communicated with;

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<sup>81</sup> Attachment 2 to my evidence.

- Retaining access for loading and unloading of goods to those properties located along Albert Street (which may include a left in, left out access), Galway and Tyler Streets, except for temporary closures where landowners and occupiers have been communicated with; and
- Retaining local vehicle access to properties located along Tyler and Galway Streets, except for temporary closures where landowners and occupiers have been communicated with.

104. Based on the evidence of Mr Clark, the implementation of the recommended performance criteria, along with other mitigation proposed in the NoR conditions, will in my opinion mitigate these effects.

*Karangahape and Newton Stations*

105. The evidence of Mr Newns sets out the indicative construction methodology for the construction of the two entry shafts at Karangahape and Newton Stations. At Karangahape Station surface works are required within the Pitt Street and Mercury Lane road corridors. At Newton Station all construction works are proposed on private land.

106. Mr Clark's evidence includes an assessment of the disruptions to private property access, which may cause diversions and travel delays, for those properties with vehicle access directly onto:

- Beresford Street from those properties which access at its eastern end, including from Samoa Lane;
- Mercury Lane from the George Court Building and those properties located directly opposite on the western side of the street; and
- Dundonald Street from those properties in the immediate vicinity of the private sites where the two entry shafts at Newton are to be constructed.

107. Mr Clark also recommends performance criteria to assist in managing and mitigating the adverse effects I describe above. The draft NoR conditions include the performance criteria recommended by Ian Clark. For this area these are set out in draft conditions [18 and 19]<sup>82</sup>.

108. In my opinion, based on the evidence of Mr Clark, the implementation of the recommended performance criteria, along with other mitigation proposed in the NoR conditions, will mitigate these effects.

*The Main Construction Site Area*

109. The evidence of Mr Newns notes that the main construction site area will accommodate the main construction support area for the CRL, the support for the TBM including spoil stockpiling, and the construction of the tunnels to connect the CRL to the NAL. This will all be located on land acquired for the Project.

110. Mr Clark's evidence includes an assessment of the disruptions to private property access, which may cause diversions and travel delays, for those properties with vehicle access directly onto:

- The eastern end of Shaddock Street; and
- Ngahura, Ruru, Korari, Flower and Nikau Streets.

111. Mr Clark has recommended performance criteria to assist in managing and mitigating the adverse effects I describe above, and these have been included in the draft NoR conditions. For this area these are set out in draft condition [20]<sup>83</sup>, and include the following which, in my view particularly address the management and mitigation of the identified adverse effects:

- Retaining local vehicle access to properties except for temporary closures where landowners and occupiers have been communicated and consulted with; and

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<sup>82</sup> Attachment 2 to my evidence.

<sup>83</sup> Attachment 2 to my evidence.

- Providing for traffic to turn right out of Ruru Street (particularly at peak times) as a result of not being able to travel via Nikau Street to traffic lights at Korari Street and New North Road.

112. Drawing on the evidence of Mr Clark and the implementation of the recommended performance criteria and other measures within the proposed draft NoR conditions, the adverse effects will be mitigated.

*Normanby Road and Porters Avenue Area*

113. As stated in paragraph [94] the evidence of Mr Newns describes the construction works to take place to grade separate both Normanby Road and Porters Avenue over the rail corridor, and to replace Mt Eden Road road bridge. Mr Newns notes in his evidence that during these construction works access can be retained to the Department of Corrections site via Lauder Road.

114. The evidence of Mr Clark includes an assessment of the disruptions to private property access (which may cause diversions and travel delays), for those properties with vehicle access directly onto:

- Porters Avenue in the vicinity of the construction works;
- Fenton and Haultain Streets; and
- Normanby Road in the vicinity of the construction works.

115. Mr Clark has recommended performance criteria to assist in managing and mitigating the adverse effects identified and these have been incorporated into the draft NoR conditions. I note that specific performance criteria for this area are set out in draft condition [20]<sup>84</sup>. These include the following which, in my view particularly address the management and mitigation of adverse effects by:

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<sup>84</sup> Attachment 2 to my evidence.

- Retaining local vehicle access to properties except for temporary closures where landowners and occupiers have been communicated with; and
  - Retaining full accessibility to those parts of Porters Avenue and Normanby Road not affected by, but in the vicinity of, the construction works.
116. Additionally, draft conditions [3C and 8] include requirements for consultation with the Department of Corrections with regard to maintaining access into its site at Lauder Road during construction of the grade separation of Normanby Road.
117. Based on the evidence of Mr Clark, it is my view that the implementation of the recommended performance criteria, via the designation conditions, along with the proposed conditions relating to communication and consultation, will mitigate these effects.

***b. Noise and Vibration***

118. Actual and potential adverse effects from construction noise are:
- Annoyance and disturbance to people from construction works.
119. Actual and potential adverse effects from construction vibration are:
- Annoyance and disturbance to people from construction works.
  - Potential aesthetic damage to Built Heritage (and other) buildings and structures.
120. I discuss the annoyance and disturbance to people in the paragraphs below. I discuss the potential aesthetic damage to Built Heritage (and other) buildings and structures in the next section of my evidence.
121. Mr Craig Fitzgerald and Mr James Whitlock have assessed the actual and potential adverse effects of annoyance and disturbance from construction noise and vibration. This assessment is contained in the noise and vibration report<sup>85</sup>, undertaken and provided to support the NoR,

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<sup>85</sup> Appendix 2, Volume 3 CRL NoR suite of documents.

the supplementary information provided to Auckland Council as a result of a further information request, and in their evidence supporting the NoR.

122. Matthew Harrison has provided evidence in support of the NoR addressing further actual and potential adverse effects from reradiated noise.

123. Annoyance and disturbance to people from construction works will result from:

- Piling related to constructing<sup>86</sup>:
  - The two tunnels between Albert Street and Aotea Station;
  - Structures associated with Aotea Station box;
  - The two shafts located at both Karangahape and Newton Stations;
  - Structures associated with the tunnels where they connect to the NAL, including the cross over box area.
- Excavation of the existing road surfaces, the station shafts, and works to connect the CRL to the NAL;
- Blasting of basalt rock within the main construction site area to construct the tunnels in this location;
- Vibration from vibratory rollers and diaphragm wall rigs;
- Vibration or reradiated noise generated from the TBM constructing the two tunnels underground; and
- Vibration from road header tunnelling methods and excavator-mounted rockbreakers.

124. I note from the evidence of Mr Fitzgerald and Mr Whitlock that piling works and road and other excavation works (described above) are the two activities which are anticipated to breach the Project Construction Noise and Vibration Criteria. Mr Newns notes in this evidence where it is anticipated that piling and road excavation works will occur.

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<sup>86</sup> Refer to the evidence of Bill Newns for the indicative methodology description of these works.

125. In addition, Mr Whitlock identifies that blasting is likely to generate the highest vibration levels of all CRL construction activities. He recommends that any blasting undertaken is done so through a regimented blasting programme to monitor and manage the effects. He also proposes management, mitigation, and monitoring measures around communication and consultation, as well as building condition surveys pre, during and post construction, as part of the draft NoR conditions.
126. With the exception of reradiated noise, Mr Whitlock's evidence states that adverse effects of annoyance and disturbance from vibration caused by construction works will be similar with other construction in the City Centre area and can be managed and mitigated through the methods proposed under the CEMP and other specific conditions of the designations.
127. Mr Whitlock also describes what reradiated noise is. He notes that during the daytime reradiated noise is likely to be masked by other noises in the surrounding environment. He also notes that the main adverse effects from reradiated noise from the TBM will occur at night as the ambient noise levels are a lot lower than during the day, and that the adverse effect of reradiated noise is a human response effect as opposed to a building damage effect.
128. Mr Whitlock has recommended a German Standard as the performance criteria for providing guidance on what is a reasonable level of reradiated noise. Mr Harrison in his evidence in general agrees with the application of the German Standard, but considers this is a conservative standard. In his evidence he states that there is support for adoption of a British standard, which he states is less stringent, and he also discusses his experience on projects where higher criteria have been specified.
129. Both Mr Whitlock and Mr Harrison in their evidence agree that it is appropriate to include in the NoR conditions a performance criteria to provide guidance on what is a reasonable level of reradiated noise (and for monitoring purposes) during the night time period (2200 to 0700). Mr Harrison further notes that in his opinion *"complying with the regenerated noise level criteria strongly indicates that the human comfort vibration criteria will also be complied with"*. A condition reflecting this performance criteria is included in the draft NoR conditions contained in Attachment 2 to my evidence.

130. The evidence of Mr Fitzgerald, Mr Whitlock and Mr Matthew Harrison assess the actual and potential adverse construction noise and vibration effects on notable receivers. It is not fully clear at this stage what the extent of these adverse effects will be on these parties. To manage and mitigate any adverse effects from construction the following has been proposed as part of the draft NoR conditions:

- Draft conditions [3c and 8] require the preparation pre-construction and during construction of a Communication and Consultation Plan, including consultation with directly affected and affected in proximity parties regarding the development of the noise and vibration section (or separate plan) of the CEMP;
- Draft conditions [3c and 8] require the implementation pre-construction and during construction of communication and consultation with directly affected and affected in proximity parties regarding the timing, duration and type of construction works they may be affected by;
- Draft condition [11] requires specific communication and consultation with notable receivers, starting (if not before) as soon as reasonably practicable once certainty on construction timing is known, to work together to manage the adverse effects from construction works being undertaken in the vicinity;
- Draft condition [21] contains performance criteria that apply to the management and mitigation of adverse effects from construction noise and vibration;
- Draft conditions [21A] contain performance criteria that apply to the management and mitigation of adverse effects from construction noise and vibration on the operation of the property known as 2 and 3 Flower Street (the “recording studio” – operating as TV 3, owned by Media Works);
- Draft condition [38] containing the Project Construction Noise Criteria recommended by Mr Fitzgerald;

- Draft condition [38A] relating to the monitoring of the construction works against the Project Noise Criteria;
- Draft condition [38A] requiring the preparation of a site specific construction noise management plan (SSCNMP) for the construction site area where it is predicted that construction noise will exceed the Project Noise Criteria by more than 5dBA;
- Draft condition [39] relating to the monitoring of the construction works against the Project Vibration Criteria;
- Draft condition [39A] requiring that further assessment be undertaken as part of a site specific construction vibration management plan (SSCVMP) where modelled or measured construction noise levels are predicted to exceed the Project construction criteria;
- Draft condition [40] requiring the preparation of a site specific construction vibration management plan (SSCVMP) for the construction site area where it is predicted that vibration from construction will exceed the Project Vibration Criteria; and
- Draft condition [39B] provides the performance criteria that vibration from construction activities shall not exceed and relates to the management of sleep disturbance from reradiated noise.

131. I am confident that the proposed measures outlined above will manage and mitigate adverse noise and vibration effects resulting from construction.

132. For the management and mitigation of adverse effects from construction noise and vibration on receivers beyond notable receivers, the noise and vibration section (or separate management plan) of the CEMP is one of the proposed tool for managing and mitigating these adverse effects. This is reflected in proposed NoR conditions [21, 38, 38A, 39, 39A and 39B] which have been discussed above.

133. With regard to draft condition [38] Mr Fitzgerald has adopted the higher noise levels under the Central Area section of the District Plan for the parts of the CRL Project that are subject to the Isthmus section of the District Plan. This is because the area that the CRL traverses between

the Central Motorway Junction and the NAL, is zoned mixed use and contains a mix of commercial, retail, residential and light industrial activities. There is therefore anticipation that ambient noise levels will be higher than a traditional residential area. In my opinion the adoption of these higher noise levels is appropriate.

