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| Scope |
| This procedure applies to all Company projects, offices and facilities and Joint Venture (JV) projects where the Company Management System has been adopted by the JV Board. Where the Company is required to operate another party’s Management System, this system will be assessed by the Site Lead with assistance from the relevant Enabling Function. The proposed procedure must be of equal standard to this procedure and formally adopted. |
| This Electrical Safety Procedure will give details of the assessment procedures required to be undertaken on all projects to establish the level of control required and will set out the procedures to be adopted for the different levels of control.  Where the Company are supplying energy to the grid, then their Distribution Safety Rules ([HSF-RM-0068b](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1166)) will apply. |
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| Purpose |
| The purpose of this Electrical Safety Procedure is to ensure that where employees or others are exposed to work situations that have the potential to subject them to the risk of electrical shock, burns, fire or explosion, then prior to any activity commencing the work situation shall be assessed and an appropriate control system will be implemented to ensure that electrical risks are eliminated, or mitigated so far as is reasonably practicable.  The term Site Lead used within this document refers to the senior person on site responsible for the Health, Safety and Wellbeing of all employees, subcontractors and third parties on site or affected by our works. |

Procedural Requirements

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|  | **INTRODUCTION** |
|  | **Policy** |
|  | Balfour Beatty (BB) referred to as the Company seeks to eliminate the requirement for live working by any of its employees or subcontractors. Where the need for live working cannot be eliminated, as a last resort the work shall only be undertaken in strict adherence to the conditions set out within this Electrical Safety Procedure. |
|  | **Procedure Control** |
|  | The content of the Electrical Safety Procedures shall be controlled by the Principal Engineer and formally reviewed annually by the HSES Director. |
|  | Any request for a change to the Electrical Safety Procedures, associated forms and guidance shall be made in writing to the Principal Engineer. Changes agreed by the Principal Engineer shall be approved by the HSES Director. |
|  | Agreed changes shall be notified to the Company Business Management System (BMS) Team who shall carry out the required changes and publish on the Company Business Management System (BMS). All pages shall display the latest Procedure amendment number and revision date. |
| 1.3 | Impressed Voltages |
|  | In addition to the Company’s work on electrical systems there are Impressed Voltage dangers when working in proximity to High Voltage equipment; Substations, Overhead Lines (OHL) and cables (including Jointing), and for example, other electrical equipment, and conductors, access equipment, metallic (Heras) fencing, scaffolding, metal posts/towers/pipes, and metal storage containers. These dangers shall be controlled in accordance with the Impressed Voltage Management Plan [HSF-RM-0068i-PTD](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-5189). |

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|  | **CONTROL HIERARCHY AND RESPONSIBILITIES** |
|  | This section outlines the Control Hierarchy and Responsibilities of the individuals required to control and operate a safe system of work under the Company Electrical Safety Procedure. |
|  | Control Hierarchy |
|  |  |
|  | Roles and Responsibilities |
|  | *Principal Engineer* |
|  | The HSES Director shall formally appoint a Principal Engineer for the Company. |
|  | The Principal Engineer’s duties will include:- |
|  | * Monitor, review and update of the Electrical Safety Procedure ensuring compliance with statutory requirements and industry best practice. |
|  | * In conjunction with the HSES Director, assessment and appointment of a sufficient number of Authorising Engineers to cover the Company’s operations. |
|  | * Ensuring the assessment criteria for Authorising Engineers is strictly adhered to. |
|  | * Ensuring that the Electrical Safety Procedure is applied to all of the Company’s operations. |
|  | * Review investigations on all electrical incidents and lead the investigation where considered appropriate. |
|  | * Ensure lessons learned are shared throughout the Company as appropriate. |
|  | * Hold regular meetings with Authorising Engineers to discuss Lessons Learned, Electrical Safety Procedure updates and Electrical Safety Training updates. |
|  | * Re-assess Authorising Engineers annually. |
|  | * Approval of Live Working RA / WPP as applicable. |
|  | *Senior Authorising Engineers / Authorising Engineers (Assessing Officers)* |
|  | Authorising Engineers shall, in conjunction with Site Leads, formally appoint a sufficient number of Authorised Persons to cover the company’s operations. |
|  | The Authorising Engineers (Assessing Officers) duties will include:- |
|  | * Assessment of the Company’s operations with reference to the Electrical Safety Procedure requirements. |
|  | * Assessment of the electrical risk posed by each workplace or site and the selection of an appropriate safe system of work from the Electrical Safety Procedure. |
|  | * Training, assessment and appointment, by letter, of Authorised Persons to implement the selected Electrical Safety Procedure. |
|  | * Ensuring Authorised Persons are competent and have a thorough understanding of the selected Electrical Safety Procedure. |
|  | * Maintaining a Register of Authorised Persons ([HSF-SF-0068y](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1151)). |
|  | * Monitoring compliance in and implementation of Authorised Persons in the selected Electrical Safety Procedure, in line with this Procedure. |
|  | * Assist with investigation of electrical incidents and accidents. |
|  | * Approval of Live Working RA / WPP as applicable. |
|  | Check List when Appointing an Authorising Engineer (Assessing Officer); |
|  | * Must be familiar with and understand the Electricity at Work Regulations 1989. |
|  | * Must understand the Company Electrical Safety Procedure. |
|  | * Must be over 21 years of age. |
|  | * Must be an Approved Electrician/Engineer or equivalent grade, as a minimum. |
|  | * Must have full knowledge of the technicalities and dangers of Electricity and precautions which need to be taken. |
|  | * Will preferably be a direct employee of the Company. |
|  | * The appointment must be confirmed in writing by the Principal Engineer, and detail the scope of the appointment |
|  | *Site Based Authorising Engineers (Assessing Officer);* |
|  | Site Based Authorising Engineers’ duties shall be the same as Authorising Engineers with the exception that when required to and authorised by the Principal Engineer, they shall be delegated responsibility to approve Live Working RA / WPP for their specific workplace location.  NB – an Assessing Officer is a person appointed by the Organisation to assess the competency of individuals nominated for appointment as Authorised Persons and recommending them for authorisation by the Responsible Manager. The designated level for assessment shall be appropriate to the experience, knowledge and training of the assessor. |
|  | *Site Lead* |
|  | The most senior Balfour Beatty person that is allocated full time to any particular project, or designated as such by Balfour Beatty. Is accountable for the safe operation of this procedure on their project. Are responsible for nominating the prospective Authorised Persons and the roles that they will undertake during the works. And are effectively the line manager for the Authorised Person(s) on their project, they may delegate the daily operational management role to others always retaining the accountability for the implementation of this procedure. |
|  | *Authorised Persons (AP)* |
|  | Where the Company is the Duty Holder on projects which includes HV and LV, SAP’s/AP’s shall be appointed for both. This may be the same person, but separate Appointment Letters shall be issued for HV and LV. |
|  | AP’s will be appointed by the Principal/Senior/Authorising Engineer. |
|  | Where more than one Authorised Person is required in any workplace location then one will be appointed Senior Authorised Person (SAP). The SAP will be responsible for and will co-ordinate the activities of all AP’s at the same or related workplace locations. |
|  | The Senior Authorised Person/Authorised Person’s duties will include:- |
|  | * Acknowledgement and understanding of the selected Electrical Safe System of Work (ESSW) for that workplace. |
|  | * Implementation and control of the selected ESSW. |
|  | * Ensuring all workplace personnel are aware of and are complying with the selected ESSW. |
|  | * Monitoring compliance of the selected ESSW. |
|  | * Ensure persons are competent to receive safety documents before issue. |
|  | * Assisting the Principal / Authorising Engineer (Assessing Officer) to investigate electrical accidents and incidents. |
|  | * Delivering Electrical Safety Toolbox Talks to site personnel as appropriate. |
|  | Check List when Appointing an SAP/AP; |
|  | * Must be familiar with and understand the Electricity at Work Regulations 1989. |
|  | * Must have attended and passed the relevant Electrical Safety Training and understand the Electrical Safety Procedure. |
|  | * Must be over 21 years of age. |
|  | * Must be a qualified Electrician grade as a minimum or equivalent for their role, with at least 2 years post qualification experience. |
|  | * Must have full knowledge of the technicalities and dangers of Electricity and precautions which need to be taken to avoid danger. They must also understand their duties and areas of control as noted within the ESSW RA / WPP for the contract. |
|  | * Will preferably be a direct employee of the Company and resident on site while the work is on-going. In cases where a low volume of work does not warrant full time attendance on the site, the Authorised Person may not be resident on site but must be contactable by telephone or other prearranged means. |
|  | * Before appointment, the over-riding factor is that the person must be fully familiar with the electrical systems on the particular site(s). If this is not the case, a familiarisation period must be arranged by the Site Lead on site prior to appointment. A familiarisation period shall be a minimum of 1 day for non-complex installations (1 source of supply only) and 5 days for any complex system (more than 2 potential sources of supply). |
|  | * Where the appointment is for an HV System the candidate shall have attended a recognised HV SAP Training Course. * NB - Where the appointment is for an LV System within an HV environment not connected to any HV Distribution Network, any onsite testing relating to those HV systems, with the source of the test derived from an LV source, these are allowable under that appointment, and will be detailed within the appointment letter. |
|  | * If the HV qualification is **NOT** City & Guilds 6037 an equivalent industry recognised qualification shall be held by the candidate who must also have records of experience in HV system operations and switching. |
|  | * The appointment shall be in writing and shall detail the exact location, equipment to be controlled, and the date/period of appointment. |
|  | * On operational sites, copies of the appointment letter are to be displayed in the site office and other such places where they can be seen by all relevant persons, including all Company staff and operatives. |
|  | * Shall have attended and passed the one-day Emergency First Aid Training Course or equivalent. |
|  | * Where the SAP/AP has a dual role on site e.g. Supervisor, the SAP/AP role will take priority at all times. The Site Lead on site shall re-assign any additional duties held by the SAP/AP to another appropriate person on site. All SAP/AP’s controlling complex systems, the role shall be full time from date of appointment; if a full time role is NOT required these details will be agreed by Site Lead and Authorising Engineer and clarified in the ESSW RA/WPP. |
|  | * The SAP/AP role shall become full time if the following criteria applies: * More than 4 hours are taken on AP duties. * Any project that has more than 2 potential sources of supply and is capable of being energised. |
|  | Competent Persons (CP) |
|  | CP’s will be required to protect themselves and others whilst working on or near electrical systems by complying with the selected section of the Electrical Safety Procedures.  Proof of competency can be a grade cards, National Electrical Registration Scheme (NERS) passport or a third party company headed letter stating competency/experience/qualifications. |
|  | The following minimum competencies are mandatory before the relevant Site Safety Documentation can be issued: |
|  | **Permit to Work** - Electrician, Electrical Craftsperson |
|  | **Sanction for Test** - Electrician and/or Test/Commissioning Engineer qualified for relevant testing duties. |
|  | **Limitation of Access -** Electrical trades – Electrician/Electrical Craftsperson or above.  - Non-electrical trades – Supervisor, Chargehand or time served trade person. |
|  | **Section 9 Permit** - Electrician and above or equivalent for the role |

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|  | The CP’s duties will include:- | | | | | | | |
|  | * Ensuring they and others under their control fully comply with the requirements of the selected Safety Document with which they have been issued. | | | | | | | |
|  | * As Safety Document receiver, they must be present while works are being carried out; other members of the working party can come and go as required – if document receiver leaves workplace, full working party must also leave. | | | | | | | |
|  | * Strict adherence to the duties outlined on the reverse of the Safety Document. | | | | | | | |
|  | * Local liaison with others who might be affected by the work being undertaken. | | | | | | | |
|  | **SELECTION OF ELECTRICAL SAFE SYSTEMS OF WORK (ESSW)** | | | | | | | |
|  | An ESSW **shall** be implemented in situations where the Company or supply chain partner’s works include the supply of energised electrical systems or those which have the potential to become energised. | | | | | | | |
