

## **CENTRE FOR MICROSCOPY & MICROANALYSIS**

### **HEALTH, SAFETY AND WELLNESS**

**&**

### **ENVIRONMENTAL SUSTAINABILITY**

### **HANDBOOK**

#### **Emergency Procedures and Telephone Numbers**

In **any** emergency, dial **3365 3333** to obtain the University Security section  
(ALL HOURS)

University Health  
Services

8.30am - 5.00pm Monday to Friday 3365 6210

The latest version of this handbook: <https://cmm.centre.uq.edu.au/induction>

**Websites related to this document:**

**UQ Policy and Procedures Library - Workplace Health and Safety:**

<https://ppl.app.uq.edu.au/content/2.-workplace-health-and-safety>

**UQ Health, Safety and Wellness Division:**

<http://www.uq.edu.au/ohs/>

**UQ Health, Safety and Wellness Policy:**

<http://ppl.app.uq.edu.au/content/2.10.03-health-safety-and-wellness-policy>

**Occupational Health and Safety in the Laboratory – Guidelines:**

<https://ppl.app.uq.edu.au/content/2.30.14-laboratory-safety-teaching-laboratories>

**ChemWatch:**

<https://staff.uq.edu.au/information-and-services/health-safety-wellbeing/health-safety-workplace/biosafety-chemicals-radiation/chemwatch/login>

**UQ Risk Assessment Database (UQSafe):**

<http://www.uq.edu.au/ohs/index.html?page=29960>

**UQ Sustainability:**

<http://www.uq.edu.au/sustainability/policies-and-procedures>

## **OVERVIEW**

This Handbook contains general information written to assist the staff and other users of CMM to work confidently and safely in CMM laboratories. Although the handbook applies generally to activities undertaken in CMM, it is not a substitute for compliance with laboratory specific regulations, e.g., those that relate to Physical Containment (PC) levels. Centre users should be aware that some CMM laboratories have specific Health Safety and Wellness (HS&W) and Sustainability (Environmental Management) procedures that may extend beyond the guidelines provided in this handbook.

CMM provides a service to internal UQ clients and external (non-UQ) clients. All clients who actively work in the CMM are required to have completed UQ's mandatory online safety modules and provide documentation these has been completed:

OHSB08: Health Safety and Wellness

OHSB09: Annual Fire Safety Training (please update annually)

OHSB01: Laboratory Safety

OHSB03: Chemical Safety

OHSB04: Biosafety (for users of our QBP Labs and updated every 2 years)

SUSB02: Sustainability Laboratory Assessment

Additional modules will be required, depending on the activities undertaken in the CMM. This handbook does not replace the need to complete these training modules.

The flowchart below summarizes the path that clients follow from their initial registration as CMM clients through to the various required inductions and instrument training and to the point where they are fully licensed and able to work independently.

**1**

Register in PPMS and create a project in PPMS. Projects are reviewed on Mondays and you will be invited to attend compulsory OHS inductions to whichever CMM lab(s) are assigned to you. Please RSVP to these meeting invites.

**2**

Before the induction, please complete:

Your training modules in:  
UQ Learn &  
Workday

Your risk assessment in  
UQSafe, approved by your  
supervisor, explaining what  
your sample is and your spill  
procedure. Email the  
expanded pdf to CMM OHS.

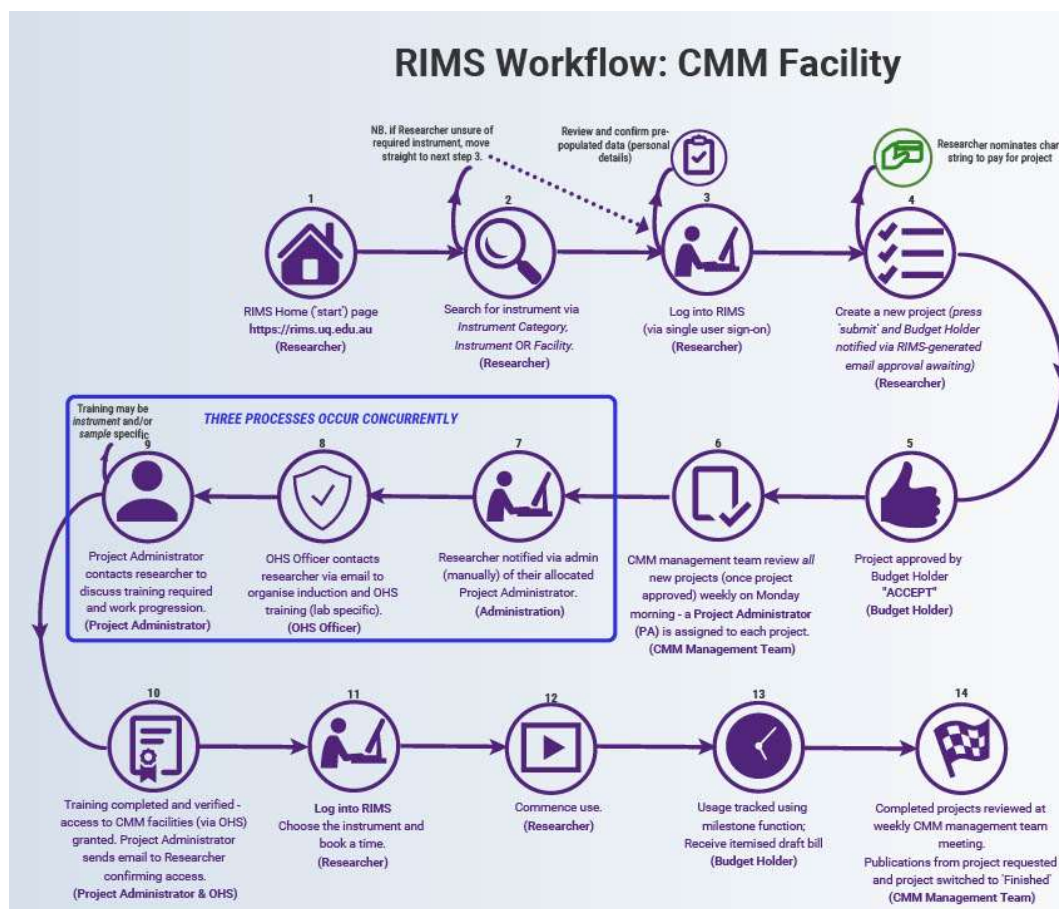
**3**

Attend the onsite induction. Afterwards, complete the New Worker Induction form in PPMS based on this induction. The proof of completion of your training modules is an attachment to this form. Please save this proof in one document for upload.

**4**

Once you have completed and passed the OHS process, your card will be granted prime time access to the lab(s).

For your training on instrumentation, bookings, and after hours access, please contact the relevant CMM lab manager.



Visitors and non-inducted clients are **not** able to work independently in CMM and must, at all times, be accompanied by CMM staff or persons approved by the CMM to supervise visitors. Because these clients are under the direct supervision of Centre staff, they are not required to undergo a full induction although they will be advised of emergency exits and other pertinent safety issues. Visitors and non-inducted clients must not do any work in the CMM unsupervised.

The nature of HS&W dictates that workplace procedures and processes must be modified and updated as knowledge and awareness increases, and information in any printed version may become outdated. Revision of the handbook will occur as the need arises e.g., when policies, legislation, facilities, personnel, or equipment are added or modified.

<https://cmm.centre.uq.edu.au/induction>

## FLOW CHART FOR CLIENT INDUCTIONS AND TRAINING

	Stage	Details	
1	<b>Client, PPMS and Project Registration</b>	<a href="https://cmm.centre.uq.edu.au/client-information">https://cmm.centre.uq.edu.au/client-information</a>  You must register a new project on PPMS: <a href="https://au.ppms.info/uq-cmm/">https://au.ppms.info/uq-cmm/</a>	
2	<b>Client allocated a Project Administrator</b>  <b>OHS Co-ordinator contacts client</b>	Weekly Monday management meeting to determine which CMM lab the client is to attend. A Project Administrator is assigned to the client during this meeting.  The OHS Co-ordinator contacts the client with OHS induction details as well as the PPMS OHS requirements.	
3	<b>Undergo CMM OHS induction tour of lab(s)</b>	A meeting invite will be sent to clients specifying the details of their compulsory tour.	
4	<b>The OHS induction process is completed when all OHS forms are received and approved</b>	<b>Complete:</b> <ol style="list-style-type: none"> <li>1. New Worker Induction Checklist (on PPMS).</li> <li>2. Record of completion of required UQ online safety training modules (attached to the form above in 1).</li> <li>3. Risk Assessment authored by the client and approved by the client's supervisor in UQSafe, describing the sample to be brought to the CMM labs and the spill procedure.</li> </ol>	
5	<b>Independent Prime Time Lab Access</b>	WHSC advises CMM Admin and client of completion of induction. Access to appropriate labs added to client's UQ access card (or access card issued to external clients). CMM will advise when access has been granted.	
6	<b>Training</b>	Undergo equipment specific training.	
7	<b>Sign relevant risk assessments for the use of equipment</b>	<b>Understand &amp; sign:</b> CMM Risk Assessments for routine use of equipment.	
8	<b>Complete training</b>	Assessed as competent by trainer.	

<b>9</b>	<b>Licensed</b>	<b>Given:</b> License (booking rights) to allow independent work on nominated equipment.	
<b>10</b>	<b>After-hours access</b>	After-hours access may later be granted if approved by trainer and an after-hours access assessment has been successfully completed by the lab manager.	



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## **2. WORKPLACE HEALTH & SAFETY AND ENVIRONMENTAL SUSTAINABILITY AT THE UNIVERSITY OF QUEENSLAND (UQ)**

### **2.1 THE WORK HEALTH & SAFETY ACT 2011 - A BRIEF OVERVIEW**

#### **Queensland Work Health & Safety Act 2011**

The WH&S Act applies to all workplaces (other than mines, aviation, and petroleum production) and all people in those workplaces (**employees, researchers, students, and visitors**) at the University of Queensland. The WH&S Act is based on the philosophy of the 1972 Robens Committee Report in the UK which stated, "The primary responsibility for doing something about the present levels of occupational injuries and disease lies with those who create the risks and those who work with them". This self-regulatory approach seeks to place a much greater level of responsibility on the employer with a reduced involvement of the inspectorate. The employer must demonstrate due diligence to fulfil these obligations.

