



Risk assessment and method statement

Confined space risk assessment

Entry into and work in a confined space. Pre-filled with typical hazards, controls and sequence: edit it for this site.

PROJECT

SITE ADDRESS			
ACTIVITY		RAMS REFERENCE	
Entry into and work in a confined space			
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)

Entry into [type of space, for example a foul water chamber] at [location], [depth] deep, to [describe the task]. Classed as a confined space because of [specified risk, for example hydrogen sulphide and possible lack of oxygen]. Entry only under this assessment and a signed entry permit. Not included: [list any exclusions].

Location and access

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

Site access via [gate]. Entrance at [location], guarded with barriers and signs, with traffic management where it is in the road. Entry by [ladder or step irons] with a tripod, winch and lifeline over the opening. Working hours [08:00 to 17:00]; no entry outside them.

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

Services and inflows isolated with [client or owner]: [list]. Other trades kept clear of the entrance. No vehicles, generators or hot work near the entrance without the supervisor's agreement.

Documents this RAMS relies on

Entry permit [ref]; entry log with gas readings in this template; isolation record; rescue plan; gas detector calibration certificate; LOLER report for the tripod and winch; drawings of the space and its connections.

The team, and their competence

CDM REGULATION 8

ROLE	NAME	CARD, TICKET OR TRAINING NEEDED	CONTACT
Entrants		Confined space training for the risk level of the entry: low, medium or high risk.	
Top person		Trained to control entry, keep the log, stay in contact, raise the alarm and start the rescue.	
Gas tester		Competent to test, read the results and act on them, with the records kept.	
Supervisor		Competent person who checks each precaution, issues the permit and may stay present throughout.	
Rescue team		Trained for their rescue role and practised, with refresher training set by how recently they last did it.	
Qualifications		City & Guilds 6160 is widely used; it replaced the 6150 series in December 2021.	

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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
Decide if entry is needed	Check whether the work can be done from outside, using cameras, probes, rods or long-handled tools, or by changing the task.	Reason entry cannot be avoided written into this assessment.	Supervisor
Plan the safe system	Assess the space, its connections and the work. Write the safe system of work, the rescue plan and the entry permit, and confirm everyone holds training for the risk level.	Competent person assesses the space; rescue arrangements ready before any entry.	Supervisor
Isolate and prepare	Isolate pipes, inflows, machinery and electrical supplies, and prove each isolation. Remove residues where possible.	Each entrant fits their own lock; isolation record completed and signed.	Supervisor
Set up the entrance	Barrier and sign the opening. Set up the tripod, winch and lifeline, the ventilation fan with its duct to the bottom of the space, communications and the rescue kit.	Fresh air drawn from a clean point; plant exhaust kept away from the entrance.	Top person
Test the atmosphere	From outside, test oxygen first, then flammable gas, then toxic gases, at the top, middle and bottom of the space. Record every reading on the entry log.	Calibrated detector with a response check that day; readings within the permit's limits before entry.	Gas tester
Issue the entry permit	Check every precaution on the permit is in place, brief the team on the permit and the rescue plan, and sign the permit.	Time limit on entry written on the permit; briefing signed against this revision.	Supervisor
Enter and work	Entrants go in on a lifeline wearing personal gas monitors. The top person logs each person in and out and stays in contact throughout.	Continuous monitoring; top person never leaves the entrance; time limits kept.	Top person
If an alarm sounds	Everyone leaves at once. The top person raises the alarm, calls the emergency services and starts the rescue plan from outside.	No entry to rescue without the training and breathing apparatus named in the plan.	Top person
Leave and close out	Everyone leaves and is checked out against the log. Remove equipment, replace the cover, remove isolations under control, and cancel the permit.	Head count matches the log before the permit is cancelled.	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

