

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

Statement of Evidence of Rachael Roberts

QUALIFICATIONS AND EXPERIENCE

1. My full name is Rachael Louise Roberts
2. I am a Project Manager at Truescape
3. I am a computer simulation specialist, working with Truescape for 6 years. I hold a diploma in Multimedia from Natcoll Design Technology.
4. I have prepared expert evidence for the following projects:
 - Essential Energy – Coffs Harbour Transmission Project
 - Solid Energy – Mt William North Mine
 - Mighty River Power – Puketoi Windfarm
 - Carter Holt Harvey – Kina Peninsula Subdivision
 - Meridian Energy – Hurunui Windfarm
 - Cooper & Co –Seafarers Development.
5. My evidence is given in support of the Notices of Requirement (NoR) for the construction, maintenance and operation of the City Rail Link (the Project), lodged with the Auckland Council by Auckland Transport.
6. The project is a 3.4km underground passenger railway (including two tracks and three underground stations) running between Britomart station and the North Auckland Line (NAL) in the vicinity of the existing Mount Eden Station, and an additional 1.4km of modifications to the NAL and local road network.
7. I am familiar with the area that the Project covers.
8. I have read the Code of Conduct for Expert Witnesses as contained in the Environment Court Consolidated Practice Note (2011), and I agree to comply with it as if this Inquiry were before the Environment Court. My

qualifications as an expert are set out above. 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.

SCOPE OF EVIDENCE

9. My evidence will deal with the following:
 - a) My background and role in this project;
 - b) Truescape credentials
 - c) Scope of work
 - d) Validation of Interactive Model
 - e) Model Input Data
 - f) Conclusions.

BACKGROUND AND ROLE

10. I am a computer simulation specialist, working with Truescape for 6 years. I joined the Truescape team initially as a 3D modeller and have progressed from Team Leader to my current Project Manager role. I hold a diploma in Multimedia from Natcoll Design Technology. I have been involved in a number of different visualisation projects, some of which are outlined within the Truescape Credentials section of this statement. These range from photo-simulations for simple projects, to fully visually simulated 3D environments. These projects have been presented as part of consenting applications, permitting applications, and consultation across New Zealand, Australia and in the United States, and Canada.
11. My role in this project has been to manage the production team at Truescape to produce, and to liaise with Auckland Transport and their designated consultants to ensure we were provided with the necessary data to build, a survey grade 3D model.

TRUESCAPE CREDENTIALS

12. Truescape has over 16 years of experience working in the 3D Photo and Video Simulations industry. Truescape has completed a wide range of different visualisation projects from photo-simulations for simple projects to full computer generated 3D video simulations for complex projects. Truescape's client base spans many industry sectors such as solar, wind, transmission and generation across New Zealand, Australia, Canada and the US.
13. Truescape adopts a team approach for project completion as each type and phase of a project calls for a different mix of specialised skill sets. This expertise spans many disciplines including photography, engineering, architecture, surveying, landscape architecture, 3D computer modelling, evidence preparation, and presenting evidence as expert witnesses. All members of our staff have either formal qualifications or have undergone professional training and have direct experience working in each of these specialised areas.
14. Truescape's simulations have been produced as evidence in forums such as the New Zealand environment and high courts, Australia's Victorian civil and Administrative Tribunal, the Supreme Court, the Alberta utilities commission, the Virginia State Corporation Commission and the Connecticut siting council and other North American jurisdictions. Members of Truescape staff have presented evidence as expert witness in these various courts and tribunals, where our work has been subjected to cross-examination, and accepted as evidence.
15. Truescape played an integral role in the development of the Best Practice Guide Visual Simulations BPG 10.2. This document sets out to promote best practice standards and procedures in the use of visual simulations by the landscape profession.

SCOPE OF WORK

16. The Applicant, Auckland Transport, engaged Truescape in June 2013 to provide
 - 3D interactive model showing the proposed railway and the NoR areas, for the use of creating images for their evidence
 - Methodology used by Truescape to develop tool capable of producing the required imagery.

17. The 3D interactive model
 - Displays each of the NoR Designations – Surface, Substrata and Strata
 - Has the ability to turn on and off each of the designations
 - Displays the proposed underground station locations
 - Has the ability to turn on and off the station locations
 - Shows the proposed railway and how it relates to the designation areas and links with the proposed stations
 - Gives the user the ability to position and orientate anywhere within the 3D scene, both above and below ground level, to see the boundaries of all designation areas and the proposed railway
 - Gives the user the ability to “screen shot” any view, which captures an image of the current view for alternative uses.

