

## Hydro demolition

<b>Reason</b>	Hydro demolition uses a high-pressure water jet to remove or cut concrete from a structure. The pressure at which the water is jetted is, in itself, a hazard to health and safety.
<b>Outline</b>	This talk covers the dangers associated with hydro demolition and how they can be overcome.



*Beware of water at high pressure*



*You must be properly trained for work involving hydro demolition*



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### Hazards

1. The pressure of the water jet can be up to 2,500 bar (36,250 psi). The main danger is being accidentally injected by the high-pressure jet.
2. The resultant injuries could be limb- or life-threatening. It only takes 100 psi to pierce the skin. High-pressure water-jet injuries are treated as medical emergencies.
3. Tissue damage can be compared to that of a gunshot wound.
4. Being injected with contaminated water could lead to further medical complications.
5. The small entrance wound may appear minor but it must not be ignored. Report any injection injury to your supervisor immediately.
6. Anyone who has suffered an injection injury, or other injury resulting from high-pressure fluids, must go to hospital immediately.
7. Equipment vibration can also cause health problems, such as hand-arm vibration syndrome (HAVS).

### What you should do

1. If someone has suffered an injection injury:
  - control any bleeding and elevate the affected limb where possible
  - if an ambulance cannot be sent, and the injured person can be moved safely, arrange for the injured person's transfer to hospital
  - contact the hospital whilst the patient is in transit and inform them of the nature of the injury.

### Safe use

1. Never use hydro demolition equipment unless you are authorised and have been properly trained.
2. Hydro demolition operations should be segregated to avoid injury to people not involved in the activity.
3. This can be done by erecting barriers and signs around the work area. In some cases, it might be possible to remove the item to be jetted to an isolated location.
4. The pressure of the water jet will try to push the person holding the nozzle backwards. A secure footing is needed.
5. If hydro demolition is taking place and you are not involved, stay well out of the exclusion area.
6. If you are involved, ensure that you have been issued with, and wear, adequate personal protective equipment (PPE) in line with your risk assessment.

### Equipment maintenance

1. Due to the high pressures involved, equipment must be maintained in accordance with the manufacturer's instructions.
2. Daily pre-use checks of the equipment should be carried out by someone who has been trained and is competent to do so.
3. Do not tamper with the equipment if you do not know what you are doing; you must be properly trained and authorised.
4. Do not attempt to adjust the equipment whilst it is pressurised.



**What should you do if the equipment is not operating properly during use?**

**What are the essential items of PPE that should be worn?**

**What is your emergency procedure in the event of a hydraulic injection injury?**