

Part 1 Energy Efficiency

NRB 1-4 Natural Ventilation / Mechanical Ventilation

Actual Assessment Submission ☐Site Verification Submission ☐

Criteria	Credit Available	Credit Claimed
(a) Natural Ventilation		
(i) Building layout with the cross ventilation	10	
(ii) Ventilation simulation modelling	10	
OR		
(b) Mechanical Ventilation	15	

Strategies:

Documentary Evidences:

Order of documents to be submitted accordingly and clearly labeled.

	Actual Assessment	Submitter	Assessor
<i>1-4(a)(i) Building layout with the cross ventilation</i>			
1.	Architectural plan layouts showing the units / rooms of all blocks with highlights of those with north and south window openings.	<input type="checkbox"/>	<input type="checkbox"/>
2.	Calculation showing the percentage of units or rooms with window openings facing north and south directions in the prescribed formats as shown in Table 1-4(a).	<input type="checkbox"/>	<input type="checkbox"/>
<i>1-4(a)(ii) Ventilation simulation modelling</i>			
1.	Ventilation simulation modelling result and analysis or wind tunnel testing to identify the most effective building design and layout which achieve average wind velocity at least 0.6m/s or more.	<input type="checkbox"/>	<input type="checkbox"/>
2.	A summary of the recommendation from the ventilation simulation report.	<input type="checkbox"/>	<input type="checkbox"/>
3.	Architectural plan layout highlights the implementation base on the recommendation from the report.	<input type="checkbox"/>	<input type="checkbox"/>
<i>1-4(b) Mechanical Ventilation</i>			
1.	Plan layout demarcate the area with mechanical ventilation system.	<input type="checkbox"/>	<input type="checkbox"/>
2.	The overall design and drawings for mechanical ventilation system to make up the required outdoor air quantity into the building at desire fan power limit.	<input type="checkbox"/>	<input type="checkbox"/>
3.	Detailed calculations showing the fan power improvement.	<input type="checkbox"/>	<input type="checkbox"/>
4.	Product catalogue of the fan power used.	<input type="checkbox"/>	<input type="checkbox"/>

Site Verification		Submitter	Assessor
<i>1-4(a)(i) Building layout with the cross ventilation</i>			
1.	As-built architectural plan layouts showing the units / rooms of all blocks with highlights of those with north and south window openings.	<input type="checkbox"/>	<input type="checkbox"/>
2.	Calculation showing the percentage of units or rooms with window openings facing north and south directions in the prescribed formats as shown in Table 1-4(a).	<input type="checkbox"/>	<input type="checkbox"/>
3.	Describe any deviations or changes to the AA submission.	<input type="checkbox"/>	<input type="checkbox"/>
<i>1-4(a)(ii) Ventilation simulation modelling</i>			
1.	Ventilation simulation modelling result and analysis or wind tunnel testing to identify the most effective building design and layout which achieve average wind velocity at least 0.6m/s or more.	<input type="checkbox"/>	<input type="checkbox"/>
2.	A summary of the recommendation from the ventilation simulation report.	<input type="checkbox"/>	<input type="checkbox"/>
3.	As-built architectural plan layout highlights the implementation base on the recommendation from the report.	<input type="checkbox"/>	<input type="checkbox"/>
4.	Describe any deviations or changes to the AA submission.	<input type="checkbox"/>	<input type="checkbox"/>
<i>1-4(b) Mechanical Ventilation</i>			
1.	The overall design and drawings for mechanical ventilation system to make up the required outdoor air quantity into the building at desire fan power limit.	<input type="checkbox"/>	<input type="checkbox"/>
2.	Detailed calculations showing the fan power improvement.	<input type="checkbox"/>	<input type="checkbox"/>
3.	Product catalogue of the fan power used and its purchase and delivery order.	<input type="checkbox"/>	<input type="checkbox"/>
4.	Photographic evidences.	<input type="checkbox"/>	<input type="checkbox"/>
5.	Describe any deviations or changes to the AA submission.	<input type="checkbox"/>	<input type="checkbox"/>

