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UNIVERSITY ABERDEEN**

Safe Electrical Isolation



Approved By	Clinton Grant, Head of Occupational Health and Environmental Safety		
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1		
2		

Safe Electrical Isolation

1. Introduction:

Electricity is a hazard in numerous environments that unfortunately results in harm and often fatalities when not managed correctly. The Electricity at Work Regulations 1989 requires that no person shall be engaged in any work activity on or so near any live conductors (other than one suitably covered with insulating material as to prevent danger) that danger may arise unless:

- (a) It is unreasonable in all circumstances for it to be dead; and
- (b) It is reasonable in all 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.

It is expected the default position will be that working on a live system will be unreasonable, as such electrical systems will need to be de-energised (isolated). The Regulations also stipulates adequate precautions shall be taken to prevent electrical equipment becoming re-energised while the work is taking place - this is the process of Isolation.

2. Definitions

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.

Isolation is the disconnection and separation of the electrical equipment from every source of electrical energy in such a way that this disconnection and separation is secure.

Isolation Authority is the authorised organisation with an electrically competent person who has been appointed to ensure all isolations on any RGU electrical system are conducted safely.

Key Person is the requestor or their competent representative of the electrical isolation.

3. Roles and Responsibilities

The following roles and responsibilities will be accepted and implemented by each designated party.

The Head of Occupational Health and Environmental Safety:

- will ensure that the Safe Electrical Isolation Procedure is reviewed from time to time.
- in liaison with the Estates Director, will ensure that the Isolation Authority has the necessary competency to undertake their roles/responsibilities safely.
- will ensure that audits are carried out periodically to ensure the effectiveness of the Safe Electrical Isolation Procedure.

Estates Director:

- Will appoint an Isolation Authority in writing that is/has access to the necessary competence to

- undertake electrical isolations safely.
- Will ensure that all electrical isolations on RGU Electrical Systems are only undertaken by the Isolation Authority.
 - Will ensure the Isolation Authority will be provided with all information required to undertake electrical isolations safely.

Isolation Authority:

- Will ensure all isolation requests will be met in line with this procedure.
- Will ensure persons appointed to the task of undertaking electrical isolations are aware of and comply with this procedure.
- Will ensure persons appointed to the task of undertaking electrical isolations have the necessary competence to complete the isolation safely.

Key Person:

- Will ensure the submission of any request for an isolation is conducted in line with this procedure.
- Will ensure that the request for an isolation is as detailed as possible to allow the isolation to be conducted safely.

4. Procedure

The process for implementing an electrical isolation is critical to ensure the isolation is safe and robust. The following steps are provided to ensure this and must be followed:

- 4.1 Electrical Isolation Request/Certificate will be completed by requester and submitted to Estates Support help desk. Prior to submitting the Request ensure all details in section A and B are completed, with particular focus on ensuring section B is fully detailed to allow the Isolation Authority to robustly identify what needs to be isolated.
- 4.2 When submitted to the [Estates Support Helpdesk](#), the Isolation Authority will review to confirm the isolation can be done in safety and is acceptable to isolate. The result of this review should be discussed with the requester, either we can do this for you, or we cannot, and these are the reasons.
- 4.3 With the decision to proceed in place, the Isolation Authority will identify the means of isolation for the circuits requested and document this in Section C of the Electrical Isolation Request/Certificate. This will need to consider the nature of the supply system ensuring that all sources of electrical energy are isolated.
- 4.4 Select a suitable voltage detection instrument and check it against a known voltage source. Using a voltage detection instrument, check that there is no dangerous voltage present on any circuit conductor to be worked on. It is important to confirm that conductors are not energised, due to a wiring fault.
- 4.5 If satisfactory, identify a suitable means to de-energise and isolate the circuit by switching off and secure it using appropriate lock off devices and locks. Section D of the Electrical Isolation Request/Certificate will be completed to record how this isolation will be done.
- 4.6 The isolation must be undertaken in the presence of the key person working on/ near the isolated circuits by the isolation or their competent representative. Provide the key person working on/near the isolated circuits the opportunity to add their own securing device to that used by the isolating authority.

- 4.7 The Isolating Authority and the key person working on/near the isolated circuits will review and confirm the isolation has been effective. Once confirmed the Isolation authority will complete section E of the Electrical Isolation Request/Certificate and the key person working on/near the isolated circuits section F.
- 4.8 The isolating authority will retain their key and the Electrical Isolation Request/Certificate and stored in Central Services Building. Where applicable the key person working on/near the isolated circuits will retain their key.
- 4.9 Step 10, Re-check the approved voltage indicator device is still functional in the same manner as before.

The process for removing an isolation is as critical to safety as the process for installing it. As such must be conducted in line with the following steps.

- 4.10 To remove an isolation (re-energise a circuit) the Key Person must request the Electrical Isolation Request/Certificate, complete section G and submit to the Isolation Authority.
- 4.11 The Isolation Authority will undertake a review of the isolation, the request to re-energise and confirm if it can be conducted safely.
- 4.12 If the Isolation Authority can safely re-energise the isolated circuit(s) they shall discuss the proposed date and time requested in section G. If this is possible, they will agree to meet the Key Person where they will undertake a review of the isolated circuit(s). Ensuring, with the key person, they can be re-energised safely.
- 4.13 If both parties agree the circuit(s) can be re-energised safely both parties should attend the equipment identified in the Electrical Isolation Request/Certificate, section D and remove the isolation.
- 4.14 When the isolation is removed both the Isolation Authority and Key Person will attend the isolated circuit(s) to confirm they are re-energised. Once confirmed both parties agree the circuit(s) are re-energised the Isolation Authority with complete section H.



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