

## ELECTRICAL INSTALLATION CERTIFICATE

Issued in accordance with British Standard 7671 - Requirements for Electrical Installations by an Approved Contractor or Conforming Body enrolled with NICEIC, Warwick House, Houghton Hall Park, Houghton Regis, Dunstable, LU5 5ZX

### DETAILS OF THE CLIENT

Client / Address: CCJV, Junction 12, M1, Toddington

Postcode: LU5 6HP

### DETAILS OF THE INSTALLATION

Address: M1 E/1 @ M/P 52/8 B (G12)

Postcode:

The installation is:

New ☒

Extent of the installation covered by this certificate: Power installation supplies to CECLB, CCTV, FTMS and Gantries.

An addition

An alteration

### DESIGN

I/We, being the person(s) responsible for the design of the electrical installation (as indicated by my/our signature(s) below), particulars of which are described above, having exercised reasonable skill and care when carrying out the design, hereby CERTIFY that the design work for which I/we have been responsible is, to the best of my/our knowledge and belief, in accordance with BS 7671 amended to JAN 2008 (date) except for the departures, if any, detailed as follows:

Details of departures from BS 7671, as amended (Regulations 120.3, 133.5):

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate. For the DESIGN of the installation:

\*\* (Where there is divided responsibility for the design)

Signature Date 14/04/2012 Name (CAPITALS) Designer 1

Signature Date 14/04/2012 Name (CAPITALS) \*\* Designer 2

### CONSTRUCTION

I/We, being the person(s) responsible for the construction of the electrical installation (as indicated by my/our signature below), particulars of which are described above, having exercised reasonable skill and care when carrying out the construction, hereby CERTIFY that the construction work for which I/we have been responsible is, to the best of my/our knowledge and belief, in accordance with BS 7671 amended to JAN 2008 (date) except for the departures, if any, detailed as follows:

Details of departures from BS 7671, as amended (Regulations 120.3, 133.5):

The extent of liability of the signatory is limited to the work described above as the subject of this certificate. For the CONSTRUCTION of the installation:

Signature Date 14/04/2012 Name (CAPITALS) Constructor

### INSPECTION AND TESTING

I/We, being the person(s) responsible for the inspection and testing of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the inspection and testing, hereby CERTIFY that the work for which I/we have been responsible is, to the best of my/our knowledge and belief, in accordance with BS 7671 amended to JAN 2008 (date) except for the departures, if any, detailed as follows:

Details of departures from BS 7671, as amended (Regulations 120.3, 133.5):

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate. For the INSPECTION AND TESTING of the installation:

Signature Date 14/03/2012 Signature Date 14/03/2012  
Name (CAPITALS) Inspector Name (CAPITALS) Qualified Supervisor†

### DESIGN, CONSTRUCTION, INSPECTION AND TESTING \*

\* This box to be completed only where the design, construction, inspection and testing have been the responsibility of one person.

I, being the person responsible for the design, construction, inspection and testing of the electrical installation (as indicated by my signature below), particulars of which are described above, having exercised reasonable skill and care when carrying out the design, construction, inspection and testing, hereby CERTIFY that the said work for which I have been responsible is to the best of my knowledge and belief, in accordance with BS 7671, amended to (date) except for the departures, if any, detailed as follows:

Details of departures from BS 7671, as amended (Regulations 120.3, 133.5):

The extent of liability of the signatory is limited to the work described above as the subject of this certificate. For the DESIGN, the CONSTRUCTION and the INSPECTION AND TESTING of the installation:

Reviewed by

Signature Date 14/03/2012 Signature Date 14/03/2012

Name (CAPITALS) Name (CAPITALS) Qualified Supervisor††

† Where the inspection and testing have been carried out by an Approved Contractor, the inspection and testing results are to be reviewed by the registered Qualified Supervisor.  
†† Where the design, the construction, and the inspection and testing have been the responsibility of one person, the inspection and testing results are to be reviewed by the registered Qualified Supervisor.

