# ELECTRICAL INSTALLATION CONDITION REPORT

Requirements For Electrical Installations - BS 7671 IET Wiring Regulations

Certificate Reference: 10938732

## 1 DETAILS OF THE PERSON ORDERING THE REPORT

Client: Lake District National Park Authority

Address: Murley Moss, Oxenholme Road, Kendal, LA9 7RL

## 2 REASON FOR PRODUCING THIS REPORT

Reason for producing this report:

To assess compliance with BS 7671

Date(s) on which inspection and testing was carried out: 22/05/2019

## 3 DETAILS OF THE INSTALLATION WHICH IS THE SUBJECT OF THIS REPORT

Installation Address: Lake District National Park Authority, Northern Area Office, Old Station Yard, Threlkeld, CA12 4TT

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

Estimated age of wiring system: 5 years Evidence of additions/ alterations: No if yes, estimated age: N/A years

Installation records available? (Regulation 651.1) No Date of last inspection: 25/04/2014

## 4 EXTENT AND LIMITATIONS OF INSPECTION AND TESTING

Extent of the electrical installation covered by this report:

100% of the installation.

Agreed limitations including the reasons (see Regulation 653.2):

Server supplies to be maintained. None disruptive inspection.

Agreed with: Kate Davies

Operational limitations including the reasons: N/A

The inspection and testing detailed in this report and accompanying schedules have been carried out in accordance with BS 7671:2018 (IET Wiring Regulations) as amended to 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.

## 5 SUMMARY OF THE CONDITION OF THE INSTALLATION

See page 3 for a summary of the general condition of the installation in terms of electrical safety.

Overall assessment of the installation in terms of it's suitability for continued use*: SATISFACTORY

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

## 6 RECOMMENDATIONS

Where the overall assessment of the suitability of the installation for continued use on page 1 is stated as 'UNSATISFACTORY', I/We recommend that any observations classified as 'Code 1 - Danger Present' or 'Code 2 - Potentially dangerous' are acted upon as a matter of urgency.
Investigation without delay is recommended for observations identified as 'FI - Further Investigation Required'.
Observations classified as 'Code 3 - Improvement recommended' should be given due consideration.

Subject to the necessary remedial action being taken, I/we recommend that the installation is further inspected and tested by: 5 Years

Note: 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. The period should be agreed between relevant parties.

## 7 OBSERVATIONS AND RECOMMENDATIONS FOR ACTIONS TO BE TAKEN

Referring to the attached schedules of inspection and test results, and subject to the limitations specified on page 1 of this report under 'Extent of the Installation and Limitations of Inspection and Testing':

✔ There are no items adversely affecting electrical safety

or

N/A The following observations and recommendations are made

| Item No | Observations | Classification Code |
|---|---|---|
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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

C2 Potentially dangerous
Urgent remedial action required

C3 Improvement recommended

FI Further investigation required without delay

| | |
|---|---|
| Immediate remedial action required for items: | N/A |
| Urgent remedial action required for items: | N/A |
| Improvement recommended for items: | N/A |
| Further investigation required for items: | N/A |

## 8 GENERAL CONDITION OF THE INSTALLATION

General condition of the installation (in terms of electrical safety):

Good condition completed to a high standard.

## 9 DECLARATION

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 declare that the information in this report, including the observations and the attached schedules, provides an accurate assessment of the condition of the electrical installation taking into account the stated extent and limitations in section 4 of this report.

| | | | |
|---|---|---|---|
| Trading Title: | Greenfields Heat and Power Ltd | | |
| Address: | Unit 9, Newtongate<br>Newton Reigny<br>Penrith<br>Postcode: CA11 0AB | Registration Number (if applicable): | 611021000/NIC1509 |
| | | Telephone Number: | 01768 210241 |

For the INSPECTION, TESTING AND ASSESSMENT of the report:

| Name: | Position: | Signature: | Date: |
|---|---|---|---|
| Tim Sowerby | Electrician |  | 14/05/2019 |

Report reviewed and authorised for issue by:

| Name: | Position: | Signature: | Date: |
|---|---|---|---|
| RICHARD CLARK | Contracts Manager - Electrical |  | 22/05/2019 |

## 10 SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS

**Earthing Arrangements**

| | |
|---|---|
| TN-S | N/A |
| TN-C-S | ✔ |
| TNC | N/A |
| TT | N/A |
| IT | N/A |

**Number and Type of Live Conductors**

| | | | | | |
|---|---|---|---|---|---|
| | | ac: | ✔ | dc: | N/A |
| 1-phase (2 wire): | N/A | 1-phase (3 wire): | N/A | 2 pole: | N/A |
| 2-phase (3 wire): | N/A | | | 3 pole: | N/A |
| 3-phase (3 wire): | N/A | 3-phase (4 wire): | ✔ | Other: | N/A |
| Other: | N/A | | | | |

Confirmation of supply polarity: ✔

**Nature of Supply Parameters**

| | |
|---|---|
| Nominal voltage(s): U: | 400 V Uo: 230 V |
| Nominal frequency, f: | 50 Hz |
| Prospective fault current, Ipf: | LIM kA |
| External earth fault loop impedance, Ze: | LIM Ω |
| Number of supplies: | 1 |

**Supply Protective Device**

| | |
|---|---|
| BS(EN): | 1361 Fuse HBC |
| Type: | 2 |
| Rated current: | 100 A |
| Short-circuit capacity: | 33 kA |

## 11 PARTICULARS OF INSTALLATION REFERRED TO IN THE CERTIFICATE

**Means of Earthing**

| | |
|---|---|
| Distributor's facility: | ✔ |
| Installation earth electrode: | N/A |

**Details of Installation Earth Electrode (where applicable)**

| | | | |
|---|---|---|---|
| Type: | N/A | Location: | N/A |
| Resistance to Earth: | N/A Ω | Method of measurement: | N/A |

Maximum Demand (Load): 52 kVA

Protective measure(s) against electric shock: ADS

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

| | | | | | |
|---|---|---|---|---|---|
| Type BS(EN): | 60947-3 Isolator | Current rating: | 250 A | Supply conductors material: | Copper |
| Number of poles: | 3 | Fuse/device rating or setting: | 250 A | Supply conductors csa: | 35 mm² |
| | | Voltage rating: | 400 V | | |

**If RCD main switch:**

| | |
|---|---|
| Rated residual operating current (IΔn): | N/A mA |
| Rated time delay: | N/A ms |
| Measured operating time (at IΔn): | N/A ms |

**Earthing and Protective Bonding Conductors**

Earthing conductor

| | | | | | |
|---|---|---|---|---|---|
| Conductor material: | Copper | csa: | 25 mm² | Connection/ continuity verified: | ✔ |

Main protective bonding conductors

| | | | | | |
|---|---|---|---|---|---|
| Conductor material: | Copper | csa: | 16 mm² | Connection/ continuity verified: | ✔ |

**Bonding of extraneous-conductive parts**

| | | | |
|---|---|---|---|
| To water installation pipes: | ✔ | To gas installation pipes: | N/A |
| To oil installation pipes: | N/A | To lightning protection: | ✔ |
| To structural steel: | ✔ | To other service(s): | Biomass fill points |

## 12 INSPECTION SCHEDULE

| Item | Description | Comment | Outcome |
|---|---|---|---|
| 1.0 | EXTERNAL CONDITION OF INTAKE EQUIPMENT (VISUAL INSPECTION ONLY) | | |
| 1.1 | Service cable | N/A | ✔ |
| 1.2 | Service head | N/A | ✔ |
| 1.3 | Earthing arrangements | N/A | ✔ |
| 1.4 | Meter tails | N/A | ✔ |
| 1.5 | Metering equipment | N/A | ✔ |
| 1.6 | Isolator (where present) | N/A | N/A |
| 2.0 | PRESENCE OF ADEQUATE ARRANGEMENTS FOR PARALLEL OR SWITCHED ALTERNATIVE SOURCES | | |
| 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 | Main earthing/bonding arrangements (411.3; Chap 54): | | |
| 3.1.1 | Presence of distributor's earthing arrangement (542.1.2.1; 542.1.2.2), or presence of installation earth electrode arrangement (542.1.2.3) | N/A | ✔ |
| 3.1.2 | Adequacy of earthing conductor size (542.3; 543.1.1) | N/A | ✔ |
| 3.1.3 | Adequacy of earthing conductor connections (542.3.2) | N/A | ✔ |
| 3.1.4 | Accessibility of earthing conductor connections (543.3.2) | N/A | ✔ |
| 3.1.5 | Adequacy of main protective bonding conductor sizes (544.1) | N/A | ✔ |
| 3.1.6 | Adequacy and location of main protective bonding conductor connections (543.3.2; 544.1.2) | N/A | ✔ |
| 3.1.7 | Accessibility of all protective bonding connections (543.3.2) | N/A | ✔ |
| 3.1.8 | Provision of earthing/bonding labels at all appropriate locations (514.13) | N/A | ✔ |
| 3.2 | FELV - requirements satisfied (411.7; 411.7.1) | N/A | ✔ |
| 4.0 | OTHER METHODS OF PROTECTION (where any of the methods listed below are employed details should be provided on separate sheets) | | |
| 4.1 | Non-conducting location (418.1) | N/A | N/A |
| 4.2 | Earth-free local equipotential bonding (418.2) | N/A | N/A |
| 4.3 | Electrical separation (Section 413; 418.3) | N/A | ✔ |
| 4.4 | Double insulation (Section 412) | N/A | ✔ |
| 4.5 | Reinforced insulation (Section 412) | N/A | ✔ |
| 5.0 | DISTRIBUTION EQUIPMENT | | |
| 5.1 | Adequacy of working space/accessibility to equipment (132.12; 513.1) | N/A | ✔ |
| 5.2 | Security of fixing (134.1.1) | N/A | ✔ |
| 5.3 | Condition of insulation of live parts (416.1) | N/A | ✔ |
| 5.4 | Adequacy/security of barriers (416.2) | N/A | ✔ |
| 5.5 | Condition of enclosure(s) in terms of IP rating etc (416.2) | N/A | ✔ |
| 5.6 | Condition of enclosure(s) in terms of fire rating etc (421.1.6; 421.1.201; 526.5) | N/A | ✔ |
| 5.7 | Enclosure not damaged/deteriorated so as to impair safety (651.2) | N/A | ✔ |
| 5.8 | Presence and effectiveness of obstacles (417.2) | N/A | ✔ |
| 5.9 | Presence of main switch(es), linked where required (462.1; 462.1.201; 462.2) | N/A | ✔ |

