

# 20 Risk Assessment & Method Statement



Investigation of Low Voltage Earth Fault – Fire Alarm System

Last Review Date: 05/10/2022

Next Review Date: October 2023

<b>Prepared by:</b> Neil Summerfield – Safety Advisor Sam Dean – Operations & Finance Manager Peter Wheatcroft – Managing Director	
<b>Approved by:</b> Peter Wheatcroft – Managing Director	<b>Issue:</b> 002
<b>Client:</b>	<b>Site:</b>
<b>Completed by:</b>	<b>Works carried out by:</b>

## Investigation of Low Voltage Earth Fault – Fire Alarm System

<b>Client</b>		<b>Contract Number</b>	
<b>Site Location</b>			
<b>Start Date</b>		<b>Finish Date</b>	
<b>Min Personnel</b>		<b>Max Personnel</b>	

Who might be harmed by the hazards identified?	Contractors		Yes/No/NA
	Visitors		Yes/No/NA
	Young Persons		Yes/No/NA
	General Public		Yes/No/NA
Are Permits to Work Required:	Yes/No	Permit Ref No.	
Has a site induction been given	Yes/No	Do all employees know the site safety rules?	Yes/No
PPE Requirements	Hard Hat		Yes/No/NA
	Safety Shoes		Yes/No/NA
	Eye Protection		Yes/No/NA
	High Visibility Clothing		Yes/No/NA
	Ear Defenders		Yes/No/NA
Has the above PPE been issued to all employees?	Yes/No	Any special requirements?	

Has all electrical Equipment been PAT tested and is it displaying a current label?	Yes/No/NA		
Has any equipment on hire been checked for certification and established as safe to use?	Yes/No/NA		
Has all equipment including 'A' Frame Ladders/Ladders been checked and established as safe to use?	Yes/No/NA		
Plant and Machinery isolation (Electrical)	Yes/No/NA	Details of Isolation	
Can Manual Handling operations be carried out safely?	Yes/No/NA		
Have any mobile lifters including MEWPS, Scissor Lifts, Mobile Booms been checked and established as safe to use?	Yes/No/NA		
Has any lifting equipment been checked and established as safe to use?	Yes/No/NA		

To carry out an investigation of a potential earth fault on the fire alarm system. This will comprise of our engineer attending the site and carrying out a series of tests to establish a potential earth fault on the fire alarm system. This may involve the use of stepladders, ladders, or mobile platforms. The process carried out is detailed in the method statement

Firstly, we will confirm that this Risk Assessment is relevant and accurate in relation to the activity at hand. In conjunction with any Site Supervisor/Responsible Person/Informed Person present on-site we will ascertain any hazards and associated risks outside the scope of these RAMS; for example, issues associated with other trades or the general public being present on-site, issues with access/egress, issues with obstructions, obstacles, uneven surfaces, issues with lone working, etc.

Should additional hazards and associated risks be identified a dynamic risk assessment will be undertaken and reasonable protection control measures will be detailed and put in place.

All Fixfire engineers will ascertain whether a site induction will be conducted by Supervisor/Responsible Person/Informed Person at site and will attend the required site induction before commencing any works on site. In instances where site inductions do not form part of the customer's Health & Safety process, Fixfire engineers will instead carry out a site induction with relevant parties as necessary.

All health and safety information and site arrangements that are updated throughout the term will be communicated to employees upon receipt of the information.

The risk assessments and method statement will be reviewed upon attending the site to ensure all hazards are addressed and any hazards outside of the scope of this generic assessment will be noted and communicated in a dynamic risk before the commencement of works.

The engineer carrying out the works will be required to read and familiarise themselves with the hazards identified within the risk assessment and confirm that the safe system of work has identified any hazards and the methodology has carefully considered these during its completion.

#### Risk Rating Calculation

Risks identified can be scored as to severity, frequency of exposure and the probability of the accident occurring.

