

Health & Safety

Assessing the risks of using the laser and managing them appropriately

- [!\[\]\(c8dce68b26731c7aa5915072fc9d68dd_img.jpg\) Air quality](#)
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Air quality

The extraction system for the laser is adequate, but not brilliant. Some members at the Hackspace are sensitive to the smoke and fumes created by cutting some materials, so the following rules are in place:

Before cutting



Check the air quality monitor behind the laser. If it is green, carry on. If it is yellow, be prepared to stop cutting if anyone in the room is affected by the smoke or fumes. If red, do not start cutting until the air quality has improved (ideally back to green).

During cutting

Continue to monitor the air quality and keep to the guidance above. You may need to pause the laser mid-job until the air quality improves. Please note that the monitor only measures particulates, so some fumes may affect others in the room without the monitor changing colour. This applies mainly when cutting acrylic or other plastics.

After cutting

Do not open the lid of the laser until you can see all the smoke has been extracted from the cutting area. After cutting acrylic, leave the lid down longer to ensure the fumes have also dissipated. Review the air quality monitor before your next cut.

Fire risk

Remember that there is only a laser in the space due to a fire caused by inattention. Any material that the laser will cut through presents an inherent risk of catching fire.

Before you use the laser

- Make sure you know what you are cutting is safe to use - see the [material guide](#)
- Follow any material specific guidelines to reduce fire risk, e.g. removing the protective plastic/paper on acrylic; making sure any paper masking is burnished and well-adhered across the whole area to be lasered
- Make sure you know where the fire blanket is and the nearest fire extinguisher
- Familiarise yourself with how to raise the alarm if a fire occurs
- Make sure the bed is clean and free of debris

While using the laser

- Know how to stop/pause the laser should a fire begin and what to do next
- Always stay in view of the laser and monitor the cut/engrave at all times using the camera
- Do not allow a flame to develop into a fire - deal with it straight away
- If cut out pieces fall in a way that will block the laser, pause and deal with them - a stuck laser or moving material creates a significant fire risk

After using the laser

- Remove your material from the laser and check it is not quietly smouldering - this is particularly important when cutting corrugated cardboard
- Remove all debris from the laser bed between cuts
- Clean the bed and blades thoroughly at the end of your session

Eye damage

The laser beam and reflected light are invisible and will damage unprotected eyes. Whilst the lid is down, the laser light is contained. Until a leather skirt is attached to the lid, there is a possibility of reflected laser light escaping from under it, so users should ensure no one is seated nearby or shorter persons/children are at eye level to the lid whilst the laser is in use.

Under no circumstances should the safety locks be tampered with or disabled. This ensures the lid has to remain closed at all times the laser is operating.



RISK ASSESSMENT

TO BE ADDED BY END OF JULY 2026