OUTCOMES

| Acceptable condition | TICK | Unacceptable condition | C1 or C2 | Improvement recommended | C3 | Further investigation | FI | Not verified | N/V | Limitation | LIM | Not applicable | N/A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## 13 INSPECTION SCHEDULE (CONTINUED)

| Item | Description | Comment | Outcome |
|---|---|---|---|
| 5.10 | Operation of main switch(es) (functional check) (643.10) | N/A | ✔ |
| 5.11 | Manual operation of circuit-breakers and RCDs to prove disconnection (643.10) | N/A | ✔ |
| 5.12 | Confirmation that integral test button/switch causes RCD(s) to trip when operated (functional check) (643.10) | N/A | ✔ |
| 5.13 | RCD(s) provided for fault protection – includes RCBOs (411.4.204; 411.5.2; 531.2) | N/A | ✔ |
| 5.14 | RCD(s) provided for additional protection/requirements, where required – includes RCBOs (411.3.3; 415.1) | N/A | ✔ |
| 5.15 | Presence of RCD six-monthly test notice at or near equipment, where required (514.12.2) | N/A | ✔ |
| 5.16 | Presence of diagrams, charts or schedules at or near equipment, where required (514.9.1) | N/A | ✔ |
| 5.17 | Presence of non-standard (mixed) cable colour warning notice at or near equipment, where required (514.14) | N/A | ✔ |
| 5.18 | Presence of alternative supply warning notice at or near equipment, where required (514.15) | N/A | ✔ |
| 5.19 | Presence of next inspection recommendation label (514.12.1) | N/A | ✔ |
| 5.20 | Presence of other required labelling (please specify) (Section 514) | N/A | N/A |
| 5.21 | Compatibility of protective devices, bases and other components; correct type and rating (no signs of unacceptable thermal damage, arcing or overheating) (411.3.2; 411.4; 411.5; 411.6; Sections 432, 433) | N/A | ✔ |
| 5.22 | Single-pole switching or protective devices in line conductors only (132.14.1; 530.3.3) | N/A | ✔ |
| 5.23 | Protection against mechanical damage where cables enter equipment (522.8.1; 522.8.5; 522.8.11) | N/A | ✔ |
| 5.24 | Protection against electromagnetic effects where cables enter ferromagnetic enclosures (521.5.1) | N/A | ✔ |
| 6.0 | DISTRIBUTION CIRCUITS | | |
| 6.1 | Identification of conductors (514.3.1) | N/A | ✔ |
| 6.2 | Cables correctly supported throughout their run (521.10.202; 522.8.5) | N/A | ✔ |
| 6.3 | Condition of insulation of live parts (416.1) | N/A | ✔ |
| 6.4 | Non-sheathed cables protected by enclosure in conduit, ducting or trunking (521.10.1) | N/A | ✔ |
| 6.5 | Suitability of containment systems for continued use (including flexible conduit) (Section 522) | N/A | ✔ |
| 6.6 | Cables correctly terminated in enclosures (Section 526) | N/A | ✔ |
| 6.7 | Confirmation that ALL conductor connections, including connections to busbars, are correctly located in terminals and are tight and secure | N/A | ✔ |
| 6.8 | Examination of cables for signs of unacceptable thermal or mechanical damage/deterioration (421.1; 522.6) | N/A | ✔ |
| 6.9 | Adequacy of cables for current-carrying capacity with regard for the type and nature of installation (Section 523) | N/A | ✔ |
| 6.10 | Adequacy of protective devices: type and rated current for fault protection (411.3) | N/A | ✔ |
| 6.11 | Presence and adequacy of circuit protective conductors (411.3.1.1; 543.1) | N/A | ✔ |
| 6.12 | Coordination between conductors and overload protective devices (433.1; 533.2.1) | N/A | ✔ |

OUTCOMES

| Acceptable condition | TICK | Unacceptable condition | C1 or C2 | Improvement recommended | C3 | Further investigation | FI | Not verified | N/V | Limitation | LIM | Not applicable | N/A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## 14 INSPECTION SCHEDULE (CONTINUED)

| Item | Description | Comment | Outcome |
|---|---|---|---|
| 6.13 | Cable installation methods/practices with regard to the type and nature of installation and external influences (Section 522) | N/A | ✔ |
| 6.14 | Where exposed to direct sunlight, cable of a suitable type (522.11.1) | N/A | ✔ |
| 6.15 | Cables concealed under floors, above ceilings, in walls/partitions less than 50 mm from a surface, and in | | |
| 6.15.1 | Installed in prescribed zones (see Section 4. Extent and limitations) (522.6.202) or | N/A | LIM |
| 6.15.2 | Incorporating earthed armour or sheath, or run within earthed wiring system, or otherwise protected against mechanical damage by nails, screws and the like (see Section 4. Extent and limitations) (522.6.204) | N/A | ✔ |
| 6.16 | Provision of fire barriers, sealing arrangements and protection against thermal effects (Section 527) | N/A | ✔ |
| 6.17 | Band II cables segregated/separated from Band I cables (528.1) | N/A | LIM |
| 6.18 | Cables segregated/separated from non-electrical services (528.3) | N/A | LIM |
| 6.19 | Condition of circuit accessories (651.2) | N/A | ✔ |
| 6.20 | Suitability of circuit accessories for external influences (512.2) | N/A | ✔ |
| 6.21 | Single-pole switching or protective devices in line conductors only (132.14.1; 530.3.3) | N/A | ✔ |
| 6.22 | Adequacy of connections, including cpcs, within accessories and to fixed and stationary equipment – identify/record numbers and locations of items inspected (Section 526) | N/A | ✔ |
| 6.23 | Presence, operation and correct location of appropriate devices for isolation and switching (Chapter 46; Section 537) | N/A | ✔ |
| 6.24 | General condition of wiring systems (651.2) | N/A | ✔ |
| 6.25 | Temperature rating of cable insulation (522.1.1; Table 52.1) | N/A | ✔ |
| 7.0 | FINAL CIRCUITS | | |
| 7.1 | Identification of conductors (514.3.1) | N/A | ✔ |
| 7.2 | Cables correctly supported throughout their run (521.10.202; 522.8.5) | N/A | ✔ |
| 7.3 | Condition of insulation of live parts (416.1) | N/A | ✔ |
| 7.4 | Non-sheathed cables protected by enclosure in conduit, ducting or trunking (521.10.1) | N/A | ✔ |
| 7.5 | Suitability of containment systems for continued use (including flexible conduit) (Section 522) | N/A | ✔ |
| 7.6 | Adequacy of cables for current-carrying capacity with regard for the type and nature of installation (Section 523) | N/A | ✔ |
| 7.7 | Adequacy of protective devices: type and rated current for fault protection (411.3) | N/A | ✔ |
| 7.8 | Presence and adequacy of circuit protective conductors (411.3.1.1; 543.1) | N/A | ✔ |
| 7.9 | Co-ordination between conductors and overload protective devices (433.1; 533.2.1) | N/A | ✔ |
| 7.10 | Wiring system(s) appropriate for the type and nature of the installation and external influences (Section 522) | N/A | ✔ |
| 7.11 | Cables concealed under floors, above ceilings, in walls/partitions, adequately protected against damage | | |
| 7.11.1 | Installed in prescribed zones (see Section 4. Extent and limitations) (522.6.202) | N/A | LIM |
| 7.11.2 | Incorporating earthed armour or sheath, or run within earthed wiring system, or otherwise protected against mechanical damage by nails, screws and the like (see Section 4. Extent and limitations) (522.6.201; | N/A | ✔ |

