Certificate No: 70917

ELECTRICAL INSTALLATION CERTIFICATE

(REQUIREMENTS FOR ELECTRICAL INSTALLATIONS BS7671 [IET WIRING REGULATIONS])

DETAILS OF THE CLIENT

Client: Birtley House Group Ltd

Address: Birtley House, Bramley, Guildford, GU5 0LB

INSTALLATION ADDRESS

Occupier: Birtley House Group Ltd

Address: Birtley House, Bramley, Guildford, GU5 0LB

DESCRIPTION AND EXTENT OF THE INSTALLATION

Description of Installation

Care home store and workshop.

(Tick boxes as appropriate)

New installation ☐

Addition to an existing installation ☐

Alteration to an existing installation ☑

Extent of installation covered by this Certificate:

New 'Store Sockets' circuit created. Ring main altered to now include previous radial circuit sockets, powered from the same breaker. New protective device installed for 'Outside Socket' circuit replacing over-rated 32A RCBO. Colour identification rectified on switched live and earth conductors. Required labelling applied.

(use continuation sheet if necessary) see continuation sheet No: N/A

FOR DESIGN, CONSTRUCTION, INSPECTION AND TESTING

I being the person responsible for the Design, Construction, Inspection & 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 that Design, Construction, Inspection & Testing, hereby CERTIFY that the design work for which I have been responsible is to the best of my knowledge and belief in accordance with BS7671: 2008 amended to 01/01/2015 except for any departures, if any, detailed as follows.

Details of departures from BS7671 as amended (Regulations 120.3 and 133.5):

None

Details of permitted exceptions (Regulation 411.3.3). Where applicable, a suitable risk assessment(s) must be attached to this certificate.

N/A

Risk assessment attached N/-

The extent of liability of the signatory is limited to the work described above as the subject of this Certificate.

Name (IN BLOCK LETTERS) DEREK BREW

Company: Derek Brew

Address: 18 Warren Close, Whitehill, Bordon, Hampshire, GU35 9EX

Date: 07/09/2017

Signature: 

Tel No: 01420 479292

NEXT INSPECTION

I the designer, recommend that this installation is further inspected and tested after an interval of not more than 5 years

SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS

(Tick boxes and enter details, as appropriate)

Earthing

TN-C	
TN-S	
TN-C-S	✓
TT	
IT	

Other source of supply (to be detailed on attached schedules)

Number and Type of Live Conductors

a.c.	Yes	d.c.	
1-Phase,2-Wire	Yes	2-wire	
2-Phase,3-Wire		3-wire	
3-Phase,3-Wire		Other	
3-Phase,4-Wire			

Confirmation of supply polarity ✓

Nature of Supply Parameters

Nominal voltage, U/U_0 (1)	230	230	V
Nominal frequency, f (1)		50	Hz
Prospective fault current, I_{pf} (2)		0.74	kA
External loop impedance, Z_e (2)		0.38	Ω

(Note: (1) by enquiry, (2) by enquiry or by measurement)

Supply Protective Device Characteristics

BS (EN) Lim

Type Lim

Rated Current Lim A

PARTICULARS OF INSTALLATION REFERRED TO IN THE CERTIFICATE

(Tick boxes and enter details, as appropriate)

Means of Earthing

Distributor's Facility: Yes

Installation Earth Electrode: N/A

Maximum Demand

Maximum demand (load) 60 KVA/Amps *(Delete as appropriate)*

Details of installation Earth Electrode: *(where applicable)*

Type: *(e.g. rod(s), tape etc)* N/A

Location: N/A

Electrode resistance to earth: N/A Ω

Main Protective Conductors

Earthing Conductor:	material Steel	csa SWA	mm²	Connection / Continuity verified	✓	
Main protective bonding conductors:	material N/A	csa N/A	mm²	Connection / Continuity verified	N/A	

To water installation pipes N/A	To gas installation pipes N/A	To oil installation pipes N/A	To structural steel N/A
To lightning protection N/A	To other N/A	Specify	

Main Switch / Switch-Fuse / Circuit-Breaker / RCD

Location:	Back Store	Current rating:	100 A	**If RCD main switch**
BS, Type:	EN60947 3	Fuse / device rating or setting:	63 A	Rated residual operating current $I_{\Delta n}$ N/A mA
No of poles:	2	Voltage rating:	230 V	Rated time delay N/A ms
				Measured operating time (at $I_{\Delta n}$) N/A ms

COMMENTS ON EXISTING INSTALLATION

(in the case of an alteration or additions see Section 633)

No gas or water supplied to this installation.
Notification to local authority for these works though NAPIT on ID number 1674317

SCHEDULES

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

One Schedules of Inspections and one Schedules of Test Results are attached.

