

Green Star – Design & As Built Submission Template

Ensure all prompts shown in **Blue text** have been responded to.

Design Review / As Built Submission [Delete as appropriate]

Credit: Quality of Indoor Air

Project Name: [name]

Project Number: GS- [####]

Points available: 4

Points claimed: [1, 2, 3 or 4]

Providing high quality indoor air

The project has been designed to provide a high quality of indoor air by improving system attributes, supplying increased outside quantities and eliminating pollutants in accordance with the following criteria:

Credit Criteria	Description	Points available	Points claimed
1 Ventilation System Attributes	The ventilation system attributes are met.	1	<input type="checkbox"/>
2 Provision of Outside Air	Outside air is provided at greater than 50% over the minimum required levels; OR CO ₂ levels are maintained at below 800 ppm.	1	<input type="checkbox"/>
	Outside air is provided at greater than 100% over the minimum required levels; OR	2	<input type="checkbox"/>
	CO ₂ levels are maintained at below 700 ppm; OR Naturally ventilated spaces – the requirements of AS1668.4-2012 are met.		
3 Elimination of Exhaust of Pollutants	The nominated pollutants are eliminated or exhausted.	1	<input type="checkbox"/>

[Please enter the number of points claimed for each criterion, 0 if no points are being claimed or N/A if the criterion is not applicable to the project]

1. Ventilation System Attributes

'Ventilation System Attributes' recognises systems that, by design, prevent the ingress of pollutants that reduce indoor air quality. The credit also requires that any installed ductwork is designed to be easily maintained and cleaned, and where this ductwork is cleaned before building occupation.

1.1 Entry of Outdoor Pollutants

The prevention of entry of outdoor pollutants is demonstrated by:

Prescriptive Method

Performance Method

[Provide an explanation of the site and design features which exist in the project that satisfy the selected compliance method]

[Insert hyperlinks to documents which support these claims]

1.2 Ease of maintenance and cleaning

[Provide an explanation of the design features which have been incorporated into the system design to meet the requirements of this section OR confirm the absence of any ductwork]

[Insert hyperlinks to documents which support these claims]

1.3 Cleaning prior to use and occupation

[Provide a description of the cleaning procedures and their compliance with at least one of the listed standards OR confirm the absence of any ductwork]

[Insert hyperlinks to documents which support these claims]

2. Provision of Outside Air

'Provision of Outside Air' recognises designs that provide ample outdoor air to counteract the build-up of air pollutants. The credit has different compliance pathways for different modes of ventilation. Below is a summary of spaces and how they are ventilated.

Table 1 Schedule of all spaces within the building

Space	Area	Mode of Ventilation (Mechanical, Natural Ventilation, Mixed Mode)

1.4 Naturally Ventilated Spaces

The project has demonstrated that [95%] of the nominated area is naturally ventilated in accordance with AS1668.4-2012. It is clearly demonstrated that areas nominated as 'naturally ventilated' can be occupied without mechanical ventilation, and that no air conditioning has been provided.

Select the approach used to determine the adequate provision of natural ventilation openings as per Additional Guidance section of the IEQ-1 'Ventilation Rates' credit:

- Proposal submission for peer review
- Empirical calculations
- Computer modelling

Complete the following tables for all naturally ventilated* occupied spaces pursuing this option:

Table 2 Schedule of Naturally Ventilated Areas

Space/Floor	Nominated Area (m ²)	Required Opening Size	Opening Provided	Compliant? (Y/N)
		m ² open area	m ² open area	
[e.g. 1 st Floor]	[m ²]	[m ²]	[m ²]	[Y/N]
[e.g. Laboratory]				
[e.g. 2 nd Floor]				

Total nominated area (m²)	
Total compliant area (m²)	
% Area Compliant	

[Insert hyperlinks to documents which support these claims]

*For spaces that use mechanically assisted natural ventilation (MANV) systems are systems that rely, partially or fully, on fans to move natural (non-contaminated) air through the space. For the purpose of this credit, MANV systems must comply with the same criteria as air-conditioned spaces in section 1.2 (to ensure fans are sized to deliver the desired air volumes).

Therefore, as demonstrated above, the above listed naturally ventilated areas are eligible to achieve 2 points for demonstrating that at least 95% of the nominated area is naturally ventilated.