Under common law there has been a duty of care placed on an employer to provide a safe and healthy workplace and a safe system of work. This duty has now been made a statutory requirement as an obligation of the WH&S Act. The Act does not require the employer to achieve zero risk, but rather to assess the hazards and employ control measures which would be seen as reasonable and practicable steps to remove or minimize the risks.

In addition, an obligation under the WH&S Act has been made a responsibility for **employees, visitors, and others** in the workplace.

#### **Work Health and Safety Act 2011**

##### **Part 2 Health and safety duties**

#### **28. Duties of workers**

While at work, a worker must—

- (a) take reasonable care for his or her own health and safety; and
- (b) take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons; and
- (c) comply, so far as the worker is reasonably able, with any reasonable instruction that is given by the person conducting the business or undertaking to allow the person to comply with this Act; and
- (d) co-operate with any reasonable policy or procedure of the person conducting the business or undertaking relating to health or safety at the workplace that has been notified to workers.

### **Penalties**

Substantial penalties may be imposed on the University, its managers, and individual employees or workers for non-compliance.

Apart from the statutory requirements of the WH&S Act to avoid injury and damage, managers should be mindful of the common law consequences of the failure to adequately address OH&S matters. Such common law claims could be orders of magnitude greater than any penalty applicable under the WH&S Act. These claims may well be directed to individual University managers as well as to the University as a corporate body.

### **Implications**

The increased flexibility of a self-regulatory approach (with progressively fewer mandatory provisions) must be matched within an organization by much greater management responsibility and awareness of workplace hazards. Individual managers and supervisors must make risk assessments and plan control measures appropriate to the work areas over which they have authority.

Appropriate induction and on-going training in workplace health and safety matters should be given to all personnel so that they fully understand their responsibilities and are competent to undertake their individual roles. This training should include OH&S management principles and knowledge of assessment and control for a wide range of workplace hazards. A record must be kept of this training. Systematic risk assessment should be carried out on all work activities including postgraduate research projects, undergraduate class experiments, field trips and workshop activities.

This induction booklet is designed to assist CMM to fulfil its obligations under the WH&S Act. The information provided is specific to CMM and does not replace the University's Workplace Induction Modules (via the online training portal). It is a requirement of CMM that all active users of CMM undertake a general university induction with their department or faculty and have completed the prescribed online training modules. External (non-UQ) clients must also complete the University's Workplace Training, Annual Fire Safety and Lab Safety Modules. The CMM can arrange access to these modules.

## 2.2 UQ OCCUPATIONAL HEALTH & SAFETY POLICY

### 1. Purpose and Objectives

[PPL 2.10.03 Health, Safety and Wellness Policy](#)

This policy outlines the University's commitment to achieve the highest attainable level of occupational health and safety for its staff, students, visitors, contractors, and volunteers throughout all areas of its activities.

### 2. Definitions, Terms, Acronyms

No entries for this document.

### 3. Policy Scope/Coverage

This policy applies to all staff, students, visitors, contractors and volunteers across all University operations and sites.

### 4. Policy Statement

The purpose of this policy will be met by strict attention to:

- Establishing an occupational health and safety risk management process that is proportionate and evidence informed, where resources and effort are determined by the nature and scale of the University's workplace activities.
- Integration of health and safety into business strategy and planning around the core business activities.
- An emphasis on leaders at all levels within our workplaces demonstrating, through their actions, their commitment to occupational health and safety.
- Provision of a clear statement and delegation of occupational health and safety accountabilities and responsibilities for personnel across the organization.
- Provision of adequate resources and a responsible financial budget for the function.
- Integration of compliance requirements with relevant health and safety legislation and University policies and procedures.
- Establishment of measurable objectives and targets for health and safety, such as the OHS Goals of the University, to ensure continuous improvement aimed at elimination of work-related illness and injury, so far as is reasonably practicable.
- Provision of appropriate and targeted health and safety training and information to students and workers.
- A sound consultation process to ensure all workers are included in the decision making where there is an impact on occupational health and safety.
- Ensure hazards and incidents are promptly reported, investigated where appropriate, and control measures implemented to eliminate or minimize the risk of recurrence.

- Regular review of the University's occupational health and safety management systems and effective monitoring of their implementation.

UQ senior staff have responsibility to ensure the implementation and maintenance of an effective system of management of occupational health and safety, consistent with relevant legislative requirements.

Supervisory staff at every level have specific responsibilities to oversee implementation of effective risk management, and to ensure that safe working procedures are clearly understood and consistently observed. Supervisors must also ensure that workplace facilities and conditions are maintained at a high standard, that hazardous substances are stored and handled safely, and that all plant and equipment in use is in safe working order.

All staff, students, visitors, contractors, and volunteers have a duty to care for their personal welfare and the welfare of their fellow colleagues. To meet this commitment, each person must follow safe working practices at all times, and take all reasonable care to prevent personal injury, injury to others, or damage to plant and equipment.

## 5. Compliance

To facilitate compliance with this policy, the University Senate:

- Established and maintains the OHS Division, headed by a Director of OHS and supported by appropriate specialist Occupational Health and Safety Advisers and administrative staff and facilities.
- Established and supports an occupational health and safety committee structure throughout the University, as set out in [PPL 2.10.01](#) Occupational Health and Safety Committees.

The University has established procedures outlining the responsibilities of specific roles for occupational health and safety compliance. Key performance criteria are outlined in:

- Staff Responsibilities for Occupational Health and Safety ([PPL 2.10.04](#))
- Occupational Health and Safety Manager Role and Function ([PPL 2.10.09](#))
- Work Health and Safety Coordinator Role and Function ([PPL 2.10.06](#))
- Health and Safety Representative Role and Function ([PPL 2.10.05](#))

## 6. Occupational Health and Safety Training

The University recognises the need to provide appropriate training and development for managers, supervisors, and staff to facilitate the implementation and maintenance of safe systems of work. The Occupational Health and Safety Division, via the [UQ Staff Development Program](#), offer training to promote, enhance and support ongoing compliance with, and continual improvement of, the University's Occupational Health and Safety Management System.

## 2.3 CMM OCCUPATIONAL HEALTH & SAFETY GOALS

The CMM endorses and adopts the University's OH&S policy. Accordingly, the CMM's goals reflect those of the university.

### OHS Goals of the University...

#	Goal	Measure/s
1	OHS at the University is effectively resourced to implement the organization's OHS Policies and Procedures.	<ul style="list-style-type: none"> <li>• There is appropriate access to OHS staff for the provision of OHS advice to management and workers.</li> <li>• As part of the annual budget approval process, sufficient funding is allocated in the local budget to meet OHS requirements.</li> <li>• OHS resources are sufficient to implement effective safety systems.</li> </ul>
2	All workers at the University are aware of their OHS responsibilities and have defined roles and accountabilities. Managers and supervisors have overall responsibility for the provision of a safe and healthy working environment and are accountable for ensuring the safety management system is working effectively within their work area.	<ul style="list-style-type: none"> <li>• Position descriptions and performance appraisals for all University staff include relevant OHS responsibilities and accountabilities (as per Policy 2.10.04).</li> <li>• All Managers and Supervisors have attended the Staff Development training course "OHS for Supervisors and Managers" OR "OHS for Senior Managers" training, as applicable to their position.</li> </ul>
3	All University workers, volunteers, students, and contractors receive appropriate health and safety and task related training to perform their function in a safe manner.	<ul style="list-style-type: none"> <li>• All workers have successfully completed the online UQ General Workplace Safety training module.</li> <li>• All new workers receive a local site-specific general induction within their workgroup.</li> <li>• All new workers complete a 'Training Needs Analysis' with their Manager/Supervisor</li> <li>• All laboratory workers have successfully completed the online UQ Laboratory Safety training module.</li> <li>• All new laboratory workers attend a local site-specific laboratory induction.</li> <li>• Records of OHS inductions and training are maintained for auditing purposes.</li> </ul>

		<ul style="list-style-type: none"> <li>All contractors engaged to work at the University have been appropriately inducted.</li> </ul>
4	Consultation arrangements are in place to ensure University workers are included in the decision-making process impacting on workplace health and safety.	<ul style="list-style-type: none"> <li>Faculty, Institute and Key Division OHS committees are active, chaired by the appropriate Senior Manager, correctly represented, and meet a minimum of 4 times per year.</li> <li>Minutes from the Faculty, Institute and Key Division OHS Committees are forwarded to the OHS Division and published on UQ OHS website.</li> </ul>
5	To ensure information on OHS issues is provided and understood by all relevant persons.	<ul style="list-style-type: none"> <li>Workers are advised of the OHS website during local inductions. The UQ “New Worker OHS Induction Checklist” is completed as verification that relevant OHS issues have been discussed.</li> <li>Online safety training and induction modules contain competency assessments, with a minimum pass mark requirement. Successful completion is verified by the workers Manager/Supervisor.</li> <li>Organizational units have appropriate and effective communication mechanisms in place (e.g., a dedicated OHS noticeboard or intranet site).</li> <li>Minutes from the Faculty, Institute and Key Division OHS Committees are disseminated locally to the workers they represent.</li> </ul>
6	To report and record in accordance with documented procedures and legislative requirements all workplace injuries, illnesses, incidents, and health and safety hazards, dangerous occurrences, and systems failures.	<ul style="list-style-type: none"> <li>100% of all incident reports are signed off and actioned appropriately by the Head of Section/Faculty/Institute within 12 weeks of the event.</li> </ul>
7	To document the University’s health and safety policy, plans and procedures in accordance with the requirements of the Work Health and Safety Act and Regulations.	<ul style="list-style-type: none"> <li>OHS Policies, Procedures and Guidelines are reviewed at least every 3 years, and in accordance with legislative changes.</li> <li>Faculty, Institute and Key Division OHS committees have developed a ‘Health and</li> </ul>



