



Risk assessment and method statement

Electrical RAMS

Electrical installation, alteration and testing. Pre-filled with typical hazards, controls and sequence: edit it for this site.

PROJECT

SITE ADDRESS			
ACTIVITY		RAMS REFERENCE	
Electrical installation, alteration and testing			
CONTRACTOR CARRYING OUT THE WORK		PRINCIPAL CONTRACTOR	
PREPARED BY	APPROVED BY	REVISION	DATE

Revision record

Reissue and rebrief when the sequence, the programme, the team or the conditions change. If you would have written it differently had you known, it needs a new revision.

REV	DATE	WHAT CHANGED	BY

THE WORK

The activity, the place and the people

Pre-filled for this kind of work. Make every line specific to this site: this sequence, this access, these people, this weather.

Scope of the activity

What is being done, and what is not included.

MHSWR REGULATION 3(1)

Installation of [containment, wiring, distribution boards and final circuits] to the drawings, alterations to existing circuits, and inspection and testing to BS 7671 with certification. Includes safe isolation of existing circuits in the work area. Live testing only as authorised in this RAMS. Not included: [list any exclusions].

Location and access

Where on site, how people and materials get there, and the restrictions.

Site access via [gate]. Points of isolation at [board or switch room ref], with keys held by [name]. Materials stored at [area]. Work in occupied areas from [time] to [time], with supply interruptions agreed with [client contact].

Programme and interfaces

When the work runs, and who else is working nearby.

CDM REGULATION 15(2)

START DATE

DURATION

WORKING HOURS

INTERFACES WITH OTHER TRADES

Other trades in the same areas: [trades]. They are told before any circuit is isolated or restored. Isolations made by others, such as the building owner or another contractor, are confirmed in writing before work starts.

Documents this RAMS relies on

Drawings and circuit schedules [ref]; existing installation records [ref]; asbestos register or survey [ref]. Utility drawings for any digging; construction phase plan; permit to work where required; BS 7671 certificates.

The team, and their competence

CDM REGULATION 8

ROLE	NAME	CARD, TICKET OR TRAINING NEEDED	CONTACT
Electricians		ECS card for the grade of work, issued through the JIB, with apprentices and trainees supervised.	
Supervisor		An experienced electrician on site, setting supervision by each person's competence and the work.	
Testers		Competent in inspection and testing to BS 7671, and in the safe use of instruments under GS38.	
Live work		Only people with the knowledge and experience for that task, named in the written authorisation.	
Access equipment		PASMA training for mobile towers and IPAF for MEWPs.	
Asbestos		Asbestos awareness training for everyone liable to disturb it.	

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METHOD STATEMENT

The sequence of work

The order the team will work in on the day, with the controls built into each stage. If the sequence changes on site, revise the RAMS and brief it again.

STAGE	WHAT IS DONE, AND HOW	CONTROLS AT THIS STAGE	BY
Before the day	Visit the site and confirm the scope, drawings, existing installation records, the asbestos information and the points of isolation. Agree any supply interruptions with the client and occupier.	Drawings and records on site; asbestos information checked; RAMS approved by the principal contractor.	Contracts manager
Arrival and briefing	Sign in, attend the site induction, then brief the team on this RAMS, the isolation procedure and the emergency arrangements. Check test equipment, locks and tools.	Briefing signed against this revision; ECS cards checked; voltage indicator and proving unit checked.	Supervisor
Identify the circuits	Identify every circuit and source of supply in the work area from drawings, labels and testing. Look for back-feeds, generators, solar inverters and batteries.	Labels never relied on alone; anything that cannot be identified is treated as live.	Electrician
Isolate and lock off	Switch off, then isolate at a lockable device. Fit a personal lock, keep the key, and post a caution notice at the point of isolation.	Tape over a breaker is not isolation; a multiple-lock hasp where more than one person works on the circuit.	Electrician
Prove dead	Prove the voltage indicator on a proving unit, test every conductor at the point of work, then prove the indicator again.	Two-pole voltage indicator to GS38; no multimeters or non-contact testers for proving dead.	Electrician
Install or alter	Carry out the work: containment, wiring, accessories and equipment. Shroud or barrier any live parts nearby.	Access equipment chosen by the work at height hierarchy; extraction for chasing; area barriered.	Electricians
Inspect and dead test	Inspect the work, then carry out the dead tests, such as continuity and insulation resistance, with the circuit still isolated.	Instruments in calibration; others warned and kept clear before insulation resistance tests.	Tester
Energise and live test	When everyone is clear, remove the locks and restore the supply. Then carry out the tests that need it live, such as earth fault loop impedance and RCD tests.	Live tests by competent testers only, with barriers and danger notices; covers back on as soon as possible.	Tester
Certify and hand over	Complete the certificate for the work to BS 7671, update circuit charts and labels, and explain the installation to the client.	Results recorded on the schedule of test results; any defects reported in writing.	Supervisor
Clear the site	Remove waste cable, offcuts and packaging, take down barriers and hand the area back to the site manager.	No board left open; every circuit left safe and labelled.	Supervisor

