ECA
Excellence in Electrotechnical & Engineering Services

NCR (No Carbon Required)

Electrical Installation Certificates

In accordance with BS 7671

These certificates are for use only by ECA Registered Members.

Only an ECA member responsible for the *inspection* of a electrical installation is authorised to issue an ECA Electrical Installation Certificate for that work.

ECA certificates and Reports are accountable documents. Unused certificates should be kept secure by the member.

IET WIRING REGULATIONS
UPDATED TO:
18TH EDITION
BS 7671:2018

To re-order this form, or any form in this series, please phone 0333 321 8225

PLEASE NOTE THAT THE EDITING OF THESE FORMS MAY NOT WORK FULLY IN YOUR WEB BROWSER AND SHOULD BE USED WITH ADOBE ACROBAT READER.

5 060126 921745 >
ECA-EIC Sap code: 6255

Membership number: 003159

This certificate is not valid if the serial number has been defaced or altered **EIC/** R33-003159

Sheet 1 of 7

ELECTRICAL INSTALLATION CERTIFICATE

(Requirements for Electrical Installations - BS 7671 [IET Wiring Regulations])

DETAILS OF THE CLIENT

Robertson Construction

INSTALLATION ADDRESS

Gulson Gardens CV1 2LA

DESCRIPTION AND EXTENT OF THE INSTALLATION

Tick boxes and enter details, as appropriate

Description of installation: Power and Lighting

Extent of installation covered by this Certificate: All Areas

(Use continuation sheet if necessary) See continuation sheet no.

New installation ☑

Addition to an existing installation ☐

Alteration to an existing installation ☐

FOR DESIGN

I/We being the person(s) responsible for the design 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 design and additionally where this certificate applies to an alteration or addition, the safety of the existing installation is not impaired, hereby CERTIFY that the design work of which I/we have been responsible is, to the best of my/our knowledge and belief, in accordance with BS 7671:2018 amended to N/A (date) except for departures, if any, detailed as follows:

Details of departures from BS 7671 (Regulation 120.3, 133.1.3, 133.5) NONE

Details of permitted exceptions (regulation 411.3.3) where applicable a suitable risk assessment(s) must be attached to this certificate NONE

Risk assessment attached ☐

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

**Where there is mutual responsibility for the design

Signature	WSJ	Date	04/11/20	Name (CAPITALS)	WILL JAMES	Designer No. 1
Signature		Date		Name (CAPITALS)		Designer No. 2**

FOR CONSTRUCTION

I being the person responsible for the construction of the electrical installation (as indicated by my signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the construction, hereby CERTIFY that the construction work of which I have been responsible is, to the best of my knowledge and belief, in accordance with BS 7671:2018 amended to N/A (date) except for departures, if any, detailed as follows:

Details of departures from BS 7671 (Regulation 120.3 and 133.5) None

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	04-11-20	Name (CAPITALS)	PAUL EDGAR	Constructor

FOR INSPECTION & TESTING

I being the person responsible for the inspection & testing of the electrical installation (as indicated by my signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the inspection & testing, hereby CERTIFY that the work of which I have been responsible is, to the best of my knowledge and belief, in accordance with BS 7671:2018 amended to N/A (date) except for departures, if any, detailed as follows:

Details of departures from BS 7671 (Regulation 120.3 and 133.5) NONE

The extent of liability of the signatory is limited to the work described above as the subject of this Certificate.
For the INSPECTION & TESTING of the installation:

Signature		Date	04-11-20	Name (CAPITALS)	MATT RAVEN	Inspector

NEXT INSPECTION

I/We the designer(s), recommend that this installation is further inspected and tested after an interval of not more than 5 years / months

PLEASE NOTE THAT THE EDITING OF THESE FORMS MAY NOT WORK FULLY IN YOUR WEB BROWSER AND SHOULD BE USED WITH ADOBE ACROBAT READER.