		Safety Management Plan', and it is reviewed annually.
8	The University ensures that OHS documents are clearly identifiable, easily located and include their issue status.	<ul style="list-style-type: none"> <li>• All workers have access to required OHS documents (e.g., via UQ and local websites, local network drives, dedicated OHS notice boards).</li> <li>• All OHS documents include date and version number.</li> </ul>
9	To provide a risk management process that is proportionate with the nature of workplace activities and scale of health and safety risks.	<ul style="list-style-type: none"> <li>• All active risk assessments on the Risk Management Database are assessed and approved by the Supervisor.</li> <li>• Risk assessments on the database are audited.</li> <li>• The UQ OHS Workplace Assessment Checklist is completed annually by local Safety Managers/Coordinators.</li> <li>• A 'Corrective Action Plan' is developed from audit findings to resolve identified hazards.</li> <li>• Results from OHS audits and inspections are discussed at the relevant local OHS committee.</li> </ul>
10	A system is in place to identify and manage all emergency situations and critical incidents that could affect University staff, students, and visitors.	<ul style="list-style-type: none"> <li>• All workers must complete compulsory online Annual Fire Safety training annually, or equivalent training at their facility.</li> <li>• Building and Floor Wardens are appointed and trained in accordance with UQ requirements.</li> <li>• Emergency practice evacuations occur in accordance with UQ requirements.</li> <li>• Building occupants are provided with written feedback following practice evacuation events.</li> </ul>

**Definitions:**

**'Worker'** => all UQ Staff and RHD Students, including academics, lecturers, tutors, researchers, sabbatical/visiting staff, casual staff, vacation scholars, volunteers and students on work experience (as interpreted from the *Work Health and Safety Act 2011*).

**'Active Risk Assessments'** => Risk assessments that apply to work tasks that have commenced. Does not include risk assessments under development (prior to tasks commencing) or archived risk assessments (tasks no longer being undertaken).

## 2.4 UQ HEALTH, SAFETY & WELLNESS DIVISION

The University of Queensland has a Health and Safety Division (located on level 6 of the Computer Science Building (Building # 69). The Director is Mr Jim Carmichael (336 52563). The main function of the HS&W Division is to advise Faculties, Schools and Centers on HS&W matters and to facilitate the implementation of the University policy within departments. The Division provides specialist advice on topics including radiation safety, ergonomic matters, fume cupboard operation, disposal of chemicals, fire procedures, storage regulations *etc.*

The Health, Safety and Wellness (HSW) Division is led by the Director, Health, Safety and Wellness, Mr Jim Carmichael (336 52563) whose direct reports include:

- Governance and Strategy
- Several specialist professional services teams that provide advice, facilitate risk management, deliver HSW programs and develop capability
- Work Injury Management
- UQ Wellness.
- (07) 3365 2365
- [hsw@uq.edu.au](mailto:hsw@uq.edu.au)

### **Governance and Strategy**

Core services:

- supporting UQ occupational health and safety (OHS) governance and consultative mechanisms
- developing, managing, and maintaining UQ's OHS management system
- monitoring UQ's OHS performance
- engagement with regulators and stakeholders.

### **Biosafety Advisors**

Biosafety is an integrated part of HSW at UQ, and it is important that all staff and students appreciate the potential health risks of using biohazardous materials in the workplace. Biosafety looks after permits and approvals relating to biological materials under the regulatory requirements and includes:

- biosecurity
- genetic manipulation of materials
- high-risk biologicals or potentially hazardous biologicals

- Security Sensitive Biological Agents
- pest plants
- Defense Trade Control
- collections related to native flora and fauna
- work relating to animal and human ethics.

The Institutional Biosafety Committee (IBC) ensures compliance with legislation, regulations and standards relating to biosafety and biosecurity.

- (07) 3365 2365
- [biosafety@uq.edu.au](mailto:biosafety@uq.edu.au)

### **Ergonomics and Rehabilitation Advisor**

The Ergonomics and Rehabilitation Advisor oversees the UQ Musculoskeletal Disorders Strategy and is responsible for its development, implementation, and evaluation.

Areas of focus include:

- computer workstations
- working in a laboratory
- manual tasks, including hand tools, and lifting and moving equipment.
- (07) 3365 2365
- [hsu@uq.edu.au](mailto:hsu@uq.edu.au)

### **Occupational Health Nurse Advisor**

Occupational Health Nurse Advisors aim to promote and maintain the highest degree of physical, mental, and social wellbeing of workers in all occupations by:

- preventing health issues
- controlling risks
- tailoring work to the person in the position.

Programs the Occupational Health Nurse Advisors assist with include:

- first aid
- health monitoring
- hearing protection and testing
- immunization
- (07) 3365 4883
- [ohna@uq.edu.au](mailto:ohna@uq.edu.au)

### **Occupational Hygiene Advisors**

Occupational Hygiene Advisors can aid in recognizing, evaluating, and controlling workplace hazards encountered in the University environment. Common issues Occupational Hygiene Advisors provide assistance with are:

- indoor air quality
- hazardous chemicals
- ventilation
- asbestos, and toxic and nuisance dust
- noise measurement and personal noise exposure monitoring
- physical environment assessment (for example, heat and lighting).
- (07) 3365 2365

- [hsw@uq.edu.au](mailto:hsw@uq.edu.au)

### **Radiation Protection Advisor**

The Radiation Protection Advisor's role is to train, implement and monitor forms of radiation and associated equipment around UQ and related sites. This includes:

- providing specialist advice
- ensuring compliance with legislation
- monitoring projects and researchers to ensure a high standard of radiation safety.
- (07) 3365 2365
- [hsw@uq.edu.au](mailto:hsw@uq.edu.au)

### **Work Injury Management**

Core services:

- administering UQ's self-insurance license requirements
- workers' compensation claims management
- return to work and rehabilitation assistance.
- (07) 3365 2365
- [wimteam@uq.edu.au](mailto:wimteam@uq.edu.au)

### **UQ Wellness**

UQ Wellness provides corporate programs and opportunities for participation in programs underpinned by the key and interrelated areas of physical health, psychological health, organizational engagement, and lifestyle factors.

- (07) 3365 2365
- [hsw@uq.edu.au](mailto:hsw@uq.edu.au)

## 2. 5 CMM SAFETY COMMITTEE

The CMM has a safety committee which liaises closely with the Research Infrastructure H&W Committee and the UQ HS&W Division. Membership of the committee is open to all staff. There are also client representatives on the committee. The committee meets four times a year to consider OH&S matters, to apply policy and discuss its implementation. It also conducts periodic safety audits. If you wish to raise any safety issue with the committee, please inform Candice Goodwin (Workplace Health and Safety Coordinator), local staff, or any member of the committee.

### Some members of the CMM Safety Committee:

Director	Roger Wepf
WHSC/First Aid Officer/Floor Warden	Candice Goodwin
Health & Safety Representative	Kathryn Green
Client Representative	Aymeric Rogalski
SSU Representative	Celestien Warnaar
First Aid/Lab Manager (Hawken)	Ron Rasch
Lab Manager (Chemistry)	Alexander Fink
Deputy Floor Warden (AIBN)	Travis Hagstrom
Lab Manager (QBP – Cryo TEM)	Matthias Floetenmeyer
First aid provider (QBP)	Lou Brillault
First aid provider (Hawken)	Ying Yu
First aid provider (Hawken)	Heike Bostelmann
First aid provider/RSO (Chemistry)	Anya Yago
AIBN Lab Manager	Nicole Schieber

## 2.6 UQ SUSTAINABILITY - ENVIRONMENTAL MANAGEMENT SYSTEM

### *Environmental Management – Policy*

#### 1. Purpose and Objectives

This policy states the University's commitment to conduct its activities in accordance with the *Environmental Protection Act (Qld) (1994)* and associated legislation. This document offers general guidance to executive, managers, staff, and students in meeting legislative and governance requirements of environmental management.

## **2. Definitions, Terms, Acronyms**

**EP Act** - Environmental Protection Act (Queensland) (1994)

## **3. Policy Scope/Coverage**

This policy applies to staff, students, contractors, and visitors of the University and applies to all activities conducted on University premises or under the auspices of the University.

## **4. Policy Statement**

The University of Queensland acknowledges the importance of protecting environmental values as part of the global community. Through its planning and practice, the University is committed to ensuring the protection of the environment by keeping environmental harm to a minimum in a sustainable, economically rewarding and technically feasible manner.

Staff, students, contractors, and visitors must meet their responsibilities under this policy.

## **5. Responsibilities**

All members of the University community share the responsibility for protecting the environment. This policy uses the three responsibilities of the EP Act: Executive Officer Responsibility (Section 493), General Environmental Duty (Section 319) and Duty to Notify (Section 320):

- Executive, managers and supervisors must ensure that the University complies with the EP Act.
- Individuals undertaking activities on University premises or under the auspices of the University must take all reasonable and practicable measures to prevent or minimize any environmental harm the activity may cause.
- On becoming aware of environmental harm, all individuals have a responsibility to notify the University.

## **6. Commitment**

In addressing this policy statement and in meeting environmental responsibilities, the University will:

- Consider sustainability issues in the decision-making process of planning and managing the University's operations and activities, including capital works projects.
- Facilitate and enhance the decision-making process by seeking opinions, feedback, and participation from the University's stakeholders on environmental management issues on University campuses and sites.
- Promote and encourage environmental awareness and training to ensure individuals throughout the University are aware of their environmental responsibilities.
- Strive for continuous improvement of environmental performance by identifying and addressing environmental risk.
- Make available procedures for minimizing risks that comply with local, state, and federal

environmental legislation with the goal of attaining best environmental practice.

- Make available resources to implement and meet the requirements of this policy.
- Offer, encourage, and develop courses, programs and research projects of environmental and sustainable content.
- Promote external awareness by supporting projects that seek solutions to environmental problems to improve the sustainability of the global environment.

<http://ppl.app.uq.edu.au/content/10.20.01-environmental-management>

## Penalties

Substantial penalties may be imposed on the University, its managers, and individual employees for non-compliance. Penalties are comparable to, and in many cases exceed, those of the WH&S Act.

## Implications

All staff/clients have a general environmental duty under the Environmental Protection Act to report any item/activity/incident/spill that they think may impact on the environment.