OUTCOMES

| Acceptable condition | TICK | Unacceptable condition | C1 or C2 | Improvement recommended | C3 | Further investigation | FI | Not verified | N/V | Limitation | LIM | Not applicable | N/A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## 15 INSPECTION SCHEDULE (CONTINUED)

| Item | Description | Comment | Outcome |
|---|---|---|---|
| 7.12 | Provision of additional protection by 30mA RCD: | | |
| 7.12.1 | For all socket-outlets of rating 32A or less unless exempt (411.3.3) * | N/A | ✔ |
| 7.12.2 | For the supply of mobile equipment not exceeding 32A rating for use outdoors (411.3.3) * | N/A | ✔ |
| 7.12.3 | For cables concealed in walls at a depth of less than 50mm (522.6.202, 522.6.203) * | N/A | ✔ |
| 7.12.4 | For cables concealed in walls/partitions containing metal parts regardless of depth (522.6.203) * | N/A | ✔ |
| 7.12.5 | For final circuits supplying luminaires within domestic (household) premises (411.3.4) * | N/A | N/A |
| | * Note: Older installations designed prior to BS 7671:2018 may not have been provided with RCDs for additional protection. | | |
| 7.13 | Provision of fire barriers, sealing arrangements and protection against thermal effects (Section 527) | N/A | ✔ |
| 7.14 | Band II cables segregated/separated from Band I cables (528.1) | N/A | LIM |
| 7.15 | Cables segregated/separated from non-electrical services (528.3) | N/A | LIM |
| 7.16 | Termination of cables at enclosures – identify/record numbers and locations of items inspected (Section 526): | | |
| 7.16.1 | Connections under no undue strain (526.6) | N/A | ✔ |
| 7.16.2 | No basic insulation of a conductor visible outside enclosure (526.8) | N/A | ✔ |
| 7.16.3 | Connections of live conductors adequately enclosed (526.5) | N/A | ✔ |
| 7.16.4 | Adequately connected at point of entry to enclosure (glands, bushes etc.) (522.8.5) | N/A | ✔ |
| 7.17 | Condition of accessories including socket-outlets, switches and joint boxes (651.2) | N/A | ✔ |
| 7.18 | Suitability of accessories for external influences (512.2) | N/A | ✔ |
| 7.19 | Single-pole switching or protective devices in line conductors only (132.14.1, 530.3.3) | N/A | ✔ |
| 8.0 | ISOLATION AND SWITCHING | | |
| 8.1 | Isolators (Sections 460; 537): | | |
| 8.1.1 | Presence and condition of appropriate devices (Section 462; 537.2.7) | N/A | ✔ |
| 8.1.2 | Acceptable location – state if local or remote from equipment in question (Section 462; 537.2.7) | N/A | ✔ |
| 8.1.3 | Capable of being secured in the OFF position (462.3) | N/A | ✔ |
| 8.1.4 | Correct operation verified (643.10) | N/A | ✔ |
| 8.1.5 | Clearly identified by position and/or durable marking (537.2.6) | N/A | ✔ |
| 8.1.6 | Warning label posted in situations where live parts cannot be isolated by the operation of a single device (514.11.1; 537.1.2) | N/A | N/A |
| 8.2 | Switching off for mechanical maintenance (Section 464; 537.3.2): | | |
| 8.2.1 | Presence and condition of appropriate devices (464.1; 537.3.2) | N/A | ✔ |
| 8.2.2 | Acceptable location – state if local or remote from equipment in question (537.3.2.4) | N/A | ✔ |
| 8.2.3 | Capable of being secured in the OFF position (462.3) | N/A | ✔ |
| 8.2.4 | Correct operation verified (643.10) | N/A | ✔ |
| 8.2.5 | Clearly identified by position and/or durable marking (537.3.2.4) | N/A | ✔ |

OUTCOMES

| Acceptable condition | TICK | Unacceptable condition | C1 or C2 | Improvement recommended | C3 | Further investigation | FI | Not verified | N/V | Limitation | LIM | Not applicable | N/A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## 16 INSPECTION SCHEDULE (CONTINUED)

| Item | Description | Comment | Outcome |
|---|---|---|---|
| 8.3 | Emergency switching/stopping (Section 465; 537.3.3): | | |
| 8.3.1 | Presence and condition of appropriate devices (Section 465; 537.3.3; 537.4) | N/A | ✔ |
| 8.3.2 | Readily accessible for operation where danger might occur (537.3.3.6) | N/A | ✔ |
| 8.3.3 | Correct operation verified (643.10) | N/A | ✔ |
| 8.3.4 | Clearly identified by position and/or durable marking (537.3.3.6) | N/A | ✔ |
| 8.4 | Functional switching (Section 463; 537.3.1): | | |
| 8.4.1 | Presence and condition of appropriate devices (537.3.1.1; 537.3.1.2) | N/A | ✔ |
| 8.4.2 | Correct operation verified (537.3.1.1; 537.3.1.2) | N/A | ✔ |
| 9.0 | CURRENT-USING EQUIPMENT (PERMANENTLY CONNECTED) | | |
| 9.1 | Condition of equipment in terms of IP rating etc (416.2) | N/A | ✔ |
| 9.2 | Equipment does not constitute a fire hazard (Section 421) | N/A | ✔ |
| 9.3 | Enclosure not damaged/deteriorated so as to impair safety (134.1.1; 416.2; 512.2) | N/A | ✔ |
| 9.4 | Suitability for the environment and external influences (512.2) | N/A | ✔ |
| 9.5 | Security of fixing (134.1.1) | N/A | ✔ |
| 9.6 | Cable entry holes in ceiling above luminaires, sized or sealed so as to restrict the spread of fire: List number and location of luminaires inspected (separate page) (527.2) | N/A | ✔ |
| 9.7 | Recessed luminaires (downlighters): | | |
| 9.7.1 | Correct type of lamps fitted (559.3.1) | N/A | N/A |
| 9.7.2 | Installed to minimise build-up of heat by use of 'fire rated' fittings, insulation displacement box or similar (421.1.2) | N/A | N/A |
| 9.7.3 | No signs of overheating to surrounding building fabric (559.4.1) | N/A | N/A |
| 9.7.4 | No signs of overheating to conductors/terminations (526.1) | N/A | N/A |
| 10.0 | LOCATION(S) CONTAINING A BATH OR SHOWER | | |
| 10.1 | Additional protection for all low voltage (LV) circuits by RCD not exceeding 30mA (701.411.3.3) | N/A | ✔ |
| 10.2 | Where used as a protective measure, requirements for SELV or PELV met (701.414.4.5) | N/A | ✔ |
| 10.3 | Shaver sockets comply with BS EN 61558-2-5 formerly BS 3535 (701.512.3) | N/A | N/A |
| 10.4 | Presence of supplementary bonding conductors, unless not required by BS 7671:2018 (701.415.2) | N/A | N/A |
| 10.5 | Low voltage (e.g. 230 volt) socket-outlets sited at least 3m from zone 1 (701.512.3) | N/A | ✔ |
| 10.6 | Suitability of equipment for external influences for installed location in terms of IP rating (701.512.2) | N/A | ✔ |
| 10.7 | Suitability of accessories and controlgear etc. for a particular zone (701.512.3) | N/A | ✔ |
| 10.8 | Suitability of current-using equipment for particular position within the location (701.55) | N/A | ✔ |
| 11.0 | OTHER PART 7 SPECIAL INSTALLATIONS OR LOCATIONS<br>List all other special installation or locations present, if any. (Record separately the results of particular inspections) | | |
| 11.1 | N/A | N/A | N/A |
| 11.2 | N/A | N/A | N/A |
| 11.3 | N/A | N/A | N/A |

OUTCOMES

| Acceptable condition | TICK | Unacceptable condition | C1 or C2 | Improvement recommended | C3 | Further investigation | FI | Not verified | N/V | Limitation | LIM | Not applicable | N/A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## 17 SCHEDULE OF CIRCUIT DETAILS AND TEST RESULTS

Distribution board designation: I-Line Main Switch Panel  Location: Workshop

| Circuit number and phase | Circuit designation | Type of wiring | Reference Method | Number of points served | Circuit conductors: csa Live mm² | Circuit conductors: csa cpc mm² | Max disconnect time permitted by BS7671 s | Overcurrent protective devices BS(EN) | Type No | Rating A | Capacity kA | RCD Operating current, IΔn mA | Maximum Zs permitted by BS7671 Ω | Circuit impedances (Ohms) Ring final circuits only (measured end to end) r1 (Line) | rn (Neutral) | r2 (cpc) | All circuits (one column to be completed) R1+R | R2 | Insulation resistance Live - Live MΩ | Live - Earth MΩ | Test voltage V | Polarity ✔ | Maximum measured earth fault loop impedance Zs Ω | RCD Disconnection time ms | RCD Test button operation ✔ | AFDD Test button operation ✔ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 L1 | Main switch | A | C | 1 | 35 | 25 | 0.4 | 60947-3 | N/A | 250 | 25 | N/A | 0.10 | N/A | N/A | N/A | LIM | N/A | N/A | LIM | LIM | ✔ | 0.06 | N/A | N/A | N/A |
| 1 L2 | Main switch | A | C | 1 | 35 | 25 | 0.4 | 60947-3 | N/A | 250 | 25 | N/A | 0.10 | N/A | N/A | N/A | LIM | N/A | N/A | LIM | LIM | ✔ | 0.06 | N/A | N/A | N/A |
| 1 L3 | Main switch | A | C | 1 | 35 | 25 | 0.4 | N/A | N/A | 250 | 25 | N/A | 0.10 | N/A | N/A | N/A | LIM | N/A | N/A | LIM | LIM | ✔ | 0.07 | N/A | N/A | N/A |
| 2 L1 | Surge protection | A | B | 1 | 16 | 10 | 0.4 | 60947-2 | N/A | 63 | 25 | N/A | 0.24 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.14 | N/A | N/A | N/A |
| 2 L2 | Surge protection | A | B | 1 | 16 | 10 | 0.4 | 60947-2 | N/A | 63 | 25 | N/A | 0.24 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.14 | N/A | N/A | N/A |
| 2 L3 | Surge protection | A | B | 1 | 16 | 10 | 0.4 | 60947-2 | N/A | 63 | 25 | N/A | 0.24 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.14 | N/A | N/A | N/A |
| 3 L1 | D.B. 1 Workshop | A | B | 1 | 25 | 16 | 0.4 | 60947-2 | N/A | 50 | 25 | N/A | 0.40 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.33 | N/A | N/A | N/A |
| 3 L2 | D.B. 1 Workshop | A | B | 1 | 25 | 16 | 0.4 | 60947-2 | N/A | 50 | 25 | N/A | 0.40 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.33 | N/A | N/A | N/A |
| 3 L3 | D.B. 1 Workshop (Supply to D.B. 1) | A | B | 1 | 25 | 16 | 0.4 | 60947-2 | N/A | 50 | 25 | N/A | 0.40 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.33 | N/A | N/A | N/A |

