ELECTRICAL INSTALLATION CONDITION REPORT

EC3379 - Master

Cannings
Building services engineers

A. Details of the Client/Person Ordering the Report

Client: Wessex RFCA

Address:
Mount House
Mount Street
Taunton
Somerset
TA1 3QE

B. Reason for Producing this Report

Purpose of this report:
5 yearly periodic electrical test and inspection report for insurance purposes.

Date(s) on which Inspection: and testing was carried out: 02/11/2020

C. Details of the Installation which is the Subject of this Report

Installation: 1069 Wimborne Squadron

Occupier: 1069 Wimborne Squadron

Address:
1069 Wimborne Squadron
156 Leigh Road
Wimborne
Dorset BH21 2DB

Description of premises:	Domestic	Commercial	Industrial
	N/A	N/A	N/A

Other: Cadet Hut

Estimated age of wiring system: 20 yrs

Evidence of alterations or additions: ✓ If yes estimated Age 5 yrs

Record of Installation available: N/A Records held By: N/A Date of previous inspection: Not Known

D. Extent and Limitations Inspection and Testing

Extent of Electrical Installation covered by this report:
The Complete electrical installation, tested in accordance to IEE

Agreed limitations including the reasons (See regulation 653.2)
R1+R2 test done by calculation

Agreed with name: Wessex

Operational Limitations including the reasons (See page No N/A)
None

This inspection and testing detailed in this report and accompanying schedules have been carried out in accordance with BS7671:2018 (IET Wiring Regulations) as amended to July 2018
It should be noted that cables concealed within trunking and conduits, under floors, in roof spaces, and generally within the fabric of the building or underground, have NOT been inspected unless specifically agreed between the client and inspector prior to the inspection. An inspection should be made within an accessible roof space housing other electrical equipment.

E. Summary of the Condition of the Installation

General condition of the installations (In terms of electrical safety)
The general conditon of the electrical installation is good, however there are some recommendations of improvements.

Overall assessment of the installation: Satisfactory

*An unsatisfactory assessment indicates that dangerous (code C1) and/or potentially dangerous (code C2) conditions have been identified.

F. Recommendations

Where the overall assessment of the suitability of the installation for continued use above is stated as SATISFACTORY , I recommend that any observations classified as 'Danger present' (code C1) or 'Potentially dangerous' (code C2) are acted upon as a matter of urgency.
Investigation without delay is recommended for observations identified as *'further investigation required' (code FI)*.
Observation classified as 'Improvement recommended' (code C3) should be given due consideration.
Subject to the necessary remedial action being taken I recommend that the installation is further inspected and tested by 02/11/2025

G. Declaration

I , being the person(s) responsible for the inspection and 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 and testing, hereby declare that the information in this report, including the observations and attached schedules, provides an accurate assessment of the condition of the electrical installation taking into account the stated extent and limitations in section D of this report.

Trading Title and address:
I J Cannings & Son Ltd,
Stratford House Water Bridge Court,
Mat ford Park Road,
Exeter,
DEVON, EX2 8EX

NICEIC Enrolment Number: 9140

Branch No. (If Applicable): 0

Inspected and tested by:

Name: Lewis Conabeer Position: Approved Electrician Signature: Date:

Report authorised for issue by:

Name: Callum Harrison Position: Qualifying Supervisor Signature: Date:

H. Schedule(s)

The attached schedule(s) are part of this document and this report is valid only when they are attached to it.

2 Schedule(s) of inspection and 2 Schedule(s) of test results are attached

I. Supply Characteristics and Earthing Arrangements

Earthing Arrangements		Number and Type of Live Conductors						Nature of Supply Parameters			Supply protective device		
TN-S	N/A	a.c.	✓			d.c.	N/A	Nominal Voltage	$U^{(1)}$	400 V	BS(EN)	1361 Fuse HBC	
TN-C-S	✓	1-Phase (2 wire)	N/A	1-Phase (3 wire)	N/A	2 Wire	N/A	Nominal Voltage	$U_0^{(1)}$	230 V			
TN-C	N/A	2-Phase (3 wire)	N/A			3 Wire	N/A	Nominal frequency	$f^{(1)}$	50 Hz	Type	2	
TT	N/A	3-Phase (3 wire)	N/A	3-Phase (4 wire)	✓	Other	N/A	Prospective fault current	$Ipf^{(2)}$	0.30 kA	Nominal current rating	100	A
IT	N/A	Other	N/A					External loop impedance	$Ze^{(2)}$	1.74 Ω	Short circuit capacity	33	kA
		Confirmation of supply polarity	✓					Number of supplies		1			
								(Note: (1) by enquiry, (2) by enquiry or by measurement)					

