THE UNIVERSITY OF NEW SOUTH WALES

SCHOOL OF CHEMISTRY

BUILDING EMERGENCY EVACUATION PROCEDURE

(For issue to students)

In the event of a major fire, explosion, escaping gases, *etc.*, it may be necessary to evacuate the Dalton and Chemical Sciences Buildings.

When the alarm is raised, floor wardens and security officers will advise students to move from their respective locations within the School to the nearest stairwell and building exit, and (where appropriate) to their relevant assembly areas:
(for Chemical Sciences Building) centre of the Village Green,
(for Dalton Building) across the University Mall, near the Village Green.
Refer to the plan on the next page.

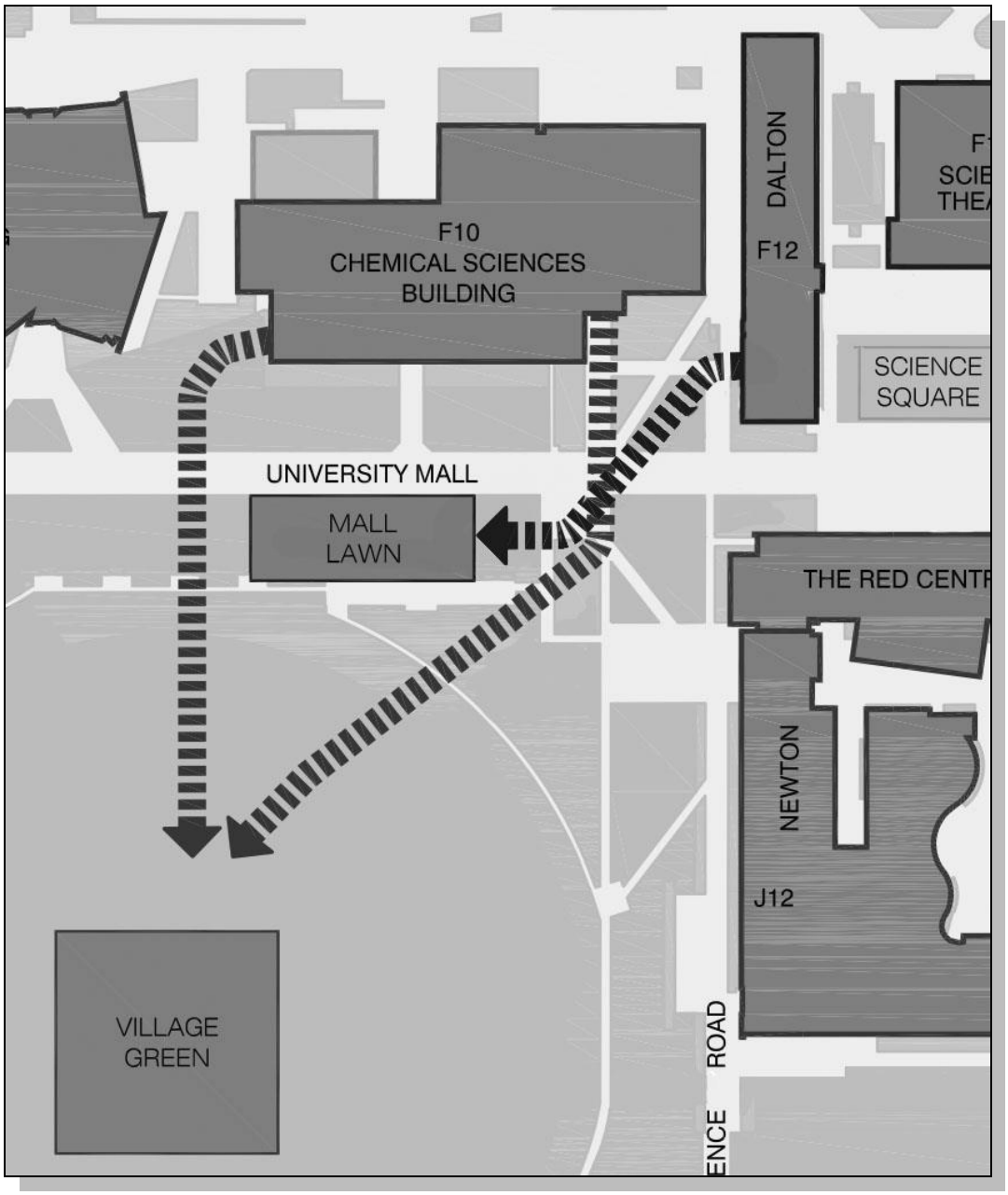
During the evacuation please keep to the left-side of the stairways and passages so that control staff, fire persons, etc., may have clear access to all floors within the School.