|  | An Assessment Request Form ([HSF-SF-0068d](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1130)) **shall** be completed and submitted by the Site Lead to the Authorising Engineer following the Pre-Start HSEQ Meeting, which allows them to understand the parameters of the works and to arrange with the project any assistance required.This meeting, as well as the Safe System of Work Selection Matrix ([HSF-RM-0068a](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1165)), will then allow the Authorising Engineer and Site Lead to agree on the required ESSW to be implemented for the works. | | | | | | | |
|  | The ESSW shall be in place a minimum of 1 week prior to the power to the electrical energy source within the boundary of the project being energised. | | | | | | | |
|  | In the interest of both safety and efficiency on the contract it is essential that the making live of the permanent system, or part of the system, is delayed as long as is contractually practicable. The making live of the system will require discussion with the client or his representative to establish the date of ‘Energisation’. | | | | | | | |
|  | From the information given in the Assessment Request Form ([HSF-SF-0068d](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1130)), the Authorising Engineer will evaluate the extent and complexity of the electrical system. The Authorising Engineer shall select an appropriate control system from the Electrical Safety Procedure The Authorising Engineer will then complete Part 2 of the Assessment Request Form ([HSF-SF-0068d](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1130)) and ensure that the appropriate electrical control system is implemented by the Site Lead. | | | | | | | |
|  | Where appropriate, the electrical control system to be used will be detailed in a RA / WPP specific to the ESSW. The RA / WPP shall be drawn up by the Site Lead/Engineer with the assistance of the Authorising Engineer and shall be referred to in the SAP/AP(s) Appointment Letter(s). | | | | | | | |
|  | The RA/WPP must include the designation of the electrical boundaries of the electrical system and determination of the means to ensure that no unplanned electrical energisation can occur across the boundaries, e.g. the proving of circuit breakers in switchboards to ensure no faulty operation. The RA/WPP must also detail the procedures to be followed in the event of an emergency. | | | | | | | |
|  | Where the Company is the Duty Holder a formal handover of the electrical system shall take place using the Formal Handover of Control of HV/LV Network and Equipment ([HSF-SF-0068i](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1135)) or subcontractor / client equivalent. This Handover Document will also be used to return control of the system to the client or his representative on completion/suspension of the works. | | | | | | | |
|  | Where the Company is not the Duty Holder the Site Lead with the assistance of the Authorising Engineer shall be responsible for ensuring that an appropriate and acceptable control system is in operation. | | | | | | | |
|  | The Authorising Engineer shall carry out an Audit on the client’s / Subcontractor’s system using Client System Audit Check List ([HSF-SF-0068e](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1131))/ Subcontractor’s Audit Checklist ([HSF-SF-0068a](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1126)). The results of these and all other Audits shall be recorded on the [WebPortal](http://portal.balfourbeatty.net/HSE/Default.aspx). | | | | | | | |
|  | **TRAINING AND INFORMATION** | | | | | | | |
|  | Training for Authorised Person | | | | | | | |
|  | All employees required to operate the requirements of this Procedure shall be suitably trained to carry out their respective responsibilities. | | | | | | | |
|  | This table details the minimum training required for HV/LV authorisation, and applicable Electrical Safety understanding; | | | | | | | |
| Position/Job Title | | | Electrical Safety Awareness Presentation | Balfour Beatty Authorised Persons Training | HV certification/ experience | Electrical Safety Tool Box Talk\* | BEAM Training Modules 1-5  As required | Emergency First Aid for Appointed Persons | HERS /NERS Training and Qualification (as required) |
| Site Leads / Site Team | | | **🗸** |  |  | **🗸** | **🗸** |  | **🗸** |
| Authorised Person | | |  | **🗸** | **🗸** | **🗸** | **🗸** | **🗸** | **🗸** |
| LV Authorised Person | | |  | **🗸** |  | **🗸** | **🗸** | **🗸** | **🗸** |
| Competent Person | | |  |  |  | **🗸** | **🗸** |  | **🗸** |
| Subcontractors | | |  |  |  | **🗸** | **🗸** |  | **🗸** |
| Client/Principal Contactors | | | **🗸** |  |  | **🗸** | **🗸** |  |  |
|  | \*See reference material in the Input Section at the end of this document for the range of Tool Box Talks available. | | | | | | | |
|  | Authorised Persons shall be trained by the Authorising Engineer in the appropriate sections of the Electrical Safety Procedures for the work/activities for which they will be appointed. All Authorised Person training shall be carried out at the Company Training Centre’s of Excellence only. | | | | | | | |
|  | Training for HV | | | | | | | |
|  | All HV Authorising Engineers, SAP/AP’s must be certified to City and Guilds 6037 or equivalent with experience. | | | | | | | |
|  | Recommendations are for refresher every 2 years unless completed recognised advanced HV course. | | | | | | | |
|  | Training for HV Attendance | | | | | | | |
|  | Authorised Persons who provide attendance into HV designated areas must have obtained City and Guilds 6037 HV Operations or have completed a recognised HV Attendance Course. | | | | | | | |
|  | Information for Site Teams, Clients and Principal Contractors | | | | | | | |
|  | A Presentation is available to explain the Electrical Safety Procedures to site teams, clients and principal contractors which must only be presented by Authorising Engineers. | | | | | | | |
|  | **MONITORING** | | | | | | | |
|  | When the control systems described in this Procedure are implemented, it is the responsibility of the Authorising Engineer to ensure that the chosen systems are effectively monitored, as well as the weekly / monthly compliance Checklists carried out by the project teams and HSE advisors visits. | | | | | | | |
|  | Where details of the controls are included in a Project Management Plan (PMP) or in a work or contract specific RA / WPP, the Site Lead, with the assistance of the Authorising Engineer shall detail how the system will be monitored, who will be responsible for the monitoring activity and the frequency at which monitoring will take place; this will include utilising the Site Leads ESSW Review form ([HSF-SF-0068ad](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-10839)) | | | | | | | |
|  | The Principal Engineer has the nominated responsibility for the audit process and frequency; however the practical application is delegated to the Authorising Engineers. The Authorising Engineers will discuss with the Site Leads/Senior Operational Management with regards to the required frequency of the audits. The different types of audit that may be undertaken are: | | | | | | | |
|  | **Start Up Audit** Using the Start Up Audit Check List ([HSF-SF-0068v](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1148))  **Interim Audit** Using the appropriate check list from:  Client System Audit Check List ([HSF-SF-0068e](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1131))  Subcontractors Audit Check List ([HSF-SF-0068a](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1126))  Section 8 Audit Check List (Balfour Beatty Duty Holder)   ([HSF-SF-0068t](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1145))  Section 9 Audit Check List ([HSF-SF-0068u](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1147))  **Close Out Audit** using the Close Out Audit Check List ([HSF-SF-0068f](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1132)) | | | | | | | |
|  | Competence checks for all employees at all levels in the hierarchy must be checked by the appropriate person in control e.g. Principal Engineer checks competency of Authorising Engineers. | | | | | | | |
|  | Competency shall be confirmed in writing by issue of an Appointment Letter. | | | | | | | |
|  | Distribution Network Operators (DNO) – Regional Electricity Companies; Transmission Network Operators (TNO) - | | | | | | | |
|  | Where work is carried out with the DNO/TNO and where Company employees have been appointed under relevant Distribution Safety Rules ([HSF-RM-0068b](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1166)), or client and third party safe systems of works (TNO; National grid, SPEN etc.), the Authorising Engineer and SAP/AP’s are responsible for monitoring compliance with the Distribution Safety Rules ([HSF-RM-0068b](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1166)). Compliance shall also be monitored by Authorising Engineers and HSE Advisors at routine site visits. | | | | | | | |
|  | Where the client’s system does not achieve standards equivalent to those of the Company Procedures, the client shall be advised and a request made to make the necessary amendments to their system in order to achieve these standards. Where this request is not accepted, the Site Lead representing the Company shall advise the client that they must implement the Safe System of Work as advised and implemented by the Authorising Engineer.  NB; DNO / TNO Safety Rules would only be required to be challenged if they are found to be deficient at site, and raised with the Principal Engineer for any course of action. | | | | | | | |
|  | When the Company Procedure is to be implemented in addition to an existing client’s system, the Authorising Engineer shall report this to the Principal Engineer. | | | | | | | |
|  | **LIVE WORKING PROCEDURE** | | | | | | | |
|  | Application of Live Working Procedure – only applicable as a last resort. | | | | | | | |
|  | Without exception, where live working is requested due to a client’s operating requirements this shall be substantiated by the production of ‘Live Working Justification’ before the Company shall undertake live working. The Live Working Justification shall be completed by the client. | | | | | | | |
|  | Live Working Justification shall include: | | | | | | | |
|  | * Reasons why the power supply cannot be isolated to eliminate the hazard. | | | | | | | |
|  | * Details of essential equipment that cannot be isolated. | | | | | | | |
|  | * The impact of essential equipment losing supply. | | | | | | | |
|  | * Why works cannot be undertaken out with normal business hours? | | | | | | | |
|  | * Why works cannot be completed during a planned outage/shutdown? | | | | | | | |
|  | * Name and signature of author, confirming that all alternatives have been reviewed and live working is the only reasonably practicable solution.   NB – you may be required to obtain the supply characteristics prior to carrying out any works, and any live works agreed with the client / responsible person(s). | | | | | | | |
|  | The Client can include the Live Working Justification within the scope of works or by completing Request for Live Working Justification ([HSF-SF-0068o](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1141)). | | | | | | | |
|  | Live Working RA / WPP | | | | | | | |
|  | Where work is required on or adjacent to live LV equipment the Site Lead shall assess the work prior to any activity and with assistance of the Authorising Engineer prepare a RA / WPP detailing the controls to be used during such work. This RA / WPP detail the work and identify and include; | | | | | | | |
|  | * The work to be carried out and the assessment of risk. | | | | | | | |
|  | * The provision of barriers or fencing. | | | | | | | |
|  | * The provision of specialist tools and equipment. | | | | | | | |
|  | * The provision of reasonable access and lighting. | | | | | | | |
|  | * The provision of trained accompanying person to render assistance e.g. emergency first aid procedures. | | | | | | | |
|  | * The training required by employees to safely complete the task e.g. first aid; communications. | | | | | | | |
|  | * The training required by the accompanying person. | | | | | | | |
|  | This list is not exhaustive; the Authorising Engineer shall incorporate other project specific issues where appropriate. | | | | | | | |
|  | THE RA / WPP MUST BE APPROVED BY THE COMPANY PRINCIPAL ENGINEER OR AUTHORISING ENGINEER WHO HAS BEEN APPOINTED FOR APPROVAL OF LIVE WORKING RA / WPP’s. | | | | | | | |
|  | Competency | | | | | | | |
|  | Employees required to carry out such work must be assessed and certificated as competent by the Authorising Engineer. The certification will take the form of a written Letter of Appointment specific to the particular live working task being undertaken. | | | | | | | |
|  | Training | | | | | | | |
|  | All employees required to carry out live working must receive a suitable and adequate briefing in the work to be carried out and the controls that are in place to protect them i.e. RA / WPP. | | | | | | | |
|  | Emergencies | | | | | | | |
|  | The Site Lead will, in the Live Working RA / WPP, set out a clear procedure to be followed in the event of an emergency. | | | | | | | |
|  | The procedure will detail: | | | | | | | |
|  | * The role of the person who will provide accompaniment for the work. | | | | | | | |
|  | * Who is to be contacted for help in an emergency? | | | | | | | |
|  | * The means of communication. | | | | | | | |
|  | * The address and phone number of the nearest hospital casualty unit.   NB – the above criteria will only be approved as a last resort, and HV Live Working will follow the guidance and training set out in the DSR. | | | | | | | |
|  | **SUPPLY AND ISOLATION/DISCONNECTION OF ELECTRICAL POWER TO/FROM A THIRD PARTY**  **NB – a Third Party** are contractors who are not in a financial contract with BB; all other subcontractors working for BB follow our ESSW requirements when in operation. | | | | | | | |
|  | Request for Supply and Isolation/Disconnection of Electrical Power from Third Parties | | | | | | | |
|  | The Company may be requested to SUPPLY/ISOLATE/DISCONNECT electrical power for third parties (e.g. other contractors, sub-contractors etc). In the case of SUPPLY, the Company may provide a supply if the applicant for power can satisfy the requirements of the IET BS 7671 Wiring Regulations and the Electricity at Work Regulations 1989, or in the case of HV works, the appropriate test records and documentation has been made available. In all cases the Company shall retain a duty of care and in order to ensure that this duty of care is exercised, the procedures described below must be implemented. | | | | | | | |
