IMS-08-MP-5300 (Electrical Safety Rules & Code of Practice) – Rev. C

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i. Document Revision

Document ID: IMS-5300-08-MP (Electrical Safety Rules & Code of Practice)

Technical Author:		Internal IMS Review:		Revision Approval:		Revision
J. Colledge	June-23	M. Cook	June-23	A. Shaw	June-23	
Senior Electrical Engineer		QHSE Manager		Company Director		
Signature: J Colledge		Signature: M Cook		Signature: A. Shaw		**C**

Revision Comments:

A – First Issue – October 2021:

- A review of the company's electrical safety rules identified outdated policies which did not entirely align with the internal management systems (IMS). It was proposed to extensively update the information set out in the previous iteration of the safety rules to meet and comply with the IMS systems. A new document has been produced and all previous document numbering is to be superseded by this iteration and further revisions of these safety rules.

B – Definition & Authority Hierarchy Updates – March 2023:

- Annual review called for updates to the authority hierarchy and definitions, to provide clearer guidance.
- Updates to clarify some definitions.
- Update to the section covering the isolation of generation equipment, to consider isolation requirements of solar generation.
- Additional document templates added to the appendices.
- Lone working definition and procedures applied (May 2023)

C – Policy Updates for Apprentice, Young Persons & Inexperienced Workers

- Definitions added to detail the differing levels of supervision
- Section 7 – Revised and updated the duties and responsibilities for Level 4 and Level 3 authorised persons, to account for supervision for unskilled/supervised persons.
- Section 7 – Revised and updated the designated persons for Level 1 authorised persons (Unskilled/Supervised). Defined levels of supervision necessary for Level 1 persons to reduce ambiguity.

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1. Scope

1.0 This document sets out the Electricity Safety Rules and code of practice which are to be adopted by Intelect and any Sub-Contractors, on Intelect Projects.

1.1 The purpose of this document is to provide guidance in the application of Intelect's Electrical Safety Rules in relationship to the design, installation, examination, testing and maintenance of LV electrical and electronic systems and equipment.

1.2 These rules are only applicable to LV electrical and electronic systems that operate with a nominal voltage up to and including 1000V ac or 1500V dc. Any electrical or electronic systems that operates above these voltages are excluded from the rules set out in this document.

1.3 Intelect must not work on or operate any MV/HV/EHV electrical or electronic system. Any work necessary on these systems must be controlled and supervised by a specialist Client or Sub-contractor.

1.4 These Rules and Procedures provide a system for:

1.4.1 Working on, working near, testing or the operation of LV electrical and electronic systems and or equipment within Intelect's or on a client's system.

1.4.2 The responsibilities for the control of electrical hazards and safety.

1.4.3 The selection and appointment of persons, to carry out the functions of Senior Authorised Person, Authorised Peron, Skilled Persons and Competent Persons.

1.4.4 The qualifications and training necessary for the appointment of Senior Authorised Person, Authorised Person and Skilled Persons.

1.4.5 The documentation associated with the application of these Rules and Procedures.

1.5 Only persons authorised to do so may undertake work on any of Intelect's electrical installations.

1.6 It shall be noted that whilst Intelect's Electrical Safety Rules shall be followed at all times, specific industry sectors may have prescribed procedures of their own. In this instance a Level 5 Authorised Person shall review those rules and issue specific guidance.

1.7 Failure to adhere to the Electrical Safety Rules and Code of Practices may result in disciplinary action.

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2. Application of Low Voltage Electrical Safety Rules

2.1 Compliance with these Electrical Safety Rules is mandatory on all Intelect (UK) Ltd projects. They have been adopted by Intelect to constitute the safe system of work on electrical and electronic systems and or equipment.

2.2 The Electrical Safety Rules are provided for the safety and protection of all whom may work on or use Intelect's, a Client's LV electrical and electronic systems or those being constructed by Intelect either for a client or for the use by Intelect, where the control of danger is under Intelect's Control.

2.3 These rules cover all Intelect projects and locations under the control of Intelect. This includes both permanent and temporary electrical installations and equipment.

2.4 Only persons who are authorised to do so shall work on Intelect's or a Client's LV electrical and electronic systems, or otherwise those being constructed by Intelect either for a Client or for use by Intelect.

2.5 A Site Safety Agreement between Intelect and the Client shall be in place to define the point of isolation that is the boundary of the Client's and Intelect's control.

2.6 In case of conflict between these Electrical Safety Rules and a statutory requirement, the latter is to be followed and the Senior Authorised Person is to be informed in writing.

2.7 Under exceptional circumstances where it is necessary to depart from any requirements of these Electrical Safety Rules, written agreement from a Level 5 Authorised Person is required prior to implementing such departures.

2.8 Where the Client is responsible for overseeing the safety of a project, Intelect and any sub-contractor employed by Intelect will adhere with the client's electrical safety rules and policies. In absence of such rules and policies by the Client, Intelect will follow its own Electrical Safety Rules & Code of Practices.

Permit to Work

2.9 Where any danger to be avoided is under the control of the Client, the Client's Authorised Person responsible for that equipment shall, in appropriate cases, issue a Permit to Work to Intelect (or Intelect's Sub-contractor) in respect of the work.

Site Safety Agreement

2.10 Where the control of an electrical system or equipment is to be the responsibility of Intelect (or Intelect's Sub-Contractor), the Client's Authorised Person responsible for that equipment shall issue a Site Safety Agreement to Intelect in respect of the work.

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2.11 The Site Safety Agreement form is used to transfer the responsibility of control or part of the Client's electrical system from a Client's Authorised Person to Intelect's (or Sub-Contractor's) Authorised Person.

2.12 The Site Safety Agreement specifies the equipment being transferred and the isolation points. The equipment may be transferred without being isolated, at the discretion of the Client's Senior Authorised Person, provided the documentation is completed to that effect.

2.13 Following the receipt of a Site Safety Agreement Intelect's Authorised Person shall operate under Intelect's Electrical Safety Rules, (Client's or the Sub-Contractor's Safety Rules).

2.14 Should it be necessary to change Intelect's Senior Authorised Person associated with the work to be done, the existing Site Safety Agreement shall be endorsed in writing (countersigned) by the new Intelect Senior Authorised Person to the effect that they fully understand their responsibilities. Intelect Senior Authorised Person who issued the Site Safety Agreement shall be notified and agreement reached prior to this taking place.

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3. Statutory Regulations and Guidance Recommendations

3.1 These Low Voltage Electrical Safety Rules are intended to comply with the Intelect's obligation to adhere to the statutory regulations and shall not be interpreted as cancelling or nullifying any of them. They are to be used in conjunction with Intelect's Health and Safety Policy, please refer to document IMS-0010-05-POL

3.2 These Electrical Safety Rules shall also be used in conjunction of the latest editions of documents, which give guidance on desirable procedures including but not limited to:

Statutory Regulations

3.2.1 The Health and Safety at Work Act 1974
3.2.2 The Electricity at Work Regulations 1989
3.2.3 The Electricity Safety, Quality and Continuity Regulations 2002

Guidance Documents

3.2.4 Requirements for Electrical Installations, IET Wiring Regulations. BS7671.
3.2.5 Distribution of Electricity on Construction and Demolition sites. BS7375.
3.2.6 Memorandum of Guidance on the Electricity at Work Regulations.
3.2.7 Electrical Test Equipment for use by electricians. Guidance Note GS38 from the Health and Safety Executive.
3.2.8 Avoiding Danger from Underground Services. Health and Safety series booklet HSG47 from the Health and Safety Executive.
3.2.9 Electricity at Work - Safe Working Practices. Health and Safety series booklet HSG85 from the Health and Safety Executive.
3.2.10 Degree of Protection Provided by Enclosures (IP code) BS EN 60529.
3.2.11 Electrical Safety Council Guidance Note 2 - Guidance on the management of electrical safety and safe isolation procedures for low voltage installations.
3.2.12 GS6 Avoiding danger from overhead power lines.
3.2.13 Controlling fire and explosion risks in the workplace INDG 370
3.2.14 Explosive atmospheres - BS EN 60079 Part 14: Electrical installations design, selection and erection
3.2.15 Explosive atmospheres – BS EN 60079 Part 17: Electrical Installations Inspection and Maintenance
3.2.16 Protection Against Lightning BS EN 62305

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4. Definitions

For the purposes of these Safety Rules the following definitions apply:

4.1 **Accompanying Safety Person.** A responsible person not involved in the work or test activity, who is to contribute to the prevention of injury and who has received training in emergency first aid and has adequate knowledge, experience and ability to recognise danger, keep watch, prevent interruption, apply first aid and summon help.

4.2 **Approved.** Complying with relevant Statutory Regulations, Codes of Practice, BSI or equivalent standards. Or having specific approval from the Senior Authorised Person.

4.3 **Authorised Person.** Level 3 authorised person(s) assessed and appointed in writing by the Senior Authorised Person, with responsibilities for the implementation, administering and monitoring of these Electrical Safety Rules with respect to the whole or defined parts of Intelect's or the Client's electrical and electronic systems and/or equipment. See section 7.5.

4.4 **Caution Notice.** An approved form of notice prominently displayed on the electrical equipment at the point of isolation when isolated, intended to advise that the electrical system is being worked upon and a warning about making such equipment live. This is a temporary notice used when carrying out installation, maintenance or repair to the electrical system.

4.5 **Charged.** An object having acquired a charge because it is live or because it has become charged by other means such as static or induction charging, or retained or regained a charge due to capacitance effects even though it may be disconnected from the rest of the system.

4.6 **Circuit.** An assembly of electrical equipment supplied from the same origin and protected against overcurrent by the same protective device.

4.7 **Circuit Conductor.** Any conductor in a system which is intended to carry electric current in normal conditions, or to be energised in normal conditions and includes a combined neutral and earth conductor but does not include a conductor provided solely to perform a protective function by connection to earth or other reference point.

4.8 **Circuit Protective Conductor.** A protective conductor connecting exposed conductive parts of equipment to the main earth terminal.

4.9 **Circuit Main Earth.** An approved means of earthing applied to ensure the safety of personnel working on the apparatus.

4.10 **Client.** A Client of Intelect to whom Intelect is in contract to carry out work for.

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4.11 **Competent.** A person who has sufficient electrical technical knowledge, training and experience that will enable them to avoid danger. The degree of supervision required will relate to the competency of the person being supervised, in relation to the work being undertaken and the system being worked on. A person authorised by the Senior Authorised Person, in writing, to undertake certain limited, defined duties on or with Electrical Equipment.

4.12 **Conductor.** Means a conductor of electrical energy.

4.13 **Confirm Dead.** Confirm with the use of approved test equipment to Guidance Note GS38, that no electrical potential is present that is liable to cause danger or injury.

4.14 **Danger.** Risk of injury or death.

4.15 **Danger Notice.** An approved form of notice prominently displayed on or adjacent to electrical equipment, warning that the equipment is **LIVE** and should not be interfered with. This is a temporary notice used when carrying out work adjacent to an electrical system.

4.16 **Dangerous Condition / Practice.** A condition or practice that is likely to lead to a Dangerous Occurrence.

4.17 **Dangerous Occurrence.** An incident involving a source of electrical energy which may be dangerous to any person, whether or not an accident has occurred.

4.18 **Dead.** Not electrically '**live**' or '**charged**'

4.19 **Designated Persons.** Persons who are authorised by the Senior Authorised Person in writing to carry out specific duties on Intelect's or the Client's electrical and electronic systems, or those being constructed by Intelect, either for a Client or for the use by Intelect.

4.20 **Disconnected.** Equipment (or part of an electrical system) that is not connected to any source of electrical energy.

4.21 **Earth.** The conductive mass of earth whose electrical potential at any point is conventionally taken as zero.

4.22 **Earthed.** Connected to the general mass of earth in such a manner so as to ensure at all times an immediate discharge of electrical energy without danger or as appropriate injury, using an approved device, tested and rated for its intended use.

4.23 **Electrical Duty Holder.** Are level 5 authorised person(s) assessed and appointed in writing by Intelect's Board of Directors for implementing, administering, monitoring and auditing the application of these Electrical Safety Rules with respect to the whole or defined parts of both Intelect's and the Client's LV electrical and electronic systems and/or equipment. See section 7.2

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4.24 **Electrical Equipment.** Includes anything used, intended to be used or installed for use, to generate, provide, transmit, transform, rectify, convert, conduct, distribute, control, store, measure or use electrical energy.

4.25 **Electrical Safety Document.** Intelect forms with a unique numbering system used to implement these Electrical Safety Rules, including the following:

i. Limitation of Access (L.V.)
ii. Electrical Permit to Work
iii. Safety Programme (Including Risk Assessments, Method Statements & Transfer of Control)
iv. Sanction for Live Testing
v. Agreement to Energise

4.26 **Energised.** The application of voltage to an electrical system.

4.27 **Event Log.** A log of events or a site diary produced by a Level 3 Authorised persons responsible for an area under their control and kept by the Senior Authorising Person detailing Electrical Events or Operations, the location and reason. This includes all incidents and dangerous occurrences.

4.28 **First Use(d).** The first time the equipment is energised.

4.29 **Hazardous Area.** An area in which explosive or flammable atmospheres are, or may be present in quantities such as to require special precautions for the construction, use, maintenance and testing of electrical/instrument equipment. The Dangerous Substances and Explosive Atmospheres Regulations (DSEAR) need to be applied in this situation.

4.30 **Injury.** Death or personal injury from electric shock, electric burn, electrical explosion or arcing, or from fire or explosion initiated by electrical energy, where any such death or injury is associated with the generation, provision, transmission, transformation, rectification, conversion, conduction, distribution, control, storage, measurement or use of electrical energy.

4.31 **Isolate.** Disconnect and separate equipment from every source of electrical energy in such a way that the disconnection and separation is secure.

4.32 **Isolated.** Equipment (or part of an electrical system) which is disconnected and separated by a safe distance (the isolating gap) from all sources of electrical energy in such a way that the disconnection is secure. Isolation shall not be achieved by the operation and locking off of emergency pushbuttons, or by operating interlocks.

4.33 **Limitation of Access.** An Electrical Safety Document which is a form of declaration signed by an Authorised Person for managing work activities on equipment or structures and controlling access to an area in the proximity of an LV electrical system, which is under the control of the Authorised Person and where the Authorised Person determines danger may be present, and

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where a Permit to Work or Sanction for Live Testing is not applicable. Please refer to document IMS-6046-08-OF and section 17 for further details.

4.34 **Live.** Equipment that is at a voltage by being connected to a source of electrical energy.

4.35 **Live Work.** Work on live conductors that are accessible and 'live' or 'charged'. This includes live testing, such as using a voltage detection instruments to measure voltage on a live power distribution or control system. This could also include loop impedance, prospective fault current and residual current testing as required for BS7671 installation testing, and may also include fault finding and circuit testing on electrical systems.

4.36 **Live Testing.** The use of approved insulated test equipment for the purpose of proving a circuit is dead, carrying out testing of an installation in line with BS7671 or for diagnostic testing on live equipment that is to IP2X.

4.37 **Live Testing In Progress Notice.** An approved form of notice prominently displayed around a proscribed area of testing. Please refer to appendix B for Warning Signs & Safety Notices.

4.38 **Lock Out Box.** A lockable box used for the retention of safety lock keys used for the purpose of isolation.

4.39 **Lone Working.** A situation where an individual is expected to work in an isolated environment away from direct contact or close supervision of other personnel. This is regardless of whether they are physically alone or in a separate location from their team. This can include roles in remote areas, one-to-one with clients or members of the public, or otherwise in a building with others but without close supervision.

4.40 **Operational Locks.** Locks differing from Safety Locks, which are used to lock apparatus in an operating position to prevent unauthorised operation. Such as Castel or Ronis type keys for the purpose of interlocking isolating switches, such as for the use on incoming mains and generator supplies to ensure only one switch can be operated in the closed position at a time.

4.41 **Permit to Work (Electrical).** An Electrical Safety Document which is a form of declaration signed by a Senior Authorised Person and given to the person in charge of the work, for the purpose of making known the equipment on which it is safe to work and specifying the extent of the work to be undertaken. Refer to section 18 for further details.

4.42 **Permit to Work Active Notice (Electrical).** An approved standard form of notice attached to the electrical equipment that has been isolated.

4.43 **Point of Isolation Notice.** An approved standard form of notice attached to electrical equipment/apparatus formally declaring the point of isolation. This is a temporary notice used to clearly define the points at which the electrical system is isolated.

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4.44 **(Point of Work) Method Statement** A form to be used for short term / emergency work only along with the Point of Work Risk Assessment.

4.45 **(Point of Work) Risk Assessment** A form to be used for short term / emergency work only along with the Point of Work Method Statement.

4.46 **Portable Equipment.** Electrical equipment which is moved whilst in operation or which can easily be moved from one place to another whilst connected to the supply.

4.47 **Prescribed Areas.** An area marked out by temporary or permanent barriers, displaying danger and or live testing in progress notices where a possible electrical hazard exists and to which access is controlled by the person in charge of the area.

4.48 **Prove Dead.** Demonstrate with the use of test equipment approved by Guidance Note GS 38, that no electrical potential is present that is liable to cause danger or injury.

4.49 **Permit to Energise.** Is an electrical safety document which is a form of agreement signed by the Authorised Person and Site Manager / Site Responsible Person, for the purpose of ensuring the equipment is safe to energise and that the necessary safety precautions are in place. Please refer to document IMS-5187-08-OF and section 21 for further details.