DO NOT USE LIFTS.

Do not re-enter the buildings until permission is granted in the assembly area.

It is possible that the Science Theatre may be evacuated at the same time.

CHEMICAL SCIENCES AND DALTON BUILDINGS EMERGENCY EVACUATION INFORMATION



EVACUATION PROCEDURE

- Students in the School of Chemistry *Lab 133* use south exit and assemble at the centre of the Village Green for roll-call. Students in Chemistry *Lab 165* exit via the stairs adjacent to the door to 165 and assemble at the centre of the Village Green for roll-call.

- Students in the Dalton building exit through East or West exits, and assemble on the south side of the University Mall opposite the southern main entrance to the Chemical Sciences Building for roll-call.

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GENERAL SAFETY PRECAUTIONS IN THE LABORATORY.

Introduction

1. The chemistry laboratory should be a safe place in which to work. Most accidents arise from carelessness or ignorance. This leaflet indicates some of the more important sources of accidents in a chemical laboratory and how such accidents may be avoided.

Conduct

2. Horseplay, unauthorized experiments, and working in the laboratory outside class hours without permission are strictly forbidden, and could result in suspension from the University.

After Hours Work

3. Students are not permitted to enter the School after scheduled class hours or at weekends without the direct permission of the Head of the School. After hours students must not work alone in a laboratory.

Personal Habits

4. Do not drink from laboratory glassware.

5. Do not drink from any taps in the laboratory.

6. No eating or drinking in laboratories.

7. Smoking is not allowed in the Chemical Sciences and Dalton Buildings. (UNSW has a NO SMOKING POLICY in all buildings on Campus).

Dress

8. During laboratory work, a student must wear suitable ASA/NZS compliant protective glasses. Students wearing spectacles must wear over-glasses or prescription safety glasses.

9. Suitable fully covered footwear MUST be worn. Open sandals, thongs, clogs, shoes with open tops or open-weave tops are not permitted. No person is allowed to enter the Chemical Sciences and Dalton Buildings with bare feet.

10. Students must wear a laboratory coat, preferably of cotton.

11. Students are required to tie up loose flowing hair to reduce fire hazard.

Safety Equipment

12. Every student should learn from their demonstrator where to find the nearest safety shower, fire blanket and fire extinguisher, and how to use these articles.

Laboratory Equipment

13. Each time you encounter a new type of equipment – ask a laboratory supervisor or demonstrator for assistance. This applies to gas cylinders, liquid nitrogen dewars and many types of scientific apparatus, each of which can pose its own safety problems.

14. Glass Winchester bottles must always be carried in baskets.

15. Gas cylinders are not to be moved from one location to another except in recessed cylinder trolleys. The cylinders must be strapped or chained to the trolleys before being moved. Gas cylinders in laboratories must be firmly secured. The regulator should always be removed prior to moving.

16. Careless handling of glassware may cause serious accidents. Observe the following rules:

    (a) Check all glassware for cracks or chips before use. Do not use chipped or cracked glassware.

    (b) Always keep your hands close together when fitting a pipette into a pipette pump. Do not apply excessive force.

    (c) Never use force to remove rubber tubing or corks from glass tubing. If necessary, cut the rubber or cork away from the glass.

    (d) Do not try to force an oversize cork into a flask. A cork may be made smaller and softer by rolling it.

Experimental Procedure

17. Before beginning an experiment, the student must read carefully the directions contained in practical notes or manuals, paying special attention to any precautions that may be mentioned. If uncertain, the student should always consult a lecturer or a demonstrator.