J. Particulars of Installation Referred to in the Report

Means of earthing		Details of installation Earth Electrode (where applicable)			
Distributor's facility	✓	Type (e.g. rod(s), tape etc.)	N/A	Location	N/A
Installation earth electrode	N/A	Resistance to Earth	N/A Ω	Method of measurement	N/A

Main Protective Conductors

Tick boxes and enter details as applicable

	Material		csa		Continuity Verified		Connection Verified	
Earthing Conductor	Material	Copper	csa	16 mm²	Continuity Verified	✓	Connection Verified	✓
Main protective bonding conductors	Material	Copper	csa	10 mm²	Continuity Verified	✓	Connection Verified	✓

Bonding of Incoming Service

Water installation pipes ✓ | Gas installation pipes N/A | Structural Steel N/A | Lightning protection N/A | Oil installation pipes N/A

Other incoming service(s) N/A — Please State: N/A

Maximum Demand (Load): 100 **Amps**

Protective measure(s) against electric shock: ADS

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

Location	Mains Cupboard	Current rating	100 A	**if RCD main switch**	
Type BS(EN)	60947-3	No of poles 3	Fuse/Device rating or setting	100 A	Rated residual operation current, IΔn	N/A mA
Supply Conductors material	Copper	Supply Conductors csa	25 mm²	Voltage rating	400 V	Rated time delay	N/A ms
						RCD Operating time at, IΔn	N/A ms

K. Observations

Referring to the attached schedule(s) of Inspection and Test Results, and subject to the limitations specified at the Extent and Limitations of the Inspection and testing section.

No remedial action is required. N/A — The following observations are made ✓

Item No	Observations	Code
1	DB1 - 7L2 - conductors not identified, needs sleeving or heat shrink	C3
2	Heaters should be identified for circuit numbers on spurs.	C3
3	Disabled WC light is faulty and needs replacing	C3
4	Emergency lights across while site fail when turning off power to count points served.	N/A
5	DB2 plastic DB does not meet crrent regulations	C3
	--Observations continue on continuation sheet(s)--	

One of the following codes, as appropriate, has been allocated to each of the observations made above to indicate to the person(s) responsible for the installation the degree of urgency for remedial action.

C1 - Danger present. Risk of injury. Immediate remedial action required	0
C2 - Potentially dangerous - urgent remedial action required	0
C3 - Improvement recommended	9
FI - Further investigation required without delay	0

Board Details

TO BE COMPLETED IN EVERY CASE

ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION

Location of Distribution Board: Classroom Hut

Distribution board designation: DB 2

Supply to distribution board is from: SubMains(DB 1, 7/L2)

No of phases: 1

Nominal Voltage: 230 V

Overcurrent protective device for the distribution circuit

Type BS(EN): 60898 MCB B

Rating: 63 A

Associated RCD (if any)

BS(EN): 61008 RCD

RCD No of Poles: 2

RCD Rating: 30 mA

Circuit Details

Circuit number and phase	Circuit designation	Type of wiring	Reference method	No of points served	Circuit conductors csa		Max permitted disconnection times (s)	Overcurrent protective device					RCD	Maximum permitted Zs (Ω)
					Live mm²	cpc mm²		BS(EN)	AFDD	Type	Rating (A)	Short circuit capacity (kA)	Operating current (IΔn)	
1/L2	Sockets	A	B	12	2.5	1.5	0.4	60898 MCB		B	32	10	30	1.37
2/L2	Heaters	A	B	2	2.5	1.5	0.4	60898 MCB		B	20	10	30	2.19
3/L2	Heaters	A	B	2	2.5	1.5	0.4	60898 MCB		B	20	10	30	2.19
4/L2	Outside Lights	A	B	5	1	1	0.4	60898 MCB		B	10	10	30	4.37
5/L2	Lights	A	B	11	1	1	0.4	60898 MCB		B	10	10	30	4.37