Description	Score	Description	Score	Description	Score
MINOR Scratch/Bruise/Cut	1	SELDOM Four Times per Year	1	UNLIKELY	1
SERIOUS Fracture, Breakage, Laceration	3	OCCASSIONAL Weekly or Monthly	2	POSSIBLE	2
MAJOR Temporary disability	6	FREQUENT Daily and hourly	4	PROBABLE	3
FATAL Death or Permanent disability	10			CERTAIN	6

RISK RATING TABLE						AGREE ACTION TO BE TAKEN TO ELIMINATE OR REDUCE MEDIUM AND HIGH RISKS													
LOW RISK						MEDIUM RISK						HIGH RISK							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

$$S+F+P = \text{RISK RATING}$$

## Risk Assessment & Method Statement

### Investigation of Low Voltage Earth Fault – Fire Alarm System

Activity	Persons at risk	Significant hazard/s	Severity	Frequency	Likelihood	Score	Risk Factor	Additional Action/Control Measures
Access & Egress	Fixfire Engineer(s)	Stepping on/ striking against falls-holes exposed edges	3	1	2	6	Low	Secure working area from 3rd parties and always kept clean and tidy. Whilst walking your working area, stay aware of possible hazards that may be present. Report any hazards.
Falls from height ladders	Fixfire Engineer(s)	Fall from height	6	1	3	10	Med	Ladders are only to be used when other methods are not practicable, and their use justified by a written risk assessment. Maintain 3 points of contact, and never lean back or front onto ladders and take regular breaks every 30 mins use before rest. Visually inspect ladders before use. Consult HSE guidance doc INDG 45.
Falls from height 'A' frame ladders	Fixfire Engineer(s)	Fall from height.	6	1	3	10	Med	'A' frame ladders are only to be used when other methods are not practicable, and their use justified by a written risk assessment. Maintain 3 points of contact, and never lean back or front onto ladders and take regular breaks every 30 mins use before rest. Visually inspect ladders before use. Consult HSE guidance doc INDG 45.
Falls from height Use of MEWP (Scissor lifter)	Fixfire Engineer(s)	Fall from height. Incorrect use & position of MEWP	10	1	3	14	High	MEWP to be inspected before use. ONLY trained and competent IPAF operators to be used. Banksman to be positioned during works and ladders segregated with signage placed. Appropriate Safety harness to be worn in accordance with IPAF training. Engineer MUST NOT overreach, repositioning necessary. Refer to working at height policy
Any task involving works in a loft void	Fixfire Operative(s)	Lack of illumination	3	4	3	10	Med	Engineers trained to work in loft voids Engineers to confirm lighting prior to work Engineers to equip with torches and/or portable floodlights. DO NOT work in loft voids using handheld torches alone. Where there are fixed lights present, engineers to ensure "Do not switch off men working" Engineers carry torches in case of light failure

## Investigation of Low Voltage Earth Fault – Fire Alarm System

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Activity	Persons at risk	Significant hazard/s	Severity	Frequency	Likelihood	Score	Risk Factor	Additional Action/Control Measures	High or Medium Risk Level				
									S	F	L	Score	Risk Factor
Any task involving works in a loft void	Fixfire Operative(s)	Access to the loft void by ladder, fixed loft ladder, or steps	6	4	3	13	High	All engineers trained in ladder safety. Engineers to assess the condition of fixed loft ladders prior to use. If any damage is found to a fixed loft ladder it is reported to the site and is not used. Where access is via a loft hatch, engineers MUST assess the size, condition and suitability of hatch for access. Where it is found to be not suitable, the hatch is not used. If using A frame ladders to access through the loft hatch they must be of the correct type (EN131) and right height to access safely with handrail. They must be on firm level ground and footed. 3 Points of contact must be maintained when ascending or descending stepladders. Cordon of the area around the access equipment and post warning signs. See HSE guidance INDG 455	6	4	2	12	Med
Any task involving works in a loft void	Fixfire Operative(s) Persons below	Falls due to stepping/slipping through plasterboard ceilings while accessing place of work.	6	4	3	13	High	Engineers are trained to work in loft voids. Voids are visually inspected before proceeding further. Access to work should be via gangway/walkway with handrails either side or, where handrails are not practicable, via securely fixed boarding and other secure mechanical features that ensure a minimum of 3-point of contact at all times. If permanent boarding is not installed temporary platforms may be used provided they are positioned securely across the joints, ceiling joists must be fully visible to allow safe deployment Access should be limited to short durations only.	6	4	2	12	Med
Any task involving works in a loft void	Fixfire Operative(s) Persons below	Falls due to timber failure	6	4	3	13	High	Engineers trained to work in loft voids. Engineers look for any signs of timber failure, splits, cracks, dry rot, wet rot, woodworm etc, and if found the works are halted the site agent informed, and expert advice sought.	6	4	2	12	Med

