

ITEM 1.3(c)

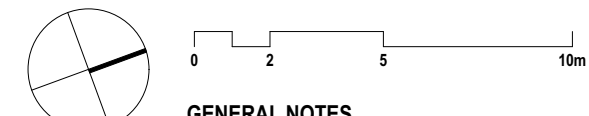
Issue/ Objection:
Natural Ventilation

Description:
The proposal includes the five single aspect maisonette units as achieving natural cross ventilation. Further evidence is required demonstrating how these units achieve natural cross ventilation. Consideration should also be given to alternative dieting solutions for non-cross ventilated units to improve natural ventilation.

ADG Objective:
Objective 4B
Objective 4B-3
Definition of Cross Ventilation

Response
29 Apartments achieve compliance as per the apartment design guide's (ADG) definition of natural cross ventilation. 5 Apartments achieve cross ventilation as detailed in qualitative assessments undertaken by ARUP. Refer to all additional information prepared by ARUP.

Complies? Yes



GENERAL NOTES

- ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK
- ALL LEVELS RELATIVE TO 'AUSTRALIAN HEIGHT DATUM'
- DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY

LEGEND

235425-24
18 October 2017

Page 3 of 6



Figure 3 - Levels 2-5, naturally cross ventilated apartments shown in blue.



Figure 4 - Levels 6-7, naturally cross ventilated apartments shown in blue.

There are 3 apartments on level 6 and 3 apartments on level 7. All 6 apartments would be considered naturally-cross ventilated.

Expert opinion for natural ventilation

Sydney is subject to relatively high mean wind speeds with three prevailing wind directions; north-east, south, and west during the temperatures when residents would seek the benefit of natural ventilation. The climate is therefore well suited to natural ventilation. It is Arup’s opinion that high levels of natural ventilation would be achieved within single-sided duplex apartments that are not considered dual aspect.

235425-24
18 October 2017

Page 4 of 6

Figure 5 shows how pressure differentials on the windward wall of an articulated single-sided duplex apartment caused by a prevailing wind form the south would be expected to result in good natural ventilation through the living areas of the upper level of the duplex apartment. A similar pattern would be expected on the lower level of the duplex. Note that external wind patterns would dominate air flow over stack driven ventilation. The internal apartment layout is considered well designed to develop good quality ventilation through the duplex apartment.

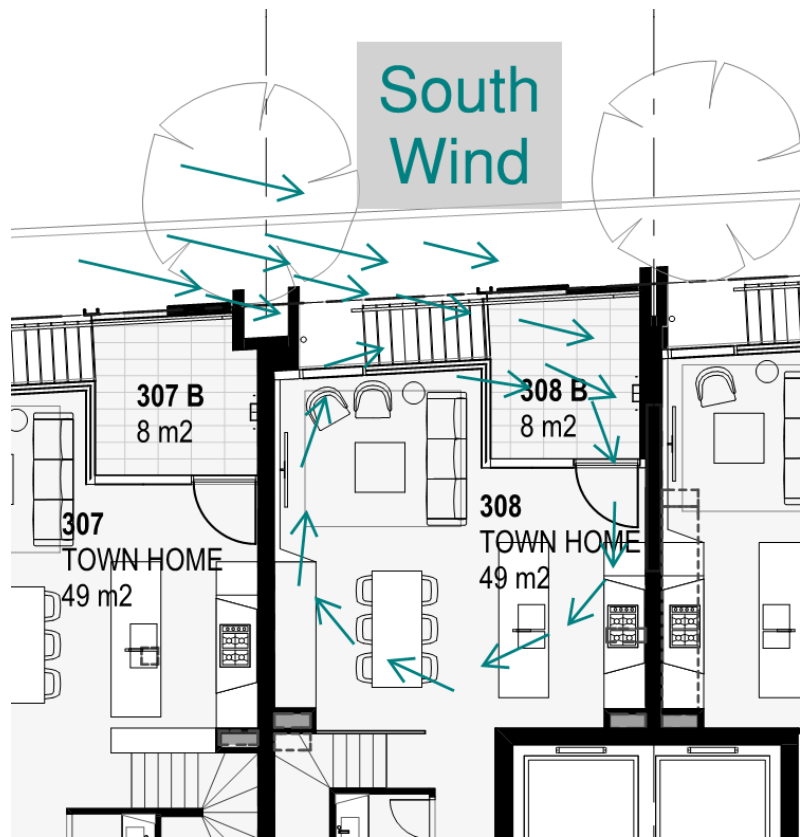


Figure 5 - Potential flow pattern inside duplex apartment

Figure 6 shows how pressure differentials on the windward wall of an articulated single-sided apartment cause by a prevailing wind form the north-east would be expected to result in good natural ventilation through the living areas in the apartment. The internal apartment layout is considered well designed to develop good quality ventilation through the apartment.

REVISION	DATE	DESCRIPTION	BY

PROJECT

85 Harrington Street
The Rocks
GOLDEN AGE & HANNAS THE ROCKS

TITLE
RESPONSE TO DoPE
ITEM 1.3(c)

SCALE	1:200 @ A2	PROJECT CODE
DATE	18/10/2017	GA85H
SHEET NO.	013	REVISION

For Review