

IN THE MATTER OF the Resource Management
Act 1991

AND

IN THE MATTER OF an application by the
Church of Jesus Christ of
Latter-day Saints Trust
Board to demolish the
Block Plant building

**STATEMENT OF EVIDENCE OF AARON SPENCER BEER ON BEHALF OF THE CHURCH
OF JESUS CHRIST OF LATTER-DAY SAINTS TRUST BOARD**

INTRODUCTION

1. My full name is Aaron Spencer Beer and I hold the position of Technical Director – Structural Engineering at Beca. I have been in this position since 2008 and have been a practising Structural Engineer for 27 years.
2. I hold the Qualifications of BE(Civil)Hons, am a Chartered Structural Engineer and a Professional Member of Engineering New Zealand.
3. My professional experience to date has been fairly broad, ranging from leading the structural design of the SKYCITY Convention Centre to several large expansions at Auckland Airport. However, of more relevance to this project, I lead the technical side of our Seismic Assessment and Retrofit team in Auckland. For many years, volunteers at Beca have played a significant role in the development of the industry guidelines NZ

engineers use when assessing and retrofitting existing buildings for earthquake. I am very familiar with those guidelines.

4. Beca has a long history with the Temple View site and has previously produced several reports including technical assessments, visual and intrusive investigations and proposals for remedial measures and upgrading works. My personal involvement with the Temple View Project began around 1998 and I have been involved in the preparation of Beca reports since then.
5. In July 2009, Beca provided a seismic assessment of the Block Plant Building (**2009 Report**), which it was later asked to update for the purposes of this Application. I was the original author of the 2009 Report and reviewed and approved the release of the updated report dated 6 March 2020 (**Updated Report**).
6. Beca also provided engineering advice on possible alternative options to retain the Block Plant Building, one for commercial use and one for residential use, and how each option would need to be undertaken to meet appropriate seismic and other current building standards. I also reviewed and approved the release of that information, which formed part of the Applicant's response to a s 92 request from Council along with the Updated Report.
7. I have been asked by the Church of Jesus Christ of Latter Day Saints Trust Board (**Trust Board**) to prepare this brief statement of evidence to summarise the key matters of the Application relevant to my expertise. My evidence draws from Beca's previous assessments referred to above and is intended to provide a holistic overview of the condition of the building and the challenges arising from any change of use or redevelopment of the site.
8. This evidence is intended to supplement the information contained in the Application and the assessment of environmental effects (**AEE**).
9. I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise.

SCOPE OF EVIDENCE

- 10.** This evidence will address the following matters:
- (a) Investigations carried out by Beca into the Block Plant Building;
 - (b) Seismic strengthening options;
 - (c) The challenges for refurbishment of the Block Plant Building;
 - (d) Comments on submissions;
 - (e) Response to the Officer's Report;
 - (f) Comments on the draft conditions; and
 - (g) Conclusion.

EXECUTIVE SUMMARY

- 11.** I am of the opinion the Block Plant building will require seismic strengthening if it was decided to significantly extend the life of the structure and find an alternative use.
- 12.** The Church has undertaken a study and determined the most realistic re-use options for the site are either office or residential development. The level of structural intervention required to convert the building into either of these uses, or to a further alternative suggested by the Hamilton City Council as a Place of Assembly under the Operative District Plan, is substantial due to the need to heavily modify the external and internal fabric (block walls) to bring natural light into the building.

INVESTIGATIONS INTO THE BLOCK PLANT BUILDING

- 13.** The Block Plant building is understood to have been constructed in the early 1950s. I assessed the structural condition of the Building in 2009 and again in February 2020.
- 14.** Overall, after making allowances for the age of the building, the impression gained is that the structural skeleton is relatively robust with no obvious signs of significant deterioration

or damage due to roof leakage. However, the finishes are currently in poor condition and the building is not expected to perform well in an earthquake.

15. The Seismic Assessment we have undertaken has found the overall building performance is currently limited to 40-50% of the new building standard (i.e. 40-50%NBS). This is below the desired minimum performance level the Church has adopted nationwide.

SEISMIC STRENGTHENING OPTIONS

16. As this building falls below 67%NBS, it is categorised an “Earthquake Risk” building in terms of the definition recommended by the New Zealand Society of Earthquake Engineering. Accordingly, if in future a decision were made to renovate the building to extend its life and accommodate an “alternative use” there will likely be a statutory requirement to strengthen.
17. If the building had to be retained and preserved, we understand a change in use would need to occur, and regardless, there may be a need to strengthen to meet Church policy.
18. If a use were able to be found for this building it is feasible to carry out seismic retrofit works. A retrofit concept has been prepared to raise the performance of the building to 67%NBS. This level of improvement would be likely to satisfy the seismic requirements of the Building Act should the building be subject to a change of use. However, this would be subject to the type of use and the approval of Hamilton City Council. In addition, there can be market drivers which may need consideration beyond any strict legal minimum standards. I also note that the Church does not have a use itself for the building and it would be a waste of resources to retrofit the building without a specific use in mind.
19. If a change of use to residential were proposed, then as I alluded to in the previous paragraph, commercial drivers and buyer expectation is expected to dictate that a performance of 100%NBS be achieved.

CHALLENGES FOR REFURBISHMENT OF THE BLOCK PLANT BUILDING

20. A structural concept has been prepared for two re-use options; an office conversion (strengthening target 67%NBS) and apartments (strengthening target 100%NBS). A further third option was prepared for a place of assembly option (comprising a gymnasium and mens’ shed) following receipt of the initial s 42A report from Council.

21. All options heavily impact the building fabric. All three options require the removal of some internal structural walls and new penetrations in exterior walls for window openings. The office option is particularly disruptive as it requires many of the exterior walls to be fully reconstructed to create large floor-to-ceiling windows. It is noted the cost attributable to seismic strengthening for all the re-use options is expected to be somewhat less in proportion to the high cost to effect the wall alterations and make the existing spaces habitable.
22. In the concepts prepared, I have tried to keep as many of the existing walls as possible whilst being realistic in terms of buildability. Only those walls being removed to suit the new use or being converted substantially to open windows/doors need to be removed. However, this unfortunately means some walls need to be re-constructed in practice, particularly in the office re-use scenario. For example; if a new local window or door is required it is feasible to keep the wall so it is retained (the existing wall can be propped/cut). However, if the entire wall becomes a long window, or a series of smaller windows and doors, then the existing wall needs to be removed. Similarly, if everything around a small "island" wall is removed then that wall may need to also be removed for practical or construction-safety reasons.
23. It is noted the place of assembly option (comprising a gymnasium and men's shed) is less impactful as it retains most of the existing front wall. However, this option does require a similar level of wall removal internally to create the open spaces required. This option will also have a similar requirement for general upgrade for things like building services (power, lighting, drainage, ventilation, etc), insulation and finishes as for the office option.

COMMENTS ON SUBMISSIONS

24. There is nothing raised in the submissions that requires comment from me on engineering matters.

RESPONSE TO OFFICER'S REPORT

25. There does not appear to be any specific concerns in the Officer's Report in relation to structure or engineering matters.

COMMENTS ON DRAFT CONDITIONS

26. I have no particular comments to make in regard to the draft conditions.

CONCLUSION

- 27.** The Block Plant building was originally built to serve an industrial purpose. Various options for re-use of the Block Plant building have been evaluated. Whilst each of these options is possible from an engineering perspective the extent of alteration required to make this building functional, habitable and code compliant is significant and expected to be challenging from an economic feasibility perspective.

Aaron Spencer Beer

9 November 2020