

**CMS Applicant – Borough Smart**

**Appointed CMS Test Agent – Power Data Associates**

**Lighting CMS  
System Evidence  
Test Checklist Report**

*Confidential to Power Data Associates Ltd and Borough Smart*

Synopsis of document. This document supports the evidential test data, provides the CMS system requirements test checklist and confirms compliance with Elexon Central Management System Test Specification.

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## **1. Introduction**

### **1.1. Purpose**

This document captures the Requirements Test Checklist as detailed in Section 5 of the Central Management System Test Specification.

### **1.2. Applicant, Test Agent and CMS Tested**

This document is compiled and submitted by Power Data Associates as the appointed CMS Test Agent, in collaboration with Borough Smart as the applicant and in relation to Borough Smart CMS.

## 2. Requirements Test Checklist

CMS Test Agent compliance monitoring.

As Test Agent we verify that the appropriate tests have been completed and have demonstrated compliance with all system requirements, through evidential testing.

In accordance with Section 5 (Requirements Test Checklist) and in relation to Section 6 (Test Group Summary) and Section 7 (Recording Test Results) of the Central Management System Test Specification.

### 2.1. (5.1) System Requirements

5.1 System Requirements				
Test Ref	Requirement / Details	BSCP520 Requirement Reference	Comment	Complies
<b>Test Group 1</b>	<b><u>Configuration Control</u></b>			
Test 1.1	CMS software version	Non-functional	Version 1.0.1 is the current version number – this is incremented for any change that effects an event log.	Pass
Test 1.2	CMS operating platform and version	Non-functional	Device and payload firmware are subject to version control	Pass
<b>Test Group 2</b>	<b><u>System Security</u></b>			
Test 2.1	Customers	4.5.2.3 (i)	Each instance hosted within a VPN. Logons provided to individual with varying access levels	Pass
Test 2.2	MA	Functional	Event logs are uploaded to secure SFTP servers with access controlled via username and password	Pass
<b>Test Group 3</b>	<b><u>Synchronisation to UTC</u></b>	4.5.2.3 (k)	All servers are synchronised to UTC, see page 7 of Test evidence.  Events seen in user interface, system backend and reported in event logs all in UTC	

## 2.2. (5.2) Data Input and Storage Requirements

5.2 Data Input and Storage Requirements				
Test Ref	Requirement / Details	BSCP520 Requirement Reference	Comment	Complies
<b>Test Group 4a</b>	<b><u>Detailed Inventory information</u></b>			
Test 4.1	Add, delete, modify manually or electronically:	Functional	Demonstrated by applicant	Pass
Test 4.1.1	Road Reference	Functional	Inventory data visible in user interface. Screenshots and explanation available on pages 8-11 of test evidence	Pass
Test 4.1.2	Town, Parish, District	Functional	As per 4.1.1	Pass
Test 4.1.3	Road Name	Functional	As per 4.1.1	Pass
Test 4.1.4	Location	Functional	As per 4.1.1	Pass
Test 4.1.5	Unit Type	Functional	As per 4.1.1	Pass
Test 4.1.6	Unit Identity	Functional	As per 4.1.1	Pass
Test 4.1.7	CMS Unit Reference	Functional	As per 4.1.1	Pass
Test 4.1.8	Charge Code	Functional	As per 4.1.1	Pass
Test 4.1.9	Number of Items	Functional	As per 4.1.1	Pass
Test 4.1.10	Switch Regime	Functional	As per 4.1.1	Pass
Test 4.1.11	Number of Controls	Functional	As per 4.1.1	Pass
Test 4.1.12	Control Charge Code	Functional	As per 4.1.1	Pass
Test 4.1.13	Ordinance Survey Grid ref 'East' or Latitude	Functional	As per 4.1.1	Pass
Test 4.1.14	Ordinance Survey Grid ref 'North' or Longitude	Functional	As per 4.1.1	Pass

5.2 Data Input and Storage Requirements				
Test Ref	Requirement / Details	BSCP520 Requirement Reference	Comment	Complies
Test 4.1.15	Exit Point	Functional	As per 4.1.1	Pass
Test 4.1.16	Distributor	Functional	As per 4.1.1	Pass
Test 4.1.17	Sub-meter	Functional	As per 4.1.1	Pass
Test 4.2	Audit Trail	Functional	Operational Audit log captures all user actions, and the Entity Audit captures the results of these actions	Pass
<b>Test Group 4b</b>	<b><u>Inventory control information</u></b>			
Test 4.3	Add, delete, modify manually or electronically:	Functional		
Test 4.3.1	Sub-Meter ID	Functional	As per 4.1.1	Pass
Test 4.3.2	Effective From Date	Functional	As per 4.1.1	Pass
Test 4.3.3	CMS Unit Reference	Functional	As per 4.1.1	Pass
Test 4.3.4	Number of Items	Functional	As per 4.1.1	Pass
Test 4.3.5	Switch Regime	Functional	As per 4.1.1	Pass
Test 4.3.6	Charge Code	Functional	As per 4.1.1	Pass
Test 4.4	Audit Trail	Functional	As per 4.2	Pass