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

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
Lack of oxygen	Entrants in chambers, tanks, sewers, ducts and deep excavations, often with no warning.	3 x 5 = 15 High	- Atmosphere tested from outside before entry with a calibrated detector, oxygen first, at the top, middle and bottom. - Personal gas monitor worn by each entrant and the air monitored continuously while anyone is inside. - Forced ventilation where needed; oxygen never added to "sweeten" the air.	1 x 5 = 5 Med	Gas tester
Toxic gases	Entrants exposed to hydrogen sulphide in sewers and chambers, or carbon monoxide from engine exhaust.	3 x 5 = 15 High	- Toxic gases tested before entry and monitored throughout; everyone leaves at once if an alarm sounds. - No petrol engines in the space; generators, pumps and plant exhaust kept well away from the entrance and downwind. - Breathing apparatus where the air cannot be made safe to breathe, worn only by people trained in it.	1 x 5 = 5 Med	
Flammable gas, fire and explosion	Entrants and the top person, from methane, solvent vapour or leaking gas.	2 x 5 = 10 Med	- Flammable gas tested as %LEL before entry and monitored throughout, with entry stopped on alarm. - Lighting, radios and tools certified for explosive atmospheres where flammable gas is possible. - No smoking or naked flames; no gas cylinders inside; hot work only under a hot work permit.	1 x 5 = 5 Med	
Gas released from residues and sludge	Entrants disturbing silt, sludge or residues that hold trapped gas.	3 x 4 = 12 Med	- Residues removed or cleaned out before work where possible. - Air retested during the work, and continuously monitored while residues are disturbed. - Work stopped and the space left if readings change.	1 x 4 = 4 Low	
Fume and vapour from the work itself	Entrants welding, cutting, painting, or using solvents, adhesives or cleaning chemicals inside the space.	3 x 5 = 15 High	- Hot work, solvents and cleaning chemicals kept out of the space where the task allows. - Forced ventilation and continuous monitoring while the work runs; gas cylinders kept outside the space. - Breathing apparatus where ventilation cannot keep the air safe to breathe.	1 x 5 = 5 Med	
Flooding and inflow	Entrants in sewers, chambers and tanks fed by pipes, rain or groundwater.	2 x 5 = 10 Med	- Inflows isolated by blanks, stoppers or valves locked shut, and the isolation checked before entry. - Weather and upstream flows checked before and during work; work stopped when heavy rain is forecast. - Over-pumping arranged where flows cannot be stopped.	1 x 5 = 5 Med	
Machinery or services starting up	Entrants in plant rooms, tanks or chambers with pumps, agitators or live services.	2 x 5 = 10 Med	- Electrical and mechanical isolation, locked off, with each entrant holding their own lock. - Isolation proved before entry and stored energy released.	1 x 5 = 5 Med	Supervisor
Electric shock in metal or wet spaces	Entrants using lights and tools inside metal tanks or wet chambers.	2 x 5 = 10 Med	- Battery or extra low voltage lights and tools inside metal tanks and wet chambers. - Residual current devices where needed; leads and tools checked before use.	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
Heat, exertion and fatigue	Entrants working in hot, humid or cramped spaces, or wearing breathing apparatus.	3 x 3 = 9 Med	- Time inside limited and recorded on the permit, with breaks in fresh air. - Ventilation used to cool the space; drinking water at the entrance. - Entrants fit for the work and the equipment, with medical advice taken where needed.	2 x 3 = 6 Med	
Falls when entering or leaving	Entrants climbing ladders or step irons in shafts and manholes.	3 x 4 = 12 Med	- Step irons or ladders checked before use; a secured ladder used where irons are missing or damaged. - Entrants wear a harness on a lifeline from a tripod and winch over the opening.	1 x 4 = 4 Low	
No way to raise the alarm	Entrants who cannot be seen or heard from the entrance.	3 x 5 = 15 High	- Top person at the entrance throughout, keeping watch and in contact with those inside. - Agreed signals by voice, radio or lifeline, tested before entry; radios protected where flammable gas is possible. - Nobody works in the space alone.	1 x 5 = 5 Med	Top person
Rescuers overcome by the same conditions	Workmates who go in to help a collapsed entrant without protection.	3 x 5 = 15 High	- Rescue plan written and briefed before entry, with the kit set up at the entrance. - Nobody enters to rescue without the training and breathing apparatus the plan names. - Casualty raised by winch and lifeline from outside wherever possible.	1 x 5 = 5 Med	Supervisor
Collapse of excavation sides	Entrants in deep excavations, trenches and shafts.	2 x 5 = 10 Med	- Support designed and installed as the groundworks RAMS sets out, and inspected before entry. - Spoil, plant and materials kept back from the edge.	1 x 5 = 5 Med	
Open entrance and falling objects	The public, other trades and entrants below the opening.	3 x 4 = 12 Med	- Opening guarded with barriers and signs, with traffic management where it is in the road. - Tools and materials lowered in a bag or bucket; nothing kept at the edge of the opening. - Cover replaced or secured whenever nobody is working.	1 x 4 = 4 Low	
Sewage and infection	Entrants in contact with sewage, sludge or contaminated water.	3 x 3 = 9 Med	- Waterproof gloves and coveralls; cuts covered before work. - Washing facilities at the work area; hands washed before eating, drinking or smoking. - Anyone who feels unwell after the work tells their doctor about the sewage contact.	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
Multi-gas detector	Calibrated in date; response check each day before use.	Trained gas tester
Tripod, winch and lifeline	LOLER thorough examination in date; checked before each use.	Trained top person
Ventilation fan and ducting	Duct reaches the bottom of the space; intake in clean air.	Trained operative
Breathing apparatus and escape sets	Suited to the hazard, checked before use and within shelf life.	Trained wearer
Lighting, radios and tools	Certified for explosive atmospheres where flammable gas is possible.	Operatives