VALIDATION OF INTERACTIVE FILE

18. The Truescape 3D interactive file, illustrates the concept of the proposed development and has been constructed accurately to the correct dimensional scale and location.

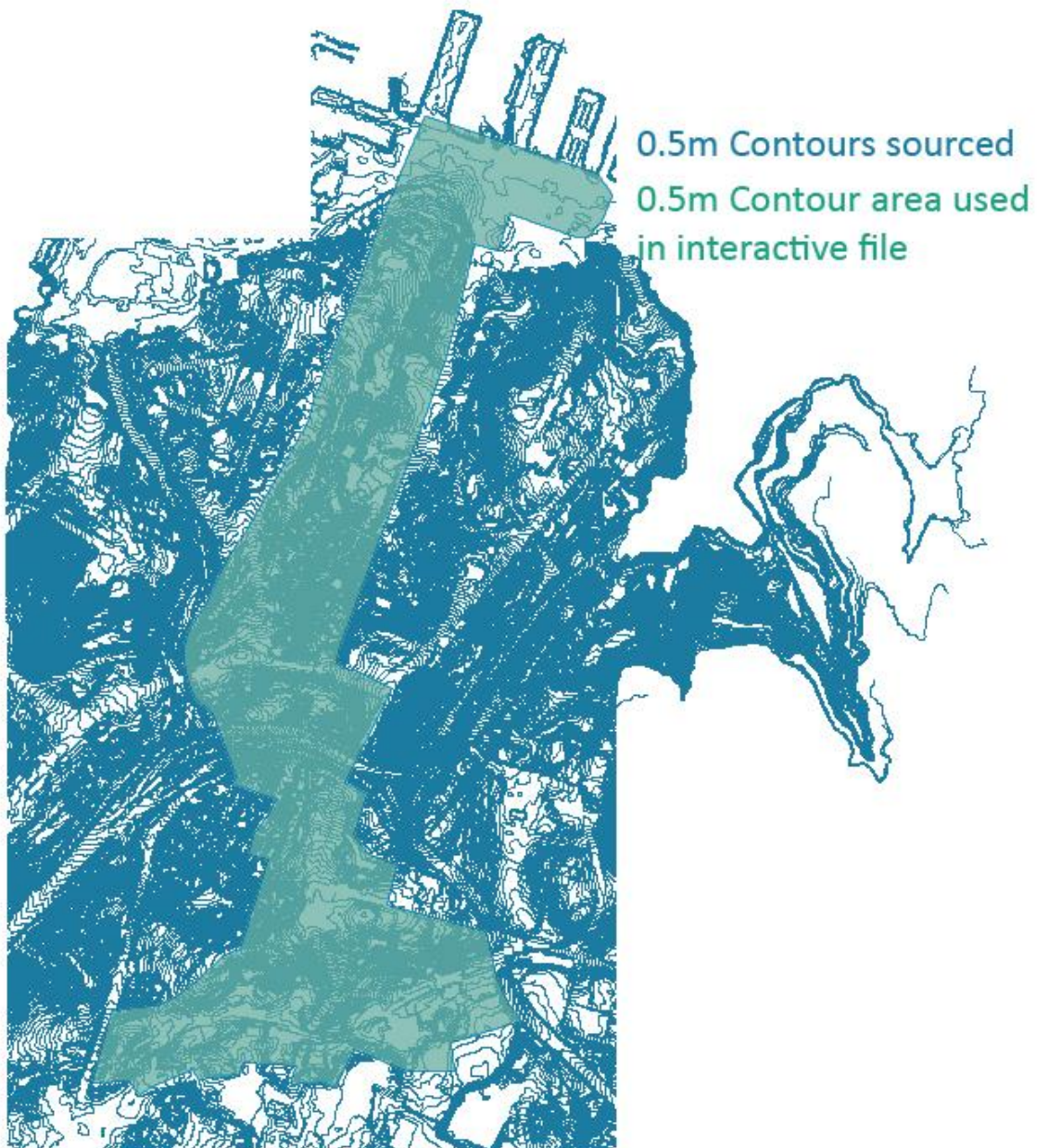
19. For the City Rail Line proposal, Truescape created a 3D interactive model using survey accurate data. Data outlining the proposed Railway, designation areas and stations was incorporated with the terrain data to represent the actual view of all components corresponding together.
20. The 3D interactive file is a tool to illustrate the concept of the proposed development outlines and to assist with capturing images of technical views for Auckland Transport to use in their evidence. The scope of Truescape's work does not extend to the any assessments or interpretations of the proposed project.
21. The 3D interactive file prepared by Truescape for the City Rail Line proposal was generated using the most advanced and accurate technology available at the time of creation. A full description of the data used in the interactive model is available under Model Input Data below.