4.50 **Safety Lock.** A padlock permanently coloured red, (differing from operational locks) having a single key which differs from all other keys provided for the system or installation, used for securing the means of isolation or earthing. The key for these locks shall be placed in the Lock Out Box and the key for that retained by the Approved Person. The unauthorised removal of safety locks shall not be permitted. Multi hasps are to be used when multiple people are working on a system with each person fitting their own lock to enable the recipient of an Electrical Permit to Work to apply their own personal safety locks.

4.51 **Safety Programme.** The Safety Programme details how the work (or test) is to be made safe and the order that the isolation is carried out in. Refer to section 19 for further details.

4.52 **Sanction for Live Testing.** May also be referred to as 'Authority to Commission' or 'Authority to Operate' is an Electrical Safety Document which is a form of declaration signed by an **Authorised Person** and issued to a **Skilled Person** for **Live Testing** of LV Electrical Equipment and Systems, for the purpose of making known the equipment to be tested and the conditions under which the tests are to be carried out – Refer to section 20 for further details.

4.53 **Senior Authorised Person.** Are level 4 authorised person(s) assessed and appointed in writing by Intelect's **Board of Directors** and/or the **QHSE manager** and/or the **Electrical Duty Holder** for implementing, administering, monitoring and auditing the application of these Electrical Safety Rules with respect to the whole or defined parts of both Intelect's and the Client's LV electrical and electronic systems and/or equipment. See section 7.4

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4.54 **Site Responsible Person.** The person responsible for site in the absence of a Site Manager. A temporary deferred approved person will assume the responsibility of the site manager.

4.55 **Skilled Person.** Are level 2 authorised person(s) assessed and appointed, in writing, by the **Senior Authorised Person** with responsibilities for operating and maintaining electrical systems within a defined area and with sufficient technical knowledge, training and experience that will enable them to avoid danger which electricity may create. See section 7.6.

4.56 **Sub-Contractor.** A company or person other than Intelect employees employed to do work on an Intelect site or location.

4.57 **Sub-station.** Any premises or part of any premises in which electrical energy is transformed or converted to or otherwise contains switchgear to operate voltages greater than 1000Vac or 1500Vdc.

4.58 **Supervision (Close).** A level of supervision where a senior level of authority or an **accompanying safety person** is within a sufficiently close proximity with the person under supervision, so that the supervisor may attend in person at the request of either of the person under supervision or the supervisor.

4.59 **Supervision (Direct).** A level of supervision where a senior level of authority or an **accompanying safety person** is working directly with the person under supervision or otherwise can be present promptly of being requested.

4.60 **Supervision (Indirect).** A level of supervision where an **accompanying safety person** is not required and where a senior level of authority is not in close proximity to the person under supervision but is immediately contactable or otherwise can be available at the location within a reasonable time.

4.61 **Switch-Room.** An enclosed space containing LV electrical equipment to which access is may be restricted.

4.62 **System.** An electrical system in which all the electrical equipment is, or may be, connected to a common source of electrical energy and includes such source and such equipment.

4.63 **Temporary Electrical Installation.** An electrical system or installation erected for a particular use and dismantled when no longer required for that use.

4.64 **Voltage.** The nominal voltage by which the installation (or part of) is designated.

i. **Extra High Voltage (EHV).** Defined in Nationals Standards as normally exceeding 230kVac.
ii. **High Voltage (HV).** Defined in National standards as being in excess of 35kV.

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iii. **Medium Voltage (MV).** Defined in Nationals Standards as normally exceeding 1000Vac.

iv. **Low Voltage (LV).** Defined in National standards exceeding Extra Low Voltage and not exceeding 1,000Vac or 1,500Vdc between conductors, or 600Vac or 900Vdc between conductors and earth.

v. **Extra Low Voltage.** Defined in National Standards as not exceeding 50Vac or 120Vdc whether between conductors or to earth.

4.65 **Work near a Live Conductor.** Any work activity where there is a risk of accidental contact with dangerous live conductors. This includes accidental short circuit contact.

4.66 **Work on a Live Conductor.** Any work activity involving the handling of or contact with exposed live conductors. This includes live testing, such as using an electrical test instrument to measure voltage on a live power distribution or control system. Examples of such are loop impedance inspections, prospective fault current, residual current (RCD) testing and as part of any fault diagnosis.

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5. General Rules

5.1 **Approval of Equipment and Installations.** Only equipment and installations that are fit for purpose and safe to operate and maintain shall be taken into service. Prior to the initial energisation of equipment, there must be an agreement between the Sub-Contractor, the Authorised Person and the Site Manager. This will be recorded on a "Permit to Energise" form.

5.2 **Building Alteration and Refurbishment.** Before any electrical installation works take place in any premises, a survey must be carried out for the possible content of Asbestos within the installation. All staff working on the fabric of the building must review the site asbestos register held in the Construction Phase Plan (document IMS-6008-08-OF) before starting work and all areas with asbestos containing materials or suspected of containing asbestos must be identified before work starts and have appropriate signs in place.

Prior to commencement of any works on the existing electrical wiring, it shall be surveyed to ensure it is safe and the relevant circuits have been Identified.

Existing wiring diagrams and circuit charts should only be considered a guide to the current status of the installation and not relied upon as an accurate record.

Any circuits located during the survey and not previously identified or recorded must be considered energised **LIVE** and marked clearly for all to see.

Following a survey all existing circuits that require alteration shall be isolated and proven dead by an Authorised Person. An electrical permit to work shall be issued to the person in charge prior to commencing the works. All electrical sub-station rooms, switch rooms, panels, distribution boards electrical risers and any other location where main electrical equipment is located will remain locked and access controlled.

5.3 **Demolition.** Prior to any demolition activities commencing adequate planning shall take place to ensure existing services are located and permanently isolated. All staff working on demolition works should be briefed on the Demolition plan appended to the construction phase plan.

Isolated supplies will be proved dead by a Level 3 Authorised Person, and an Electrical Permit to Work shall be issued to the person in charge before demolition commences.

Should the demolition process require a supply of electricity, the supply must be independent of any existing electrical installations in the building structure being demolished.

5.4 **Display of Regulations and Rules.** A copy of the notice "Instructions for the Treatment of Persons Suffering from Electric Shock" and “Electricity at Work Regulations” shall be posted in all Sub-Stations, Switch Rooms and Control Rooms, Following the installation being energised "Authorised Personnel Only" signs must be posted on all access and egress points.

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5.5 **Electrical Safety Document.** Only one type of these documents shall be in force at the same time for the same equipment with the exception of those part of the **Safety Programme** which is used to supplement the other documents.

5.6 **Display of Electrical Safety Documents.** One copy shall be displayed on the" Electrical Permit Board" by the Authorised Person; another copy shall be displayed/available at the point of isolation or handed over to the recipient and the third copy is kept by the Senior Authorised Person.

5.7 **Live Testing.** Live Testing of LV equipment may be undertaken where it is impracticable to carry out such tests with the equipment dead, with the following restrictions:

A Sanction for Live Testing (authority to commission) must be completed by a Level 3 Authorised Person.

Note: Where equipment is not to IP2X, the Senior Authorised Person must be contacted to advise of any additional safety precautions prior to the issuing of a Sanction for Live Testing.

Note: Live Testing (confirm dead), shall only be carried out with an approved LV Voltage Detection Instruments and proving unit.

Note: A Safety Person must be present during all Live Testing and for Confirming Dead. No person shall be lone working unless special arrangements are in place and agreed with the **Electrical Duty Holder** and the **Senior Authorised Person** responsible for the works prior commencing the dead testing.

5.8 **Non-Electrical Permits.** Other permits to work exist within Intelect's and Client's Safe Systems of Work. These should be in addition to the appropriate Electrical Safety Document.

5.9 **Non-Lockable Isolators.** No connection or modification shall be undertaken to an existing system that cannot provide a lockable and secure means of isolation. A survey should be carried out prior to any works to determine Regulation 12 of the EAWR ‘89 can be complied with.

5.10 **Re-commissioning of Equipment.** After work in which functional checking or testing has been carried out, the equipment shall not be returned to service until it has been restored to a safe operational condition.

5.11 **Special Tools and Test Equipment.** Any special tools and equipment used for live functional testing shall be of an approved type. They shall be inspected and tested periodically and a record maintained with the equipment. The users shall satisfy themselves by examination, before use, that such equipment is suitable for the task and within its test period. All test equipment shall have an annual Calibration Certificate. Please refer to document IMS-3012-08-OF for further information on calibration consistency procedures.

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5.12 **Transfer of Authorised Person.** Should it be necessary to transfer the issuer from the original Authorised Person to a different Authorised Person, then all Electrical Safety Documentation must be withdrawn and new ones issued after approval in writing by the Senior Authorised Person. This transfer of responsibility will be recorded in the Construction Phase Plan. There shall only be one Authorised Person on a project at any one time.

In the event that there is a shift system in place which requires two Senior Authorised Persons to manage the site at different times, an "SAP on Duty" sign shall be displayed on the site wide "Permit Board". The arrangements in place will be recorded in the Construction Phase Plan.

5.13 **Transfer of the recipient of Contractor Electrical Safety Document**. Should it be necessary to transfer work from the original recipient to a second or subsequent person who is to take charge of or do the work, then the original Electrical Safety Document shall be cancelled, signed off and new documentation shall be issued. If this is not practicable then the second recipient shall endorse in writing (countersign) the original safety document.

5.14 **Unauthorised Personnel.** No unauthorised personnel are to interfere/tamper with any electrical equipment/systems.

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6. General Duties and Responsibilities

6.1 **General.** It is the duty of all persons who may be concerned with the operation of, or work upon, the electrical and electronic systems and equipment of Intelect, the Sub-Contractor and its Client's to:

i. Comply with these Electrical Safety Rules and Code of Practice, a copy of which shall always be readily available to them; and

ii. Be thoroughly conversant with all Regulations and Rules governing the work they may be called upon to undertake.

iii. And to conduct their work activities so as to prevent danger.

6.2 **Objections** Any person who receives an instruction regarding work on or the operation of electrical equipment, shall report any objections they may have concerning the carrying out of such an instruction to the person issuing it in writing. This objection could be escalated via two routes, through the normal management chain and/or the **Electrical Duty Holder**. The final resolution should address the electrical concerns.

6.3 **Failure of Supply**. All persons shall report any failure of the main electrical supply to the person responsible for the operation of the affected plant without delay.

During a supply failure, all electrical equipment shall be regarded as being live until the necessary safety precautions have been taken.

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7. Designated Persons

7.1 **Board of Directors.** Are the highest level of authority and shall assess the competency of, and appoint in writing, an **Electrical Duty Holder** for Intelect. Alternatively, the Managing Director may appoint an Electrical Consultant to manage these duties, following an assessment of their competency.

7.2 **Electrical Duty Holder (Level 5).** is a level 5 authorised person who shall appoint in writing, the Senior Authorised Person(s) for Intelect.

To provide as an intermediatory for the **Board of Directors**, the **QHSE Manager** and level 4 **Senior Authorised Person(s)**, to ensure relevant standards or statutory requirements are enforced throughout the company.

To be responsible for implementing, administering, monitoring and auditing the application of these Electrical Safety Rules and Code of Practice with respect to the whole or defined parts of both Intelect's and the Client's electrical and electronic systems and/or equipment.

To appoint in writing and maintain a register of Senior Authorised Person(s) (Level 4) following an assessment of their competency as a Senior Authorised Person for each location under their control as required to implement these Electrical Safety Rules and Code of Practice.

To ensure all electrical Dangerous Occurrences are investigated and these Electrical Safety Rules are reviewed and updated as required.

To ensure that Intelect specific Electrical Safety Rules and Code of Practice comply with current legislation and industry best practice guidance.

To liaise with colleagues to ensure good electrical practice is consistent with the application of Intelect's Electrical Safety Rules.

Minimum Requirement for Intelect's (Level 5) Electrical Duty Holder Status

i. Industry recognised Higher-Level Qualification in Electrical and Electronic Engineering (Electrically biased bachelor's degree or Higher National Diploma as a minimum)
ii. Preferably Chartered (CEng) or Incorporated (IEng) Engineer with a professional engineering institute.
iii. Industry recognised higher-level health and safety qualification(s)
iv. Proof of skills (portfolio of qualifications relevant to the job requirement)
v. 10+ Years of industry experience, including working in a Project Management or Engineering capacity with a high level of technical understanding, responsibility, safety awareness and commercial responsibilities.

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7.3 **QHSE Manager (Level 5).** is a level 5 authorised person who shall assist with the assessment and appointing in writing, under the supervision of the **Electrical Duty Holder**, the Senior Authorised Person(s) for Intelect.

To provide as an intermediatory for the Board of Directors, the **Electrical Duty Holder** and the level 4 Senior Authorised Person(s).

To ensure relevant standards or statutory requirements are enforced throughout the company.

To liaise with colleagues to ensure good electrical practice is consistent with application of Intelect's Electrical Safety Rules and Code of Practice.

To ensure all electrical **Dangerous Occurrences** are investigated and raised for review with the **Electrical Duty Holder** and **Board of Directors**.

Minimum Requirement for Intelect's (Level 5) QHSE Manager Status

i. Industry recognised Higher-Level Qualification in Health & Safety
ii. Proof of skills (portfolio of qualifications relevant to the job)
iii. 10+ Years of industry experience, including working in a Project Management or Engineering capacity with technical understanding, responsibility, safety awareness and commercial responsibilities.
iv. Competence to be considered after assessment at the discretion of the **Board of Directors** and **Electrical Duty Holder**

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7.4 **Senior Authorised Person(s) (Level 4).** Is a level 4 authorised person(s) assessed and appointed in writing by the **Board of Directors** and/or the **QHSE Manager** and/or the **Electrical Duty Holder**, following an assessment of their competency, to be responsible for implementing, administering, monitoring and auditing the application of these Electrical Safety Rules with respect to the whole or defined parts of both Intelect's and the Client's electrical and electronic systems and/or equipment.

To appoint in writing and maintain a register of Level 3 & Level 2 authorised person(s) following an assessment of their competency as an **Authorised Person & Skilled Person** respectively, for each location under their control as required to implement these Electrical Safety Rules and Code of Practice.

To determine and assess the risk of **Unskilled/Supervised Persons** following an assessment of their competency, so to define a level of supervision necessary for the work activity they are assigned to.

A **Senior Authorised Person** may also undertake the duties of an **Authorised Person**.

To ensure that Intelect specific Electrical Safety Rules and Code of Practice complies with current legislation, and industry best practice guidance.

This person shall be a competent electrically disciplined Project engineer, Senior Construction Supervisor or Site Manager and possess an industry recognised higher level electrical qualification.

Minimum Requirement for Intelect's (Level 4) Senior Authorised Person Duties

i. Industry recognised Higher-Level Qualification in Electrical and Electronic Engineering (Such as an electrically biased Higher National Certificate or Diploma or above)
ii. Industry recognised Higher-Level Qualification in Health & Safety
iii. Proof of skill (portfolio of qualifications relevant to the job requirement)
iv. 5+ Years industry experience, including working in a supervisory role with a high level of technical understanding, responsibility, safety awareness and commercial responsibilities.

An exception to the minimum requirement will consider 10+ Industry experience years without a higher-level engineering qualification, providing points ii), iii) and iv) are met, will be assessed for competence at the discretion of the **Board of Directors** and **Electrical Duty Holder.**

Ensure all electrical Dangerous Occurrences are raised to the **QHSE Manager** or **Electrical Duty Holder** to be investigated and reviewed as required. To Liaise with colleagues to ensure good electrical practice consistent application of the Contractor's Electrical Safety Rules.

This person(s) is re-assessed on an annual basis, after a re-assessment of their competency by the **Board of Directors** and/or the **QHSE Manager** and/or the **Electrical Duty Holder**. This re-assessment will include a review of the accidents, incidents and near misses under their control.

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7.5 **Intelect's Authorised Person (Level 3).** A level 3 authorised person(s) assessed and appointed in writing by the Senior Authorised Person following an assessment of their competency, with responsibilities for the implementation, administering and monitoring of these Electrical Safety Rules and Code of Practice with respect to the whole or defined parts of Intelect's or the Client's electrical and electronic systems and/or equipment.

To be responsible for overseeing the installation, commissioning, operating and maintaining electrical systems and responsible for electrical safety and the issuing and cancelling of Intelect's Electrical Safety Documents and to keep an events log to note down all significant Electrical Events or Operations; the location and identity of the equipment concerned and the reason for the Event or Operation.

An **Authorised Person** may also undertake the duties of a **Skilled Person**.

To supervise both Intelect's and/or Sub-Contractor's **Skilled Persons** and **Unskilled/Supervised Persons** for each location under their control as required to install, commission, operate and maintain installations and to implement these Electrical Safety Rules and Code of Practice.

This person shall be a competent electrical technician or an industry recognised and graded 'Approved Electrician' working in a supervisory role.

Minimum Requirement for Intelect's Authorised Person

i. Recognised electrical apprenticeship and/or an industry recognised electrical qualification. (Electrically biased BTech or NVQ Level 3 or above).
ii. HNC in Electrical & Electronic Engineering or 5+ Years industry experience working with elevated supervisory responsibilities.
iii. Industry Recognised Level 4 Health & Safety qualification or above.
iv. First aid trained
v. Proof of skill (portfolio of qualifications relevant to the job requirement)

This person is re-assessed annually for their competency by the **Senior Authorised Person**. This re-assessment will include a review of the Electrical Safety Documents issued over this period.

