

# End User Pre-specification Checklist

## Introduction

This document is intended to guide end users in the points to consider in the preparation of their requirements for a Building Energy Management System (BEMS). Design Engineers, Consultants and Contractors should be able to comply with this checklist.

Sometimes cost savings during construction distract from the original design intent. Variations should always be properly considered and evaluated against reduced comfort and occupant wellbeing. Short term savings can result in increased energy, maintenance and operating costs during the lifecycle of the building. A thorough specification will ensure desired outcomes are achieved.

## Section 1 General Details

- 1.1 Have the detailed operational needs of the building users been fully considered? YES / NO
- 1.2 Has a specialist BEMS engineer been consulted to ensure BEMS delivery achieves the end user requirements for the expected lifecycle of the building? YES / NO
- 1.3 It is assumed a BEMS integrates via standard open protocols with all mechanical building services and plant in accordance with BS EN15232. To maximise energy efficiency and user experience it may be desirable to interface with other systems including:
- a) Access, Intruder, CCTV YES / NO
  - b) Occupation Services (e.g. asset & room booking systems) YES / NO
  - c) Lighting control YES / NO
  - d) Metering YES / NO
  - e) Solar shading YES / NO
  - f) Photo Voltaic (PV) YES / NO

## Section 1 General Details cont...

- 1.4 Has the network infrastructure been designed to incorporate all systems reliant upon it? YES / NO
- a) Is the BEMS network stand alone? YES / NO
  - b) Are any converged networks to be used by BEMS YES / NO
  - c) Have all security and access issues been agreed with the network owner? YES / NO
- 1.5 Has a responsibility matrix been provided to eliminate co-ordination and integration issues? YES / NO
- 1.6 Will any elements of the system need to be Acceptance Tested at Manufacturers works? YES / NO
- 1.7 Is there adequate scope for the system to be expanded or upgraded over the next 5 to 10 years? YES / NO



## Section 2 BEMS & Access Details

- 2.1 Has a points list been prepared to detail hard wired and data points? YES / NO
- 2.2 Are the control stations to have any special features?  
 a) Local override switches (monitored) YES / NO  
 b) UPS YES / NO  
 c) Other features YES / NO
- 2.3 Do control stations have local interfaces? YES / NO
- 2.4 Is a graphic user interface (GUI) standard defined? YES / NO
- 2.5 Does the scope allow for a secure connection for remote interrogation and adjustment of the system? YES / NO
- 2.6 Does the BEMS require any proprietary software to allow user functions? YES / NO

## Section 3 Installation

- 3.1 Does the scope allow for:  
 a) Supply of computer hardware YES / NO  
 b) Supply of sensors / actuators / valves YES / NO  
 c) Supply of motorised control centres (MCC) and / or controls enclosures (CE) YES / NO  
 d) Supply of active equipment YES / NO  
 e) Installation of the above YES / NO  
 f) Cable all the above YES / NO  
 g) Configuration of BEMS functional software YES / NO  
 h) Configuration of BEMS GUI YES / NO  
 i) Power wiring YES / NO  
 j) Commissioning of the BEMS YES / NO

## Section 4 BEMS Scope

- 4.1 Has Construction Design Management (CDM) regulations responsibility been assigned? YES / NO
- 4.2 Are there any special conditions to the contract installation (i.e. night time working, noise) YES / NO
- 4.3 Has BEMS training requirement to end users been defined? YES / NO
- 4.4 Does the contract allow for BEMS software, licences and passwords ownership to be transferred to the end user? YES / NO
- 4.5 Has a service and maintenance contract been included within the tender submission? YES / NO
- 4.6 Does the BEMS maintain installation performance and comfort and reduce energy consumption during the full lifecycle of the building? YES / NO

