

## Facilities, Residential and Commercial Services

Document – **Standard Operational Procedure**

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<b>Title</b>	Management of Access to Low Voltage Switch rooms at the Main Campus, Brownlow Hill
<b>Version</b>	2.0
<b>Last updated</b>	22 <sup>nd</sup> January 2017
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**Document Control**

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**Revisions**

Summary of Changes	Version	Revision Date

**Authorisation** This document requires the following approvals.

Committee	Chairperson	Signature	Version	Date
FRCS Compliance Committee	Director of Estates Management		1.0	Dec 17

**Distribution** This document has been distributed to:

Name/Group/Committee	Title	Date Issued	Version	Date

**Facilities Management****Document – Standard Operational Procedure**

<b>Title</b>	Management of Low Voltage Switchrooms at the Main Campus, Brownlow Hill
<b>PP&amp;T Code</b>	<i>FM00220</i>
<b>Document Type</b>	Procedure
<b>Issue Date</b>	22 <sup>nd</sup> January 2017
<b>Risk</b>	High
<b>Status</b>	Approved
<b>Approval Date</b>	
<b>Amendments</b>	Any proposed amendments must be referred to the Senior Electrical Engineer for approval.
<b>Aim</b>	To provide a standard operational procedure to University staff, Contractors and Consultants working with the FRCS remit.
<b>Scope</b>	Internal and External.
<b>Audience</b>	Estates Management, Capital Project and Estates Strategy, Computer Services Department, Consultants & Contractors

## **1. Introduction**

The University of Liverpool (the University) owns and operates extensive Low Voltage (LV) Systems including Switchrooms. Under the Health and Safety at Work Act 1974 and other legislation, the University has an obligation to provide safe places of work and safe systems of work. The University, from time to time, requires persons to enter and carry out work in these Switchrooms. This document details the procedures which Shall be adopted to ensure that access to Switchrooms is managed and carried out in a controlled and consistent manner whilst minimising risk to persons involved.

## **2. Scope**

This document applies to all -

- (a) Persons carrying out activities associated with LV Switchrooms in accordance with the University of Liverpool Electrical Safety Rules for Low Voltage Systems (the Safety Rules).
- (b) LV Switchrooms located at the main campus of the University on Brownlow Hill under the operational control of Facilities, Residential and Commercial Services Department (FRCS).

Further precautions will be required for 'locations that are under construction' and for facilities that are subject to 'The Dangerous Substances and Explosive Atmospheres Regulations 2002' (DSEAR). When a contractor or member of staff is working in such facilities, such as the Chemistry department, the contractor or member of staff Shall meet that department's arrangements.

## **3. Definitions**

The words printed in initial capitals within this document are either headings or definitions as defined in the Safety Rules.

## **4. Risk management**

Access to, and work in LV Switchrooms creates the potential for Danger to persons carrying out the activity.

The main dangers to persons in LV Switchrooms are electric shock, burns or falls, arising from:-

- (a) Physical conditions in the vicinity of the point of work due to deep excavations, or working at a height.
- (b) Contact with adjacent exposed live conductors, other cables or services.
- (c) Chemicals and fumes from fluxes and other sources.

## **5. Admittance to Switchrooms**

All access doors to Switchrooms Shall be kept securely locked when unattended. The locks to be used Shall be of a suite such that a single key (or electronic device such as the current Salto system) will enable access to be gained to any Switchroom.

Authorised Persons Shall manage access, switching and operational procedures associated with the interconnected LV system which connects the main LV Switchboards.

No person other than an Authorised Person or an Electrical Technician employed by the University may enter a Switchroom unless they are accompanied by an Authorised Person or are in receipt of a Safety Document issued by an Authorised Person.

The Authorised Person Shall not permit Switchrooms to be used a route for other services, materials and systems (e.g. services, water, drainage, medical gases, methane, storage of materials, other electrical systems) which may compromise safety or put at risk than normal operation and business continuity of the University buildings and systems.

Electrical Technicians employed by the University have been allocated areas of the Brownlow Hill Campus as indicated in Appendix A. These Electrical Technicians Shall report concerns for their area to the Authorised Person who may escalate them to the Engineering Maintenance Manager if thought necessary.