Dangerous Chemicals

18. Exercise care in handling all chemicals. Special care must be exercised in handling strong acids, alkalis, bromine, hydrofluoric acid, cyanides, phenols, benzene, ether, chlorinated hydrocarbons, sodium, mercury and radioisotopes.
    REMEMBER! *Seek advice if in doubt*. Consult the MSDS folder in the laboratory.

19. All experiments in which any toxic, obnoxious or irritating gas or vapour is produced must be carried out in a fume cupboard. Especially dangerous are bromine, chlorine, hydrogen fluoride, nitrogen dioxide, hydrogen sulfide, benzene and chlorinated hydrocarbons.

20. Flammable liquids must never be handled near an open flame. Solvents, such as alcohol, ether, petrol, etc. must be distilled on a steam bath – NEVER OVER OR NEAR an open flame. Volatile vapours may travel five metres or more to an open flame and ignite, thus setting the liquid in the container alight.

Disposal of Waste

21. Particular care should be exercised in disposing of waste or spilt chemicals and reaction residues. This should be done on the advice of the demonstrator or lecturer in charge. Organic solvents and other dangerous chemicals must NOT be poured down sinks.

22. Rubbish, waste filter paper, etc. must NOT be thrown into sinks, but placed in the rubbish bins provided. Disposable gloves must be placed in special plastic waste containers.

23. Broken glass must be placed in the containers provided.

Chemical Exposure

24. The showers are mainly intended for the rapid removal of corrosive chemicals that have been spilt over a large area of the body. Contaminated clothing must be removed during shower treatment. For chemical exposure to hands and face, use the taps. In all cases speed is essential.

25. Eye injuries, whether from chemical or mechanical causes, must always be considered as serious. The best treatment for chemical injury to the eye is immediate and prolonged flushing with water through the use of an emergency eye wash (available in all chemical labs at UNSW). Steps should be taken to obtain medical advice for an eye injury.

Fire Victim

26. The most distressing laboratory accidents are caused by clothing catching fire. Since the victim's chances of recovery rapidly diminish with an extent of skin surface burned, immediate and correct action is essential. Therefore, when a person's clothing catches fire:

    (a) **Throw the person to the floor and roll the person to smother the flames quickly**. If a fire blanket or a laboratory coat is **handy**, it may be used.

    (b) If near a shower, roll the person under and then turn on the water, but never let the person stand even if you have to be forceful. This procedure prevents injury to the respiratory passages and eyes by the flames which would naturally rise and envelop the head.

    (c) Never use an extinguisher of any type on a person. The soda-acid extinguisher may damage the eyes, whilst the carbon dioxide type may cause severe frostbite.

27. **Report all injuries, however trivial, as soon as possible to the demonstrator or lecturer in charge, who will fill in the report form and take appropriate action.** A student who has suffered an injury should attend the University Health Services, as further treatment may be necessary. The University Health Services is located in the Quadrangle. The Doctor or Sister-in-Charge may be contacted on Exts. 55425, 55426, 55427.

28. After normal hours call the Emergency telephone number Ext 56666.

Evacuation

29. In the event of fire, explosion or other major calamity, a warning siren will be sounded. At all times, follow all directions issued by wardens, Security or from the public address system. Turn off Bunsen burners and electrical heaters and close all doors and windows if possible. Quickly check so see that everyone is out. Move steadily to the nearest stair well and out of the building to the School assembly areas in the middle of the Village Green (for people in the Chemical Sciences Building) and south of the University mall, near the Village Green (for people in the Dalton Building). **Do not use lifts**. **See separate sheet "Building Emergency Evacuation Procedures".**

30. Floor wardens and security officers will occupy key points in the event of evacuation. Please observe their instructions. They can be identified by their coloured vests and caps.

Conclusion

31. In general, make safety habits a way of daily life. In chemistry there will always be an element of danger which needs to be controlled. Be aware of this. Never grow contemptuous, careless or indifferent. Your life and the lives of other students may well depend on your personal safety standard.

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