| CODES FOR TYPE OF WIRING | A Thermoplastic insulated/sheathed cables | B Thermoplastic cables in metallic conduit | C Thermoplastic cables in nonmetallic conduit | D Thermoplastic cables in metallic trunking | E Thermoplastic cables in nonmetallic trunking | F Thermoplastic /SWA cables | G Thermosetting /SWA cables | H Mineral insulated cables | O - Other |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | N/A |

## 18 BOARD CHARACTERISTICS

APPLIES WHEN THE BOARD IS NOT CONNECTED TO THE ORIGIN OF THE INSTALLATION

Supply to this distribution board is from: N/A  No of phases: N/A  Confirmation of supply polarity: N/A

Overcurrent protective device for the distribution circuit: BS(EN): N/A  Rating: N/A A  Nominal Voltage: N/A V  Zs: N/A Ω  Ipf: N/A kA

RCD BS(EN): N/A  No of poles: N/A  Rating: N/A mA  Disconnection time at In: N/A ms  Disconnection time at 5In: N/A ms

## 19 DETAILS OF TEST INSTRUMENTS

Details of Test Instruments used (state serial and/or asset numbers):

Multi-functional: 228292  Insulation resistance: N/A  Continuity: N/A

Earth electrode resistance: N/A  Earth fault loop impedance: N/A  RCD: N/A

## 20 TESTED BY

Name: RICHARD CLARK  Position: Contracts Manager - Electrical  Signature:   Date: 22/05/2019

## SCHEDULE OF CIRCUIT DETAILS AND TEST RESULTS

Distribution board designation: I-Line Main Switch Panel  Location: Workshop

| Circuit number and phase | Circuit designation | Type of wiring | Reference Method | Number of points served | Circuit conductors: csa | | Max disconnect time permitted by BS7671 | Overcurrent protective devices | | | | RCD | Maximum $Z_s$ permitted by BS7671 | Circuit impedances (Ohms) | | | | | Insulation resistance | | | Polarity | Maximum measured earth fault loop impedance Zs | RCD | | AFDD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | Ring final circuits only (measured end to end) | | | All circuits (one column to be completed) | | | | | | | Disconnection time | Test button operation | Test button operation |
| | | | | | Live | cpc | | BS(EN) | Type No | Rating | Capacity | Operating current, $I\Delta n$ | | $r_1$ | $r_n$ | $r_2$ | $R_1+R$ | $R_2$ | Live - Live | Live - Earth | Test voltage | | | | | |
| | | | | | $mm^2$ | $mm^2$ | s | | | A | kA | mA | Ω | (Line) | (Neutral) | (cpc) | | | MΩ | MΩ | V | ✔ | Ω | ms | ✔ | ✔ |
| 4 L1 | D.B. 2 Office | F | D | 1 | 25 | 70 | 0.4 | 60947-2 | N/A | 50 | 25 | N/A | 0.40 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.38 | N/A | N/A | N/A |
| 4 L2 | D.B. 2 Office (Supply to D.B. 2) | F | D | 1 | 25 | 70 | 0.4 | 60947-2 | N/A | 50 | 25 | N/A | 0.40 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.38 | N/A | N/A | N/A |
| 4 L3 | D.B. 2 Office | F | D | 1 | 25 | 70 | 0.4 | 60947-2 | N/A | 50 | 25 | N/A | 0.40 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.38 | N/A | N/A | N/A |
| 5 L1 | D.B. 3 Boiler House | F | C | 1 | 16 | 72 | 0.4 | 60947-2 | N/A | 40 | 25 | N/A | 0.54 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.40 | N/A | N/A | N/A |
| 5 L2 | D.B. 3 Boiler House (Supply to D.B. 3) | F | D | 1 | 16 | 72 | 0.4 | 60947-2 | N/A | 40 | 25 | N/A | 0.54 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.40 | N/A | N/A | N/A |
| 5 L3 | D.B. 3 Boiler House | F | D | 1 | 16 | 72 | 0.4 | 60947-3 | N/A | 40 | 25 | N/A | 0.54 | N/A | N/A | N/A | LIM | N/A | N/A | > 200 | 500 | ✔ | 0.40 | N/A | N/A | N/A |
| 6 L1 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 6 L2 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 6 L3 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 7 L1 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 7 L2 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 7 L3 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 8 L1 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 8 L2 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 8 L3 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | |

| CODES FOR TYPE OF WIRING | A | B | C | D | E | F | G | H | O - Other |
|---|---|---|---|---|---|---|---|---|---|
| | Thermoplastic insulated/sheathed cables | Thermoplastic cables in metallic conduit | Thermoplastic cables in nonmetallic conduit | Thermoplastic cables in metallic trunking | Thermoplastic cables in nonmetallic trunking | Thermoplastic /SWA cables | Thermosetting /SWA cables | Mineral insulated cables | N/A |

## SCHEDULE OF CIRCUIT DETAILS AND TEST RESULTS

Distribution board designation: D.B. 1 Location: Workshop

| Circuit number and phase | Circuit designation | Type of wiring | Reference Method | Number of points served | Circuit conductors: csa Live mm² | Circuit conductors: csa cpc mm² | Max disconnect time permitted by BS7671 s | Overcurrent protective devices BS(EN) | Type No | Rating A | Capacity kA | RCD Operating current, IΔn mA | Maximum $Z_s$ permitted by BS7671 Ω | Circuit impedances (Ohms) Ring final circuits only (measured end to end) $r_1$ (Line) | $r_n$ (Neutral) | $r_2$ (cpc) | All circuits (one column to be completed) $R_1+R$ | $R_2$ | Insulation resistance Live - Live MΩ | Live - Earth MΩ | Test voltage V | Polarity ✔ | Maximum measured earth fault loop impedance Zs Ω | RCD Disconnection time ms | RCD Test button operation ✔ | AFDD Test button operation ✔ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 L1 | Workshop exit flood and centre row lights | D | B | 6 | 1.5 | 1.5 | 0.4 | 60898 | C | 10 | 10 | N/A | 2.19 | N/A | N/A | N/A | 0.42 | N/A | N/A | > 200 | 500 | ✔ | 0.75 | N/A | N/A | N/A |
| 1 L2 | Workshop 2x outside rows lights | D | B | 7 | 1.5 | 1.5 | 0.4 | 60898 | C | 10 | 10 | N/A | 2.19 | N/A | N/A | N/A | 0.54 | N/A | N/A | > 200 | 500 | ✔ | 0.82 | N/A | N/A | N/A |
| 1 L3 | Changing rooms, shower and WC lights | A | B | 8 | 1.5 | 1.5 | 0.4 | 61009 | B | 10 | 10 | 30 | 4.37 | N/A | N/A | N/A | 1.94 | N/A | N/A | > 200 | 500 | ✔ | 1.83 | 29 | ✔ | N/A |
| 2 L1 | Workshop 2, corridor and roof space lights | A | B | 12 | 1.5 | 1.5 | 0.4 | 60898 | C | 10 | 10 | N/A | 2.19 | N/A | N/A | N/A | 1.13 | N/A | N/A | > 200 | 500 | ✔ | 1.46 | N/A | N/A | N/A |
| 2 L2 | South external wall and cycle shed lights | O | B | 9 | 1.5 | 1.5 | 0.4 | 60898 | C | 10 | 10 | N/A | 2.19 | N/A | N/A | N/A | LIM | N/A | N/A | LIM | N/A | N/A | LIM | N/A | N/A | N/A |
| 2 L3 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

| CODES FOR TYPE OF WIRING | A Thermoplastic insulated/sheathed cables | B Thermoplastic cables in metallic conduit | C Thermoplastic cables in nonmetallic conduit | D Thermoplastic cables in metallic trunking | E Thermoplastic cables in nonmetallic trunking | F Thermoplastic /SWA cables | G Thermosetting /SWA cables | H Mineral insulated cables | O - Other |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | N/A |