134. Draft conditions [3C and 8] will also assist in managing and mitigating the adverse effects from construction noise and vibration by including requirements for consultation with persons affected by the Project in respect of the development of the noise and vibration section (or separate plan). This condition applies to NoR 1, 2, 4, 5 and 6.
135. In my opinion overall, based on the evidence of Mr Fitzgerald, Mr Whitlock and Mr Harrison as noted above, the implementation of the recommended performance criteria, along with other measures proposed in the NoR conditions, will mitigate the actual and potential adverse effects from construction noise and vibration.

***c. Aesthetic Damage to Built Heritage***

136. The key actual and potential adverse effect to Built Heritage from construction works is the potential aesthetic damage to Built Heritage (and other) buildings and structures.
137. Mr Bruce Petry, Mr Whitlock and Mr Craig Stevenson have assessed the actual and potential adverse effects of potential aesthetic damage to Built Heritage (and other) buildings and structures. These assessments are contained in the Built Heritage Report<sup>87</sup>, the noise and vibration report<sup>88</sup>, and the structural engineering report<sup>89</sup>, and in their evidence supporting the NoR. The evidence of Mr Stevenson and Mr Whitlock also notes that a conservative standard has been applied to this assessment.
138. Messrs Petry, Whitlock and Stevenson note that any actual and potential adverse effects on Built Heritage fall into the aesthetic damage category of the applied standard. In their view, fifty

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<sup>87</sup> Appendix 4, Volume 3 CRL NoR suite of documents.

<sup>88</sup> Appendix 2, Volume 3 CRL NoR suite of documents.

<sup>89</sup> Appendix 10, Volume 3 CRL NoR suite of documents.

five built heritage structures or buildings are considered to fall into the aesthetic damage category. In his evidence Mr Stevenson notes that should any damage result, there is confidence that this will fall into the aesthetic damage category, and that it is unlikely that any structural damage will occur.

139. Mr Stevenson and Mr Whitlock have also assessed the actual and potential effects to buildings from construction vibration and works causing settlement. I am addressing this matter in this section of my evidence as the actual and potential effects, i.e. building damage, and the proposed management and mitigation of these adverse effects is the same as for Built Heritage.

140. As described in his evidence, Mr Stevenson has undertaken a preliminary analysis of potential settlement in order to help establish the CRL designation footprint. Resource consents for tunnel exaction works and the drawdown and / or diversion or take of groundwater, which may result in settlement effects, are not being sought at this time.

141. Messrs Petry, Whitlock and Stevenson recommend performance criteria to assist in managing, mitigating, and monitoring the adverse effects I describe above. The draft NoR conditions include the following performance criteria recommended by them::

- Draft condition [21] requires that the noise and vibration section (or separate plan) of the CEMP confirm the proposed methods for monitoring construction vibration including procedures for predicting and addressing exceedances of the Project Vibration Criteria, including where building condition surveys should be undertaken prior to construction, monitored through construction, and undertaken again post construction;
- Draft condition [22] requires that the Built Heritage section (or separate plan) of the CEMP confirm where building condition surveys should be prior to construction, monitored through construction, and undertaken again post construction (noting that the condition includes a performance criteria that at minimum those 55 buildings identified as being potentially affected by aesthetic building damage be subject to the building condition survey process);

- Draft condition [41] sets out the requirements for the building condition process.

142. The evidence of Mr Newns describes the indicative construction methodology for the construction of the CRL tunnels along Albert Street between Customs and Victoria Street, including in the vicinity of the scheduled Bluestone Wall. The documentation which supports the NoR notes that while the scheduled toilets beneath Albert Street (accessed through this wall) need to be removed to construct the CRL, the wall itself can be protected during construction works.

143. The significance of the Bluestone Wall in terms of Heritage value is recognised as described in the evidence of Mr Petry, in the Auckland Council technical Heritage report for the Section 42A report, and in the submission by NZHPT (in particular). As final construction procedures are not yet known, draft NoR conditions [36C, 36D and 36E] are proposed to put a framework in place for independent advisors to confirm the final construction option selected to manage any actual and adverse effects on the Bluestone Wall during construction. The intention of these conditions is to certify that the method selected by the Requiring Authority to construct the CRL will have the least impact (compared with other reasonably practicable methods) on the heritage values of the Bluestone Wall.

144. In my opinion overall, based on the evidence of Messrs Petry, Whitlock and Stevenson, the implementation of the recommended performance criteria, along with other measures proposed in the NoR conditions, will mitigate the actual and potential adverse effects on Built Heritage and other buildings from construction vibration and settlement.

***d. Discovery of Archaeological Remains***

145. The main actual and potential adverse effects on archaeology from construction works is the loss or damage of archaeological remains where surface construction works are occurring.

146. Mr Rod Clough has assessed the actual and potential adverse effects of the loss or damage of archaeological remains where surface construction works are occurring. This assessment is

contained in the Archaeology Report<sup>90</sup> undertaken and provided to support the NoR, and in his evidence supporting the NoR.

147. Mr Clough notes in his evidence that archaeological remains will only potentially be discovered where surface construction works are proposed, and that the area where this is most likely is between Britomart and south of Aotea Station. Mr Clough also notes that during the redevelopment of the Central Post Office, Queen Street and Queen Elizabeth Square into Britomart station a number of archaeological remains were removed from that area.
148. Performance criteria to be included in the archaeology section (or separate plan) of the CEMP are recommended and supported by Mr Clough. The draft NoR condition [23] includes a number of procedures to be confirmed at construction time for addressing the discovery of archaeological remains, including procedures for training the construction team on these matters.
149. Additionally, draft condition [8] requires the Communication and Consultation Plan to be implemented and complied with during construction includes methods for communicating and consulting with mana whenua, the Auckland Council Heritage Unit and the NZHPT with regard to archaeological discoveries.
150. In my opinion overall, based on the evidence of Mr Clough, the implementation of the recommended performance criteria, along with other measures proposed in the NoR conditions, will mitigate the actual and potential adverse effects of loss or damage to archaeological remains.

**e. Impact to Human Health – Air Quality and Contamination**

151. Actual and potential adverse effects on air quality and from contaminated land exposed during the construction works are:
- Impacts on human health and annoyance from the discovery and removal of contaminated soil and associated odour / hazardous air pollutants; and

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<sup>90</sup> Appendix 3, Volume 3 CRL NoR suite of documents.

- Dust generated from construction works.
152. Mr Camilla Needham and Mr David Dangerfield have assessed the actual and potential adverse effects (respectively) on air quality and the discovery and removal of contaminated material. Their assessment is contained in the Air Quality and Contamination technical reports<sup>91</sup> undertaken and provided to support the CRL NoR documents, and in their evidence supporting the NoR.
153. Performance criteria to be included in the Air Quality and Contamination sections (or separate plans) of the CEMP are recommended and as noted in their evidence, supported by Ms Needham and Mr Dangerfield. The draft NoR conditions include the following:
- Draft condition [25], includes a number of procedures to be confirmed at construction time for addressing the discovery of contaminated soil and materials; and
  - Draft condition [26], includes a number of procedures to be confirmed at construction time for addressing the management of air quality.
154. Additionally, draft condition [42] requires that at the completion of construction works a validation report be prepared in accordance with Ministry for Environment Guidelines documenting the management of soil and evidence of appropriate disposal.
155. In my opinion overall, based on the evidence of Mr Needham and Mr Dangerfield, the implementation of the recommended performance criteria, along with other measures proposed in the NoR conditions, will mitigate the actual and potential adverse effects on air quality and from the discovery and removal of contaminated material.

***f. Removal and / or Relocation of Trees and Vegetation***

156. The main actual and potential adverse effects on from the removal of trees and vegetation from within the surface designation areas is

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<sup>91</sup> Contaminated Land Assessment Appendix 6, and Air Quality Appendix 7, Volume 3 CRL NoR suite of documents.

areduction in the urban amenity from the removal or relocation of trees and vegetation.

157. Simon Chapman has assessed the actual and potential adverse effects of the removal of trees and vegetation from within the surface designation footprint. His assessment is contained in the Tree Assessment technical report<sup>92</sup> undertaken and provided to support the CRL NoR documents, and in his evidence supporting the NoR.
158. The NoR contemplates that all trees and vegetation contained within the surface designation footprint areas may be removed as a result of construction works. The evidence of Simon Chapman assesses the adverse effects of this and contains in attachments to his evidence lists and maps of those trees affected. I note from Mr Chapman's evidence that no scheduled trees<sup>93</sup> are located within the surface designation areas of the CRL.
159. Mitigation for the removal of trees and vegetation, including the protection of trees and vegetation located in proximity to the surface designation footprint (where branches may overhang or roots spread into the construction area), is proposed through the draft NoR conditions<sup>94</sup> as follows:
- condition [24] requires the Tree section (or separate plan) of the CEMP to confirm the trees and vegetation which requires removal, the trees and vegetation which requires protection from construction works, the methods to monitor and report on the Tree works throughout the construction period;
  - condition [24] also includes a requirement for this section (or separate plan) of the CEMP to include cross references to the Urban Design and Landscape Plan where mitigation tree and vegetation planting is to be included;
  - condition [29] requires the preparation of an Urban Design and Landscape Plan;

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<sup>92</sup> Appendix 8, Volume 3 CRL NoR suite of documents.

<sup>93</sup> Scheduled under the Auckland District Plan: Central Area and Isthmus sections.

<sup>94</sup> Attachment 2 to my evidence.

- Condition [30] requires that the Urban Design and Landscape Plan include proposed planting and vegetation to mitigate the effects of tree and vegetation removal, including the time by which it needs to be implemented and the duration it is to be maintained.

160. In my opinion overall, based on the evidence of Simon Chapman, and the measures proposed through the NoR conditions discussed above, will mitigate the actual and potential adverse effects from tree and vegetation removal.

**g. Social Effects**

161. The main actual and potential adverse effect social and economic effects is

a reduction in urban amenity, impacts to business operations, and the potential for blighting<sup>95</sup>.

162. Section 7.15 of the AEE<sup>96</sup> contains the assessment of social effects for the CRL. Additionally, a further supporting social impact assessment report<sup>97</sup> was provided to Auckland Council as part of a response for further information.

163. Social effects predominantly relate to people's appreciation of their amenity<sup>98</sup> and how they interact with the environment within which they are located. They can be both positive and adverse. The majority of social effects will occur where surface construction works are proposed.

164. The positive effects and benefits of the CRL, which will all contribute to people's appreciation of their amenity, are described in my evidence.

165. In my view, adverse social effects are contributed to by noise and vibration, impacts on the transport network (including mobility for pedestrians and cyclists), access to private property,

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<sup>95</sup> Blighting – i.e. the deterioration of an area from lack of investment in maintenance and / or new development.

<sup>96</sup> Page 213, Volume 2, CRL NoR suite of documents.

<sup>97</sup> Authored by Beca.

<sup>98</sup> Footnote 23 of my evidence provides the definition of amenity.

and dust and odour. These adverse effects and the management and mitigation proposed in relation to them have already been discussed in my evidence.

166. In addition, actual and potential adverse social effects in my view also include the impact to business operations from construction occurring in the vicinity. This is also potentially an adverse economic effect. Adverse effects from noise and vibration, impacts on the transport network (including mobility for pedestrians and cyclists), access to private property, and dust and odour in my opinion contribute to disruptions to businesses during construction works. The proposed management and mitigation of these adverse effects has been discussed previously in my evidence. Performance criteria are proposed as part of the NoR conditions against which these adverse effects will be mitigated and monitored.
167. Another social effect not yet addressed in my evidence is visual amenity. In my opinion, visual amenity during the construction of the CRL will have both positive and adverse effects depending on the receiver. People will both want to have visual views into the construction areas to observe the works taking place, and have construction sites visually screened from the public view. In my opinion this is very subjective to the receiver. The draft proposed NoR conditions include requirements under the proposed CEMP (draft condition [15]), and additionally through draft condition [37], around the screening, management of graffiti, lighting and tidiness of the construction areas to manage and mitigate any actual or potential adverse visual effects.
168. In my view actual and potential adverse effects of “blighting” result predominantly in adverse amenity<sup>99</sup>. It is possible blighting may occur on land which has been included within a designation , but the timing of construction and operation is not confirmed. As a result people are reluctant to work, live, invest in the area and it becomes dilapidated.
169. Potential adverse amenity effects of such blighting could be unfriendly and unsafe areas, properties which are un-used and become derelict and run down, a loss of visual amenity, and a loss of a sense of community and place.