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Activity	Persons at risk	Significant hazard/s	Severity	Frequency	Likelihood	Score	Risk Factor	Additional Action/Control Measures	High or Medium Risk Level				
									S	F	L	Score	Risk Factor
Any task involving works in a loft void	Fixfire Operative(s)	Confined Space	6	2	2	10	Med	Engineers trained to work in loft voids. Engineer to evaluate the risks involved and preventative measures necessary for a confined space. If roof void is classified as a confined space, then a permit to work must be obtained, this must include: Permit holder Entrant Attendant	6	1	2	9	Med
Electricity up to 230v (Fire Alarm Panel)	Fixfire Engineer(s)	Electrocution, electrical burns, fire	10	1	2	13	High	ONLY trained and competent fire engineers to work within the fire alarm panel and ONLY for testing procedures. Under <u>no circumstances</u> must any electrical works be carried out.	10	1	1	12	Med
COSHH	Fixfire Engineer(s)	Absorption, inhalation, ingestion Eye contact of substances	1	1	2	4	Low	See individual COSHH assessments for all control measures. Wash hands prior to eating to avoid possible ingestion of substances. Check each substance is the correct one before use.	1	1	1	3	Low
Lone Working	Fixfire Engineer(s)	Engineer becomes ill or has an accident	6	1	2	9	Med	Confirm engineer is medically fit to work, ensure regular two-way communication is in place with onsite supervision. Use a sign in and out system. Confirm acceptable temperature for working environment.	6	1	1	8	Med
Moving machinery/ Vehicles	Fixfire Engineer(s)	Injury from collision	6	1	2	9	Med	All operatives to receive site induction including awareness of vehicle routes. Hi-Viz vest & appropriate PPE to be worn at all times. Segregation where practicable of personnel/vehicles, reversing.	6	1	1	8	Med
3rd Party	General Public	Collision, trip, slips & falls	3	1	2	6	Low	Engineer will work in isolation and test only in areas where there is limited or no interference with the general public	3	1	1	5	Low