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	☒	Helmet with chin strap
Safety footwear	☒	Safety boots or safety wellingtons
High-visibility clothing	☐	
Gloves	☒	Waterproof gloves where sewage is present
Eye protection	☐	
Hearing protection	☐	
Respiratory protection Type, and face-fit tested	☒	Escape set; BA where air cannot be made safe
Harness or restraint Anchor points identified	☒	Rescue harness on a lifeline to the winch

CONTROLS

Substances, permits, emergencies and the environment

Hazardous substances

Each substance and its COSHH assessment.

COSHH 2002, REGULATION 6

SUBSTANCE	COSHH ASSESSMENT REFERENCE	CONTROLS
Hydrogen sulphide and other sewer gases	[COSHH assessment ref]	Tested before entry and monitored throughout; everyone leaves on alarm.
Sewage, sludge and contaminated water	[COSHH assessment ref]	Waterproof gloves and coveralls; cuts covered; wash before eating.

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

First aid, fire, and how someone is rescued.
The rescue plan belongs in the RAMS, not after it.

Rescue plan in place before entry: tripod, winch and lifeline set up, breathing apparatus where the plan needs it, and trained rescuers at the entrance. Emergency services called at once and given what is known about the space. First aider trained in resuscitation on site, and the nearest accident and emergency department named.

Environment and neighbours

Dust, noise, vibration, waste, spills and hours of work.

Ventilation exhaust and purged gas discharged away from people and air intakes. Sludge, residues and wash water removed by [licensed carrier or approved discharge]. Opening covered and secured whenever nobody is working.

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ENTRY LOG

Entry log with gas readings

Test from outside before entry: oxygen first, then flammable gas, then toxic gases. Record each reading and each person in or out. Stop entry if a reading is outside the permit's limits.

TIME	PERSON, IN OR OUT	OXYGEN %	FLAMMABLE %LEL	H2S AND CO, PPM	TOP PERSON SIGNATURE
[time]	Pre-entry test from outside: top, middle and bottom	[reading]	[reading]	[H2S] / [CO]	[signature]
[time]	[Name] in	[reading]	[reading]	[H2S] / [CO]	[signature]
[time]	[Name] out	[reading]	[reading]	[H2S] / [CO]	[signature]

CONFINED SPACES REGULATIONS 1997; HSE L101 (THIRD EDITION, 2014), PARAGRAPHS 89 TO 97 AND 136

Briefed before the work starts

BRIEFED BY	REVISION BRIEFED	DATE AND TIME

[illegible]

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