|  | Request for Supply of Electrical Power Procedures | | | | | | | |
|  | On receipt of a request for electrical power from a third party, the Company SAP/AP will provide the applicant with the Request for Electrical Power Form ([HSF-SF-0068n](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1140)) and ask the applicant to complete Part 1. | | | | | | | |
|  | Part 1 will provide details of the applicant(s) company, project/work details, plant/ equipment/system identity and location and date/time supply required. | | | | | | | |
|  | The Company SAP/AP will complete Part 2 giving the time and date that the request was received, detailing where the applicant(s) plant/equipment will be fed from, indicating that the supply equipment/cable has been tested and providing the test sheet numbers. Equipment and cables must be tested, in accordance with Testing Procedures before power is supplied to the applicant. | | | | | | | |
|  | Part 3 details the Conditions of Receiving Power. It is important that the Company SAP/AP’s satisfy themselves that these conditions have been met by the applicant before agreeing to the supply. | | | | | | | |
|  | The applicant(s) representative(s) will sign Part 4 indicating agreement and compliance with the Conditions of Receiving Power. | | | | | | | |
|  | On verifying that the conditions in Part 3 have been met, the Company SAP/AP will agree to provide the power supply by completing Part 5. | | | | | | | |
|  | If for any reason the Company SAP/AP is not satisfied that the applicant has met all of the conditions, the electrical supply will not be provided and Part 6 will be completed detailing the reasons why the supply has NOT been provided. | | | | | | | |
|  | A copy of the completed Request for Electrical Power Form ([HSF-SF-0068n](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1140)) will be given to the applicant and a second copy will be filed on site. | | | | | | | |
|  | The Request for Electrical Power Form ([HSF-SF-0068n](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1140)) shall be filed in a separate section within the ESSW Site Safety Document Book ([HSF-SF-0068aa](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1127)). | | | | | | | |
|  | Request for Isolation/Disconnection of Electrical Power procedure | | | | | | | |
|  | On receipt of a request for isolation or disconnection of the electrical supply from a third party, the Company SAP/AP will provide the applicant with the Request for Isolation / Disconnection ([HSF-SF-0068b](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1128)) of Electrical Power Form and ask the applicant to complete Part 1. | | | | | | | |
|  | Part 1 will provide details of the applicant(s) company, project/work details, plant/equipment/system identity and location and date/time Isolation / Disconnection is required. | | | | | | | |
|  | The Company SAP/AP will complete Part 2 giving the time and date that the request was received, detailing where the applicant(s) plant/equipment will be Isolated / Disconnected from, indicating that the equipment/cable has been proved ‘DEAD’ and providing the associated sketches of areas/equipment etc. | | | | | | | |
|  | The applicant(s) representative(s) will sign Part 3 indicating agreement and compliance with the Conditions of Isolation / Disconnection, and that they have witnessed the SAP/AP proving ‘DEAD’ of areas/equipment specified in Part 1. | | | | | | | |
|  | Part’s 4 & 5 will only be required to be completed if system has been isolated for the third party where a Permit to Work was not the appropriate Safety Document, and supply is to be reinstated following their works. If Isolation / Disconnection are of a permanent nature then these parts will be crossed out as non-applicable. | | | | | | | |
|  | A copy of the completed Request for Isolation / Disconnection of Electrical Power ([HSF-SF-0068b](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1128)) and associated sketches will be given to the applicant, as an Isolation Certificate, and a second copy will be filed on site within the ESSW Site Safety Document Book ([HSF-SF-0068aa](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1127)).  NB – the above form shall not be taken as a Permit to Work, but only as confirmation that isolations / disconnections have taken place, and works are safe for third parties to carry out their works. | | | | | | | |
|  | **COMPLEX PERMIT CONTROL SYSTEM** | | | | | | | |
|  | Application of Permit Control System | | | | | | | |
|  | In situations where the Company assumes responsibility, following completion of the Formal Handover of Duty Holder control form (or equivalent), for HV and/or complex LV systems, including site temporary supplies for construction, demolition and welfare, there is a clear requirement for a safe system of work, which is formalised in written instructions. In cases where this is a requirement, a Permit Control System will be mandatory and this section gives details of the procedures and systems to be adopted. | | | | | | | |
|  | Where control of complete systems is assumed then Safety Programme Switching Operations Log Sheet ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)) should also be incorporated into the operational planning for the control of power. | | | | | | | |
|  | A Layout Drawing showing the areas for which the Company is Duty Holders shall be displayed in the Permit Office and on the site noticeboard as applicable; | | | | | | | |
|  | * When areas have electrical systems which have the potential to become live the area shall be shaded in red on the layout drawing. | | | | | | | |
|  | * Whenever any part of the system is handed over either to the final Duty Holder or a Commissioning Team the area shall be shaded orange and contact details for the Duty Holder displayed adjacent on the layout drawing. | | | | | | | |
|  | * A Floor/Section Layout Drawing shall also be displayed on site at the main access point to the floor/section detailing the areas that contain live electrical systems. | | | | | | | |
|  | All Work on or Testing of HV Equipment connected to a system is to be authorised by a Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) or a Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)). | | | | | | | |
|  | HV Equipment which is considered by the SAP/AP to be in a Dangerous Condition, or is subject to a current Warning Notice it is to be remotely isolated and disconnected and action taken by the SAP/AP to prevent it being re-connected to the supply of electricity. The SAP/AP is to report the matter as soon as is reasonably practicable to the duty holder. | | | | | | | |
|  | Safety Locks are to be applied, where practicable, at points of isolation to prevent unauthorised operation or re-connection. A Caution Notice should always accompany Safety Locks used for isolation (See [Electrical Safety Caution Notices and Signage](https://home360.balfourbeatty.com/UKHealthandSafety/Pages/Electricity.aspx) on 360) | | | | | | | |
|  | Security of Designated Electrical Areas | | | | | | | |
|  | Designated Electrical Areas shall be defined by the Site Lead with assistance of the Authorising Engineer in the ESSW RA / WPP. All Designated Electrical Areas shall be kept locked when unattended. Except in an emergency no person shall enter a Designated Electrical Area unless accompanied by an SAP/AP or covered by a Safety Document issued by an SAP/AP. | | | | | | | |
|  | Lock off devices and storage | | | | | | | |
|  | A specific, designated Lock out box with multiple locks will be utilised during HV isolations, the key for the padlock on the isolation is to be kept within the lock out box, the keys to open the lock out box are to be retained as such, 1 x key to be held by SAP/AP isolating the circuit & 1 x key to each of the document holders. | | | | | | | |
|  | When work is to be carried out on the HV system, Primary Earths will be applied to the circuit after it has been proven ‘dead’ with an approved and appropriate HV voltage indicator and proving unit before and after use. | | | | | | | |
|  | When Primary Earths have been applied using a circuit breaker or separate Earth Switch, they will be secured in the on position by means of an Earth Padlock. | | | | | | | |
|  | A Key Safe and Padlock Safe shall be provided to house the keys associated with padlocks that have been fitted to the system whilst work is in progress under permit issue conditions. There shall be no duplicate keys for a Safety Lock. | | | | | | | |
|  | Each SAP/AP shall be issued with a personal key, or the key stored within numerical lock out box, to enable them to gain access to the Key Safe which shall also house the key(s) to all the Designated Electrical Areas and the keys to the Padlock Safe. | | | | | | | |
|  | The key safe shall be of sufficient size to hold all keys for Safety Locks and or Earth Locks fitted to the system, keys for designated electrical areas and keys to the Padlock Safe. | | | | | | | |
|  | For emergency use only, the keys for the designated electrical areas where the main incoming source of power (normally main switch room) shall be kept in a break glass fronted box at a constantly manned part of the premises, e.g. Reception, Security Post if such a place exists, or the Permit Office. Should the spare key be required, the person concerned shall, after using the key, enter their name on the Emergency Key Log ([HSF-SF-0068g](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1133)) to be kept in/adjacent to this key box and give the reason for requiring the key. The key to the break glass box shall be kept in the key safe. | | | | | | | |
|  | The purpose of the break glass box is to allow the emergency access to the main incoming switch so that all power to the building can be isolated in an emergency. | | | | | | | |
|  | All other Padlocks, Safety Locks and Earth Locks associated with the electrical system shall be kept in the Padlock Safe when not in use. No spare keys shall be provided elsewhere. All keys and padlocks shall be clearly labelled with a unique reference which shall be engraved on the padlock and the key. | | | | | | | |
|  | The Padlock Safe shall be kept locked except when padlocks and keys are being removed from or returned to it. | | | | | | | |
|  | The Padlock Safe shall have a Register ([HSF-SF-0068x](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1150)) which shall be updated each time a padlock is removed from or returned to it.  On completion of the Company’s contractual works and the Formal Handover of Duty Holder form has been signed and returned to the client, all padlocks shall be removed from the system, or any keys shall be issued to the client under signature. | | | | | | | |
|  | Authorisation and Supervision of Work | | | | | | | |
|  | No work shall be carried out in a Designated Electrical Area unless authorised by the issue of the appropriate Safety Document by the appointed SAP/AP for the project. | | | | | | | |
|  | An SAP/AP may enter a Designated Electrical Area for the purposes of observation of the implementation of the Safety Documents but shall not be allowed to carry out any works. | | | | | | | |
|  | An SAP/AP wishing to carry out works which require the issue of a Safety Document shall be issued the Safety Document from another SAP/AP from the Site Team. | | | | | | | |
|  | Safety Documents shall only be issued to persons who are competent to receive such documents. | | | | | | | |
|  | Competency for each Safety Document is defined in these Electrical Safety Procedures. | | | | | | | |
|  | Once the SAP/AP has confirmed the person’s competency they shall deliver the Toolbox Talks relating to the specific Safety Document and record the details in the Competent Person Induction Check List ([HSF-SF-0068w](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1149)). | | | | | | | |
|  | An SAP/AP shall actively monitor all ‘on issue’ safety documents throughout the working day as part of their appointed duties. | | | | | | | |
|  | Safe Isolation and Preparation for Work | | | | | | | |
|  | Before issuing a Safety Document the SAP/AP shall: | | | | | | | |
|  | * Understand precisely the work that is to be carried out via the setting to works procedures and within the parameters of the ESSW in operation for the works. | | | | | | | |
|  | * Record on the Safety Programme Switching Operations Log Sheet ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)) details of the switching operations and other safety measures they intend to carry out to make the system safe to work on. | | | | | | | |
|  | * Whenever any HV Switching operation is to be carried out a switching schedule shall be produced detailing all steps that will be taken in the order that they will be carried out, including the application of all Safety Locks. | | | | | | | |
|  | * The switching schedule will also have a sketch of a single line diagram produced showing the system at the start of the process and the system’s intended state at the end of the switching as a minimum, if the HV SAP/AP carrying out the operation deems it necessary, then the sketch shall show additional stages in between. These sketched will be drawn on the Safety Programme Switching Operations Diagram Sheet ([HSF-SF-0068p](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1142)). These sketches shall be shown to the permit recipient before the issuing of a safety document. | | | | | | | |
|  | * The switching schedule shall be approved by another HV SAP/AP or Authorising Engineer for the project before any of the operation is started, and each HV switching operation will require the presence of two HV AP’s for the site, one to physically carry out the operation and one to provide attendance and initial each action on the schedule as it has been completed. Note; this is not always the case on HV switching, the SAP may require to deal directly with the System(s) Control Center, the only time additional help is required is if they need help operating the switch. | | | | | | | |
|  | * The attending HV AP will be able to verify the actions of the switching HV SAP and must have sufficient knowledge to anticipate dangers and hazards as they occur, in the event of an incident they will be able to summon help in the event of an emergency, provide initial first aid and carry out any emergency safety switching. | | | | | | | |