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<sup>99</sup> Footnote 23 of my evidence provides a definition of amenity.

170. In my view the land required for the main construction site area and the connection of the CRL to the NAL is where 'blighting' has the most potential to occur. This is because a number of adjoining sites in one location are required for the construction of the CRL. Once the CRL is constructed in this area it will "capped" and the ground level reinstated. This allows for the land acquired for the construction to be developed. This redevelopment opportunity in my opinion offers significant benefits and positive effects<sup>100</sup> for this area.
171. The evidence of Ms Deborah Godinet discusses Auckland Transport's intention to work with current property owners around the management, property maintenance and (as applicable), the occupation of their sites to keep properties operating as per usual as much as practicable . Her evidence also discusses Auckland Transport's proposed acquisition process and indicative timing for this. The proposed draft NoR conditions include condition [45] which requires a property management strategy to be developed and implemented by Auckland Transport to manage the actual and potential adverse amenity effects associated with possible blighting"
172. In my view the likelihood of blighting occurring on property subject to the CRL strata and sub-strata designations<sup>101</sup> is much more limited than for the main construction site area. These designations do not authorise physical works associated with the CRL at ground surface level. The CRL strata (protection designation) designation also does not authorise any physical works associated with the CRL. The intention of the strata designation is not to prevent development occurring below ground, but to provide a mechanism in which property owners engage with Auckland Transport over development plans in order to protect and provide for (and not hinder) the CRL. Providing that the development proposed does not hinder or prevent the construction, operation or maintenance of the CRL, Auckland Transport would be most

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<sup>100</sup> Such as regeneration and revitalisation of the area, intensification of land uses, including residential opportunities (noting that the area is considered to be within the walk up catchment of Newton Station), and opportunity for new commercial business to relocate and operate.

<sup>101</sup> Bryce Julyan's evidence provides an explanation of these terms. Additionally, an explanation can be found at the top of page 31 of the AEE, Volume 2 CLR NoR suite of documents.

likely be in a position to not object to proposed development under the section 176 of the RMA to.

173. In my opinion overall, based on the comments made above, and the measures proposed through the NoR conditions, the adverse effects from a reduction in urban amenity, impacts to business operations, and the potential for the blighting of a property or area to occur can be managed and mitigated.

### **Permanent Effects**

174. The actual and potential permanent adverse environmental effects included:

- The loss of heritage from the removal of the scheduled<sup>102</sup> men's toilets located under Albert Street<sup>103</sup>;
- The loss of character supporting buildings<sup>104</sup> through the removal of the buildings known as Martha's Corner<sup>105</sup>, the Griffiths Building<sup>106</sup>, the old toilets<sup>107</sup> located in Beresford Square, and the annexes located on the back of the buildings fronting Symonds Street<sup>108</sup>;

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<sup>102</sup> These toilets are scheduled under the Auckland Council District Plan: Central Area Section. See the Built Heritage report provided as part of the CRL NoR suite of documents and the evidence of MrPetry.

<sup>103</sup> Located between Victoria Street and Wyndham Street at the western end of Durham Street west.

<sup>104</sup> The Built Heritage technical report (Appendix 4, Volume 3 CRL NoR suite of documents), which supports the NoR lists these buildings as Type C, which is defined as character supporting. These buildings are not formally scheduled.

<sup>105</sup> Located on the northwest corner of Albert Street and Victoria Street intersection. The Built Heritage report provided as part of the CRL NoR suite of documents lists this building as being unscheduled but of built heritage merit.

<sup>106</sup> Located on the southeast corner of Albert Street and Wellesley Street intersection. The Built Heritage report provided as part of the CRL NoR suite of documents lists this building as being unscheduled but of built heritage merit.

<sup>107</sup> The Built Heritage report provided as part of the CRL NoR suite of documents lists this building as being unscheduled but of built heritage merit and within a precinct.

<sup>108</sup> Land Requirement Plan numbers 178, 180, 181 (NoR 5, Volume 1 CRL NoR suite of documents). The Built Heritage report provided as part of the CRL NoR suite of documents lists this building as being unscheduled but of built heritage merit and within a character area under the Auckland District Plan: Isthmus section.

- Disturbance and annoyance resulting from operational rail vibration (reradiated noise), on notable receivers<sup>109</sup>, potentially impacting their ability to operate;
- Disturbance and annoyance from operational noise from ventilation plant proposed in Queen Elizabeth II Square and associated with Aotea, Karangahape and Newton Station buildings;
- Physical and metaphysical impacts on tangata whenua cultural values, including but not limited to, effects on two known scheduled cultural sites<sup>110</sup>;
- and from the need to remove the rock art known as “Te Ahi Ka Roa” from Queen Elizabeth II Square;
- Permanent loss of private property and associated social effects; and
- Changes to vehicle driving practices as a result of the permanent closure of Beresford Street at its eastern end to vehicles.

175. The following sections of my evidence are based on the assessments and evidence of Auckland Transport’s technical expert team. My evidence provides key planning comments to further supplement those assessments and methods to manage and mitigate adverse effects. My evidence also refers to and supplements the assessment I undertook in preparing the AEE which supports the CRL NoR.

176. The Section 42A report discusses adverse effects from operational rail noise. Mr Fitzgerald has addressed this issue in his evidence.

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<sup>109</sup> Notable noise and vibration receivers are defined as: public performance theatres; and in relation to sensitive equipment – recording studios (both sound and television), medical facilities and scientific laboratories, and the Auckland District Court in Albert Street.

<sup>110</sup> One site is located at the intersection of Albert and Customs Street (which the two tunnels will be constructed through), and the other site is located adjacent the construction of the two tunnels at 87-89 Albert Street.

#### ***h. Built Heritage***

177. Actual and potential adverse effects on Built Heritage include:

- The loss of heritage from the removal of the scheduled men's toilets located under Albert Street;
- The loss of character supporting buildings through the removal of the buildings known as Martha's Corner, the Griffiths Building, the old toilets located in Beresford Square, and the annexes located on the back of the buildings fronting Symonds Street; and
- Potential loss of heritage on one Built Heritage Building in Nikau Street.

178. The removal of the scheduled men's toilets located under Albert Street is the only scheduled item to be removed in order to construct the CRL.

179. Mr Petry has assessed the actual and potential adverse effects from the removal of Built Heritage. This assessment is contained in the Built Heritage Report<sup>111</sup> and in his evidence, both supporting the NoR. I discuss the adverse effects from the removal of built heritage in the paragraphs below.

#### Men's Toilets Albert Street

180. With regard to the scheduled toilets under Albert Street (adjacent to the Bluestone Wall), Mr Petry notes that it appears that there may not be much left of heritage value within the toilets themselves, and that what parts are left could be re-used (where practicable) in the CRL stations. Both the Section 42A report and the technical Heritage report supporting it, have similar findings to Mr Petry's assessment.

181. My evidence discuss the actual and potential effects on the scheduled Bluestone Wall, through which these toilets are entered and the management and mitigation measures proposed to protect this wall during construction works.

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<sup>111</sup> Appendix 4, Volume 3 CRL NoR suite of documents.

182. Draft NoR condition [22] requires that as part of the development of the Built Heritage section (or separate plan) as part of the preparation of the CEMP, the identification and methodology for recording the heritage value of these toilets be provided, along with confirming which parts of these toilets (where practicable) are proposed to be adaptively re-used elsewhere in the CRL design.
183. In my opinion, based on the assessment and evidence of Mr Petry, and the measures proposed through the NoR condition discussed above, will mitigate the actual and potential adverse effects of the loss of heritage from the removal of these toilets.

Martha's Corner

184. Mr Petry, in his Built Heritage assessment, defines the buildings known as Martha's Corner as:

*Category C - those buildings and structures that are seen as being "character supporting" and form part of a group of significance as well as having some individual significance, but are not currently protected by statutory mechanisms.*

185. Mr Petry in his evidence notes that the removal of these buildings is not acceptable from a Built Heritage perspective. The Section 42A report and the technical Heritage report supporting it, have similar findings to Mr Petry's assessment.
186. The evidence of Mr John Fellows describes the concept design for Aotea Station on the Martha's corner site, including what building changes would be required to accommodate the station entry and associated plant. He notes that if the current concept design is implemented it is unlikely that the retention of facades, interior fabric and interior floors of these buildings with a view to adaptive re-use will be possible, but that further examination of the concept design can be undertaken in the future stages of design development to see if there are realistic alternatives to the demolition of these buildings. Mr Fellows also notes in his evidence, that based on his knowledge of the technical requirements for a station entrance at this location, it is his opinion that a replacement building that fulfils the needs of a modern station

entrance will need to be developed in this location and therefore complete demolition should be at least contemplated at this point in time.

187. The proposed management and mitigation of the adverse effects on Built Heritage from the removal of Martha's Corner includes establishing a process through the draft NoR conditions to consider the potential adaptive re-use of these buildings in the next stages of design development. Draft condition [22] requires that as part of the development of the Built Heritage section (or separate plan) the Requiring Authority shall explore the adaptive re-use of the Martha's Corner buildings, with complete demolition only considered as a last resort. Guidance as to the appropriate level of adaptive re-use is included within the proposed draft condition. This proposed condition also includes requirements for the identification and methodology for recording the heritage value/s of Martha's Corner should it be removed.
188. As it is not clear at this stage whether or not Martha's Corner can be adaptively re-used, it is my view that the above proposed methods outlined above will manage and mitigate the adverse effects of the potential loss of heritage values from the removal or the adaptive re-use of Martha's Corner.

#### Griffiths Building

189. Mr Petry, in his Built Heritage assessment which supports the NoR, defines the Griffiths Building as:

*Category C - those buildings and structures that are seen as being "character supporting" and form part of a group of significance as well as having some individual significance, but are not currently protected by statutory mechanisms.*

190. Mr Petry in his evidence notes that while this building contributes to those similar styled buildings in the vicinity (such as the Civic Theatre and the Smith and Caughey's building), the Griffiths building is a plain example of art deco style and has been significantly modified inside. The Section 42A report and the technical Heritage report supporting it, have similar findings to Mr Petry's assessment.

191. Mr Fellows in his evidence describes the concept design for Aotea Station and the use of the Griffiths Building site. He includes a description of what building changes would be required to accommodate the station entry and associated plant. Similar to Martha's Corner, he notes that it may be difficult to adaptively re-use this building, but that further examination of this could be undertaken in the future stages of design development to see if there are realistic alternatives to the demolition of this building. Mr Fellows also notes in his evidence, that based on his knowledge of the technical requirements for a station entrance at this location, it is his opinion that a replacement building that fulfils the needs of a modern station entrance will need to be developed in this location and therefore complete demolition should be, at least contemplated at this point in time.
192. The proposed management and mitigation of the adverse effects on Built Heritage from the removal of the Griffiths Building includes establishing a process through the draft NoR conditions to consider the potential adaptive re-use of this building in the next stages of design development Draft condition [22] requires that as part of the development of the Built Heritage section (or separate plan) as part of the CEMP, the Requiring Authority shall explore the adaptive re-use of the Griffith Building. Guidance as to the appropriate level of adaptive re-use is included within the proposed draft condition. This proposed condition also includes requirements for the identification and methodology for recording the heritage value of the Griffiths Building should it be removed.
193. As it is not clear at this stage whether or not the Griffiths Building can be adaptively re-used, it is my view that the above proposed methods outlined above will manage and mitigate the adverse effects of the potential loss of heritage values from the removal or the adaptive re-use of the Griffiths Building.