CDM REGULATION 15(2): PLAN, MANAGE AND MONITOR THE WORK

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RISK ASSESSMENT

Hazards, controls and the risk that remains

Each significant hazard rated before and after its controls, as likelihood times severity. The ratings are typical: check them for this site.

LIKELIHOOD

SEVERITY

5	5	10	15	20	25
4	4	8	12	16	20
3	3	6	9	12	15
2	2	4	6	8	10
1	1	2	3	4	5
	1	2	3	4	5

1 to 4 low

5 to 12 medium

15 to 25 high

HAZARD	WHO COULD BE HARMED, AND HOW	RISK BEFORE	CONTROLS	RISK AFTER	BY
Shock from circuits thought to be dead	Electricians on circuits that are wrongly identified, back-fed, or switched back on by someone else.	4 x 5 = 20 High	- Circuits identified from drawings, labels and testing, never a label alone, with every source of supply found, including generators and solar inverters. - Isolated at a lockable device with a personal lock and unique key, and a caution notice at the point of isolation. - Proved dead at the point of work with a two-pole voltage indicator, itself proved before and after the test.	1 x 5 = 5 Med	Electrician
Live working	Electricians testing, fault-finding or working where the supply cannot reasonably be made dead.	3 x 5 = 15 High	- Live work only where it is unreasonable to work dead, reasonable to work live, and suitable precautions are taken, as EAWR regulation 14 requires. - Each live task justified in writing and authorised before it starts, with insulated tools, shrouding, barriers and suitable PPE. - Where the risk calls for it, a second person trained to recognise danger, switch off and help stays close by.	1 x 5 = 5 Med	Supervisor
Testing and inspection	Testers, and anyone near a board with its covers off while tests are carried out.	3 x 5 = 15 High	- Instruments and leads to GS38: CAT rating suited to the installation, finger barriers on probes, and fused leads where the risk assessment calls for them. - Dead tests done first; live tests kept to those that need the supply on. - Covers off only while needed, with the area barriered and a danger notice displayed.	1 x 5 = 5 Med	Tester
Arc flash and burns at boards and intakes	Electricians working on or beside distribution boards, busbars and supply intakes.	2 x 5 = 10 Med	- Work on boards and intakes done dead wherever possible, with the supply side of any isolator treated as live. - Adjacent live parts shrouded or barriered, and danger notices posted on them. - Flame-resistant clothing and face protection where the assessment identifies an arc risk.	1 x 5 = 5 Med	
Restoring the supply	Anyone still working on the circuit, and occupants, when the supply is switched back on.	3 x 5 = 15 High	- Locks removed only by the person who fitted them; a multiple-lock hasp where several people work under one isolation. - Supply restored only after checking that everyone is clear and all tools, earths and covers are removed or refitted.	1 x 5 = 5 Med	Electrician
Hidden cables in existing buildings	Electricians and other trades drilling or chasing into walls, ceilings and floor voids.	3 x 5 = 15 High	- Existing services surveyed before work; cables in roof spaces, ceiling voids and floor voids treated as live until proved dead. - Cable detector used before drilling or chasing. Non-contact detectors help find cables but are never used to prove dead.	2 x 5 = 10 Med	
Buried cables	Anyone breaking ground for cable runs, earth rods or lighting column bases.	3 x 5 = 15 High	- Utility drawings checked, then the route scanned with a cable avoidance tool and signal generator by a trained operator, as HSE guidance HSG47 describes. - Cable positions marked on the ground and confirmed by trial holes dug with safe digging methods before any mechanical excavation.	1 x 5 = 5 Med	
Overhead power lines	Operatives using ladders, MEWPs or long materials near external overhead lines.	2 x 5 = 10 Med	- Overhead lines within 10 metres of the work identified before work starts, as HSE guidance GS6 advises. - Line owner consulted to divert or switch off the line; otherwise barriers and goal posts keep plant and materials at a safe distance.	1 x 5 = 5 Med	

