

# Annexure 13

## KIOSK CEILING PERMEABILITY REQUIREMENTS

# Consultant Advice Notice

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<b>Subject</b>	Kiosks Permeability for Services	<b>Revision:</b>	01

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## Introduction

The purpose of this Consultation Advice Notice (CAN) is to define roof/ceiling permeability to proposed kiosks that will dictate services requirements.

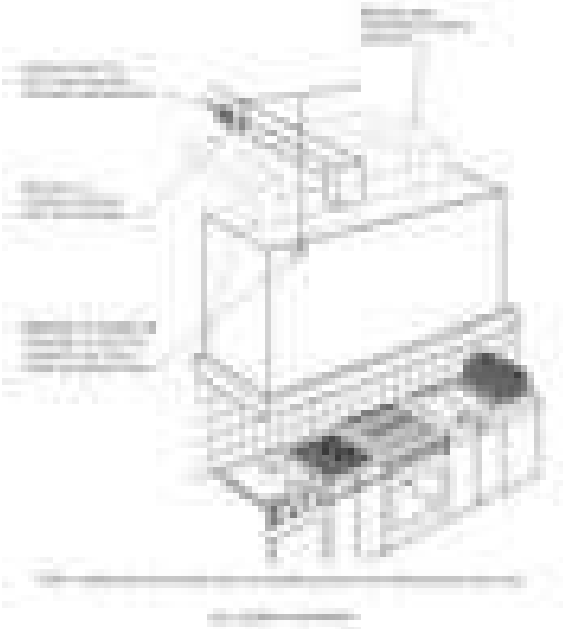
Currently, the Market Hall is naturally ventilated and therefore not provided with mechanical ventilation – no outside air is provided via mechanical Air-Handling Unit but provided by louvres and awning windows to satisfy the requirement under BCA and AS1668.2 & AS1668.4. No kiosks are currently provided with supplementary outside air for tenants.

Also, the Market Hall will be fully sprinklered in accordance with AS2118.1-2017 requirement. Shall ceiling / roof are provided to the future kiosks, consideration will need to applied with regards to the permeability of potential ceilings in order to enable the proposed market hall sprinkler protection to also protect the kiosks (the definition is provided in Table 1).

For the kiosks provided with Kitchen Exhaust (refer services and architectural drawings), sprinklers will be provided

## Ceiling in kiosks vs. Services

**Table 1:**

<b>Sprinklers</b> <b>AS2118.1-2017</b>	<p>Suspended Open Grid ceilings: If ceilings are installed above kiosks, they will require to be permeable in order to ensure no sprinklers are required within the kiosks. The permeability requirement is defined as below as per AS2118.1-2017 Section 5.7.9.5 <i>Suspended open grid ceilings</i></p> <p>(c) The open area of the ceiling grid is greater than 70% of the total plan area.</p> <p>(d) Where services are installed within the grid ceiling, e.g., light fittings, these features do not reduce the open area to less than 60%.</p> <p>Note that for selected kiosks provided with Kitchen Exhaust and commercial kitchen hood, sprinklers will be provided and required as per AS2118.1-2017 Section 5.9.14 (refer figure below).</p> <p>Sprinkler pipework will be reticulated via the kitchen exhaust riser to roof enabling to provide ceiling mounted sprinkler to the selected kiosk</p>
	

**Ventilation**  
**NCC, AS1668.1,**  
**AS1668.2 & AS1668.4**

Borrowed ventilation principles can be applied to selected kiosks. The principle defined in AS1668.4-2012 relies on *air that is borrowed from a naturally ventilated enclosure and used to ventilate an adjoining enclosure*. Note that this applies to *an enclosure, which is defined as an individual room, space or part thereof*.

Shall a kiosk or part of kiosk include an enclosure, the below principle is to be applied with regards to free area from an enclosure to the market hall (naturally ventilated).

Market Hall: 5% free area open to outside (via louvres and awning windows)

Enclosure: 10% free area of enclosure open to Market Hall



**Smoke Detection**  
**AS1670.1-2017**

Open Grid Ceilings: If ceilings are installed above kiosks, they will require to be permeable in order to ensure no smoke detection are required within the kiosks. The permeability requirement is defined as below as per AS1670.1-2018 Section 3.27.7 *Open grid ceilings*

Detectors are not required on the underside of open grid ceiling, where the open grid portions have not less than two-thirds of the total ceiling area open to the free flow of air and have detectors installed on the ceiling above the open grid.

Based on the above, the ceilings are required to be open 67% in order **not to provide** smoke detection

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