#### Toilets in Beresford Square

194. The evidence of Mr Newns describes the indicative construction methodology in Beresford Square to construct the main entry shaft for Karangahape Station and the evidence of Mr Fellows describes the concept design for the Station in this location. As noted in this evidence, the old toilet block located in Beresford Square is required to be removed.

195. Mr Petry, in his Built Heritage assessment which supports the NoR, defines the old toilet block as:

*Category C - those buildings and structures that are seen as being “character supporting” and form part of a group of significance as well as having some individual significance, but are not currently protected by statutory mechanisms.*

196. The evidence of Mr Petry describes the actual and potential adverse effects of the loss of heritage from the removal of these toilets.

197. The proposed management and mitigation of the adverse effects on Built Heritage from the removal of the old toilet block located in Beresford Square requires (via draft NoR condition [22]) the identification and methodology for recording the heritage value of these toilets, along with confirming which parts of these toilets (where practicable) are proposed to be adaptively re-used elsewhere in the CRL design.

198. In my opinion, based on the assessment and evidence of Mr Petry, the measures proposed through the NoR conditions discussed above, will mitigate the actual and potential adverse effects of the loss of heritage from the removal of these toilets.

Annex at the back of Symonds Streets Buildings

199. The evidence of Mr Newns describes the indicative construction methodology relating to the construction of the secondary shaft for Newton Station. He notes in his evidence that the construction of this shaft may require the removal of annexes located at the back of buildings fronting Symonds Street<sup>112</sup>. I note from Mr Newns evidence that the buildings themselves which front Symonds Street are not intended to be removed.

200. Mr Petry, in his Built Heritage assessment which supports the NoR, defines the old toilet block as:

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<sup>112</sup> Land Requirement Plan numbers 178, 180, 181 (NoR 5, Volume 1 CRL NoR suite of documents).

*Category C - those buildings and structures that are seen as being “character supporting” and form part of a group of significance as well as having some individual significance, but are not currently protected by statutory mechanisms.*

201. The evidence of Mr Petry describes the actual and potential adverse effects of the loss of heritage from the removal of these annex.
202. The proposed management and mitigation of the adverse effects on Built Heritage from the removal of these annex requires via draft NoR condition [22] the identification and methodology for recording the heritage value of these annex.
203. In my opinion, based on the assessment and evidence of Mr Petry, the measures proposed through the NoR conditions discussed above, will mitigate the actual and potential adverse effects of the loss of heritage from the removal of these annex.

#### Nikau Street

204. Mr Petry also identifies that there may be adverse effects from the loss of heritage on one Built Heritage building he has identified in Nikau Street in the vicinity of the main construction site area. He notes that at this stage it is not clear what the potential effects will be for this building, but he is confident that the mitigation policies proposed in Section 7 of the Built Heritage report<sup>113</sup> provided to support the NoR, are appropriate to cover any potential effects. The mitigation policies proposed in that section of the Built Heritage report have been reflected in the performance criteria set out in draft NoR condition [22].
205. In my opinion, based on the assessment and evidence of Mr Petry, the measures proposed through the NoR conditions discussed above, will mitigate the actual and potential adverse effects of the loss of heritage in relation to this building.

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<sup>113</sup> Appendix 4, Volume 3 CRL NoR suite of documents.

*i. Operational Rail Vibration (reradiated noise)*

206. Actual and potential adverse effects from operational rail vibration (reradiated noise) include:

- Disturbance and annoyance resulting from operational rail vibration (reradiated noise), on notable receivers<sup>114</sup>, potentially impacting their ability to operate.

207. James Whitlock has undertaken an assessment of the actual and potential adverse effects from operational rail vibration (referred to as reradiated noise)<sup>115</sup>. Mr Harrison<sup>116</sup> has also provided evidence on this matter.

208. Mr Whitlock notes in his evidence that beyond the notable receivers any adverse effects from reradiated noise can be mitigated through the implementation of maintenance practices that are typical for a rail line and network (i.e. maintenance of rolling stock, and the lubrication of turns and junctions).

209. Mr Whitlock proposes the adoption of Project Operational Vibration Criteria which includes performance standards for reradiated noise. He recommends preliminary mitigation for the operation phase in the vicinity of the three notable receivers where he has predicted exceedances with the Project Operational Vibration criteria, as follows:

- Floating slab track within 30 metres of Aotea Centre, and resilient rail fasteners or continuously welded rail out to 50 metres either side of the building;
- Resilient rail fasteners or continuously welded rail out to 50 metres either side of Roundhead Studios; and
- Floating track slab within 15 metres of the TV3 building and resilient rail fasteners or continuously welded rail out to 30 metres either side of the building.

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<sup>114</sup> Notable noise and vibration receivers are defined as: public performance theatres; and in relation to sensitive equipment – recording studios (both sound and television), medical facilities and scientific laboratories, and the Auckland District Court in Albert Street.

<sup>115</sup> Noise and Vibration Technical Report, Volume 3 CRL NoR suite of documents and within his evidence.

<sup>116</sup> Of SLR consultants, Sydney Australia.

210. He notes in his evidence that the distances given above are plan distances (i.e. measured horizontally), not slant distances (i.e. incorporating differences in depth).

211. It is Mr Whitlock's opinion that with the mitigation measures such as those above in place (and subject to further refinement in the detailed design phase), he predicts that compliance with the Project Operational Vibration criteria can be achieved for all receivers, and therefore the operational effects of the Project will be acceptable.

212. The proposed draft NoR conditions include the mitigation measures recommended by Mr Whitlock:

- Draft condition [43] presents the Project Criteria relating to operational rail vibration and reradiated noise levels;
- Draft condition [44] requires the development of an ONVMP to ensure the CRL tracks are maintained so as to (among other things) minimise noise and vibration emissions.

213. In my opinion, based on the assessment and evidence of James Whitlock, and the mitigation proposed through the NoR conditions discussed above, will mitigate the actual and potential adverse effects from reradiated noise.

***j. Operational Ventilation Plant Noise***

214. The actual and potential adverse effect from operational plan noise is disturbance and annoyance from operational noise from ventilation plant proposed in Queen Elizabeth II Square and associated with Aotea, Karangahape and Newton Station buildings.

215. Mr Fitzgerald has assessed the actual and potential adverse effects disturbance and annoyance from operational noise associated with plant ventilation proposed in Queen Elizabeth II Square and associated with Aotea, Karangahape and Newton Station buildings. This assessment is contained in the Noise and Vibration report<sup>117</sup> and in his evidence supporting the NoR.

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<sup>117</sup> Appendix 2, Volume 3 CRL NoR suite of documents.

216. Mr Fitzgerald notes in his evidence that based on his calculations, plant ventilation (at full design duty<sup>118</sup> with the inclusion of industry standard proprietary attenuation and noise mitigation techniques (such as positioning ventilation openings to face away from the closest noise sensitive receiver where practicable)), can comply with the Project Operational Noise criteria he has recommended.
217. The Project Operational Noise Criteria recommended by Mr Fitzgerald is included in the Draft NoR conditions (condition [44]). This condition requires that any operational noise from mechanical plant ventilation shall be measured and assessed in accordance with this criteria.
218. In my opinion, based on the assessment and evidence of Mr Fitzgerald, the measures proposed through the NoR conditions discussed above, will mitigate the actual and potential adverse effects of operational noise from plant ventilation.

***k. Physical and Metaphysical Tangata Whenua Effects***

219. A CVA<sup>119</sup> has been prepared in support of the NoR. Auckland Transport also commissioned the preparation of Maori Values Assessments (MVA) directly with those Iwi who identified an interest in the CRL. The CVA considers the issues, information and recommendations contained in the MVA's received at the time it was prepared, and represents an independent review of the information relevant to consideration of Maori values and interests in the CRL. The CVA also provides recommendations on measures to avoid, remedy or mitigate any adverse effects on Maori values, or measures to recognise and provide for the relationship of iwi / hapu with their ancestral lands and taonga.

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<sup>118</sup> This is defined in a footnote of the evidence of Craig Fitzgerald as - full design duty reflects maintenance testing periods and emergency operation. During normal operation, fan duty would be lower, corresponding to reduced noise emissions.

<sup>119</sup> Cultural Values Assessment, Appendix 6, Volume 2 CRL NoR suite of documents.

220. From the CVA I note that there will be physical and metaphysical impacts on tangata whenua cultural values including, but not limited to, effects on two known scheduled cultural sites<sup>120</sup>.
221. The CVA notes that the physical impacts will derive from construction of the tunnels and stations through an important cultural landscape and through adjacent important cultural sites. It also notes that the metaphysical effects include effects on the mauri and tapu of important sites and areas which are significant to iwi as a source of mana, whakapapa, and traditions for iwi / hapu and which connect them to the whenua and important ancestors. Additionally, the construction works below ground has a potential to disturb ancestral taonga.
222. The CVA notes that the area in which the CRL is proposed was rich in Maori use, occupation and association and that there is potential for other sites which have not been scheduled or disclosed (due to their sensitive nature or information on them has been lost) to be potentially affected by the CRL.
223. The CVA notes that for some iwi / hapu the following factors assist in mitigating the impact of the CRL on cultural and spiritual values:
- The existence of the urban environment;
  - The modern (post 1840) landscape is important to mana whenua as a symbol of partnership and mutual benefit and mana whenua acknowledge the metropolitan values;
  - The CRL is a major public transport proposal which will benefit Aucklanders, visitors and also mana whenua.
224. Mitigation of the physical and metaphysical effects on mana whenua is proposed through the draft NoR conditions<sup>121</sup>. Draft condition [10] requires the establishment of a mana whenua forum, as identified in the CVA which will provide for the on-going role in the design and construction of the CRL. Additionally, draft conditions [8] and [23] relate to communication and consultation with iwi regarding the discovery of any archaeological remains.

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<sup>120</sup> One site is located at the intersection of Albert and Customs Street (which the two tunnels will be constructed through), and the other site is located adjacent the construction of the two tunnels at 87-89 Albert Street.

<sup>121</sup> Attachment 2 of my evidence.

225. I also note from the CVA that there will be physical and metaphysical impacts on tangata whenua cultural values from the need to remove the rock art known as “Te Ahi Ka Roa” from Queen Elizabeth II Square (this rock art can be relocated to a suitable location in collaboration with tangata whenua and Auckland Council and a draft NoR condition (condition [28]) is proposed).
226. Overall in my opinion, and based on the assessment provided in the MVA and CVA, and the mitigation proposed through the NoR conditions discussed above, will mitigate the actual and potential adverse physical and metaphysical effects on tangata whenua.

#### ***l. Permanent Loss of Property***

227. Section 7.14 of the AEE<sup>122</sup> provides an assessment of the adverse effects from the loss of property required to construct and operate the CRL. Additionally, the Social Impact Assessment Report<sup>123</sup> provides further assessment on the adverse social effects that may result from both the permanent loss of property, including the associated land use activities, as a result of the CRL.
228. The evidence of Ms Godinet has set out Auckland Transport’s intended property acquisition programme for the CRL Project. I note that landowners, whose property is being purchased, whether at the surface or a sub-strata level, will be compensated.
229. With regard to the loss of sub-strata property which will be permanently lost, the intention of this designation is not to prevent development occurring below ground, but to provide a mechanism for engagement and agreement with Auckland Transport. I note that the sub-strata designation (which contains the two CRL running tunnels) is located at some depth below the surface of the ground, and I consider it would be unlikely that development would occur at this depth.

