

6	IEQ	6.4 VENTILATION	
		<b>IEQ 10 BACKGROUND VENTILATION</b>	
	<b>EXCLUSIONS</b>	Buildings not designed to utilise natural ventilation.	
	<b>OBJECTIVE</b>	Ensure that normally occupied premises designed to utilise natural ventilation are provided with a minimum of background ventilation to control indoor air pollutants.	
	<b>CREDITS ATTAINABLE</b>	1	
	<b>PREREQUISITES</b>	Compliance with the Building (Planning) Regulations (B(P)Reg.) 30, 31 and 32.	
	<b>PREREQUISITES</b>	1 credit where it can be demonstrated that adequate ventilation can be achieved by natural means.	
	<b>ASSESSMENT</b>	<p>The Client shall provide evidence in form of a report by a suitably qualified person stating that appropriate analysis or measurements have been undertaken to verify the adequacy of background ventilation (minimum air change rate).</p> <p>The minimum ventilation rate required to maintain known contaminants below recognised limits can be calculated using recognised procedures, for example, Appendix D of BS 5925 [1] or similar.</p> <p>Ventilation performance may be simulated using wind tunnel tests, computational fluid dynamics (CFD) or other appropriate modelling techniques [2,3].</p> <p>The modelling technique shall show a boundary layer as appropriate for the site, and the model will include any significant buildings and site obstructions within a distance of approximately 2 building heights. The pressure data will be used with recognised calculation procedures (e.g. BS 5925) to estimate flows through the habitable areas. Buoyancy or turbulence driven flows need not be considered. Ventilation rates can be predicted using either CFD or approaches that range in complexity from simple single zone models to elaborate multi-zone models [2]. Principles of model operation are discussed in the ASHRAE Handbook [4].</p> <p>Alternatively, a suitable commissioning test may be performed, for example a tracer gas decay test [5]. The test should be carried out in representative units as defined above and performed under average wind conditions with windows closed and purposely designed ventilators open.</p> <p>Where it can be demonstrated that background ventilation meets ACH of 2.0 that is of a higher level (ACH of 1.5) as prescribed by the Building Authority (BA), the credit can be awarded.</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p>

- 1 BS 5925:1991 (Inc. Amendment No 1), Code of Practice for Ventilation principles and designing for natural ventilation. British Standards Institute, London. December 1995.
- 2 American Society for Testing Materials. ASTM E 2267-03. Specifying and Evaluating Performances of Single Family Attached and detached Dwellings – Indoor Air Quality. 2003.
- 3 American Society of Heating, Refrigerating and Air Conditioning Engineers. ASHRAE Fundamentals Handbook Chapter 26. Atlanta 2001.
- 4 American Society of Heating, Refrigerating and Air Conditioning Engineers. ASHRAE Fundamentals Handbook Chapter 26. Atlanta 2001.
- 5 ASTM E 741-00. Standard Test Method for Determining Air Change in a Single Zone by means of a Tracer Gas Dilution. American Society for Testing Materials. Pasadena USA. 2000.



Circular Letter No.: 2014.119

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Application: BEAM Plus NB Version 1.1  
BEAM Plus NB Version 1.2

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### **Credits Not Applicable to Not Normally Occupied Buildings**

This circular letter announces that the following credits are not applicable to buildings that are not normally occupied (e.g. pump stations, sewerage treatment plants).

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- SA 2
- SA 3
- IEQ 10
- IEQ 15
- IEQ 16
- IEQ 21
- IEQ 23a

Signed :

A handwritten signature in blue ink, appearing to read "Ray", is written over a horizontal line.

Dr. Raymond Yau  
Chairperson of Technical Review Committee

**Q11. IEQ 7, For BEAM Plus New Buildings Version 1.1 and 1.2, is it necessary to demonstrate that the measurement is taken at background mode?**

**Q12. IEQ 8 (second Bonus credit), for BEAM Plus Existing Building Version 2.0 Comprehensive Scheme, whether the “Indoor Air Quality Certification Scheme for Office and Public Place” certificate should cover the whole development or part of the development:**

**Q13. IEQ 10, For BEAM Plus New Buildings Version 1.1 and 1.2, should domestic kitchen be considered as normally occupied premises?**

No. Normally occupied areas are enclosed areas where people normally stay there for more than 1 hour per person per day on average.

