CODE OF PRACTICE

The adoption and practice of good safety procedures is of paramount importance both for the health and safety of fellow workers and for the integrity of the fabric of the laboratories.

1) Permitted Activities
No work, other than designated laboratory classes under appropriate supervision, may be carried out in the Soil Mechanics Research Lab or the Soil Mechanics Teaching Lab without the prior permission of the academic staff*.

2) Safety Protocols & Equipment
No work may be carried out until all necessary safety documentation has been read and understood. New staff and students should also make themselves aware of the positions of safety equipment in the labs. These are:

Emergency telephone number: 4444.
Emergency Exit: from Soil Mechanics Teaching Lab.
Fire Extinguishers: in corridor outside main entry door to Teaching Lab (foam, CO₂ and fire blanket); beside Emergency Exit in Teaching Lab (CO₂).
First Aid kit: in Teaching Lab above chemical cupboard

3) Activities conducted outside normal working hours or when alone
Any work outside normal working hours (9am to 5pm on normal weekdays) requires explicit permission from the academic staff*. Work outside normal working hours should not involve potentially hazardous activities, including heavy lifting, working with compressed air or high voltage power supplies (other than monitoring of ongoing experiments) or use of hazardous chemicals. During normal working hours such activities should not normally be undertaken whilst alone in a laboratory.

* Academic staff: Professor Simon Wheeler, Dr Zhiwei Gao, Dr Trevor Davies or Dr Bill Stewart.
4) The Temperature Controlled Laboratory
The Soil Mechanics Research Laboratory is a temperature-controlled room. The door should be shut immediately after entry or exit and unnecessary entries or exits should be avoided.

5) Electrical Equipment
All electrical equipment should be PAT tested and used in a safe an appropriate fashion. If in doubt, contact the Electronics Technical Support Team and inform your supervisor.

6) Water
Tubing and connectors on pressurized water lines should be appropriately designed and used. Check regularly for leaks. Layout of equipment should avoid risks of any water leaks coming into contact with electrical equipment. Any water leaks or spillages should be cleaned up immediately.

7) Compressed Air Lines
Appropriate precautions must be used when using the compressed air line to provide a pressure source.

Bear in mind that there is a large amount of energy stored per unit volume of a high pressure gas, whereas this is not true for a high pressure liquid. Significant volumes of compressed air should therefore be avoided and pressure supplies to equipment should use an air-water interface to convert air pressure to water pressure. If this is not possible, equipment and procedures should be appropriately designed and explicit permission should be obtained from the academic staff.

Ensure that no equipment is employed in a situation where it could be intentionally or unintentionally subjected to a pressure higher than its pressure rating. Ensure that equipment is isolated from the compressed air line and vented before removing any connection or attempting to dismantle the equipment.

Avoid directing any compressed air line towards yourself or another individual, even if the compressed air is switched off. Contact a member of technical staff if there are problems with the compressed air line, such as low pressure, pressure fluctuations or moisture in the line.

8) Computer-Controlled Equipment
When using the computer-controlled equipment in the Research Laboratory, set appropriate Alarm triggers in the control software to avoid equipment being over-ranged.
9) Weights: Lifting & stacking
Take care lifting and stacking weights on any equipment employing a dead-weight system of load application (such as the oedometers).

Stack weights in a stable arrangement. This means avoiding placing weights of larger size above substantial numbers of weights of smaller size on the load hanger (this may mean removing smaller weights to add a larger one, and may require a procedure to be devised to ensure that the soil sample is not unloaded and reloaded in the process). It also means that the orientation of slots in the weights should be alternated, to avoid the risk of a stack of weights falling off the hanger.

10) Ovens
Use the ovens with care. They will normally be set at a temperature of 105-110 °C, but be aware that they can go to higher temperatures. Place samples in an oven in an appropriate container, which is marked with a number or other mark. When removing a sample from an oven, check carefully to ensure that you are not removing someone else’s sample by mistake. Samples left unclaimed in an oven for excessive lengths of time will be thrown away.

11) Hotplates
Use hotplates with care. Be aware that a hotplate that is switched off may still be hot from previous use. Do not leave anything on a hotplate unattended, and be careful to avoid boiling anything dry on a hotplate. Switch off the hotplate as soon as you have finished with it.

12) Refrigerator and Freezer
The refrigerator in the Teaching Lab is for general use for soil samples, etc. Do not place anything hazardous in the refrigerator. No food or drink is to be stored in the refrigerator. Ensure that anything that you place in the refrigerator is labelled with your name. Unlabelled items will be thrown away if they are left for excessive periods of time.

The large freezer in the Teaching Lab is associated with the Environmental Engineering Laboratory and is not for general use. Anyone wishing to use a freezer should speak to the staff member in charge of the Environmental Engineering Laboratory.

13) Chemical Cupboard
The chemical cupboard (coloured yellow) in the Teaching Laboratory is not for general access. Use of any items from the chemical cupboard requires permission from Mr Bill Monaghan, and the appropriate COSHH documentation should then be read before using any chemical.
14) In Case of Doubt
If you find yourself following a possibly unfamiliar procedure or performing an experiment and are unsure of what to do next or if something is going wrong, seek assistance from somebody rather than end up having an accident.

15) Accidents & Mishaps
In the event of an accident or mishap, inform appropriate individuals immediately and your supervisor as soon as possible. Complete a written accident report form and submit to your supervisor.

16) Laboratory Practice
Keep your workspace tidy. Equipment, glassware, tools, etc should be cleaned and returned to their proper place of storage as soon as you have finished with them. Waste material should be disposed in an appropriate fashion. Spillages of water or soil should be cleaned up immediately.

17) Personal Belongings
Personal belongings such as bags and coats should be stored outside the labs if possible, and if not they should be stored on the coat-hooks in the Teaching Lab or under a bench, not left on the open floor. Books and paper in the labs should be kept to a minimum.

18) Food & Drink
No food or drink may be consumed in the laboratory.

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