Such concerns may include:

- (a) poor workmanship undertaken by contractors
- (b) Switchrooms left in an inappropriate condition
- (c) switchgear left open,
- (d) exposed parts, trunking lids off,
- (e) unfixed cables,
- (f) stored & flammable materials,
- (g) routing of other services through Switchrooms etc.

The Authorising Engineer Shall lead formal audits relating to this process. These audits are to drive improvement to both the condition of the infrastructure and the safety processes associated with the management of the LV System with respect to staff, students, and contractors.

## **6. Access Control System.**

The Main LV Switchrooms and LV Switchboards located in High Voltage Substations are to be accessed using a card key system - currently the Salto door access system. The allowed access details are held on the Salto card which may be used for circa 150 controlled rooms. Other LV Switchrooms are to be accessed using the current A2 key.

Each Salto door-set is provided with a battery which is to be replaced after 40,000 operations and the Salto software advises the Authorised Person well in advance of when the battery need to be replaced at each door. Batteries are to be replaced by University Electrical Technicians as part of general maintenance to Switchrooms and Substations.

An Authorised Person Shall be appointed to both manage and control the risk of entering Switchrooms and issuing a Salto Card to a suitably qualified person/contractor.

Staff and contractors wishing to access particular Switchrooms Shall contact their line manager or works project manager and then complete:

- Access Control Authorisation Form. Appendix B
- Risk Assessment.
- Method Statement.

The application form Shall then be submitted to Authorised Person at least 5 days prior to the proposed commencement of work. Contact details: [fmhelp@liverpool.ac.uk](mailto:fmhelp@liverpool.ac.uk)  
Telephone 0151 994 3000.

The Authorised Person before issuing a time limited access (which could be one hour or several days) to enter a Switchroom, Shall be satisfied with the risk assessment and method statement for the proposed work and verify the credentials / competency of the person wishing to enter and work on the System.

The Authorised Person Shall then issue a Safety Document and a time limited access card to the Switchroom.

A logbook Shall be provided in each Switchroom for contractors and staff to confirm the reason for the visit to the Switchroom. Such logbooks will be available for review by the Authorised Persons to ensure that the logbook entries agree with the Access Control Authorisation Form (ACAF).

