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WORKED EXAMPLE: RISK ASSESSMENT AND METHOD STATEMENT

# Hot works: cutting and welding in an occupied warehouse

Hollins & Reed Fabrications Ltd · 12 to 14 October 2026 · In charge: Dan Hollins

**Worked example. Change it to fit your job before you use it.**

## Job details

| | |
|---|---|
| **Company** | Hollins & Reed Fabrications Ltd |
| **Site and work area** | Unit 3, Canal Side Business Park, Stockport: Bay 6 |
| **Planned dates** | 12 to 14 October 2026 |
| **Customer** | Thornley Vale Estates Ltd |
| **In charge on site** | Dan Hollins |
| **Team** | Three people: Dan Hollins leads and welds; Tom Ellis cuts and grinds; Priya Shah is the fire watcher and does no hot work. |
| **Work** | Hot works: cutting and welding in an occupied warehouse |
| **Prepared by** | Dan Hollins |
| **Signature** | |
| **Date** | |

## Work and boundaries

Grind/cold cut, fuel-gas cut, arc weld. Areas: Bay 6, steel beam over grid lines 12 to 16; The floor below and around the work, and the far side of the Bay 6 partition

## Working arrangement

- Access: a podium.
- Working height: brackets at about 2.5 m.
- Ground or floor: level concrete slab.
- Gas set: Oxygen and propane.
- Other people will be using the area.
- The warehouse keeps trading; Bay 6 is closed to trucks and staff, behind barriers and screens, while we work. The engineer's drawing rules out bolting the new brackets, so heat is needed for this work and no other. Hot work runs only on the shift manager's permit for this bay and this

shift, shown at the work. It stops two hours before the end of the working day. Two extinguishers stay at the work. The fire watcher stays for at least an hour after the last hot work, and there is one more check two hours after it. Which detectors go off, and who puts them back on and when, is agreed with the shift manager first.

## Emergency arrangements

Fire: break the glass at call point CP14, by the Bay 6 door, and leave. Priya Shah raises the alarm first and tackles a fire only if it is safe; while the zone's detectors are off she is the detection for that zone. Gas off at the cylinder if you can do it safely. Muster at Yard B and report to the shift manager. Tell the fire service the cylinders are on the trolley at Bay 6. First aid: J. Patel, goods-in office, including burns. Priya Shah rings 999; J. Patel meets the crew at gate 2 and goods-in stops all trucks.

## Planned method

1 **Set up the work area**
Confirm the work area and scope before starting. Keep other people outside the active work area. Keep entrances and escape routes clear.

2 **Keep people clear of the work**
Agree how people get past or around the work while it is going on. Put barriers or signs where a route crosses the work. Do not leave open work unattended.

3 **Check the wheel and guard**
Check the wheel type, speed and mounting before use. Fit the guard and side handle; stop if the guard cannot stay between you and the wheel.

4 **Check the welding equipment**
Inspect the machine, leads, holder, torch and connectors before plugging in. Withdraw damaged equipment from use.

5 **Check for asbestos before you disturb anything**
Check the asbestos survey covers exactly what you will disturb, to the full depth. Register only, or nothing: get a refurbishment survey or a sample first. Read what it says about old lagging, boards and panels around the steel and pipework. No survey, or a material you do not recognise: stop and get it checked.

6 **Find and isolate hidden services**
Find cables and pipes before you disturb anything: drawings, then a detector. Mark what you find. Not sure what is there? Turn the supply off, or do not start. Have cables and gas isolated by the right person and prove them dead before you start.

7 **Stop things falling on people below**
Keep people out of the area below the work so nobody walks under the tools, hot metal and slag. Keep toe boards and guards in place on any platform, and lanyard tools where you can.

**8 Set up access equipment**
Use access equipment suited to the task and work area. Check the equipment before use. Keep the area below the work controlled.

**9 Carry the steel, tools and metal parts safely**
Plan the route, clear it, and get help with anything long or heavy. Store materials close to the work so nobody carries further than they need to.

**10 Check and clean the metal before cutting**
Remove dirt and grease where the method allows. Do not flame cut a former fuel or chemical container without safe certification.

**11 Prove it dead before you cut into it**
Metalwork often carries cables, conduit or trunking. Get the circuit switched off, locked off and proved dead first. Do not cut, grind or weld on anything still live.