PARTICULARS OF SIGNATORIES TO THE ELECTRICAL INSTALLATION CERTIFICATE

Designer (No. 1)	Name	Will JAMES	Company	TRIANGLE CONSULTING ENG	
Address	5 Westgate, Tadcaster		Postcode	LS24 9AB	Tel: 0113 287 7222
Designer (No. 2)	Name		Company		
Address			Postcode		Tel:
Constructor	Name	PAUL EDGAR	Company	VALLECTRIC LTD	
Address	3 HALES ROAD LEEDS		Postcode	LS12 4PL	Tel: 01132038884
Inspector	Name	MATT RAVEN	Company	VALLECTRIC LTD	
Address	3 HALES ROAD LEEDS		Postcode	L212 4PL	Tel: 01132038884

SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS

Tick boxes and enter details, as appropriate

Earthing arrangements		Number and type of live conductors				Nature and type of supply parameters			Supply protective device	
TN-C	☐	AC	☐	DC	☐	Nominal voltage, U / U_o (1)	400	V	BS (EN)	60947-3
TN-S	☐	1-phase, 2-wire	☐	2-wire	☐	Nominal frequency, f (1)	50	Hz	Type	
TN-C-S	☑	2-phase, 3-wire	☐	3-wire	☐	Prospective fault current, I_{pf} (2)	8.7	kA	Rated current	1250 A
TT	☐	3-phase, 3-wire	☐	Other	☐	External loop impedance, Z_e (2)	0.01	Ω		
IT	☐	3-phase, 4-wire	☑			Note: (1) by enquiry. (2) by enquiry or by measurement				
		Confirmation of supply polarity	☑			Other sources of supply (as detailed on attached schedule)		☐		

PARTICULARS OF INSTALLATION REFERRED TO IN THE CERTIFICATE

Tick boxes and enter details, as appropriate

Means of earthing		Maximum demand		Details of Earth Electrode (where applicable)		
Distributor's facility	☑	Maximum demand (load)		Type *(e.g. rod(s), tape, etc.)*	N/A	
Installation earth electrode	☐	683kVA	kVA / Amps *(delete as appropriate)*	Location	N/A	Resistance to earth N/A Ω

Main protective conductors

Earthing conductor	Material	COPPER	csa	120	mm²	Connection/continuity verified	☑
Main protective bonding conductors (to extraneous-conductive-parts)	Material	COPPER	csa	70	mm²	Connection/continuity verified	☑

To water installation pipes	☑	To gas installation pipes	☑	To oil installation pipes	☐	To structural steel	☐
To lightning protection	☑	To other	☐	Specify			

Main switch / Switch fuse / Circuit breaker / RCD

						If RCD main switch		
Location	LV SWITCH ROOM		Current rating	1250	A	Rated residual operating current ($I_{\Delta n}$)	N/A	mA
			Fuse / device rating or setting	1000	A	Rated time delay	N/A	ms
BS (EN)	60947-3	No. of poles 3	Voltage rating	400	V	Measured operating time (at $I_{\Delta n}$)	N/A	ms

COMMENTS ON EXISTING INSTALLATION

(in the case of an addition or alteration see Regulation 644.1.2)

N/A

SCHEDULES

The attached Schedules are part of this document and this Certificate is valid only when they are attached to it.

Schedules of Inspections and ☐ Schedules of Test Results are attached. *(Enter quantities of Schedules attached.)*

ECA
Excellence in Electrotechnical & Engineering Services

SCHEDULE OF INSPECTIONS (for new installation work only)

NOTE 1: This form is suitable for many types of smaller installation, not exclusively domestic. All items inspected in order to confirm, as appropriate, compliance with the relevant clauses in BS 7671. The list of items and associated examples where given are not exhaustive.

NOTE 2: Insert ✓ to indicate an inspection had been carried out and the result is satisfactory, or N/A to indicate that the inspection is not applicable to a particular item.