Wiring Code

A	B	C	D	E	F	G	H	O
PVC/PVC cables	PVC cables in metallic conduit	PVC cables in non-metallic conduit	PVC cables in metallic trunking	PVC cables in non-metallic trunking	PVC/SWA cables	XLPE/SWA cables	Mineral insulated cables	Other

Board Tests

TO BE COMPLETED IN EVERY CASE

Correct supply polarity confirmed ✓ | Phase sequence confirmed (where appropriate) ✓

Supplementary Conductors ✓

ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION

Zs 0.38 Ω Ipf 0.61 kA

Operating times of associated RCD (if any) At I Δ n N/A ms

TEST INSTRUMENTS (SERIAL NUMBERS) USED

Earth fault loop impedance	226446	RCD	226446
Insulation resistance	226446	Multi-function	N/A
Continuity	226446	Other	N/A

Details of circuits and/or equipment vulnerable to damage

N/A

Circuit Tests

Circuit number and phase	Circuit Impedances Ω					Insulation resistance					Polarity (v)	Maximum measured earth fault loop impedance Ω	RCD		AFDD Test button operation	Remarks see continuation sheet
	Ring final circuits only (measure end to end)			All circuits (At least one column to be completed)		Test Voltage	Live/ Live MΩ	Live/ Neutral MΩ	Live/ Earth MΩ	Earth/ Neutral MΩ			Operating time at I Δ n (ms)	Test button operation		
	r_1 (Line)	r_n (Neutral)	r_2 (cpc)	$(R_1 + R_2)$	(R_2)											
1/L2	0.64	0.66	1.26	0.49	N/A	500	N/A	200	200	200	✓	0.87	42	✓		NO
2/L2	N/A	N/A	N/A	0.22	N/A	500	N/A	200	200	200	✓	0.60	42	✓		NO
3/L2	N/A	N/A	N/A	0.27	N/A	500	N/A	200	200	200	✓	0.65	42	✓		NO
4/L2	N/A	N/A	N/A	0.65	N/A	500	N/A	200	200	200	✓	1.03	42	✓		NO
5/L2	N/A	N/A	N/A	0.74	N/A	500	N/A	200	200	200	✓	1.12	42	✓		NO

Tested By

Signature		Position	Approved Electrician
Name	Lewis Conabeer	Date of testing	02/11/2020

Board Details

TO BE COMPLETED IN EVERY CASE

ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION

Location of Distribution Board: Mains Cupboard

Distribution board designation: DB 1

Supply to distribution board is from: N/A

No of phases: N/A

Nominal Voltage: N/A V

Overcurrent protective device for the distribution circuit

Type BS(EN): N/A

Rating: N/A A

Associated RCD (if any)