They can report to CMM staff, their Supervisor, Security on Ext 53333 or the Environmental Engineer on Ext 51587. For non-emergency incidents you may elect to fill out an Environmental Aspects and Impacts Identification Form (accessed on <http://www.uq.edu.au/sustainability/environmental-risk>) to be returned to the Environmental Engineer.

**The major activities of CMM which may impact on the environment involve the production and disposal of waste - principally *Chemical Waste* and *Clinical Waste*.**

This handbook and your training at CMM will assist you to safely manage all the waste that you generate.

- Please be aware of the aspects of waste management relating to each task you conduct at CMM before you undertake the task. You must be aware of spill procedures, environmental risks, and waste disposal methods for any chemical you use.
- Please seek advice from your trainer, risk assessments, ChemWatch or staff if you are unsure.
- Asbestos materials are known to be present on campus, but the CMM is not aware of any structures or equipment that may contain asbestos in our facilities. If you find/disturb material that you suspect of containing asbestos, inform CMM staff immediately. See UQ's Asbestos Management Policy for more information. <https://ppl.app.uq.edu.au/content/2.20.01-asbestos-management>.



### **3. EMERGENCY PROCEDURES**

#### **3.1 GENERAL EMERGENCY INFORMATION**

**Basic Rule: Don't panic. Keep calm in all situations. Ring Security.**

**All University emergencies are handled by University Security 53333.**

**University Security Section (all hours):  
EMERGENCIES ONLY: 3365 3333**

**For confirmed fires call 000**

**Report the type of emergency, exact location, and nature of incident.**

#### **AMBULANCE AND HEALTH SERVICE**

Security will then inform the Fire Brigade, Ambulance or Police, if required and will coordinate the interaction with the University Health Service. Only in the event of difficulty in making contact with the Security Section, telephone the Queensland Emergency Services (Fire Brigade, Ambulance or Police) directly on 0 - 000 (i.e. Dial 0 to get an outside line, when a dial tone is heard, dial 000).

The **Poisons Information Centre** at the Royal Brisbane Hospital can be reached at all hours.  
Phone **13 11 26**

**Note:** Dial 0 to get an outside line from within UQ, when a dial tone is heard, dial the external number.

#### **AFTER HOURS CMM EMERGENCY CONTACTS**

A notice is posted in each laboratory showing after-hours contact information for CMM staff. These contact details are for emergency use only.

More Emergency Procedures information can be obtained from:  
<http://www.uq.edu.au/hupp/index.html?page=25025&pid=25015>

### In the case of a medical emergency:

Basic rules: Remove person/s from danger only if it is safe to do so.  
Apply first aid if appropriate.  
**Get Help - Phone extension 53333 or 3365 3333 (Security).**

\* Note: Security will then be responsible for calling an ambulance if required.

#### a. Phone 53333 (Security)

- State
- (a) Your name and contact phone number
  - (b) The exact location of the emergency - building name, floor and room number or place in the grounds
  - (c) Number of persons injured
  - (d) Nature of accident/injury
  - (e) What action has been

- b. Arrange
- (a) Easily located point to meet emergency teams and guide them to spot.
  - (b) Delegate people to - stand by the phone- meet emergency team.

- b. Confirm                      Site and meeting place with Security.

## 3.2 EMERGENCY / FIRE EVACUATION PROCEDURE

- Warning Siren - (sounds like a reversing truck - beep, beep, beep). Prepare to evacuate the building. Check your area for fire, smoke etc.

Outside normal working hours, when it is unlikely that the building fire warden will be available, treat the alert alarm as a signal to evacuate the building immediately.

- Evacuation Siren - (whoop, whoop sound) - Evacuate the building

***OR, if safe to do so,***

- a. Exit your immediate area - turn off lights, gas, hot plates etc., close the door to room as you leave. Take valuables (if you have them nearby), keys etc. Please assist the disabled or any other persons in need on the way out.
- b. Exit the building by the nearest exit.
- c. Follow instructions from the building warden and floor wardens, they can be recognized by their colored hard hats.
- d. Assemble in the designated emergency assembly areas found on the maps in the back

of this handbook.

- e. Stay together in your assembly area, and wait for the building warden to give the “all clear” before returning to the building.
- f. After hours, evacuate the building immediately if the warning sounds.

Where the only way for escape is through the smoke or fumes, stoop down as low as possible to take advantage of the cooler, cleaner air near floor level.

If possible, breathe through a wet cloth.

*Note:* Most deaths resulting from fires are caused by asphyxiation not burns.

**If you discover a fire in your CMM area:**

**DON'T PANIC!!!**

**If floor fire warden is not available:**

- a. Activate the fire alarm system, using the break-glass alarm situated near the exits in each laboratory. This is especially important if the alarm is not already sounding.
- b. Deal with any emergency situations, such as assisting an injured worker to escape the immediate vicinity of the fire or extinguishing burning clothing or hair by smothering with fire blankets (provided in each laboratory).

**During working hours:**

- a. Alert other people in the vicinity and on adjacent floors.
- b. Notify the Floor Fire Warden (see the list posted on the emergency procedures notice board in each laboratory). If available, he/she will take control of the emergency procedures on the floor. If no Fire Warden is available, a responsible person must take on the role as Acting Fire Warden.
- c. EVACUATE THE BUILDING - CHECK THAT NO ONE IS LEFT ON THE FLOOR.

**Outside working hours:**

- a. Alert other people in the vicinity and enlist their assistance.
- b. Notify Security Section (ext. 53333). Advise them of the location and extent of the fire and of any injuries.
- c. ONLY IF IT IS SAFE TO DO SO, attempt to put out fire using suitable fire extinguishers, turn off all experiments, close all doors.
- d. EVACUATE TO EMERGENCY ASSEMBLY POINT - CHECK THAT NO ONE IS LEFT ON THE FLOOR.

## Fire Fighting Equipment

The following types of fire-fighting equipment are available at locations indicated on the CMM Emergency floor plans in the back of this guide.

- (a) Fire Hose
- (b) Fire Extinguishers:
  - Carbon Dioxide (CO<sub>2</sub>) Extinguishers
  - Dry Chemical (powder) Extinguishers
- (c) Fire Blankets

















**Dry Chemical or Carbon Dioxide (CO<sub>2</sub>) Extinguishers** can be used on Electrical, Flammable Liquid or Wood and Paper fires.

**Fire Hoses** should **only be used** for **Paper and Wood fires** and should not be used for **Electrical or Flammable Liquid fires**.

# Portable Fire Extinguisher Guide

T +61 3 8892 3131  
F +61 3 8892 3132  
E shop@fpaa.com.au  
E technical@fpaa.com.au  
W www.fpaa.com.au

## Type of Fire, Class and Suitability

Pre 1997	Current	Extinguishing Agent	A Wood Paper Plastic	B Flammable & Combustible Liquids	C Flammable Gases	E Electrically Energised Equipment	F Cooking Oils and Fats	Comments	D Metal Fires
		Water	✓	✗	✗	✗	✗	Dangerous if used on flammable liquid, energised electrical equipment and cooking oil/fat fires	Use only special purpose extinguishers and seek expert advice.
		Wet Chemical	✓	✗	✗	✗	✓	Dangerous if used on energised electrical equipment	
		Foam <sup>1</sup>	✓	✓	✗	✗	LIMITED	Dangerous if used on energised electrical equipment <sup>1</sup> Solvents such as alcohol or acetone mix with water and therefore require special foam	
		Powder	(ABC) ✓ (BC) ✗	✓	✓	✓	✗	Look carefully at the extinguisher to determine if it is a BC or ABC unit as the capability is different	
		Carbon Dioxide	LIMITED	LIMITED	✗	✓	✗	Not suitable for outdoor use or smouldering deep seated Class A fires	
		Vaporising Liquid	✓	LIMITED	LIMITED	✓	✗	Check the characteristics of the specific extinguishing agent. <sup>2</sup> Yearly servicing must be done by ODS & SGG licensed persons.	
		Fire Blanket	LIMITED <sup>2</sup>	LIMITED	✗	✗	✓	<sup>2</sup> Fire blankets may be used to control a fire in clothes being worn by a person or as a thermal barrier against radiant heat.	
		Fire Hose Reel	✓	✗	✗	✗	✗	Dangerous if used on flammable liquid, energised electrical equipment and cooking oil/fat fires	

### LEGEND

✓ = the class or classes to which agent is most effective  
✗ = not recommended for this class of fire  
For more information go to: [www.fpaa.com.au](http://www.fpaa.com.au)

LIMITED = indicates the extinguishing agent is not the agent of choice for this class of fire, but it may have a limited extinguishing capability

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Care should be taken when using carbon dioxide extinguishers in confined spaces and rooms should be well ventilated after use, because this type of extinguisher does not cool the source of the fire, and re-ignition may occur when the CO<sub>2</sub> is replaced by air.

**Never put yourself in a position of being trapped if the fire re-ignites.**

Any use of a fire extinguisher, even for a minor fire, must be reported to the WHSC. The fire extinguisher at that point needs to be recharged. Replacing it in its usual position is a dangerous practice as it leads to a false sense of security. This can be particularly dangerous if there is another fire, and the fire extinguisher is found to be empty.

If a fire extinguisher is discharged it must be given to the Workplace Health and Safety Coordinator who will arrange with the Fire Officer to get it replaced.

Consult the Fire & Emergency Evacuation Map for each laboratory (**Sections 7.1 to 7.4** of this handbook). Note the location of fire extinguishers, emergency exits and assembly areas.

### 3.3 CMM FIRST AID STAFF

#### CMM Safety Coordinator & First Aid Officer

Candice Goodwin is the Safety Coordinator and First Aid Officer for CMM.

#### CMM First Aid Officers

The following CMM staff members have a First Aid Certificate:

Hawken Laboratory	AIBN Laboratory
Ron Rasch	Candice Goodwin
Ying Yu	Kathryn Green
Heike Bostelmann	QBP Laboratory
	Lou Brillault
	X-RAF Laboratory
	Anya Yago

In the absence of a qualified first aid person or medical practitioner, it may be appropriate but is not obligatory for you to administer first aid.