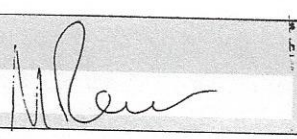
Item no	Description	Outcome (See Note 2)
1.0	**EXTERNAL CONDITION OF INTAKE EQUIPMENT (VISUAL INSPECTION ONLY)**	
1.1	Service cable	
1.2	Service head	✓
1.3	Earthing arrangement	✓
1.4	Meter tails	✓
1.5	Metering equipment	✓
1.6	Isolator (where present)	✓
2.0	**PARALLEL OR SWITCHED ALTERNATIVE SOURCES OF SUPPLY**	
2.1	Adequate arrangements where a generating set operates as a switched alternative to the public supply (551.6)	N/A
2.2	Adequate arrangements where a generating set operates in parallel with the public supply (551.7)	N/A
3.0	**AUTOMATIC DISCONNECTION OF SUPPLY**	
3.1	**Presence and adequacy of earthing and protective bonding arrangements:**	
	• Distributor's earthing arrangement (542.1.2.1; 542.1.2.2)	✓
	• Installation earth electrode (where applicable) (542.1.2.3)	N/A
	• Earthing conductor and connections, including accessibility (542.3; 542.3.2)	✓
	• Main protective bonding conductors and connections, including accessibility (411.3.1.2; 543.3.2: Section 544)	✓
	• Provision of safety electrical earthing/bonding labels at all appropriate locations (514.13)	✓
	• RCD(s) provided for fault protection (411.4.204; 411.5.3)	✓
4.0	**BASIC PROTECTION**	
4.1	**Presence and adequacy of measures to provide basic protection (prevention of contact with live parts) within the installation:**	
	• Insulation of live parts e.g. conductors completely covered with durable insulating material (416.1)	✓
	• Barriers or enclosures e.g. correct IP rating (416.2)	✓
5.0	**ADDITIONAL PROTECTION**	
5.1	**Presence and effectiveness of additional protection methods:**	
	• RCD(s) not exceeding 30 mA operating current (415.1; Part 7), see Item 8.14 of this schedule	✓
	• Supplementary bonding (415.2; Part 7)	✓
6.0	**OTHER METHODS OF PROTECTION**	
6.1	**Presence and effectiveness of methods which give both basic and fault protection:**	
	• SELV system, including the source and associated circuits (Section 414)	N/A
	• PELV system, including the source and associated circuits (Section 414)	N/A
	• Double or reinforced insulation i.e. Class II or equivalent equipment and associated circuits (Section 412)	✓
	• Electrical separation for one item of equipment e.g. shaver supply unit (Section 413)	✓
7.0	**CONSUMER UNIT(S) / DISTRIBUTION BOARDS(S):**	
7.1	Adequacy of access and working space for items of electrical equipment including switchgear (132.12)	✓
7.2	Components are suitable according to assembly manufacturer's instructions or literature (536.4.203)	✓
7.3	Presence of linked main switch(es) (462.1.201)	✓
7.4	Isolators, for every circuit or group of circuits and all items of equipment (462.2)	N/A
7.5	Suitability of enclosure(s) for IP and fire ratings (416.2, 421.1.6; 421.1.201; 526.5)	✓
7.6	Protection against mechanical damage where cables enter equipment (522.8.1; 522.8.5; 522.8.11)	✓
7.7	Confirmation that ALL conductor connections are correctly located in terminals and are tight and secure (526.1)	✓
7.8	Avoidance of heating effects where cables enter ferromagnetic enclosures e.g. steel (521.5)	✓
7.9	Selection of correct type and ratings of circuit protective devices for overcurrent and fault protection (411.3.2; 411.4, 411.5, 411.6; Sections 432, 433)	✓

NOTE 1: This form is suitable for many types of smaller installation, not exclusively domestic. All items inspected in order to confirm, as appropriate, compliance with the relevant clauses in BS 7671. The list of items and associated examples where given are not exhaustive.

NOTE 2: Insert ✓ to indicate an inspection had been carried out and the result is satisfactory, or N/A to indicate that the inspection is not applicable to a particular item.