#### ***m. Closure of Beresford Street to Through Vehicles***

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<sup>122</sup> Volume 2, CRL NOR suite of documents.

<sup>123</sup> Authored by Beca, provided to Auckland Council as part of responding to a further information request.

230. The evidence of Mr Clark has addressed whether or not there will be permanent adverse effects on the transport network as a result of the permanent closure of Beresford Street at its eastern end to vehicles. I note from the Concept Design Report<sup>124</sup> and the Urban Design Framework<sup>125</sup> prepared to support the NoR, that the primary purpose of permanently closing Beresford Street in this location to through vehicles is to provide for opportunities associated for integrating the Karangahape Station with its surrounding environment through providing more expansive and connected pedestrian spaces and flow areas, seating and other street furniture, and landscaping as appropriate.

231. Mr Clark notes that the actual vehicle flow through this connection is considered to be relatively low. Based on this assessment I consider that the adverse effects are acceptable.

## **Part 2 RMA Assessment**

232. With regard to Part 2 and the actual and potential effects on the environment from CRL I make the following comments<sup>126</sup>:

233. The Purpose<sup>127</sup> of the RMA is to promote the sustainable management of natural and physical resources through managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while –

*(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*

*(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*

*(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

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<sup>124</sup> Appendix 13, Volume 3 CRL NoR suite of documents.

<sup>125</sup> Appendix 9, Volume 3 CRL NoR suite of documents.

<sup>126</sup> Section 8.5 (page 219) of the CRL NoR AEE (Volume 2 CRL NoR suite of documents) contains the assessment of the against Part 2 of the RMA.

<sup>127</sup> Section 5 RMA.

- The positive effects and benefits<sup>128</sup> anticipated to be realised as a result of the construction and operation of the CRL will enable people and communities to provide for their social, economic, cultural well-being, and for their health and safety through:
  - Promoting the efficient use of land by providing a public transport connection underground a finite resource (being land within the City centre area);
  - Contributing to reducing congestion on the road network;
  - Encouraging intensification around stations, and the efficient movement of people to, from and within the city centre area, both of which will provide for the social, economic and cultural wellbeing of people;
- The actual and potential adverse effects resulting from the construction, operation and maintenance of the CRL will be predominantly temporary in nature, occurring only during the construction of the CRL. While there will be permanent adverse effects from the operation and maintenance of the CRL I consider that these along with the adverse temporary effects can be managed and a range of mitigation options are available. The proposed draft CRL NoR conditions incorporate a number of measures to safeguard the life supporting capacity of air, land and water, and mitigation is available to manage the adverse effects of the CRL on the environment.
- I therefore consider that the CRL achieves the Purpose of the RMA<sup>129</sup>.

234. Matters of National Importance<sup>130</sup> of relevance to the assessment of actual and potential effects from the CRL are:

*(a) the preservation of the natural character of the coastal environment....and the protection of them from inappropriate subdivision, use, and development;*

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<sup>128</sup> As described in my evidence and in the evidence of Mr David Warburton, Mr Chris Meale and Mr Julian.

<sup>129</sup> Pages 219 and 220 of the CRL NoR AEE (Volume 2 CRL NoR suite of documents) contains the assessment of the CRL against the Purpose of the RMA.

<sup>130</sup> Section 6 of the RMA.

*(d) the maintenance and enhancement of public access to and along the coastal marine area...;*

*(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga; and*

*(f) the protection of historic heritage from inappropriate subdivision, use, and development*

- In my opinion, and for the reasons provided below<sup>131</sup>, the actual and potential effects of the CRL, and the mitigation options available, are consistent with the relevant Principles of Section 6 set out above.
- The existing coastal environment located at the northern end of the Project is a highly modified urban environment. The location of the CRL tunnels beneath lower Queen Street through to Albert Street will not greatly alter this current environment. Once constructed the tunnels will be underground and linkages to the coastal area from Queen Street and Albert Street restored. For the period of construction in lower Queen Street and Queen Elizabeth II Square it is proposed that a pedestrian and cycle link through this area be maintained, recognising the importance of this current link and thereby mitigating any adverse effects of it being severed. The proposed draft CRL NoR conditions reflect this linkage requirement<sup>132</sup>.
- The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga has been considered in the assessment of actual and potential effects. My evidence consultation with iwi for the Project has been undertaken. I have obtained knowledge and understanding of the physical and metaphysical effects on these from this consultation and the review of the cultural impacts assessments<sup>133</sup> prepared by mana whenua. Draft NoR conditions are proposed which provide for the on-going

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<sup>131</sup> Pages 220 and 221 of the CRL NoR AEE (Volume 2 CRL NoR suite of documents) contains the assessment of the CRL against the Principles (Matters of National Importance) of the RMA.

<sup>132</sup> Attachment 2 to my evidence.

<sup>133</sup> A Cultural Impact Assessment is contained in Appendix 6, Volume 2 CRL NoR suite of documents. Cultural Impact Assessments prepared by mana whenua are attached as appendices to the main Cultural Impact Assessment.

engagement and input by those mana whenua who have confirmed they would like to be involved in the Project.

- With regard to the protection of historic heritage only one scheduled<sup>134</sup> structure is required to be removed in order to construct the two CRL tunnels in Albert Street. My evidence discusses the removal and the available mitigation of other built heritage (not scheduled but considered by Mr Petry<sup>135</sup> as being of heritage merit). The use of a TBM machine to construct the two CRL tunnels underground is a mechanism protecting other historic heritage from greater effects than would be created by more intrusive construction methods from the surface down. An assessment of the effects of using a TBM under historic heritage has been undertaken and has been addressed in the technical assessments of vibration<sup>136</sup>, structural<sup>137</sup> and built heritage<sup>138</sup>. The outcome of this assessment is that no worse than aesthetic damage is anticipated to occur. Mitigation in the form of both monitoring historic heritage during construction and undertaking the repair of any damage resulting from CRL construction is available and proposed in the draft NoR conditions<sup>139</sup>.

235. Other Matters<sup>140</sup> of relevance to the assessment of actual and potential effects from the CRL are:

- (a) *Kaitiakitanga*;
- (b) *the ethic of stewardship*;

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<sup>134</sup> The men's toilets located under Albert Street. These are Scheduled under the NZ Historic Places Trust and the Auckland Council District Plan: Isthmus Section.

<sup>135</sup> Auckland Transport's Built Heritage expert for the CRL NoR.

<sup>136</sup> Evidence of James Whitlock and Noise and Vibration Report, Appendix 2 Volume 3 CRL NoR suite of documents.

<sup>137</sup> Evidence of Craig Stevenson and in the Structural Assessment report, Appendix 10 Volume 3 CRL NoR suite of documents.

<sup>138</sup> Evidence of Bruce Petry and in the Built Heritage report, Appendix 4 Volume 3 CRL NoR suite of documents.

<sup>139</sup> Attachment 2 to my evidence.

<sup>140</sup> Section 7 of the RMA.

- (c) the efficient use and development of natural and physical resources;*
- (d) the efficiency of the end use of energy;*
- (e) the maintenance and enhancement of amenity values;*
- (f) maintenance and enhancement of the quality of the environment;*
- (g) any finite characteristics of natural and physical resources;*
- (h) the effects of climate change.*

236. In my opinion, and for the reasons provided below<sup>141</sup>, the actual and potential effects of the CRL, and the mitigation available, are consistent with the relevant Principles of Section 7 set out above:

- With regard to kaitiakitanga and the ethic of stewardship, my evidence discusses the engagement of mana whenua in the CRL Project to date. Draft NoR conditions<sup>142</sup> are proposed which enable mana whenua to be involved on-going on the Project and in the management of adverse effects.
- The CRL is an efficient use and development of natural and physical resources as it largely avoids utilising the limited private land resource in the City Centre area by undertaking the majority of works subterranean, enabling the efficient use of that land above, including providing for intensification opportunities around the stations.
- The CRL is an efficient end use of energy through the use and expansion of the electrified Auckland passenger rail network.
- The predominant location of the CRL underground will reduce the actual and potential adverse effects on amenity values. Once constructed the entire CRL will be underground, and that private land located immediately to the North of the NAL, which is required for construction, can be re-developed. Mitigation is proposed for managing adverse effects during construction and operation. Once operational the provision of better access in the

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<sup>141</sup> Pages 221 and 222 of the CRL NoR AEE (Volume 2 CRL NoR suite of documents) contains the assessment of the CRL against the Principles (Other Matters) of the RMA.

<sup>142</sup> Attachment 2 to my evidence.

City Centre area, along with the location of stations and the enhancement of their precinct areas<sup>143</sup>, will enhance amenity<sup>144</sup> and the quality of the environment in the long term.

- The CRL is reducing the adverse effects on any finite characteristics of natural and physical resources through constructing and operating underground, using existing public and private land in the City Centre area, and through providing for the expansion of the Auckland passenger rail network allowing for more trains to operate and train travel times to be reduced. Additionally, the CRL provides the future potential for other passenger rail lines to also be connected to expand the Auckland rail network.
- The CRL contributes positively to climate change issues by operating electrified trains on an expanded Auckland rail passenger network, allowing for more trains to operate and train travel times to reduce. As a result it is anticipated that road transport congestion may reduce.

237. The Principles of the Treaty of Waitangi<sup>145</sup> have been taken into account<sup>146</sup> and conditions are proposed on the CRL designations which enable mana whenua to be involved on-going on the Project and in the management of adverse effects.

238. In my opinion, and for the reasons set out in my evidence, the actual and potential effects from the CRL, and the proposed management and mitigation of these, achieves the Purpose and is consistent with the Principles set out in Part 2 of the RMA.

### **Response to submissions lodged to the NoR**

239. The Section 42A Report provides a comprehensive summary of the submissions received during the public notification of the CRL Project. The majority of the submissions received were in support of the Project. In my view, a predominant issue raised in submissions that

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<sup>143</sup> As facilitated by the Urban Design Framework and principles established as part of the NoR process.

<sup>144</sup> See footnote 23 of my evidence for the definition of amenity.

<sup>145</sup> Section 8 of the RMA.

<sup>146</sup> Pages 222 and 223 of the CRL NoR AEE (Volume 2 CRL NoR suite of documents) contains the assessment of the CRL against the Principles of the Treaty of Waitangi.

were either in partial support or opposition, is the management of adverse effects during the construction period.

240. My evidence, and the evidence provided in support of the NoR, has generally covered the matters raised within the submissions. A number of the submission raised similar issues, in order to avoid repetition I have identified and respond to the key common themes across the submissions below.

#### *Approach to Managing Adverse Effects*

241. As stated in the Section 42A Report, eight submissions were received regarding the approach being taken by Auckland Transport to manage the adverse effects. I have set out the reasons why this approach was adopted in my evidence. The proposed draft CRL NoR conditions<sup>147</sup> reflect the implementation and monitoring of this approach.

242. The Section 42A report recommends a number of changes to the draft CRL NoR conditions to provide more certainty to submitters on involvement in the management of adverse effects as well as recommending the involvement of peer review experts to review the management and mitigation of specific adverse effects covered by the CEMP. In the main these recommendations have been accepted and are reflected in the updated version of the draft NoR conditions<sup>148</sup>. Particularly:

- Pre-construction communications and consultation with stakeholders, directly affected and affected proximity parties, including obtaining feedback and inputs regarding the management and mitigation of adverse effects in relation to the transport network, property access, construction noise and vibration;
- More clarity around consultation during construction, reflecting the above requirements for this period as well; and
- Review and updating procedures for the CEMP.

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<sup>147</sup> Attachment 2 to my evidence.