**12 Clear combustibles before hot work**
Walk the area with the site contact. Check around the work, below it and on the other side of any partition. Move combustible material away, or cover it with flame-resistant covers. Protect openings with non-combustible board. Agree which detector zone is isolated, who isolates it and who puts it back on. Place at least two suitable extinguishers at the work and post a fire watcher who is not doing the hot work.

**13 Assess vibration from the grinder**
Note how long each person's hands are on each tool while it runs. Take the tool's vibration figure from the maker or HSE's table and check it fits how you use it. Points per hour times hours on the trigger, added up for the day, gives the exposure: 100 points is the action value, 400 is the limit. HSE's vibration calculator does the sum. Over 100, cut it with lower-vibration kit or less time, and never pass 400. Write the result down. Sharing the work does not replace this.

**14 Check the gas set before lighting**
Bring only the cylinders the job needs, secured upright on a trolley, and check the torch, hoses, regulators and connections. Keep oxygen fittings free from oil and grease.

**15 Fit flashback arresters**
Fit the correct arresters to the oxygen and fuel hoses near the regulators. Check the torch, hoses and arresters before use.

**16 Check for gas leaks safely**
Test suspected leaks with leak fluid, never with a flame. Keep hose runs protected from hot metal, sharp edges and traffic.

**17 Control the flame and slag path**
Work out where the flame, slag and sparks can go, including the far side and lower levels. Protect openings with non-combustible board before the torch is lit.

**18 Set up the cut safely**
Clamp the piece so it cannot twist or close on the blade. Support the offcut before the final part of the cut.

19 **Protect eyes and control sparks**
Wear suitable eye protection and keep people out of the spark and fragment line. Keep the sparks inside the cleared area.

20 **Clamp the return to clean work metal**
Clamp the current return close to the weld on clean metal. Do not use a handrail, pipe or building frame unless it is the workpiece.

21 **Screen the arc from other people**
Set a welding screen around the work before striking the arc. Wear the correct welding filter and covering clothing.

22 **Capture welding fume at source**
Position LEV at the arc and keep your head out of the plume. Where LEV cannot provide enough control, as is often the case outdoors, wear RPE with an APF of at least 20. Tight-fitting RPE needs a face fit test and a clean shave.

23 **Get the hot-work permit for this place and shift**
Get a permit for this location and this shift, once the area is cleared and the fire cover is in place. It states the place, the times, the precautions, how to raise the alarm, who is in control and who authorised it. Keep a copy on display at the work.

24 **Work under the permit**
Do only the cutting, grinding, welding or heating the permit covers. Grinding sparks are hot work too. Keep the fire watcher on duty during the work and through every break. Stop hot work two hours before the end of the working day.

25 **Shut down the gas set**
Shut off the gas at the cylinder when the cutting finishes. Purge the hoses, then stow the cylinders.

26 **Complete the fire watch before handback**
Keep a continuous fire watch for at least an hour after hot work stops, then make at least one more check two hours after finishing. Inspect behind walls, below floors and in voids before closing the permit. Have the detector zone put back on as soon as the work stops, and sign off the permit.

27 **Clear and hand back the area**
Remove tools, waste and unused materials. Check the area is clean and ready to use. Tell the customer or whoever runs the site when the work is complete.

## Risk assessment

| Hazard | Who might be harmed and how | Controls in place |
|---|---|---|
| People entering the work area or tripping over materials<br>Step 1 | Workers, occupants and visitors | Mark or barrier the active work area. Store tools and materials away from access routes. |

| Hazard | Who might be harmed and how | Controls in place |
|---|---|---|
| People using the building or passing by walking into the work or over what it leaves<br>Step 2 | Occupants, visitors, members of the public and workers | Keep the barriers and signs up while the work is active. Give people a clear way round where their normal route is blocked. |
| A wrong or badly mounted wheel breaks and throws fragments<br>Step 3 | The operator and anyone nearby | Use the wheel only for the work it is designed to do. Have a trained person change damaged or worn wheels. |
| Electric shock, burns or a failed welding return circuit<br>Step 4 | The welder and nearby workers | Use equipment suitable for the task and in good condition. Report defects before the arc is struck. |
| Breathing asbestos fibres from old boards, sheets, sealants or insulation<br>Step 5 | The team and anyone in the building | Do not cut, drill or break any material until it is confirmed asbestos free. Licensed work is not for this method; hand it to a licensed contractor. |
| Hitting a live cable or gas pipe causes shock, fire or gas escape<br>Step 6 | The person doing the work and everyone nearby | Check again wherever the work moves. If you hit something, stop, keep clear and report it. |
| Tools, hot metal and slag falling onto people below<br>Step 7 | People below | Bring waste down by hand or in bags. Never throw it. Keep the exclusion zone up until the last item is down. |
| Falling from the access equipment; tools or materials falling from the platform<br>Step 8 | The person on the platform, if it is set up on an unsuitable surface and shifts under them. Anyone passing or working underneath. | Place access equipment on a firm, level surface. Keep tools and materials secure while working above ground. |
| Back and shoulder injury from carrying heavy or long items<br>Step 9 | Everyone handling materials | Use a trolley or sack truck on the flat where the load suits one. Where the work is up a level, hand items up or hoist them. Never carry them up a ladder. |