Item no	Description	Outcome (See Note 1)
7.10	**Presence of appropriate circuit charts, warning and other notices:**	
	• Provision of circuit charts/schedules or equivalent forms of information (514.9)	✓
	• Warning notice of method of isolation where live parts not capable of being isolated by a single device (514.11)	✓
	• Periodic inspection and testing notice (514.12.1)	✓
	• RCD six-monthly test notice; where required (514.12.2)	✓
	• Warning notice of non-standard (mixed) colours of conductors present (514.14)	N/A
7.11	Presence of labels to indicate the purpose of switchgear and protective devices (514.1.1; 514.8)	✓
8.0	**CIRCUITS**	
8.1	Adequacy of conductors for current-carrying capacity with regard to type and nature of the installation (Section 523)	✓
8.2	Cable installation methods suitable for the location(s) and external influences (Section 522)	✓
8.3	Segregation/separation of Band I (ELV) and Band II (LV) circuits, and electrical and non-electrical services (528)	✓
8.4	Cables correctly erected and supported throughout, with protection against abrasion (Sections 521, 522)	✓
8.5	Provision of fire barriers, sealing arrangements where necessary (527.2)	✓
8.6	Non-sheathed cables enclosed throughout in conduit, ducting or trunking (521.10.1; 526.8)	✓
8.7	Cables concealed under floors, above ceilings or in walls/partitions, adequately protected against damage (522.6.201, 522.6.202, 522.6.203, 522.6.204)	✓
8.8	Conductors correctly identified by colour, lettering or numbering (Section 514)	✓
8.9	Presence, adequacy and correct termination of protective conductors (411.3.1.1; 543.1)	✓
8.10	Cables and conductors correctly connected, enclosed and with no undue mechanical strain (Section 526)	✓
8.11	No basic insulation of a conductor visible outside enclosure (526.8)	✓
8.12	Single-pole devices for switching or protection in line conductors only (132.14.1; 530.3.3; 643.6)	✓
8.13	Accessories not damaged, securely fixed, correctly connected, suitable for external influences (134.1.1; 512.2; Section 526)	✓
8.14	**Provision of additional protection by RCD not exceeding 30mA:**	
	• Socket-outlets rated at 32 A or less, unless exempt (411.3.3)	✓
	• Supplies for mobile equipment with a current rating not exceeding 32 A for use outdoors (411.3.3)	✓
	• Cables concealed in walls at a depth of less than 50 mm (522.6.202; 522.6.203)	✓
	• Cables concealed in walls/partitions containing metal parts regardless of depth (522.6.202; 522.6.203)	✓
	• Final circuits supplying luminaires within domestic (household) premises (411.3.4)	✓
8.15	**Presence of appropriate devices for isolation and switching correctly located including:**	
	• Means of switching off for mechanical maintenance (Section 464; 537.3.2)	✓
	• Emergency switches (465.1; 537.3.3)	✓
	• Functional switches, for control of parts of the installation and current-using equipment (463.1; 537.3.1)	✓
	• Firefighter's switches (537.4)	N/A
9.0	**CURRENT-USING EQUIPMENT (PERMANENTLY CONNECTED)**	
9.1	Equipment not damaged, securely fixed and suitable for external influences (134.1.1; 416.2; 512.2)	✓
9.2	Provision of overload and/or undervoltage protection e.g. for rotating machines, if required (Sections 445, 552)	N/A
9.3	Installed to minimise the build-up of heat and restrict the spread of fire (421.1.4; 559.4.1)	✓
9.4	Adequacy of working space. Accessibility to equipment (132.12; 513.1)	✓
10.0	**LOCATION(S) CONTAINING A BATH OR SHOWER (SECTION 701)**	
10.1	30 mA RCD protection for all LV circuits, equipment suitable for the zones, supplementary bonding (where required) etc.	✓
11.0	**OTHER PART 7 SPECIAL INSTALLATIONS OR LOCATIONS**	
11.1	List all other special installations or locations present, if any. (Record separately the result of particular inspections applied)	Evidence Attached

INSPECTED BY:

Name *(CAPITALS)* MATT RAVEN Signature  Date 05/11/20

PLEASE NOTE THAT THE EDITING OF THESE FORMS MAY NOT WORK FULLY IN YOUR WEB BROWSER AND SHOULD BE USED WITH ADOBE ACROBAT READER.

