

6	<b>IEQ</b>	<b>6.2 HYGIENE</b>
		<b>IEQ 2 PLUMBING AND DRAINAGE</b>
	<b>EXCLUSIONS</b>	None.
	<b>OBJECTIVE</b>	Reduce the potential for contamination of plumbing and drainage systems, the ability of systems to carry infections, and the likelihood of odours.
	<b>CREDITS ATTAINABLE</b>	1
	<b>PREREQUISITES</b>	Compliance with the provisions of the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations.
	<b>CREDIT REQUIREMENT</b>	1 credit for designs that reduce the potential for transmission of harmful bacteria viruses and odours.
	<b>ASSESSMENT</b>	<p>The Client shall submit details of the plumbing and drainage systems in the form of drawings and specifications, and confirmation that installation of the systems was carried out according to the specifications. A summary report shall be submitted highlighting where appropriate means have been included to allow for safe and hygienic operation over the expected lifespan of the systems and components.</p> <p>The ‘appropriate means’ shall include, but are not limited to the following:</p> <ul style="list-style-type: none"> <li>• adequacy of flushing water supply to meet the pattern of demand;</li> <li>• design of drainage stacks of adequate capacity for peak loading;</li> <li>• venting of stacks;</li> <li>• access to pipework and ducts for maintenance purposes;</li> <li>• installation of buried pipework that pays attention to leaks at joints, seals, etc. for the expected life of the installation;</li> <li>• design of floor drains; and</li> <li>• maintenance of water seals.</li> </ul> <p>Where it can demonstrate that the design and installation of the plumbing and drainage systems, and any other provisions that can impact on performance (e.g. ventilation of bathrooms) have been given due attention, e.g. comply with the recommended practices promoted by various authorities, then the credit shall be awarded.</p>
	<b>BACKGROUND</b>	<p>Since the outbreak of the SARS virus, there has been a great deal of attention to the design of buildings to improve building hygiene. There appears to be sufficient evidence to conclude that a building drainage system was a path for the transmission of the SARS virus. Subsequent investigations have identified that certain features of drainage and sewage system design should be improved. BEAM seeks to ensure greater attention is paid to the design and installation of plumbing and drainage systems in buildings in order to reduce the risk of transmission of bacteria, viruses and odours into occupied areas.</p> <p>Water seal traps are required to be provided for all sanitary fitments, including floor drains (if provided), before they are connected to a common drainage stack [1]. Trap seal retention can be a problem in multi-level drainage systems. The main ways that air passes a trap are:</p>

1 Buildings Department. Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers, PNAP No. ADV-24 Floor Drains in Kitchens and Bathrooms.  
<http://www.bd.gov.hk/english/documents/pnap/ADV/ADV024.pdf>

Q16. EU 12, For BEAM Plus New Buildings Version 1.1 & 1.2, What are the requirements for metering and monitoring for clubhouse and carpark?

### Water Use

Q1. WU P1 & WU 1, Do I need to consider the water pressure indicated in the baseline figures for different water appliances when predicting the water consumption?

Q2. WU P1, Is water sample necessary to be taken from the supply point of WSD for water quality analysis under WU P1?

Q3. WU P1, WU P2/WU 1, For BEAM Plus New Buildings / Existing Buildings Version 1.1 and 1.2, is a conceptual plumbing sketch satisfactory for PA stage?

Q4. WU 5, For BEAM Plus New Buildings Version 1.2, how is WU 5 applied to different building types?

Q5. WU 5, For BEAM Plus New Buildings Version 1.1, how is WU 5 applied to different building types?

Q6. WU 5, For BEAM Plus New Buildings Version 1.1 & 1.2, how is WU 5 applied to different building types?

Q7. WU 5, For BEAM Plus New Buildings Version 1.1 & 1.2, what type of appliances shall be included into the assessment of this credit?

Q8. WU 5, For BEAM Plus New Buildings Version 1.1 & 1.2, what type of washing machine would meet the credit requirement and what type of substations shall be provided to justify for the performances of the washing machine?

### Indoor Environmental Quality

Q1. IEQ P1, How to achieve the outdoor air quality standard in local context of Hong Kong?

Q2. If a clubhouse is provided with VRV or split type units but with fresh air provided by PAU or fresh air fans, are IEQ P1 and IEQ 9 (NB) / IEQ 10 (EB) applicable?

Q3. IEQ 2, For BEAM Plus New Buildings Version 1.1 and 1.2, sub-item 7 “maintenance of water seals”, are water seal traps required for all floor drains?

Yes. Water seal traps are required for all floor drains located in kitchen, bathroom, plant room, meter room and refuse storage to reduce the potential for transmission of harmful bacteria viruses and odours.

By common practice, the water in the trap may dry up through evaporation unless water is replenished. Therefore, the following approaches should be considered for the maintenance of water seals:

- i. Divert some of the waste water from a sanitary fitment to the U-trap of floor drains;
- ii. Provide the declaration letter from building owner / property management company to demonstrate manual water refilling will be conducted on regular basis for floor drains outside domestic flats; and
- iii. Provide notification, such as resident's handbook, pamphlet, tenant handbook and notices to demonstrate that building users are encouraged to conduct regular manual water refilling for floor drains inside domestic flats.

(Released on 3 May 2019)

Q4. Should the noise level of the ventilation system or de-odourising system be considered under IEQ 4 (NB and EB)?

Q5. 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:

Q6. 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?

Q7. IEQ 11b, For BEAM Plus New Buildings Version 1.1 & 1.2, is clubhouse applicable to this credit?

Q8. 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?

Q9. What features can be considered as glare control under IEQ 15 in BEAM Plus Version 1.1?

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