<sup>148</sup> Attachment 2 to my evidence.

243. In my opinion the above measures address the majority of the concerns of the submitters.

244. I discuss my response to specific adverse effects in the sections below.

#### *Noise and Vibration*

245. As stated in the Section 42A Report, 42 submissions were received in regard to construction noise and those submissions relating to vibration had concerns about potential building damage or disturbance and annoyance.

246. The evidence of Mr Fitzgerald and Mr Whitlock has addressed the issues raised in submissions in relation to noise and vibration. In my view, the main concerns raised are around the ability to operate businesses, including accommodation facilities and restaurants, impacts on residential amenity<sup>149</sup>, and potential building damage resulting from vibration.

247. The Section 42A Report recommends changes to the proposed draft NoR conditions to address submitter concerns. A number of these recommendations have been accepted and are reflected in the updated version of the draft NoR conditions<sup>150</sup>. The recommendations which have not been accepted have been addressed by Mr Fitzgerald and Mr Whitlock.

248. In my view, the surface construction works in the Albert Street area (particularly) will be in an environment of competing land uses which prefer amenity<sup>151</sup> to be maintained at different times of the day. In my opinion this has been addressed by the changes made to draft proposed NoR conditions<sup>152</sup>.

249. Additionally, the evidence of both Mr Fitzgerald and Mr Whitlock addresses those submissions received from submitters who raised concerns about impacts on residential amenity at night in

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<sup>149</sup> Amenity is defined at footnote 23 of my evidence.

<sup>150</sup> Ibid.

<sup>151</sup> Amenity is defined at footnote 23 of my evidence.

<sup>152</sup> Attachment 2 to my evidence reflecting the Auckland Council recommended changes that have been accepted, or not accepted and the reasons why. The reasons why some recommended changes were not accepted are set out in the evidence of Craig Fitzgerald and James Whitlock.

hotels and apartments, and on church operations during the day, from noise and vibration. Mr Fitzgerald has also addressed the concerns raised in the Bear Park Child Care submission. In my opinion the reasonable concerns of the submitters have been addressed in evidence and in the changes made to the draft NoR conditions.

250. With regard to potential effects of building damage from vibration, this has also been assessed in the evidence of Mr Whitlock and Mr Stevenson. They have both addressed the submissions which have raised concerns around this matter. I note that Mr Whitlock's evidence states that from his assessment of operational train vibration levels there is no indication of risk of building damage. With regard to potential building damage during construction, as well as being covered in their evidence, I have also addressed along with the proposed management and mitigation of these effects, my evidence. Given this it is my view that the matters raised by the submitters have been addressed.
251. Mr Whitlock notes in his evidence that 16 submitters raised concerns about operational rail vibration, and notes the potential for operational rail vibration to cause adverse effects, as above. He does identify that three notable receivers, being the Aotea Centre, Roundhead Studios and the television site at 2 and 3 Flower Street owned by Media Works, may experience adverse operational rail vibration effects and mitigation for these effects has been proposed as stated in my evidence.
252. With regard to the Ministry of Justice submission and the Auckland District Court in Albert Street, a specific reference has been made requiring communication and consultation with this party in both the pre-construction and during construction Communication and Consultation Plans. In undertaking consultation with the Ministry of Justice an understanding was reached with regard to their concerns around construction noise and vibration impacting of the ability to operate within the dedicated quiet areas of the Auckland District Court. In these areas traumatised witnesses provide recorded statements, which are sometimes only whispers. Additionally, draft conditions [38] and [39A] require site specific noise and vibration management plans where it is predicted that construction noise and vibration will exceed the

Project criteria. Such a plan will provide the site specific management and mitigation measures to be employed at this site.

253. With regard to notable receivers draft condition [11] requires consultation with these parties to address the management and mitigation of adverse effects. Additionally, draft conditions [38] and [39A] require site specific noise and vibration management plans where it is predicted that construction noise and vibration will exceed the Project criteria. Such a plan will provide the site specific management and mitigation measures to be employed.
254. With regard to the Media Works submission, an additional site specific condition has been proposed, draft condition [21A]. This is because as stated in my evidence, It is not clear at this stage what the extent of these adverse effects will be on this party. To manage and mitigate any adverse effects from construction this condition requires Auckland Transport and its constructor to work collaboratively with Media Works (or a future owner) to address the management of actual and potential adverse effects. Based on this it is my view that the reasonable concerns of the submitters have been addressed.
255. Overall, in my opinion the above addresses the issues raised by submitters.

#### *Structural Integrity*

256. The evidence of Mr Stevenson has addressed the structural integrity concerns raised by submitters, including those concerns which are not related to the effects of vibration on buildings and structures, or Built Heritage. The later I address below with regard to submissions.
257. My evidence addresses the assessment undertaken by Mr Stevenson and the proposed monitoring and mitigation measures. Mr Stevenson and Mr Newns in their evidence discuss the potential structural effects from the rail tunnels below on the Eclipse Apartment Building at the south end of Vincent Street. Mitigation for this potential adverse effect is proposed through draft condition [45].
258. Based on this it is my view that the reasonable concerns of the submitters have been addressed.

## *Transport Network*

259. The evidence of Mr Clark has addressed the submitters who have raised concerns around the adverse effects from construction causing disruptions from reduced road capacity potentially causing congestion, diversions and travel delays, and disruptions to private property access.
260. Mr Clark has also addresses the submitters who have raised concerns around access to and from private property, and adverse effects from disruptions causing congestion and travel delays.
261. The evidence of Mr Clark, my evidence have set out the proposed measures for managing and mitigating these effects and given this I consider that the concerns of the submitters have been addressed.
262. Mr Clark has also addressed in his evidence the mitigation proposed for pedestrian access across Albert Street between Customs and Victoria Streets during construction. This is an issue raised by a number of submitters, who have highlighted the strong pedestrian links for people needing to access both sides of Albert Street and the Streets beyond. The mitigation is proposed for this issue through the performance criteria proposed under draft NoR condition [17], which requires that as a minimum, one safe crossing is to be retained between Customs Street and Victoria Street during construction works in this area. Drawing on this it is my view that the reasonable concerns of the submitters have been addressed.
263. Mr Clark has addressed the access and congestion concerns raised by submitters in the vicinity of the grade separation works related to Normanby Road. As stated at my evidence, the evidence of Bill Newns states that access can be retained during construction to the Ministry of Corrections site accessed off Lauder Road. Draft conditions [3C and 8] include requirements for consultation with the Department of Corrections with regard to maintaining access into this site. With regard to the Tram Lease and Dilworth Trust sites, also located in the vicinity of these grade separation works, I note from the evidence of Mr Bill Newns that access during construction can be retained (where practicable) to these sites. Additionally, I note from Mr Newns evidence that a new access to the sites will be provided, as required, to link into the new grade separation structure. Draft conditions [16 and 20] contain the proposed

methods for managing and mitigating the disruptions to private property access and in relation to congestion. Mr Clark has also addressed the temporary loss of on-site car parking raised in the Tram Lease submission, noting the recent car parking survey's he has undertaken and the results of these. Reflecting on the above I consider that the issues raised in submissions has been addressed in evidence.

264. Mr Clark has addressed in his evidence the submissions raising concerns about property access, congestion and travel delays around the main construction site area. Mitigation measures have been included in draft NoR conditions [16] and [20].

#### *Network Utilities*

265. Submissions have been received from Vector, Chorus and Watercare raising issues around the management of network utilities during the CRL Project. Draft NoR condition [27A] is proposed to manage and mitigate the adverse effects on network utilities from the CRL. In my opinion, the reasonable concern of the submitters has been addressed in this proposed condition.
266. A number of submissions raise concerns about the loss of essential services (i.e. telephone, broadband, electricity, water supply), during construction of the CRL. In my view the proposed draft NoR conditions [27 and 27A] (which deal with the specific management of all utilities during construction of the CRL), address the reasonable concern raised by submitters.

#### *Built Heritage*

267. The evidence of Bruce Petry, James Whitlock and Craig Stevenson have addressed the submissions which have raised concerns regarding adverse effects on Built Heritage. This has included discussion on the management and mitigation of these adverse effects. Potential building damage to Built Heritage has been covered in detail in the evidence of Bruce Petry, James Whitlock and Craig Stevenson. My evidence address the adverse effects from the potential damage to, or loss of, Built Heritage and the proposed mitigation of these effects through the draft NoR conditions.

268. With regard to submissions raising issues around the removal of the Martha's Corner building and the Griffiths Building, I note that these are not scheduled under the NZHPT or the Auckland Council District Plan: Central Area section, and as such were identified to be a Type C in Mr Petry's Built Heritage inventory<sup>153</sup>. However, mitigation as discussed in my evidence is proposed and incorporated in the draft NoR conditions.

269. In my opinion, the reasonable concern of the submitters has been addressed in evidence.

#### *Trees*

270. As stated in the Section 42A report, no submissions have raised issues specifically about the loss of trees as a result of the construction of the CRL. The Section 42A report does note that four submissions have identified the desire to have replacement planting as part of a high quality streetscape post-construction. This has been addressed in the proposed draft NoR conditions relating to the preparation and implementation of Urban Design and Landscape Plans, and the draft conditions relating the replacement planting, including when this is to be implemented and the duration for monitoring it. In my opinion, the reasonable concern of the submitters has been addressed in these proposed conditions.

#### *Contamination and Air Quality*

271. David Dangerfield and Camilla Needham have addressed the submissions which have raised concerns about the management and mitigation of adverse effects from the discovery and removal of contaminated material and on air quality. As outlined in my evidence, the management and mitigation of any adverse effects from contamination and on air quality are included within the draft NoR conditions. In my view the concern raised in these submissions has been addressed in the proposed conditions.

272. I note one submitter refers to concerns about the potential adverse effects from the discovery and removal of contaminated material and on air quality from the site on the northwest corner

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<sup>153</sup> Built Heritage report, Appendix 4 Volume 3 CRL NoR suite of documents. Type C is those buildings and structures that are seen as being "character supporting" and form part of a group of significance as well as having some individual significance, but are not currently protected by statutory mechanisms

of Pitt Street and Vincent Street. The rail tunnels in this location will be constructed at some depth by TBM, as described in the evidence of Bill Newns. The evidence of David Dangerfield and Camilla Needham has addressed the potential for any contamination and air quality effects.

#### *Social Effects and other Amenity Effects*

273. My evidence has addressed the actual and potential adverse social and amenity effects, including of “blighting”, and the methods proposed to manage and mitigate these through the draft NoR conditions. The majority of issues raised by submitters in relation to social and amenity effects have been addressed in evidence and previously in this section of my evidence.
274. The CLC Trust Board raises concerns about the adverse effects on the Life Church, particularly the 20 year lapse period. I note that the Life Church site is required fully for the construction and operation of the CRL.
275. A number of submissions have raised the opportunity to have station entrances from Elliot Street and the currently vacant site on the southeast corner of Albert and Victoria Streets. As described in the evidence provided to support the NoR, the concept design for Aotea Station is a cut and cover / top down box and as such other entrances to those shown in the concept design are not precluded from being considered in future stages of design. This includes from other sites and buildings located on Albert Street between Wellesley Street and Victoria Streets.

#### **Response to Council Officers Hearing Report**

276. I have reviewed the Section 42A Report and in general, I agree with the findings of this report with some exceptions. I do not agree with the overall recommendation that the NoR cannot be confirmed.
277. The majority of matters raised in the Section 42A report have in my view already been addressed and responded to in my evidence. This relates particularly to the proposed management and mitigation of actual and potential adverse effects on the environment from

the CRL Project. The other evidence provided in support of the NoR has also addressed and responded to the matters raised in the Section 42A report, and particularly to the proposed management and mitigation of actual and potential adverse effects on the environment.