SCHEDULE OF TEST RESULTS

Location of distribution board: LV SWITCH ROOM

Supply to DB is from: DNO SUPPLY

Distribution board reference designation: MAIN PANEL

Overcurrent protective device type BS (EN): 60947-3

Overcurrent protective device rating: 1250 A

Number of phases: THREE PHASE

Nominal voltage: 400 V

If relevant, RCD BS (EN): N/A

$I_{\Delta n}$ of RCD: N/A mA

CIRCUIT DETAILS

Circuit number	Circuit description	Protective device							Conductor details		
		BS (EN)	Type	Rating (A)	Number of points served	Breaking capacity (kA)	RCD $I_{\Delta n}$ (mA)	Maximum permissible Z_s (Ω)	Reference method	Live (mm²)	cpc (mm²)
1	BUSBAR 1	60947-3		630	3		N/A		B	480	480
2	BUSBAR 2	60947-3		630	5		N/A		B	480	480
3	DB BIN STORE	60947-2		40	1		N/A		D	16	16
4	LAUNDRY	60937-3		100	1		N/A		102	25	16
5	FIRE ALARM PANEL	60937-2		16	5		N/A		102	4.0	4.0
6	SPARE										
7	SPARE										
8	EXTERNAL LIGHTING DB	60947-3		63	1		N/A		102	16	16
9	CHP	60947-3		63	1		N/A		102	16	16
10	SPARE										
11	SPARE										
12	SPARE										

Note - regarding reference method, this will be the most onerous method in regard to the thermal performance of the cable

SCHEDULE OF TEST RESULTS

Z_s at DB:	0.01	Ω	**Details of test equipment used:**
I_{pf} at DB:	8.7K	A	Continuity: - RCD: -
Correct polarity confirmed (tick)	✔		Insulation resistance: - Earth electrode resistance: -
Correct phase rotation confirmed (tick)	✔		Earth fault loop impedance: - Multi-functional: 8636005

Equipment vulnerable to test: N/A

TEST RESULTS

	Ring final circuit continuity (Ω)			Continuity (Ω)		IR test voltage	Insulation resistance (MΩ)		Polarity	Z_s (Ω)	RCD		AFDD	Remarks
Circuit number	r1 (line)	rn (neutral)	r2	(R1+R2)	R2	V	Live-Live	Live-Earth	Tick or cross		Disconnection time (ms)	RCD test button operation	Manual AFDD test button	
	N/A	N/A	N/A	0.01	N/A	500	>1000	>1000	✓	0.03	N/A	N/A	N/A	
1	N/A	N/A	N/A	0.01	N/A	500	>1000	>1000	✓	0.03	N/A	N/A	N/A	
	N/A	N/A	N/A	0.01	N/A	500	>1000	>1000	✓	0.03	N/A	N/A	N/A	
	N/A	N/A	N/A	0.02	N/A	500	500	>1000	✓	0.03	N/A	N/A	N/A	
2	N/A	N/A	N/A	0.02	N/A	500	700	>1000	✓	0.03	N/A	N/A	N/A	
	N/A	N/A	N/A	0.02	N/A	500	650	>1000	✓	0.03	N/A	N/A	N/A	
3	N/A	N/A	N/A	0.09	N/A	500	>200	>200	✓	0.14	N/A	N/A	N/A	
	N/A	N/A	N/A	0.04	N/A	500	>200	>200	✓	0.07	N/A	N/A	N/A	
4	N/A	N/A	N/A	0.04	N/A	500	>200	>200	✓	0.06	N/A	N/A	N/A	
	N/A	N/A	N/A	0.04	N/A	500	>200	>200	✓	0.07	N/A	N/A	N/A	
5														
6														
7														
	N/A	N/A	N/A	0.22	N/A	500	>200	>200	✓	0.33	N/A	N/A	N/A	
8	N/A	N/A	N/A	0.22	N/A	500	>200	>200	✓	0.36	N/A	N/A	N/A	
	N/A	N/A	N/A	0.22	N/A	500	>200	>200	✓	0.35	N/A	N/A	N/A	
	N/A	N/A	N/A	0.29	N/A	500	>200	>200	✓	0.40	N/A	N/A	N/A	
9	N/A	N/A	N/A	0.29	N/A	500	>200	>200	✓	0.43	N/A	N/A	N/A	
	N/A	N/A	N/A	0.30	N/A	500	>200	>200	✓	0.41	N/A	N/A	N/A	
10														
11														
12														

