

BACKGROUND INFORMATION FOR TUTORS USING CLASSROOMS IN THE GLEN EIRA U3A MAIN CAMPUS

Major improvements were made to the ventilation system at the Glen Eira U3A main campus building in 2018. Those changes ensured that the building meets the requirements for fresh air ventilation in all classrooms in the main building.

Tutors need to ensure that they prepare each classroom to ensure the comfort of participants. This will often require the use of air conditioners for heating or cooling, in addition to the ventilation delivered through vents.

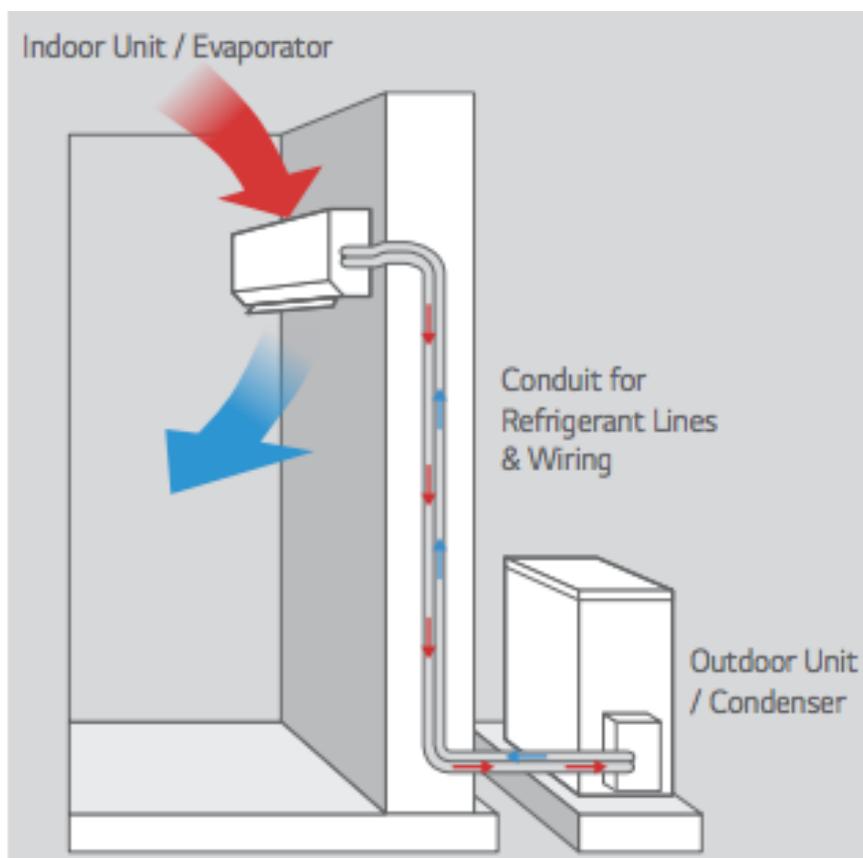
AIR CONDITIONERS

There are air conditioners in every classroom, with controls on the wall near the air conditioning units. Every air conditioner installed is a 'split system'.

A Split System Air Conditioner

- It draws in air from the room
- It passes it over refrigerant lines, (as the refrigerant heats up, the heat is passed to the outdoor unit where it releases the heat)
- The cooler air is released into the room
- It does not bring in outside air and therefore provides no ventilation

It is very important to note that split system air conditioners do not draw in any fresh air for ventilation. They are only used for heating and cooling.



VENTILATION

Ventilation in classrooms in the main building is provided by air vents in the ceilings or on the walls. Fresh air is drawn into an air exchange on the roof. The air exchange is designed to ensure that the fresh air being delivered to classrooms is at a similar temperature to the ambient temperature in the building.

Comfort in the classroom then becomes dependent on the use of air conditioners for heating or cooling.

Example of an air exchange:



In March 2021, we commissioned a measurement of the fresh air being delivered through the air vents in the main building. Results demonstrated that appropriate fresh ventilation levels are being achieved.

Note that in the two studio rooms, split system air conditioners are installed, but fresh air ventilation can be achieved by opening windows.

HISTORY OF THE GLEN EIRA U3A MAIN CAMPUS BUILDING

Our main building was completed in 2010.

Earlier building plans had included a row of windows in each classroom in the main building. However, changes were made to reduce costs, which led to the windows in each classroom being removed from the plan.

In late 2017, following some adverse comments from members, we became very concerned about ventilation in our building. We employed an air conditioning expert who advised that we did not have adequate ventilation. Vining Air undertook a full assessment and recommended aiming for 7.5 l/s per person in all our rooms based on size and occupancy. They identified this would require much bigger vents in each room, and a new air exchange on the roof to provide 1,000 l/s.

We commissioned a commercial air conditioning firm, A E Smith Pty Ltd, to replace the air exchange and install large vents in every room to meet the recommended requirement. The work was undertaken in 2018 at a large cost.

Recently there were complaints about heat in the three green rooms during hot weather. This largely arose from a decision by the tutor to not use the air conditioners. In response, the ventilation levels have been rechecked and found to meet requirements. This experience demonstrates the importance of the interaction of both ventilation, and use of air conditioners for heating and cooling.