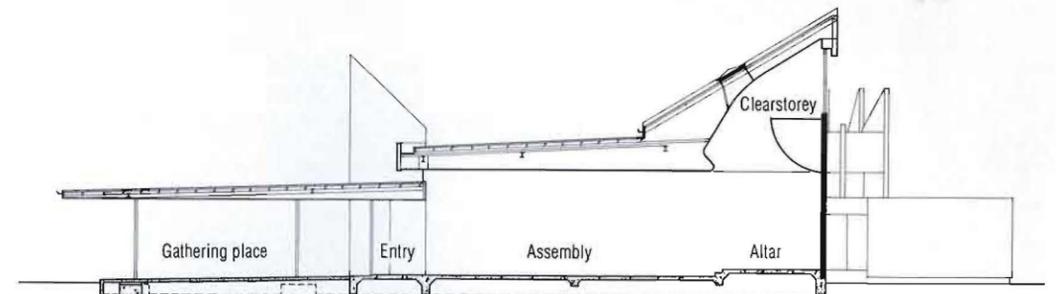


Mary McKillop Catholic Church

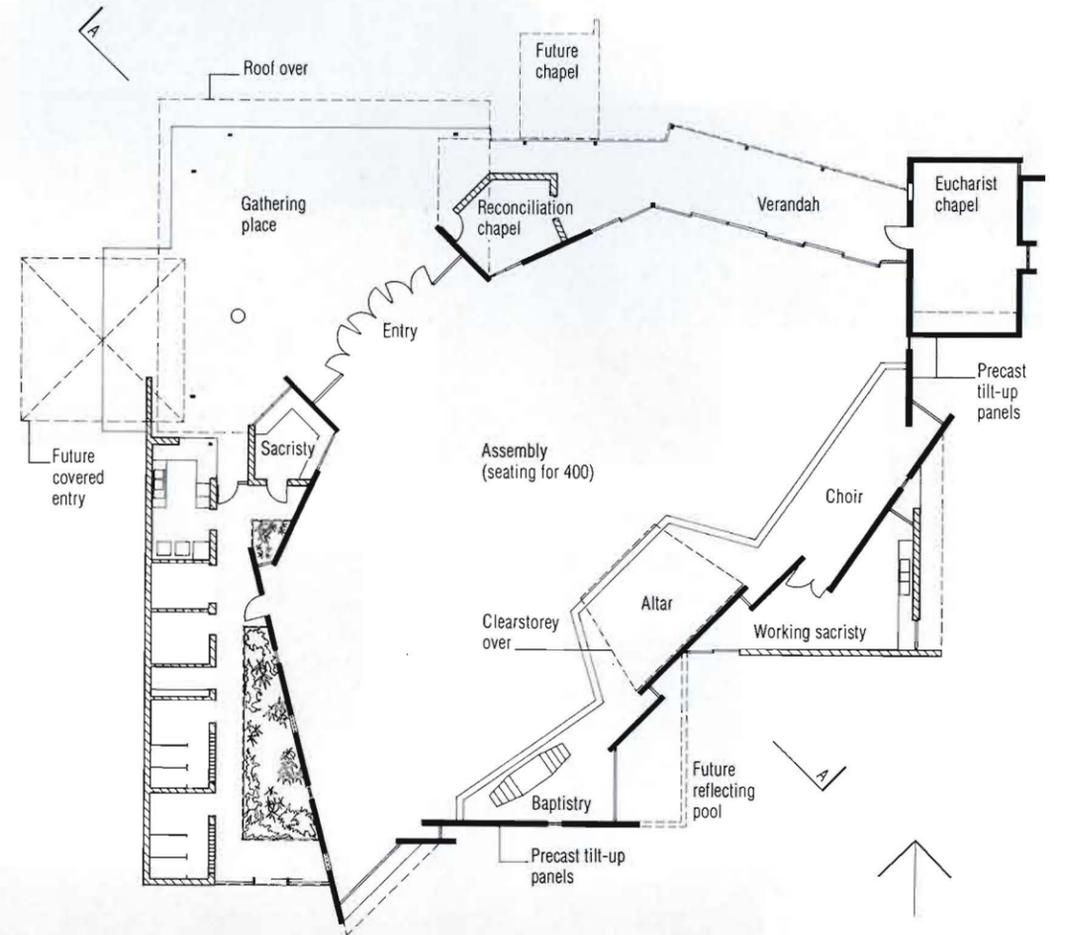
- LOCATION**
Birkdale, Qld
- CLIENT**
The Corporation of the Trustees of the Roman Catholic Archdiocese of Brisbane (Fr Luke Reed Parish Priest)
- ARCHITECT**
Heathwood Cardillo Wilson Pty Ltd
- STRUCTURAL ENGINEERS**
Peter S McAdam and Co Pty Ltd
- ELECTRICAL ENGINEERS**
Engineering Technology Consultants
- HYDRAULIC ENGINEERS**
Neil Blair and Associates
- QUANTITY SURVEYORS**
Butler Wright and Partners
- ACOUSTIC CONSULTANT**
Ron Rumble Pty Ltd
- LANDSCAPE ARCHITECT**
Greenspace
- BUILDER**
Rohrig Constructions Pty Limited
- PRE-MIXED CONCRETE**
Boral
- TILT-UP ACCESSORIES**
Ramset
- TILT-UP PANELS**
George Voysey