**PARTICULARS OF THE ORGANISATION(S) RESPONSIBLE FOR THE ELECTRICAL INSTALLATION**

<b>DESIGN (1)</b>	Organisation † SERCO		
Address:	Cavendish House Clearwater Park Stockton on Tees	NICEIC Enrolment No (where appropriate)	
		Branch number: (if applicable)	
		Postcode: TS17 6QY	
<b>DESIGN (2)</b>	Organisation †		
Address:		NICEIC Enrolment No (where appropriate)	
		Branch number: (if applicable)	
		Postcode:	
<b>CONSTRUCTION</b>	Organisation ERH Communications Ltd		
Address:	Communications House Grange Industrial Estate Cwmbran	NICEIC Enrolment No (Essential Information) 042643	
		Branch number: (if applicable)	
		Postcode: NP44 8HQ	
<b>INSPECTION AND TESTING</b>	Organisation † ERH Communications Ltd		
Address:	Communications House Grange Industrial Estate Cwmbran	NICEIC Enrolment No (where appropriate) 042643	
		Branch number: (if applicable)	
		Postcode: NP44 8HQ	

**SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS**

Tick boxes and enter details, as appropriate

System Type(s)	Number and Type of Live Conductors	Nature of Supply Parameters	Characteristics of Primary Supply Overcurrent Protective Device(s)
TN-S N/A	a.c. ✓ d.c. N/A	Nominal Voltage(s), U <sub>n</sub> 230 V U <sub>0</sub> (1) V	BS(EN) 1361  Type  Rated current 100 A Short circuit capacity 33 kA
TN-C-S ✓	1-phase (2 wire) N/A 1-phase (3 wire) ✓ 2 pole N/A	Nominal frequency, f <sub>n</sub> 50 Hz	
TN-C N/A	2-phase (3 wire) N/A 3 pole N/A	Prospective fault current, I <sub>p</sub> (2)(3) 1.25 kA	
TT N/A	3-phase (3 wire) N/A 3-phase (4 wire) N/A other	External earth fault loop impedance, Z <sub>e</sub> (2)(3) 0.19 Ω	
IT N/A	Other	Number of supplies 1	

**PARTICULARS OF INSTALLATION AT THE ORIGIN**

Tick boxes and enter details, as appropriate

Means of Earthing		Details of Installation Earth Electrode (where applicable)	
Distributor's facility: ✓	Type: (eg rod(s), tape etc)	Location:	
Installation earth electrode: N/A	Electrode resistance, R <sub>A</sub> : (Ω)	Method of measurement:	
Main Switch or Circuit-Breaker (Applicable only where an RCD is suitable and is used as a main circuit-breaker)		Maximum Demand (Load)	Protective measures against electric shock:
Type: BS(EN) 60947/3	Voltage rating 250 V	Amps	
No of Poles 2	Rated current, I <sub>n</sub> 100 A		
Supply conductors material Copper	RCD operating current, I <sub>Δn</sub> mA		
Supply conductors csa 25 mm <sup>2</sup>	RCD operating time (at I <sub>Δn</sub> ) ms		
		Protective Bonding Conductors	
		Bonding of extraneous conductive parts (-)	
		Wager service N/A Gas Service N/A	
		Oil service N/A Structural steel ✓	
		Lightning protection N/A Other incoming service(s) N/A	

**COMMENTS ON EXISTING INSTALLATION**

In the case of an alteration or additions see Section 633 NONE

Note: Enter 'NONE' or, where appropriate, the page number(s) of additional page(s) of comments on the existing installation.

**NEXT INSPECTION**

Enter interval in terms of years, months or weeks, as appropriate

SIX YEARS

I/We the designer(s), RECOMMEND that this installation is further inspected and tested after an interval of not more than

† Where the Approved Contractor responsible for the construction of the electrical installation has also been responsible for the design and the inspection and testing of that installation, the 'Particulars of the Organisation responsible for the Electrical Installation' may be recorded only in the section entitled 'CONSTRUCTION'

‡ Where a number of sources are available to supply the installation, and where the data given for the primary source may differ from other sources, a separate sheet must be provided which identifies the relevant information relating to each additional source.

**SCHEDULE OF ITEMS INSPECTED**

† See note below

**PROTECTIVE MEASURES AGAINST ELECTRIC SHOCK**

**Basic and fault protection**

**Extra low voltage**

N/A SELV N/A PELV

**Double or reinforced insulation**

✓ Double or Reinforced Insulation

**Basic Protection**

✓ Insulation of live parts ✓ Barriers or enclosures

✓ Obstacles \*\* ✓ Placing out of reach \*\*

**Fault protection**

**Automatic disconnection of supply**

- ✓ Presence of earthing conductor
- ✓ Presence of circuit protective conductors
- ✓ Presence of main protective bonding conductors
- ✓ Presence of earthing arrangements for combined protective and functional purposes
- ✓ Presence of adequate arrangements for alternative source(s), where applicable
- ✓ FELV
- ✓ Choice and setting of protective and monitoring devices (for fault protection and/or overcurrent protection)