|  | * For all Safety Programme Switching Operations Log Sheets ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)) for complex LV out with normal procedures, switching operations shall be accompanied by a line diagram, utilising Safety Programme Switching Operations Diagram Sheet ([HSF-SF-0068p](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1142)) which will show the points of isolation, points of earthing (if applicable) and location of Caution Notices and Safety Locks. | | | | | | | |
|  | * Display the ‘Work on System in Progress’ on the Mimic Diagram. | | | | | | | |
|  | * Isolate the system/circuit to be worked on and record the time of each switching operation in the Safety Programme Switching Operations Log Sheet ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)). | | | | | | | |
|  | * Where the system/circuit is already isolated but has the potential to become live, the SAP/AP shall check the system/circuit is locked in the OFF position and the key is held in the key safe. | | | | | | | |
|  | * Apply Safety Locks or other adequate means of control to prevent unauthorised operation of switchgear and to prevent the system becoming electrically charged. Where more than one work activity requires isolation by the same switch, a Safety Lock for each permit will be fitted to the switch by means of a multiple padlock hasp. Where a Sanction for Test ([HSF-SF-0068r)](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144) is being issued no other Safety Documents shall be concurrently issued for the same equipment/service/circuit. | | | | | | | |
|  | * Where a Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) is in force on plant and/or HV apparatus, no other Safety Documents shall be in force on the same plant or apparatus. | | | | | | | |
|  | * Fix DANGER and CAUTION Notices, fences and barriers as necessary to make the work site safe. | | | | | | | |
|  | * If necessary apply Primary Earths between point of work and possible Live sources. | | | | | | | |
|  | * Carry out tests to ensure that the point of work is ‘DEAD’. The test instrument will be proved before and after the test. | | | | | | | |
|  | * Once the circuit has been proved dead, alter the Mimic Diagram where applicable to show the exact state of the switches. | | | | | | | |
|  | * Complex switching will be detailed in the ESSW RA / WPP for the projects involved (and a Switching Operations Log Sheet ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)) shall be produced covering all switching actions to be taken to make the service/load end safe). Where any secondary supplies are available through bus-bar couplers, generators or UPS then the isolation of the outgoing or secondary way shall be confirmed by the BOTH SAP/AP for the site. This in effect states that where complex switching exists two AP’s shall be involved in checking the methodology and those circuits are confirmed as fully isolated). Both will sign the appropriate permit and carry out visual inspection as confirmation of the check. | | | | | | | |
|  | When the SAP/AP is satisfied that it is safe to work on the system or enter the area they shall: | | | | | | | |
|  | * Implement the requirements for the issue of Safety Documents, as detailed in paragraphs below. | | | | | | | |
|  | * Ensure that the CP receiving the Safety Document is fully conversant with the system, precautions to be taken and the nature of the work to be done. | | | | | | | |
|  | Permit to Work Procedures | | | | | | | |
|  | *Permit to Work Issue* | | | | | | | |
|  | The SAP/AP shall enter on the Permit to Work ([HSF-SF-0068m)](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139) full details of the system on which work will be carried out and the precautions which have been taken to make the equipment safe, including where Danger or Caution Notices have been posted. The SAP/AP shall sign Part 1. The Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) shall be made out in duplicate.(The method of duplication shall be detailed in the RA/WPP) | | | | | | | |
|  | All members of the Working Party shall be recorded on the Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) in the appropriate area. | | | | | | | |
|  | The Permit to Work ([HSF-SF-0068m)](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139) will be assigned a Serial Number and details of the Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) will be entered in the Permit to Work Log Sheet ([HSF-SF-0068l](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1138)) by the SAP/AP. The date and time issued and name of the recipient will be entered. If more than one permit is being issued for the one item of equipment, then this will be noted in the Remarks Column of the Log Sheet, giving the Serial Number(s) of the other permit(s) issued. The Permit to Work Log Sheet ([HSF-SF-0068l](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1138)) shall be kept in the Site Log Book ([HSF-SF-0068z](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1152)). | | | | | | | |
|  | For each Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) issued, details of the switching operations and other safety measures (i.e. Earthing points, Caution and Danger Notices, etc.) will be entered in the Safety Programme Switching Operations Log Sheet ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)). Each entry will be initialled by the SAP/AP. The Safety Programme Switching Operations Log Sheet ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)) shall be kept in the Site Log Book ([HSF-SF-0068z](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1152)). | | | | | | | |
|  | The CP receiving the Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) shall read its contents and signify to the SAP/AP that he fully understands each instruction on the permit and their responsibilities which are detailed on the back. | | | | | | | |
|  | The CP and all members of the working party shall witness the SAP/AP proving the point of work ‘dead’, the SAP/AP shall then sign the Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)). The CP shall acknowledge receipt of the permit by signing Part 2 of the Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) at the point of work. | | | | | | | |
|  | The top copy of the Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) shall be retained in the Permit Office and filed in the Site Safety Document Book ([HSF-SF-0068aa](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1127)) in a section which will be clearly indexed ‘ON ISSUE PERMITS TO WORK’. (Copies of on issue documents can be posted adjacent to the Mimic diagram, and this action will be noted within the ESSW RA/WPP as applicable). | | | | | | | |
|  | The second copy of the Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) shall be issued to the CP in charge of the work, who shall retain it in their possession at all times whilst the work detailed on the permit is being carried out. | | | | | | | |
|  | If, during the course of the work, it is found necessary to change the scope of the work, the existing Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) shall be returned to the SAP/AP and cancelled and a new Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) issued, clearly detailing the revised work. | | | | | | | |
|  | The Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) shall only be valid until the end of the shift or working day and shall be returned to the SAP/AP for cancellation. | | | | | | | |
|  | *Permit to Work Cancellation* | | | | | | | |
|  | When the works are completed, the person authorised to receive a Permit to Work ([HSF-SF-0068m)](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139) shall sign Part 3 of the second copy of the Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) IN THE PRESENCE OF THE SAP/AP. | | | | | | | |
|  | The SAP/AP shall then check that: | | | | | | | |
|  | All the work has been completed for the system or part of system for which the Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) had been issued. | | | | | | | |
|  | All tools and equipment have been removed. | | | | | | | |
|  | That the system has been left in a satisfactory and safe condition. | | | | | | | |
|  | The SAP/AP shall marry the top copy and the second copy and sign Part 4. The top copy and the second copy will be filed in the Site Safety Document Book ([HSF-SF-0068aa](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1127)) in a section which will be clearly indexed ‘CANCELLED PERMITS TO WORK’. | | | | | | | |
|  | When a Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) is cleared and cancelled, the ‘Date of Clearance’ and ‘Date of Cancellation’ will be entered by the SAP/AP in the Permit to Work Log Sheet ([HSF-SF-0068l](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1138)). The SAP/AP shall initial the Permit to Work Log Sheet ([HSF-SF-0068l](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1138)). | | | | | | | |
|  | Whilst working under a Customer ESSW Procedure that involves the point of work not being the point of isolation, a means of positive identification shall be fixed at the point of work (i.e. Equipment Flag detailing that the equipment is under isolation shall be applied and peer checked). | | | | | | | |
|  | Sanction for Test Procedures | | | | | | | |
|  | *Sanction for Test Issue* | | | | | | | |
|  | The Issuing SAP/AP shall enter on the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) full details of the system on which tests will be carried out, and detail the precautions which have been taken for the testing being undertaken, including where Caution Notices have been posted and / or fences, barriers erected. | | | | | | | |
|  | All members of the working party shall be recorded on the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) in the appropriate area. | | | | | | | |
|  | Where the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) is being issued for live testing of a circuit, the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) will not be issued until all required LV dead tests are completed and recorded. | | | | | | | |
|  | Where the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) is being issued for any HV testing being undertaken where the Company are only responsible for the LV system(s), but the testing derives from an LV source, LV SAP/AP, with assistance from the Site Lead, must ensure that the works are covered by a specific RA/WPP detailing all testing parameters and additional controls, and noted within the Sanction for Test. | | | | | | | |
|  | The SAP/AP shall write on the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) exact details and scope of the tests to be carried out. The SAP/AP shall sign Part 1. The Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) shall be made out in duplicate.(The method of duplication shall be detailed in the RA/WPP) | | | | | | | |
|  | A Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) shall not be issued when there is another Safety Document in force for the circuit/system for which the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) is being requested. | | | | | | | |
|  | The Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) will be assigned a Serial Number and details of the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) will be entered in the Sanction for Test Log Sheet ([HSF-SF-0068s](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1145)). The date and time issued and name of the recipient will be entered in the Log Sheet. | | | | | | | |
|  | Only one Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) shall be issued for each discreet electrical system. The Sanction for Test Log Sheet ([HSF-SF-0068s](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1145)) shall be kept in the Site Log Book ([HSF-SF-0068z](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1152)). | | | | | | | |
|  | For each HV Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) issued, details of the switching operations and other safety measures (i.e. Earthing points, Safety Lock applied and Caution Notices, keys to Earth Locks issued etc.) will be entered in the Safety Programme Switching Operations Log Sheet ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)). Each entry will be initialled by the SAP/AP. The Safety Programme Switching Operations Log Sheet ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)) will be kept in the Site Log Book ([HSF-SF-0068z](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1152)). | | | | | | | |
|  | The Person authorised to receive the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) shall read its contents and signify to the SAP/AP that they fully understands each instruction on the Sanction for Test ([HSF-SF-0068r)](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144) and their responsibilities, which are detailed on the back. They shall acknowledge receipt by signing Part 2 of the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)). | | | | | | | |
|  | The top copy of the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) shall be retained in the Permit Office and filed in the Site Safety Document Book ([HSF-SF-0068aa](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1127)), in a section which will be clearly indexed ‘ON ISSUE SANCTIONS FOR TEST’. (Copies of on issue documents can be posted adjacent to the Mimic diagram, and this action will be noted within the ESSW RA/WPP as applicable). | | | | | | | |
|  | The second copy of the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) shall be issued to the person in charge of the test who shall retain it in their possession at all times whilst the tests detailed on the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) are being carried out. | | | | | | | |
|  | If, during the course of the work, it is found necessary to change the scope of the work, the existing Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) shall be returned to the SAP/AP and cancelled and a new Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) issued, clearly detailing the revised work. | | | | | | | |
|  | The Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) shall only be valid until the end of the shift or working day and shall be returned to the SAP/AP for cancellation. | | | | | | | |
|  | *Sanction for Test Cancellation* | | | | | | | |
