

<b>5</b>	<b>WATER USE</b>	<b>5.1 WATER CONSERVATION</b>	
		<b>WU 2 MONITORING AND CONTROL</b>	
	<b>EXCLUSIONS</b>	None.	
	<b>OBJECTIVE</b>	Reduce wastage of fresh water and allow for auditing of water use.	
	<b>CREDITS ATTAINABLE</b>	1	
	<b>PREREQUISITES</b>	Compliance with Waterworks Regulation Chapter 102A Regulation 32.	
	<b>CREDIT REQUIREMENT</b>	1 credit for installation of devices to monitor water leakage from the fresh water distribution systems without embedded plumbing pipework.	
	<b>ASSESSMENT</b>	<p>The Client should demonstrate if means are in place that can effectively limit the wastage of water by early detection of water leakage from the plumbing system within the building.</p> <p>The applicant is required to state explicitly in the submitted plumbing drawings that no water pipe will be embedded in load bearing structural elements such as columns, beams and slabs in longitudinal directions [1]. And that plumbing installation does not have any embedded pipe work in non-structural elements of the construction. Pipe work protected by a sleeve and embedded in a non-structural element is accepted, and water leakage detectors such as infrared or moisture detector shall be provided.</p> <p>Various approaches are available and BEAM is not intended to be prescriptive as to which should be used.</p> <p>The Client shall submit a detail report on the system(s) for monitoring water leakage from internal plumbing installations. Where it can be demonstrated that the provisions of equipment meet the intent, the credit shall be awarded.</p>	<div>1</div> <div>2</div> <div>3</div> <div>4</div>
	<b>BACKGROUND</b>	<p>Water seepage has been a cause for concern to a number of Government departments including the Buildings Department [2]. Detection of water leaks in service pipework also presents an opportunity to save water, and perhaps more importantly, reduce the potential for structural damage as well as the creation of unhygienic conditions.</p> <p>Causes of water seepage vary but one of the common sources of seepage is water-borne piping embedded in the structural members of a building. Water seepage arising from embedded piping causes not only nuisance but also deterioration to the structural member of a building if unattended for a prolonged period. Designers are strongly advised to design the routing of all water-borne piping off structural elements to meet the indispensable need for repair and replacement of such piping during the design life of the building, which would normally outlast the design life of the piping. The huge benefit to the consumers and the public that this will bring about in terms of easy maintenance of the building for its entire design life will certainly outweigh the efforts at the design stage of a building project.</p>	

1 WSD circular letter No 1/2000 dated 7 June 2000.

2 Buildings Department. Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers. PNAP No. APP-105 Water Seepage.  
<http://www.bd.gov.hk/english/documents/pnap/APP/APP105.pdf>



Circular Letter No.: 2017.136

Issue Date: 9 January 2017

Application: BEAM Plus NB Version 1.1 & 1.2

Effective Date<sup>1</sup>: 9 January 2017

### **WU 2 Monitoring and Control**

In a normally occupied building, water leakage detection coverage for water piping located in plain sight (for example, exposed within a common area, circulation space, or exposed on an external wall) is excluded from assessment because in the event of any water leakage, the leakage would be self-evident, and discovered by either the occupants or building manager.

5

However, in a building not normally occupied<sup>2</sup> there are no occupants to discover the water leakage. Therefore, the coverage and extent of any water leakage detection system is more critical, and exposed piping shall NOT be excluded from assessment under NB WU 2.

6

A handwritten signature in blue ink, appearing to read "Kenneth Chan", is written above a horizontal line.

Sr. Kenneth CHAN Jor Kin  
Chairperson of Technical Review Committee

<sup>1</sup> All submissions on or after the effective date shall comply with the specified criteria to achieve credit under WU 2.

<sup>2</sup> In this context, not normally occupied shall mean all developments and buildings without occupants present every day, for example unmanned sub-stations, pumping stations, drainage facilities, ventilation buildings, and similar types of building that only have periodic visitors.