COST
\$747 000

COST/m²
\$670 excluding carparks and roads



SECTION A-A



GROUND FLOOR PLAN

0 2 4 6 8 10m

A LIMITED budget and a practical brief provided the ideal opportunity for the architects to take advantage of the economies of tilt-up construction, as well as to use the system imaginatively to produce a memorable image for this new Roman Catholic church.

The Building Committee of this new parish, which incorporates the bayside suburbs of Thornlands, Birkdale and Wellington Point, had no preconceived ideas as to the appearance of their new church. They were not interested in historical precedents but gave the architects the instruction that 'the building or cover enclosing architectural space is a shelter or skin for a liturgical action. It does not have to look like anything else past or present'. The architects were advised that it was their task 'to design the space, using contemporary materials and modes of construction ...

Constraints on design were that the parish was not wealthy and that the church should be constructed economically and that the structure should prove to be durable with minimum maintenance requirements.

The building is multi-purpose and used for local concerts and meetings but is predominantly a church accommodating and responding to the liturgy.

Internally it was essential for the church to give a sense of community to the congregation and between the congregation and the priest. It was felt that it should reflect the characteristics of its inspiration, Mary MacKillop, in that it should be basic, practical, down to earth and devoid of artifice but to still retain a sense of mystery.

The fan-shaped layout focuses the attention of the congregation on the priest and the sanctuary and with only ten rows of seating there is a strong feeling of intimacy.



The church nevertheless has a seating capacity of 400 with provision for another 150. For special occasions 776 worshippers can be seated by using the verandahs, chapel and gathering space.

The site was formerly used for crop farming and is elevated from its surroundings so that the silhouette of the church was important. In response to this requirement the building is formed by a series of tilt-up panels with raking tops arranged unconventionally to structure the fan-shaped plan, frequently with the top of the panels soaring above the roof line.

The ample site provided sufficient space for the tilt-up panels to be cast individually on special casting beds fanning out around the perimeter of the church floor slab and each close to their final location. Panels were cast on ribbed metal decking to provide a vigorous vertical ribbed appearance. The top surface which was to be the internal face was grit blasted to remove the slurry and reveal the light-coloured stone aggregate from the Pine River. The panels were 170-mm thick excluding the ribs and were cast of S32E3 concrete with a mix containing off-white cement, and Pine River sand and aggregate.

Drains were cast into the top edge of each panel discharging onto the roof to reduce staining to the face of the panel from the local red dust.

The 22 panels were erected in eight hours using an 80-tonne crawler crane, with the heaviest panel weighing 18.45 tonnes. Panels generally had four lifting points but on the taller panels eight points were used. They are dowelled into a recess in the slab edge.

Panels generally stand with windows between them so it is only in the chapel that adjacent panels are bolted together and the joints sealed using a thixotropic joint sealant on polyurethane base over a backing rod.

The foundation soils are highly reactive so a deep concrete raft slab supports the loadbearing tilt-up panels which in turn support the deep plane of steel roof framing.

Externally the ribbed concrete walls are in harmony with the off-white brick walls of the secondary structures. Internally lighting from skylights floods the altar with natural light emphasising the contrast between textured walls and the highly finished blond timber of the sanctuary furniture. Seventy percent of the ceiling is acoustically treated to absorb sound. Except for polished timber sound dispersing battens on two entry side panels, no special acoustic treatment was required for the wall as the reflection of sound provided by the concrete gives life to the church music, especially to choral works.

The designers of the Mary MacKillop Catholic Church were recipients of a Concrete Institute of Australia Excellence in Concrete Award at Concrete 95 held in Brisbane late last year.