Case Study 07

Capitol Apartments
Pyrmont NSW
Capitol Apartments is tucked in behind Darling Harbour, on a prominent but awkwardly-shaped site on a bend in Pyrmont Bridge Road. Darrel Conybeare was project manager and design director with Mark Broadley as project architect.

Conybeare describes it as a “European style development”, built up to the front boundary of the 700 m² site and backed by a narrow lane. “Our brief was to provide a mixed-use development in that the ground floor would be retail and shops and things that have to do with activating the Pyrmont Bridge Road streetlife, with varying sized units above.”

He describes the approval process as “requiring the resolution of challenging design ideas within the constraints of quite restrictive and inflexible development controls.” Oversighting and proximity to neighbours were tightly regulated in a way that Conybeare believes was more appropriate to a conventional stepped development. “I think there would be a more sophisticated approach today.”

There are 45 apartments from one to three bedrooms over the nine storeys, including two floors of penthouses and 17 ground-level shops. The building is concrete framed with concrete floor slabs and face brick above the second level. “Brick is a Pyrmont kind of material,” he contends. “Brick and sandstone form the fundamental building materials in Pyrmont.”
Since the introduction of the Building Code of Australia in 1988 we have had one of the most sophisticated systems for determining the ability of a wall to resist the ravages of fire.

In 1993 the Clay Brick and Paver Institute released *Fire Resistance Levels for Clay Brick Walls*, an innovative manual that enabled wall designers to readily assess the fire resistance level (FRL) for a wide range of wall configurations. This has recently been revised to accommodate changes introduced in AS 3700-1998, *The Masonry Structures Code*. The calculation of slenderness ratios has been altered and the percentage of voids allowed in a ‘solid’ brick has been raised slightly without affecting its insulation value. There are also revisions to reinforcement requirements and calculations for walls with recesses or chasing.

Unlike the old fire ratings (that is, pre-1988) the FRL system requires the designer to calculate three fire resistance periods (FRPs). **Structural adequacy** is the ability of a wall to continue its structural function during a fire. **Integrity** is its ability to maintain continuity and prevent the passage of flames and hot gases through cracks. **Insulation** ensures the side of the wall away from the fire does not exceed a pre-defined temperature.

An FRL of, for example, 90/90/90 indicates a fire resistance period of 90 minutes each for structural adequacy, integrity and insulation (and always in that order).

Careful attention was given to brick selection and detailing to articulate the facade of the building and evoke the rich traditional construction to be found in Pyrmont’s warehouses.

Red-brown brickwork predominates with tan infill panels linking levels. The window reveals are neatly detailed with soldier courses on three sides and shaped bricks on the sill.

Conybeare uses the term “new urbanity” to describe the building. “This is a building of the next century,” he explains. “It has to live in a heritage context and be part of that environment but at the same time it has to look forward. Our design philosophy was to achieve this in a contextual way, to take our cues from other Pyrmont buildings of that scale and adapt their architectural elements to provide appropriate reference to the past.”

“We aren’t necessarily striving to make a major statement, in fact to some extent we are even looking at a kind of background building approach, to create a timeless development.”

All units in Capitol Apartments were sold prior to completion in September 1998.