## 2.3. (5.3) Process Requirements

5.3 Process Requirements				
Test Ref	Requirement / Details	BSCP520 Requirement Reference	Comment	Complies
Test Group 5	<u>Lighting CMS - Issue Instructions</u>		Where events are driven by CMS programming	
Test 5.1	Scenario 1 - Switch Regime 999	4.5.2.3 (b)	<p>Test carried out using asset elexon000002</p> <ul style="list-style-type: none"> <li>Power: 100% - Events recorded start time of 13:25 and end time of 13:37 and energy recorded on the register as 36.6W.</li> <li>Power: 75% - Events recorded start time of 13:37 and end time of 13:43 and energy recorded on the register as 28W.</li> <li>Power: 50% - Events recorded start time of 13:43 and end time of 13:58 and energy recorded on the register as 18.5W.</li> <li>Power: 0% - Events recorded start time of 13:58 and energy recorded on the register as 1.6W.</li> </ul>	Pass
Test 5.2	Scenario 2 - Switch Regime 998	4.5.2.3 (b)	<p>Test carried out using asset elexon000003 Instruction to move to continuous full power output was issued to the asset at 14:00. Asset was witnessed turning on at full power which the register recorded at 37W. The asset remained in this status until turned off at 16:10</p>	Pass

5.3 Process Requirements				
Test Ref	Requirement / Details	BSCP520 Requirement Reference	Comment	Complies
Test 5.3	Scenario 3 - Control Failure	4.5.2.3 (b)	Test was carried out using asset elexon000001 Morning events were allowed to occur as normal on 21/03 before the gateway was turned off. The gateway remained off until after the version 1 event logs were generated the next day. The version 1 event log contains just the switching events transmitted prior to the gateway being switched off. The version 2 event log generated records all of the events that occurred on 21/03 including the previously reported events	Pass
Test 5.4	Scenario 4 – Revised Data after control failure (following day)	4.5.2.3 (b) 4.5.2.3 (c)	The gateway was turned off and remained off for the entirety of 22/03. It was repowered on 23/03 after the version 1 event logs had been generated. The version 1 event log contains no switching events. The version 2 event log generated after power was restored to the gateway includes all of the switching events	Pass
Test 5.5	Receive Response (optional)	Functional		
Test Group 6	<b><u>Lighting CMS - Record operational switching times and power levels</u></b>		<b>Where events are driven by CMS programming</b>	
Test 6.1	Scenario 1 - Switch Regime 999	4.5.2.3 (b)	See appendix 1	Pass
Test 6.2	Scenario 2 - Switch Regime 998	4.5.2.3 (b) 4.5.2.3 (c)	See appendix 2	Pass
Test 6.3	Scenario 3 - Control Failure	4.5.2.3 (b) 4.5.2.3 (c)	See appendix 3	Pass



5.3 Process Requirements				
Test Ref	Requirement / Details	BSCP520 Requirement Reference	Comment	Complies
Test 6.4	Scenario 4 – Revised Data after control failure (following day)	4.5.2.3 (b) 4.5.2.3 (c)	See appendix 4	Pass
Test 6.5	Audit Trail	4.5.2.3 (j)	Audit log for each test is held against each asset in the user interface	Pass
<b>Test Group 7</b>	<b>Lighting CMS - Generate Operational Event Log</b>		<b>Where events are driven by CMS programming</b>	
Test 7.1	Scenario 1 - Switch Regime 999	4.5.2.3 (b) 4.5.2.3 (c)	Event log has been generated, uploaded to the FTP server and is correctly formatted. This has been retrieved by PDA, please see event log elaxon120230324002.log	Pass
Test 7.2	Scenario 2 - Switch Regime 998	4.5.2.3 (b) 4.5.2.3 (c)	Event log has been generated, uploaded to the FTP server and is correctly formatted. This has been retrieved by PDA, please see event log elaxon220230324002.log	Pass
Test 7.3	Scenario 3 - Control Failure	4.5.2.3 (b) 4.5.2.3 (c)	Event log have been generated, uploaded to the FTP server and are correctly formatted. They have been retrieved by PDA, please see event log elaxon120230321001.log and elaxon120230321002.log	Pass
Test 7.4	Scenario 4 – Revised Data after control failure (following day)	4.5.2.3 (c)	Event log have been generated, uploaded to the FTP server and are correctly formatted. They have been retrieved by PDA, please see event log elaxon120230322001.log and elaxon120230322002.log	Pass