BS(EN): N/A

RCD No of Poles: N/A

RCD Rating: N/A mA

Circuit Details

Circuit number and phase	Circuit designation	Type of wiring	Reference method	No of points served	Circuit conductors csa		Max permitted disconnection times (s)	Overcurrent protective device					RCD	Maximum permitted Zs (Ω)
					Live mm²	cpc mm²		BS(EN)	AFDD	Type	Rating (A)	Short circuit capacity (kA)	Operating current (IΔn)	
1/L1	Office & Kitchen Ring	A	B	11	2.5	1.5	0.4	61009 RCD/RCBO		B	32	10	30	1.37
1/L2	Far Ring	A	B	16	2.5	1.5	0.4	61009 RCD/RCBO		B	32	10	30	1.37
1/L3	Heaters 1&2	A	B	2	2.5	1.5	0.4	61009 RCD/RCBO		B	20	10	30	2.19
2/L1	Heaters 3&4	A	B	2	2.5	1.5	0.4	61009 RCD/RCBO		B	20	10	30	2.19
2/L2	Heaters 5&6	A	B	2	2.5	1.5	0.4	61009 RCD/RCBO		B	20	10	30	2.19
2/L3	Heaters 7&8	A	B	2	2.5	1.5	0.4	61009 RCD/RCBO		B	20	10	30	2.19
3/L1	Heaters 9,10 &11	A	B	3	2.5	1.5	0.4	61009 RCD/RCBO		B	32	10	30	1.37
3/L2	Heater 12 Disabled wc	A	B	1	2.5	1.5	0.4	61009 RCD/RCBO		B	20	10	30	2.19
3/L3	Disabled wc Hand Drier	A	B	1	2.5	1.5	0.4	61009 RCD/RCBO		B	20	10	30	2.19
4/L1	WC Hand Drier	A	B	1	2.5	1.5	0.4	61009 RCD/RCBO		B	20	10	30	2.19
4/L2	Water Heater Kitchen	A	B	1	2.5	1.5	0.4	61009 RCD/RCBO		B	20	10	30	2.19
4/L3	Heater 15 & 16	A	B	2	2.5	1.5	0.4	61009 RCD/RCBO		B	20	10	30	2.19
5/L1	WC hand drier 2	A	B	1	2.5	1.5	0.4	61009 RCD/RCBO		B	20	10	30	2.19
5/L2	Lights WCs front	A	B	11	1	1	0.4	61009 RCD/RCBO		B	6	10	30	7.28
5/L3	Class 1 & 2 Lights	A	B	9	1	1	0.4	61009 RCD/RCBO		B	6	10	30	7.28
6/L1	Store & Office Lights	A	B	7	1	1	0.4	61009 RCD/RCBO		B	6	10	30	7.28
6/L2	Hallway Lights	A	B	10	1	1	0.4	61009 RCD/RCBO		B	6	10	30	7.28
6/L3	Kitchen Lights	A	B	5	1	1	0.4	61009 RCD/RCBO		B	6	10	30	7.28
7/L1	Fire Alarm	O	B	1	1.5	1	0.4	60898 MCB		B	6	10	N/A	7.28
7/L2	Sub Mains(DB 2)	F	C	1	16	16	5	60898 MCB		B	63	10	N/A	0.69
7/L3	WC Heaters	A	B	2	2.5	1.5	0.4	61009 RCD/RCBO		B	20	10	30	2.19
8/L1	Outside Lights	A	B	3	1	1	0.4	61009 RCD/RCBO		B	6	10	30	7.28
8/L2	Heat Stat Contactor	A	B	2	1	1	0.4	60898 MCB		B	6	10	N/A	7.28
8/L3	Frost Stat Contactor	A	B	1	1	1	0.4	60898 MCB		B	6	10	N/A	7.28

Wiring Code

A	B	C	D	E	F	G	H	O
PVC/PVC cables	PVC cables in metallic conduit	PVC cables in non-metallic conduit	PVC cables in metallic trunking	PVC cables in non-metallic trunking	PVC/SWA cables	XLPE/SWA cables	Mineral insulated cables	Other

Board Tests

TO BE COMPLETED IN EVERY CASE

Correct supply polarity confirmed ✓ | Phase sequence confirmed (where appropriate) ✓

Supplementary Conductors ✓

ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION

Zs N/A Ω Ipf N/A kA

Operating times of associated RCD (if any) At I Δ n N/A ms

TEST INSTRUMENTS (SERIAL NUMBERS) USED

Earth fault loop impedance	226446	RCD	226446
Insulation resistance	226446	Multi-function	N/A
Continuity	226446	Other	N/A