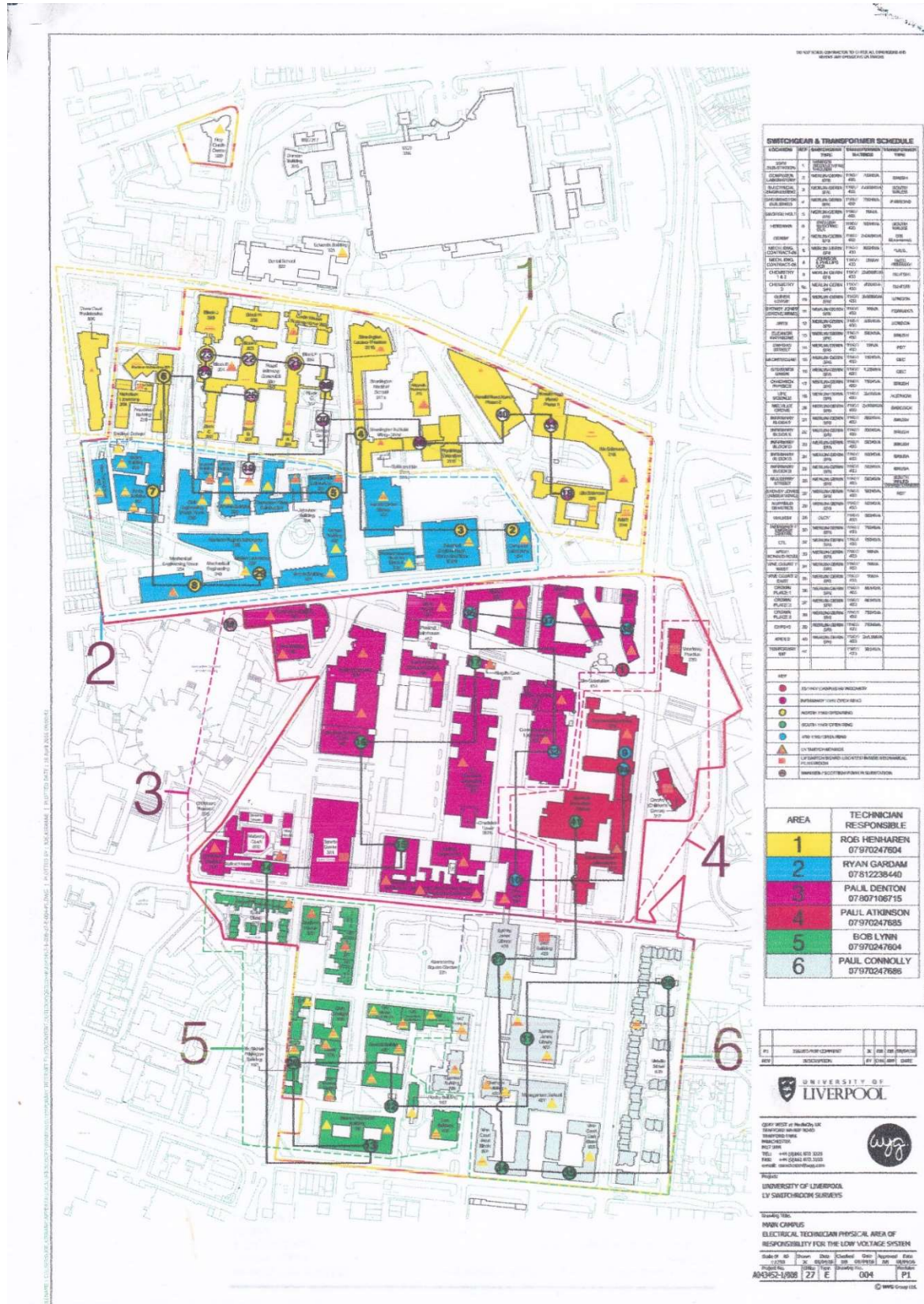
## 7. Summary of Access Arrangements

<b>Type of Room</b>	<b>Access with</b>	<b>Request for Access to</b>
Main LV Switchrooms	Salto Card	Authorised Person
Other LV Switchrooms	Key A2	Authorised Person
HV Substations	Salto Card	Authorised Person

# Appendix A

This document can be accessed at

<https://theuniversityofliverpool.sharepoint.com/sites/electricaltesting/SitePages/Home.aspx>



# Appendix B

## FACILITIES, RESIDENTIAL AND COMMERCIAL SERVICES SECURITY SERVICES

### ACCESS CONTROL AUTHORISATION FORM

### ELECTRICAL SWITCHROOMS/SUBSTATION

<b>Card No</b>																			
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<b>AUTHORISED CARD HOLDER DETAILS (PLEASE PRINT - ALL DETAILS MUST BE FILLED IN)</b>	
<b>Title Mr/Mrs/Miss/Ms</b>	
<b>First Name &amp; Initials</b>	
<b>Surname</b>	
<b>Staff/Student Number/Company</b>	
<b>Department/Project</b>	
<b>Building</b>	
<b>Telephone Extension</b>	
<b>Mobile</b>	
<b>Email</b>	

			<b>START DATE</b>	<b>EXPIRY DATE</b>	<b>COMMENTS</b>
<b>STAFF</b>		<b>Please Tick</b>			
<b>CONTRACTOR</b>					

<b>ACCESS DOOR LOCATION</b>	<b>DOOR No</b>	<b>AUTHORISED USE</b>	
		<b>YES</b>	<b>NO</b>
<b>FRCS University switch room/substation</b>			



**Reason for entry/Description of works to be carried out:**

**Project Manager Name/Line Manager (PRINT):**

**Confirmation RAMS provided for the works (Copy Required)  
YES/NO**

Insert file.

**Confirmation: Training records and certificates for the operatives involved inspected:  
YES / NO**

**(Copy Required)**

Insert file.

**UoL Line Manager /Project Manager Name (PRINT)**

**Signatory: \_\_\_\_\_**

**DATE: \_\_\_\_\_**

**Authorised Person Review and Comments**

**With respect to the request for access and the condition of the particular switch room/equipment (particular risks and /or operational matters that the members of staff / contractor using the switch room should be aware off?)**

**Authorised Person Name (PRINT):**

**Authorised Signatory: \_\_\_\_\_**

**DATE: \_\_\_\_\_**