

DISCUSSION

CONSERVATION OF HISTORIC BUILDINGS IN A SEISMIC ZONE: A NEW ZEALAND PERSPECTIVE

by I. Bowman

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D.C. HOPKINS

The paper published by Ian Bowman published in the June 1988 bulletin is most welcome in the issues it raises and in pointing out some of the activities and decisions taken by overseas bodies who have addressed the problem of conservation of historic buildings in seismic regions.

I should like to make the following comments on his paper:

1. Definition

The definition of historic buildings as "cultural properties" quoted by Mr Bowman is a good one and worthy of consideration by engineers and developers. When historic buildings are considered in these terms, the preservation of facades in front of new construction must be seen as a hollow victory for conservationist. Mr Lagenbach in a paper to the Pacific Earthquake Conference in August 1987 referred to the loss of the "time in use" of a building when it is demolished or only the facade retained. More consideration needs to be given to the value of this "time in use" when considering the merits of an historic building.

2. NZNSEE Recommendations

Mr Bowman's comments could be taken to imply that the NZNSEE recommendations do not cover historic buildings. The Study Group responsible for this document were mindful of the special circumstances of historic buildings and drew particular attention to the need to consider special circumstances. Furthermore the risk based approach has been put forward in the Recommendations on the basis that application of them will reduce the risk overall. The uniqueness of each building is recognised and encouragement is given to consider other aspects than calculations of structural strength.

3. The Test of Time

Mr Bowman quotes the Californian State Historic Building Code as stating that "Where no distress is evident, that structure may be assumed to have withstood the test of time".

If such an assumption saves a worthy building, well and good. However, in relation to the buildings ability to withstand an earthquake, the assumption is an extremely risky one. In my view it should at least be qualified by making reference to the earthquakes to which the building is known to have experienced and survived.

Later in the article, Mr Bowman quotes Article 4 of the International Charter for the Conservation and Restoration of Monuments and Sites. This Article states that it is essential to the conservation of monuments that they be maintained on a permanent basis. If a monument or building is truly of value but at risk to earthquake damage (in spite of having survived minor earthquakes) then the assumption of having withstood the test of time may not serve the long term protection of the monument very well at all. Surely responsible and well considered conservation demands a realistic appraisal of the integrity of the monument and its exposure to risk.

4. Local Government Amendment Act

The Local Government Amendment Act has been blamed for the demolition of many New Zealand's historic buildings, and Mr Bowman joins the list of critics. The requirements of the Act may well have been a catalyst but I personally do not believe that the demolition of our old masonry buildings had been entirely due to those requirements. In many cases the older buildings were unappealing to occupants and uneconomic for their owners. Such forces, together with the fact that the buildings represented an earthquake risk (irrespective of the existence of the local government act requirements) are virtually unstoppable. It is interesting to note that a good number of the most worthy buildings have not been demolished but have been strengthened and their character in many cases preserved.

5. Emergency Measures

Mr Bowman expressed his disappointment at the lack of support for his efforts to visit the Edgecumbe area as an expert in building conservation after the March 1987 earthquake. It would be interesting to learn more of Mr Bowman's efforts in this regard and what his intentions were. I believe that the NZNSEE would have welcomed the perspective of an expert in conservation when compiling its Reconnaissance Report.

In conclusion I compliment Mr Bowman on his paper and trust that it will provoke fruitful discussion amongst our members

AUTHOR'S REPLY

I was pleased to read this response to my article on historic building conservation in seismic zones and my reply is as follows:

The Californian State Historic Building Code is an attempt to address the identified problem of standard legislation which does not allow for the uniqueness of each historic building. It makes allowances for "archaic" building materials and forms of construction which do not conform to modern requirements or are easily analysed. The code allows individual engineers to exercise his/her professional judgement in each case and recognition is given to its previous history of earthquake survival. I would certainly concur that a realistic appraisal of the condition of and earthquake risk to the monument would be essential.

The Local Government Amendment Act has undoubtedly encouraged owners of buildings identified as at risk from earthquakes to determine the worth of these buildings. Quite clearly all old buildings are not historic, however I would suggest that those which can be identified as having cultural significance be considered separately from the requirements of the Act. Individual buildings of obvious historic worth are being strengthened and conserved, as noted, but where their significance is less clear, the decision to retain is more difficult. One such situation arises with buildings which are part of a "character area". Such precincts are so designated because of their value as a group and it may be that individual buildings are not significant. The removal of one building under this legislation can destroy the integrity of the whole area.

Where such areas have been identified by Local Authorities or the NZ Historic Places Trust, it is to be hoped that those buildings receive sympathetic treatment under the Act.

With regard to my attempts to visit the Edgecumbe area, I contacted four organisations who were involved with either investigating earthquakes or historic building conservation (among which was the NZNSEE). Unfortunately finance was not available from these organisations for a survey of historic buildings. I would hope in the future, that in accordance with the international recommendations, a fund be made available for such a task.

In conclusion, I hope that some of the issues in the article will be as favourably considered by other earthquake engineers and that by doing so, the retention of historic buildings can be enhanced.