(Enter quantities of schedules attached)

SCHEDULE OF INSPECTIONS (for new installation work only) for DOMESTIC AND SIMILAR PREMISES WITH UP TO 100 A SUPPLY

NOTE 1: This form is suitable for many types of smaller installation not exclusively domestic.

All items inspected to confirm as appropriate, compliance with the relevent clauses in BS7671.
The list of items and associated examples where given are not exhaustive.

NOTE 2: Insert ✓ to indicate an inspection has 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	**DISTRIBUTOR'S / SUPPLY INTAKE EQUIPMENT (the Distributor should only be notified of any unsatisfactory equipment**	
1.1	Condition of service cable	✓
1.2	Condition of service head	✓
1.3	Condition of distributor's earthing arrangement	✓
1.4	Condition of meter tails - Distributor / Consumer	N/V (encased)
1.5	Condition of metering equipment	✓
1.6	Condition of 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)	✓
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:**	
	• Installation earth electrode where applicable (542.1.2)	N/A
	• Earthing conductor and connections including accessibility (542.3)	✓
	• Main protective bonding conductors and connections including accessibility (411.3.1.2)	N/A
	• Provision of safety electrical earthing / bonding labels at all appropriate locations (514.13)	N/A
	• RCD(s) provided for fault protection (411.4.9; 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 eg. conductors completely covered with durable insulating materials (416.1)	✓
	• Barriers or enclosures eg. 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 systems, including the source and associated circuits (414)	N/A
	• PELV systems, including the source and associated circuits (414)	N/A
	• Double or reinforced insulation i.e. Class II or equivalent equipment and associated circuits (412)	N/A
	• Electrical separation for one item of equipment e.g. shaver supply unit (413)	N/A
7.0	**CONSUMER UNIT(S) / DISTRIBUTION BOARD(S):**	
7.1	Adequacy of access and working space for items of electrical equipment including switchgear (132.12)	✓
7.2	Presence of linked main switch(s) (537.1.4; 537.1.5; 537.1.6)	✓
7.3	Isolators, for every circuit or group of circuits and all items of equipment (537.2)	✓
7.4	Suitability of enclosure(s) for IP and fire ratings (416.2; 421.1.6; 421.1.200)	✓
7.5	Protection against mechanical damage where cables enter equipment (522.8.1; 522.8.11)	✓
7.6	Confirmation that ALL conductor connections are correctly located in terminals and are tight and secure (526.1)	✓