MHSWR REGULATION 3(6): WITH FIVE OR MORE EMPLOYEES, RECORD THE SIGNIFICANT FINDINGS

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RISK ASSESSMENT, CONTINUED

More hazards, and those specific to this site

HAZARD	WHO COULD BE HARMED, AND HOW	RISK BEFORE	CONTROLS	RISK AFTER	BY
Temporary site supplies	Everyone on site using temporary lighting, tools and distribution boards.	3 x 5 = 15 High	- Temporary system designed and installed by a competent electrical contractor to BS 7671, with 110V centre-tapped earth for lighting and tools where battery tools are not used. - Any 230V socket protected by an RCD, checked daily with its test button. - Distribution system inspected and tested every 3 months, with the records kept on site.	1 x 5 = 5 Med	
Asbestos in older buildings	Electricians drilling, chasing or lifting floors in buildings built or refurbished before 2000.	3 x 5 = 15 High	- Asbestos register or refurbishment survey checked before work; materials not covered by it are presumed to contain asbestos until sampled. - Work stops and the area is left if suspect material is found or disturbed. - Asbestos awareness training for everyone liable to disturb it, repeated at regular intervals.	1 x 5 = 5 Med	
Work at height on containment and lighting	Electricians installing tray, trunking, luminaires and cabling at high level.	3 x 5 = 15 High	- Height avoided where possible, for example by assembling containment runs at ground level. - Podium steps, mobile towers or MEWPs chosen ahead of ladders, with PASMA training for towers and IPAF for MEWPs. - Ladders only for short, low-risk tasks, checked before use and secured.	1 x 5 = 5 Med	
Working in occupied buildings	Occupants, staff and the public in homes, offices, schools or shops during the work.	3 x 4 = 12 Med	- Supply interruptions agreed with the occupier in advance, with vulnerable occupants and essential equipment identified first. - Work area barriered, open boards never left unattended, and every circuit left safe and labelled at the end of each day.	1 x 4 = 4 Low	
Dust and noise from chasing and drilling	Electricians chasing walls or drilling masonry, and others nearby.	4 x 3 = 12 Med	- Chasing done with on-tool extraction suited to the dust, or a wet method where practicable. - FFP3 or other suitable RPE, face-fit tested, where extraction alone does not control the dust. - Hearing protection where the noise assessment calls for it.	2 x 3 = 6 Med	
Manual handling of drums and equipment	Electricians and labourers moving cable drums, boards, switchgear and containment.	3 x 3 = 9 Med	- Cable drums run out from drum stands or jacks; heavy boards and switchgear moved on trolleys or with lifting aids. - Long containment lengths carried by two people, on routes kept clear.	2 x 3 = 6 Med	