MODEL INPUT DATA

22. Contour data was sourced from Auckland Council
AucklandCouncil_Contours.shp

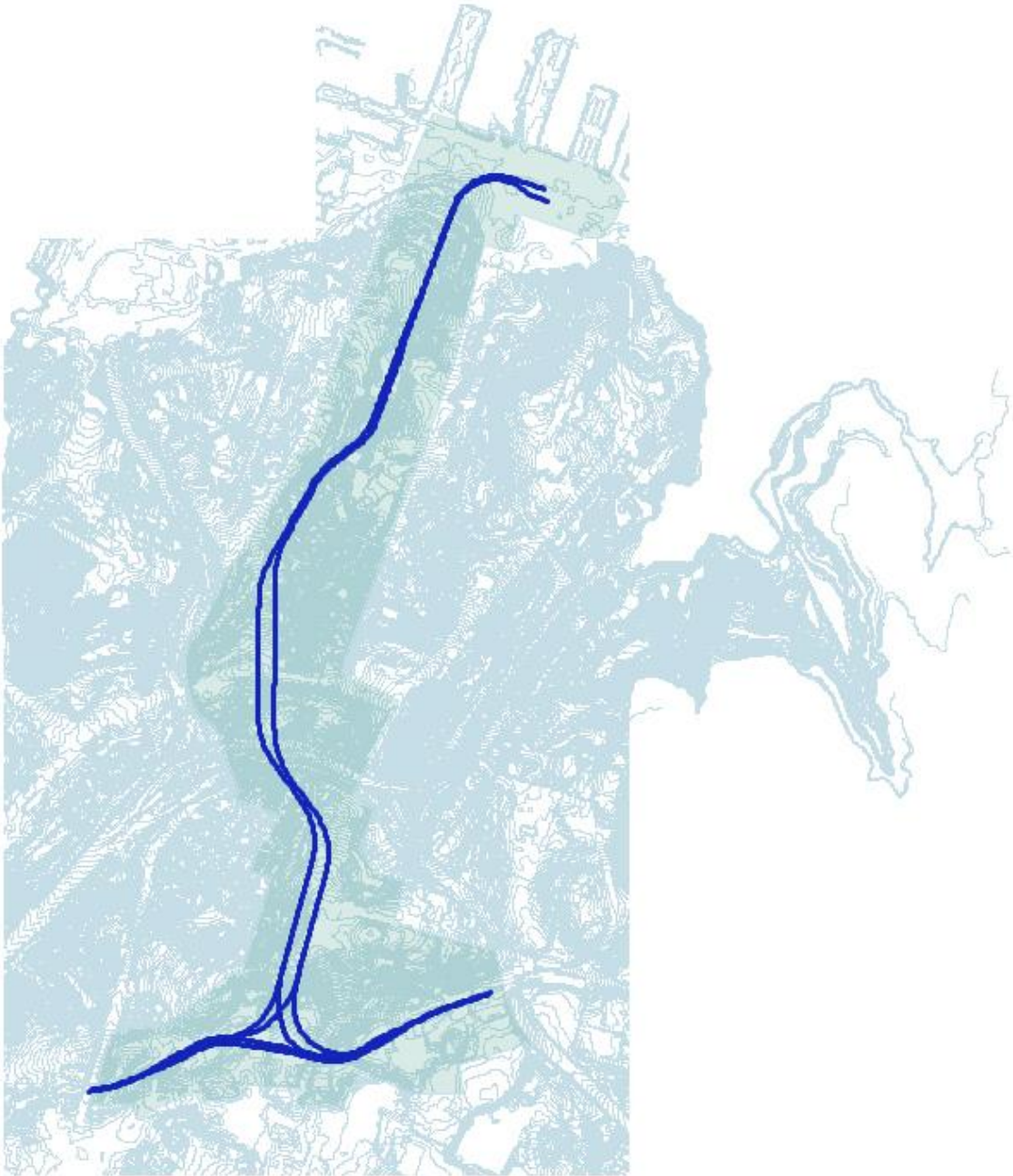


23. The above image shows the 0.5m detailed contours sourced.