Although they are classified as an **Authorised Person** throughout the year, they can only operate as an **Authorised Person** once they are allocated, for a period of time, to a specific site. However, it only permitted to have one **Authorised Person** allocated to a site at a time. This is to be defined with the point of work Risk Assessment's and Method Statements.

Authorised Persons are to demonstrate the use of electrical control documentation and consistent application of Intelect's Electrical Safety Rules and Code of Practice and are responsible for creating, maintaining and collating accurate records for all documentation issued (relevant to Electrical Site Safety). In addition, the **Authorised Person** shall maintain an up-to-date register of all currently active permits, site safety agreements, limitations of access and any other documentation required by these Electrical Safety Rules, such that an inspection by a third party would immediately reveal all areas covered by said active documentation.

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7.6 **Intelect's Skilled Person (Level 2).** A person assessed and appointed in writing by a **Senior Authorised Person** following an assessment of their skills, with responsibilities for working in accordance with these Electrical Safety Rules.

To be responsible for specific defined work and with suitable and sufficient technical knowledge and experience as to prevent danger or injury, which electricity may create in the person's working environment.

This person is assessed continuously at the discretion of the **Senior Authorised Person**. This assessment will include a review of the implementation of the Intelect Electrical Safety Rules over this period.

When assessing competence of a Skilled Person, full account must be given to the following criteria:

a) Knowledge of electricity.
b) Experience of electrical work, Instrument, Control and Automation or commissioning works being undertaken.
c) Understanding of the electrical system to be worked upon, coupled with adequate practical knowledge and experience of that system or similar systems.
d) Understanding of the hazards which may arise through working or testing with exposed live conductors and the appropriate safety precautions required to be taken.
e) Ability to recognise, during the course of work, any situation arising through which it is not safe to work.

Minimum Requirement for Intelect's Skilled Person

i) Recognised electrical apprenticeship of training and/or an industry recognised electrical qualification. (Electrically biased BTech or NVQ Level 3 or above.)
ii) Level 3: C&G 2382 Requirements for Electrical Installations (Current Edition)
iii) Industry Recognised Health & Safety Course
iv) Proof of skill (portfolio of qualifications relevant to the job requirement)
v) 3 Years technical electrical knowledge and experience working towards becoming an industry recognised and graded 'Approved Electrician' or equivalent.

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7.7 **Intelect's Unskilled/Supervised Person (Level 1).** A person employed by Intelect, that is aware of the responsibilities for working in accordance with these Electrical Safety Rules and Code of Practices but knowing they are not fully competent to work on an electrical system without a reasonable level of supervision from a senior level of authorisation, such as that as an electrical apprentice, electrical improver or an electrician's assistant.

A reasonable level of supervision is to be continually determined based on an assessment of the individual's level of competence, maturity and attitude. An assessment of technical knowledge and ability, including maturity and attitude will be reviewed between the individual's training provider, **Skilled Persons** and/or **Authorised Persons** responsible for previously supervising the **Unskilled/Supervised Person** prior to the start of works. The outcome of this assessment is to be communicated to the responsible **Senior Authorised Person** to enable the assessment of risks and provide a reasonable judgement for the level of supervision necessary, that being either **Direct Supervision**, **Close Supervision** or **Indirect Supervision.** This continual assessment will also include a review of the implementation of Intelect's Electrical Safety Rules over the duration of their employment period.

In the event of a newly employed or young apprentice starting their training or where it is expected a person's technical knowledge and ability will be limited or where an individual's maturity and attitude are not satisfactory, then **Direct Supervision** will be necessary.

Direct Supervision must be in place for an **unskilled/supervised person,** where a situation that is considered dangerous or where there is an increased possibility of injury. Such circumstances may include but are not limited to; the necessity for **Live Testing** and the safe isolation procedures for proving a circuit is **dead**. Ordinarily, these circumstances are to be avoided but may be necessary as a form of training and development for apprentices or improvers.

To be responsible for specific defined work and with suitable and sufficient technical knowledge and experience to prevent danger or injury, which electricity may create in the person's working environment. This person will be expected to provide assistance and to carry out these duties under the relevant supervision of either the **Senior Authorised Person**, **Authorised Person** or **Skilled Person**.

Minimum Requirement for Intelect's Unskilled/Supervised Person

i. Working towards a recognised electrical apprenticeship of training and/or an industry recognised electrical qualification. (Electrically based BTech or NVQ Level 3 or above.)
ii. Industry recognised Health & Safety Course
iii. Conversant with the health and safety requirements with regards to electrical safety.
iv. Proof of skill (portfolio of qualifications relevant to the job requirement)

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7.8 **Sub-Contractors Authorised Person (Level 3).** A person assessed and appointed in writing by the Sub-Contractor's Senior Authorised Person and accepted by Intelect's **Senior Authorised Person** following an assessment of their competency, with responsibilities for the implementation, administering and monitoring of these Electrical Safety Rules with respect to the whole or defined parts of the Intelect's or Client's electrical and electronic systems and/or equipment.

To be responsible for overseeing the installation, commissioning, operating and maintaining electrical systems and responsible for electrical safety and the issuing and cancelling of Intelect's Electrical Safety Documents and to keep an events log to note down all significant Electrical Events or Operations; the location and identity of the equipment concerned and the reason for the Event or Operation.

Prior to the appointment of the Sub-Contractor, the Sub-Contractor shall be approved by Intelect and shall have passed the Vendor Assessment Questionnaire. Please refer to document IMS-1027-07-OF.

An **Authorised Person** may also undertake the duties of a **Skilled Person**.

To provide supervision to the Sub-Contractor's **Skilled Persons** for each location under their control as required to install, commission, operate and maintain installations and to implement these Electrical Safety Rules and Code of Practice.

This person shall be a competent electrical technician or an industry recognised and graded 'Approved Electrician' working in a supervisory role.

Minimum Requirement for the Sub-Contractor's Authorised Person

i. Recognised electrical apprenticeship and/or an industry recognised electrical qualification. (Electrically biased BTech or NVQ Level 3 or above).
ii. HNC in Electrical & Electronic Engineering or 10+ Years industry experience working with elevated supervisory responsibilities.
iii. Industry Recognised Level 4 Health & Safety qualification or above.
iv. First aid trained
vi. Proof of skill (portfolio of qualifications relevant to the job requirement)

Demonstrate the use of electrical control documentation and consistent application of Intelect's and/or the Sub-Contractors Electrical Safety Rules.

This person is re-assessed annually for their competency by Intelect's **Senior Authorised Person**.

This re-assessment will include a review of the Electrical Safety Documents issued over this period. Although they are classified as an Authorised Person throughout the year, they can only operate as an Authorised Person once they are allocated, for a period of time, to a specific site. However, only one **Authorised Person** is permitted to be allocated to a site at a time.

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Authorised Persons are to demonstrate the use of electrical control documentation and consistent application of Intelect's Electrical Safety Rules and Code of Practice and are responsible for creating, maintaining and collating accurate records for all documentation issued (relevant to Electrical Site Safety). In addition, the **Authorised Person** shall maintain an up-to-date register of all currently active permits, site safety agreements, limitations of access and any other documentation required by these Electrical Safety Rules, such that an inspection by a third party would immediately reveal all areas covered by said active documentation.

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7.9 **Sub-Contractor's Skilled Person.** A person assessed and appointed in writing by the Sub-Contractor's **Senior Authorised Person** and accepted by Intelect's **Senior Authorised Person** following an assessment of their skills, with responsibilities for working in accordance with these Electrical Safety Rules.

To be responsible for specific defined work and with suitable and sufficient technical knowledge and experience to prevent danger or injury, which electricity may create in the person's working environment.

This person is assessed on a yearly basis by the **Senior Authorised Person**. This assessment will include a review of the implementation of the Intelect Electrical Safety Rules over this period.

When assessing competence of a Skilled Person, full account must be given to the following criteria:

a) Knowledge of electricity.
b) Experience of electrical work, Instrument, Control and Automation or commissioning works being undertaken.
c) Understanding of the electrical system to be worked upon, coupled with adequate practical knowledge and experience of that system or similar systems.
d) Understanding of the hazards which may arise through working or testing with exposed live conductors and the appropriate safety precautions required to be taken.
e) Ability to recognise, during the course of work, any situation arising through which it is not safe to work.

Minimum Requirement for the Sub-Contractor's Skilled Person

i) Recognised electrical apprenticeship of training and/or an industry recognised electrical qualification. (Electrically biased BTech or NVQ Level 3 or above.)
ii) Industry recognised Health & Safety Course
iii) Level 3: C&G 2382 Requirements for Electrical Installations (Current Edition)
iv) Proof of skill (portfolio of qualifications relevant to the job requirement)
5 Years technical electrical knowledge and experience working towards becoming an industry recognised and graded 'Approved Electrician' or equivalent.

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7.10 **Sub-Contractor's Unskilled/Supervised Person(s).** A person assessed and appointed in writing by Intelect's **Senior Authorised Person** following and assessment of their competence with responsibilities for working in accordance with these Electrical Safety Rules and Code of Practices but knowing they are not fully competent to work on an electrical system without direct supervision from a senior level of authorisation, such as that as an electrical apprentice, electrical improver or an electrician's labourer.

To be responsible for specific defined work and with suitable and sufficient technical knowledge and experience to prevent danger or injury, which electricity may create in the person's working environment. This person will be expected to provide assistance and to carry out these duties under the direct supervision of either the **Senior Authorised Person**, **Authorised Person** or **Skilled Person**.

This person is to be continually assessed of their competency at the discretion of the **Senior Authorised Person**. This continual assessment will include a review of the implementation of Intelect's Electrical Safety Rules over the duration of their employment period.

Minimum Requirement for the Sub-Contactor's Unskilled/Supervised Person

i. Working towards a recognised electrical apprenticeship of training and/or an industry recognised electrical qualification. (Electrically based BTech or NVQ Level 3 or above.)
ii. Industry Recognised Health & Safety Course
iii. Conversant with the health and safety requirements with regards to electrical safety.
iv. Proof of skill (portfolio of qualifications relevant to the job requirement)

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8. General Rules for Working on Low Voltage Systems

8.1 These rules shall apply to all equipment forming part of the LV electrical system and to any equipment which is connected to that system.

8.2 LV equipment that is considered by the Authorised Person to be in a dangerous condition is to be isolated and locked off elsewhere, to prevent it being reconnected to the electrical supply. The Authorised Person shall notify the Senior Authorised Person as soon as reasonably practicable, and the Client if relevant.

8.3 All work on and testing of LV equipment connected to a system is to be authorised by an Electrical Permit to Work or a Sanction for Live Testing issued by an Authorised Person.

8.4 Safety Locks are to be applied at the points of isolation to prevent unauthorised operation or re-connection. A Point of Isolation Notice and Caution Notice should always accompany Safety Locks used for isolation.

8.5 Voltage Detection Instruments (as defined in HSE GS38) are to be tested immediately before and after use against a known live source or a compliant proving unit.

8.6 The user of any electrical test equipment shall be satisfied by examination, immediately before use that the test equipment and special tools are suitable for the task, safe to use and within the re-test period.

All electrical test equipment shall be complete with a full set of operating instructions.

8.7 Multi-meters or instruments with digital numeric displays **must not** be used to prove dead.

8.8 Test equipment to be used in a hazardous area shall be certified for use in such areas.

8.9 Only properly insulated tools are to be used when working near or on live conductors and shall be inspected prior to use by the user to ensure that the insulation is not damaged.

8.10 Along with the Electrical Permit to Work and a Permit to Energise, a Safety Programme is required. This is to be written by the person responsible for the isolation/switching in conjunction with the Authorised Person.

8.11 Prior to the issue of an Electrical Permit to Work or Sanction for Live Testing the Authorised Person is to show the Recipient the safety arrangements at the points of isolation and at the places of work or Test and is to ensure that the recipient understands all the relevant safety procedures and precautions. If the prospective Recipient thereafter accepts the Electrical Permit to Work or Sanction for Live Testing that person becomes responsible for the defined Work or Test until the Electrical Permit to Work or Sanction for Live Testing is cancelled.

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8.12 Where Authorised Persons need to personally undertake tasks normally requiring an Electrical Permit to Work, or a Sanction for Live Testing, or Permit to Energise, and with the Senior Authorised Person's prior approval, in writing, they must carry out works in accordance with the Electrical Safety Rules and procedures and fill in a Risk Assessment and Method Statement.

8.13 An Electrical Permit to Work shall be issued for each system at the Point of Isolation. The Permit shall be posted / available at the Point of Isolation.

8.14 Where it is not practicable to prove Equipment dead until an Electrical Permit to Work has been issued, one of the following sub-clauses is to apply:

8.14.1 The Authorised Person is to instruct the Recipient, using appropriate tools, and Protective Equipment where necessary, to prove the Equipment dead as soon as conductors have been made accessible to a suitable Voltage Detection Instruments, or

8.14.2 The Authorised Person is to remain with and supervise the Recipient until conductors have been made accessible. The Equipment is to be proved dead to the satisfaction of the Authorised Person and the Recipient before the work or test proceeds.

Display of Temporary Signs

8.15 A Point of Isolation Notice shall be prominently displayed at the point of isolation before the issue of an Electrical Permit to Work and for the duration of the work until the Electrical Permit to Work has been cancelled.

8.16 Caution Notice shall be prominently displayed on the point of isolation for the electrical equipment that has been isolated, before the issue of an Electrical Permit to Work and for the duration of the work until the Electrical Permit to Work has been cancelled.

8.17 An Electrical Permit to Work Notice shall be prominently displayed on the equipment that has been isolated, before the issue of an Electrical Permit to Work and for the duration of the work until the Electrical Permit to Work has been cancelled.

8.18 Danger Notices shall be prominently displayed on adjacent live equipment, before the issue of an Electrical Permit to Work and for the duration of the work until the Electrical Permit to Work has been cancelled.

Access to and locking of LV Switch rooms.

8.19 Entry to low voltage switch rooms controlled by Intelect shall be restricted by the Senior Authorised Person.

8.20 Doors/access points shall be locked or secured, if possible, when the switch room is unattended.

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8.21 Where it is necessary to prevent danger or injury or to prevent unauthorised operation, equipment cubicles and operating mechanisms are to be locked when the equipment is unattended.

8.22 These Electrical Safety Rules do not allow for any **Live Work** with the exception of Live Testing, Fault Finding and working near live conductors, so long as they are at a minimum of IP2X protection and task specific PPE is utilised.

Permit to Energise (Authority to Commission)

8.23 It is always preferable to avoid energising any outgoing electrical distribution services until the distribution switchgear or Motor Control Centre, and all connected circuits are complete and have been inspected and dead-tested in accordance with the requirements of BS 7671.

8.24 If live services are required before all installation work and inspection and testing associated with the relevant Motor Control Centre or distribution boards have been fully completed, and this cannot be resisted, the system is not to be energised unless there is an agreement in place between the Client/Sub-Contractor, the Authorised Person and the Site Manager that ensures adequate control measures have been put in place.

8.25 A Permit to Energise form shall be in place for all Motor Control Centre or distribution boards prior to initially being energised; it shall be completed by the Client/Sub-Contractor and signed by Authorised Person and the Site Manager/ Site Responsible Person.

8.26 Once the system has been energised or partially energised (if the installation is not complete) then a further Permit to Energise is required. The Electrical Permit to Work and Sanction for Live Testing forms shall be used to manage the control of the electrical danger, unless the Authorised Person deems there is insufficient danger from the remaining circuits being energised.

8.27 Motor Control Centre sections that are not required to be energised or are not electrically complete shall have safety locks fitted, Point of Isolation Notices and Caution Notices fitted.

8.28 Distribution Boards sections that are not required to be energised or are not electrically complete shall have safety locks fitted, Point of Isolation Notices and Caution Notices fitted.

8.29 Danger Notices shall be fitted to all equipment that is to be energised. These shall be removed once the installation has been energised, and all safety locks and Caution Notices have been removed.

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Procedure for Working Dead

8.30 Only persons who are Competent and authorised in writing shall undertake work upon any Intelect or Client LV system.

8.31 The Authorised Person shall ensure that the persons carrying out the work are at least a Competent Person and that a safe system of work is adopted and enforced.

8.32 All persons undertaking the work on the electrical system must retain security over the points of isolation for that system. Before any person is allowed to work on LV equipment, the authorised person shall write the Safety Programme and ensure that:

i. **Identified** - The work activity to be undertaken is identified within the existing system or network.

ii. **Understood/ Reviewed** - The current system is understood and reviewed as necessary. Review of the planned work including any associated risk assessments, method statements and safety programme.

iii. **Isolated** - Identify necessary isolations and switch off and isolate from all sources of supply.

iv. **Locked Off -** With a safety lock and a point of isolation notice. Where locking facilities are not available, other precautions shall be taken to secure isolation such as the removal and retention of supply fuses and the posting of suitable warning labels.

v. **Fix Caution Notice** - On the point of isolation for the electrical equipment that has been isolated.

vi. **Fix Electrical Permit to Work Notice** - On the equipment that has been isolated

vii. **Fix Danger Notices** - On live electrical equipment

viii. **Proved Dead** - Ensure that the equipment to be worked on is the equipment that has been isolated. Prove dead by an approved LV voltage detection instrument which shall itself be tested before and after use. An Accompanying Safety Person shall be in attendance while the equipment is being proven dead, unless a special agreement is in place with the **Electrical Duty Holder**. Where it is not practicable to prove dead until the Electrical Permit to Work is issued, it shall be confirmed dead once the conductors are accessible.

ix. **Earthed** - Earthed where necessary and appropriate.

x. **An Electrical Permit to Work** is issued to the Recipient for the equipment / circuit being worked upon.