ITEM NO	DESCRIPTION	OUTCOME See Note 2
7.0	**CONSUMER UNIT(S) / DISTRIBUTION BOARD (S) continued**	
7.7	Avoidance of heating effects where cables enter ferromagnetic enclosures e.g. steel (521.5)	✓
7.8	Selection of correct type and ratings of circuit protective devices for overcurrent and fault protection (432; 433; 411.3.2; 411.4, .5, .6)	✓
7.9	**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)	N/A
	• Periodic inspection and testing notice (514.12.1)	N/A
	• RCD quarterly test notice; where required (514.12.2)	✓
	• Warning notice of non-standard (mixed) colours of conductors present (514.14)	✓
7.10	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 (523)	✓
8.2	Cable installation methods suitable for the location(s) and external influences (522)	✓
8.3	Segregation/separation of Band I (ELV) and Band II (LV) circuits, and electrical and non-electrical services (528)	N/A
8.4	Cables correctly erected and supported throughout including escape routes, with protection against abrasion (521; 522)	✓
8.5	Provision of fire barriers, sealing arrangements where necessary (527.2)	N/A
8.6	Non-sheathed cables enclosed throughout in conduit, ducting or trunking (521.10.1; 526.8)	N/A
8.7	Cables concealed under floors, above ceilings or in walls / partitions, adequately protected against damage (522.6.200; 526.6.203)	N/A
8.8	Conductors correctly identified by colour, lettering or numbering (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 (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; 530.3.2)	✓
8.13	Accessories not damaged, securely fixed, correctly connected, suitable for external influences (526; 512.2)	✓
8.14	**Provision of additional protection by RCD not exceeding 30mA:**	
	• Socket-outlets rated at 20 A or less, unless exempt (411.3.3)	✓
	• 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 (522.6.201; 522.6.203)	N/A
	• Cables concealed in walls / partitions containing metal parts regardless of depth (522.6.202; 522.6.203)	N/A
8.15	**Presence of appropriate devices for isolation and switching correctly located including:**	
	• Means of switching off for mechanical maintenance (537.3)	✓
	• Emergency switches (537.4)	N/A
	• Functional switches, for control of parts of the installation and current-using equipment (537.5)	✓
	• Firefighter's switches (537.6)	N/A
9.0	**CURRENT-USING EQUIPMENT (PERMANENTLY CONNECTED)**	
9.1	Equipment not damaged, securely fixed and suitable for external influences (416.2)	✓
9.2	Provision of overload and/or undervoltage protection e.g. for rotating machines, if required (552; 445)	✓
9.3	Installed to minimize the build of heat and restrict the spread of fire (421.1.4; 559.5.1)	✓
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.	N/A
11.0	**OTHER PART 7 SPECIAL INSTALLATIONS OR LOCATIONS**	
11.1	List all other special installations or locations present, if any. (Record separately the results of particular inspections applied)	N/A

Inspected by:
Name (Capitals) DEREK BREW Signature  Date 07/09/2017

GENERIC SCHEDULE OF TEST RESULTS

Certificate No: 70917

DB reference no DB9
Location Back Store
Zs at DB Ω 0.38
I_{pf} at DB (kA) 0.74
Correct supply polarity confirmed ✓
Phase sequence confirmed (where appropriate) N/A

Details of circuits and/or installed equipment vulnerable to damage when testing
Burglar Alarm

Details of test instruments used (state serial and/or asset numbers)
Continuity 1002398101422559
Insulation resistance 1002398101422559
Earth fault loop impedance 1002398101422559
RCD 1002398101422559
Earth electrode resistance N/A

Tested by:
Name (Capitals) DEREK BREW
Signature 
Date 07/09/2017

Test results

Circuit Details									Ring final circuit continuity Ω			Continuity Ω (R1 + R2) or R2		Insulation Resistance Insulation (MΩ)		Polarity	Zs Ω	RCD (ms)			Remarks (continue on a seperate sheet if necessary)
		Overcurrent device				Conductor details															
Circuit Number	Circuit Description	BS(EN)	type	rating (A)	breaking capacity (kA)	Reference Method	Live (mm2)	cpc (mm2)	r1 (line)	rn (neutral)	r2 (cpc)	R1 + R2 *	R2	Live - Live	Live - Earth	Insert ✓ or		@ $I_{\Delta n}$	@ $5I_{\Delta n}$	Test button operation	
1	Woodchip Shd	EN60898	B	50	6	D	10	4	N/A	N/A	N/A	.27	N/A	999	999	✓	.37	39	16	✓	RCD at Load End
2	Garage Skts	EN61009	B	32	6	B	2.5	1.5	.58	.58	.87	.81	N/A	999	999	✓	.70	40	29	✓	
3	Desk Sockets	EN61009	B	20	6	B	2.5	1.5	N/A	N/A	N/A	.48	N/A	999	999	✓	.55	29	19	✓	
4	Outside Skt	EN61009	B	20	6	C	2.5	2.5	N/A	N/A	N/A	.75	N/A	999	999	✓	.56	29	19	✓	
5	Lights	EN60898	C	6	6	B	1	1	N/A	N/A	N/A	.64	N/A	Lim	24	✓	.97	N/A	N/A	N/A	
6	Burglar Alarm	EN60898	B	6	6	C	1	1	N/A	N/A	N/A	.45	N/A	999	999	✓	.86	N/A	N/A	N/A	

* Where there are no spurs connected to a ring final circuit this value is also the (R1 + R2) of the circuit

ELECTRICAL INSTALLATION CERTIFICATE
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 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 or for new work associated with an addition or alteration to an existing installation. It should not have been issued for the inspection 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 of test results.