(Released on 29 November 2019)

**Q14. IEQ 11a, for BEAM Plus New Buildings Version 1.1 & 1.2, if the Applicant does not provide any ventilation equipment for kitchen and toilet areas, should these areas be included in the assessment?**

**Q15. IEQ 11a, For BEAM Plus New Buildings Version 1.1 and 1.2, should T&C records of window fan/propeller fan without air duct required to be submitted in the Final Assessment?**

**Q16. IEQ 11b, For BEAM Plus New Buildings Version 1.1 & 1.2, is clubhouse applicable to this credit?**

**Q17. IEQ 12, For BEAM Plus New Buildings Version 1.1 and 1.2, can lift lobby served by firemen’s lift be exempted from the assessment?**

**Q18. IEQ 12a, For BEAM Plus New Buildings Version 1.1 and 1.2, is enclosed common areas ventilated via “fresh air louver + EAF” / “transfer air duct” comply with BEAM Plus requirement?**

**Q19. IEQ 14b, For BEAM Plus New Buildings Version 1.1 and 1.2. what should be the duration of temperature measurement?**

**Q20. IEQ 14b, For BEAM Plus New Buildings Version 1.1 and 1.2, how should the representative sampling points be selected?**

**Q21. IEQ 14b, For BEAM Plus New Buildings Version 1.1 and 1.2, can T&C records of split type A/C for residential portion be accepted as evidence to demonstrate the performance of the air-conditioning units?**

**Q22. IEQ 14b, For BEAM Plus New Buildings Version 1.1 and 1.2, is it necessary for an SQP to endorse the measurement records?**

**Q23. What features can be considered as glare control under IEQ 15 in BEAM Plus Version 1.1?**

**Q24. IEQ 15, For BEAM Plus NB V1.1 and 1.2, there are a number of methodologies in the computation of the average daylight factor from various software. Will it be acceptable if the output provides the average daylight factor for the entire area of a room?**

**Q25. IEQ 16&17, For BEAM Plus New Buildings Version 1.1 and 1.2, how should the representative sampling points be selected and what is the percentage of compliance of the sampling points in order to achieve the credit?**

**Q26. IEQ 16&17, For BEAM Plus New Buildings Version 1.1 and 1.2, should decorative lighting be assessed?**

**Q27. IEQ 18, 19, 20 & 21, For BEAM Plus New Buildings Version 1.1 and 1.2, what is the definition of “suitably qualified person” (SQP)?**

**Q28. IEQ 18, For BEAM Plus New Buildings Version 1.1 and 1.2, how should the representative sampling points be selected?**

**Q29. IEQ 19, For BEAM Plus New Buildings Version 1.1 and 1.2, how should the representative sampling points be selected?**

**Q30. IEQ 19, For BEAM Plus New Buildings Version 1.1 and 1.2, in normal credit, is impact noise isolation (IIC) between floors required for Office, Hotel and Residential premises?**



Circular Letter No.: 2020.168

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Application: BEAM Plus NB Version 1.1 and 1.2

Effective Date: 5 June 2020

### **Updated Exclusion Clauses for IEQ Credits**

1. **Technical Circular Letter No. 2016.134 dated 09 August 2016 will be withdrawn on the effective date.**
2. This Circular Letter clarifies the exclusion clause for the following credits:

Credits	New Exclusions
IEQ P1 IEQ 9	Residential premises, or Premises without any fresh air provision <sup>1</sup> .
IEQ 3	Residential premises, or Premises without any provision of air-conditioning equipment.
IEQ 5	Residential premises, or Premises without any fresh air provision <sup>1</sup> and HVAC system.
IEQ 6	Residential premises, or Premises without any fresh air provision <sup>1</sup> .
IEQ 7a IEQ 7b	Residential premises without any interior decoration, or Premises without any fresh air provision <sup>1</sup> and interior decoration.
IEQ 10	Premises with fresh air provision <sup>1</sup> .
IEQ 11b	Residential premises, or Premises without any future tenant (for example, single owner occupier premises).
IEQ 12	Premises without any enclosed common area in the main circulation route.
IEQ 13a	Normally occupied premises <sup>2</sup> without any air-conditioning equipment installed and provided by the project proponent, or without any fresh air provision <sup>1</sup> .
IEQ 13b	Normally occupied premises <sup>2</sup> without any installation of air diffuser in the air-conditioning system.
IEQ 14a	Normally occupied premises <sup>2</sup> with fresh air provision <sup>1</sup> .
IEQ 14b	Normally occupied premises <sup>2</sup> with fresh air provision <sup>1</sup> , or without any air-conditioning equipment installed and provided by the project proponent.

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Ir SK Ho  
Chairperson of Standards Sub-committee

<sup>1</sup> Fresh air provision means any fresh air equipment such as PAU, AHU, FAU, FAP, FAF, etc.; and/or premises with fresh air louvers, etc.

<sup>2</sup> Normally occupied premises are enclosed spaces / areas where people normally stay there for more than 1 hour per person per day on average.