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8.33 The issue of an Electrical Permit to Work does not by itself, necessarily protect persons from injury. The **Senior Authorised Person** shall consider if a Mechanical Permit to Work is also required to protect persons from injury.

Procedure for Live Testing

8.34 Within this section any mention of live testing also includes for live fault finding.

8.35 Only persons who are competent and authorised in writing by a Senior Authorised Person shall undertake live testing on any Intelect or Client LV system. The Senior Authorised Person shall ensure that the persons carrying out the live testing are at least a **Skilled Person** and that a safe system of work is adopted and enforced.

8.36 This procedure for live testing on LV equipment, shall apply where it is necessary to expose live conductors in order to carry out the task. Where the equipment is not to IP2X, the Senior Authorised Person must be contacted to advise in writing any additional precautions needed prior to the issue of a Sanction for Live Testing.

8.37 It is the responsibility of the person carrying out the live testing to do so in a manner which avoids danger.

8.38 No person shall be engaged in any work activity on or near any exposed live conductor (for the purpose of live testing) where danger may arise, unless:

i. It is unreasonable in ALL circumstances for the work to be carried out with the equipment dead, and

ii. It is reasonable in ALL circumstances for the work to be carried out with the equipment live, and

iii. Suitable safety precautions have been taken in order to prevent injury, including where necessary the provision of Protective Equipment and Personal Protective Equipment, and

iv. Test equipment and all tools in use shall be suitable, for the use for which they are intended and, maintained and in a condition suitable for the intended use and properly used, and

v. Adequate precautions are taken to prevent damage to Equipment and accidental contact with live conductors, and

vi. A **Sanction for Live Testing** is in place for the equipment/circuit being tested.

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8.39 When live testing is being carried out, all necessary precautions shall be taken to prevent danger, or where appropriate injury, including the following:

i. Live testing shall take place within a prescribed area unless the physical disposition of the equipment allows the task to be carried out safely without forming a prescribed area.

ii. 'Live Testing in Progress' signage must be erected and access restricted to Electrical Equipment and Installations under test.

iii. Accompanying **Safety Person** shall be in attendance with the ability to restrict access into the proscribed area, able to recognise and avoid danger, aware of how to isolate the equipment and trained to render prompt assistance in an emergency, shall be within sight and sound of the person carrying out the testing. This person will be an electrically competent person.

iv. An exception to iii.) will be at the discretion and agreement of the **Electrical Duty Holder** following the review of the increased associated risk and only where an externally monitored lone working system is in place during the works.

v. Any adjacent live terminals or live electrical equipment not requiring testing shall be temporarily shrouded to IP2X standard.

vi. Proving dead shall only be carried out with an approved voltage detection instrument.

vii. Approved special tools and equipment, screens, barriers, safety glasses, insulating mats, gloves and boots shall be used to avoid danger. The user shall be satisfied by examination, before use, that the equipment is suitable for the task.

viii. A **Sanction for Live Testing** is in place for the equipment/ circuit being worked upon.

Identification and Work on LV cables

8.40 Before the conductors of a cable are cut or exposed, the cable to be worked on is to be identified with certainty. This shall be identified by but not limited to, either an end-to-end continuity test, tracing of the cable's route where visible throughout its installation or by signal injection.

It will be at the discretion of the Authorised Person to agree the appropriate method of identification if the cable is not visible throughout its length.

Accompanying Safety Person

8.41 An Accompanying Safety Person is to be in attendance in the following circumstances:

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i. Where testing is being carried out to prove dead

ii. Whilst inspection and testing, fault finding is being undertaken on live low voltage equipment.

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9. Systems and Equipment in Potentially Hazardous Areas (DSEAR)

9.1 No portable or transportable electrical equipment shall be used or taken into a potentially hazardous area unless the equipment is certified for use in potentially explosive atmospheres.

9.2 The following requirements are supplementary to those of Extra Low Voltage Systems and Equipment in Non-Hazardous Areas and Low Voltage Systems and Equipment in Non-Hazardous Areas and are to be applied to work or testing on extra low voltage and low voltage systems and equipment located in a potentially Hazardous Area.

9.3 Work or testing shall not commence within a potentially hazardous area, nor shall a Permit-to-Work, Sanction-for-Test, Permit to Work or limitation-of-access be issued in respect of that hazardous area, until the safe working procedures for entry and work within that Hazardous Area have been identified and implemented. Such procedures are to include the identification of the extent of the potentially hazardous area, its classification(s) and the extent of any confined space.

9.4 Where the potentially hazardous area is also a confined space the adopted entry and working procedures shall also conform to the confined spaces procedures. Such procedures may require the use of a written entry permit. If any doubt arises as to the interpretation or application of such procedures for a particular location, the decision of the person having responsibility for the control of the functional activities at that location shall be obtained.

9.5 Where the intended work activity shall be subject to an Electrical safety Document and written authorisation applies to entry and working arrangements, the written authorisation prepared for the work is to include for the entry requirements and work activities of the Authorised Person or Authorised Person in connection with the issue and cancellation of the Electrical Safety Document or Electrical Control Document.

9.6 Where a risk assessment is required in respect of electrical work or testing it shall be undertaken by, or in consultation with, a Senior Authorised Person. The risk assessment shall establish whether additional precautions or procedures to those already being implemented are considered necessary to ensure a safe system of work.

9.7 Working or testing on systems and equipment located in a potentially hazardous area is restricted to:

i. Authorised Person and authorised by a Senior Authorised Person or Senior Duty Holder to undertake work or testing in a potentially hazardous area.

ii. a person acting under the direct supervision of an Authorised Person

9.8 Whenever reasonably practicable, the working place shall be rendered non-hazardous for the duration of the work or test.

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9.9 All tools, hand lamps and test equipment taken into a potentially hazardous area are to be suitable for use in that hazardous area, Mobile telephones, radios etc shall not be taken into a potentially hazardous area. Uncertified items may only be used where a safe area is proved to exist and thereafter continuously monitored for the duration of the work activity.

9.10 Only intrinsically safe test lamps or voltage testing devices suitable for the purpose are to be used to prove that equipment is dead. Such devices are to be tested against a test supply immediately before being taken into a potentially hazardous area. Test supply devices are to remain in a non- Hazardous Area.

9.11 The replacement of batteries in hand lamps or other portable/transportable equipment shall not be undertaken in potentially hazardous areas.

Installation, Removal & Refurbishment of Equipment

9.12 Any electrical equipment for use in a potentially hazardous area shall be certified to suit the environment in which it shall be used.

9.13 Any connection or alterations to an existing electrical systems or equipment associated with potentially hazardous areas shall not impair the safety or functionality of that system.

9.14 Modification of certified equipment shall only be performed by the original manufacturer of the equipment, their appointed agents or other HSE-approved organisation, unless otherwise permitted in the equipment licence. However, the repair, refurbishment and exact replacement of components, within certification requirements, is permissible.

9.15 When certified equipment is removed the associated wiring shall be correctly terminated in a certified enclosure appropriate to the zone classification, or the associated wiring shall be completely removed.

9.16 The integrity of barriers, sealing arrangements, cable transits etc shall be maintained at all times.

9.17 No live testing involving the dismantling; maintaining or repair of equipment shall be undertaken in a potentially hazardous area.

Testing

9.18 Test equipment used within a potentially hazardous area shall be intrinsically safe.

9.19 Tests are to be preceded by a visual check of the protective conductor(s) associated with the circuit to be tested. If the condition of any of the protective conductors appears to be unsatisfactory the test shall not proceed and the matter shall be reported to a Senior Authorised Person or Electrical Duty Holder.

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9.20 Earth fault loop impedance, high current continuity and prospective short circuit current tests are not to be undertaken. Such tests are restricted to the pre-commissioning stage on a new or refurbished installation prior to the introduction of a potentially hazardous area. Within a potentially hazardous area, only resistance tests using a low current intrinsically safe instrument are permissible.

9.21 On Completion of Electrical Work or Test and prior to restoring the equipment into an operational state the Authorised Person shall be satisfied with the integrity of the explosion protection of all equipment that may have been affected by the work or test.

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10. Inspection and Testing of Electrical Installations (BS7671)

10.1 All inspection and testing of permanent Installations shall comply with the requirements of BS7671 IET Wiring Regulations (as amended).

10.2 Every installation shall, during construction and on completion before being put into service, be inspected and tested to verify, so far as reasonably practicable that the requirements of BS7671 have been met, and an Electrical Installation Certificate issued.

10.3 The frequency of periodic inspection and testing of installations shall be determined having regard to the type of installation and equipment, its use and operation, the frequency and quality of maintenance and any external influences to which it may be subjected to. The results and recommendations of the previous reports if available shall be taken into account.

10.4 Where electrical works do not include the provision of a new circuit or significant design changes, a Minor Electrical Installation Works Certificate shall be issued (as detailed in BS7671).

10.5 Electrical installations within hazardous areas shall be designed, installed and tested in accordance with ***"The Dangerous Substances and Explosive Atmospheres Regulations" (DSEAR).***

10.6 Electrical installations within hazardous areas shall be design, installed and tested by competent CompEx trained persons, with the relevant qualification modules to suit the type of hazardous area works.

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11. Temporary Installations and Portable Appliances & Equipment

11.1 The design, installation and the inspection and testing of temporary installations shall comply with the requirements of BS7671 and BS7375.

11.2 All temporary electrical equipment on a construction site shall be permanently and uniquely identified, with a record kept of the date of issue, date of last inspection carried out and the recommended inspection period.

11.3 Every temporary installation shall, during construction and on completion before being put into service, be inspected and tested to verify, so far as reasonably practicable that the requirements of BS7671 and BS7375 have been met, and an Electrical Installation Certificate issued.

11.4 The frequency of periodic inspection and testing of all fixed temporary installations shall be at intervals not exceeding 12 months.

11.5 The frequency of visual inspection of all movable temporary installations shall be at intervals not exceeding 30 days.

11.6 The frequency of testing of all movable temporary installations shall be at intervals not exceeding 6 months.

11.7 Where electrical works do not include the provision of a new circuit, or does not require significant design changes; a Minor Electrical Installation Works Certificate shall be issued (as detailed in BS7671).

11.8 All trailing and flexible cables used to supply mobile plant shall be protected, and provide a sound metallic return path for the fault current in the event of an earth fault occurring. Earth monitoring and/or protective conductor proving may be employed to alleviate this situation.

One method to achieve this is to provide a Pilot Core protection system, providing an Earth monitoring system and a method of preventing connection and disconnection under load conditions when used in conjunction with an electrical contractor.

11.9 Residual current devices (RCD's) for plant equipment or tools are to be tested by actuating the pushbutton prior to each use. Fixed or movable installations incorporating RCDs within their installation are to be functionally tested by the pushbutton, not exceeding a four-week duration. Injection tests of all RCDs are to be captured within routine periodic inspections.

11.10 A site plan showing the temporary installation shall be prepared and maintained by the Authorised Person responsible for the installation. (See BS7375 Annex A)

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11.11 **Table of Test Requirements and Frequencies**

Equipment / Application	Voltage	User Check	Formal Visual Inspection	Combined Inspection & Test
Battery operated power tools and torches	Less than 25V	Daily	Not Required	Not Required
110V Portable hand-held tools, extension leads, site lighting, moveable wiring systems and associated switchgear	Secondary winding centre tapped (55V)	Weekly	Monthly	Before first use on site and then every 3 months
230V Portable hand-held tools, extension leads and portable floodlighting	230V mains and **must** be supply via 30mA RCD	Daily	Weekly	Before first use on site and then every 3 months
230V Fixed equipment, such as lifts, hoists and fixed floodlighting	230V supply via MCB or fuses	Daily	Weekly	Before first use on site and then every 3 months
RCDs fixed		Daily	Weekly	Before first use on site and then every 3 months
Equipment in site offices	230V office equipment	Monthly	6 Monthly	Before first use on site and then annually
Testing of site cabins	230V / 400V Supply	Monthly	6 Monthly	Before first use on site and then annually

Portable & Transportable Equipment

11.12 All portable and transportable electrical equipment including leads and plugs shall be maintained in good condition and working order and its use shall comply with the manufacturer's instructions.

11.13 Equipment that does not bear evidence of registration or portable appliance test shall be withdrawn from use and an authorised person notified, who shall ensure that the equipment is registered and tested.

11.14 Any employee who observes equipment or extension lead etc, that appears to be defective or damaged, or who observes a person working in a manner likely to cause danger, shall immediately draw the persons attention to the danger to be avoided and then report the matter to the authorised person responsible for that location.

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11.15 Before equipment is purchased or hired the purchaser or hirer shall consult with a Senior Authorised Person to ensure that the electrical characteristics of the equipment are suitable for its intended use (e.g. working environment, is compatible with the electrical supply system) and has a current test date. It shall be the responsibility of the hirer to ensure that the Hire Company undertake any re-test during the hire period.

11.16 For operational, maintenance and construction environments the following order of preference shall be used for portable tools;

i. Where practicable, battery powered tools and hand lamps or extra low voltage hand lamps to be used.

ii. Where the above is not practicable a low voltage system which delivers 110 V ac from a 55-0- 55 V ac Centre Tapped Earth source shall be used.

iii. In exceptional circumstances 230V equipment may be used provided the equipment including any extension lead shall be protected by a non-adjustable RCD with a rated tripping current of 30 mA, or less. The RCD shall be suitable for its environment, be protected against mechanical damage and, where appropriate, vibration and be located at the point of connection to the fixed installation.

iv. Any flexible leads (including extension leads) connected to sources of supply above 230V shall be restricted to 3 metres in length unless they are protected by flexible armour or braid with the armour or braid securely bonded to earth

Purchase of New Portable & Transportable Equipment

11.17 Before new equipment is put into use the person responsible for its purchase or issue shall:

i. Make the equipment available for PAT registration and labelling by consulting the Senior Authorised Person or Electrical Duty Holder responsible for appliance testing in that area;
ii. and, provide a copy of the relevant parts of the manufacturer's instructions to the Senior Authorised Person or Senior Duty Holder responsible for equipment maintenance and repair;
iii. ensure that users are trained and competent to use the equipment and instructed in the safety precautions to be applied.

11.18 The above procedure also applies to extension leads and portable RCDs or equipment owned or hired for personal issue to an employee for business use at home or elsewhere or where the equipment is owned or provided by an employee for use in the work place.

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Withdrawal and Repair of Defective Equipment

11.19 Defective equipment removed from service shall be immediately labelled 'faulty/do not use', or similar, in such a manner that it is clear to potential users that the equipment must not be used. A warning label shall be attached to the body of the equipment and at its plug, if fitted.

11.20 Where practicable, defective equipment shall be removed from the work place and returned to an Authorised Person, or other responsible person, for examination and repair.

11.21 Temporary joints or repairs to equipment leads and extension leads and temporary repairs to equipment, plugs etc are not permitted.

11.22 Only an Authorised Person or a person named in a standing instruction is permitted to undertake the following work on equipment:

i. Replace fuses in plug tops or equipment, fit or replace plugs or sockets on flexible leads, extension leads or connect leads into equipment (connection and disconnection of plugs at sockets and cord sets on equipment excepted).

ii. Remove covers or casings on equipment or on plugs or sockets. The exceptions are user- permitted activities such as battery changing and other activities intended to be performed by the user in the normal operation of the equipment and which do not provide access to electrical parts, e.g. loading paper into a photocopier.

11.23 A standing instruction may be issued by the Duty Holder or a Senior Authorised Person to a named person to permit that person to undertake defined activities in relation to portable or transportable equipment. The defined activities may include authority to carry out work in (i) or (ii), or carry out inspection and testing. The standing instruction is to define the permitted activities.

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12. Sub- Contractors

General

12.1 When Sub-Contractors are required to carry out work on Intelect's or a Client's electrical system, the following procedures shall be adopted as appropriate:

i. Contract specifications shall state that the Sub-Contractor shall be required to work in accordance with Intelect's Electricity Safety Rules, a copy of which shall be made available.

ii. Sub-Contractors are to report their presence on a day-to-day basis to the person nominated, or the method of signing in detailed as part of the site induction process.

iii. Before the commencement of any work on any Intelect or Client's electrical system, the nominated Authorised Person, shall specify the safety measures to be adopted by the Sub-Contractor in accordance with Intelect's Electrical Safety Rules.

iv. The Sub-Contractor shall only supply competent and qualified people to work on electrical systems. They shall also have suitable experience of working on systems that are similar to that on the Intelect's site / project.

12.2 In all cases when a Sub-Contractor is working on an Intelect or a Client's site, the Sub-Contractor shall be responsible for ensuring that plant and wiring upon which they or their employees are working is in a condition which presents no danger.