|  | When tests are completed, the person authorised to receive a Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) shall sign Part 3 of the second copy of the Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) in THE PRESENCE OF THE SAP/AP. | | | | | | | |
|  | The SAP/AP shall then check that: | | | | | | | |
|  | * All the work has been completed for the system or part of system for which the Sanction for Test ([HSF-SF-0068r)](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144) had been used | | | | | | | |
|  | * All tools and equipment has been removed | | | | | | | |
|  | * And that the system has been left in a satisfactory and safe condition. | | | | | | | |
|  | The check shall also include a visual inspection of the systems and confirmation that only circuits which have completed test results have been energised and that any remaining circuits have been left in a safe state.  NB – an HV SFT may have been issued for dead testing, so may not require confirming systems are energised, but all other items are applicable. | | | | | | | |
|  | The SAP/AP shall marry the top copy and the second copy and sign Part 4. The top copy and the second copy will be filed in the Site Safety Document Book ([HSF-SF-0068aa](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1127)) in a section which will be clearly indexed ‘CANCELLED SANCTIONS FOR TEST’. | | | | | | | |
|  | When a Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) is cleared and cancelled, the ‘Date of Clearance’ and ‘Date of Cancellation’ will be entered by the SAP/AP in the Sanction for Test Log Sheet ([HSF-SF-0068s](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1145)). The SAP/AP shall initial the Sanction for Test Log Sheet ([HSF-SF-0068s](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1145)). | | | | | | | |
|  | Limitation of Access Procedures | | | | | | | |
|  | *Limitation of Access Issue* | | | | | | | |
|  | The issuing SAP/AP shall enter on the Limitation of Access Form ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)), full details of the equipment or electrical area on which work will be carried out and the precautions which have been taken to make the equipment safe, including where Caution Notices have been posted. They shall also write on the Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) exact details and scope of the work to be carried out. They shall sign Part 1. The Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) shall be made out in duplicate.(The method of duplication shall be detailed in the RA/WPP) | | | | | | | |
|  | The Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) will be assigned a Serial Number and details of the Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) will be entered in the Limitation of Access Log Sheet ([HSF-SF-0068k](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1137)). | | | | | | | |
|  | The date and time issued and name of the recipient will be entered and, if more than one Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) is being issued for one item of equipment or work area, then this will be noted in the Remarks Column of the Log Sheet, giving the Serial Number(s) of other Limitation(s) of Access issued. The Limitation of Access Log Sheet ([HSF-SF-0068k](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1137)) will be kept in the Site Log Book ([HSF-SF-0068z](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1152)). | | | | | | | |
|  | The CP receiving the Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) shall read its contents and signify to the issuing SAP/AP that they fully understands each instruction on the Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)), and their responsibilities which are detailed on the back. They shall acknowledge receipt by signing Part 2 of the Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)). | | | | | | | |
|  | The top copy of the Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) shall be retained in the Permit Office and filed in the Site Safety Document Book ([HSF-SF-0068aa](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1127)), in a section which will be clearly indexed ‘ON ISSUE LIMITATION OF ACCESS’. (Copies of on issue documents can be posted adjacent to the Mimic diagram, and this action will be noted within the ESSW RA/WPP as applicable). | | | | | | | |
|  | All members of the Working Party shall be recorded on the Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) in the appropriate area. | | | | | | | |
|  | The second copy of the Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) shall be issued to the CP in charge of the work who shall retain it in their possession at all times whilst the work detailed on the Limitation of Access([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) is being carried out. | | | | | | | |
|  | If, during the course of the work, it is found necessary to change the scope of the work, the existing Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) shall be returned to the SAP/AP and cancelled and a new Limitation of Access issued, clearly detailing the revised work. | | | | | | | |
|  | The Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) shall only be valid until the end of the shift or working day and shall be returned to the SAP/AP for cancellation. If there is any deviation from this procedure it must be authorised by the issuing Authorising Engineer and included in the ESSW RA/WPP. | | | | | | | |
|  | *Limitation of Access Cancellation* | | | | | | | |
|  | When work is completed or suspended at the end of a shift the CP shall sign Part 3 of the second copy of the Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) IN THE PRESENCE OF THE SAP/AP. | | | | | | | |
|  | The SAP/AP shall marry the top copy and the second copy and sign Part 4. The top copy and the second copy will be filed in the Site Safety Document Book ([HSF-SF-0068aa](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1127)) in a section which will be clearly indexed ‘CANCELLED LIMITATIONS OF ACCESS. | | | | | | | |
|  | When a Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) is cleared and cancelled, the ‘Date of Clearance’ and ‘Date of Cancellation’ will be entered by the issuing SAP/AP in the Limitation of Access Log Sheet ([HSF-SF-0068k](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1137)). When a Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) is cancelled, the SAP/AP shall initial the Limitation of Access Log Sheet ([HSF-SF-0068k](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1137)). | | | | | | | |
|  | Re-connection of Supply | | | | | | | |
|  | On satisfactory completion of the work detailed on a Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)), Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) or Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)), electrical switchgear, before being energised will be dead tested in accordance with current edition of IET Regulations (BS7671) and / or HV requirements, and any outgoing circuits which are incomplete shall be removed from all sources of supply. | | | | | | | |
|  | For LV system sub circuitry a visual inspection of the equipment will be carried out and results recorded on the Energisation Log Sheet ([HSF-SF-0068h](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1134)). Completed Energisation Log Sheets ([HSF-SF-0068h](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1134)) shall be kept in the Test Packs. | | | | | | | |
|  | The SAP/AP shall then record in the Safety Programme Switching Operations Log Sheet ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)) the procedures to be undertaken, including the removal of Primary Earths, Caution Notices, and other precautions, and the switching operations necessary for the re-connection of the supply. The SAP/AP shall amend the Mimic Diagram before carrying out the switching operation to reinstate the supply and shall verify afterwards that the Mimic Diagram is a true record of the system status. | | | | | | | |
|  | Operation of Switchgear | | | | | | | |
|  | Operation of switchgear, designated in the ESSW RA / WPP contained in the appointment documents of the SAP/AP shall only be carried out by the SAP/AP or by a CP who has been issued a Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) for live testing. | | | | | | | |
|  | Switches may be operated in an emergency but the SAP/AP must be informed of all emergency switching at the earliest possible time. **Whenever possible HV switchgear should be operated remotely.** | | | | | | | |
|  | **Making ‘Live’ or ‘Dead’ by visual signal or pre-arranged understanding after an agreed interval of time, is forbidden.** | | | | | | | |
|  | No HV or Complex LV switching operation will be carried out unaccompanied.  Note; this is not always the case on HV switching, the SAP may require to deal directly with the System(s) Control Center, the only time additional help is required is if they need help operating the switch. | | | | | | | |
|  | Isolation of air circuit breakers (ACBs) will be in line with manufacturers’ instructions and secured in the OFF position only. | | | | | | | |
|  | Where any complex switching is required which may involve secondary supplies or bus bar couplers, the switching operation shall be detailed in the ESSW RA / WPP and on the Safety Programme Switching Operations Log Sheet ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)). | | | | | | | |
|  | Before any HV system is energised (or reenergised), the HV SAP/AP must ensure that the cable/equipment that is to be put into service has been correctly tested and completed test certification is in their possession. | | | | | | | |
|  | It is the preferred option that where equipment allows HV switching shall be remotely completed, where this option is not available, the PPE listed below will be mandatory. | | | | | | | |
|  | Industry approved PPE to be worn when carrying out HV switching activities includes: | | | | | | | |
|  | * Insulated gauntlets (rated to exceed to Voltage being switched). | | | | | | | |
|  | * Full face Visor | | | | | | | |
|  | * Flameproof overalls | | | | | | | |
|  | (This list is not exhaustive and may be added to as site conditions require.) | | | | | | | |
|  | All spout shutters on HV equipment not required for immediate work or operation shall be kept locked shut. The keys to locks used on spout shutters shall only be accessible to a HV SAP/AP. | | | | | | | |
|  | Action in an Emergency | | | | | | | |
|  | The first SAP/AP attending the emergency shall remove all personnel in the immediate area and, wherever possible, make the area electrically safe. The SAP/AP or other nominated Authorised Person shall then go immediately to the Mimic Diagram and display the ‘Work on System in Progress’ notice, confirming their name and time posted. Any other Authorised Person attending the site on seeing this notice shall take no action until they have contacted the Authorised Person who displayed the notice. | | | | | | | |
|  | CAUTION and DANGER Notices, Barriers etc. | | | | | | | |
|  | CAUTION Notices shall be fixed (by Safety Locks, if possible) to the control mechanism of all switchgear which has been made ‘Dead’ (locked off) to enable work to proceed. DANGER Notices shall be attached on or adjacent to ‘Live’ apparatus as necessary, at the limit of the zone in which the work may be carried out. CAUTION and DANGER Notices, barriers and screens shall be fixed and moved only under the supervision of the SAP/AP. | | | | | | | |
|  | Earthing | | | | | | | |
|  | *Primary Earths* | | | | | | | |
|  | **Low Voltage** | | | | | | | |
|  | When low voltage equipment is to be discharged and earthed the equipment shall be tested to ensure that it is ‘Dead’ and shall then be discharged by an earthing connection. | | | | | | | |
|  | **High Voltage** | | | | | | | |
|  | When Primary or Secondary Earths are applied as a cable, the cable must be able to withstand the full fault current of the isolated circuit and must be applied by using an approved pole. | | | | | | | |
|  | When carrying out HV switching operations adjacent live switches will have ‘Danger Live’ notices placed on them in a prominent position, the application of these notices shall be detailed on the relevant switching schedule. | | | | | | | |
|  | The following procedure shall be observed when HV equipment is to be discharged and earthed:- | | | | | | | |
|  | 1. Where practicable, the circuit breaker or provided earth switch shall be used to make the earth connection.   After closing, the circuit breaker or earth switch shall be locked in the earthed position. Any remote tripping devices must be rendered inoperable by the SAP/AP. | | | | | | | |
|  | 1. Where (a) is not practicable, the HV equipment shall be tested to ensure that it is ‘Dead’ and shall then be discharged and earthed by an earthing lead which shall be of an adequately rated earthing capacity, which shall be tagged, applied by an approved method determined by a briefing and at a position recorded in a safety document | | | | | | | |
|  | 1. No HV earthing system shall be operated or Primary Earth connection attached or removed except by or under direct supervision of the SAP/AP. | | | | | | | |
|  | *Earthing Leads and Connections* | | | | | | | |
|  | Earthing leads and associated clamps shall be examined immediately prior to use and shall be of adequate capacity to carry the prospective fault current of the system at the point of application. They shall be properly stored and maintained. | | | | | | | |
|  | *Recording of Primary Earths (HV and LV)* | | | | | | | |
|  | When Primary Earths are applied, the precise location of each circuit main earth shall be recorded on the Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) or Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)). | | | | | | | |
|  | *Procedure for the Use of Earthing Leads (HV and LV)* | | | | | | | |
|  | The following procedure shall be observed when using earthing leads:- | | | | | | | |
|  | * Verify that the circuit is ‘Dead’ by means of a voltage indicator of approved type, the indicator itself being tested immediately before and after use. | | | | | | | |
|  | * Earthing leads shall be connected to the earth system before being secured to phase and neutral conductors. They shall be secured to the conductors only by means of approved apparatus. Care must be taken to ensure that good contact is made. | | | | | | | |
|  | * All phases and neutral, where applicable, shall be earthed, even if work is to be carried out on one phase only. | | | | | | | |