**Non-conducting location \*\***

N/A Absence of protective conductors

**Earth-free equipotential bonding\*\***

N/A Presence of earth-free equipotential bonding

**Electrical separation**

- ✓ For one item of current using equipment
- ✓ For more than one item of current using equipment\*\*

**Additional protection**

- ✓ Presence of residual current device(s)
- ✓ Presence of supplementary bonding conductors

\*\* for use in controlled supervised/conditions only

**Prevention of mutual detrimental influence**

- ✓ Proximity of non-electrical services and other influences
- ✓ Segregation of Band I and Band II circuits or Band II insulation used
- ✓ Segregation of safety Circuits

**Identification**

- ✓ Presence of diagrams, instructions, circuit charts and similar information
- ✓ Presence of danger notices and other warning notices
- ✓ Labelling of protective devices, switches and terminals
- ✓ identification of conductors

**Cables and Conductors**

- ✓ Selection of conductors for current carrying capacity and voltage drop
- ✓ Erection methods
- ✓ Routing of cables in prescribed zones
- ✓ Cables incorporating earthed armour or sheath or run in an earthed wiring system, or otherwise protected against nails, screws and the like
- ✓ Additional protection by 30mA RCD for cables concealed in walls (where required, in premises not under the supervision of skilled or instructed persons)
- ✓ Connection of conductors
- ✓ Presence of fire barriers, suitable seals and protection against thermal effects

**General**

- ✓ Presence and correct location of appropriate devices for isolation and switching
- ✓ Adequacy of access to switchgear and other equipment
- ✓ Particular protective measures for special installations and locations
- ✓ Connection of single-pole devices for protection or switching in line conductors only
- ✓ Correct connection of accessories and equipment
- ✓ Presence of undervoltage protective devices
- ✓ Selection of equipment and protective measures appropriate to external influences
- ✓ Selection of appropriate functional switching devices

**SCHEDULE OF ITEMS TESTED**

† See note below

- ✓ External earth fault loop impedance,  $Z_e$
- ✓ Installation earth electrode resistance,  $R_A$
- ✓ Continuity of protective conductors
- N/A Continuity of ring final circuit conductors
- ✓ Insulation resistance between live conductors
- ✓ Insulation resistance between live conductors and Earth
- ✓ Protection by separation of circuits

- ✓ Basic protection by barrier or enclosure provided during erection
- ✓ Insulation of non-conducting floors or walls
- ✓ Polarity
- ✓ Earth fault loop impedance,  $Z_s$
- ✓ Verification of phase sequence
- ✓ Operation of residual current devices
- ✓ Functional testing of assemblies
- ✓ Verification of voltage drop

**SCHEDULE OF ADDITIONAL RECORDS\* (See attached schedule)**

Page No(s)

Note: Additional page(s) must be identified by the Electrical Installation Certificate serial number and page number(s).

† All boxes must be completed. "✓" indicates that an inspection or a test was carried out and that the result was satisfactory. "N/A" indicates that an inspection or a test was not applicable to the particular installation

\* Where the electrical works to which this certificate relates includes the installation of a fire alarm system and/or an emergency lighting system (or a part of such system), this electrical safety certificate should be accompanied by the particular certificate(s) for the system(s).

This form is based on the model shown in Appendix 6 of BS7671 (as amended).  
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## SCHEDULE OF CIRCUIT DETAILS FOR THE INSTALLATION

CIRCUIT DETAILS					
TO BE COMPLETED IN EVERY CASE		TO BE COMPLETED ONLY IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION*			
Location of distribution board:	E/I 52/8 B	Supply to distribution board is from:	No of phases:	Nominal voltage:	V
Distribution board designation:	E/I 52/8 B	Overcurrent protective device for the distribution circuit:	Associated RCD (if any): BS(IEN)		
		Type: BS(IEN)	Rating:	A	
				RCD No of poles:	Δn mA

[illegible]

↑ See Table 4A2 of Appendix 4 of BS 7671

CODES FOR TYPE OF WIRING								
A	B	C	D	E	F	G	H	I (Other - please state)
Thermoplastic insulated/sheathed cables	Thermoplastic cables in metallic conduit	Thermoplastic cables in non-metallic conduit	Thermoplastic cables in metallic trunking	Thermoplastic cables in non-metallic trunking	Thermoplastic /SVA cables	Thermosetting /SVA cables	Mineral insulated cables	TR 2153

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\* In such cases, details of the distribution (sub main) circuit(s), together with the test results for the circuit(s), must also be provided, on continuation schedules.

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See next page for  
Schedule of Test Results