Details of circuits and/or equipment vulnerable to damage

N/A

Circuit Tests

Circuit number and phase	Circuit Impedances Ω					Insulation resistance					Polarity (v)	Maximum measured earth fault loop impedance Ω	RCD		AFDD Test button operation	Remarks see continuation sheet
	Ring final circuits only (measure end to end)			All circuits (At least one column to be completed)		Test Voltage	Live/ Live MΩ	Live/ Neutral MΩ	Live/ Earth MΩ	Earth/ Neutral MΩ			Operating time at I Δ n (ms)	Test button operation		
	r_1 (Line)	r_n (Neutral)	r_2 (cpc)	$(R_1 + R_2)$	(R_2)											
1/L1	0.39	0.42	0.64	0.28	N/A	500	N/A	200	200	200	✓	0.58	34	✓		NO
1/L2	0.68	0.68	1.11	0.47	N/A	500	N/A	200	200	200	✓	0.77	19	✓		NO
1/L3	N/A	N/A	N/A	0.30	N/A	500	N/A	200	200	200	✓	0.60	20	✓		NO
2/L1	N/A	N/A	N/A	0.43	N/A	500	N/A	200	200	200	✓	0.73	19	✓		NO
2/L2	N/A	N/A	N/A	0.45	N/A	500	N/A	200	200	200	✓	0.75	19	✓		NO
2/L3	N/A	N/A	N/A	0.26	N/A	500	N/A	200	200	200	✓	0.56	19	✓		NO
3/L1	N/A	N/A	N/A	0.18	N/A	500	N/A	200	200	200	✓	0.48	18	✓		NO
3/L2	N/A	N/A	N/A	0.10	N/A	500	N/A	200	200	200	✓	0.40	19	✓		NO
3/L3	N/A	N/A	N/A	0.35	N/A	500	N/A	200	200	200	✓	0.65	19	✓		NO
4/L1	N/A	N/A	N/A	0.22	N/A	500	N/A	200	200	200	✓	0.52	23	✓		NO
4/L2	N/A	N/A	N/A	0.20	N/A	500	N/A	200	200	200	✓	0.50	19	✓		NO
4/L3	N/A	N/A	N/A	0.08	N/A	500	N/A	200	200	200	✓	0.38	19	✓		NO
5/L1	N/A	N/A	N/A	0.14	N/A	500	N/A	200	200	200	✓	0.44	19	✓		NO
5/L2	N/A	N/A	N/A	0.43	N/A	500	N/A	200	200	200	✓	0.73	19	✓		NO
5/L3	N/A	N/A	N/A	0.76	N/A	500	N/A	200	200	200	✓	1.06	20	✓		NO
6/L1	N/A	N/A	N/A	0.79	N/A	500	N/A	200	200	200	✓	1.09	19	✓		NO
6/L2	N/A	N/A	N/A	0.96	N/A	500	N/A	200	200	200	✓	1.26	22	✓		NO
6/L3	N/A	N/A	N/A	0.61	N/A	500	N/A	200	200	200	✓	0.91	20	✓		NO
7/L1	N/A	N/A	N/A	0.05	N/A	500	N/A	200	200	200	✓	0.35	N/A	N/A		NO
7/L2	N/A	N/A	N/A	0.08	N/A	500	N/A	200	200	200	✓	0.38	N/A	N/A		NO
7/L3	N/A	N/A	N/A	0.17	N/A	500	N/A	200	200	200	✓	0.42	19	✓		NO
8/L1	N/A	N/A	N/A	0.61	N/A	500	N/A	200	200	200	✓	0.91	19	✓		NO
8/L2	N/A	N/A	N/A	0.23	N/A	500	N/A	200	200	200	✓	0.53	N/A	N/A		NO
8/L3	N/A	N/A	N/A	0.24	N/A	500	N/A	200	200	200	✓	0.54	N/A	N/A		NO

Tested By

Signature		Position	Approved Electrician
Name	Lewis Conabeer	Date of testing	02/11/2020

Extent of Electrical Installation covered by this report, Continued. from page 1

wiring regulations BS7671 guidance note 3

Observations Continued from Page 2

Item No	Description	Code
6	DB2 - C4 - x2 outside lights full of water, drilled holes on all outside lights whilst on site, recommend these lights are replaced as water damaged. (round 2D fittings)	C3
7	4.0 CONSUMER UNIT(S) / DISTRIBUTION BOARD(S) 4.4 Condition of enclosure(s) in terms of fire rating etc. (421.1.201; 526.5)	C3
8	recommend surge protection device is fitted on site	C3
9	5.0 FINAL CIRCUITS 5.1 Identification of conductors (514.3.1)	C3
10	5.0 FINAL CIRCUITS 5.19 Suitability of accessories for external influences (512.2)	C3

Code Key

C1 - Danger present. Risk of injury. Immediate remedial action required

C2 - Potentially dangerous - urgent remedial action required

C3 - Improvement recommended

FI - Further investigation required without delay