|  | * Earthing leads shall not be applied in any cell or compartment in which there are any exposed ‘Live’ conductors. | | | | | | | |
|  | * When earthing leads are being removed, they shall be disconnected from phase conductor’s first and earth system last. | | | | | | | |
|  | Work On or Near Remotely and Automatically Controlled Equipment | | | | | | | |
|  | Before work is carried out on remotely or automatically controlled equipment such as circuit breakers, motor starters, isolators, tap changing gear, or associated air compressors, all remote control and automatic features shall first be rendered inoperative. | | | | | | | |
|  | No work shall be carried out on the controlling equipment, wiring or relays except by the SAP/AP or CP working under the supervision of the Authorised Person. Details of the actions taken to render the controls inoperative shall be recorded on the relevant Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)), Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)), or Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)). | | | | | | | |
|  | Energisation of LV Systems | | | | | | | |
|  | **No electrical system/associated wiring shall be energised before it has been tested in accordance with IET Wiring Regulations (BS 7671),** and a Certificate of Test issued. For systems above 1000v, where the IET Regulations do not apply, a similar Test Certificate must be issued. | | | | | | | |
|  | Work on Low Voltage Cables | | | | | | | |
|  | If work which involves the exposure of conductors is carried out on a low voltage cable which has previously been energised or connected to source(s) then a Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) must be raised. | | | | | | | |
|  | Before issuing a Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) for work on a low voltage cable which involves the exposure of conductors, the SAP/AP, in addition to the procedure described above, shall identify and mark the cable to be worked upon. When appropriate, the cable shall be spiked at the point of work with a remotely controlled spiking gun. | | | | | | | |
|  | No person shall work on any live low voltage cable unless it is unreasonable in all circumstances for it to be dead and it is reasonable in all the circumstances for the person to work on the cable while it is live.This also includes the moving of live cables on containment / supports, which shall be isolated before being moved. | | | | | | | |
|  | If work which involves the exposure of conductors has to be carried out on live low voltage cables, then only suitable trained and competent personnel shall carry out the work, AND FOLLOWING THE Live Working process detailed in this Procedure.  These works would only be carried out as a last resort. | | | | | | | |
|  | Work on High Voltage Cables | | | | | | | |
|  | If work involves the exposure of conductors is carried out on a HV cable, which has previously been energised or connected at source(s), then a Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) must be raised. | | | | | | | |
|  | Before issuing a Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) for work on a HV cable which involves the exposure of conductors, the Authorised Person, in addition to the procedure described above, shall identify and mark the cable to be worked upon. When appropriate the cable shall then be spiked at the point of work, with a remotely controlled spiking gun. | | | | | | | |
|  | No person shall move or reposition a high voltage cable unless the conductor is proven ‘dead’, earthed and a Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)) issued. | | | | | | | |
|  | Automatic Gas Discharge Fire Extinguishing Equipment | | | | | | | |
|  | The following will be observed when work or inspections are carried out in any enclosures protected by automatic fire extinguishing equipment:- | | | | | | | |
|  | * The automatic control of gas discharge shall be rendered inoperative by the SAP/AP and the equipment left on hand-control from within the sub-station only. Alternatively, the gas discharge equipment shall be completely isolated and locked in that condition. The SAP/AP shall use a prominent ‘turnover’ type cautionary notice to indicate whether or not the automatic fire protection system is operative. This is usually also indicated by a system of warning lights if the system is energised. | | | | | | | |
|  | * Precautions taken to render the automatic control inoperative shall be noted on any Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)), Sanction for Test ([HSF-SF-0068r)](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144) or Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)). | | | | | | | |
|  | * The automatic control shall be restored by the SAP/AP as soon as practicable after the persons engaged on the work have withdrawn from the protected enclosure and the Permit to Work ([HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139)), Sanction for Test ([HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144)) or Limitation of Access ([HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)) cancelled. | | | | | | | |
|  | Gas Flooding Systems at Joint Bays | | | | | | | |
|  | Where Gas Flooding Systems are installed at Cable Joint Bays, precautions listed in the Fire Plan and Risk Assessment should be followed. | | | | | | | |
|  | Portable Extinguishers | | | | | | | |
|  | Only CO2 or Dry Powder extinguishers shall be used in the vicinity of ‘Live’ electrical apparatus and a safety clearance of at least 0.3m shall be maintained. After the discharge of portable extinguishers in an enclosed space, personnel shall withdraw from that space until the precautions set out below have been taken. Water or foam extinguishers are not to be used in the vicinity of live electrical apparatus. CO2 or Dry Powder extinguishers shall not be used in a joint bay area where the insulation of the cable is exposed. | | | | | | | |
|  | Precautions After Fire | | | | | | | |
|  | After any explosion or fire, or after the discharge of extinguishers in an enclosed space, the space shall be thoroughly ventilated and atmospheric tests carried out before entry of personnel, unless suitable breathing apparatus is worn and operatives have been trained in the use of the breathing apparatus. | | | | | | | |
|  | **NB:** No suitable test exists for the detection of Halon gas. Consult Principal Engineer before re-entry. | | | | | | | |
|  | Supply Failures | | | | | | | |
|  | A failure of supply, from whatever cause, on any part of a system shall be reported immediately to the SAP/AP and shall be noted in the Safety Programme Switching Operations Log Sheet ([HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143)). During failures of supply all equipment and conductors shall be regarded as being ‘Live’ unless or until isolated and checked with a voltage indicator and earthed. | | | | | | | |
|  | Hydraulic/Pneumatic Systems | | | | | | | |
|  | Hydraulic and pneumatic systems may be an integral part of the ‘plant’ being worked on and the isolation of these systems may be required in order to work on electrical equipment or circuits. These systems should have their own safe systems of work in operation and action must be taken to ensure that the safe systems of work are observed. | | | | | | | |
|  | **NON COMPLEX PERMIT CONTROL SYSTEM** | | | | | | | |
|  | Scope of a Section 9 Permit | | | | | | | |
|  | The Section 9 Permit ([HSF-SF-0068c](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1129)) will only be used on; | | | | | | | |
|  | * Non-complex low voltage systems such as single lighting and power circuits, replacement of motors, lighting units etc. and during modifications or maintenance work in commercial, light industrial or domestic premises. | | | | | | | |
|  | * May also be used in conjunction with a client’s Electrical Safety Processes, or to control Site welfare establishments. | | | | | | | |
|  | The Section 9 Permit ([HSF-SF-0068c](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1129)) is completed by a trained Company Authorised Person. | | | | | | | |
|  | The Section 9 Permit ([HSF-SF-0068c](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1129)) will be used in situations where employees work alone or in small teams. | | | | | | | |
|  | The parameters for the use of this process will be detailed in the Setting to Works procedures for the project(s). | | | | | | | |
|  | Completion of Section 9 Permit Form | | | | | | | |
|  | The Company Authorising Engineer will confirm if the client has a suitable operating ESSW and in this situation the Section 9 Permit will not be required. | | | | | | | |
|  | Where the client has no operating ESSW the Company Appointed AP for the work(s) will isolate the electrical supply. | | | | | | | |
|  | In such cases the AP will assume control of the system and complete the Section 9 Permit ([HSF-SF-0068c](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1129)) as follows:- | | | | | | | |
|  | * **Part 1** Isolation of LV electrical supplies | | | | | | | |
|  | * **Part 2** As far as they are able, describe the circuits to be worked on and the reasons for work. Warning signs to alert others that work is being carried out must be posted and a copy of the permit attached to the warning sign (See [Electrical Safety Caution Notices and Signage](https://home360.balfourbeatty.com/UKHealthandSafety/Pages/Electricity.aspx) on 360). | | | | | | | |
|  | * **Part 3** Complete and sign. | | | | | | | |
|  | * **Part 4** Sign on completion of work | | | | | | | |
|  | Where required the Section 9 Permit Log Sheet ([HSF-SF-0068ab](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-5187)) will be completed. | | | | | | | |
|  | It is recognised that the AP will be required to investigate faults, or to carry out testing and adjustments on electrical systems where the system needs to be live whilst such fault investigation is carried out (only on a system with equipment and components that are IP2X compliant). | | | | | | | |
|  | The AP must take adequate steps to protect themselves from contact with live electrical equipment during fault finding operations by:- | | | | | | | |
|  | * Removing any metallic parts from their person such as watches, rings, chains, etc. | | | | | | | |
|  | * Using only approved insulated tools and equipment. | | | | | | | |
|  | * Using an approved voltage test instrument which must be proved before and after use. Multimeters must not be used. | | | | | | | |
|  | * Assessing the workplace environment for other risks such as limited space, means of access, lighting, etc. | | | | | | | |
|  | * Stopping work and requesting assistance or advice when required or in any doubt. | | | | | | | |
|  | When fault finding has been completed any subsequent repairs must be carried out with the equipment dead and Part 2 of the permit adjusted as necessary. | | | | | | | |
|  | Removal of Redundant Isolations Enforced under Section 9 | | | | | | | |
|  | If a long term isolation is required to be removed following completion of the Company works, and the Company are no longer on site, the following steps are required; | | | | | | | |
|  | * Contact should be made with the issuer of the Section 9 document and isolation, or | | | | | | | |
|  | * Contact should be made with an Authorising Engineer for the Company who will be able to assist | | | | | | | |
|  | * The Duty Holder shall ensure there is proper justification for removal of any isolation by others, and that the required Inspections and Tests have been carried out to ensure that it is safe to re energise. | | | | | | | |
|  | Only after the above has been exhausted, can the Duty Holder then take steps to remove the isolation and re energise. | | | | | | | |
|  | **ELIMINATION OF FREE ENDS** | | | | | | | |
|  | In order to eliminate free/open ends, the following steps must be taken: | | | | | | | |
|  | * All final connection points from local distribution boards must be fitted with an accessory or wire nut connector. | | | | | | | |
|  | * The wire nut connector must remain in place until the final accessory is to be fitted. | | | | | | | |
|  | * The accessory or wire nut connector must be fitted at the point when the cables are installed into their final position/back box, or coiled above / below ground. | | | | | | | |
|  | * For connection of wire nut connectors, bare all cores of the cables before fitting the connector. This will create a short circuit if the circuit is inadvertently energised. | | | | | | | |
|  | * Use of other means of shorting out the free end must be discussed and agreed with the Authorising Engineer, and details contained in the setting to work procedure. | | | | | | | |
|  | **Note:** Distribution boards which have steel wire armour/armoured type cables emanating from them, shall have all field points (‘Z’ end) terminated before the distribution board (‘A’ end) is connected. If this is unachievable then the ‘Z’ end cores must be bared, connected together to ‘short out’ by appropriate means and shrouded to prevent any danger labelled accordingly. | | | | | | | |
|  | **CABLE CUTTING AND REMOVAL PROCESS** | | | | | | | |
|  | In order to eliminate the potential for adjacent cables/services to be cut, the following steps must be taken: | | | | | | | |
|  | * The project Appointed Person or customer equivalent must issue a Permit to Work ([HSF-SF-0068m).](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139) | | | | | | | |
|  | * The cable must be physically identified from source (‘A’) end by a loop method | | | | | | | |
|  | * The cut point on the cable shall be identified by fixing easily identifiable tape at both sides of the loop. | | | | | | | |
|  | * If the loop method is not possible (i.e. underground cabling, not isolated and disconnected) then the cable must be spiked by a trained and competent person. Following the spiking, and confirmation that cable is ‘dead’ by use of Voltage Indicator / proving Unit. It can then be determined that the right cable has been spiked by carrying out a continuity test from the cut end (Z) at the spiking location, with the source end (A) – this will confirm the correct cable is being worked on. | | | | | | | |
|  | * Any cut must be completed with insulated tools as determined by the cable size/type and noted within the task briefing for the works (Hacksaws shall not be used). | | | | | | | |
