

APPENDIX Z – ADDITIONS AND ALTERATIONS (Informative only)

Z1 APPLICATION AND GENERAL

This Appendix was part of AS1170.4 (1993) and is provided in the 2007 Commentary as an informative guide only for buildings in Australia that are to:

- have additions made to them
- be altered in extent
- have their structure changed in form or material
- have their occupancy changed from that for which it was originally designed.

It is recognized that it may not be possible to show that an existing structure can withstand the current design lateral forces acting on it as a whole. It is not intended that this Appendix should result in a disproportionate expenditure to achieve strengthening.

For heritage buildings, where strengthening of the structure would significantly reduce the heritage value, the need to conform to this Appendix may be assessed in the light of a special study that includes a risk assessment and implementation of measures to control the risk other than strengthening the structure (ie. controls on the presence of people).

General methods for assessment of existing buildings may be found in AS ISO 13822. Guidance on the strengthening of existing structures for earthquake may be found in AS 3826. This Appendix does not apply to domestic housing as defined in AS 4055 and AS 1170.4.

Z2 DEFINITIONS

An 'addition or extension' is defined as any construction or change to a building or facility which increases its external dimensions or cubic content.

An 'alteration' is defined as a change or modification of the character or condition of a building. The Building Code of Australia defines an 'alteration' in relation to a building as including an 'addition or extension' to a building.

Z3 GENERAL

Z3.1 General

For any increase in Importance Level the building should be checked to confirm compliance with the requirements of AS 1170.4. Where forces (actions) are transferred to an existing structure, the existing structure should be checked to confirm that it is structurally adequate to carry the additional forces (actions).

Z 3.2 Alteration to Occupancy

For any change of occupancy where floor loads are increased, the building should be checked to confirm it complies with the requirements of AS 1170.4.

Z 3.3 Addition or Alteration to Structure or Form of the Building

For Importance Level 2 or 3 structures, depending on the extent of the addition or alteration to the structure or form of the building, the completed building should be shown to comply with:

- For buildings where the change to external dimensions, volume or seismic mass does not exceed 30 percent and provided it is demonstrated that there is no reduction in the capacity of the lateral force-resisting system, the building may be deemed-to-comply with the requirements of AS 1170.4.
- For buildings where the change to external dimensions, volume or seismic mass exceeds 30 percent the buildings should comply with the requirements of AS1170.4.