## BOARD CHARACTERISTICS

APPLIES WHEN THE BOARD IS NOT CONNECTED TO THE ORIGIN OF THE INSTALLATION

Supply to this distribution board is from: I-Line Main Switch Panel - 3 L1,2,3 No of phases: 3 Confirmation of supply polarity: ✔

Overcurrent protective device for the distribution circuit: BS(EN): 60947-2 - Type N/A Rating: 50 A Nominal Voltage: 400 V Zs: 0.33 Ω Ipf: 1.01 kA

RCD BS(EN): N/A No of poles: N/A Rating: N/A mA Disconnection time at In: N/A ms Disconnection time at 5In: N/A ms

## DETAILS OF TEST INSTRUMENTS

Details of Test Instruments used (state serial and/or asset numbers):

Multi-functional: 228292 Insulation resistance: N/A Continuity: N/A

Earth electrode resistance: N/A Earth fault loop impedance: N/A RCD: N/A

## TESTED BY

Name: Tim Sowerby Position: Electrician Signature:  Date: 14/05/2019

## SCHEDULE OF CIRCUIT DETAILS AND TEST RESULTS

Distribution board designation: D.B. 1 Location: Workshop

| Circuit number and phase | Circuit designation | Type of wiring | Reference Method | Number of points served | Circuit conductors: csa | | Max disconnect time permitted by BS7671 | Overcurrent protective devices | | | | RCD | Maximum $Z_s$ permitted by BS7671 | Circuit impedances (Ohms) | | | | | Insulation resistance | | | Polarity | Maximum measured earth fault loop impedance Zs | RCD | | AFDD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | Ring final circuits only (measured end to end) | | | All circuits (one column to be completed) | | | | | | | Disconnection time | Test button operation | Test button operation |
| | | | | | Live | cpc | | BS(EN) | Type No | Rating | Capacity | Operating current, $I\Delta n$ | | $r_1$ | $r_n$ | $r_2$ | $R_1+R$ | $R_2$ | Live - Live | Live - Earth | Test voltage | | | | | |
| | | | | | $mm^2$ | $mm^2$ | s | | | A | kA | mA | Ω | (Line) | (Neutral) | (cpc) | | | MΩ | MΩ | V | ✔ | Ω | ms | ✔ | ✔ |
| 3 L1 | Roller shutter door | D | B | 1 | 2.5 | 2.5 | 0.4 | 60898 | C | 10 | 10 | N/A | 2.19 | N/A | N/A | N/A | 0.03 | N/A | > 200 | > 200 | 500 | ✔ | 0.39 | N/A | ✔ | N/A |
| 3 L2 | Roller shutter door | D | B | 1 | 2.5 | 2.5 | 0.4 | 60898 | C | 10 | 10 | N/A | 2.19 | N/A | N/A | N/A | 0.02 | N/A | > 200 | > 200 | 500 | ✔ | 0.39 | N/A | ✔ | N/A |
| 3 L3 | Roller shutter door | D | B | 1 | 2.5 | 2.5 | 0.4 | 60898 | C | 10 | 10 | N/A | 2.19 | N/A | N/A | N/A | 0.02 | N/A | > 200 | > 200 | 500 | ✔ | 0.41 | N/A | ✔ | N/A |
| 4 L1 | Cycle charging sockets | D | B | 2 | 2.5 | 1.5 | 0.4 | 61009 | B | 20 | 10 | 30 | 2.19 | N/A | N/A | N/A | 0.19 | N/A | N/A | > 200 | 500 | ✔ | 0.76 | 18 | ✔ | N/A |
| 4 L2 | Workshop socket | D | B | 1 | 4 | 1.5 | 0.4 | 61009 | B | 20 | 10 | 30 | 2.19 | N/A | N/A | N/A | 0.33 | N/A | N/A | > 200 | 500 | ✔ | 0.63 | 29 | ✔ | N/A |
| 4 L3 | Changing room socket | A | B | 3 | 4 | 1.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | 0.42 | 0.42 | 1.03 | 0.35 | N/A | N/A | > 200 | 500 | ✔ | 0.54 | 29 | ✔ | N/A |
| 5 L1 | Workshop 2 and corridor sockets | A | B | 13 | 4 | 1.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | 0.47 | 0.46 | 1.73 | 0.88 | N/A | N/A | > 200 | 500 | ✔ | 0.88 | 28 | ✔ | N/A |
| 5 L2 | Fuel store (Supply to D.B. 4 Fuel Store) | D | D | 1 | 16 | 16 | 0.4 | 60898 | B | 40 | 10 | N/A | 1.09 | N/A | N/A | N/A | 0.21 | N/A | N/A | > 200 | 500 | ✔ | 0.48 | N/A | N/A | N/A |
| 5 L3 | Toilet hand dryer | A | B | 1 | 2.5 | 1.5 | 0.4 | 60898 | C | 16 | 10 | N/A | 1.37 | N/A | N/A | N/A | 0.55 | N/A | N/A | > 200 | 500 | ✔ | 0.89 | N/A | N/A | N/A |
| 6 L1 | Apprentice room sockets | A | B | 6 | 4 | 2.5 | 0.4 | 61009 | B | 32 | 10 | N/A | 1.37 | 0.37 | 0.35 | 1.01 | 0..37 | N/A | N/A | > 200 | 500 | ✔ | 0.67 | 29 | ✔ | N/A |
| 6 L2 | Air conditioning server room | F | C | 1 | 1.5 | 1.5 | 0.4 | 60898 | C | 10 | 10 | N/A | 2.19 | N/A | N/A | N/A | 0.25 | N/A | N/A | > 200 | 500 | ✔ | 0.55 | N/A | N/A | N/A |
| 6 L3 | Workshop sockets | D | B | 6 | 4 | 2.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | 0.36 | 0.35 | 0.22 | 0.07 | N/A | N/A | > 200 | 500 | ✔ | 0.35 | 29 | ✔ | N/A |
| 7 L1 | 16A 3ph socket | D | B | 1 | 4 | 4 | 0.4 | 60898 | C | 16 | 10 | N/A | 1.37 | N/A | N/A | N/A | 0.01 | N/A | > 200 | > 200 | 500 | ✔ | 0.37 | N/A | N/A | N/A |
| 7 L2 | 16A 3ph socket | D | B | 1 | 4 | 4 | 0.4 | 60898 | C | 16 | 10 | N/A | 1.37 | N/A | N/A | N/A | 0.06 | N/A | > 200 | > 200 | 500 | ✔ | 0.40 | N/A | N/A | N/A |
| 7 L3 | 16A 3ph socket | D | B | 1 | 4 | 4 | 0.4 | 60898 | C | 16 | 10 | N/A | 1.37 | N/A | N/A | N/A | 0.05 | N/A | > 200 | > 200 | 500 | ✔ | 0.41 | N/A | N/A | N/A |
| 8 L1 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 8 L2 | Welding socket | D | B | 1 | 6 | 6 | 0.4 | 60898 | B | 32 | 6 | N/A | 1.37 | N/A | N/A | N/A | 0.06 | N/A | N/A | > 200 | 500 | ✔ | 0.56 | N/A | N/A | N/A |

| CODES FOR TYPE OF WIRING | A | B | C | D | E | F | G | H | O - Other |
|---|---|---|---|---|---|---|---|---|---|
| | Thermoplastic insulated/sheathed cables | Thermoplastic cables in metallic conduit | Thermoplastic cables in nonmetallic conduit | Thermoplastic cables in metallic trunking | Thermoplastic cables in nonmetallic trunking | Thermoplastic /SWA cables | Thermosetting /SWA cables | Mineral insulated cables | N/A |

## SCHEDULE OF CIRCUIT DETAILS AND TEST RESULTS

Distribution board designation: D.B. 1 Location: Workshop

| Circuit number and phase | Circuit designation | Type of wiring | Reference Method | Number of points served | Circuit conductors: csa | | Max disconnect time permitted by BS7671 | Overcurrent protective devices | | | | RCD | Maximum $Z_s$ permitted by BS7671 | Circuit impedances (Ohms) | | | | | Insulation resistance | | | Polarity | Maximum measured earth fault loop impedance Zs | RCD | | AFDD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Live | cpc | | BS(EN) | Type No | Rating | Capacity | Operating current, $I\Delta n$ | | Ring final circuits only (measured end to end) | | | All circuits (one column to be completed) | | Live - Live | Live - Earth | Test voltage | | | Disconnection time | Test button operation | Test button operation |
| | | | | | | | | | | | | | | $r_1$ | $r_n$ | $r_2$ | $R_1+R$ | $R_2$ | | | | | | | | |
| | | | | | $mm^2$ | $mm^2$ | s | | | A | kA | mA | Ω | (Line) | (Neutral) | (cpc) | | | MΩ | MΩ | V | ✔ | Ω | ms | ✔ | ✔ |
| 8 L3 | 16A socket | D | B | 1 | 4 | 4 | 0.4 | 60898 | B | 16 | 6 | N/A | 2.73 | N/A | N/A | N/A | 0.09 | N/A | N/A | > 200 | 500 | ✔ | 0.46 | N/A | N/A | N/A |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| CODES FOR TYPE OF WIRING | A | B | C | D | E | F | G | H | O - Other |
|---|---|---|---|---|---|---|---|---|---|
| | Thermoplastic insulated/sheathed cables | Thermoplastic cables in metallic conduit | Thermoplastic cables in nonmetallic conduit | Thermoplastic cables in metallic trunking | Thermoplastic cables in nonmetallic trunking | Thermoplastic /SWA cables | Thermosetting /SWA cables | Mineral insulated cables | N/A |