12.3 Where any danger to be avoided is not under the direct supervision of Intelect, the Authorised Person responsible for that equipment shall issue a Permit to Work to the Sub-Contractor in respect of the work.

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13. Allocation of Responsibility between Intelect and Sub-Contractors

Where Intelect has control of the Danger

13.1 Intelect is responsible for ensuring the safety of all persons on site. Sub-Contractor's and Intelect's personnel are to work in accordance with these Electrical Safety Rules and Code of Practice.

13.2 Where any danger to be avoided is under the control of Intelect, the **Senior Authorised Person** responsible for that equipment shall issue one of the Electrical Safety Documents in respect of the works being carried out.

Where the Sub-Contractor has control of the Danger

13.3 The person who has control of the danger is responsible for ensuring the safety of persons on site and is required to work in accordance with these Electrical Safety Rules. Alternatively, the Sub-contractor may operate their own safe system of work, which would need to be approved in writing prior to implementation by the **Senior Authorised Person**.

13.4 Where the control of an electrical system or equipment is to be the responsibility of the Sub-Contractor, the Authorised Person responsible for that equipment shall issue one of the Electrical Safety Documents in respect of the works being carried out. Alternatively, the Sub-contractor may operate their own safe system of work, which would need to be approved in writing prior to implementation by Intelect's **Senior Authorised Person**.

Where Intelect appoints an Operation or Maintenance Sub-Contractor

13.5 Intelect is to specify in the Conditions of Contract that the Sub-Contractor shall work in accordance with these Electrical Safety Rules. Alternatively, the Sub-Contractor may operate their own safe system of work, which would need to be approved, in writing, prior to implementation by Intelect's **Senior Authorised Person**.

Where Intelect appoints a Sub-Contractor for new installation works and before such work is handed over to Intelect

13.6 Intelect is to specify in the Conditions of Contract that the Sub-Contractor shall work in accordance with these Electrical Safety Rules. Alternatively, the Sub-Contractor may operate their own safe system of work, which would need to be approved, in writing, prior to implementation by Intelect's **Senior Authorised Person**.

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14. Overhead and Underground Cabling

Underground Cables

14.1 Refer to HSG47 from the Health and Safety Executive.

14.2 No person shall in any way interfere with a cable or remove any cable cover, warning tile or other protection unless specifically authorised to do so by an Authorised Person.

Overhead Cables

14.3 Refer to GS6 from the Health and Safety Executive.

14.4 No person shall in any way interfere with an overhead cable system unless specifically authorised to do so by an Authorised Person.

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15. Isolation of Generation Plant

15.1 Prior to the commencement of work, the associated prime mover or source of energy shall be effectively inhibited to generate. Where practicable, safety locks and point of isolation notices shall be employed to prevent inadvertent starting or energy conversion, the keys for which shall be under the control of the **Authorised Person** in charge of or doing the work. In addition, the following precautions shall also be applied:

i. The source of generation shall normally be at rest.

ii. The field circuit shall be isolated and locked off where it is energised from a separate dc supply. Where motor driven exciters are provided, the switch controlling the motor shall also be locked off. Where inverters are provided for solar installations, these shall also be isolated and locked off.

iii. The valves controlling the supply of starting air (or water supply on hydroelectric generators) to the prime mover shall be closed and locked off. Where locking valves are not available, then the system is to be drained and then locked off and precautions taken to ensure it cannot be recharged.

iv. Where there is potential for back feeding on to a generation system, any associated protection devices must be opened and locked off, including any associated neutral and earth links.

v. Caution and point of isolation notices shall be prominently displayed at the points referred to in (ii), (iii) and (iv).

vi. Batteries associated with generation equipment shall be physically disconnected prior to the commencement of the work. Where batteries supply more than one source of generation, battery supplies shall be physically isolated from sources of generation.

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16. Connection of Mobile Generators

16.1 Follow site specific procedures for the isolation and locking off of normal incoming supplies and connection of mobile generators. Ensure adequate precautions have been taken to prevent inadvertent paralleling of Mains and Generator supplies.

16.2 Contact the electricity supplier to inform them the site will be running off generation. Ensure all the characteristics of the generator are compatible with the load to be supplied.

16.3 Run a separate earth lead from the generator and connect to a suitable point on the site system earth or dedicated permanent earth rod.

16.4 Run a separate neutral lead from the generator and connect to a suitable point on the site supply system.

16.5 Run the phase 3 leads and connect to a suitable point on the site supply system. Ensure that the phase sequence of the generator output matches the phase sequence of the installation.

16.6 **DO NOT** disconnect the neutral links.

16.7 **DO NOT** use earth spikes either in place of or in conjunction with the separate earth lead.

16.8 Carry out an Earth Loop Impedance Test to prove the site Earth system is suitable.

16.9 If the mobile generator is fitted with RCD protection, set the protection appropriately with consideration to the selectivity of downstream protection, to avoid nuisance tripping of the RCD.

16.10 Below 10 kVA and single-phase generators (portable) no requirement for separate reference to mass of the earth.

16.11 Above 10 kVA or 3 phase generators (mobile) of any size an external reference to the mass of the earth is required with Earth Loop Impedance test.

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17. Limitation of Access

17.1 This section should be read in conjunction with section 8: Rules Low Voltage.

17.2 The term Authorised Person in this section can be either a person in the employment of either Intelect or the Sub-Contractor.

17.3 A Limitation of Access is a standard form of declaration signed by an Authorised Person for managing work activities on equipment or structures and controlling access to an area in the proximity of an LV electrical system which is under the control of the Authorised Person, and where the Authorised Person determines danger may be present, and where an Electrical Permit to Work or Sanction for Live Testing or Permit to Energise is not applicable.

17.4 A Limitation of Access shall specify the work to be done, the electrical hazards present and the safety precautions to be taken.

17.5 The issue of a Limitation of Access does not in itself guarantee safety, but relies on the persons involved following the procedures and being properly trained and instructed.

17.6 A Limitation of Access may not be issued when a **Sanction for Live Testing** is in place within the area for which a Limitation of Access is to be issued.

17.7 The person issuing the Limitation of Access shall be:

i. An **Authorised Person** with relevant authority to issue a Limitation of Access and be conversant with relevant statutory regulations.

ii. Familiar with the Electrical Equipment and the situation to which the Limitation of Access refers and where applicable, with the System of which the Electrical Equipment is part.

17.8 The recipient of a Limitation of Access shall be a Competent Person. It is the responsibility of the **Authorised Person** to assess their competence. No specific certification is required for this assessment.

17.9 The **Authorised Person** shall complete and sign part 3, of the Limitation of Access in the presence of the recipient ensuring that they fully understand the nature of the work and their responsibilities.

17.10 Prior to the Authorised Person issuing the Limitation of Access, the recipient having understood the work to be undertaken, completing the entry/access checklist and being prepared to work in accordance with it, is to complete and sign part 4.

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17.11 Once the Authorised Person has issued the Limitation of Access, alterations shall not be made by the recipient to amend the work as originally described nor shall the Limitation of Access, be transferable to another recipient. Where revision is necessary the original Limitation of Access, shall be cancelled and a new Limitation of Access, issued to cover the revised work.

17.12 Once the recipient has signed part 4 and accepted the Limitation of Access, the recipient is personally responsible for supervising the works or undertaking the defined work, taking all necessary precautions to avoid danger, and ensuring the safety of persons on site.

17.13 Having completed the work, having withdrawn all persons and any tools from the place of work and having advised all persons associated with the work that it is no longer safe to work in the area, the recipient is to complete and sign part 5 of the Limitation of Access.

17.14 The **Authorised Person** is to check that the work has been satisfactorily completed, and that the area is safe, and then complete and sign part 6 of the Limitation of Access.

17.15 Should work need to be suspended or stopped before the works defined in part 3 of the Limitation of Access, have been completed, the Limitation of Access shall be cancelled by the **Authorised Person**. Prior to cancelling the Limitation of Access, the Authorised Person shall ensure any additional safety measures required by the cancellation of the Limitation of Access, are in place.

17.16 Where work is to be resumed following the suspension or stopping of the works the Authorised Person shall issue a new Limitation of Access.

17.17 One copy shall be displayed on the "Electrical Permit Board" by the Authorised Person; another copy shall be displayed/available at the point of access or handed over to the recipient and the third copy is kept by the Authorised Person.

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18. Electrical Permit to Work

18.1 This section should be read in conjunction with section 8: Rules – Low Voltage.

18.2 The term Authorised Person in this section can be either a person in the employment of either Intelect or the Sub-Contractor.

18.3 An Electrical Permit to Work is a standard form of declaration for working on Low Voltage Electrical Equipment and systems in situations where the Senior Authorised Person determines Danger may be present.

18.4 The Electrical Permit to Work shall be used to describe and regulate work on Low Voltage Electrical Equipment and systems, in order to comply with Intelect's Electrical Safety Rules.

18.5 The Electrical Permit to Work specifies the work to be carried out, points of isolation, earthing if required and safety precautions to be taken.

18.6 The issue of an Electrical Permit to Work does not in itself guarantee safety, but relies on the persons involved following the procedures and being properly trained and instructed.

18.7 An Electrical Permit to Work is not to be issued for any item of equipment for which another Electrical Safety Document has been issued with the exception of those described in the Safety Programme.

18.8 No more than one Electrical Permit to Work shall exist at the same time for the same purpose.

18.9 The person issuing the Electrical Permit to Work shall be:

i. An Authorised Person with relevant authority to issue Electrical Permit to Work and be conversant with relevant statutory regulations.

ii. Familiar with the Electrical Equipment and the situation to which the Electrical Permit to Work refers and where applicable, with the System of which the Electrical Equipment is part.

18.10 The recipient of an Electrical Permit to Work shall be at least a Competent Person (for example mechanical works on a pump), for work upon electrical systems the recipient shall be at least a **Skilled Person** (for example wiring modifications).

18.11 Prior to issuing the Electrical Permit to Work the Authorised Person shall carry out the work as detailed in clause 8.32 of these Electrical Safety Rules and detailed on the Safety Programme.

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18.12 The Authorised Person shall complete and sign Section C Part 2 (Issue), of the Electrical Permit to Work, in the presence of the recipient ensuring that they fully understand the nature of the work and their responsibilities.

18.13 Prior to the Authorised Person issuing the Electrical Permit to Work, the recipient having understood the work to be undertaken and being prepared to work in accordance with it and these Electrical Safety Rules is to complete and sign Section G (receipt).

18.14 Once the Authorised Person has issued the Electrical Permit to Work, alterations shall not be made by the recipient to amend the work as originally described nor shall the Electrical Permit to Work be transferable to another recipient. Where revision is necessary the original Electrical Permit to Work shall be cancelled and a new Electrical Permit to Work issued to cover the revised work.

18.15 Once the recipient has signed Section G (receipt) and accepted the Electrical Permit to Work, the recipient is personally responsible for supervising the works or undertaking the defined work and ensuring the safety of persons working under the Electrical Permit to Work in accordance with these Electrical Safety Rules.

18.16 Having completed the work, having withdrawn all persons, tools and instruments from the place of work and having advised all persons associated with the work that it is no longer safe to work on the equipment, the recipient is to complete and sign Section I (Sign-off) of the Electrical Permit to Work.

18.17 The Authorised Person is to check that the work has been satisfactorily completed, that the equipment is safe and then complete and sign Section I (Sign-off) of the Electrical Permit to Work. The equipment shall not be returned to service until it has been restored to a safe operating condition.

18.18 Should work need to be suspended or stopped before the works defined in the Electrical Permit to Work have been completed, then the Electrical Permit to Work shall be cancelled by the Authorised Person with all safety locks, earths and notices remaining in place. Prior to cancelling the Electrical Permit to Work, the Authorised Person shall ensure any additional safety measures required by the cancellation of the Electrical Permit to Work are in place.

18.19 Where work is to be resumed following the suspension or stopping of the works the Authorised Person shall issue a new Electrical Permit to Work.

18.20 A separate Electrical Permit to Work shall normally be issued for each item of equipment that has been isolated. The Permit shall be posted at the Point of Isolation. It is down to the discretion of the Authorised Person to cover multiple items of equipment under an Electrical Permit to Work.

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18.21 One copy shall be displayed on the "Electrical Permit Board" by the Authorised Person; another copy shall be displayed/available at the point of access or handed over to the recipient and the third copy is kept by the Authorised Person.

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19. Safety Programme (Transfer of Control Between Client and Principal Contractor)

19.1 This section should be read in conjunction with section 8: Rules Low Voltage.

19.2 The term Authorised Person in this section can be either a person in the employment of Intelect or the Sub-Contractor.

19.3 The Safety Programme is written by the Responsible Person in conjunction with the Senior Authorised Person and included into the Construction Phase Plan

19.4 The Safety Programme consists of a set of standard forms for use when carrying out any Electrical Work or Testing that involves isolation or switching within a prescribed work area.

19.5 The Safety Programme forms are; a Risk Assessment; Method Statement; Transfer of Control; and the Site Safety Agreement. These shall all be used to describe and detail the work/testing required for isolation, in order to comply with the Intelect's Electrical Safety Rules and Code of Practice. It shall include a description the necessary Isolations, along with the sequence of what the work entails to make the system safe to work on and identifying any mitigating factors so to control the risks imposed.

19.6 Refer to IMS-6072-08-OF & IMS-6119-08OF for the transfer of control documents '**Client to Principal Contractor Handover**' and **'Principal Contractor to Client Handover'**, respectively.

19.7 Refer to IMS-5003-08-OF for the combine **Risk Assessment and Method Statement** document.

19.8 Refer to IMS-5180-08-OF for the **Site Safety Agreement** document.

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20. Sanction for Live Testing

20.1 This section should be read in conjunction with section 8: Rules Low Voltage.

20.2 The term Authorised Person in this section can be either a person in the employment of either Intelect or the Sub-Contractor.

20.3 A Sanction for Live Testing is a standard form of declaration for use when carrying out live testing on Low Voltage Equipment.

20.4 The Sanction for Live Testing shall be used to describe and regulate live testing on Low Voltage Electrical Equipment and systems, in order to comply with Intelect's Electrical Safety Rules.

20.5 The Sanction for Live Testing specifies the live testing to be carried out, points of isolation, earthing points if applicable and safety precautions to be taken.

20.6 The issue of a Sanction for Live Testing does not in itself guarantee safety, but relies on the persons involved following the procedures and being properly trained and instructed.

20.7 A Sanction for Live Testing is not to be issued for any item of equipment for which another Electrical Safety Document has been issued.

20.8 The person issuing the Sanction for Live Testing shall be:

i. An Authorised Person with relevant authority to issue Sanction for Live Testing and be conversant with relevant statutory regulations.

ii. Familiar with the Electrical Equipment and the situation to which the Sanction for Live Testing refers and where applicable, with the System of which the Electrical Equipment is part.

20.9 The recipient of a Sanction for Live Testing shall be at least a **Skilled Person**.

20.10 Prior to issuing the Sanction for Live Testing the Authorised Person shall ensure the requirements detailed in clause 8.36 and 8.37 of these Low Voltage Electrical Safety Rules have been satisfied.

20.11 The Authorised Person shall complete and sign part 1 (Issue), of the Sanction for Live Testing in the presence of the recipient ensuring that they fully understand the nature of the live testing and their responsibilities.

20.12 Equipment, for which the Sanction for Live Testing has been issued, comes under the temporary control of the recipient of the Sanction for Live Testing.

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20.13 Prior to the Authorised Person issuing the Sanction for Live Testing, the recipient having understood the live testing to be undertaken and being prepared to work in accordance with it and these Low Voltage Electrical Safety Rules is to complete and sign part 2 (receipt).

20.14 The Recipient may, without further reference to the Authorised Person, carry out the live testing. The Recipient shall then be responsible for ensuring that danger is avoided during the tests.

20.15 Once the Authorised Person has issued the Sanction for Live Testing, alterations shall not be made by the recipient to amend the live testing as originally described nor shall the Sanction for Live Testing be transferable to another recipient. Where revision is necessary the original Sanction for Live Testing shall be cancelled and a new Sanction for Live Testing issued to cover the revised live testing.

20.16 Once the recipient has signed part 2 (receipt) and accepted the Sanction for Live Testing, the recipient is personally responsible for supervising the live testing or undertaking the live testing and ensuring the safety of persons on site in accordance with these Electrical Safety Rules.

20.17 Live Testing shall normally take place within a proscribed area unless the physical disposition of the equipment allows the task to be carried out safely without forming a proscribed area.

20.18 'Live Testing in Progress' signage must be erected and access restricted to Electrical Equipment and Installations under test.

20.19 An Accompanying Safety Person with the ability to restrict access into the proscribed area, able to recognise and avoid danger, aware of how to isolate the equipment and trained to render prompt assistance in an emergency, shall be within sight and sound of the person carrying out the testing. This person will be an electrically competent person and first aid trained.

20.20 Having completed the live testing, having withdrawn all persons, tools and instruments from the place of work and having advised all persons associated with the live testing that it is no longer safe to work on the equipment and ensuring the equipment is returned in the same condition as existed when the Sanction for Live Testing was issued, the Recipient is to complete and sign part 3 (clearance) of the Sanction for Live Testing.

20.21 The Authorised Person is to check that the live testing has been satisfactorily completed, and that the equipment is safe, and then complete and sign part 4 (cancellation) of the Sanction for Live Testing. The Authorised Person shall fit his own safety locks, earths and notices, unless the equipment is placed into operational use.