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DETAILED METHOD STATEMENT (State precisely the tasks that you will complete when completing the work)	
	Method Statement (Investigation of Low Voltage Earth Fault – Fire Alarm System)
	<b>During the visit various checks are carried out to ascertain the cause of the potential earth fault on the fire alarm system.</b>
1.	<p>The Fixfire engineer will firstly sign in and carry out a safety induction. All equipment brought onto the site will be fit for purpose and inspected and tested prior to commencement of works.</p> <p>The following methodology has considered all the hazards associated with the works and a safe system of work produced.</p> <p><b>First Aid &amp; Evacuation</b></p> <p>Our engineers will be advised of actions to be taken in the event of an accident or incident at the Safety Induction. Accidents and Near Misses will be reported to the Client's Site Supervisor and Fixfire Head Office and will be recorded in the Fixfire accident book. In the event of an accident, the Client's supervisor will contact the emergency services if appropriate.</p> <p>In the event of an emergency evacuation of the building, the engineer will go straight to the muster point as detailed in the induction. The engineer will assemble at this point where a roll call will be taken. In an emergency, any instructions given must be obeyed by the engineer.</p> <p><b>Lone Working</b></p> <p>There may be on occasion the need to work 'Lone' when either in a plant room or during agreed weekend working. Fixfire will confirm that the Engineer who will carry out any 'Lone Working' is medically fit to work in the agreed environment and will ensure that regular two-way communication by phone or radio is in place with either the site supervisor or the office. The Engineer will use the sign-in/out system in place on-site and will confirm there is no hazard present from extremes in temperature in the working area. Lone working will be for short periods ONLY.</p> <p><b>Equipment Used</b></p> <ul style="list-style-type: none"> <li>a) Multimeter</li> <li>b) Potential to use – Stepladders/A 'Frame ladders/ladders or loft ladders/MEWP or Scissor Lift</li> </ul> <p><b>Safe Use of Ladders</b></p> <p>Use ladders for short duration works and for a maximum of 30 minutes before a rest break should be taken. A minimum of 3 points of contact will be maintained, and stepladders to be placed on firm level ground and facing in the direction of the works. Stepladders will be positioned side onto the work as may become unstable when pressure or force is applied. Stepladders will be inspected before use, consulting HSE Guidance document INDG 455.</p> <p><b>Safe Use of MEWPS/Scissor Lifts/Mobile Booms</b></p> <p>Equipment to be inspected before use and Working at Height Policy to be followed ONLY trained and competent IPAF operator to use lifter with banksman to be positioned during works Area to be segregated with signage placed. Appropriate Safety harness to be worn in accordance with IPAF training. Engineer MUST NOT overreach, reposition MEWP as necessary</p> <p><b>Commencement of works as follows:</b></p>
2.	Any monitoring services will be notified the system is being worked on and taken out of service for the appropriate period.
3.	The engineer will notify the appropriate contact at site of any sections of the fire alarm system not covered whilst investigation works take place.
4.	Any equipment required for working at height, such as Stepladders, A Frame Ladders or ladders will be inspected before use and the appropriate measures taken to reduce the level of risk, as set out above.
5.	Any Scissor Lift/MEWP/Mobile Boom required will be inspected before use and the appropriate measures taken to reduce the level of risk, as set out above.
6.	<p>Where engineers are required to access roof voids and or loft spaces, they will:</p> <ul style="list-style-type: none"> <li>-be aware cables are often routed through loft voids and ensure cables are not loose laid and are safety secured.</li> <li>-be aware of asbestos, reporting any material if unsure of composition.</li> <li>-check for any damage to structure of the area, such as damp or woodworm.</li> <li>-inspect any available loft ladder before use and if in doubt, will not use.</li> <li>-be aware loft hatches may be small and will ensure that any materials or equipment will safely pass through the hatch.</li> <li>-look for an additional escape hatch, where this is not fitted, they will establish a confined space procedure in the event of an emergency.</li> <li>-use suitable existing lighting, where not available, the engineer will ensure suitable temporary lighting is used before commencing work. Hand-held torches will not be used as the only means of illumination.</li> <li>-ensure there is a gangway/walkway including handrails OR boarding of a suitable strength and at least 2.5 metres in all directions from work area to exposed edges.</li> <li>-ensure untrained personnel do not work in a loft space alone</li> <li>-ensure working in a loft is kept to a minimum, and never for periods of over 10 mins where verbal communication is not possible</li> <li>-wear PPE appropriate to the task</li> </ul>

## Investigation of Low Voltage Earth Fault – Fire Alarm System

### DETAILED METHOD STATEMENT (Continued)

6.	The engineer will commence identifying the location of the earth fault, methodically following a process of elimination. Disconnecting all connections to the fire panel, establishing if the fault is on a circuit or within the panel. Establishing if the fault is positive or negative to earth using a Multimeter or the diagnostic tools built into the fire panel. Further pinpointing the issue following the procedure set out on the 'Fixfire Procedure to Trace Earth Faults using a Voltmeter'
7.	Once the fault has been identified, the engineer will rectify the issue if applicable to do so.
8.	Once works or checking has completed, any isolated sections will be placed back into service.
9.	All monitoring devices will be reinstated and placed back into service, with checks made to the monitoring station to ensure signals have been received.
10.	Once servicing is concluded, the Fire Logbook will be updated, and inspection records completed. Any works carried out and/or further works required will be communicated to the appropriate person at the site.
11.	All equipment will be removed from site and the area of works left in a clean and tidy condition. The engineer will sign out.
	IF IN DOUBT, ASK

Approved by Manager:.....

Print: .....

All employees/contractors involved in the above task must be made aware of the findings of the above risk assessment & method statement.

#### EMPLOYEE(S)/CONTRACTOR(S) TO SIGN BEFORE ANY WORK IS CARRIED OUT

Print Name: .....  
 Sign: .....  
 Date: .....

Print Name: .....  
 Sign: .....  
 Date: .....