278. Table 10.1 of the Section 42A report is a summary of the effects assessment. I have reproduced Table 10.1 below and provide comment on the matters raised in it.

Effect / Matter	Auckland Council Conclusion	My Comment
AT approach to mitigating adverse effects – CEMP	The CEMP and various management plans are the key mechanism AT is relying on to mitigate adverse effects	In my evidence I describe why management plans were adopted and are considered appropriate for the management of adverse effects for the CRL.
Construction Noise and Vibration	<p>Agreeing generally with AT's findings and conclusions subject to recommended changes to noise and vibration limits and hours of operation set out in the conditions</p> <p>Adverse effects will be significant in some locations on certain sensitive receivers locations (including TV3 studios, Roundhead Studios and Aotea Centre) and in some circumstances it may not be practicable for these effects to be mitigated. It is recommended that AT provides information on how these effects can be mitigated or avoided.</p>	<p>The evidence of Craig Fitzgerald and James Whitlock, Matthew Harrison has addressed this.</p> <p>Draft conditions are proposed and included in Attachment 2 to my evidence.</p>
Operational Noise and Vibration	Operational effects are generally acceptable, however adverse effects will be significant in some locations (including TV3 studios, Roundhead Studios and Aotea Centre) on certain sensitive receivers and in some circumstances it may not be practicable for these effects to be mitigated. It is recommended that AT provides information on how these adverse effects can be mitigated or avoided.	<p>The evidence of Craig Fitzgerald and James Whitlock, Matthew Harrison has addressed this.</p> <p>Draft conditions are proposed and included in Attachment 2 to my evidence.</p>
Structural integrity	<p>No significant adverse effects predicted</p> <p>Settlement contours predicted by AT are reasonable - but not overly conservative</p> <p>Building conditions surveys are offered as mitigation (link through to vibration effects discussion above)</p> <p>Resource consents to be lodged at a later date will deal with groundwater dewatering effects</p>	<p>The evidence of Craig Stevenson has addressed this.</p> <p>Draft conditions are proposed and included in Attachment 2 to my evidence.</p>
Transport networks and traffic	Significant adverse effects predicted during the construction phase (main areas of concern are construction vehicle	My evidence and the evidence of Bill Newns and Ian Clark have addressed this.

Effect / Matter	Auckland Council Conclusion	My Comment
	<p>movements, Albert St intersections property access)</p> <p>Significant positive effects predicted in the operational phase. We agree with the positive effects identified by AT including optimising the efficiency of the public transport network (including rapid transport network), patronage, release the rail capacity constraint at Britomart and facilitate intensification of land use particularly in the vicinity of the stations.</p>	<p>Draft conditions are proposed and included in Attachment 2 to my evidence.</p>
<p>Access to properties</p>	<p>Conclusions covered above</p>	<p>My evidence and the evidence of Bill Newns and Ian Clark have addressed this.</p> <p>Draft conditions are proposed and included in Attachment 2 to my evidence.</p>
<p>Walking and cycling</p>	<p>No significant adverse effects</p> <p>During construction phase walking and cycling in the vicinity of the construction sites will need to be carefully managed, this may be extended out to routes to be used by construction and heavy vehicles</p> <p>Managed through Urban Design Framework</p>	<p>My evidence and the evidence of Ian Clark have addressed this.</p>
<p>Network utilities</p>	<p>Adverse effects can be appropriately mitigated and additional conditions are recommended to achieve this</p>	<p>Draft conditions are proposed and included in Attachment 2 to my evidence.</p>
<p>Light spill and glare</p>	<p>Adverse effects can be appropriately mitigated and additional conditions are recommended to achieve this</p>	<p>Draft conditions are proposed and included in Attachment 2 to my evidence.</p>
<p>Tangata whenua</p>	<p>AT has undertaken significant consultation with tangata whenua</p> <p>Maori Values Assessment have been undertaken by iwi and have informed the Cultural Values Assessment</p> <p>Adverse effects will be appropriately managed</p>	<p>Draft conditions are proposed and included in Attachment 2 to my evidence.</p>
<p>Built heritage</p>	<p>The NoR is proposing the potential demolition of Martha's corner as a worst case scenario. We do not support the demolition of this building and changes to conditions are recommended to prioritise adaptive reuse in the first instance.</p> <p>Adverse effects can be appropriately mitigated and additional or amended conditions are recommended to achieve this (historic heritage management plan, the</p>	<p>My evidence and the evidence of Bruce Petry and John Fellows have addressed this.</p> <p>Draft conditions are proposed and included in Attachment 2 to my evidence.</p>

Effect / Matter	Auckland Council Conclusion	My Comment
	recording of built heritage that is to be demolished through this process and building conditions surveys including requirement to repair damage)	
Archaeology	<p>Historic Heritage Management Plan is recommended to be prepared in consultation with Council's Heritage Unit</p> <p>Adverse effects can be appropriately managed</p> <p>Maori archaeological sites have been addressed under the tangata whenua section which must be reflected in the Historic Heritage Management Plan</p>	<p>My evidence and the evidence of Rod Clough have addressed this.</p> <p>Draft conditions are proposed and included in Attachment 2 to my evidence.</p>
Trees	There is a need for clarification regarding the number of scheduled trees to be removed or affected by the proposed works. We have recommended amendments to conditions to consider the feasibility of temporarily relocating these trees for the duration of construction works.	Evidence of Simon Chapman has clarified this. There are no scheduled trees currently located with the surface designation footprint of the CRL.
Contamination	<p>Adverse effects can be appropriately mitigated and additional conditions are recommended to achieve this</p> <p>(Independent peer review of the CEMP)</p>	Draft conditions are proposed and included in Attachment 2 to my evidence.
Air Quality	<p>Adverse effects can be appropriately mitigated and additional conditions are recommended to achieve this</p> <p>(Independent peer review of the CEMP)</p>	Draft conditions are proposed and included in Attachment 2 to my evidence.
Urban design	<p>There are a number of potential adverse effects associated with urban design that could eventuate as part of both the construction and operation of the CRL.</p> <p>It is considered that the recommended conditions will ensure the appropriate management of these effects. In terms of recommendations (for amendments to what has been provided by AT), these can be summarised as:</p> <p>Include a condition requiring AT to request a review of Station Plans and the UDLP by the Auckland Urban Design Panel prior to their lodgement with Auckland Council; and</p> <p>Integrating the UDF initiatives into relevant designation conditions.</p>	Draft conditions are proposed and included in Attachment 2 to my evidence.
Visual and amenity values	Cross-reference above	
Blight	<p>Potential adverse effects</p> <p>Outstanding matters that need to be</p>	My evidence and the evidence of Deborah Godinet have addressed this matter.

Effect / Matter	Auckland Council Conclusion	My Comment
	addressed by AT through providing further detail, for example on 'Property Management Strategy' and 'Property Acquisition Plan'. Recommend that AT to provide conditions relating to the Strategy and the Plan.	Draft conditions are proposed and included in Attachment 2 to my evidence.
Social	<p>Potential adverse effects</p> <p>Outstanding matters that need to be addressed by AT through providing further detail, for example on 'Property Management Strategy' and 'Property Acquisition Plan'. Recommend that AT to provide conditions relating to the Strategy and the Plan.</p>	<p>My evidence and the evidence of Deborah Godinet have addressed this matter.</p> <p>Draft conditions are proposed and included in Attachment 2 to my evidence.</p>
Other Positive Effects	<p>In addition to other positive effects discussed above, other positive effects include:</p> <ul style="list-style-type: none"> <li>o Regeneration and intensification of areas surrounding the stations; and</li> <li>o Associated enhancement to heritage areas and buildings.</li> </ul>	
Other adverse effects	None identified that have not been addressed in this Report.	
Cumulative effects	<p>Potential for cumulative adverse effects during construction phase</p> <p>Recommendation that Draft Indicative CEMP includes proposed methodology for the assessment of cumulative effects</p>	

279. In my view the matters raised in the table above by Auckland Council have all been addressed in the evidence provided to support the NoR.

280. Table 15.2 of the Section 42A report sets out matters the Auckland Council planner would like addressed. These matters are the same as those matters set out in the table provided above with the addition of others, which I address below.

*Part 2 RMA assessment – outstanding issues relating to adverse construction effects*

281. The evidence provided in support of the NoR has addressed the actual and potential adverse effects from the construction of the CRL and the proposed methods to manage and mitigate these effects through the proposed draft NoR conditions.

282. I have undertaken an assessment of the actual and potential effects on the environment of the CRL Project against the matters set out in Part 2 of the RMA. For the reasons set out in that

section of my evidence, my Part 2 assessment concludes that the CRL achieves the purpose of the RMA and is consistent with its Principles.

*Section 171(1)(b) and (1)(c) – alternatives assessment and objectives*

283. The evidence of Mr Julyan has addressed these matters.

*Lapsing of designation*

284. The evidence of Mr Julyan has addressed this matter.

*Conditions - amendments*

285. The full suite of updated draft NoR conditions in Attachment 2 to my evidence includes the acceptance of changes recommended by the Auckland Council Planner in the Section 42A report, and where recommended changes have not been accepted, a reason why is provided.

286. Based on the evidence provided in support of the NoR, including my evidence and my concluding statements above, it is my opinion that the Hearing Commissioners can recommend to Auckland Transport that the CRL designations be confirmed with the imposition of the proposed draft conditions contained in Attachment 2 of my evidence.

**Conclusions**

287. In conclusion:

- There will be both actual and potential effects from the construction, operation and maintenance of the CRL;
- The overall positive effects and benefits from the CRL, (which will be long term, on-going and benefit many), have in my opinion a greater weighting than the adverse effects which predominantly are going to be temporary for the duration of the construction of the CRL;
- While I acknowledge that some of the adverse temporary effects will be significant, conditions are proposed on the CRL designations to manage and mitigate these;

- The use of a TBM to construct the majority of the CRL underground is a significant method to mitigate a number of adverse effects that would otherwise occur if other construction methods from the surface down were employed;
- The permanent adverse effects identified can be mitigated and conditions are proposed on the CRL designations to enable this;
- With regard to actual and potential effects and Part 2 of the RMA it is my opinion that:
  - The CRL achieves the Purpose of the RMA as:
    - The positive effects and benefits<sup>154</sup> anticipated to be realised as a result of the construction and operation of the CRL will enable people and communities to provide for their social, economic, cultural well-being, and for their health and safety;
    - The actual and potential adverse effects resulting from the CRL have been identified and assessed, and conditions are proposed on the CRL designations to manage and mitigate these;
  - The CRL is consistent with the relevant Principals of the RMA for the reasons set out in my evidence;
  - The Principles of the Treaty of Waitangi have been taken into account and conditions are proposed on the CRL designations which enable tangata whenua to be involved on-going on the Project and in the management of adverse effects.

288. Based on the evidence provided in support of the NoR, my own assessments as set out above, it is my opinion that the Hearing Commissioners can recommend to Auckland Transport that the CRL designations be confirmed with the imposition of the proposed draft conditions contained in Attachment 2 of my evidence.

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<sup>154</sup> As described in the evidence of Messrs Warburton, Meale and Julyan.