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20.22 Should live testing need to be suspended or stopped before the live testing defined in part 1 (issue) of the Sanction for Live Testing have been completed, then the Sanction for Live Testing shall be cancelled by the Authorised Person who will ensure the system has been isolated with safety locks, any additional earthing arrangements are in place and notices have been posted, if the equipment is not in a safe condition. Prior to cancelling the Sanction for Live Testing the Authorised Person shall ensure any other additional safety measures required by the cancellation of the Sanction for Live Testing are in place. If the person responsible for the work has to leave site the work must stop and the Permit closed out.

20.23 Where work is to be resumed following the suspension or stopping of the works the Authorised Person shall issue a new Sanction for Live Testing.

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21. Permit to Energise

21.1 This section should be read in conjunction with section 8: Rules Low Voltage.

21.2 The term Authorised Person in this section can be either a person in the employment of either Intelect or the Sub-Contractor.

21.3 A Permit to Energise is a standard form of declaration when energising an installation for the first time or where equipment has been isolated and had major modifications carried out.

21.4 The Permit to Energise shall be used to confirm the appropriate installation checks and tests have been carried out by Intelect's skilled person or Sub-Contractor, and that the Authorised Person has fitted safety locks, caution notices to sections of the installation that are not being energised and danger notices fitted to those sections being energised as per the Safety Programme. It will also confirm that the Authorised Person or Site Manager has taken the appropriate action to brief the rest of the workforce to the change in danger and required control measures.

21.5 Prior to completing Part 1 of the form Intelect's Skilled Person or the Sub-Contractor shall ensure that all checks and tests have been completed.

21.6 Intelect's Skilled Person or Sub-Contractor shall then sign Part 1 of the form and issue this to the Authorised Person.

21.7 Prior to completing Part 2 of the form the Authorised Person shall ensure the Safety Programme has been completed as far as is practicable.

21.8 The Authorised Person shall then sign Part 2 of the form and issue this to the Skilled Person.

21.9 Prior to completing Part 3 of the form the Site Manager shall ensure the workforce have been briefed on the associated dangers and control measures in place.

21.10 The Site Manager shall then sign Part 3 of the form, and return this to the Sub-Contractor.

21.11 The Sub-Contractor shall then liaise with the Authorised Person to agree the time and date to energise the installation.

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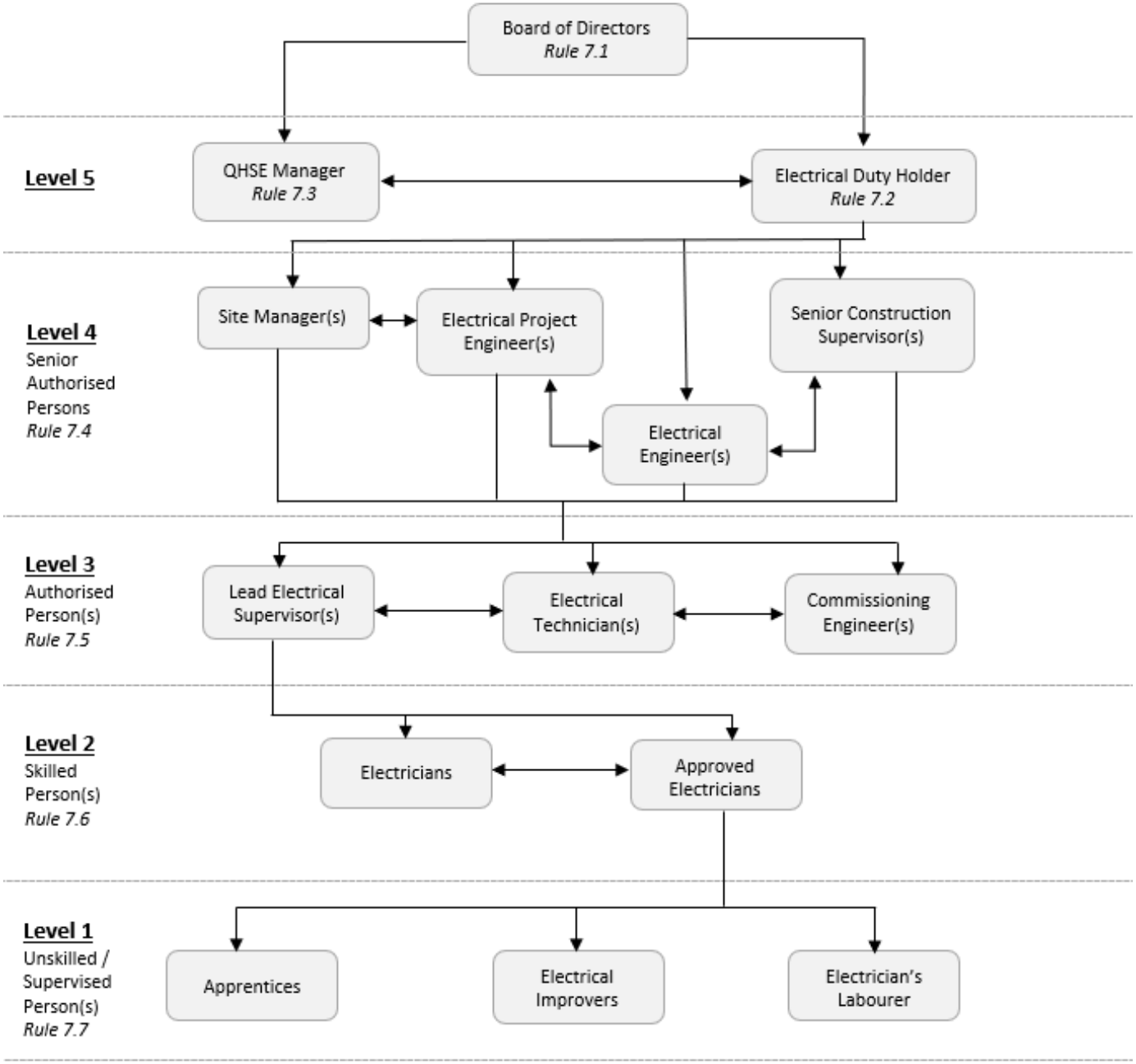
Appendix A – Appointments & Duties

A.1 Authorisation Hierarchy Flow Chart



A **Senior Authorised Person** may also under take the duties of an **Authorised Person**

An **Authorised Person** may also under take the duties of a **Skilled Person**

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A.2 Letters of Appointment

A2.1 Please refer to the following IMS Documents:

- Intelect's Senior Authorised Person (Level 4) – IMS-5181-08-OF
- Intelect's Authorised Person (Level 3) – IMS-5182-08-OF
- Intelect's Skilled Person (Level 2) – IMS-5183-08-OF

- Sub-Contractor's Authorised Person (Level 3) – IMS-5184-08-OF
- Sub-Contractor's Skilled Person (Level 2) – IMS-5185-08-OF

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A.3 Authorised Persons Review Forms

A3.1 Please refer to the following IMS Documents:

- Intelect's Senior Authorised Person (Level 4) Annual Review – IMS-5198-08-OF
- Intelect's Authorised Person (Level 3) Annual Review – IMS- 5197-08-OF
- Intelect's Skilled Person (Level 2) Review – IMS- 5196-08-OF

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Appendix B – Warning Signs & Safety Notices

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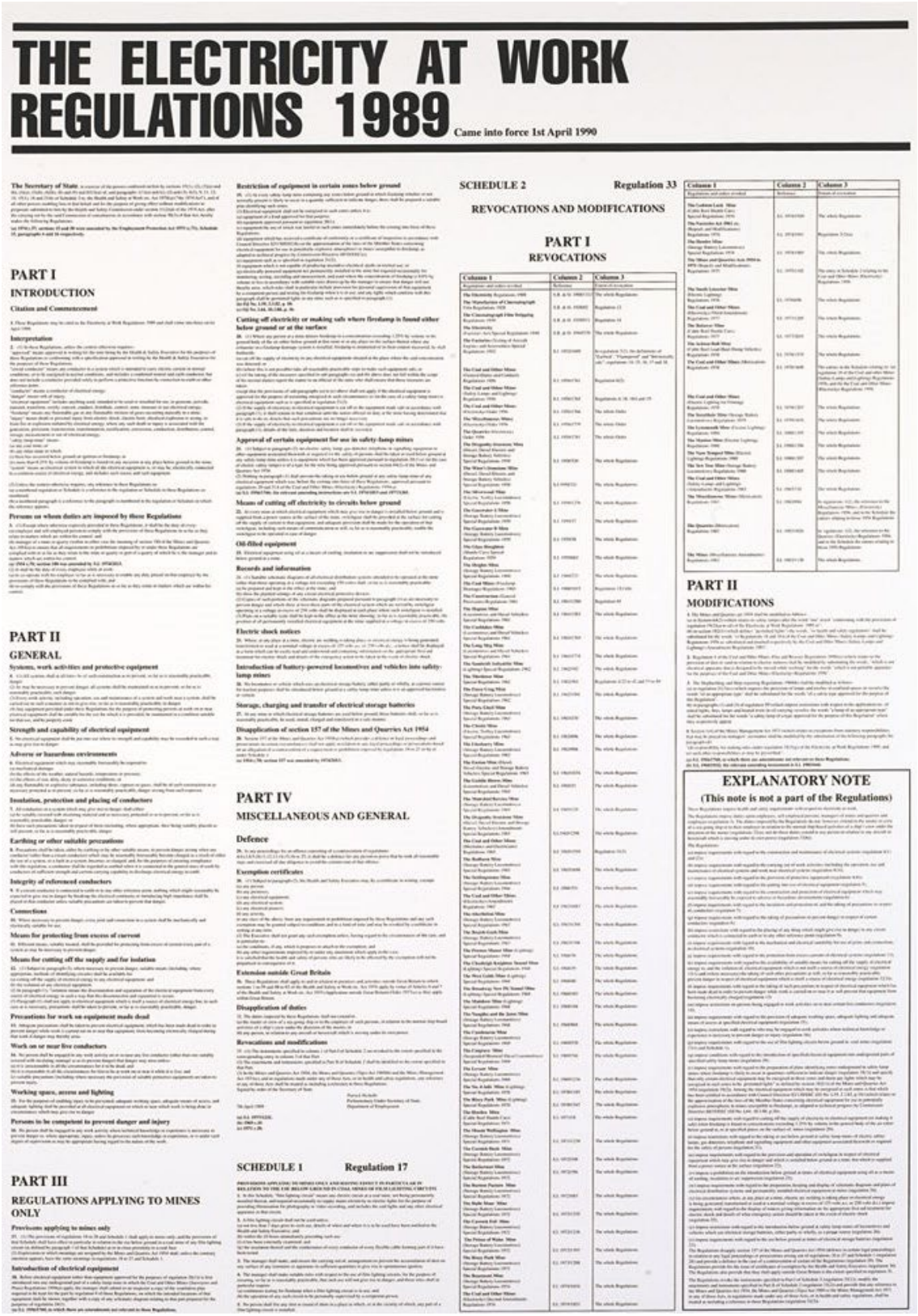
B.1 Electrical at Work Regulation 1989



THE ELECTRICITY AT WORK REGULATIONS 1989

Came into force 1st April 1990

The Secretary of State, in exercise of the powers conferred on him by sections 15(1), (3), (5)(a) and (6), 16(2), 18(2), 80 and 82(3)(a) of, and paragraphs 1(1)(a) and (2) and 6(1), (2), (3), (4), (5) and (6)(a) of Schedule 3 to, the Health and Safety at Work etc. Act 1974 ("the 1974 Act"), and of all other powers enabling him in that behalf, and for the purpose of giving effect without modification to proposals submitted to him by the Health and Safety Commission under section 11(2)(a)(i) of the 1974 Act, after the carrying out by the said Commission of consultations in accordance with section 50(3) of that Act, hereby makes the following Regulations:

(as 1974 c.37, sections 15 and 80 were amended by the Employment Protection Act 1975 (c.71), Schedule 15, paragraphs 9 and 10 respectively).

PART I
INTRODUCTION

Citation and Commencement

1. These Regulations may be cited as the Electricity at Work Regulations 1989 and shall come into force on 1st April 1990.

Interpretation

2. (1) In these Regulations, unless the context otherwise requires—

"approved" means approved in writing for the time being by the Health & Safety Executive for the purposes of these Regulations in conforming with a specification approved in writing by the Health & Safety Executive for the purposes of these Regulations;

"circuit conductor" means any conductor in a system which is intended in normal circumstances to carry electric current or through conditions of use is capable of having such current imposed on it, and includes a combined neutral and earth conductor but does not include a conductor provided solely to perform a protective function by connection to earth or other protective point;

"conductor" means a conductor of electrical energy;

"danger" means risk of injury;

"electrical equipment" includes anything used, intended to be used or installed for use, to generate, provide, transmit, transform, rectify, convert, conduct, distribute, control, store, measure or use electrical energy;

"hazard" means any foreseeable cause or circumstance which may result in injury;

"injury" means death or personal injury from electric shock, burns, scalds, physical disablement or asphyxia, or from fire or explosion initiated by electrical energy, where any such death or injury is associated with the generation, provision, transmission, transformation, rectification, conversion, distribution, control, storage, measurement or use of electrical energy;

"safety integrator" means—

(a) any owner of;

(b) any other person in whom;

(c) there has accrued (where ground or premises are bankrupt or in receivership or liquidation) any interest in any place before ground in the sense "system" means an electrical system in which all the electrical equipment is, or may be, electrically connected to a common source of electrical energy, and includes such source and such equipment.

(2) Unless the context otherwise requires, any reference in these Regulations to an numbered regulation or Schedule is a reference to the regulation or Schedule in these Regulations so numbered and a reference in the paragraph is numbered to the regulation or Schedule in which the reference appears.

Persons on whom duties are imposed by these Regulations

3. (1) Except where otherwise expressly provided in these Regulations, it shall be the duty of every employer and self-employed person to comply with the provisions of these Regulations in so far as they relate to matters which are within his control; and

(2) the manager of a mine or quarry (within the meaning of section 180 of the Mines and Quarries Act 1954) to ensure that all requirements or prohibitions imposed by or under these Regulations are complied with in so far as they relate to the mine or quarry or part of a quarry of which he is the manager and in matters which are within his control.

(3) [Revoked, S.I. 1995/3163].

(4) At the end of the duty of every employee which, in so far as is necessary to enable any duty placed on that employer by the provisions of these Regulations to be complied with, and

(5) to comply with the provisions of these Regulations so far as they relate to matters which are within his control.

Restriction of equipment in certain zones below ground

10. (1) In every colliery lamp mine containing any zones below ground in which flammable mixtures of not less than such proportion of inflammable gas as is sufficient to indicate its danger, there shall be prepared a suitable zone identifying such zones.

(2) Electrical equipment shall not be employed in such zones unless it is—

(a) equipment of a kind approved for that purpose;

(b) equipment approved pursuant to regulation 20(1);

(c) equipment in the use of which was lawful in such zones immediately before the coming into force of these Regulations;

(d) equipment which has received a certificate of conformity or a certificate of inspection in accordance with Council Directive 82/130/EEC on the approximation of the laws of the Member States concerning electrical equipment for use in potentially explosive atmospheres (fifteenth individual Directive) and is designed, or adapted to ecclesiastical progress by Commission Directive 88/35/EEC(a); or

(e) equipment which is not capable of producing incendive electrical sparks or electrical arc, or (f) electrically powered equipment not permanently installed in the zone but which can be operated intermittently for monitoring, testing, recording and measurement, and used where the concentration of firedamp is below the volume or lower explosive limit in accordance with suitable zones drawn up by the manager to ensure that danger will not thereby arise, which rules shall in particular include provision for personal supervision of this equipment by a competent person and testing the firedamp where it is in use and, subject to paragraph (3), shall be permitted light in any mine such as is specified in paragraph (1).

(as 1974 c.37, s. 15; 1988 c.1, s. 28).

Cutting off electricity or making safe where firedamp is found either below ground or at the surface

11. (1) Where any person at a mine knows firedamp in a concentration exceeding 1.25% by volume in the ground body of the air either below ground at that mine or at any place on the surface thereof where any underground exchange/drainage system is installed, firedamp is ventilated or in that mine recovered, he shall withdraw all persons from the place where the concentration exceeds 1.25% by volume.

(2) Where any person at a mine detects firedamp in a concentration exceeding 1.25% by volume in the ground body of the air either below ground at that mine or at any place on the surface thereof where any underground exchange/drainage system is installed, firedamp is ventilated or in that mine recovered, he shall withdraw all persons from the place where the concentration exceeds 1.25% by volume.

(3) Subject to paragraph (4), no person shall re-enter the place where the said concentration has been detected or—

(a) in the case of the roadway in any electrical equipment situated at the place where the said concentration has been detected, until the concentration of firedamp is 1.25% by volume or less in accordance with suitable rules drawn up by the manager to ensure that danger will not thereby arise, which rules shall in particular include provision for personal supervision of this equipment by a competent person and testing the firedamp where it is in use and, subject to paragraph (3), shall be permitted light in any mine such as is specified in paragraph (1).

(4) Paragraph (3) does not prevent the withdrawal of any person who is not employed in connection with the operation of any electrical equipment in the place or apparatus for the purpose of withdrawing the equipment.

