

31 July 2013

Chief Executive
IPENZ
PO Box 12241
WELLINGTON 6144



Dear Sir

Statement of Complaint

Complaint

A Gisborne District Council building designed in 2001 appears to have significant design flaws and is only rated 23% of IL2 and 16% of IL4 of the National Building Standard (NBS) in its current state. The rating has been carried out by Opus Consultants. A peer review by Clendon Burns & Parks has confirmed the initial findings that there is a significant variance from the NBS.

The designer Bob Hall has been advised of these findings but believes his design meets appropriate design standards.

I understand that Bob Hall was the engineer responsible for the design of an apartment building that suffered damage after the 2007 Gisborne earthquake.

With this information, I am concerned that the engineer continues to practise as a structural designer.

I therefore request that IPENZ investigate this as a complaint against Bob Hall's engineering competency and professionalism in the area of structural design of buildings.

Background

The Council administrative centre comprises three buildings as shown in the attached aerial photograph. The building concerned is shown as "C".

A seismic assessment of the original two-storey part of the Fitzherbert Street administrative centre, built in 1954, was carried out in 2011. 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 confirmed the IEP assessment at 19% NBS at IL4 and 33% at IL2.

A notice to strengthen was issued by Council's building services section with a time limit of five years. These works are to be completed by 12 October 2016. Council considered whether a new building or strengthening would be the best approach.

Whichever option was chosen, staff would need to vacate the building while works were carried out. A feasibility study was carried out to confirm whether those staff could be temporarily housed across the other parts of the complex – the 1980s building (B) and the 2001 building (C). If this could be achieved on a temporary basis then the next question was why not on a permanent basis? If so, there would not be a need to strengthen or rebuild building (A).

A preliminary study to look at accommodation of staff within the other parts of the building was completed late 2012. A structural assessment by Opus was also carried out across the 1980s (B) and 2001 (C) buildings to confirm whether changes could be made to accommodate staff.

This has shown that the 1980s (B) building is rated between 63 and 81%NBS of IL2 and 35 to 45% NBS of IL4 relating to earthquake strength. However, the 2001 building (C) has significant shortcomings in regards to its design and is only rated 23% NBS of IL2 and 16%NBS of IL4 in its current state.

Details of the Opus assessment, peer review and responses from the designer are attached.

There is a major concern with the 2001 building (C). As the initial findings were significantly below the required NBS, they have been peer reviewed by a suitably qualified structural engineer from Clendon Burns & Parks who has confirmed the initial findings and that there is a significant variance from the NBS. Although the building (C) is not required to be operational after a major event, it is way short of the strength required for a normal occupancy building, i.e. IL2.

Buildings should also be designed so that when failure does occur it is in such a way that the risk to life is minimised. It appears that with the low strength the potential failure modes are such that building C is likely to be unsafe in a major earthquake.

An apartment building was damaged as a result of the 2007 Gisborne earthquake. The designer was subject to a disciplinary complaint. Although the decision of the investigating committee was that the engineer should not be named, it is understood it was the same designer of the Council building C.

As a result of this information, the Chief Executive has taken "all practical steps" to minimise hazards by relocating staff and public access from building C.

Building C was constructed by a design/build contract. The contracting business no longer exists. The design engineer was Bob Hall who continues to practise as a professional engineer.

Yours faithfully



Peter Higgs BE (Civil), FIPENZ, CPEng, Dip. Bus. Mgt
Deputy Chief Executive