|  | If none of the above can be achieved, or scope of works requires that cables are to be “cut and capped and marked redundant” the Site Lead must request assistance from the Authorising Engineer to ensure that the Risks have been assessed and the correct controls and methodology are in place. | | | | | | | |
|  |  | | | | | | | |
|  | **PORTABLE ELECTRICAL APPARATUS** | | | | | | | |
|  | For the purpose of these procedures, Portable Electrical Apparatus is equipment which is not part of a fixed installation, but is intended to be connected to a fixed installation or generator, by means of a flexible cable and either a plug and socket or to a spur accessories or similar means. It also includes equipment that is either hand held or hand operated while connected to the supply. The responsibility for the safe use of portable electrical equipment is with the user, and the user must also ensure that any new portable electrical equipment has been tested and in date before use. | | | | | | | |
|  | All PAT testing of the equipment must be carried out by operatives trained to use the test equipment. | | | | | | | |
|  | Routine Inspection | | | | | | | |
|  | All portable electrical apparatus in use in Company offices, workshops and sites will be inspected and maintained in line with local regulations, suppliers/manufacturer’s instructions and at regular intervals to ensure that such apparatus is safe whilst in use. All plant/equipment conductors that could give rise to danger must be suitably insulated or located to eliminate danger, every system must be protected from excess current and nothing should be placed in an earthed circuit that could break continuity or introduce impedance. | | | | | | | |
|  | Apparatus Identification | | | | | | | |
|  | Individual items of portable apparatus will be identified by a serial number and a register of such apparatus maintained at the office, workshop or site where it is in use. | | | | | | | |
|  | Inspection Frequency | | | | | | | |
|  | The frequency at which portable electrical apparatus is inspected will be dependent upon: | | | | | | | |
|  | * The type of apparatus | | | | | | | |
|  | * Frequency of use of the apparatus | | | | | | | |
|  | * The environment in which the apparatus is used | | | | | | | |
|  | Portable electrical apparatus in use in workshops and on sites will need to be inspected on a more frequent basis than office based equipment. | | | | | | | |
|  | The frequency of inspection of apparatus will be noted in the Safety Plan for the office, workshop or site location. | | | | | | | |
|  | Inspection and Records | | | | | | | |
|  | The inspection of portable electrical apparatus will be carried out by a suitable Competent Person. | | | | | | | |
|  | * The inspection will record: | | | | | | | |
|  | * The apparatus identification | | | | | | | |
|  | * Date of inspection | | | | | | | |
|  | * Records of any tests, defects or repairs | | | | | | | |
|  | Apparatus found unserviceable during inspection will be immediately withdrawn from use, tagged and isolated until the defect has been rectified. | | | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Testing will not exceed the following: | | | | |
|  | **Equipment** | | **User Checks** | **Formal Visual Inspection** | **Combined Inspection and Test** |
|  | Battery Operated equipment (less than 40V) e.g. laptop etc | | No | No | No |
|  | Extra Low Voltage Equipment, (less than 50V) e.g. telephone etc | | No | No | No |
|  | Construction Sites, Plant depots; Workshops | all Low Voltage Equipment | Yes Weekly | Yes Monthly | Yes before 1st use then 3 Monthly |
| Equipment Site Offices | Yes Monthly | Yes 6 monthly | Yes before 1st use and then Yearly |
|  | Offices  (not on construction sites)  NB – separate pictorial guidance for office managers is available in [HSF-RM-0068h](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-5190) | Desktop computers, VDU screens | No | Yes 2-4 years | No if double insulated, otherwise up to 5 years |
|  | Photocopiers, fax machines: Not hand-held. Rarely moved | No | Yes, 2-4 years | No |
|  | Double insulated  (Class II) equipment: Not hand-held. Moved occasionally e.g. fans, table lamps | No | Yes, 2-4 years | No |
|  | Double insulated  (Class II) equipment: Hand-held, e.g. some floor cleaners, some kitchen equipment | Yes | Yes, 6 months – 1 year | No |
|  | Earthed equipment (Class I*):* Electric kettles, some floor cleaners, some kitchen equipment and irons | Yes | Yes, 6 months – 1 year | Yes, 1-2 years |
|  |  | Cables (leads and plugs connected to the above) and mains voltage extension leads and battery-charging equipment | Yes | No if Battery Operated or Extra Low Voltage. Yes, 6 months – 4 years depending on the type of equipment it is connected to as detailed above. | No if Battery Operated or Extra Low Voltage. Yes, 1-5 years depending on the type of equipment it is connected to as detailed above. |
|  | Fixed Electrical Installations Inspection | | | | |
|  | All fixed electrical installations in Company offices, site offices, site welfare and workshops will be inspected and tested in accordance with the IET Wiring Regulations at intervals not exceeding five years (1 year for site offices/welfare) during the occupancy of such offices or workshops. A Certificate of Inspection and test results will be maintained in the office or workshop. | | | | |
|  | Electrical Installations and Inspections of Temporary Electrics on Site | | | | |
|  | Temporary electrical installations on construction sites will be installed, inspected and tested in accordance with the IET Wiring Regulations prior to energisation and at intervals not exceeding three months during the period such temporary installations are in use. A Certificate of Inspection and test results will be maintained on the site. | | | | |
|  | Work on Electrical Installations on Company Premises | | | | |
|  | Where any work on electrical installations in any Company office, workshop or site is to be carried out, the control of such work must be in accordance with this Procedure. | | | | |

| Abbreviations / Definitions | | |
| --- | --- | --- |
| **HIGH VOLTAGE (HV)** | | The existence of potential difference (rms value for ac) exceeding 1000ac/1500dc volts between conductors and exceeding 600ac/900dc volts between any conductors and earth. |
| **LOW VOLTAGE (LV)** | | The existence of potential difference (rms value for ac) up to 1000ac/1500dc volts between conductors and up to 600 volts between conductors and earth. |
| **EXTRA LOW VOLTAGE (ELV)** | | Normally not exceeding 50V ac or 120V dc whether between conductors or to earth |
| **ACCOMPANYING AUTHORISED PERSON (AP)-** **(HV/LV)** | | 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. |
| **PRIMARY EARTH** | | A connection to earth, applied by an HV Senior Authorised Person (SAP) / AP (or Competent Person (CP) working under an issued Sanction for Test) specified in a Permit to Work or Sanction for Test, made before working on or testing Equipment to ensure so far as is practicable that the Equipment does not become electrically charged. It is secured, where practicable, by an Earth Lock. On completion of a Permit to Work or Sanction for Test these Earth’s are removed by the SAP / AP. |
| **SECONDARY EARTH** | | A proprietary Earth applied by an SAP/AP (or a CP) working or testing under a Sanction for Test which may be removed by the CP for the duration of the test. These Earths are listed on the Sanction for Test by the SAP/AP prior to the issue of the Sanction for Test. |
| **HV SAFETY LOCK (SL)**: | | A padlock coloured red, having an engraved unique number and uniquely keyed which differs from all other keys provided for the system or installation, used for securing the means of isolation. |
| **SAFETY LOCK (SL)**: | | A padlock having an engraved unique number and uniquely keyed which differs from all other keys provided for the system or installation, used for securing the means of isolation |
| **HV OPERATIONAL LOCK (OL):** | | A padlock, except Safety Locks and Earth Locks, used to secure Equipment, may be keyed alike. |
| **HV EARTH LOCK (EL):** | | A padlock coloured green with an engraved number and uniquely keyed used to secure safety earths. |
| NB – all isolations by means of any of the above padlocks can only be removed by means of the associated key under the control by the SAP/AP; Except as noted within 9.3 above, **no unauthorised removal of padlocks by means of tools or force is permitted** | | |
| **KEY SAFE** | | A lockable cabinet controlled only by the AP, containing keys for isolations placed on the electrical system, keys to designated hazardous areas, keys to padlock safes. |
| **PADLOCK SAFE** | | A lockable cabinet controlled only by the AP, containing padlocks for use in isolations on the electrical system and a register identifying where all padlocks utilised are located on the electrical system. |
| **LOCK OUT BOX** | | A cabinet with multiple locks utilised during HV isolations, the key for these isolations will be stored within the lock out box and the keys to open the lock out box will be retained by the AP, and associated members of the working party as applicable – all keys required to remove the isolations. |
| **SAFETY DOCUMENTS INCLUDING:** | | |
| PERMIT TO WORK (PTW) | A document issued by an HV/LV SAP/AP to a CP, under signature, defining a safe system of work which includes switching operations and other measures that have been carried out to ensure that the risk from contact with electricity is eliminated. It also details the work to be carried out and any additional precautions required to be taken /observed by the CP and people under their direction/control.  This includes LV dead testing on circuits or equipment that has the potential to become live (connected at source(s)).  Permits to work shall only be issued to work on equipment that is isolated from all the supply source(s) [‘A’ end(s)] “dead” and has been proven to be dead at the point of work (‘Z’ end) to the permit recipient by the SAP / AP issuing the Permit to Work. | |
|  | ‘**A’ END** is the point at which the circuit is connected to the supply/source(s) of electrical energy. | |
|  | **‘Z’ END** is the final point of work. | |
| SANCTION FOR TEST (SFT) | A document issued by an HV/LV SAP/AP to a CP / Commissioning or Test Engineer qualified to carry out testing duties, under signature, defining a safe system of work which includes switching operations, and other measures that have been undertaken to ensure that risks from contact with the electrical system are eliminated.  It details the tests to be carried out and the limit of the defined electrical system. It also details any further precautions required to be taken/observed by the CP / Commissioning or Test Engineer and anyone under their direction/control.  The requirements set out in this document shall be adhered to when a test is to be carried out on a system which has been energised or is required to be energised to allow testing to be carried out.  NB – the sequence and operations required by the testing activity may require the issue of a specific RA / WPP by the tester(s) and shall be noted on the document. | |
| LIMITATION OF ACCESS (LOA) | A document issued by an HV/LV SAP/AP to a CP, under signature, defining the limits and nature of the work which may be carried out in the vicinity of live electrical systems or sensitive equipment.  This document is intended to be used to allow access into designated electrical areas for the purpose of carrying out any work where it would be inappropriate to issue a Permit to Work.  NB; Where access into an HV designated electrical area is required the AP must have completed a recognised HV Awareness training session.  **A Limitation of Access (**[**HSF-SF-0068j**](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136)**) shall not be issued for intrusive work on any electrical system(s) where that system is connected to potential energy source(s).** | |
| PTW/SFT/LOA issuing | The method of duplication when issuing these Safety Documents will be detailed within the RA/WPP i.e. permit pads; carbon copy; photo copy; SAP/AP copy saved on tablet; but document receiver must always have a copy at the point of work as well as copy with the SAP/AP.  NB – the above must be taken into consideration when works are covered under a Section 9 permit too, and methodology will be specific to that project / SBU. | |
| SUBSTATION- HV/LV SWITCHROOM | A designated electrical area containing HV/LV Switchgear, Transformers and other HV/LV electrical equipment. | |
| LV SWITCHROOM | A designated electrical area containing only LV Switchgear. | |
| MIMIC DIAGRAM | The mimic diagram shall consist of a single line diagram showing the whole of the HV or LV system being controlled by the safe system of works being administered for the site. Each switch, circuit breaker and transformer shall have facilities for indicating whether the switching contacts are closed, open or earthed. (A minimum paper single line diagram on a board, ‘dressed’ with coloured pins for switch status is an acceptable form of a mimic diagram during construction phase).  **RED** will indicate the switch is ON  **GREEN** will indicate the switch is OFF  **BLACK** will indicate the switch is EARTHED | |
| SITE SAFETY DOCUMENT BOOK AND SITE LOG BOOK | The Site Safety Documents Book and Site Log Book are loose leaf folders containing the undernoted documents as required. The folders shall be the responsibility of the SAP/AP for the site. | |
|  | **The Site Safety Document Book will contain:**   1. On issue Permits to Work 2. On issue Sanctions for Test 3. On issue Limitations of Access 4. Cancelled Permits to Work 5. Cancelled Sanctions for Test 6. Cancelled Limitations of Access 7. Request for Electrical Power; Request for Isolation/Disconnection 8. Competency Check List 9. Formal Handover of HV/LV Network; Pre-start Audit 10. Appointment Letters; ESSW Risk Assessment/Work Package Plan/Method Statement; and Assessment Request | |
|  | **The Site Log Book will contain:**   1. The Safety Programme Switching Operations Log Sheet and diagram. 2. Permit to Work Log Sheets 3. Sanction for Test Log Sheets 4. Limitation of Access Log Sheets 5. Energisation Log Sheet (Blanks for use in Test Packs) | |
| **TESTING** | Testing in this Electrical Safety Procedures means testing of HV/LV electrical systems, and defined as follows; | |
| QUALITY TEST/ TESTING | Applying test voltages, currents or signals for the purposes of proving insulation, continuity or other characteristic of isolated electrical equipment (for example, before a permanent electrical installation is energised from any source(s) of electrical energy. | |