### 3.4 FIRST AID KITS

First aid kits are in each CMM laboratory; please familiarize yourself with their location. The content of first aid kits is in accordance with the requirements of the Queensland Work Health and Safety Act.

No analgesic drugs are to be placed in the kits. If you require headache tablets, keep them in your drawer.

It is an offence against the Queensland Work Health and Safety Act 2011 to remove materials from a first aid kit for other than first aid use.

**REMEMBER:** One of the “Basic Rules of First Aid” is to give “NIL by mouth”.

Calcium gluconate ointment for hydrofluoric acid (HF) burns is available in the AIBN and Hawken lab first aid kits.

## 3.5 LOCATION OF THE FIRST AID KITS

### **AIBN Laboratory**

- Near laboratory main entrance - next to booking computer.

### **Hawken Building Laboratory**

- In the safety bookcase near the EBL lab.

### **CMM Main Administration Office AIBN**

- Above cabinet near photocopier - near office entrance.

### **QBP Laboratories**

- Near TEM laboratory main entrance - next to booking computer. And before lab manager's office at UQROX.

### **X-RAY Analysis Laboratory**

- On the wall just inside the XRD facility (near the HS&W notice board).

## 3.6 EMERGENCY SHOWERS AND EYEWASH STATIONS

### **Emergency Showers**

Showers are in the AIBN, Hawken and QBP Laboratories; check the floor plans (see Sections 7 of this document).

### **Emergency Eye Wash Stations**

There is an eye wash station located with each emergency shower and other eye wash stations are mounted on the wall throughout the laboratories.

## 3.7 CHEMICAL SPILLS

Given the variety of chemical use and quantities across the University, it is near impossible to document a procedure and spill kit for each individual suite of chemicals. The following

recommendations and guidelines should be used in conjunctions with the “Chemical Risk Assessment” procedure so that the user may identify and design appropriate procedures and spill kits to suite their application.

#### **CMM SPILL KITS**

**Chemical Spill Kits are located in each CMM laboratory and contain:**

1. **Sodium hydrogen carbonate** – to neutralize *acid spills*.
2. **Citric acid** - to neutralize *alkali spills*.
3. **Vermiculite** - for absorbing *general spills including resin spills*.
4. **Milk powder** - to neutralize *osmium tetroxide spills*  
*Note:* Alcohol or acetone can be used instead of milk powder for osmium spills.
5. **Sawdust/Wood shavings** – for absorbing hydrofluoric acid spills  
*Note:* HF must be neutralized first with sodium bicarbonate.
6. **Dustpan and brush** - to collect spilt substances.
7. **Sealable plastic bags** – to package spilt substances for waste collection.
8. **PPE** – e.g., gloves, masks, and safety glasses.



## EMERGENCY PROCEDURES – CHEMICAL SPILL

- a. **Notify another person (preferably CMM staff) immediately that there is a spill and indicate what the substance is. Evacuate the immediate area (consider people outside open windows) if the risk from exposure is significant.**

This notification ensures that awareness of the incident is not lost. Previous incidents have resulted in a person being overcome by the substances while cleaning up (so no-one will find out about it). Subsequent people attending the scene have no information to allow them to act promptly to prevent further exposure to the overcome person, themselves, and others and to the environment.

- b. **If the spill is a flammable substance, turn off or remove all ignition sources.**

At some point between the spill and clean air is the volatile concentration.

- c. **Contain the spill where possible in a safe manner. If you cannot contain the spill safely, call Security immediately on 3365 3333 (St Lucia).**

Security (when contacted) will coordinate the appropriate response and handling. Assess the ability to handle the spill “in house”. A good simile is the size of a fire. Deal with it yourself only if you are confident of your safety and ability to do so. Consider personal exposure / PPE, routes of exposure and the physical hazard of fire, explosion, toxic fumes, radiation, and secondary reactions.

**If any material has entered the drainage system or has other major environmental implications, call the Environmental Engineer on 3365 1587 or Security on 3365 3333 if after hours.**

## CHEMICAL SPILL KITS

Collect the spilt substance along with any absorbents into compatible bags (at least two) or bottles/ jars, label the container with the chemical name and the required health / risk statements, pack this bag / container into a box labelled chemical waste with your name and phone number. Process through the UQ chemical waste disposal system.

## LIQUIDS

### 1. Flammable (DG 3) and Toxic (DG 6) Liquids.

Use an absorbent to contain and soak up the spill, e.g., vermiculite or sawdust.  
Wash the area with water if appropriate or with a material recommended in the Material Safety Data Sheet (MSDS) or Risk Assessment.

## 2. Corrosive (DG 8) Liquids.

### a. Acids (other than hydrofluoric acid)

- The preference is to neutralize first with sodium bicarbonate / sodium hydrogen carbonate (or another weak base). Use vermiculite to contain and soak up the spill.

### b. Hydrofluoric acid

- Must be neutralized first with sodium bicarbonate or sodium hydrogen carbonate. Use sawdust to contain and soak up the spill. Wash the area with water and prevent run-off into drains.

### c. Alkalis

- The preference is to neutralize first with citric acid (or another weak acid) otherwise, use an absorbent material to contain and soak up the spill, e.g., vermiculite or sawdust.
- Wash the area with water if appropriate or with a material recommended in the Material Safety Data Sheet (MSDS) or Risk Assessment.

## 3. Radioactive (DG 7) Liquids

- Use an absorbent to contain and soak up the spill, e.g., vermiculite or sawdust.
- Wash the area with a decontaminant or with a material recommended in the Material Safety Data Sheet (MSDS).

## 4. Oxidizing (DG 5) Liquids

- Use vermiculite to contain and soak up the spill.
- Wash the area with water or with a material recommended in the Material Safety Data Sheet (MSDS) or Risk Assessment.

## SOLID CHEMICAL SPILLS

Be aware of dust inhalation and chemical reactions with benches, flooring, and other incompatible materials.

Collect the substance into compatible bags (at least two) or bottles/ jars, label the container with your name, the chemical name and the required health / risk statements, and process through the UQ chemical waste disposal system.

## 3.8 MINIMUM DRESS STANDARDS AND PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Note:** This section is largely derived from the UQ HS&W Div. - Minimum Standards of Dress and Personal Protective Equipment: <https://ppl.app.uq.edu.au/content/2.30.05-minimum-standards-dress-and-personal-protective-equipment#Policy>

## Minimum standards of dress

The level of personal protection required for workers will depend on the nature of the hazards that they work with or which they may encounter in their work area.

Before using a chemical, you must be aware of the appropriate personal protective equipment to be worn when using the chemical. This information can be found by reading the Material Safety Data Sheet (MSDS) for that chemical or the relevant associated Risk Assessment. In laboratories it is appropriate and necessary to specify a minimum standard of dress and protective equipment based on risk assessments.

The minimum standards need to take account of the hazards that are present in the workplace for most of the time and to consider the work of the group as a whole and not just that of an individual worker. For example, in the case of chemical and biological laboratories, the minimum standard of dress and protective equipment would be full length laboratory coat, safety glasses and closed-in shoes. Gloves will also be required to handle toxic, corrosive, pathogenic or radioactive substances.

CMM contains designated chemical and biological laboratories and the minimum dress requirements when working in these areas are laboratory coat, safety glasses with side protection and enclosed footwear (as per UQ guidelines).

### Footwear

Closed shoes must be worn at all times. Thongs and sandals are unacceptable because of the danger of burns in the event of a chemical spill. A description of suitable footwear is provided in Section 8.1 Appendix 1.

You will not be allowed entry to any CMM laboratory without suitable enclosed footwear.

### Laboratory coats

Laboratory (lab) coats must be worn in chemical and biological laboratories, i.e., any lab which has hazardous biological or chemical material. This includes sample preparation areas where hazardous chemicals are in use or present, e.g., the central laboratory area of AIBN and the back prep area of Hawken where the fume hoods are located. The CMM provides lab coats for use in CMM laboratories.

Microscope rooms are usually excluded (subject to risk assessment) because sample preparation is not undertaken there.

The UQ guidelines states that “In the case of chemical and biological laboratories the minimum standard of dress and protective equipment would be full length laboratory coat, safety glasses and closed-in shoes.”

### Eye protection

Wearing contact lenses should be avoided when in laboratories because the use of solvents and other chemicals can cause the lenses to breakdown and stick to the eyes. The CMM provides safety glasses for use in CMM laboratories.

Standard reading glasses or sunglasses are not suitable eyewear when safety glasses are stipulated as PPE.

### Gloves

Gloves (cryo) and a protective face shield **must** be worn when handling significant volumes of liquid nitrogen: this is a legal requirement. CMM supplies latex and nitrile (blue) gloves. Nitrile gloves are generally used for procedures that involve chemicals. Some chemicals require double-gloving or specialized glove types. Consult the relevant Risk Assessment, CMM staff or MSDS for advice on the type of gloves required.

## 3.9 RISK ASSESSMENTS

Risk Assessments are required for everything we do. There are **Procedural** Risk Assessments, **Chemical** Risk Assessments and **Fieldwork** Risk Assessments which need to be completed and signed by all participants. Fieldwork refers to any work undertaken outside the University Campuses; it can be attending conferences/meetings locally, interstate or overseas, or collecting specimens out in the field.

Please be aware that “by law”, a risk assessment is required for all work that involves a practical component. In this way, hazards can be identified, risks minimized, and due care demonstrated.

For all chemicals & samples that you use in the laboratory you must complete a UQ Risk Assessment. This is to be based on accurate and current MSDS data and must include **spill procedures** and methods of **waste disposal**.

(See Sections **4.3**, **4.8** & **4.17** for more details on waste disposal procedures for biologic, chemical, and non-chemical wastes).

To comply with the UQ and CMM Risk Assessment requirements you must submit your own so that CMM has a complete record of all the samples/specimens, procedures and chemicals being used in its laboratories. A copy of your risk assessment will be held in all CMM labs in which

you work. An additional copy will be held by the CMM WHSC. **You should also keep a copy for your own records.**

The UQ HS&W Div. has advised that it intends to annually check centers such as CMM to ensure that risk assessments are completed and up to date.

