

NEW EDITION OF TECHNICAL GUIDELINE ON BOUNDARY NOISE LIMITS FOR AIR CONDITIONING AND MECHANICAL VENTILATION SYSTEMS IN NON-INDUSTRIAL BUILDINGS

Reference: NEA/EP/PDD/05-00075

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CIRCULAR TO PROFESSIONAL INSTITUTIONS

Who should know

Developers, Architects, Engineers

Dear Sir/Madam,

Notification of New Edition of Technical Guideline on Boundary Noise Limits for Air Conditioning and Mechanical Ventilation Systems in Non-Industrial Buildings (2018 Edition)

We would like to notify all Qualified Persons (QPs) that new edition of the Technical Guideline on Boundary Noise Limits for Air Conditioning and Mechanical Ventilation Systems in Non-Industrial Buildings 2018 Edition has been released.

2. The review of the guideline was done in consultation with the industries (Singapore Institute of Architects, Institute of Engineers Singapore, the Association of Consulting Engineers Singapore, the Singapore Contractor Association Ltd), the academia (National University of Singapore) and the government agencies (Building and Construction Authority, Urban Redevelopment Authority). This guideline sets out the maximum boundary noise emission limits for air conditioning and mechanical ventilation systems in non-industrial buildings.
3. Please refer to the attached Annex A for the summary list of main updates in the Technical Guidelines on Boundary Noise Limits for Air Conditioning and Mechanical Ventilation Systems in Non-Industrial Buildings 2018 Edition.
4. The copy of the Technical Guideline on Boundary Noise Limits for Air Conditioning and Mechanical Ventilation Systems in Non-Industrial Buildings 2018 Edition can be downloaded from NEA website at <http://www.nea.gov.sg/anti-pollution-radiation-protection/central-building-planning>.
5. Please note that it is the responsibility of the QP to ensure compliance with the environmental related Acts, Regulations, Codes of Practice and guidelines to prevent any adverse impact to public health and the environment.

6. For further enquiries, please contact NEA Hotline at 1800-2255 632 or submit them electronically via the Online Feedback Form at <http://www.nea.gov.sg/corporate-functions/feedback> or mobile application (myENV). We would appreciate it if you could disseminate the content of this circular to your members.

Thank you.

Sincerely



Koh Chin Yong
Director
Central Building Plan Department

Cc: The President
Singapore Institute of Architects (SIA)

The President
Association of Consulting Engineers Singapore (ACES)

The President
The Institute of Engineers Singapore (IES)

The President
The Singapore Contractors Association Ltd (SCAL)

The President
Real Estate Developers' Association of Singapore (REDAS)

ANNEX A

Section	Remarks
<u>Section 1 – Scope</u>	The list of the industries, academia and government agencies involved in the review of the Guideline has been updated.
<u>Section 2 – Definitions</u>	Noise sensitive premises, residential premises, commercial/other premises and factory premises were defined in this section.
<u>Section 3 – Boundary Noise Limits</u>	<p>Boundary noise limits other than noise sensitive premises and residential premises had been included in this section.</p> <p>A footnote is added to advise that the more stringent residential noise limit should be used if the affected premise is a mixed use development comprising both commercial and residential and Qualified Persons should make reference to URA master plan to check on intended use of adjacent premises.</p>
<u>Section 4 – Measurement Points</u> <ul style="list-style-type: none"> • (b) for equipment that is installed above ground level 	The noise measurement should be taken at least 1m from the noise source and at the same height as the equipment.
<u>Section 8 – Design Considerations</u>	This is a new section that provides general guidance in the design of mechanical ventilation system(s) in a proposed development where practical.
<u>Annex 1 – Location for Noise Measurement</u>	Footnotes have been added on recommendations and to conduct noise measurement when a noise barrier is installed if it is not practical to measure at 1m away from mechanical ventilation outlet.
<u>Table 1.1 – Modifying Factor Corrections</u>	<p>Narrow-band Frequency Analysis (preferably Fast Fourier Transform (FFT) analysis) is to be carried out according to ISO1996-2 for Tonal Noise.</p> <p>A footnote is added that air-conditioning compressors, bifurcated kitchen exhaust and axial fans could cause tonal noise.</p>