1.5 Mechanically Air-Conditioned Spaces and Mechanically Assisted Naturally Ventilated Spaces

This project has demonstrated that for [95%] of the nominated area, outside air is provided at rates greater than the requirements of AS1668.2-1991. An improvement of [50%, 100%] above the minimum outside rates has been documented.

Complete the following tables for all mechanically ventilated occupied spaces pursuing this option. Determine the minimum ventilation rates from AS1668.2-1991 and percent improvement:

Table 3 Schedule of Mechanically Ventilated Areas

Air Handling Unit	Space/Floor	Nominated Area (m ²)	AS1668.2 Requirements			Project Rates	% Improvement	No. of points achieved [1, 2]
			Net Floor Area per person	Quantity (L/S/ Person)	Min OA per Space (L/s)	Min OA per Space (L/s)		
[e.g. AHU – North]	[e.g. 1 st Floor]	[10m ²]	[10m ²]	[e.g. 7.5l/s/person]	[e.g. 75L/s]	[e.g. 115 L/s]	[e.g. 53%]	[e.g. 1 point]
[e.g. AHU – North]	[e.g. Laboratory]							
[e.g. AHU – North]	[e.g. 2 nd Floor]							

Total nominated area (m²)	
Total compliant area (m²)	
% Area Compliant	

Table 4 Air Handling Units Serving Project

Air Handling Unit	AS1168.2 Min OA requirement (L/s)	Project AHU OA rate (L/s)	% Improvement	No. of point achieved [1, 2]
[e.g. AHU – North]	[e.g. 1 st Floor]	[10m ²]	[e.g. 53%]	[e.g. Y, 1 point]

[Insert hyperlinks to documents which support these claims]

Therefore, as demonstrated above, this project is eligible to achieve [1 or 2] points for providing a [50%, 100%] improvement in outside air greater than minimum outside air rates for 95% of the nominated area.

1.6 Mixed Mode Ventilated Spaces

The space or the building uses both natural and mechanical ventilation and independently satisfies the criteria for both naturally ventilated and air-conditioned spaces, regardless of the proportion of time the space operates in either mode. Sections 1.1 and 1.2 have been completed for their associated spaces and supporting documentation provided. Points awarded will be limited to the maximum points awarded under the mechanical ventilation criteria.

Table 5 Schedule of Mixed Mode Areas

Space/Floor	Nominated Area (m ²)	Compliant with Mechanical Ventilation Requirements (Y/N)	Compliant with Natural Ventilation Requirements (Y/N)
[e.g. 1 st Floor]	[Mechanical Natural]	[Y/N]	[Y/N]
[e.g. Laboratory]			
[e.g. 2 nd Floor]			

Total nominated area (m²)	
Total compliant area (m²)	
% Area Compliant	

[Insert hyperlinks to documents which support these claims]

Therefore, as demonstrated above, this project is eligible to achieve [1, 2] points for providing both natural ventilation and mechanical ventilation consisting of a [50%, 100%] improvement in outside air greater than minimum outside air rates for 95% of the nominated area.

3. Exhaust or Elimination of Pollutants

[Provide a description of how the project meets the requirements of the credit, outlining the compliance pathway(s)]

Description of Exhaust Riser(s)

[Provide a description of how the tenant's exhaust riser(s) is controlled and operated]

Table 1 provides details of how the tenant exhaust riser has the capacity to serve all floors.

Table 6: Calculating Compliance

Floor	Nominated Area (m ²)	Required Exhaust rate (L/s/m ²)	Required Air Flow Rate (L/s)	Air Flow Rate Provided (L/s)	Floor take off size capacity (L/s)	Floor take off size capacity as air floor rate (L/s/m ²)
[Level 1]						
[Level 2]						
[Level 3]						
[Level 4]						

[Insert hyperlinks to documents which support these claims]

Therefore, as demonstrated above, this project is eligible to achieve 1 point for complying with the requirements for the exhaust or elimination of pollutants.

Discussion

[Insert any issues you would like to highlight and clarify to the Assessment Panel.]

Date issued: April 2014

Author Details:

[Insert name, position and contact details of author]

[Date]

— **Report end** —