

Subject: Fitzherbert Street Administration Block Earthquake Repair Project

Prepared by: Matt Feisst (Commercial Property Manager)

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For a Deliberative Session of COUNCIL with the PUBLIC EXCLUDED

SUMMARY

As part of asset management planning for Council's Fitzherbert Street administrative centre and budgeting for the Ten Year Plan, a seismic assessment of the original two-storey part of the structure built in 1954 was carried out.

The building is identified as earthquake prone under the Building Act 2004 and is classified as a post disaster critical building level 4. This gives the building a greater requirement of strength capacity as it is deemed to be critical in response to a civil defence emergency or similar.

The building was firstly assessed using the Initial Evaluation Procedure (IEP) method. This gave an approximate percentage against the New Building Standard (NBS) of 19%. With such a low percentage of NBS, an engineer's report was commissioned to further examine the structure.

The resulting report has confirmed the IEP assessment at 19% NBS.

A notice to strengthen has been issued by Council's building services section with a time limit of five years. **Improvements are to be completed by 12 October 2016.**

The options available to Council to maintain the current levels of service are to:

- Seismic strengthen the current structure.
- Demolish and build a new building to meet current earthquake standards and levels of service.
- Re-evaluate current space requirements and modify the affected structure and structurally sound parts of the building to suit.

Matt Feisst
Commercial Property Manager

Peter Higgs
Group Manager Engineering and Works

1. SEISMIC STRENGTHEN OF CURRENT BUILDING – 800 m²

An engineering design has been sought on the strengthening option. Due to the column and beam design of the building, support for the beams is required to stop any lateral or twisting movement during a seismic event.

The preferred strengthening option is to install shear walls in between columns to give the support required to the structure. The downside of this approach is significant internal disruption with a resultant change of layout and replacement to allow for an efficient use of the new spaces. A reduction in the available space will result due to the limitations of the new floor plate layout.

Further provision of office space would also need to be built to cater for the current activities.

External strengthening options have been assessed. However, due to the building strength capacity being so far below that required, the strengthening required is substantial. This option alone will not provide enough support without significantly altering the external structure. Further work would also be required internally to brace the internal columns.

The structural design life of the building would be extended. However, this would not address parts of the building that have been surpassed by current design and building standards or items that will require replacing in the near future, such as the roof, lift and windows.

It should be noted that this option has construction risks associated. These stem mainly from the unknowns to do with the building foundation performance and hidden beam and column connections. The current condition of these items will not be known until the invasive repair has started unless invasive deconstructive investigation is carried out.

While indicative pricing has allowed for a higher level of contingency due to these factors, no extra foundation work or repair has been expressly allowed for.

2. NEW BUILD – 1,200 m²

The new build option presented takes into account current needs with the added ability to increase the floor space to 1,200 m² and create an improved link and use of space through the customer service area of Council.

The increased size of the floor plate and versatile nature of the new build would allow greater flexibility to changes in the internal office layout.

With a design life of 80 years this allows for a replacement of the current building with a building designed to modern standards that also takes advantage of "green" building enhancements.

While the cost exceeds the strengthening option and depending on the scope of the final project, a new build option allows for a significant improvement to the current facility.

The following benefits would be gained with the provision of a new building:

- Increased space (approx. 50%).
- Flexibility of layout.
- Improved efficiencies across energy use with improvements to building design (approximately \$30k per year).
- An extended design life (80 years) past the end use of an earthquake strengthened building.

- Option to look at current front of facility issues, improved customer experience and flow, less space replication and wastage.

3. RE-EVALUATE AND RENOVATE

The third option is to re-evaluate Council's current administration centre needs and internal levels of service.

Council's administration functions and front office services have not ever had a full design with the intention to look at working relationships and actual working spaces required. The disjointed nature of the building is testament to the ad hoc nature of developments over time and is a mixture of amalgamation and long term working relationships/habits rather than a specifically designed cohesive operational approach.

A full re-evaluation of current work spaces and areas as well as council meeting activities would yield an increase of useable floor space over the structurally sound parts of the Fitzherbert Street administration centre. There would also be the added advantage of providing fit for purpose work spaces in appropriate areas of the building, plus providing consistency of work spaces across the different age classes of structures following renovation.

As research into this option is likely to reduce the extra space required in any strengthen or build option, it would be advisable to complete this part of the project first before a decision is made on the final construction option.

Due to the decreased structural requirements of this option, it is envisaged to be the cheaper option due to less upfront capital costs as well as long term running costs over a reduced floor space.

3.1 Possible Options

Options	Advantages	Disadvantages	Comment
Option 1 – Do nothing			
Option 2 - Strengthen	<ul style="list-style-type: none"> - Cheaper than a full rebuild - Inclusion of emergency management 	<ul style="list-style-type: none"> - Higher financial risk due to unknown condition of foundation and structure connections - Little improvement to current layout issues and front of house customer entry etc - Little improvement to building energy dynamics and ongoing costs - Will add to current design life but not as much as a new build - There will be a reduction in the current available internal space by approximately 20-30% due to the extra structure required within the building 	<ul style="list-style-type: none"> - Financial risk could be mitigated by destructive investigation of the structural joints and foundations. Due the invasive nature of this work, certain parts of the building would need to be vacated to allow this work to be completed

Options	Advantages	Disadvantages	Comment
Option 3 – New build	<ul style="list-style-type: none"> - Improved layout - Inclusion of emergency management - Possible dedicated IT hub to allow for business continuance - Modern energy efficient design - Improved work flow dynamics' with in the building e.g. team structures and modern design - Extended design life - Improved general layout and possible modernisation of out of date spaces e.g. chambers and committee room structure - Inclusion of emergency management 	<ul style="list-style-type: none"> - Higher cost option - Possibly politically sensitive - May end up with more space than required due to unforeseen changes in local government 	
Option 4 – Re-evaluate needs and renovate to suit	<ul style="list-style-type: none"> - Possibly cheaper than the previous two options due to less structural work required - End result would be a more cohesive building with modern work spaces - Long term renewals in the 1981 part of the building completed as part of the upgrade - Less long term operational cost due to decrease in overall floor space - Inclusion of emergency management 	<ul style="list-style-type: none"> - Less space for expansion within the building - Change to current perceived levels of service and subsequent management, e.g. Chambers instant accessibility, movement of council services internal and external. 	

4. RECOMMENDATION

It is recommended that a re-evaluation of the Council administration centre and its activities and required levels of service takes place before a decision is made on the preferred construction option.

Following the re-evaluations findings, an appropriate solution to the current earthquake prone building should be built and/or renovations made to satisfy Council's current and future accommodation needs.

5. BENEFITS AND IMPACTS

5.1 Benefits

- Following the recommendation will provide an accurate solution for Council's current and future accommodation requirements.
- Less financial input may be required in regards to the immediate capital input. Longer term costs reductions will be found if less space is required to accommodate Council activities.
- Closer working relationships and less of a "silo" mentality will result from a consistent quality of accommodation across the building.
- Older building components could be replaced with efficient modern components.
- Modern and cohesive working environment across teams.
- Politically acceptable solution and result.

5.2 Impacts

- Possible wider facility disruption and change to current perceived levels of service, e.g. on-site meeting spaces and usage of chambers.
- A stronger focus on staff and customer consultation and notifications will be required to ensure that the benefit message is delivered.