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## Case study: ON THE BEAT

Author and photographer- Peter Hyatt

*Bendigo has a new police headquarters and it's certain to put some spring into the step of the local constabulary. More often confined to hunker in their bunker, police rarely experience such luminous spatial qualities. Prismatic and purposeful, here is a community presence far less confronting and much more engaging. Finally this arm of the law has apprehended the highly....*

Modern police station design should be deterrent enough to resist a life of crime. The unpalatable truth is that even astringent funding can't be held fully responsible for the visual and functional failings that have brought a stash of 'modern' architecture into disrepute.

Metropolitan and regional police stations have shrunk in number and ballooned in size to deal with their expanding domains. Many of these are among the most unappealing civic designs money can buy. The problem isn't merely one of appearances. People whose work frequently involves long hours and real difficulty are asked for peak performance in harsh, difficult work environments.

But while there are failings, there are also successes that are cause for optimism. With 100,000 mostly law-abiding residents, Bendigo's new regional base represents a clear civic spirit and endeavour. The bonus for employee and community morale is obvious.

From its main road position, a pair of towering plane trees provide a botanical context for these headquarters. From inside this is no bad thing either because the leafy veil conceals not much evidence of gold rush era ornament as car yards, food outlets and barbeque sales rooms.

In this context the result was always bound to be groovy, but the sleek origami of lightweight construction and high performance glazing gives it a scalpel contoured finesse. A lightweight construction, the building combines steel, glass and pre-finished cement sheet with pre-cast concrete panels. Its expressed facades are like a freshly ironed shirt or skirt beautifully tailored and crisply pleated. And rather than treating doors and windows as the holes not filled in by bricks, a whole other expression of gleam and shine is provided.

A horizontal waistline on the south-west elevation is repeated on the north-west main road (High Street) elevation and sculpts a concave envelope with a glazed overhang.

### Glazing Specifications

"We developed a jig with a telescopic forklift, cradle and power-sucker to put each irregular shaped pane into place. We needed the assistance of a pair of booms on each side and involved five men per sheet and three pieces of equipment." *Carl Kampe-Director, Bremner Aluminium*

*All performance glass supplied by Viridian*

Inclined facade elements from 3.6 m x 2.4 m to varying smaller sections. All 13.52mm heat strengthened Coolblue laminated.

Behind the expressed façade is standard clear glazing. On all other exposed facades is 8.38mm Coolblue EnergyTech laminated by Viridian.

All other internal glazing including windows and balustrades is clear laminate 10.38mm up to 12.38mm with some smaller panels of 6.38mm clear laminated.

And there is no bluster or aggrandizement at work here. The idea of sustainability appears as a wholly integrated idea and in this respect the use of glazing to absorb light yet be resistant to heat is a central tenet of the design. In plan and elevations the building provides vital clues about its performance from the delta-shaped multi-dimensional glass 'facades', operable clerestory roof to the variation in clear and translucent glazing on the western staff entry.



Landscaped courtyards fragment the usual zone between 'us' and 'them' on the main High Street public access elevation. Here visitors can enter or leave without need to negotiate the familiar and, potentially off-putting, anonymous 'power' facades. It is a building without fences other than for police vehicle parking to the rear.



This intersection of glazed delta shape glass blades as double facades powerfully addresses its two primary street elevations with the most prominent feature being the visually distinguished, inclined glass. This cavity between the dual glazed 'facades' is planted with climbers supported on vertical wires to create a terrarium effect. Relief air for the supply of the double façade is supplied from the main atrium via the office spaces, or from low-level vents. This system supports

the dichotomy of a modern police force that requires 24-hour operational security and street surveillance, while presenting an accessible and transparent public image.

Project principal Greg Anson of FMSA Architects notes that a culture of openness and transparency was noticeable throughout the design process. Such an extensive use of glazing had other benefits including its active ESD response. "The glass eyelids are an environmental device designed to reduce energy consumption by seasonal shading of the western and northern inner facades. This creates a controllable, thermal buffer where windows can be opened to access cleaner, cooler or warmer air (depending on the season) without the potential traffic noise and security issues.

"We were encouraged to project an image of visibility and presence. We had to juggle those delicate roles of transparency and security. A decade ago this sort of expansion could have easily resulted in an inflated box with a deep floor-plate and none of the ESD or amenity issues you see today," he observes of the free-wheeling version that, "challenges expectations."

A central void and clerestory draws light and assists with ventilation. Accessible by perimeter corridor, footbridges and stairs, Anson points to the success of such circulation zones as a way of encouraging informal and unplanned meetings between the centre's 100 plus staff members. Even with its sizeable floor-plate, orientation is that much simpler as is the general awareness of the external environment.

Major operational areas revolve around the central streetscape act to realise a dynamic internal courtyard that flushes daylight down into and through a series of offices and holding

areas that radiate along its perimeter. Primary surfaces are pre-cast concrete walls 'decorated' with an appropriately golden acoustic panelled motif that has a playful ambiguity - a slash of sunlight or very rich vein of gold.

While pleased with the design progress made Anson says "It's not quite perfect. There are still too many small rooms and offices. From a cultural point of view we're trying to further break down and overcome that traditional hierarchy of divided offices and work areas." It's a fair point, while most rooms link effortlessly to the trees and light, some of the operational areas appear to retreat into their former corporate ways.

In the big gestures though the design embraces structural slenderness, lightweight cladding and transparency - the trend in modern construction. These are qualities being better promoted by architects and engineers as buildings undergo weight-training programs that parallel our understanding of a human health and fitness.

The demands for workplaces to be good environments and, ultimately, neighbours extends the role of design to a wider social responsibility. More than ever buildings are being assessed on performance basis expected of road, sea and air travel. Necessity increasingly dictates that these are fully responsive to their occupants and environment.

Projects such as the Bendigo Police Station demonstrate how buildings are effectively shedding mass to become thinner, lighter and ultimately 'Greener'. Thermal mass is used where it is needed at its base. Bulk is on the way out in favour of lighter, light-filled buildings with a luminous amenity.

Being highly automated and integrated with manual overrides the facility operates as a smart working environment. When windows are open, the air conditioning system shuts down and other building components respond accordingly. Automated windows, lighting controls, blinds, ceiling fans, façade venting and other mechanical systems are all controlled by the building management systems. Rainwater is collected for landscape irrigation and car washing. In a city facing the worst drought on record it's a minor, but essential, part of a wider design strategy.

A new attitude has arrived with this type of building that speaks of a friendlier, less intimidating environment inside and out. Miscreants may not notice, or care, about the lengths gone to in order to achieve such results. Law-abiding citizens can be comforted in the knowledge that they have such a high performance, user-friendly facility.

As economies around the world falter, the bluster and swagger of impersonal bully buildings finally appear to have had their day. Bendigo's police headquarters is pivotal for many reasons, not least it represent a generational change towards a more distinctive, commanding and accountable presence.

It also offers hope and optimism. Gone is the cop in the mirrored 'shades'. The transparency of these artful glass facades speaks of far greater connections within and beyond. Classy form, light-filled spaces and cool technologies are all handsomely apprehended.

**Project:** Bendigo Police Headquarters, Victoria

**Architect:** FMSA Architects

**Project architects:** Greg Anson, Peter Martin, Najib Zohab, Eric Ng, Karen Tan,  
Michael Thom, Kristine Piggford

**Engineer:** Sinclair Knight Merz

**Glass:** Viridian

**Glazier:** Bremner Aluminium

**Façade engineer:** Green Facades

**Builder:** Hansen Yuncken P/L

**Budget:** \$19.7 million

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