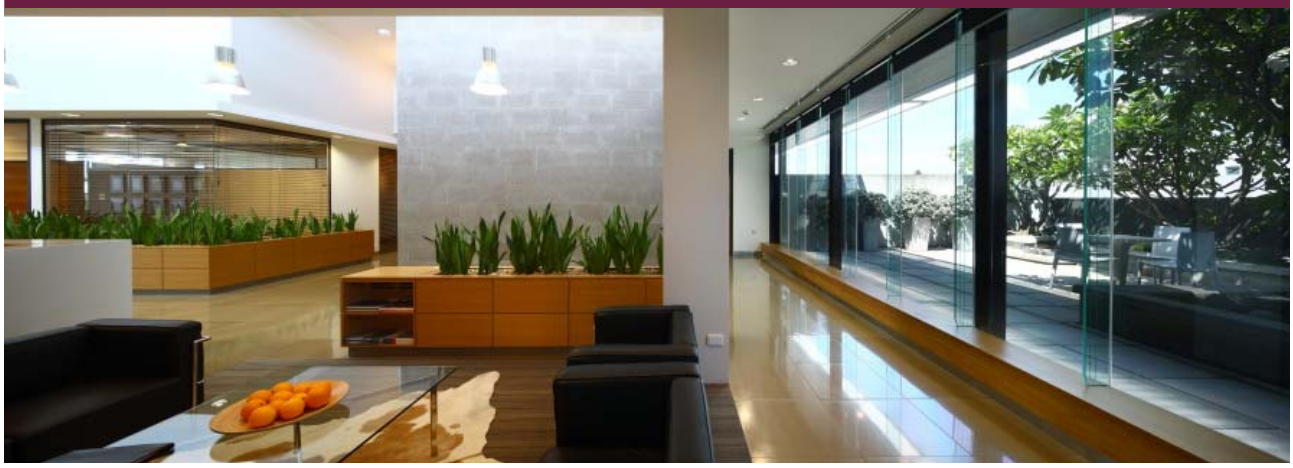
Wiley & Co transforms an old relic into a modern icon



SITUATION

Wiley has moved into its new head office at 100 Ipswich Road, Woolloongabba. Keeping the three-generation family company in the southside suburb was important and so when the disused Westpac Bank cheque processing facility beside the famous Norman Hotel came up for sale, the company recognised the potential of the well serviced building and began redeveloping it into a multi-award winning, sustainable A-grade commercial space.

Built in 1975 as a high security vault, the brown brick building was state-of-the-art. As a bank building, it required substantial power and cooling facilities to service a large mainframe computer and had more than 600m^2 of plant room and two standby generators. A few high narrow windows offering little natural light or views for workers, and concrete slabs to all floors, exaggerated the building's bunker-like features.

Today, the former unsightly landmark is a shining example of a modern eco-efficient building incorporating the latest design and construction features and is testament to Wiley's skill at creating better and more efficient facilities. Here is a closer look at the redevelopment project.

MANAGEMENT

Wiley undertook construction work under a site-specific environmental management plan and acted as the single point of responsibility for design, construction and commissioning.

INDOOR ENVIRONMENTAL QUALITY

To create a comfortable work environment inside the building, Wiley:

- Removed existing windows and lowered sill levels to increase natural light, which gave occupants external views to reduce eye strain
- Landscaped balconies to maximise the link to the outside
- Used laminated glass with UV and acoustic properties to minimise noise and UV transmission
- Added internal blinds to give daylight glare control
- Added to the west two layers of glass with ventilated planters to absorb the heat load and minimise traffic noise from Ipswich Road
- Added a large staff recreation area, including a kitchen and terrace, and small breakout areas near a library to encourage staff interaction
- Installed a security system and cameras to protect property and to allow inhabitants to feel safe and secure.

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ENERGY

The building's heavy concrete and masonry structure absorbs and holds heat, effectively working as a passive thermal mass to minimise energy consumption.

Wiley selected energy efficient light fittings and installed a CBUS system to control lighting and power. The CBUS is a microprocessor-based control and management system which allows accurate customised control, minimising use of fittings to actual requirements. The building's external lighting is set to illuminate every day 10 minutes before sunset and self-adjusts to the time of year. Lighting to low occupancy rooms is on a timer and air conditioning to these rooms is set to a two-hour switch. The CBUS system can be refined over time to minimise the building's power use.

TRANSPORT

The building is ideally located on a major city busway. Wiley added bike racks, showers and lockers on the ground floor to encourage staff to use public transport and other environmentally friendly and healthy alternatives to driving.

WATER

Wiley selected landscaping with low water requirements. The landscaping is timer-controlled and uses a drip sprinkle system. Fittings are water-efficient and sensor–controlled.

MATERIALS

Wiley recycled the entire building. A strong design feature which softened the building's bunker-like exterior was the addition of a four-storey bamboo screen to the front façade. The screen shades the glazing and softens the building's exterior.

As the major tenant, Wiley used materials wisely through an integral shell and core fitout. The company pursued a high level of fitout to reflect its signature of professionalism and quality development. The building was to speak for the company's vision and values. The material strategy was to use easily maintained natural products with the capacity to age well

HVAC

Wiley pursued many initiatives in HVAC, such as:

- Designing air conditioning using solar modelling to determine heat loads and drive the design of external shading devices
- Reconditioning and recycling a lot of the existing air conditioning.
- Creating landscaped terraces with raised concrete pavers to provide an air gap below which insulates the slab and reduces heat loading to spaces below
- Designing the top floor with overhangs of 1700 mm to provide window shading
- Selecting HVAC controls with energy efficient features, including:
  - a dedicated outside air system to reduce energy consumption on low occupancy rooms (training and meeting rooms)
  - controls based on outside air temperature rather than standard time clock (hours of operation are more efficient)

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Other energy-efficient features of the air-conditioning system are:

- A fully programmable time schedule for the entire plant
- Variable speed drives on the main air-cooled condensers to control the condenser fans during periods of reduced ambient temperature
- Push buttons, instead of switches, for after-hours operation of the main fan coil units, which set off a software timer that automatically stops the plant when the timer expires
- An 'unoccupied' mode to control temperatures and reduce energy use in low-use rooms, such as the conference room
- A variable speed drive on the main fresh air fan, which adjusts the fresh air quality to match the fresh air requirements of the operational fan coil units
- A dedicated fan coil unit in each thermal zone and discreet operational area so only a small fan coil unit is required for out-of-hours operation
- Use of solid state control on sub zones that have trim heaters, which minimises heating energy
- Air conditioning of the computer server room via the central plant during normal work hours and then by a standby split system after hours
- A sophisticated control system in the chiller plant for staging refrigeration and pumps to minimise energy consumption.

AWARDS

The Project was awarded the Master Builders Association State Award for 'Excellence in Building for Queensland's Climate' ($2M-$10M), Major Winner for Building's Owner/Tenant in the Energex Sustainable Buildings Awards, and a commendation for Environmentally Sustainable Design in the Interior Design Awards.