**CMM is obliged by law to monitor client compliance with risk assessments and has the right and obligation to refuse access to facilities in the case of non-compliance.**

### **Completing and lodging Risk Assessments**

CMM has completed Procedural and/or Chemical Risk Assessments for the routine procedures and chemicals used in CMM, e.g., "Routine Use of SEMs". For these, a sign-off sheet is provided, so that clients can read the task specific Risk Assessment and sign to indicate that they have understood the information and will follow these procedures. **For all other procedures, a new Risk Assessment must be formulated by the individual.**

The options available to external and internal clients are somewhat different and relate to the use of the web based UQ Risk Assessment database.

### **External clients**

External clients are unable to access the UQ database. Clients can use the supplied electronic templates or complete their risk assessment in hard copy format using their own organization's RA documentation. E-copies are preferred.

**EXTERNAL CMM CLIENTS:** The e-copy or signed hard copy of the relevant Risk Assessment(s) must be forwarded to the CMM safety team before you begin work on any new specimen or procedure in CMM.

### **Internal UQ clients**

CMM clients who are UQ staff or students are urged to prepare their risk assessments on-line using the web based UQ Risk Assessment Database, UQSafe.

The web based UQ Risk Assessment Database is the format preferred by CMM as it enables the details to be checked, edited, and updated easily and makes the completed risk assessments available for others to use as a template. All CMM risk assessments and all other risk assessments done by CMM clients and other UQ staff and students can be searched and accessed on the UQ system and used as a guide for your own risk assessment. **UQ supervisors should assist their students to prepare Risk Assessments and sign-off on their risk assessments.**

**INTERNAL CMM CLIENTS:** A RA database e-copy of all relevant Risk Assessments must be forwarded to the CMM safety team before you begin work on any new specimen or procedure in CMM.

## A brief guide to the use of the UQ Risk Assessment database

A training database for the UQ Risk Assessment database is available at:

<https://staff.uq.edu.au/information-and-services/health-safety-wellbeing/health-safety-workplace/risk/assessments>

This training site explains the database in considerable detail and users can now view narrated “walk-through” training movies of, focusing on step-by-step instructions for performing Risk Assessments.

First time users will be prompted for a log on name, password, and other address information. Your log on name and password will be the same as your initial UQ email account. It is strongly suggested that clients peruse this site before attempting to use the real database.

**Note:** You may have to disable the pop-up window or ad block control on your personal firewall to use the database.

For further assistance with Risk Assessments consult:

ChemWatch web site

<http://www.uq.edu.au/ohs/?page=230317>

UQ Sustainability web site  
(for all waste disposal)

<http://www.uq.edu.au/sustainability/recycling-and-waste>

### **Notes:**

ChemWatch and the other websites listed above are available on the booking computers in CMM laboratories.

Training courses on the use of the UQ Risk Assessment database are available through the University Staff Development Program.

**REMEMBER:** All necessary Sample Risk Assessments must be completed and returned to CMM’s safety team before any training or work commences.

This includes external and “one-off” clients who bring specimens to CMM for analysis.

### 3.10 ACCIDENTS/INCIDENTS

#### Accident/Incident/Hazard or Injury Reporting

All work-related accidents/incidents/injuries/hazards/dangerous events, whether resulting in personal injury or not, must be recorded on the UQ's OHS Incident Reporting Database. UQ staff and students can access this reporting system directly. External clients and visitors should notify the WHSC who will complete the incident details on the reporting system.

Reporting and recording incidents is recognised as an important component in hazard control, risk management and incident prevention.

As an employer, The University of Queensland has a legal obligation under the Work Health and Safety Act 2011 to keep a record of all work-related injuries, illnesses, and dangerous events. The University is also required to have effective processes for investigating workplace-related incidents and illnesses and for the implementation of corrective and preventive actions.

The UQSafe - Incident OHS incident reporting system is a web-based program designed to standardise incident reporting procedures within the University in order to comply with legal requirements, and to provide statistical information which is used in future hazard control, risk management and incident prevention programs.

Incident reports must be submitted online using UQSafe by the person who is injured or ill or by another person who is familiar with the details of the incident. This process also applies to any dangerous events that occur regardless of any injury or illness, e.g., near-miss events.

UQ staff and students can access UQSafe - Incident from the staff/student home page. Non-University personnel unable to access the on-line reporting system should contact the WHSC who will then enter the accident/incident details on UQSafe - Incident.

In the case of **notifiable incidents** (fatalities, serious injury, work-caused illness, or a dangerous incident), after completing any emergency action required, details of the incident must be provided without delay to the UQ Occupational Health and Safety Division (telephone 3365 2365) so that notification to the regulator can occur.

It should be noted that the on-line reporting system or form does not replace the need for employees injured at work or with a work-related illness to complete a worker's compensation claim. If medical treatment is obtained then pages 7 & 8 of the "Self-Insurance of Worker's Compensation" booklet <http://www.uq.edu.au/ohs/PPL/2-25-01/WIM-SelfInsurance-Booklet.pdf> need to be given to the treating doctor.



## **4. LABORATORY PROCEDURES**

### **4.1 BIOLOGICAL MATERIALS**

**Note:** The following instructions are in response to AS2243.3/s3.3 guidelines which indicate that diagnostic specimens from humans or animals are normally regarded as Risk Group 2 organisms and should be sterilized before disposal. Further information can be obtained from <http://www.uq.edu.au/ohs/?page=29969> or from the relevant OH&S Division Biosafety Adviser.

**Note:** All Australian Quarantine & Inspection Service regulations and conditions placed on your biological material **MUST** be adhered to.

All biological material must be handled and disposed of as if it is contaminated with viable pathogens (e.g., wear appropriate PPE and place waste materials in a *Clinical Waste* bin only after sterilization). In CMM, biological material that has been fixed in an appropriate volume of chemical fixative (e.g. EM fixatives or 70% ethanol) is considered **sterile**. Before disposal as waste, all biological material, (except that classed as **sterile** at the time it arrives at CMM) must be sterilized and recorded in the CMM laboratory's *Waste Disposal Record Sheet*.

### **4.2 IMPORTED BIOLOGICAL MATERIALS**

The Department of Agriculture (Biosecurity) monitors biological materials being imported into Australia to ensure that any risk associated with each material is assessed. DAFF-Biosecurity then manages this risk by applying certain conditions to the importation and handling of the products (under the Quarantine Act 1908). The importations of products that represent a risk to Australia's plant, animal and human health require a permit. Attempted importation of biological material without appropriate Department of Agriculture (Biosecurity) authorization incurs heavy fines and destruction of material.

### **4.3 BIOLOGICAL MATERIALS WASTE DISPOSAL**

All biological material must be sterilized before disposal and must be disposed of in the *Clinical Waste* stream. Sterilization can be through chemical sterilization (standard EM fixatives or 70% alcohol) or as stipulated by Department of Agriculture (Biosecurity) conditions. Material requiring autoclaving by Department of Agriculture (Biosecurity) is to be returned to lab of origin for correct disposal.

**The disposal method for your biological specimens must form part of your Risk Assessment.**

Biological materials that are brought into the center "unsterilized" (i.e., not fixed) or material under Department of Agriculture (Biosecurity) jurisdiction must be sterilized and documented in the laboratory's *Waste Disposal Record Sheet*. This record sheet is forwarded to the CMM WHSC every month for the updating of CMM records.

#### 4.4 BIOLOGICAL MATERIALS ORDERING

N/A

#### 4.5 CHEMICAL SAFETY

Most chemical substances used in laboratories are dangerous in one way or another, some more than others. Just because a chemical is common or familiar does not mean that it should be treated as harmless. If you are unsure of the risks associated with the use of any substance at the CMM, consult the associated risk assessment. If one is not evident, contact supervising center staff or the WHSC. Additional information to help determine the risks may be obtained from the Material Safety Data Sheet (MSDS). Do not proceed to use any chemical if you are not trained in its use. You should be aware of the precautions necessary (e.g., personal protective equipment, use of fume hood etc.) for handling all substances you use. Become familiar with the first aid treatment for a chemical before using it, in case of an accident. Also be aware of what to do if there is a spill. This information is contained in the risk assessment.

Any person transporting chemicals in a University vehicle is advised to attend the Staff Development seminar on Chemicals Management.

Any CMM staff that plan to transport chemicals in University vehicles please contact the CMM's WHSC for course times. You must sign off on an appropriate risk assessment or, if one does not exist, conduct a risk assessment. Be aware that the transport of any chemical in a personal vehicle may void your insurance.

#### 4.6 CHEMICAL PROCUREMENT

Any chemicals brought into the CMM must be accompanied by a Risk Assessment.

#### 4.7 CHEMICAL AND SPECIMEN LABELS

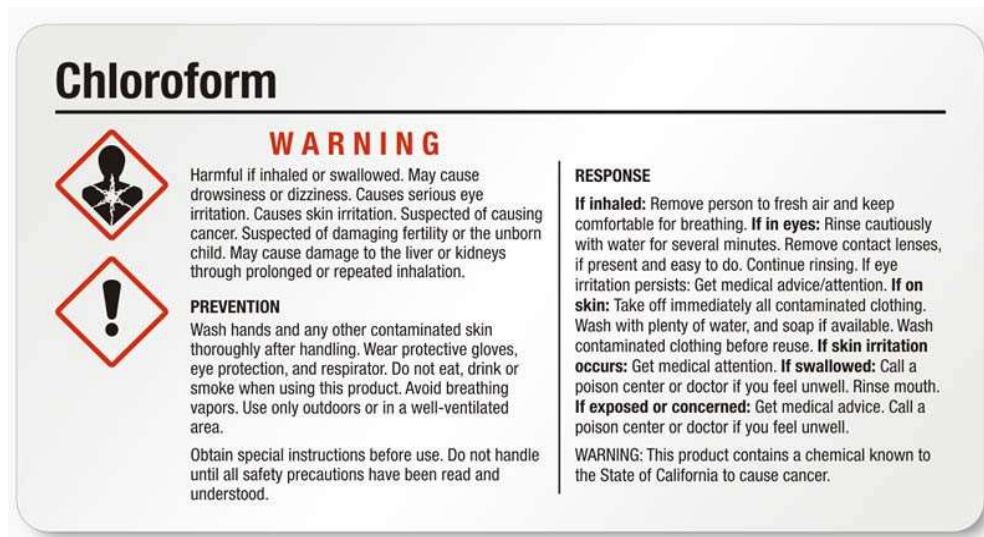
**All specimens & chemicals used in the laboratory (e.g. on benches & in fume hood) must be labelled correctly.** Labels must be securely fixed to the chemical or specimen container and protected from chemical spills where appropriate with adhesive tape and /or clear plastic contact. Where a "stick on" label is not appropriate, e.g., when specimens in a beaker are being sonicated in the fume hood or small vials of specimens are being processed in a tray, then clip (using peg) or otherwise secure the label to the sonicator or specimen tray so it cannot be blown or sucked off.