**Fiona Carol Blight**

**2 July 2013**

## Attachment 1

### Experience of Fiona Carol Blight Relevant to the CRL NoR

## **Qualifications and Memberships**

Bachelor of Resource and Environmental Planning, University of Massey, 1995

MNZPI (Full Member of NZ Planning Institute)

Committee Member of the Auckland Branch of the NZ Planning Institute (2010 - present)

Member of Resource Management Law Association

## **Employment History**

**2012 – present**

Technical Director - Planning, Beca, Auckland, NZ

**2009 – 2012**

Associate - Planning, Beca, Auckland, NZ

**2005 - 2009**

Senior Planner, Beca, Auckland, NZ

**2001 - 2005**

Resource Consents Planner, Resource Consents Senior Planner, and Team Leader Resource Consents, Auckland City Council, Auckland, NZ

**1998 - 2001**

Non planning work overseas

**1997 - 1998**

Resource Consents Planner Wanganui District Council, Wanganui, NZ

**1996 - 1997**

Resource Consents Planner Manawatu-Wanganui Regional Council, Palmerston North, NZ

**1996 – 1997**

Resource Consents Planner Horowhenua District Council, Levin, NZ

## **Overview**

I have fourteen years of planning and resource management experience, specialising in designation and resource consents planning. At Beca I leads multi-disciplinary project teams, predominantly in the Transport market, through statutory planning processes, from up front strategy development and option evaluation, to preparing environmental effects assessments, undertaking consultation, obtaining planning applications and managing them during construction.

My work at Beca has built on my statutory planning experience and knowledge gained from previous experience working for local government. I have been involved in a number of Council Hearings and Environment Court cases, and I have appeared as an expert planning witness before the Court.

In addition to my planning project work, I am actively involved in giving back to the planning profession through my engagement with the New Zealand Planning Institute and to Beca planners through providing technical planning advice to peers and younger team members, organising and facilitating in-house training sessions, and mentoring younger planners.

## **Project Experience Relevant to CRL NoR**

### **City Rail Link (KiwiRail and Auckland Regional Transport Authority)**

I was part of the project management team supporting Bryce Julyan.

The project included development and assessment of route options, the selection of a preferred route option and station locations, a business case to support the preferred route option, an engineering concept design for the preferred route option, and documentation (including a final draft assessment of environmental effects) to support the draft NoR documentation for a designation.

2009 - 2010

I managed the day to day running of the planning team which delivered the Option Evaluation Report and the draft NoR and supporting documentation including a draft assessment of environmental effects. My role included input into the Option Evaluation process and report, technical advice to the Project team including the client, day to day management of the planning team and technical experts feeding into the draft NoR documentation (urban design, noise and vibration, archaeology and transportation), liaison and guidance to the engineering design team to enable robust design which could be supported by an NoR, and organisation and management of consultation with key stakeholders.

### **Land Use Preconditions for Rapid Transit in North Auckland (Auckland Council)**

2011

I was the lead land use planner in the Beca / Parsons Brinckerhoff team delivering a strategic report to Auckland Council to support the spatial planning process. The work involved a high level strategic study which assessed planning for land use and rapid transit options in the North Shore in consideration of the anticipated growth areas, the existing capacity of the Northern Busway, other rapid transit options, and connections beyond the Northshore.

### **Marsden Point Rail Link (KiwiRail)**

2005 – 2006 &

I was both the Beca Project Manager and Planning Manager for this project which obtained a designation for a new 20km rail line between the North Auckland Rail Line (south of Whangarei) and the deep water port at Marsden Point. The rail line includes 5 bridge structures (carrying two rail lines and up to 65m in length) through coastal and river estuarine areas.

2008 – 2010

This is the first substantial new Greenfields rail designation undertaken by the New Zealand Railways Corporation (KiwiRail) for around four decades. A key success of this project was the collaborative approach to delivery undertaken by Beca and KiwiRail. This collaborative approach, combined with the

consultation undertaken, resulted in minimal submissions in opposition and only 6 appeals to the Environment Court (of which only 2 were from directly affected landowners). The appeals were settled prior to the need to hold an Environment Court Hearing.

Both the designation and the resource consents were obtained with a lapse period of 20 years.

An extensive option evaluation process was undertaken as part of this project from overall route alignment to a number of more minor alignment changes through individual landholdings (including bridge options in two locations and 17 alignment options through a substantial hill on the route). The option assessments included consideration of constructability, environmental, cost and property impacts / acquisition and ranged from more simple pro's and con's to extensive multi-criteria evaluations as appropriate.

My work involved management of the Beca team (including sub consultants), co-ordination of work associated with alignment options and changes, facilitation of consultation with landowners, Tangata Whenua, key stakeholders and the community, liaison with Northland Regional Council and Whangarei District Council, providing consenting strategies for KiwiRail, management of The Property Group work around land acquisition, overview and input into the assessment of effects on the environment to support the designation and resource consents, management of environmental and engineering technical experts (including civil engineering, geotechnical, coastal engineering, hydrology, survey, geospatial, ecology, noise, landscape / visual, and archaeology), facilitation and review of all Hearing evidence and management of the Council Hearing process. I also provided expert planning evidence at the Council Hearing in September 2009.

#### **Medallion Drive Notice of Requirement (Auckland Transport)**

I am the Beca Project Director and document verifier of this project to obtain a new road designation to link Medallion Drive / Oteha Valley Road with Fairview Avenue in Albany Auckland to assist in accommodating development growth in the area. My role is to provide planning advice to the client and the Beca team preparing the NoR documentation and the supporting engineering concept scheme assessment. I have reviewed and verified all of the NoR documentation prior to it being served on Auckland Council in early November 2012. I have subsequently reviewed all of the Beca evidence for the NoR Hearing (currently scheduled for August 2013). Similar to City Rail Link, the designation is being sought prior to resource consents.

2012 – 2013

#### **New Lynn Transit Orientated Development (TOD) (Waitakere City Council)**

2007 - 2010

I was the Beca Project Manager and planning lead for a new road designation

and resource consents as part of the New Lynn Transit Orientated Development (TOD) in the west of Auckland. The project involved obtaining a new designation and resource consents to support road and transit changes (new bridges, roads and a bus station) associated with the redevelopment of the New Lynn town centre. This project was undertaken by Waitakere City Council in tandem with the New Lynn Rail trench project. I managed the Beca team (including technical sub consultants), facilitated consultation with the community and directly affected landowners, provided overview and input into the assessment of effects on the environment, and the provision of technical planning advice to the Council. Resource consents were obtained for stages 1, 2 and 3, the designation for the new road overbridge confirmed, and an Outline Plan also submitted and confirmed. The project has been constructed.

**Waiheke Island Community Facilities Designation (Auckland City Council)**

2009 – 2010

I was the Beca Project Director for this project which sought to designate land on Waiheke Island on behalf of Auckland City Council for Community Facilities. Auckland City Council wishes to establish the Waiheke Island Library and Council Services Centre, along with other community facilities, on land in Oneroa Village. I provided strategic planning advice, particularly on the designation aspect, to Auckland City Council and the Beca Planning team delivering this project. I also provided overall review and verification of the NoR documentation prior to it being submitted.

**Wellington Metropolitan Rail Network Upgrades (KiwiRail)**

2008 – 2009

The Wellington Beca Planning team was involved in the preparation of Outline Plans and resource consents for a number of rail infrastructure upgrade projects, which were required to support the introduction of the new Electrical Multiple Units (EMU's) to the Wellington Metropolitan Rail Network in 2010 and 2011. As part of these upgrades, various Outline Plans for new rail substations and track alignments were prepared. I provided senior planning support to the Wellington Beca Planning team working on this project, through the provision of technical advice and review of all Outline Plan and resource consent documentation.

**Rail Station Planning (Auckland Regional Transport Authority)**

2007 - 2008

Beca assisted the Auckland Regional Transport Authority (ARTA) with a roll out programme to introduce new rail stations and / or upgrade existing rail stations throughout the Auckland Metropolitan Rail Network. This project involved undertaking the analysis of station location options and preliminary design concept reports. Key stations included in this project were: Puhinui Station and the potential for linkages to a future Manukau City rail station and the airport; station locations along the Onehunga Branch Line; and the station

location for Kumeu/Huapai out west Auckland.

My role was to lead and implement the planning aspects of the project, including land use integration analysis, consultation with stakeholders, and the identification of planning consenting requirements.

**Distributed Rail Stabling (Auckland Regional Transport Authority)**

2006 - 2008

I was the Beca planning lead for the rail stabling facilities at Pukekohe, Papakura, Ranui and Tamaki Drive. The project involved preparing and obtaining Outline Plans for Pukekohe and Papakura, preparation of a draft Outline Plan at Ranui (including facilitation of consultation), and planning advice to the design concept for the Tamaki Drive facilities. This work required the management of technical sub consultants, attendance at project meetings, the provision of planning advice, and liaison with the local authorities concerned.

**Rail Station Planning and Dart 8 (Auckland Regional Transport Authority)**

2006

I provided assistance to Bryce Julyan in his role as project manager for the planning of the upgrade or replacement of rail stations on the Auckland Metropolitan Rail Network. This work included assisting with the management of the Outline Plans and consents application processes, and managing communication and consultation. Assistance to ARTA with work on DART 8 was also provided where required.

**Takanini Rail Station Site Location Analysis (Papakura District Council)**

2005 - 2006

I assisted Bryce Julyan with a location analysis, coordinating and facilitating workshops for stakeholders and developing evaluation of alternatives. This included a Transit Orientated Development (TOD) exercise to examine new locations for a new station to replace Takanini Station and serve new residential and mixed use development in area.

**New Campus Facility in Manukau City Centre (Manukau Institute of Technology)**

2010 - 2011

I provided strategic and technical planning advice and guidance to MIT and the Beca Planning team in relation to the establishment of a new campus facility in Manukau City Centre. The campus is an integrated development, incorporating the main ground level entry to the proposed Manukau Rail Station. The Beca Planning team prepared the resource consents for the new campus. I was the verifier of these documents.

**Additional Manukau Harbour Crossing (NZ Transport Agency as part of the Manukau Harbour Crossing Alliance)**

2010 – 2012

During the 2010 to 2012 period I supported the Beca Planning team which assisted the Manukau Harbour Crossing Alliance (MHX) with administering and implementing the designation and resource consent conditions during the

construction of the additional bridge crossing the Manukau Harbour. This involved the provision of advice to the planners, the construction environmental team and the wider alliance team, and the review of planning documents and conditions, and the review of additional small resource consent applications. In early 2012 I facilitated the final analysis of the designation and resource consent conditions, identifying and confirming those that were completed and those that were on-going, for handover to the New Zealand Transport Agency.

#### **SH20A Upgrade Project (NZ Transport Agency as part of the Manukau Harbour Crossing Alliance)**

2011 -2012

As part of the Manukau Harbour Crossing Alliance (MHX), I led the planning and consultation aspects of this project which investigated the feasibility of upgrading SH20A to motorway standards. This work included undertaking an option evaluation to select a preferred option for grade separating the SH20A / Kirkbride Road intersection, incorporating bus priority lanes into the motorway upgrade, relocating an existing cycle network, drafting and reviewing the Outline Plans and regional consents, working with The Property Group regarding impacts on property and potential land acquisition, preparing consultation material and undertaking consultation with key stakeholders and some potentially affected landowners.

#### **Environment Court Appeal Work**

2003 – 2004 &  
2006 – 2007

During 2003 – 2004 I gained experience in preparing affidavits, expert planning evidence (including rebuttal evidence) and cross-examination in the Environment Court. I was the processing planner while employed at Auckland City Council for two resource consent applications where the Council decisions were appealed to the Environment Court. One appeal was withdrawn after evidence was exchanged but prior to the Court Hearing. I was an expert planning witness at an Environment Court Hearing for the second appeal, where Council's decision was upheld and costs were awarded to the applicant and Council.

During 2006 – 2007 on behalf of the Auckland City Council, I was the expert planning witness for three appeals before the Environment Court. I assisted the Council to defend its decisions on three separate and unrelated resource consent applications. My work included attendance at pre Hearing meetings, mediation/settlement conferences, the preparation of planning evidence, and attendance as an expert planning witness at the Environment Court Hearing for one of the appeals. The other appeals did not reach the Environment Court.

## Attachment 2

### Draft Proposed CRL NoR Conditions