SELECT

ELECTRICAL INSTALLATION CERTIFICATE (SINGLE-SIGNATURE)

For use where design, construction, inspection and testing are the responsibility of one person

(REQUIREMENTS FOR ELECTRICAL INSTALLATIONS — BS 7671 [IET WIRING REGULATIONS])

SELECT MEMBERSHIP NUMBER 8080

SSC 057039

DETAILS OF THE CLIENT

Sutherland Management
28 Bingham Terr Dundee DD4 7HJ

INSTALLATION ADDRESS

14c Church Street, Broughty Ferry Dundee

DESCRIPTION AND EXTENT OF THE INSTALLATION

Description of installation: Domestic

Extent of installation covered by this Certificate: Replacement consumer unit, install of smoke & heat detectors

New installation ☐
Addition ☑
Alteration ☐

FOR DESIGN, CONSTRUCTION, INSPECTION AND TESTING

I being the person responsible for the Design, Construction, Inspection and Testing of the electrical installation (as indicated by my signature), 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 work for which I have been responsible is to the best of my knowledge and belief in accordance with BS 7671:2008, amended to 2017 (date) except for the departures, if any, detailed as follows:

Details of departures from BS 7671 (Regulations 120.3 and 133.5) and comments on existing installation: None

Details of permitted exceptions (Regulation 411.3.3): None

Where applicable, a suitable risk assessment(s) must be attached to this Certificate. Risk assessment attached ☐

Name (Block Letters) NATHAN FORBES

For and on behalf of G A Helmore
2 Langlands St Dundee DD4 6SZ

Position Electrician

Signature N. F Date 26/10/2017

I recommend that this installation is further inspected and tested after an interval of not more than 5 years years/~~months~~.

The attached schedule of inspections and schedules(s) of test results are part of this document and this Certificate is only valid when they are attached to it.

SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS

Nature of Supply Parameters

Nominal Voltage 240 V
Nominal Frequency 50 Hz
Prospective fault current, I_{pf} 1.50 kA
External loop impedance, Z_e 0.15 Ω

Number and Type of Live Conductors

1-phase, 2-wire ☑
2-phase, 3-wire ☐
3-phase, 3-wire ☐
3-phase, 4-wire ☐

Supply Protective Device Characteristics

BS (EN): 1361
Type: LIM
Rated current 40 A

Earthing arrangements

Distributor's facility ☐

☐ TN-S
☑ TN-C-S
☐ TT
☐ Other sources of supply

Installation earth electrode ☐

Type (e.g. rod(s), tape etc) N/A
Location N/A
Electrode resistance to earth N/A Ω

PARTICULARS OF INSTALLATION REFERRED TO IN THE CERTIFICATE

Maximum Demand

Load 45 kVA/Amps
(delete as appropriate)

Polarity and Phase Sequence

Supply polarity confirmed ☑
Phase sequence confirmed ☑
(Where appropriate)

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

Location boord hall cupboard
BS (EN)
No. of poles 2
Current rating 100 A
Fuse/device rating or setting 100 A
Voltage rating 240 V

If RCD main switch

Rated residual operating current ($I_{\Delta n}$) 30 mA
Rated time delay 40 ms
Measured operating time (at $I_{\Delta n}$) 0.4 ms

Main Protective Conductors

Earthing conductor: material copper csa 16 mm² Continuity/connection verified ☑
Main protective bonding conductors: material copper csa 10 mm² Continuity/connection verified ☑

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

This certificate and associated schedules are based on the models given in Appendix 6 of BS 7671 - IET Wiring Regulations.
They were developed by SELECT (the trading style of The Electrical Contractors' Association of Scotland).

SELECT

SCHEDULE OF INSPECTIONS

(for new installation work only)

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Note 1: All items inspected 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 Outcome for each item as follows:
To indicate that an inspection has been carried out and the result is **satisfactory**: ✔
To indicate that the inspection is **not applicable** to a particular item: N/A

Item No	DESCRIPTION	Outcome (Note 2)
1.0	**DISTRIBUTOR'S / SUPPLY INTAKE 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	✔
1.5	Condition of metering equipment	✔
1.6	Condition of isolator (where present)	N/A
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)	✔
3.0	**AUTOMATIC DISCONNECTION OF SUPPLY**	
3.1	**Presence and adequacy of earthing and protective bonding arrangements:**	
	a) Installation earth electrode where applicable (542.1.2.3)	N/A
	b) Earthing conductor and connections, including accessibility (542.3; 543.3.2)	✔
	c) Main protective bonding conductors and connections including accessibility (411.3.1.2; 543.3.2)	✔
	d) Provision of safety electrical earthing/bonding labels at all appropriate locations (514.13)	✔
	e) 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:**	
	a) Insulation of live parts e.g. conductors completely covered with durable insulating material (416.1)	✔
	b) Barriers or enclosures e.g. correct IP rating (416.2)	✔
5.0	**ADDITIONAL PROTECTION**	
5.1	**Presence and effectiveness of additional protection methods:**	
	a) RCD(s) not exceeding 30 mA operating current (415.1; Part 7) See Item 8.14 of this schedule	✔
	b) 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:**	
	a) SELV systems including the source & associated circuits (Section 414)	✔
	b) PELV systems including the source & associated circuits (Section 414)	✔
	c) Double or reinforced insulation i.e. Class II or equivalent equipment and associated circuits (Section 412)	✔
	d) Electrical separation for one item of equipment e.g. shaver supply unit (Section 413)	✔

