



STATEMENT

DATE	23/04/	JOB	2639	PAGES	1 of 2
PROJECT	Saints Peter and Paul Assyrian Primary School				
TO	Scott Hay - Planner				
COMPANY	Department of Planning and Environment				
FROM	Tim Williams				
REFERENCE	SSDA 9210				

ARCHITECTURE
INTERIORS
MASTERPLANNING

SYDNEY
MELBOURNE
HONG KONG

pmdl.com.au

The GANSW requested further details regarding user-operability of the proposed ventilation system. In reply, we offer the statement below:

The project has been designed specifically to maximise the use of natural ventilation at all times of the year when the outdoor air temperature is suitable. This is in order to decrease the use of the Mechanical Ventilation with Heat Recovery (MVHR) system and the air conditioning (A/C) systems to the minimum possible in order to create comfort conditions during the hotter and cooler times of the day or times of the school year, with the ensuing energy reduction and associated long-term cost benefits to the school.

In order to achieve this aim, the design includes glass louvres at ground floor level and at underside of roof level on opposing façades in order to encourage a natural crossflow of fresh air utilising the warm-air-rises, 'buoyancy' principle. On hot days, this can be used as a night-purge system if motorised on a timer control and if the client so chooses.

Alternating, mono-pitched roofs along with large voids in the first floor slabs allows this natural ventilation system to work without any mechanical assistance, as and whenever desirable to the occupants. Each space can be managed independently as well as the whole building as one, if the client chooses to incorporate a Building Management System for this purpose.

On days or times of days when the outdoor air temperature is outside the standard comfort range but not significantly, then the MVHR system will be utilised with simple on/off controls for clearly defined areas of the project as per the staged construction process.

On extreme hot and cold days or times of days, the A/C system may be utilised in each individual learning area, again simply controlled by a member of staff with an on switch on the wall and an automatic off switch responding to an occupancy sensor.

The principles behind all of these early design decisions were threefold:

- 1. Maximise the use of natural fresh air for as many days of the school year as possible in this western Sydney environment;*

NSW Nominated Architects:
Andrew Pender 5317
David Morris 5865
Vicki van Dijk 9476

PMDL Architecture & Design Pty Ltd
ABN 56 062 961 317
PMDL Architecture & Design HK
Limited



2. *Minimise the energy requirements of the mechanical systems by utilising MVHR whenever possible prior to needing to use the A/C system on extreme temperature days only;*
3. *Simple operation with default to off when areas are not occupied.*

The architects worked in conjunction with the client's ESD Consultant, Cundall, to formulate this overall design approach. This has the added benefit of maximising daylight access, which together with natural ventilation and high concentrations of fresh air, creates better learning outcomes.