## SCHEDULE OF CIRCUIT DETAILS AND TEST RESULTS

Distribution board designation: D.B. 2 Location: Plant room

| Circuit number and phase | Circuit designation | Type of wiring | Reference Method | Number of points served | Circuit conductors: csa Live mm² | Circuit conductors: csa cpc mm² | Max disconnect time permitted by BS7671 s | Overcurrent protective devices BS(EN) | Type No | Rating A | Capacity kA | RCD Operating current, IΔn mA | Maximum $Z_s$ permitted by BS7671 Ω | Circuit impedances (Ohms) Ring final circuits only (measured end to end) $r_1$ (Line) | $r_n$ (Neutral) | $r_2$ (cpc) | All circuits (one column to be completed) $R_1+R$ | $R_2$ | Insulation resistance Live - Live MΩ | Live - Earth MΩ | Test voltage V | Polarity ✔ | Maximum measured earth fault loop impedance Zs Ω | RCD Disconnection time ms | RCD Test button operation ✔ | AFDD Test button operation ✔ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 L1 | Right row lights | A | 100 | 4 | 1.5 | 1.0 | 0.4 | 61009 | C | 10 | 10 | 30 | 2.19 | N/A | N/A | N/A | 1.17 | N/A | N/A | > 200 | 500 | ✔ | 1.37 | 19 | ✔ | N/A |
| 1 L2 | Left row lights | A | 100 | 4 | 1.5 | 1.0 | 0.4 | 61009 | C | 10 | 10 | 30 | 2.19 | N/A | N/A | N/A | 1.21 | N/A | N/A | > 200 | 500 | ✔ | 1.44 | 18 | ✔ | N/A |
| 1 L3 | Centre row lights | A | 100 | 6 | 1.5 | 1.0 | 0.4 | 61009 | C | 10 | 10 | 30 | 2.19 | N/A | N/A | N/A | 1.32 | N/A | N/A | > 200 | 500 | ✔ | 1.87 | 18 | ✔ | N/A |
| 2 L1 | Canteen and corridor lights | A | 100 | 8 | 1.5 | 1.0 | 0.4 | 61009 | C | 10 | 10 | 30 | 2.19 | N/A | N/A | N/A | 1.36 | N/A | N/A | > 200 | 500 | ✔ | 1.39 | 19 | ✔ | N/A |
| 2 L2 | Meeting,interview and print lights | A | 100 | 8 | 1.5 | 1.0 | 0.4 | 61009 | C | 10 | 10 | 30 | 2.19 | N/A | N/A | N/A | 1.60 | N/A | N/A | > 200 | 500 | ✔ | 1.85 | 28 | ✔ | N/A |
| 2 L3 | Ancillary and WC lights | A | 100 | 8 | 1.5 | 1.0 | 0.4 | 61009 | C | 10 | 10 | 30 | 2.19 | N/A | N/A | N/A | 1.45 | N/A | N/A | > 200 | 500 | ✔ | 1.80 | 29 | ✔ | N/A |
| 3 L1 | South external wall and bollard lights | F | D | 7 | 4 | 4 | 0.4 | 61009 | C | 10 | 10 | 30 | 2.19 | N/A | N/A | N/A | 1.32 | N/A | N/A | > 200 | 500 | ✔ | 1.52 | 29 | ✔ | N/A |
| 3 L2 | North external wall lights | A | 100 | 6 | 1.5 | 1.0 | 0.4 | 61009 | C | 10 | 10 | 30 | 2.19 | N/A | N/A | N/A | 1.48 | N/A | N/A | > 200 | 500 | ✔ | 1.37 | 29 | ✔ | N/A |
| 3 L3 | Left front ring main | A | 100 | 9 | 2.5 | 1.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | 0.38 | 0.35 | 0.61 | 0.22 | N/A | N/A | > 200 | 500 | ✔ | 0.66 | 29 | ✔ | N/A |

| CODES FOR TYPE OF WIRING | A Thermoplastic insulated/sheathed cables | B Thermoplastic cables in metallic conduit | C Thermoplastic cables in nonmetallic conduit | D Thermoplastic cables in metallic trunking | E Thermoplastic cables in nonmetallic trunking | F Thermoplastic /SWA cables | G Thermosetting /SWA cables | H Mineral insulated cables | O - Other |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | N/A |

## BOARD CHARACTERISTICS

APPLIES WHEN THE BOARD IS NOT CONNECTED TO THE ORIGIN OF THE INSTALLATION

Supply to this distribution board is from: I-Line Main Switch Panel - 4 L1,L2,L3 No of phases: 3 Confirmation of supply polarity: ✔

Overcurrent protective device for the distribution circuit: BS(EN): 60947-2 - Type N/A Rating: 50 A Nominal Voltage: 400 V Zs: 0.38 Ω Ipf: 1.21 kA

RCD BS(EN): N/A No of poles: N/A Rating: N/A mA Disconnection time at In: N/A ms Disconnection time at 5In: N/A ms

## DETAILS OF TEST INSTRUMENTS

Details of Test Instruments used (state serial and/or asset numbers):

Multi-functional: 228292 Insulation resistance: N/A Continuity: N/A

Earth electrode resistance: N/A Earth fault loop impedance: N/A RCD: N/A

## TESTED BY

Name: Tim Sowerby Position: Electrician Signature: Date: 14/05/2019

## SCHEDULE OF CIRCUIT DETAILS AND TEST RESULTS

Distribution board designation: D.B. 2 Location: Plant room

| Circuit number and phase | Circuit designation | Type of wiring | Reference Method | Number of points served | Circuit conductors: csa | | Max disconnect time permitted by BS7671 | Overcurrent protective devices | | | | RCD | Maximum $Z_s$ permitted by BS7671 | Circuit impedances (Ohms) | | | | | Insulation resistance | | | Polarity | Maximum measured earth fault loop impedance Zs | RCD | | AFDD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Live | cpc | | BS(EN) | Type No | Rating | Capacity | Operating current, IΔn | | Ring final circuits only (measured end to end) | | | All circuits (one column to be completed) | | Live - Live | Live - Earth | Test voltage | | | Disconnection time | Test button operation | Test button operation |
| | | | | | | | | | | | | | | $r_1$ (Line) | $r_n$ (Neutral) | $r_2$ (cpc) | $R_1+R$ | $R_2$ | | | | | | | | |
| | | | | | $mm^2$ | $mm^2$ | s | | | A | kA | mA | Ω | | | | | | MΩ | MΩ | V | ✔ | Ω | ms | ✔ | ✔ |
| 4 L1 | Left rear ring main | A | 100 | 6 | 2.5 | 1.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | 0.44 | 0.46 | 0.77 | 0.45 | N/A | N/A | > 200 | 500 | ✔ | 0.75 | 29 | ✔ | N/A |
| 4 L2 | Right front ring main | A | 100 | 9 | 2.5 | 1.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | 0.50 | 0.48 | 0.88 | 0.75 | N/A | N/A | > 200 | 500 | ✔ | 0.74 | 29 | ✔ | N/A |
| 4 L3 | Right rear ring main | A | 100 | 6 | 2.5 | 1.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | 0.60 | 0.60 | 1.04 | 0.40 | N/A | N/A | > 200 | 500 | ✔ | 0.85 | 29 | ✔ | N/A |
| 5 L1 | Staff room ring main | A | 100 | 10 | 2.5 | 1.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | 0.49 | 0.50 | 0.84 | 0.33 | N/A | N/A | > 200 | 500 | ✔ | 0.72 | 29 | ✔ | N/A |
| 5 L2 | Kitchen ring main | A | 100 | 5 | 2.5 | 1.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | 0.33 | 0.33 | 0.53 | 0.25 | N/A | N/A | > 200 | 500 | ✔ | 0.63 | 29 | ✔ | N/A |
| 5 L3 | Meeting,interview and print sockets | A | 100 | 14 | 2.5 | 1.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | 0.41 | 0.42 | 0.70 | 0.48 | N/A | N/A | > 200 | 500 | ✔ | 0.63 | 29 | ✔ | N/A |
| 6 L1 | Store,plant room and corridor sockets | A | 100 | 14 | 2.5 | 1.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | 1.04 | 1.03 | 1.69 | 0.77 | N/A | N/A | > 200 | 500 | ✔ | 0.79 | 29 | ✔ | N/A |
| 6 L2 | Kitchen water boiler | A | 100 | 1 | 2.5 | 1.5 | 0.4 | 61009 | B | 32 | 10 | 30 | 1.37 | N/A | N/A | N/A | 0.37 | N/A | N/A | > 200 | 500 | ✔ | 0.75 | 29 | ✔ | N/A |
| 6 L3 | Handdryer 1 | A | 100 | 1 | 2.5 | 1.5 | 0.4 | 61009 | C | 32 | 10 | 30 | 0.68 | N/A | N/A | N/A | 0.31 | N/A | N/A | > 200 | 500 | ✔ | 0.64 | 29 | ✔ | N/A |
| 7 L1 | Handdryer 2 | A | 100 | 1 | 2.5 | 1.5 | 0.4 | 61009 | C | 16 | 10 | 30 | 1.37 | N/A | N/A | N/A | 0.43 | N/A | N/A | > 200 | 500 | ✔ | 0.81 | 29 | ✔ | N/A |
| 7 L2 | IT cabinet | A | 100 | 1 | 2.5 | 1.5 | 0.4 | 61009 | C | 16 | 10 | 30 | 1.37 | N/A | N/A | N/A | LIM | N/A | N/A | LIM | LIM | N/A | LIM | LIM | N/A | N/A |
| 7 L3 | Car park lights south | F | D | 5 | 4 | 4 | 0.4 | 60898 | C | 10 | 10 | N/A | 2.19 | N/A | N/A | N/A | 0.71 | N/A | N/A | > 200 | 500 | ✔ | 1.02 | N/A | N/A | N/A |
| 8 L1 | Car park lights north | F | D | 6 | 4 | 4 | 0.4 | 60898 | C | 10 | 10 | N/A | 2.19 | N/A | N/A | N/A | 0.94 | N/A | N/A | > 200 | 500 | ✔ | 1.37 | N/A | N/A | N/A |
| 8 L2 | Security alarm panel | A | 100 | 1 | 1.5 | 1.0 | 0.4 | 60898 | C | 6 | 10 | N/A | 3.64 | N/A | N/A | N/A | 0.4 | N/A | N/A | > 200 | 500 | ✔ | 0.69 | N/A | N/A | N/A |
| 8 L3 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 9 L1 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 9 L2 | Fire alarm panel | O | 100 | 1 | 1.5 | 1.0 | 0.4 | 60898 | C | 6 | 10 | N/A | 3.64 | N/A | N/A | N/A | 0.44 | N/A | N/A | > 200 | 500 | ✔ | 0.69 | N/A | N/A | N/A |