| FUNCTIONAL TEST/ TESTING | Proving a sequence of operations or the measuring of electrical characteristics of live Electrical Equipment (for example, diagnostic testing of faulty equipment). | |
| TEST PACKS | Test packs should be set up as early as practicable, and shall be controlled by the SAP/AP as part of their duties, and should include the following –  Copy of blank input test sheet(s)for completion by the nominated testers – type as required  Copy of drawings covered by the designated Switchgear/Distribution Board for As Fitting by the nominated testers  Copy of the Energisation Log for completion by the Nominated testers on final energising of individual circuits. | |
| HV TESTING | All HV switchgear to be tested to BS E– 62271 – High Voltage Switchgear and Control Gear.  All HV cables to be tested in accordance with the latest applicable regulations for the works.  Where the system(s) under test is connected to the Distribution or Clients system then defined demarcation and boundaries shall be agreed prior to any testing being carried out. A Sanction for Test is also mandatory for all tests on HV systems or equipment and any testing to be carried out on a circuit which is live.  Where the system(s) and equipment under test are not connected to the Distribution or Clients system, with the source of the test derived from an LV source, it is permissible for this Sanction for Test to be issued by the relevant LV SAP/AP. | |
| LV TESTING | All dead tests must be carried out as detailed in the IET BS 7671 Regulations Guidance notes 3 before any circuit is energised.  A Sanction for Test is also mandatory for all live/functional tests on LV systems or equipment.  NB – prior to any energisation of mains / sub mains cabling, it is encouraged to carry out a basic I.R. test, if initial dead tests were completed over 4 weeks previous. | |
| ON SITE FLASH TESTING | This does not need to be covered by the ESSW for the project, but MUST be detailed in the subcontractors Risk Assessment / Method Statement | |
| **SAFETY DOCUMENT CONTROL SYSTEM** | A site or project specific Risk Assessment (RA) and Work Package Plan (Method Statement) (WPP) which shall define the limits of the safe systems of work will be produced by the Site Lead.  The RA/WPP will define all interfaces with existing electrical systems. The RA/WPP shall also confirm the safe system of work which is being used in relation to the existing system together with the contact details for the SAP/AP controlling the system.  Where more than one power supply is present at a single item of equipment the RA/WPP shall confirm the isolation procedure (Safety Programme Switching Operations Log Sheet) and safety documents that are required before work may commence. | |
| **LIVE WORKING PROCEDURE – *ONLY APPLICABLE AS A LAST RESORT*** | A procedure detailing guidelines on the actions to be taken by Site Lead to assess work, identifying why the system cannot be made dead and with the assistance of the Authorising Engineers detailing how the risks are being minimized and prepare a work specific Live RA/WPP to mitigate those risks that still exist.NB – following this process may require permission from the client / responsible person to carry out live working, and can be discussed during the Request for Isolation process. | |
| **WORKING ON OR NEAR\* EXPOSED ELECTRICAL CONDUCTORS OR COMPONENTS.** EXAMPLES OF LIVE WORKING:- | * HV Jointing * Installing new circuit in energised Switchgear / Distribution Board * Adding or removing equipment or accessories from a live circuit * Battery equipment, including the installation of batteries above 48v. * Photo Voltaic / Wind turbine equipment   \* Examples of near exposed conductors or components are:   * HV cable chambers / trenches * Working in a control cabinet alongside unshrouded terminals which are live. * Any work within adjacent to unshrouded or uninsulated electrical conductors and connections. * Containment / cableways containing single insulated cables * The above list is not exhaustive, BUT all specific risks and their required controls shall be discussed and agreed with the Authorising Engineer prior to any works being carried out.   **All live LV functional testing is not classed as live working for the purposes of this Safe System of Work and will be controlled under a Sanction for Test** | |
| **DUTY HOLDER** | The Duty Holder shall be the organisation in charge of the designated electrical system and shall be responsible for switching operations and the issue of all Safety Documents. For example, this could be the client, their appointed representative, the Company or Company appointed specialist sub-contractor. | |
|  | **Under NO CIRCUMSTANCES should a situation be allowed to arise where separate power supplies to a single item of equipment are controlled by more than 1 duty holder.** | |
| **HV SAFETY DISTANCES** | 1. The Safety Distances (designated ‘X’ in Table 1 below) shall be maintained at the respective System voltages between any part of the person or object and the nearest exposed Live High Voltage Conductor. 2. A distance of 300mm shall also be maintained, at all System voltages, from the portion of insulators supporting Live High Voltage Conductors which is outside the appropriate Safety Distance from the Conductors. | |
|  | **Table 1 – Safety Distances**   |  |  |  |  | | --- | --- | --- | --- | | Nominal **System**  Voltage | | Safety  Distance ‘X’ | | | Up to and including | but not exceeding | 33kV | 0.8m | | Exceeding 33kV | but not exceeding | 66kV | 1.0m | | Exceeding 66kV | but not exceeding | 132kV | 1.4m | | Exceeding 132kV | but not exceeding | 275kV | 2.4m | | Exceeding 275kV | but not exceeding | 400 kV | 3.1m | | Exceeding 400kV | Follow the Safety Distances of the Asset owner | | | | |
| **LIVE** | A conductor or conductive part which is electrically charged under normal use and will show an indicated voltage on an approved voltage tester. | |
| **DEAD** | A conductor or conductive part which has been isolated from its supply source(s) and has an indicated voltage of zero to earth, neutral and any other phase on an approved voltage tester. | |
| **REASONABLY PRACTICABLE** | Balancing the level of risk against the measures needed to control the real risk in terms of money, time or trouble. However, you do not need to take action if it would be grossly disproportionate to the level of risk. | |

| INPUTS | | |
| --- | --- | --- |
| **Reference** | **Type** | **Title** |
| [HSF-RM-0068a](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1165) | Reference Material | Safe System of Work Selection Matrix |
| [HSF-RM-0068b](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1166) | Reference Material | Distribution Safety Rules |
| [HSF-RM-0068c](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1167) | Reference Material | Cable Cutting and Removal Process |
| [HSF-RM-0068d](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1168) | Reference Material | Elimination of Free Ends |
| [HSF-RM-0068e](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1169) | Reference Material | Electrical Safe Systems of Work |
| [HSF-RM-0042b](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-5192) | Reference Material | Limitation of Access |
| [HSF-RM-0068f-PTD](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-10843) | Reference Material | Impressed Voltage Control |
| [HSF-RM-0068g](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1158) | Reference Material | Portable Electric Tools |
| [HSF-RM-0068h](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-5190) | Reference Material | Portable Appliance Testing – Guidance for Office Managers |
| [HSF-RM-0068i-PTD](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-5189) | Reference material | Impressed Voltage Management Plan |
| None | [360 Web Page](https://home360.balfourbeatty.com/UKHealthandSafety/Pages/Electricity.aspx) | Electrical Safety Caution Notices and Signage |
|  | [Legislation](http://www.legislation.gov.uk/ukpga/1974/37/contents) | Health and Safety at Work Act 1974 |
|  | [Legislation](http://www.legislation.gov.uk/uksi/1989/635/contents/made) | Electricity at Work Regulations 1989 |
|  | HSE Guidance | HSE Guidance notes – hse.gov.uk and include, but not exhaustive of the following; |
| [HSR25](http://www.hse.gov.uk/pubns/books/hsr25.htm) |  | Memorandum of Guidance on the Electricity at Work Regulations. |
| [HSG85](http://www.hse.gov.uk/pubns/books/hsg85.htm) |  | Electricity at Work: Safe Working Practices |
| [HSG38](http://www.hse.gov.uk/pubns/books/hsg38.htm) |  | Test Equipment |
| [HSG141](http://www.hse.gov.uk/electricity/information/construction.htm) |  | Electrical Safety on Construction Sites |
| [BS7671](https://home360.balfourbeatty.com/bbcsuk/home/ToolsResources/Pages/IHS.aspx) | Regulation | IET Wiring Regulations. Requirements for Electrical Installations. |
|  | Regulation | IET Wiring Regulations Guidance Notes |
| [BS7375](https://home360.balfourbeatty.com/bbcsuk/home/ToolsResources/Pages/IHS.aspx) | British Standards | Distribution of Electricity on Construction and Building sites. |
|  | Legislation | Electricity Supply Quality and Continuity Regulations |
| [GS6](http://www.hse.gov.uk/pubns/gs6.htm) | HSE Guidance | Avoidance of Danger from Overhead Electric Lines |
|  | [Code of Practice](https://www.theilp.org.uk/resources/ilp-general-reports/gp03/) | The Institution of Lighting Engineers Code of Practice for Electrical Safety in Public Lighting Operations |
|  | [Legislation](http://www.legislation.gov.uk/uksi/2009/640/pdfs/uksi_20090640_en.pdf) | Overhead Lines (Exemption) Regulations |
|  | Legislation | Electricity Supply Regulations Street Lighting Exemption |
|  | [WebPage](http://www.thehea.org.uk/hers/) | HERS Handbook, NHSS 8 Procedure and associated documents |
| [BS EN IEC 62305](http://www-public.tnb.com/eel/docs/furse/BS_EN_IEC_62305_standard_series.pdf) | Guidance | Lightning Protection Standards |
| The above list is not exhaustive, but can be used to supplement these procedures, whilst the Company control of the system is in place, or as guidance when working for a client. | | |

| OuTPUTS | | | |
| --- | --- | --- | --- |
| **Reference No.** | **Document Title** | **Retention Period** | **Responsibility** |
| [HSF-SF-0068a](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1126) | ESSW Audit Check List – Sub Con | 6/12 Years | Site Lead |
| [HSF-SF-0068b](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1128) | ESSW Request for Isolation Disconnection | 6/12 Years | Site Lead |
| [HSF-SF-0068c](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1129) | ESSW-MSSW Section 9 Permit | 6/12 Years | Site Lead |
| [HSF-SF-0068d](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1130) | ESSW Assessment Request Form | 6/12 Years | Site Lead |
| [HSF-SF-0068e](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1131) | ESSW Audit Check List – Client | 6/12 Years | Site Lead |
| [HSF-SF-0068f](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1132) | ESSW Close Out Audit Check List | 6/12 Years | Site Lead |
| [HSF-SF-0068g](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1133) | ESSW Emergency Key Log Sheet | 6/12 Years | Site Lead |
| [HSF-SF-0068h](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1134) | ESSW Energisation Log Sheet | 6/12 Years | Site Lead |
| [HSF-SF-0068i](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1135) | ESSW Formal Handover of Control HV/LV | 6/12 Years | Site Lead |
| [HSF-SF-0068j](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1136) | ESSW-MSSW Limitation of Access | 6/12 Years | Site Lead |
| [HSF-SF-0068k](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1137) | ESSW Limitation of Access Log | 6/12 Years | Site Lead |
| [HSF-SF-0068l](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1138) | ESSW Permit to Work Log Sheet | 6/12 Years | Site Lead |
| [HSF-SF-0068m](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1139) | ESSW Permit to Work on Electrical System | 6/12 Years | Site Lead |
| [HSF-SF-0068n](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1140) | ESSW Request for Electrical Power | 6/12 Years | Site Lead |
| [HSF-SF-0068o](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1141) | ESSW Request for Live Working Justification | 6/12 Years | Site Lead |
| [HSF-SF-0068p](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1142) | ESSW Safety Programme Switching Diagram | 6/12 Years | Site Lead |
| [HSF-SF-0068q](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1143) | ESSW Safety Programme Switching Log | 6/12 Years | Site Lead |
| [HSF-SF-0068r](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1144) | ESSW Sanction for Test | 6/12 Years | Site Lead |
| [HSF-SF-0068s](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1145) | ESSW Sanction for Test Log Sheet | 6/12 Years | Site Lead |
| [HSF-SF-0068t](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1146) | ESSW Section 8 Audit Check List | 6/12 Years | Site Lead |
| [HSF-SF-0068u](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1147) | ESSW Section 9 Audit Check List | 6/12 Years | Site Lead |
| [HSF-SF-0068v](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1148) | ESSW Start Up Audit Check List | 6/12 Years | Site Lead |
| [HSF-SF-0068w](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1149) | ESSW Competent Person Induction Checklist | 6/12 Years | Site Lead |
| [HSF-SF-0068x](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1150) | ESSW Padlock Register | 6/12 Years | Site Lead |
| [HSF-SF-0068y](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1151) | ESSW Register of Authorised Persons | 6/12 Years | Site Lead |
| [HSF-SF-0068z](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1152) | ESSW Site Log Book | 6/12 Years | Site Lead |
| [HSF-SF-0068aa](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-1127) | ESSW Site Safety Document Book | 6/12 Years | Site Lead |
| [HSF-SF-0068ab](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-5187) | ESSW Section 9 Permit Log Sheet | 6/12 Years | Site Lead |
| [HSF-SF-0068ac-PTD](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-10840) | Impressed Voltage Control | 6/12 Years | Site Lead |
| [HSF-SF-0068ad](https://home360.balfourbeatty.com/ghoreferencecentre/Group%20BMS/_layouts/DocIdRedir.aspx?ID=2KHUWT73P6SE-1572-10839) | Site Lead ESSW Review | 6/12 Years | Site Lead |