



**AUSTRALIAN CAPITAL TERRITORY**

**BUILDING ACT 1972**

**DISALLOWABLE INSTRUMENT FOR THE PURPOSE OF 27(1)**

**EXPLANATORY STATEMENT**

**NO. 10 OF 1996**

This Instrument, made under subsection 27(1) of the Act, exempts Works and Commercial Services, being a government agency, from the application of the BCA specified in the Exemption Schedule in respect of the construction of the fire isolated lobby and corridor linking the central stair (Stair 3) with the exterior of Building 1 at Level 2 (Ground Floor) at Woden Valley Hospital.

It is a requirement of the *ACT Building Act 1972* (the Act) that all work undertaken on a project shall be in accordance with the Building Code of Australia (BCA). The Building Code is made up of the Building Code of Australia (BCA) and various appendices, including an ACT Appendix to the BCA. The BCA and its ACT Appendix consist of sections indexed from A to H. Subsection 27(1) of the Act provides that the Minister may exempt a government agency from the application of any or all of the provisions of the Building Code.

The Tower Block building comprises 10 levels, plus a sub-basement and a plant room above the 10th level. It is being totally refurbished in stages and completion is anticipated by 1997. The building has reinforced concrete floors and roofs supported on reinforced concrete beams and columns and has masonry external walls. The Buildings Regulations Audit considers it to be of Type A construction and the structural adequacy of the building has been accepted.

There are three fire escape stairs in the building, Stair 3 being the central stair, all of which are pressurised. Due to the difficulty of achieving a fire isolated escape route through the adjacent Building 2, Stair 3 is connected to the exterior by a fire isolated corridor discharging to the exterior of Building 1 at its East end.

BCA Clause D1.7(d)(ii) states that "a required fire isolated exit .....must be pressurised in accordance with AS (Australian Standard) 1668.1." However, if the fire isolated corridor were pressurised to comply with AS 1668.1, the combination of the positive pressure in the corridor and the negative pressure in an adjacent compartment when operating in a fire situation, (ie in an exhaust mode, therefore under negative pressure) would create a condition where the force required to open a door outward from the fire-affected adjacent compartment into the corridor would exceed the maximum force allowed under AS 1668 1

The fire isolated corridor joining Stair 3 to the exterior of the building has been so pressurised, relative to any adjacent compartment operating in an exhaust mode in a fire situation, that the corridor will be under positive pressure relative to that fire compartment, while still allowing the door to the compartment to be openable by a force not exceeding that permitted by AS 1668.1.

To assess the fire safety of this arrangement, Philip Chun and Associates, building surveying consultants, experts in interpreting and preparing recommendations on the BCA, were engaged by the Project Manager, Project Coordination Australia Pty Ltd, to examine the implications of allowing the fire isolated corridor which joins the central stair (Stair 3) to the exterior of the building not to be pressurised to the extent required by AS 1668 1

The consultant recommended that application be made for an exemption from the requirements of the BCA. The recommendation is supported by the Construction and Maintenance Management Service of Works and Commercial Services, the ACT Fire Brigade and the ACT Public Hospitals Redevelopment Project Director.

A sprinkler system has been installed in the fire isolated corridor and adjacent fire compartments. This sprinkler system ensures that any smoke generated will be significantly less than that from a fire which is not controlled or extinguished by a sprinkler system. Therefore, there will not be enough smoke to threaten the corridor.

The pressurisation systems installed to the fire compartments and Stair 3 comply with AS 1668 1. Illuminated Exit signs and emergency lighting have been provided in the corridor. The building has been equipped with a smoke detection system to provide an early warning to the occupants. A hose reel, located as directed by the ACT Fire Brigade, has been installed in this corridor to provide additional safety coverage.