24. The above image shows the area of terrain that was used in the 3D scene

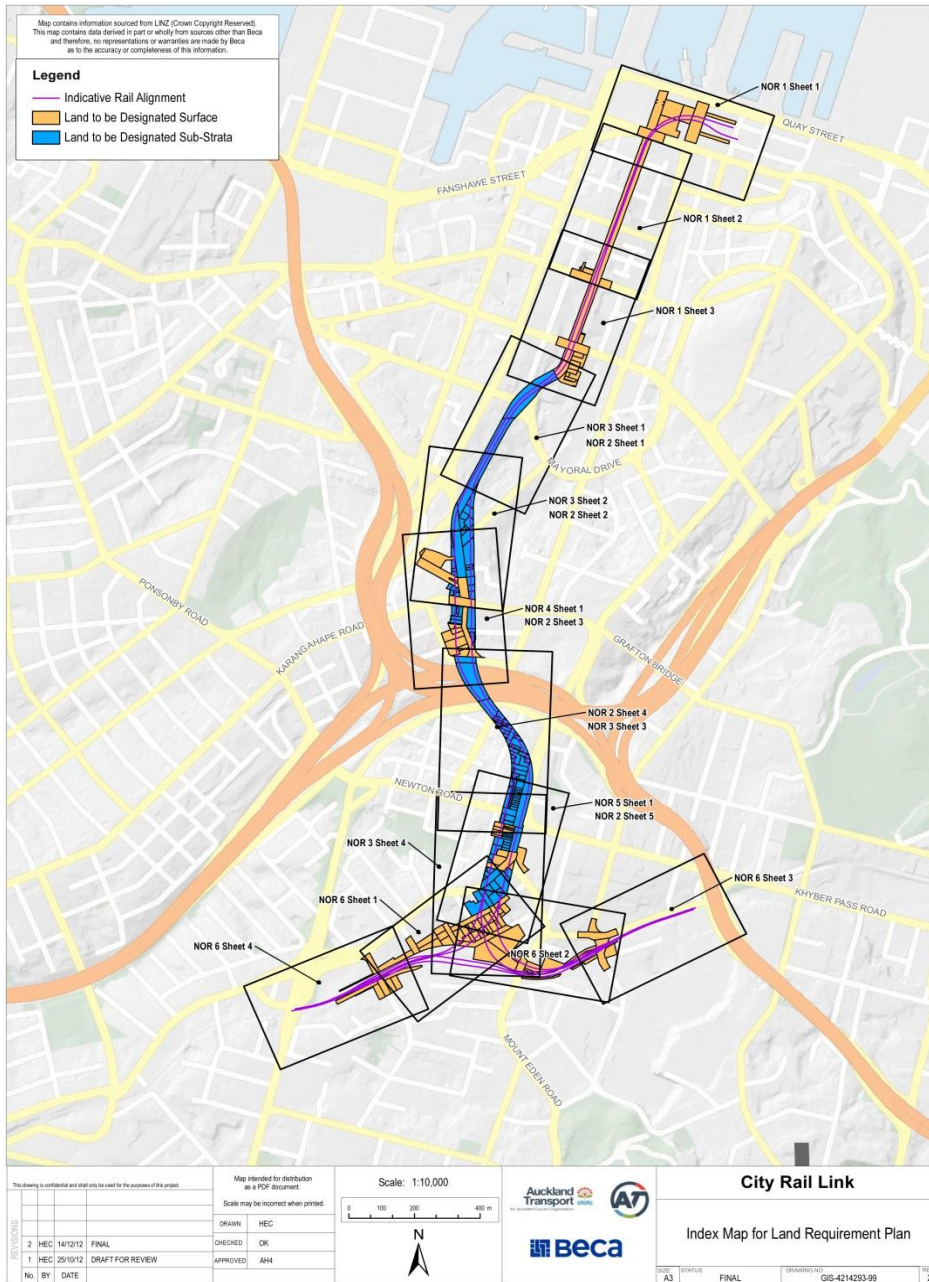
25. Railway line data was received from Auckland Transport – *Alignment_RevK_Update_2012_12_10.shp.*