(5) Nothing in paragraph (3) shall prevent the taking of any action before ground at any safety lamp mine of any person employed in connection with the operation of any electrical equipment in the place or apparatus for the purpose of withdrawing the equipment.

(6) In this regulation "competent person" means a person who has such practical knowledge and experience of the detection of firedamp by means of a flame safety lamp as will enable him properly to perform the duties required of him by this regulation.

Approval of certain equipment for use in safety-lamp mines

12. (1) Subject to paragraph (2), no electric safety lamp, gas detector, microphone, or signalling equipment or other equipment incorporated therewith as required in the mine, safety of persons, shall be taken or used before ground at any safety lamp mine unless it is equipment which has been approved pursuant to regulation 20(1) or (a) the case of electric safety lamps) is of a type for the time being approved pursuant to section 84(2) of the Mines and Quarries Act 1954.

(2) Nothing in paragraph (1) shall prevent the taking or use before ground at any safety lamp mine of any electric safety lamp, gas detector, microphone or signalling equipment or other equipment incorporated therewith which was before the coming into force of these Regulations, approved pursuant to regulation 20 (or 81 and 82) of the Coal and Other Mines (Miscellaneous Provisions) Regulations 1956(a).

(as S.I. 1956/1756. for relevant amending instruction see S.I. 1974/1885 and 1975/1268).

Means of cutting off electricity to circuits below ground

13. Efficient means shall be provided at the surface of the mine, or the part thereof which is specified in the regulation, for cutting off the supply of electrical energy to each circuit which enters the mine below ground.

Oil-filled equipment

14. Electrical equipment using oil as a means of cooling, insulation or arc suppression shall not be introduced below ground at a mine.

Records and information

15. (1) In respect of each diagram of all electrical distribution systems introduced or operated at the mine (other than those operating at a voltage not exceeding 150 volts) there shall, so far as is reasonably practicable, be compiled and kept at the office at the mine, and

(2) there shall be prepared and kept at any circuit protective device—

(a) a record of authorisation of the electronic diagram prepared pursuant to paragraph (1) or any alteration to person danger and which there is less than such of the electrical system which are not safety, switchgear operating at a voltage exceeding 250 volts shall be displayed in such place where such switchgear is installed (3) Plans on a suitable scale shall be kept in the office at the mine showing, so far as is reasonably practicable, the position of all underground electrical equipment and the mine supplied at a voltage in excess of 150 volts.

Electric shock notices

16. Where, at any place at a mine, electric are working or taking place or electrical energy is being generated, transformed or used at a nominal voltage in excess of 250 volts, there shall be displayed in a suitable place in a form which can be easily read and understood and containing information on the appropriate first aid treatment for persons affected by electric shock and details of the arrangements for summoning it.

Introduction of battery-powered locomotives and vehicles into safety-lamp mines

17. No locomotive or vehicle which uses an electrical storage battery (other than a battery of which the electrolyte is not capable of being made to give off inflammable gas in a dangerous quantity) shall be introduced into or used in any safety-lamp mine unless it is of a type or of a kind approved for the purpose of this regulation.

Storage, charging and transfer of electrical storage batteries

18. In any room in which electrical storage batteries are used below ground, those batteries shall, so far as is reasonably practicable, be used, stored, charged and transferred in a safe manner.

Disapplication of section 157 of the Mines and Quarries Act 1954

19. Section 157 of the Mines and Quarries Act 1954(a) (which makes certain orders or local prescriptions and provisions made by certain persons) shall not apply in relation to any local prescription or provision made by any person in relation to any matter which is required by these Regulations.

(as 1954 c.70, section 157 was amended by 1974/2013).

PART II
GENERAL

Systems, work activities and protective equipment

4. (1) All systems shall be of such construction as to prevent, so far as is reasonably practicable, danger.

(2) It may be necessary to prevent danger all systems shall be maintained so as to prevent, so far as is reasonably practicable, such danger.

(3) Every work activity, including operation, use and maintenance of a system and work near a system, shall be carried out in such a manner as not to give rise, so far as is reasonably practicable, to danger.

(4) Any equipment provided under these Regulations for the purpose of preventing persons at work on or near electrical equipment shall be suitable for the use for which it is provided, be maintained in a condition suitable for that use, and be properly used.

Strength and capability of electrical equipment

5. No electrical equipment shall be put into use where its strength and capability may be exceeded in such a way as may give rise to danger.

Adverse or hazardous environments

6. Electrical equipment which may reasonably foreseeably be exposed to—

(a) the effects of the weather, natural hazards, temperature or pressure;

(b) the effects of wear, decay or corrosive conditions; or

(c) any flammable or explosive substance, including dusts, vapours or gases, shall be of such construction as or be protected, as or placed, so as to be reasonably practicable, danger arising from such exposure.

Insulation, protection and placing of conductors

7. All conductors in a system which may give rise to danger shall either—

(a) be suitably insulated with insulating material and as necessary protected so as to prevent, so far as is reasonably practicable, danger; or

(b) have such precautions taken in respect of them (including, where appropriate, their being suitably placed) as will prevent, so far as is reasonably practicable, danger.

Earthing or other suitable precautions

8. Precautions shall be taken, either by earthing or by other suitable means, to prevent danger arising when any conductor (other than a circuit conductor) which may be reasonably foreseeably become charged as a result of either the use of a system, or a fault in a system, becomes so charged; and for the purposes of ensuring compliance with this regulation, a conductor shall be regarded as earthed when it is connected to the general mass of earth by conductors of sufficient strength and current-carrying capability to discharge electrical energy to earth.

Integrity of referenced conductors

9. Where a circuit conductor is connected to earth or to any other protective point, nothing which might reasonably be expected to give rise to danger by breaking the electrical continuity or substantially increasing its impedance shall be placed in that conductor unless suitable precautions are taken to prevent that danger.

Connections

10. Where necessary to prevent danger, every joint and connection in a system shall be mechanically and electrically suitable for use.

Means for protecting from excess of current

11. Efficient means, suitably located, shall be provided for protecting from excess of current every part of a system as may be necessary to prevent danger.

Means for cutting off the supply and for isolation

12. (1) Subject to paragraph (3), where necessary to prevent danger, suitable means (including, where appropriate, methods of identifying circuits) shall be available for—

(a) cutting off the supply of electrical energy to any electrical equipment; and

(b) the isolation of any electrical equipment.

(2) In paragraph (1), "isolation" means the disconnection and separation of the electrical equipment from every source of electrical energy in such a way that the disconnected equipment is unlikely to become charged.

(3) Paragraph (1) shall not apply to electrical equipment which is itself a source of electrical energy but, in such cases as is necessary, precautions shall be taken to prevent, so far as is reasonably practicable, danger.

Precautions for work on equipment made dead

13. Adequate precautions shall be taken to prevent electrical equipment, which has been made dead in order to prevent danger while work is carried out on or near that equipment, from becoming electrically charged during that work if danger may thereby arise.

Work on or near live conductors

14. No person shall be engaged in any work activity on or so near any live conductor (other than one suitably screened with insulating material) as to expose them to danger unless—

(a) it is unreasonable in all the circumstances for it to be dead; and

(b) it is reasonable in all the circumstances for him to be at work on or near it while it is live; and

(c) suitable precautions (including where necessary the provision of suitable protective equipment) are taken to prevent injury.

Working space, access and lighting

15. For the purposes of enabling injury to be prevented, adequate working space, adequate means of access, and adequate lighting shall be provided at all electrical equipment on which or near which work is being done in circumstances which may give rise to danger.

Persons to be competent to prevent danger and injury

16. No person shall be engaged in any work activity where technical knowledge or experience is necessary to prevent danger or, where appropriate, injury, unless he possesses such knowledge or experience, or is under such degree of supervision as may be appropriate having regard to the nature of the work.

PART III
REGULATIONS APPLYING TO MINES ONLY

Provisions applying to mines only

17. (1) The provisions of regulations 18 to 20 and Schedule 1 shall apply to mines only, and the provisions of that Schedule shall have effect in particular in relation to the use before ground in a coal mine of any film lighting circuit as defined by paragraph 1 of that Schedule (as to in those provisions in a coal mine).

(2) Expressions to which meanings are assigned by the Mines and Quarries Act 1954 shall, unless the contrary intention appears, have the same meanings in regulations 18 to 21 and Schedule 1.

Introduction of electrical equipment

18. Before electrical equipment (other than equipment approved for the purposes of regulation 20(1)) is first introduced into any underground part of a safety lamp mine in which the Coal and Other Mines (Safety-lamps and Flame Regulations 1956(a)) apply, the manager shall submit to an inspector a copy of the combining plan required to be kept for the part by regulation 9 of those Regulations, on which the intended locations of that equipment shall be shown, together with a copy of any schedule(s) diagram relating to that part prepared for the purposes of regulation 20(2).

(as S.I. 1956/1760, to which there are amendments not relevant to these Regulations).

SCHEDULE 1 Regulation 17

PROVISIONS APPLYING TO MINES ONLY AND RELATING EXPECT IN PARTICULAR OR RELATION TO USE, FOR BELOW GROUND IN COAL MINES OF FILM LIGHTING CIRCUITS

1. In this Schedule, "film lighting circuit" means any electric circuit or a coal mine, not being permanently installed therein, and used occasionally to supply mains electricity to electric lights for the purpose of providing illumination for photography or video recording, and includes the coil lights and any other electrical apparatus in that circuit.

2. A film lighting circuit shall not be used unless—

(a) not less than 7 days prior to such use, details of where and when it is to be used have been notified to the Health and Safety Executive; and

(b) neither the Executive nor the manager has, within that period, prohibited such use.

3. The manager shall make, and ensure the carrying out of, arrangements to prevent the accumulation of dust on any surface of any tunnels or apparatus in sufficient quantities to give rise to spontaneous ignition.

4. The manager shall make suitable rules with respect to the use of film lighting circuits, for the purpose of ensuring, so far as is reasonably practicable, that such use will not give rise to danger, and those rules shall in particular require—

(a) conditions (using for firedamp when a film lighting circuit is in use; and

(b) the operation of any such circuit to be personally supervised by a competent person.

5. No person shall for any time a circuit of them is in place in which, or at the vicinity of which, any part of a film lighting circuit is installed.

SCHEDULE 2 Regulation 33

REVOCATIONS AND MODIFICATIONS

PART I
REVOCATIONS

Column 1	Column 2	Column 3
Regulations and orders revoked	Reference	Extent of revocation
The Electricity (Factories Act) Special Regulations 1908	S.R. & O. 1908/312	The whole Regulations
The Manufacture of Cinematograph Film Regulations 1926	S.R. & O. 1926/82	Regulation 13
The Cinematograph Film Stripping Regulations 1939	S.R. & O. 1939/811	Regulation 14
The Electricity (Factories Act) Special Regulations 1944	S.R. & O. 1944/739	The whole Regulations
The Coal and Other Mines (Electricity) Regulations 1956	S.I. 1956/1768	The whole Regulations
The Coal and Other Mines (Safety-lamps and Flame) Regulations 1956	S.I. 1956/1760	Regulation 6(2)
The Coal and Other Mines (Miscellaneous Provisions) Regulations 1956	S.I. 1956/1756	Regulations 6, 18, 19(1) and 19
The Coal and Other Mines (Electricity) Order 1956	S.I. 1956/1769	The whole Order
The Mines (Precautions against Inrushes) Order 1958	S.I. 1958/377	The whole Order
The Coal and Other Mines (Electricity) Order 1959	S.I. 1959/1119	The whole Order
The Quarries (Electricity) Order 1959	S.I. 1959/1331	The whole Order
The Dinnington Extension Mine (Diesel Driven and Storage Battery Vehicles) Special Regulations 1960	S.I. 1960/1838	The whole Regulations
The Mine (Precautions against Inrushes) Regulations 1960	S.I. 1960/2121	The whole Regulations
The Mine (Precautions against Inrushes) (Amendment) Regulations 1962	S.I. 1962/1711	The whole Regulations
The Coal and Other Mines (Electricity) (Amendment) Regulations 1962	S.I. 1962/1757	The whole Regulations
The Quarries (Electricity) (Amendment) Regulations 1962	S.I. 1962/1758	The whole Regulations
The Coal and Other Mines (Diesel Driven and Storage Battery Vehicles) Special Regulations 1958	S.I. 1958/1756	The whole Regulations
The Glyncorrwg Extension Mine (Diesel Driven and Storage Battery Locomotives) Special Regulations 1959	S.I. 1959/1177	The whole Regulations
The Glyncorrwg Extension Mine (Diesel Driven and Storage Battery Locomotives) Special Regulations 1962	S.I. 1962/1	The whole Regulations
The Glyn Neath Mine (Diesel Driven and Storage Battery Locomotives) Special Regulations 1959	S.I. 1959/1838	The whole Regulations
The Wern Tarw Mine (Diesel Driven and Storage Battery Locomotives) Special Regulations 1960	S.I. 1960/1839	The whole Regulations
The Coal and Other Mines (Diesel Driven and Storage Battery Locomotives) Special Regulations 1959	S.I. 1959/1840	The whole Regulations
The Coal and Other Mines (Safety-lamps and Flame) Regulations 1956	S.I. 1956/1760	Regulations 6(1), 18, 19(1) and 19
The Coal and Other Mines (Miscellaneous Provisions) Regulations 1956	S.I. 1956/1756	Regulations 6, 18, 19(1) and 19
The Coal and Other Mines (Electricity) Regulations 1956	S.I. 1956/1768	The whole Regulations
The Coal and Other Mines (Electricity) Order 1956	S.I. 1956/1769	The whole Order
The Mines (Precautions against Inrushes) Order 1958	S.I. 1958/377	The whole Order
The Coal and Other Mines (Electricity) Order 1959	S.I. 1959/1119	The whole Order
The Quarries (Electricity) Order 1959	S.I. 1959/1331	The whole Order
The Dinnington Extension Mine (Diesel Driven and Storage Battery Locomotives) Special Regulations 1959	S.I. 1959/1838	The whole Regulations
The Glyncorrwg Extension Mine (Diesel Driven and Storage Battery Locomotives) Special Regulations 1959	S.I. 1959/1177	The whole Regulations
The Glyncorrwg Extension Mine (Diesel Driven and Storage Battery Locomotives) Special Regulations 1962	S.I. 1962/1	The whole Regulations
The Glyn Neath Mine (Diesel Driven and Storage Battery Locomotives) Special Regulations 1959	S.I. 1959/1838	The whole Regulations
The Wern Tarw Mine (Diesel Driven and Storage Battery Locomotives) Special Regulations 1960	S.I. 1960/1839	The whole Regulations
The Coal and Other Mines (Diesel Driven and Storage Battery Locomotives) Special Regulations 1959	S.I. 1959/1840	The whole Regulations
The Quarries (Miscellaneous) Regulations 1967	S.I. 1967/1720	In regulation 3(2), the reference to the Miscellaneous Health Regulations 1959, and in the Schedule the entries relating to those Regulations.
The Mines (Precautions against Inrushes) Regulations 1967	S.I. 1967/1130	The whole Regulations

PART II
MODIFICATIONS

1. The Mines and Quarries Act 1954 shall be modified as follows—

(a) in section 124(2) (power to make regulations) for the words "and" at the end of paragraph (ee) there shall be substituted the word "or", and after paragraph (ff) there shall be inserted the following paragraph—

"(gg) for requiring the manager of a mine, or the owner, agent or other person in charge of any quarry, to provide such information as may be specified in the regulations to the Health and Safety Executive for the purposes of the Coal and Other Mines (Electricity) Regulations 1956".

2. The Shotfiring and Explosives Regulations 1966(a) shall be modified as follows—

(a) in regulation 2(1) (interpretation) the definition of "approved" means approved for the purpose of regulation 19 (use in safety-lamp mines) of the Electricity at Work Regulations 1989; and

(b) in regulation 19 (use of explosives in safety-lamp mines) for the words "a safety-lamp mine" there shall be substituted the words "a safety-lamp mine approved for the purpose of this regulation".

3. Regulation 4 of the Coal and Other Mines (Fire and Rescue) Regulations 1956(a) (which relates to the provision of fire and rescue stations in relation to electrical apparatus) shall be modified by substituting the words "which is an electrical apparatus that is designed to be operated while switched on" for the words "which is not portable apparatus" for the purposes of the Coal and Other Mines (Electricity) Regulations 1956".

4. The Shotfiring and Stone-cutting Regulations 1960(a) shall be modified as follows—

(a) in regulation 2(1) (interpretation) for the definition of "approved" there shall be substituted the definition "approved" means approved for the purpose of regulation 19 (use in safety-lamp mines) of the Electricity at Work Regulations 1989; and

(b) in regulation 19 (use of explosives in safety-lamp mines) for the words "a safety-lamp mine" there shall be substituted the words "a safety-lamp mine approved for the purpose of this regulation".

5. In regulation 2(1) of the Mines Management Act 1971 (certain terms in regulations from statutory responsibilities), that may be prescribed in relation to "accountable mines" shall be modified by the substitution for paragraph (a) of—

"(a) in relation to the Electricity at Work Regulations 1989, and any such other responsibilities as may be prescribed".

(as S.I. 1956/1760, to which there are amendments not relevant to these Regulations; S.I. 1960/2121, the relevant amending instrument is S.I. 1989/1846).

EXPLANATORY NOTE
(This note is not a part of the Regulations)

These Regulations impose health and safety requirements with respect to electricity at work.