| CODES FOR TYPE OF WIRING | A | B | C | D | E | F | G | H | O - Other |
|---|---|---|---|---|---|---|---|---|---|
| | Thermoplastic insulated/sheathed cables | Thermoplastic cables in metallic conduit | Thermoplastic cables in nonmetallic conduit | Thermoplastic cables in metallic trunking | Thermoplastic cables in nonmetallic trunking | Thermoplastic /SWA cables | Thermosetting /SWA cables | Mineral insulated cables | N/A |

## SCHEDULE OF CIRCUIT DETAILS AND TEST RESULTS

Distribution board designation: D.B. 2 Location: Plant room

| Circuit number and phase | Circuit designation | Type of wiring | Reference Method | Number of points served | Circuit conductors: csa | | Max disconnect time permitted by BS7671 | Overcurrent protective devices | | | | RCD | Maximum $Z_s$ permitted by BS7671 | Circuit impedances (Ohms) | | | | | Insulation resistance | | | Polarity | Maximum measured earth fault loop impedance Zs | RCD | | AFDD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | Ring final circuits only (measured end to end) | | | All circuits (one column to be completed) | | | | | | | Disconnection time | Test button operation | Test button operation |
| | | | | | Live $mm^2$ | cpc $mm^2$ | s | BS(EN) | Type No | Rating A | Capacity kA | Operating current, IΔn mA | Ω | $r_1$ (Line) | $r_n$ (Neutral) | $r_2$ (cpc) | $R_1+R$ | $R_2$ | Live - Live MΩ | Live - Earth MΩ | Test voltage V | ✔ | Ω | ms | ✔ | ✔ |
| 9 L3 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 10 L1 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 10 L2 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 10 L3 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 11 L1 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 11 L2 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 11 L3 | Spare | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 12 L1 | Solar PV | C | B | 1 | 2.5 | 2.5 | 0.4 | 60898 | C | 20 | 10 | N/A | 1.09 | N/A | N/A | N/A | 0.13 | N/A | > 200 | > 200 | 500 | ✔ | 0.49 | N/A | N/A | N/A |
| 12 L2 | Solar PV | C | B | 1 | 2.5 | 2.5 | 0.4 | 60898 | C | 20 | 10 | N/A | 1.09 | N/A | N/A | N/A | 0.13 | N/A | > 200 | > 200 | 500 | ✔ | 0.56 | N/A | N/A | N/A |
| 12 L3 | Solar PV | C | B | 1 | 2.5 | 2.5 | 0.4 | 60898 | C | 20 | 10 | N/A | 1.09 | N/A | N/A | N/A | 0.13 | N/A | > 200 | > 200 | 500 | ✔ | 0.50 | N/A | N/A | N/A |
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| CODES FOR TYPE OF WIRING | A | B | C | D | E | F | G | H | O - Other |
|---|---|---|---|---|---|---|---|---|---|
| | Thermoplastic insulated/sheathed cables | Thermoplastic cables in metallic conduit | Thermoplastic cables in nonmetallic conduit | Thermoplastic cables in metallic trunking | Thermoplastic cables in nonmetallic trunking | Thermoplastic /SWA cables | Thermosetting /SWA cables | Mineral insulated cables | N/A |

## SCHEDULE OF CIRCUIT DETAILS AND TEST RESULTS

Distribution board designation: D.B. 3 Location: Boiler House

| Circuit number and phase | Circuit designation | Type of wiring | Reference Method | Number of points served | Circuit conductors: csa | | Max disconnect time permitted by BS7671 | Overcurrent protective devices | | | | RCD | Maximum $Z_s$ permitted by BS7671 | Circuit impedances (Ohms) | | | | | Insulation resistance | | | Polarity | Maximum measured earth fault loop impedance Zs | RCD | | AFDD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Live | cpc | | BS(EN) | Type No | Rating | Capacity | Operating current, IΔn | | Ring final circuits only (measured end to end) | | | All circuits (one column to be completed) | | Live - Live | Live - Earth | Test voltage | | | Disconnection time | Test button operation | Test button operation |
| | | | | | | | | | | | | | | $r_1$ (Line) | $r_n$ (Neutral) | $r_2$ (cpc) | $R_1+R$ | $R_2$ | | | | | | | | |
| | | | | | mm² | mm² | s | | | A | kA | mA | Ω | | | | | | MΩ | MΩ | V | ✔ | Ω | ms | ✔ | ✔ |
| 1 L1 | Lights | O | C | 1 | 1.5 | 1.0 | 0.4 | 60898 | C | 6 | 10 | N/A | 3.64 | N/A | N/A | N/A | 0.13 | N/A | N/A | > 200 | 500 | ✔ | 0.46 | N/A | N/A | N/A |
| 1 L2 | Sockets and fault monitor | A | B | 3 | 2.5 | 1.5 | 0.4 | 61009 | B | 20 | 10 | 30 | 2.19 | N/A | N/A | N/A | 0.17 | N/A | N/A | > 200 | 500 | ✔ | 0.41 | 17 | ✔ | N/A |
| 1 L3 | Immersion | C | B | 1 | 2.5 | 1.5 | 0.4 | 60898 | B | 16 | 10 | N/A | 2.73 | N/A | N/A | N/A | 0.07 | N/A | N/A | > 200 | 500 | ✔ | 0.44 | N/A | N/A | N/A |
| 2 L1 | Pump 3 | D | B | 1 | 1.5 | 1.5 | 0.4 | 60898 | B | 10 | 10 | N/A | 4.37 | N/A | N/A | N/A | 0.21 | N/A | N/A | > 200 | 500 | ✔ | 0.55 | N/A | N/A | N/A |
| 2 L2 | Pump 1 | D | B | 1 | 1.5 | 1.5 | 0.4 | 60898 | B | 10 | 10 | N/A | 4.37 | N/A | N/A | N/A | 0.18 | N/A | N/A | > 200 | 500 | ✔ | 0.52 | N/A | N/A | N/A |
| 2 L3 | Pump 2 | D | B | 1 | 1.5 | 1.5 | 0.4 | 60898 | B | 10 | 6 | N/A | 4.37 | N/A | N/A | N/A | 0.17 | N/A | N/A | > 200 | 500 | ✔ | 0.53 | N/A | N/A | N/A |
| 3 L1 | Biomass | D | B | 1 | 2.5 | 1.5 | 0.4 | 60898 | C | 20 | 10 | N/A | 1.09 | N/A | N/A | N/A | 0.10 | N/A | > 200 | > 200 | 500 | ✔ | 0.54 | N/A | N/A | N/A |
| 3 L2 | Biomass | D | B | 1 | 2.5 | 1.5 | 0.4 | 60898 | C | 20 | 10 | N/A | 1.09 | N/A | N/A | N/A | 0.09 | N/A | > 200 | > 200 | 500 | ✔ | 0.53 | N/A | N/A | N/A |
| 3 L3 | Biomass | D | B | 1 | 2.5 | 1.5 | 0.4 | 60898 | C | 20 | 10 | N/A | 1.09 | N/A | N/A | N/A | 0.09 | N/A | > 200 | > 200 | 500 | ✔ | 0.51 | N/A | N/A | N/A |

| CODES FOR TYPE OF WIRING | A Thermoplastic insulated/sheathed cables | B Thermoplastic cables in metallic conduit | C Thermoplastic cables in nonmetallic conduit | D Thermoplastic cables in metallic trunking | E Thermoplastic cables in nonmetallic trunking | F Thermoplastic /SWA cables | G Thermosetting /SWA cables | H Mineral insulated cables | O - Other |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | N/A |