All specimens used in CMM laboratories must be labelled correctly.

This includes specimens that belong to external and "one-off" clients who bring specimens to CMM for analysis.

The labelling process may vary slightly between CMM laboratories (check with the relevant CMM Laboratory Manager) but all specimens and chemicals must have the following two labels:

(1) A ChemWatch label printed from ChemWatch (see figure below).



CMM has a limited range of *ChemWatch* labels pre-printed for commonly used chemicals. ChemWatch labels contain the appropriate health and risk statements required by law. If the original chemical bottle or container already has these statements, then it is unnecessary to print another (i.e. ChemWatch) label.

(2) An *Identification* label that is handwritten and legible (e.g., see figure below).

This label must state your **name**, **date**, phone number, school /center or client number, dangerous goods class, and chemical name. This label must have the details written in pencil (not ink) to ensure that it remains legible when wet.

IDENTIFICATION LABEL	
Your Name:	Suzie Smith
Date:	10 Jan 2017
School/Centre:	UQ Engineering – Chemical Engineering
Contact Phone Number:	3365 3567
Chemical Name:	Chloroform
100% (List each ingredient & conc. as %)	
Dangerous Goods	
Class:	6.1
(Refer to MSDS)	Toxic

**Note:** CMM laboratories have a range of blank identification labels of different sizes and styles for labelling chemicals, specimens, specimen trays and chemical waste.

#### 4.8 CHEMICAL WASTE DISPOSAL

You **must** follow UQ procedures to dispose of all chemical waste. Be aware of correct chemical disposal procedures before you use a chemical. See the relevant MSDS and the risk assessment for details. For further information about chemical waste management consult the website: <http://www.uq.edu.au/sustainability/recycling-and-waste> or the WHSC.

**Most chemicals cannot go down the laboratory sinks.**

Exceptions include ethanol which can be flushed down the laboratory sinks with enough water to dilute it to less than 10% of the lower explosive limit. Acetone can similarly be flushed but only down the fume hood sinks.

**You must collect, label & store all other chemical waste correctly in appropriate waste containers.**

Only correctly labelled chemicals can be routinely disposed of by UQ ChemWaste. Pre-labelled waste containers are available for commonly used chemicals (e.g., shellite, kerosene). Please take these waste containers to the fume hood to use and return them when finished. If you will generate other waste, CMM can request additional containers from ChemWaste as required.

CMM laboratories have labelled storage bins for temporary storage of compatible groups of chemical wastes i.e. (1) Corrosives – *Acids*; (2) Corrosives – *Alkalis*; (3) Oxidizers. Flammable wastes are stored in a Flammable Cabinet. If waste containers are full, notify CMM staff so they can request chemical disposal via the following web site: <http://chemstore.science.uq.edu.au/LoginStore.aspx?ReturnUrl=%2fDefault.aspx>

##### **Guidelines for chemical waste collection and storage:**

- Know the correct chemical disposal procedures before you use a chemical, i.e., consult the MSDS and Risk Assessment for the procedure.
- Wastes must only be stored in suitable containers, e.g., hydrofluoric acid must not be stored in glass – check MSDS.
- Do not store incompatible chemicals wastes together - check the MSDS.
- Do not mix chemicals. Keep chemicals separate in their own correctly labelled waste bottle/ container.
- Ensure that all chemical waste containers for storage or collection are clearly labelled **WASTE.**

#### 4.9 INFECTIOUS MATERIALS

The CMM's QBP lab is the only CMM PC2 certified laboratory. All infectious / restricted biological material (Risk Group 2) must be "disinfected", usually by chemical fixation, before entering any other CMM laboratory. This includes the CMM's AIBN lab as it is not a certified PC2 lab. These materials must **not** be processed in the lab when "viable".

#### 4.10 FUME HOODS

One of the most important safety devices in a laboratory is a properly functioning fume hood. The fume hood protects users from inhaling chemicals by constantly pulling air into the hood and exhausting it out of the building. Fume hoods also provide some protection in the event of an explosion or fire. All experiments involving toxic or volatile materials must be carried out in a fume hood. Clients should be aware that fume hoods vary in category and not all are suitable for certain activities. Never use a fume hood for any function for which it was not intended. Certain chemicals or reactions require specially constructed hoods. Examples are perchloric acid or high-pressure reactions. Most special-use hoods are labelled as to the uses for which they are designed. Contact the Senior Laboratory Manager or Workplace Health and Safety Coordinator for advice on using a fume hood or the capabilities of a particular hood.

A well-designed fume hood, when properly installed and maintained, can provide a substantial degree of protection for the user, provided its proper use and limitations are understood. The protection afforded by a fume hood is, however, only as good as the work practices of the hood user. The following section provides general guidelines for the use of fume hoods modified from a range of sources including:

- Princeton University Environmental Health & Safety  
<https://ehs.princeton.edu/laboratory-research/laboratory-safety/laboratory-equipment-and-engineering/fume-hoods>
- The Office of Environment, Health & Safety, UC Berkeley  
<http://ehs.berkeley.edu/images/ehs/pubs/09fumehood.pdf>;

Fume hoods are checked regularly by a Certified Testing Authority and after each test a Fume Hood Test Report Sticker is attached to the outside of the hood.

#### CMM FUME HOOD WORK PRACTICES

##### **Make sure that the fume hood is working before you begin use.**

Typically, fume hoods have a control panel with warning lights and other buttons. Check these to make sure the fume hood is functioning correctly and never utilize the hood unless there is some clear indication that it is operating. A tissue taped to the sash or inside the hood provides a simple indicator of air flow. If you notice that a fume hood is not working, then place a prominent warning sign on it and inform CMM staff.

##### **The fume hoods must be left on at all times even when they are not being used.**

Fume hood fans must not be turned off. This is to guard against leakage of fumes from chemicals. Scrubbers are not required to be on unless the chemical being used specifically requires it.

##### **Know the toxic properties of the chemicals with which you work. Be able to identify signs and symptoms of over exposure.**

All chemicals used in the fume hood must be subject to a risk assessment read and understood by the user.

**The use of perchloric acid is prohibited unless the hood has been designed for its specific use.** Do not use perchloric acid without first consulting with the Operations Manager or Workplace Health and Safety Coordinator.

**Adhere to the advice of the fume hood manufacturer in regard to the operation of the fume hood.**

Typically fume hoods have notices attached to them by the manufacturer e.g. *"Maximum quantity of flammable liquid introduced into the fume cupboard at any one time shall not exceed 2 liters."*

**All samples and chemicals being used in the fume hood must be labelled correctly.**

By law, all chemicals must be labelled with their name and appropriate health and risk statements. Suitable chemical labels are available on ChemWatch.

In addition, attach an identification label written in pencil (not ink) that states your name, date, phone number, school or center, chemical name, and dangerous goods class.

Ensure that labels are attached securely (e.g., pegged or clipped on) so they do not get sucked into the fume hood. Small vials can be contained in a tray that is labelled correctly.

**Keep the sash completely lowered anytime "hands-on" experiments are not in progress or whenever the hood is on and unattended.**

When the fume hood is not in use, lowering the sash reduces the level of noise from the fume hood fans and reduces the chance of leakage of fumes.

**Adjust the sash low enough to shield yourself from splashes or flying objects.**

The sash can only provide protection from spills, explosions, and fire if it is low enough to act as a shield. Also, the lower a sash is, the less chance of escape of fumes.

**Always use personal protective equipment (PPE) when working in the fume hood.**

The hood is not a substitute for personal protective equipment including gloves and safety glasses.

**Do not put any part of your body, with the exception of hands or forearms, into the fume hood when chemicals are present.**

In particular never put your head inside a fume hood that has chemicals inside.

**Do not work with chemicals closer than 150 mm from the sash.**

The capture ability of a fume hood may decrease slightly at the front of the hood. Keeping chemicals a minimum distance of 150mm from the sash reduces the risk of chemicals escaping from the hood if there is an interference with the air flow, e.g., people walking past the hood create air currents that can interfere with air flow at the front of the hood.

**Do not use the fume hoods for the storage of chemicals, samples, or any other materials.**

Keep only the materials absolutely necessary for the procedure inside the hood. This will reduce the risk of accidents.

**Use only designated fume hood power points to supply mains power to appliances inside a fume hood. Never run an extension cord from an external power point into the fume hood.** Fume hood power points are designed not to turn on until sufficient time has passed for the fume hood to be vented so that flammables are exhausted. Also, the power points are equipped with a residual current device (RCD) which will trip out the power point if earth leakage is detected in an appliance.

**Do not use any ignition source in a fume hood that contains a dangerous quantity of flammables.** Remember, that ANY electrical or gas appliance is a potential ignition source. Remember too, that the fume hood is a confined space which can increase the chance of explosion.

Any practice that requires the use of flammables and an ignition source in the fume hood, e.g., sonicating a component in acetone must be subject to a Risk Assessment. The RA must detail the relevant safe quantities of the flammable substance to be used as well as other control measures in order to achieve an acceptable level of risk.

Suggested control measures include positioning the fume hood sash low enough to protect against burns and ensuring that all electrical devices are connected and disconnected outside the hood to avoid sparks which may ignite a flammable or explosive chemical.

**Where possible, contain your work in trays to reduce the chance of chemical spills in the fume hood.**

Trays also make relocation of samples easier and safer in the event of fume hood failure or servicing.