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EQUIPMENT

Plant, equipment and PPE

Plant and equipment			Each item, the checks and certificates it needs, and who may operate it.
PUWER 1998, LOLER 1998			
ITEM	CHECKS AND CERTIFICATES		OPERATOR COMPETENCE
Voltage indicator and proving unit	Indicator proved before and after each test; probes and leads to GS38.		Each electrician
Multifunction tester	In calibration; leads and probes checked before use.		Competent tester
Lock-off kit and caution notices	Personal locks with unique keys; a hasp for multiple locks.		Each electrician
110V tools and transformers	Pre-use check; inspected and tested at the site interval.		Trained user
Cable avoidance tool and signal generator	Checked to the maker's instructions before each use.		Trained operator
Podium steps, towers and MEWPs	Pre-use checks; towers inspected after erection.		PASMA or IPAF trained

Personal protective equipment			PPE is the last line of defence, after the controls above. Specify the type, not just the item.
PPE AT WORK REGULATIONS 1992			
ITEM	NEEDED	TYPE AND SPECIFICATION	
Safety helmet	☒	To site standard	
Safety footwear	☒	Safety boots with toe protection	
High-visibility clothing	☒	To site standard	
Gloves	☒	Insulating gloves rated for any live work	
Eye protection	☒	For drilling, chasing and cutting	
Hearing protection	☒	Where the noise assessment requires it	
Respiratory protection Type, and face-fit tested	☒	FFP3, face-fit tested, for chasing dust	
Harness or restraint Anchor points identified	☐		

CONTROLS

Substances, permits, emergencies and the environment

Hazardous substances		Each substance and its COSHH assessment.
COSHH 2002, REGULATION 6		
SUBSTANCE	COSHH ASSESSMENT REFERENCE	CONTROLS
Silica dust from chasing and drilling	COSHH assessment ref	On-tool extraction or wet cutting; FFP3 RPE, face-fit tested
Cable lubricants and cleaning solvents	COSHH assessment ref	Use as the safety data sheet directs; gloves; good ventilation
Fire-stopping sealants and foams	COSHH assessment ref	Use as the safety data sheet directs; gloves and eye protection

Permits and plans

PERMIT OR PLAN	NEEDED	REFERENCE
Hot work permit	☒	
Permit to work	☒	
Permit to dig or break ground	☒	
Confined space entry	☐	
Lift plan	☐	
Temporary works design	☐	

Emergency and rescue	If someone is in contact with a live conductor, do not touch them until the supply is off. Switch off at the isolator, or break the contact with insulating material. Call 999 and give CPR if trained. First aider and kit on site, and the nearest accident and emergency department named on the briefing.
First aid, fire, and how someone is rescued. The rescue plan belongs in the RAMS, not after it.	

Environment and neighbours	Waste cable, metal offcuts and packaging separated for recycling. Lamps and waste electrical equipment kept apart for specialist disposal. Noise from chasing and drilling kept to agreed hours in occupied buildings.
Dust, noise, vibration, waste, spills and hours of work.	

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ISOLATION RECORD

Safe isolation record

One line for each isolation: what was isolated, how it was secured, the proving dead check, and who restored the supply. Keep it with this RAMS until the work is complete.

CIRCUIT OR EQUIPMENT	POINT OF ISOLATION AND LOCK NUMBER	ISOLATED BY, DATE AND TIME	INDICATOR PROVED, TESTED DEAD, RE- PROVED	RESTORED BY, DATE AND TIME	NOTES
DB2, circuit 7, second floor lighting	DB2 breaker 7, lock-off device, lock 14	[Name], [date], 08:10	Yes, at the point of work	[Name], [date], 15:40	Caution notice fitted
Kitchen socket circuit, flat 3	Consumer unit, RCBO 3, lock 22	[Name], [date], 09:00	Yes, all conductors	[Name], [date], 12:30	Occupier told before restoring

ELECTRICITY AT WORK REGULATIONS 1989, REGULATIONS 12 AND 13; HSE HSG85, PARAGRAPHS 47 TO 56

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Briefed before the work starts

DATE AND TIME

A SIGNATURE AGAINST A REVISION, ON A DATE, BEFORE THE WORK STARTED, IS HOW A BRIEFING IS EVIDENCED

A pre-filled starting point, not legal advice. Edit it for the site and have it approved.