The Regulations impose duties upon employers, self-employed persons, persons who control to an extent certain matters and employees in particular. The duties imposed by the Regulations do not, however, extend to the matters to which a duty giving rise to their imposition in relation to the same matter is imposed by or under the provisions of the Mines (Regulations). Those and the duties created in any person in relation to any aircraft or hovercraft which is carrying out its operations (regulation 3(2)(a)).

(a) impose requirements with regard to the construction and maintenance of electrical systems (regulation 4(1) and (2));

(b) impose requirements with regard to the carrying out of work activities including the operation, use and maintenance of electrical systems and work near electrical systems (regulation 4(3));

(c) impose requirements with regard to the provision of protective equipment (regulation 4(4));

(d) impose requirements with regard to the strength and capability of electrical equipment (regulation 5);

(e) impose requirements with regard to the protection of electrical equipment which may reasonably foreseeably be exposed to adverse or hazardous environments (regulation 6);

(f) impose requirements with regard to the insulation and protection of conductors (regulation 7);

(g) impose requirements with regard to the precautions to be taken in relation to conductors (regulation 8);

(h) impose requirements with regard to the integrity of referenced conductors (regulation 9);

(i) impose requirements with regard to the connection of conductors (regulation 10);

(j) impose requirements with regard to the protection from excess currents of electrical equipment (regulation 11);

(k) impose requirements with regard to the provision of means for cutting off the supply to and isolation of electrical equipment (regulation 12);

(l) impose requirements with regard to the precautions to be taken when electrical equipment made dead is to be worked on (regulation 13);

(m) impose requirements with regard to the prevention of danger or injury (regulation 14);

(n) impose requirements with regard to the use of live working (which has been ground in coal mines (regulation 15(1) and Schedule 1);

(o) impose requirements with regard to the provision of adequate working space, adequate lighting and adequate means of access at specified electrical equipment (regulation 15);

(p) impose restrictions with regard to the competence of persons engaged in work activities where technical knowledge or experience is necessary to prevent danger or injury (regulation 16);

(q) impose requirements with regard to the provision of mines (regulation 17(1) and Schedule 1);

(r) impose requirements with regard to the introduction of specified classes of equipment into underground parts of specified safety lamp mines (regulation 18);

(s) impose requirements with regard to the preparation of plans identifying mines underground in safety lamp mines and the circumstances in which a mine is a gaseous or otherwise as indicated danger (regulation 19(1) and specify the circumstances in which electrical equipment may be energised in these mines and which may be energised in such mines in the "permitted lights" as defined by section 80(1) of the Mines and Quarries Act 1954 (regulation 19(2)). Among the electrical equipment which may be energised in such mines is that which has been certified in accordance with Council Directive 82/130/EEC (OJ No L 59, 2.3.82, p.1) (which relates to the approximation of the laws of the Member States concerning electrical equipment for use in potentially explosive atmospheres, in mines susceptible to firedamp), as adapted to technical progress by Commission Directive 88/35/EEC (OJ No. L 66, 10.3.88, p.26);

(t) impose requirements with regard to cutting off the supply of electricity in electrical equipment or making it safe before firedamp is found in concentrations exceeding 1.25% by volume in the general body of the air either below ground or, at a specified place on the surface of, mines (regulation 20);

(u) impose requirements with regard to the taking or use before ground at safety lamp mines of electric safety lamps, gas detectors, microphones and signalling equipment and other equipment incorporated therewith as required for the safety of persons (regulation 21);

(v) impose requirements with regard to the provision and operation of switchgear in respect of electrical equipment which may give rise to danger and which is installed below ground at a mine, for which a supplied from a power source at the surface (regulation 22);

(w) impose a prohibition on the introduction below ground at mines of electrical equipment using oil as a means of cooling, insulation or arc suppression (regulation 23);

(x) impose requirements with regard to the preparation, keeping and display of schematic diagrams and plans of electrical distribution systems and electrical equipment installed underground at mines (regulation 24);

(y) [no consecutive] revoke, in any place at a mine, electric are working or taking place or electrical energy is being generated, transformed or used at a nominal voltage in excess of 250 volts, as to 250 volts in a proper requirements with regard to the display of notices giving information as the appropriate first aid treatment for electric shock and details of who emergency action should be taken in the event of electric shock (regulation 25);

(z) impose requirements with regard to the introduction before ground at safety lamp mines of locomotives and vehicles which are electrical storage batteries, either partly or wholly, as a certain mines (regulation 26).

The Regulations disapply section 157 of the Mines and Quarries Act 1954 (power to make local prescriptions) in relation to any local prescriptions or provisions arising out of regulations 10 or 19 and Schedule 1 (regulation 28) and provide a defence in the case of a contravention of certain of the Regulations (regulation 29). The Regulations provide for the issue of certificates of exemption by the Health and Safety Executive (regulation 30). The Regulations also provide that they shall apply outside Great Britain in the circumstances specified in regulation 31.

The Regulations revoke the instruments specified in Part I of Schedule 2 (regulation 33(2)) and modify the enactments and instruments specified in Part II of Schedule 2 (regulation 33(2)) and provide that any reference in the Mines and Quarries Act 1954, the Mines and Quarries (Tips) Act 1969 or the Mines Management Act 1971, or any of those Acts, to regulations made under any of those Acts, or to health and safety regulations, shall be treated as including a reference to these Regulations (regulation 34(3)).

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B.2 Electrical Shock & First Aid Procedures

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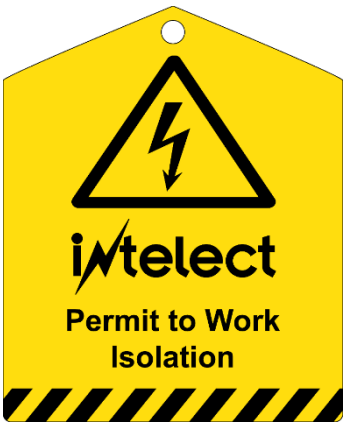
B.3 Typical Electrical Safety Notices



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Appendix C – Template Documents

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C.1 Permit to Work

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C.2 Limitation of Access

Limitations of Access Permit

Company name		Project title	
Location		Contract no.	

Part 1 – Permit reference and work team		
Reference no.		
Address		
Contractor		
Team completing work	Name	Signature
Competent person supervising the work		
Other members of the team		
Location		
Location entrance(s) must be signed with the notice of access control.		

Part 2 – Attachments						
Risk assessment and method statement		Yes		No	Approved risk assessment and method statement no.	
Checklists	Yes		*(Permit will not be approved if checklists are not attached)*			

Part 3 – Authorisation							
Any special precautions required?							
The persons designated above (and only those persons) are hereby granted permission to enter and work in the controlled location in accordance with the approved risk assessment and method statement.							
Permit to commence	Date			Time			
Permit to expire	Date			Time			
This permit cannot cover more than one shift and can only be issued for the maximum of a 12-hour period.							
Name		Position		Signature		Date	

Part 4 – Acceptance of permit							
I hereby confirm that all persons working within the scope of this permit will be adequately briefed on its content and will abide by the conditions of the permit.							
Name		Position		Signature		Date	

Part 5 – Completion of work							
The work for which this permit was issued is complete and all persons, materials and equipment under my supervision have been withdrawn.							
Name		Position		Signature		Date	

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Limitations of Access Permit

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TF30" THINK FOR 30 SECONDS

Part 6 – Works complete

I certify that I personally examined the work area detailed above and that the work specified has been satisfactorily completed.

Comments

Name		Position		Signature		Date	

The permit is now cancelled – a new permit will be required if work is to continue.

This checklist must be completed by the trade contractor's competent, nominated person and reviewed by the appointed person before a permit can be issued. A copy of the checklist must also be attached to the permit.

Note: only questions 3, 4, 6, 7, 8, 11, 14 and 16 can be answered N/A.

Entry / Access Permit - Checklist

	Yes	No	N/A	Comments
1. Is there adequate access and egress?				
2. Has a risk assessment and method statement been approved?				
3. Is monitoring equipment required (and if so has it been calibrated)?				
4. Have all harmful substances been removed from the space?				
5. Are all those entering the area trained and competent?				
6. Is a rescue plan in place and approved?				
7. Are rescue equipment and personnel readily available for the duration of the work?				
8. Has the rescue team been trained in its use?				
9. Has a system of communication been established and are emergency contact numbers available?				
10. Have all services to the area been isolated or disconnected?				
11. Is the correct personal protective equipment (PPE) readily available and fit for use?				
12. Are all the necessary signs and barriers available?				
13. Is intrinsically safe task lighting available?				
14. Is there a risk of spark or fire? (*If 'Yes' a hot-work permit is required.*)				
15. Has a gas-free certificate been issued?				
16. If working in riser shafts, lift shafts, roof areas, etc.:				
a) is adequate fall prevention in place?				
b) have precautions been taken to avoid falling materials and tools?				
c) has the area been checked for potential fragile surfaces?				

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C.3 Permit to Energise

Permit to Energise (L.V)

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Email: mail@intelectuk.com Website: www.intelectuk.com

TF30" THINK FOR 30 SECONDS

Part 1 (Request) – To be completed by the Person requesting to energise the installation.

Requested by _____

Employed by _____

I hereby declare that the LV Electrical Installation / Equipment listed below is complete and in a safe condition to be energised. For all electrical equipment tests have been completed in accordance with the manufacture' installation and dead testing procedures. For all Electrical Installations all dead tests have been carried out in accordance with BS7671.

Location: _____

Installation / Equipment: _____

No.	Check / Type of Test	Y / N/ NA	Date / Time
1	Schematics are available for the Control Panel / Installation		
2	Amtech or similar cable calculations and schedules are available		
3	Breaker settings have been set as per the calculations		
4	Schedule of test results available for all dead testing carried out on completed installation		
5	Instructions for the Treatment of Persons Suffering from Electric Shock' is displayed in all Sub-Stations and Switch rooms being energised.		
6	Check and confirm Control Panel has been flash tested and records are available		
7	Check and confirm all Control Panel interlinking cabling has been completed.		
8	Check and confirm all Control Panel bus-bar and cable way covers are in place.		
9	Check and confirm earth mat is installed and tested in accordance with the Code of practice for protective earthing of electrical installations BS7430.		
10	Check all warning notices are in place		
11	Check suitable fire extinguishers is in place		
12	Check all links / inhibits are removed		

To be completed by the Person requesting to energise the Installation.

I confirm that all the above checks have been completed

Signed: _____ Print Name: _____

Issue Date: _____Time: _____ Contact Tel No: _____

Part 2. (Agreement) – To be completed by Intelect's or Sub-Contractor's Authorised Person

I hereby declare that I have checked the information provided in Part 1 and that the necessary agreements and or safety documents from the Person in charge of the Electrical Danger are in place to allow the new / modified installation to be energised. Or that I am the person in charge of the Electrical Danger in the case of a new supply from the Distribution Network Operator.

I will now limit access into associated Sub-Stations and Switch rooms using the Low Voltage Electrical Safety Rules.

No.	Check / Type of Test	Y / N / NA	Date / Time
1	Check and confirm any mechanical isolations are in place for untested control circuits.		
2	Safety locks and caution notices fitted to all sections that are not electrically completed or required to be energised.		
3	Danger notices fitted to all sections that are to be energised.		

Signed: _____ Print Name: _____

Date: _____ Time: _____ Contact Tel No: _____

Part 3. (Agreement) – To be completed by the Senior Authorised Person (Site Manager / Site Responsible Person)

I hereby declare that the induction has been up-dated and the workforce on site have been briefed in relation to the energising of a new Electrical Installation and associated dangers and control measures.

Signed: _____ Print Name: _____

Date: _____ Contact Tel No: _____

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C.4 Sanction for Live Testing

Sanction for Live Testing (LV)

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TF30" THINK FOR 30 SECONDS

Part 1 (Issue) – To be completed by the Intelect's Authorised Person

Issue to_____
Employed by _____
Name of Accompanying Safety Person: _____

Only equipment covered by this Sanction for Live Testing may be worked upon

Location: _____
Installation / Equipment: _____

Mandatory Precaution during Live Testing:

(i) Live Testing shall take place within a prescribed area. (Barriers erected and access restricted to Electrical Equipment and Installation under test.)

(ii) 'Live Testing in Progress' signage must be erected around the prescribed area.

(iii) A second person with the ability to restrict access into the prescribed area, able to recognise and avoid danger, aware of how to isolate the equipment and trained to render prompt assistance in an emergency, shall be within sight and sound of the person carrying out the test.

Additional Precautions required:

The following testing is to be carried out:

RAMS Ref: _____

Intelect's or Sub-Contractor's Authorised Person

I hereby authorise the above-named person (who I have ensured holds a Skilled Person Certificate) to work on the Low Voltage equipment specified in this permit. It is reasonable in all circumstances for the recipient to be at or near equipment whilst it is live and suitable precautions have been specified to prevent danger.

Signed: _____ Print Name: _____

Issue Date: _____Time _____ Contact Tel No: _____

Expiry Date: _____ Time _____ Duration of Sanction (tick box) ☐1 day ☐7 day ☐ 14 day

Part 2. (Receipt) – To be completed by the Recipient (Skilled Person)

I hereby declare that the equipment is under my temporary control and I have responsibility for carrying out the work detailed in Part 1. I am responsible for taking the required safety precautions to avoid danger during the testing

Signed: _____ Print Name: _____

Issue Date: _____Time _____ Contact Tel No: _____

Part 3. (Clearance) – To be completed by the Recipient (Skilled Person)

I hereby declare that the works detailed in Part 1 are now suspended / complete (Delete as appropriate) and that all persons and tools have been withdrawn from the place of work and I have advised all persons associated with the works that it is no longer safe to work in the area

Signed: _____ Print Name: _____

Issue Date: _____Time_____ Contact Tel No: _____

Part 4. (Cancellation) – To be completed by Intelect's or Sub-Contractor's Authorised Person

This permit is hereby cancelled. I hereby declare that I have checked the area has been left in a safe condition.

Signed: _____ Print Name: _____

Issue Date: _____Time_____ Contact Tel No: _____

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C.5 Site Safety Agreement (Transfer of Control)

Electrical Site Safety Agreement (Transfer of Control)

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Email: mail@intelectuk.com Website: www.intelectuk.com

TF30" THINK FOR 30 SECONDS

Part 1 (Issue)

To _____ being an authorised person appointed to undertake work on electrical systems.

Employed By_____ Contact No_____

Sites: _____

You may carry out work under your own control on the following electrical installations:

NO OTHER EQUIPMENT MAY BE WORKED UPON

Low voltage Electrical Safety Document Reference: _____

Work to be carried out:
Equipment is Isolated and point of isolation notices are posted at:
Danger notices posted at:
Part 1 (issue) – To be completed by Intelect's or Sub-Contractor's authorised person Signed: _____ Print Name: _____ (Being an authorised person) Company: _____ Time: _____ Date: _____
Part 2 (Receipt) I hereby declare that I am an authorised person and that I accept personnel responsibility for taking the necessary safety precautions to avoid danger. I am in receipt of Intelect's low voltage electrical safety rules and I am in receipt of any safety keys associated with the isolation of equipment. Signed: _____ Print Name: _____ (Being an authorised person) Company: _____ Time: _____ Date: _____
Part 3 (Clearance) Having completed / suspended the work I wish to return control of the danger of the equipment. The equipment listed above is / is not isolated. Where the equipment is live, it Is safe and in good working order. Signed: _____ Print Name: _____ (Being an authorised person) Company: _____ Time: _____ Date: _____
Part 4 (Cancellation) I accept control of the danger in relation to the equipment listed above, together with any keys associated with the means of isolating and earthing. This document is hereby cancelled. Signed: _____ Print Name: _____ (Being an authorised person) Company: _____ Time: _____ Date: _____

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C.6 Acceptance of Sub-Contractors LV Electrical Safety Rules

Certificate of Acceptance
Sub-Contractor's Low Voltage Electrical Safety Rules

Middlesbrough TEL: (01642) 878784
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Email: mail@intelectuk.com Website: www.intelectuk.com

TF30" THINK FOR 30 SECONDS

Part 1 (Issue) – To be completed by the Intelect's Electrical Duty Holder / QHSE Manager

In accordance with the Intelect's low voltage electrical safety rules, I hereby declare that I have assessed the adequacy of the Sub-Contractors Low Voltage electrical safety rules and deem them to be suitable and sufficient for use on Intelect's site.

Name of Company_____

Low Voltage Electrical Safety Rules Assessed_____

Limitations on Use (if applicable)

Locations Applicable to this appointment:
Project Name_____

Project No_____

Restrictions:

Intelect's Senior Authorised Person
Signed: _____ Print Name: _____

Issue Date: _____ Contact Tel No: _____

Part 2 (Receipt) – To be completed by the Recipient Authorised Person

I fully Understand the duties and responsibilities required of me to operate a safe system of work relating to Electrical Safety and declare that I am in possession of the current issue of the Sub-Contractors Low Voltage Electrical Safety Rules.

Signed: _____ Print Name: _____

Date: _____ Contact Tel No: _____

Part 3 (Acceptance) – To be completed by the Senior Authorised Person

Signed: _____ Print Name: _____

Issue Date: _____ Contact Tel No: _____

Note: This certificate of appointment expires on Date_____
(Maximum 12 months and must be renewed)

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