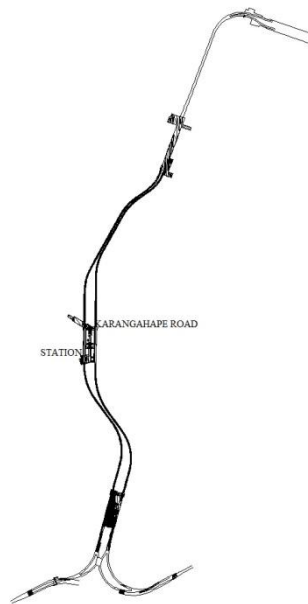
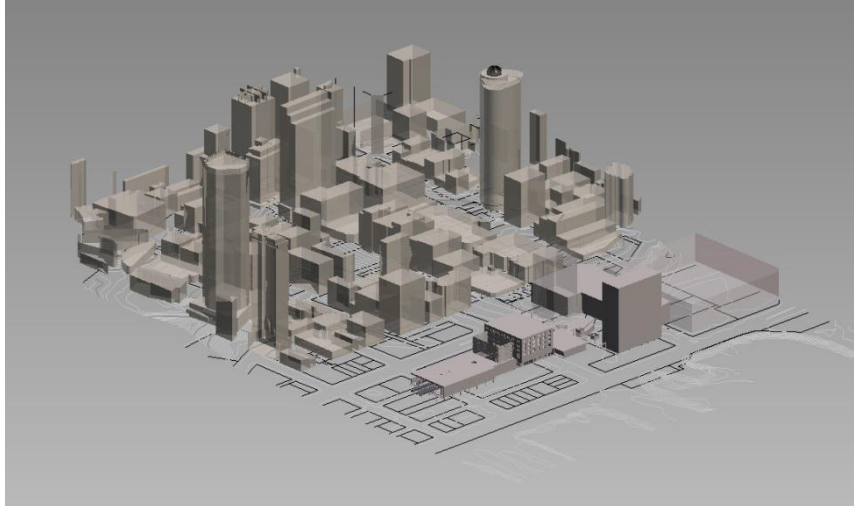
26. Designation areas where compiled from the follow data, received from Beca:

LandToBeDesignated_Footprint.shp

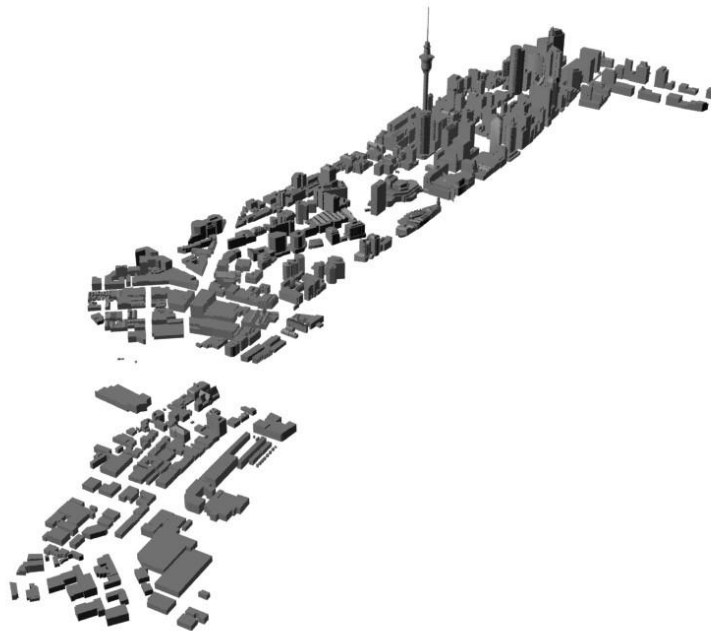
- 1.8 **CRL NoR Notice 2 Land requirement plan December 2012 (clean).pdf**
- 1.14 **CMRL NoR Notice 4 Land requirement plan December 2012 (clean).pdf**
- 1.17 **CRL NoR Notice 5 Land requirement plan December 2012 (clean).pdf**



27. Station models were provided in 3D .fbx format from Jasmx. The location of the stations was defined using file **228072-XR-C-Station_Locations(NoR).dwg** received from Aurecon Group.



28. 3D model of the city scape was prepared internally by Truescape.



CONCLUSION

29. The 3D interactive file prepared by Truescape for the City Rail Line project accurately represents the proposed Designation areas, Railway and Station locations allowing the user to generate imagery from any angle with components of interest visible.

Rachel Roberts

2 July 2013