| Hazard | Who might be harmed and how | Controls in place |
|---|---|---|
| Explosive vapour or toxic fume comes from contamination or former contents<br>Step 10 | The operator and anyone nearby | Stop if the former contents are unknown or unsafe. Use the agreed fume control and RPE for the metal. |
| Cutting into a live cable or conduit gives a shock, a flash burn or starts a fire<br>Step 11 | The person cutting and anyone nearby | Only the person who locked it off takes the lock off. Prove the tester on a known live source before and after. |
| Sparks, hot metal or slag starts a fire<br>Step 12 | Everyone in and near the work area | Sparks can travel a long way and start fires in other rooms: check the routes they can take. Put a cold method first if the job can be done without heat. |
| Hand-arm vibration from the grinder<br>Step 13 | The person grinding | Keep the tools maintained and hands warm. Gloves do not stop vibration. Give health checks to anyone above the action value. |
| Fire or explosion from an unsafe gas set<br>Step 14 | The operator and nearby workers | Use the correct hose, regulator and coupler for each gas. Withdraw damaged equipment from use. |
| Flashback travels through the hoses to the cylinders<br>Step 15 | The operator and everyone nearby | Stop and evacuate if a flashback makes a cylinder hot or vibrate. Use the arresters specified for the gas equipment. |
| Leaking fuel gas or oxygen causes fire or explosion<br>Step 16 | The operator and nearby workers | Close the cylinders and repair the defect before use. Do not use oil or grease on oxygen fittings. |
| Flame or hot slag burns someone or lands out of sight<br>Step 17 | The operator, fire watch and people nearby | Keep the hot-work route under control. Keep the hose run clear of the slag path. |
| Kickback, trapped fingers or an offcut dropping as it comes free<br>Step 18 | The operator and anyone below or nearby | Keep both hands on the tool where its design allows. Stop if the part is loaded or the support is not clear. |
| Fragments, sparks or hot swarf injure someone nearby<br>Step 19 | The operator and everyone near the work | Wear hearing protection and a face shield for grinding. Stop if sparks reach anything that was not cleared. |

| Hazard | Who might be harmed and how | Controls in place |
|---|---|---|
| Stray welding current causes shock, burns or property damage<br>Step 20 | The welder and people touching nearby metal | Keep the return path short. Stop if the return cannot attach safely to the workpiece. |
| Arc-eye, burns and harmful light reaching people nearby<br>Step 21 | The welder, passers-by and nearby workers | Keep unprotected people outside the screened area. Use a suitable welding curtain or screen. |
| Breathing welding fume that can damage the lungs<br>Step 22 | The welder and people nearby | General ventilation alone does not control welding fume. Keep people out of lingering fume. |
| Hot work starts before the fire precautions are in place<br>Step 23 | Everyone in and near the work area | No permit, no hot work. A new shift or a new place needs a new permit. |
| A fire takes hold unseen during the work or a break<br>Step 24 | Everyone in and near the work area | The fire watcher raises the alarm first, and tackles a fire only if it is safe. Stop and get the permit changed if the job or the place changes. |
| Gas left under pressure leaks or feeds a fire<br>Step 25 | The operator and everyone nearby | Tell the fire service on arrival where any cylinders are. Do not move a cylinder involved in a fire. |
| A smouldering fire develops after the work stops<br>Step 26 | Everyone in and near the work area | Tell the site when the work and watch are finished. Keep to a longer watch if the site requires one. |
| Debris, tools or unfinished work left in the area<br>Step 27 | Workers, occupants and visitors | Remove waste by the agreed route. Record and protect any unfinished work. |