ECA
Excellence in Electrotechnical & Engineering Services

ELECTRICAL INSTALLATION CERTIFICATE

Notes for the person producing the Certificate:

1. The Electrical Installation Certificate is to be used only for the initial certification of a new installation or for an addition or alteration to an existing installation where new circuits have been introduced, or the replacement of a consumer unit/ distribution board.

   It is not to be used for a Periodic Inspection, for which an Electrical Installation Condition Report form should be used. For an addition or alteration which does not extend to the introduction of new circuits, a Minor Electrical Installation Works Certificate may be used.

   The 'original' Certificate is to be issued to the person ordering the work (Regulation 644.4). A duplicate should be retained by the contractor.

2. This Certificate is only valid if accompanied by the Schedule of Inspections and the Schedule(s) of Test Results.

3. The signatures appended are those of the persons authorised by the companies executing the work of design, construction, inspection and testing respectively. A signatory authorised to certify more than one category of work should sign in each of the appropriate places.

4. The time interval recommended before the first periodic inspection must be inserted. The proposed date for the next inspection should take into consideration the frequency and quality of maintenance that the installation can reasonably be expected to receive during its intended life, and the period should be agreed between the designer, installer and other relevant parties.

5. The page numbers for each of the Schedule of Inspections and the Schedule(s) of Test Results should be indicated, together with the total number of sheets involved.

6. The maximum prospective value of fault current (I_{pf}) recorded should be greater of either the prospective value of short-circuit current or the prospective value of earth fault current.

Guidance for Recipients (to be appended to the Certificate)

This safety Certificate has been issued to confirm that the electrical installation work to which it relates has been designed, constructed, inspected and tested in accordance with British Standard 7671 (the IET Wiring Regulations).

You should have received an 'original' Certificate and the contractor should have retained a duplicate. If you were the person ordering the work, but not the owner of the installation, you should pass this Certificate, or a full copy of it including the schedules, immediately to the owner.

The 'original' Certificate should be retained in a safe place and be shown to any person inspecting or undertaking further work on the electrical installation in the future. If you later vacate the property, this Certificate will demonstrate to the new owner that the electrical installation complied with the requirements of British Standard 7671 at the time the Certificate was issued. The Construction (Design and Management) Regulations require that, for a project covered by those Regulations, a copy of this Certificate, together with Schedules, is included in the project Health and Safety documentation.

For safety reasons, the electrical installation will need to be inspected at appropriate intervals by a skilled person or persons, competent in such work. The maximum time interval recommended before the next inspection is stated on Page 1 under 'NEXT INSPECTION'.

This Certificate is intended to be issued only for a new electrical installation of for new work associated with an addition or alteration to an existing installation. It should not have been issued for the inspection and testing of an existing electrical installation. An 'Electrical Installation Condition Report' should be issued for such an inspection.

This Certificate is only valid if accompanied by the Schedule of Inspections and the Schedule(s) of Test Results.

ECA
Excellence in Electrotechnical & Engineering Services

About ECA

ECA is the UK's largest trade association representing electrotechnical and engineering services organisations, at regional, national and European level. ECA member-companies are rigorously assessed before membership is approved.

Member firms have a combined turnover in excess of £6 billion annually. Member firms carry out design, installation, inspection, testing, maintenance and monitoring activity across the domestic, commercial, industrial and public sectors. This ranges from power and lighting to data communications, to energy efficiency and renewables, as well as the design and installation of cutting-edge building control technologies.

ECA's near 3,000 members range from SME electrotechnical businesses to nationwide engineering services organisations that employ thousands of professionals on major UK projects.

Tel: 020 7313 4800 Email: info@eca.co.uk www.eca.co.uk