Item No	DESCRIPTION	Outcome (Note 2)
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; 421.1.201)	✔
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)	✔
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 (411.3.2; 411.4, 411.5, 411 .6; Sections 432, 433)	✔
7.9	**Presence of appropriate circuit charts, warning and other notices:**	
	a) Provision of circuit charts/schedules or equivalent forms of information (514.9)	✔
	b) Warning notice of method of isolation where live parts not capable of being isolated by a single device (514.11)	✔
	c) Periodic inspection and testing notice (514.12.1)	✔
	d) RCD quarterly test notice; where required (514.12.2)	✔
	e) 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 (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 including escape routes, 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; 522.6.204)	✔
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; 530.3.2)	✔
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 30 mA:**	
	a) Socket-outlets rated at 20 A or less, unless exempt (411.3.3)	✔
	b) Mobile equipment with a current rating not exceeding 32 A for use outdoors (411.3.3)	✔
	c) Cables concealed in walls at a depth of less than 50 mm (522.6.202, 522.6.203)	✔
	d) Cables concealed in walls/partitions containing metal parts regardless of depth (522.6.202; 522.6.203)	✔
8.15	**Presence of appropriate devices for isolation and switching correctly located including:**	
	a) Means of switching off for mechanical maintenance (537.3)	✔
	b) Emergency switches (537.4)	N/A
	c) Functional switches, for control of parts of the installation and current-using equipment (537.5)	✔
	d) 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 (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 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 results of particular inspections applied)	✔

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CIRCUIT CHART AND SCHEDULE OF TEST RESULTS (18 CIRCUITS)

SELECT

Distribution Board Reference No. ....

Location and Type hall, cupboard

Details of circuits and/or installed equipment vulnerable to damage when testing: Smoke Detectors

Phase sequence confirmed (where appropriate) ☑

Z_s at DB 0.15 Ω

I_{pf} at DB 1.50 kA

Supply polarity confirmed ☑

No.	Circuit Description	No. of Points	Type (see code below)	Ref. Method †	csa Live (mm²)	csa CPC (mm²)	Overcurrent Device Type (.......... kA)	Overcurrent Device Amps	R_1+R_2 (Ω)	R_2 (Ω)	Ring Final Circuit L-L (Ω)	Ring Final Circuit N-N (Ω)	Ring Final Circuit CPC-CPC (Ω)	Insulation Resistance L-L (MΩ)	Insulation Resistance L-E (MΩ)	Polarity (✔)	Z_s (Ω)	RCD $I_{\Delta n}$ mA	RCD Time 100% (ms)	RCD Time *500% (ms)	Functional testing (✔)	Remarks
	Main Switch		A	A																		
1	Shower	1	A	A	6	2.5	B	32	0.04	N/A	N/A	N/A	N/A	N/A	>1000	✔	0.19	30	40	10	✔	No local isolation
2	Cooker	1	A	A	6	2.5	B	32	0.06	N/A	N/A	N/A	N/A	N/A	>1000	✔	0.21	30	60	20	✔	No local isolation
3	House Sockets + boiler	13	A	A	2.5	1.5	B	32	0.13	N/A	0.30	0.30	0.30	N/A	>1000	✔	0.39	30	90	30	✔	
4			A	A	1.0	1.0	B	6														
5	House Lights	7	A	A	1.0	1.0	B	6	0.54	N/A	N/A	N/A	N/A	N/A	>1000	✔	0.80	30	30	12	✔	
6	Spare																					
7	Spare																					
8			A	A	2.5	1.5	B	16														
9			A	A	2.5	1.5	B	16														
10	Socket in lounge	1	A	A	2.5	1.5	B	16	0.14	N/A	N/A	N/A	N/A	N/A	>1000	✔	0.31	30	77	26	✔	

† Insert Reference Method (see Table 4A2 from BS 7671 Appendix 4)

*30mA RCDs only

(No visible earth bond at gas meter (verified by test))

Code for Wiring Type	A	B	C	D	E	F	G	H	O (Other - please specify)
	PVC/PVC	PVC in Metal Conduit	PVC in Plastic Conduit	PVC in Metal Trunking	PVC in Plastic Trunking	PVC/SWA	XLPE/SWA	Mineral Insulated	

TEST INSTRUMENTS USED

Manufacturer	Type	Serial No.	Date Accuracy Verified	Manufacturer	Type	Serial No.	Date Accuracy Verified	Manufacturer	Type	Serial No.	Date Accuracy Verified

Tested by: NAME (CAPITALS) NATHAN FORBES Signature [signature] Date 26/10/17