5.3 Process Requirements				
Test Ref	Requirement / Details	BSCP520 Requirement Reference	Comment	Complies
Test 7.5	Available daily (Separate CMS and MA System)	4.5.2.3 (b)	Event logs are uploaded to the FTP server daily as per a configurable generation schedule	Pass
Test 7.6	On Request (Integrated CMS and MA System)	4.5.2.3 (c)	In addition to the automatic processes Borough Smart can generate new event logs containing all the days switching events. These are produced with incremented version numbers.	Pass
Test 7.7	Audit Trail	4.5.2.3 (j)		
<b>Test Group 8</b>	<b>mCMS - Event Driven Measurement</b>		<b>Where events are driven by the connection of Apparatus to an exit point</b>	
Test 8.1	Scenario 1	4.5.2.3	N/A	
Test 8.2	Scenario 2	4.5.2.3	N/A	
Test 8.3	Scenario 3	4.5.2.3	N/A	
Test 8.4	Scenario 4	4.5.2.3	N/A	
Test 8.5	Scenario 5	4.5.2.3	N/A	
Test 8.6	Scenario 6	4.5.2.3	N/A	
<b>Test Group 9</b>	<b>mCMS - Record operational switching times and power levels</b>		<b>Events and power levels should be available via a user interface to the mCMS</b>	
Test 9.1	Record operational switching times for Scenarios 1 to 6	4.6.3.3(b) 4.6.3.3(c)	N/A	
Test 9.2	Audit Trail	4.6.3.3(h)	N/A	
<b>Test Group 10</b>	<b>mCMS - Generate Operational Event Log</b>		<b>Generate events for each scenario</b>	

5.3 Process Requirements				
Test Ref	Requirement / Details	BSCP520 Requirement Reference	Comment	Complies
Test 10.1	Scenario 1	4.5.2.3	N/A	
Test 10.2	Scenario 2	4.5.2.3	N/A	
Test 10.3	Scenario 3	4.5.2.3	N/A	
Test 10.4	Scenario 4	4.5.2.3	N/A	
Test 10.5	Scenario 5	4.5.2.3	N/A	
Test 10.6	Scenario 6	4.5.2.3	N/A	
Test 10.7	Available daily and on request	4.6.6.3(b) 4.6.6.3(c)	N/A	
Test 10.8	Audit Trail	4.6.6.3(h)	N/A	
<b>Test Group 11</b>	<b>Volume and Performance</b>			
Test 11.1	Compliance with operational timescales	Functional		

## 2.4. (5.4) Data Output Requirements

5.4 Data Output Requirements				
Test Ref	Requirement / Details	BSCP520 Requirement Reference	Comment	Complies
<b>Test Group 12</b>	<b><u>Operational Event Log</u></b>			

Test 12.1	File Format	4.5.2.3 (c)	File formats of all tests are correct. Power Data Associates (acting as an MA) confirmed the event logs can be processed by an approved Equivalent Meter	Pass
Test 12.2	Filename	4.5.2.3 (c)	As per 12.1	Pass
Test 12.3	Header identifier	4.5.2.3 (c)	As per 12.1	Pass
Test 12.4	Sub-Meter ID	4.5.2.3 (c)	As per 12.1	Pass
Test 12.5	Date	4.5.2.3 (c)	As per 12.1	Pass
Test 12.6	Version	4.5.2.3 (c)	As per 12.1	Pass
Test 12.7	CMS Unit reference	4.5.2.3 (c)	As per 12.1	Pass
Test 12.8	Time	4.5.2.3 (c)	As per 12.1	Pass
Test 12.10	Percentage of base power	4.5.2.3 (c)	As per 12.1	Pass
Test 12.10	Information Flag	4.5.2.3 (c)	As per 12.1	Pass
Test 12.11	Trailer	4.5.2.3 (c)	As per 12.1	Pass

### 3. Statement of CMS Compliance or Non-Compliance

I can confirm that all required tests have been conducted, evidenced, and witnessed as prescribed by the Central Management System Test Specification and in accordance with BSCP520.

As appointed CMS Test Agent, I hereby certify that Borough Smart from Borough Smart is compliant with the Central Management System Test Specification and in accordance with BSCP520.

Testing and documentation completed by

Signed



Duly authorised to act on behalf of Power Data Associates Limited

Name

James Collins

Position

Operations Analyst

Dated

30/3/23

Reviewed by

Signed



Duly authorised to act on behalf of Power Data Associates Limited

Name

David Lewis

Position

Account Manager

Dated

30/03/2023