## BOARD CHARACTERISTICS

APPLIES WHEN THE BOARD IS NOT CONNECTED TO THE ORIGIN OF THE INSTALLATION

Supply to this distribution board is from: I-Line Main Switch Panel - 5 L1,L2,L3 No of phases: 1 Confirmation of supply polarity: ✔

Overcurrent protective device for the distribution circuit: BS(EN): 60947-2 - Type N/A Rating: 40 A Nominal Voltage: 230 V Zs: 0.40 Ω Ipf: 1.04 kA

RCD BS(EN): N/A No of poles: N/A Rating: N/A mA Disconnection time at In: N/A ms Disconnection time at 5In: N/A ms

## DETAILS OF TEST INSTRUMENTS

Details of Test Instruments used (state serial and/or asset numbers):

Multi-functional: 228292 Insulation resistance: N/A Continuity: N/A

Earth electrode resistance: N/A Earth fault loop impedance: N/A RCD: N/A

## TESTED BY

Name: Tim Sowerby Position: Electrician Signature: Date: 14/05/2019

## SCHEDULE OF CIRCUIT DETAILS AND TEST RESULTS

Distribution board designation: D.B. 3 Location: Boiler House

| Circuit number and phase | Circuit designation | Type of wiring | Reference Method | Number of points served | Circuit conductors: csa | | Max disconnect time permitted by BS7671 | Overcurrent protective devices | | | | RCD | Maximum $Z_s$ permitted by BS7671 | Circuit impedances (Ohms) | | | | | Insulation resistance | | | Polarity | Maximum measured earth fault loop impedance Zs | RCD | | AFDD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | Ring final circuits only (measured end to end) | | | All circuits (one column to be completed) | | | | | | | Disconnection time | Test button operation | Test button operation |
| | | | | | Live $mm^2$ | cpc $mm^2$ | s | BS(EN) | Type No | Rating A | Capacity kA | Operating current, $I\Delta n$ mA | Ω | $r_1$ (Line) | $r_n$ (Neutral) | $r_2$ (cpc) | $R_1+R$ | $R_2$ | Live - Live MΩ | Live - Earth MΩ | Test voltage V | ✔ | Ω | ms | ✔ | ✔ |
| 4 L1 | Flowtech | D | B | 1 | 1.5 | 1.5 | 0.4 | 60898 | B | 6 | 6 | N/A | 7.28 | N/A | N/A | N/A | 0.14 | N/A | N/A | > 200 | 500 | ✔ | 0.52 | N/A | N/A | N/A |
| 4 L2 | Pump 5 | D | B | 1 | 1.5 | 1.5 | 0.4 | 60898 | B | 6 | 6 | N/A | 7.28 | N/A | N/A | N/A | 0.19 | N/A | N/A | > 200 | 500 | ✔ | 0.52 | N/A | N/A | N/A |
| 4 L3 | Pump 4 | D | B | 1 | 1.5 | 1.5 | 0.4 | 60898 | B | 6 | 6 | N/A | 7.28 | N/A | N/A | N/A | 0.09 | N/A | N/A | > 200 | 500 | ✔ | 0.53 | N/A | N/A | N/A |
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| CODES FOR TYPE OF WIRING | A | B | C | D | E | F | G | H | O - Other |
|---|---|---|---|---|---|---|---|---|---|
| | Thermoplastic insulated/sheathed cables | Thermoplastic cables in metallic conduit | Thermoplastic cables in nonmetallic conduit | Thermoplastic cables in metallic trunking | Thermoplastic cables in nonmetallic trunking | Thermoplastic /SWA cables | Thermosetting /SWA cables | Mineral insulated cables | N/A |

## SCHEDULE OF CIRCUIT DETAILS AND TEST RESULTS

Distribution board designation: D.B. 4 Fuel Store  Location: Fuel Store

| Circuit number and phase | Circuit designation | Type of wiring | Reference Method | Number of points served | Circuit conductors: csa Live mm² | Circuit conductors: csa cpc mm² | Max disconnect time permitted by BS7671 s | Overcurrent protective devices BS(EN) | Type No | Rating A | Capacity kA | RCD Operating current, IΔn mA | Maximum $Z_s$ permitted by BS7671 Ω | Circuit impedances (Ohms) Ring final circuits only (measured end to end) $r_1$ (Line) | $r_n$ (Neutral) | $r_2$ (cpc) | All circuits (one column to be completed) $R_1+R$ | $R_2$ | Insulation resistance Live - Live MΩ | Live - Earth MΩ | Test voltage V | Polarity ✔ | Maximum measured earth fault loop impedance Zs Ω | RCD Disconnection time ms | RCD Test button operation ✔ | AFDD Test button operation ✔ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Tool store power | F | D | 3 | 2.5 | 2.5 | 0.4 | 60898 | B | 20 | 6 | 30 | 2.19 | N/A | N/A | N/A | 0.13 | N/A | N/A | > 200 | 500 | ✔ | 0.68 | 14 | ✔ | N/A |
| 2 | Socket fuel store | C | C | 4 | 2.5 | 1.5 | 0.4 | 60898 | B | 16 | 6 | 30 | 2.73 | N/A | N/A | N/A | 0.49 | N/A | N/A | > 200 | 500 | ✔ | 0.70 | 14 | ✔ | N/A |
| 3 | Lights fuel store | C | C | 2 | 1.0 | 1.0 | 0.4 | 60898 | B | 6 | 6 | 30 | 7.28 | N/A | N/A | N/A | 0.28 | N/A | N/A | > 200 | 500 | ✔ | 0.72 | 14 | ✔ | N/A |
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| CODES FOR TYPE OF WIRING | A Thermoplastic insulated/sheathed cables | B Thermoplastic cables in metallic conduit | C Thermoplastic cables in nonmetallic conduit | D Thermoplastic cables in metallic trunking | E Thermoplastic cables in nonmetallic trunking | F Thermoplastic /SWA cables | G Thermosetting /SWA cables | H Mineral insulated cables | O - Other |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | N/A |

## BOARD CHARACTERISTICS

APPLIES WHEN THE BOARD IS NOT CONNECTED TO THE ORIGIN OF THE INSTALLATION

Supply to this distribution board is from: D.B. 1 - 5 L2  No of phases: 1  Confirmation of supply polarity: ✔

Overcurrent protective device for the distribution circuit: BS(EN): 60898 - Type B  Rating: 40 A  Nominal Voltage: 230 V  Zs: 0.48 Ω  Ipf: 0.78 kA

RCD BS(EN): N/A  No of poles: N/A  Rating: N/A mA  Disconnection time at In: N/A ms  Disconnection time at 5In: N/A ms

## DETAILS OF TEST INSTRUMENTS

Details of Test Instruments used (state serial and/or asset numbers):

Multi-functional: 228292  Insulation resistance: N/A  Continuity: N/A

Earth electrode resistance: N/A  Earth fault loop impedance: N/A  RCD: N/A

## TESTED BY

Name: Tim Sowerby  Position: Electrician  Signature:   Date: 14/05/2019

# ELECTRICAL INSTALLATION CONDITION REPORT
# GUIDANCE FOR RECIPIENTS

(to be appended to the Report)

This Report is an important and valuable document which should be retained for future reference.

1. The purpose of this Report is to confirm, so far as reasonably practicable, whether or not the electrical installation is in a satisfactory condition for continued service (see Section 5). The Report should identify any damage, deterioration, defects and/or conditions which may give rise to danger.
2. The person ordering the Report should have received the 'original' Report and the inspector should have retained a duplicate.
3. The 'original' Report should be retained in a safe place and be made available to any person inspecting or undertaking work on the electrical installation in the future. If the property is vacated, this Report will provide the new owner/occupier with details of the condition of the electrical installation at the time the Report was issued.
4. Where the installation incorporates a residual current device (RCD) there should be a notice at or near the device stating that it should be tested six-monthly. For safety reasons it is important that this instruction is followed.
5. Section 4 (Extent and Limitations) should identify fully the extent of the installation covered by this Report and any limitations on the inspection and testing. The inspector should have agreed these aspects with the person ordering the Report and with other interested parties (licensing authority, insurance company, mortgage provider and the like) before the inspection was carried out.
6. Some operational limitations such as inability to gain access to parts of the installation or an item of equipment may have been encountered during the inspection. The inspector should have noted these in Section 4.
7. For items classified in Section 7 as C1 ('Danger present'), the safety of those using the installation is at risk, and it is recommended that a skilled person or persons competent in electrical installation work undertakes the necessary remedial work immediately.
8. For items classified in Section 7 as C2 ('Potentially dangerous'), the safety of those using the installation may be at risk and it is recommended that a skilled person or persons competent in electrical installation work undertakes the necessary remedial work as a matter of urgency.
9. Where it has been stated in Section 7 that an observation requires further investigation (code FI) the inspection has revealed an apparent deficiency which may result in a code C1 or C2, and could not, due to the extent or limitations of the inspection, be fully identified. Such observations should be investigated without delay. A further examination of the installation will be necessary, to determine the nature and extent of the apparent deficiency (see Section 6).
10. For safety reasons, the electrical installation should be re-inspected at appropriate intervals by a skilled person or persons, competent in such work . The recommended date by which the next inspection is due is stated in Section 6 of the Report under 'Recommendations' and on a label at or near to the consumer unit/ distribution board.