**Clean up any chemical residues and spills from the hood chamber after each use.**

Always clean up chemical residues and spills and ensure that contaminated clinical wastes, including gloves, are disposed of in the *Clinical Waste Bins* provided inside the fume hood.

#### **4.11 GAS CYLINDERS**

Ensure that all gas cylinders are chained into position before use. Use earmuffs when "cracking" (opening) a bottle. Use a trolley - and strap in the gas bottle - when moving it. Work in a well-ventilated area when using carbon dioxide, nitrogen or argon gas. If clients feel sick, develop a headache, or feel faint while using gases they should leave the area immediately and get some fresh air. They should also report the incident to the CMM First Aid Officer and/or Duty Officer. CMM staff should be involved at all times when handling gas cylinders.

#### **4.12 LABORATORY REFRIGERATORS**

Samples may be **temporarily** stored (<week) only in refrigerators designated for sample storage and must be labelled correctly (e.g., name, date and appropriate chemical label - See Section 4.7 for labelling details).

Samples and chemicals older than 1 month or undated may be discarded during regular clean ups. No flammable liquids are to be stored in refrigerators. A spark proof refrigerator is available in the AIBN lab for all flammable liquids.

Food or drink must ~~not~~ be stored in laboratory refrigerators. A tearoom refrigerator is provided for this purpose.

#### 4.13 CONSUMPTION OF FOOD OR DRINK IN LABORATORIES

The University Senate has adopted a policy prohibiting the consumption and storage of food or drink in any University Chemical or Biological Laboratory.

The Director of Occupational Health and Safety has supplied the following information in clarification of Senate's decision:

- Areas should be considered laboratories where chemicals or biological materials are handled for teaching and/or research purposes. Rooms which have been previously used as laboratories, but which have had all laboratory materials removed from them and converted to offices may be considered as offices rather than laboratories.
- Eating and drinking may take place in offices attached to laboratories, but the occupiers of offices should be sensitive to the suitability of the practice should there be virtually no separation between the office and laboratory.
- Food and drink should not be consumed at desks in laboratories. However, this would not prohibit the holding of lunches in sealed containers within a desk, if there are no other alternatives.
- If an area adjacent to a laboratory is to be used as a tearoom it should be clearly separated from the laboratory, i.e., partitions should extend from floor to ceiling.

The CMM Hawken Laboratory has a separate tearoom available for use by staff and clients. This is the only area that can be used for preparing meals, eating lunches, snacks and consuming tea and coffee.

#### 4.14 POTABLE WATER

As a general rule all water in laboratory areas is "non-potable" i.e., not suitable for drinking. You are advised to only drink water from "potable supplies" i.e., taps in tearooms. Each water outlet should have a sign denoting its potability.

**Do NOT drink from the taps in laboratories nor from beakers or other chemical/sample equipment.**



#### 4.15 SMOKING

The UQ policy on smoking can be found at: <http://www.uq.edu.au/hupp/?page=25058&pid=25015>  
In summary, smoking is prohibited on campus and in all University vehicles other than those issued to staff for private use.

#### 4.16 RADIATION

Electron microscopes operating above 200kV accelerating voltage generate potentially damaging X-rays. CMM instruments that operate above these values have increased lead protection in areas prone to X-ray emission to ensure the safety of staff and clients. Electron microscopes are inspected and tested for radiation leakage at regular intervals.

All maintenance must be carried out by fully trained technicians to ensure safety standards are not compromised.

#### 4.17 NON-CHEMICAL WASTE DISPOSAL

##### General Waste

**General Waste** is any waste that is not infectious, and which does not fit into other waste streams. It is the stream that contains wastes of domestic characteristics which are solid and inert in nature.

##### Other Waste Streams

**Note:** The definitions below are derived from the UQ Sustainability website - Recycling and Waste: <http://www.uq.edu.au/sustainability/recycling-and-waste>

##### Pathological Waste

**Pathological Waste** refers to waste of a viral, infectious, or contaminated nature. Pathological substances are substances that act as a source, host, or carrier of disease. This waste includes tissue samples, blood samples, faeces, and contaminated equipment such as containers, bags, or surgical equipment.

*All Pathological Waste must be sterilized (e.g., by a suitable chemical fixative) before disposal in Clinical Waste bins. The waste disposal method must be documented in the sample's risk assessment.*

##### Clinical & Related Waste

**Clinical Waste** refers to any samples (e.g., tissue, venom, blood, serum, and swabs) that have been in contact with, or used in, experiments with a pathological substance and includes pathological waste.

DO NOT place *Clinical Waste* or *Perceived Clinical Waste* in *General Waste* bins!

### Perceived Clinical Waste

**Perceived Clinical Waste** is any waste that is typical of a clinical environment and may be confused by waste handlers as being of a clinical nature (e.g., pipettes, syringes, gloves, face masks, laboratory coats, etc.). In CMM, **Perceived Clinical Waste** includes pieces of non-pathological, healthy plant or animal samples. Do not place these items in the General Waste bin.

Perceived clinical wastes **must be disposed of as *Clinical and Related Waste***.

University cleaners **will not** collect or handle any ***Clinical and Related Wastes*** or ***Perceived Clinical Wastes***.

### Disposable Gloves

All disposable gloves must go into the ***Clinical Waste*** bins (yellow bins with yellow bin liner) regardless of whether they have been contaminated with potentially pathogenic materials or not. This includes all gloves used to perform specimen exchanges in electron microscopes.

Do **not** place disposable gloves in ***General Waste*** bins!

### Sharps

Sharps refers to objects or devices having a sharp point or protuberance capable of cutting or piercing the skin. They include, but are not limited to, hypodermic needles, scalpels, broken ampoules, and any broken glassware. Broken glass, scalpel blades, micropipette tips, sharp sticks etc. must be placed in a Sharps Containers. For waste disposal purposes, anything that can puncture the yellow liners of ***Clinical Waste*** bins is considered a sharp.

Any object capable of piercing a plastic bin liner is to be considered a sharp and must be placed in the sharps containers.

**This includes toothpicks, plastic micro-pipette tips and orange wood sticks etc.**

**Note:** Plastic disposable pipettes can be placed in the ***Clinical Waste*** bin as they are soft and will not penetrate the ***Clinical Waste*** bags.

## **5. RULES FOR WORKING IN LABORATORIES**

All CMM laboratories, no matter where they are located, must comply with the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011. Our laboratory in the QBP Building is a certified Physical Containment Level 2 and must operate under the Physical Containment Level 2 (PC2) standard. The AIBN laboratory operates at PC2 standard but is not certified.

Failure to comply with any of these regulations may result in a hazard to laboratory workers, university staff or the general public.

### **5.1 LABORATORY HYGIENE & MAINTENANCE**

- a. Never adopt a casual attitude in the workplace and always be conscious of potential hazards.
- b. It is the responsibility of each individual to leave instrument areas and general lab areas clean and tidy.
- c. All staff, clients, students, and visitors must make themselves aware of the safety rules governing their immediate workplace and of the fire evacuation procedures.
- d. All individuals should ensure that there are no obstructions present in fire escape routes and that fire blankets, extinguishers and first aid kits are readily accessible.
- e. Access to laboratories is limited to laboratory personnel and persons specified by laboratory management. Laboratory doors must remain closed at all times; this is a security and fire safety issue.
- f. Before using any piece of equipment in any CMM laboratory users must have completed the CMM Safety Induction, read, understood, and signed off on the Risk Assessments and been trained on the piece of equipment they wish to use.
- g. Eating, drinking, applying cosmetics, or shaving in the laboratories is strictly prohibited. Storage of food or drink in laboratories is prohibited and tearooms should be used for this. Water in laboratories is non potable, i.e., not drinkable.
- h. Smoking in University buildings or vehicles is prohibited.
- i. No procedures are to be undertaken while under the influence of any drug (including alcohol) that may impair your ability to safely carry out an experiment.
- j. It is good work practice to wash hands on leaving any laboratory and a requirement in certain laboratories.

## 5.2 LABORATORY TECHNIQUES

- a. Gas cylinders must be chained to the wall (or equivalent) at all times. They are to be transported only on appropriate trolleys and a CMM staff member must be involved at all times. Do not attempt to move/use cylinders unless trained.
- b. A risk assessment must be completed before commencing any work. All new and untried or hazardous reactions must be referred to a Principal Investigator or the Workplace Health and Safety Coordinator before proceeding.
- c. Mouth pipetting is prohibited!
- d. Scalpel blades shall be removed using a Qlicksmart device which is mounted adjacent to area of usage. See CMM staff for training if you have never used one before.
- e. Report all broken or damaged equipment to a staff member immediately. If the matter is urgent use the emergency contact numbers which are located in each lab. Laboratory staff will advise maintenance and service personnel of any hazards in the laboratory. If necessary, all equipment surfaces will be decontaminated before maintenance personnel begin work on that equipment.
- f. All staff, students, clients, and visitors are required to wear enclosed footwear at all times.

No sandals or thongs allowed. Other personal protective equipment such as gloves, lab coats, face shields are also required in certain areas or duties where specified e.g.

  - Lab coats should be worn when using the biological laboratories or when you are doing any wet work in the labs and should be removed when leaving the laboratories. Lab coats are not required when using the microscopes.
  - Gloves should be worn as required in laboratory areas and microscope rooms. Ensure you dispose of gloves in the yellow clinical waste bins.
- g. Long hair should be tied back while working in laboratories. It has the potential to create a hazard by being caught up in moving equipment, dropping into spillages on benches or by catching alight. Hair nets are available in the Hawken Lab.
- h. After-hours work in the labs can only be done with the relevant CMM laboratory manager's approval and if after-hours access has been given by CMM. It is your responsibility to ensure that you inform someone about your whereabouts, your expected return time, and an emergency contact number if you do not return.
- i. Any accident, whether resulting in personal injury or not, must be recorded on UQ's OHS Incident Reporting Database **UQ Safe** and to the CMM WHSC.

- j. All waste disposal must be done in accordance with University Environmental Management Systems Procedures and Guidelines. Segregate specialized wastes (e.g., chemical, clinical, sharps etc.).
- k. Visitors to CMM must be accompanied by a staff member at all times. No access by visitors is permitted after hours unless with direct authorization from the respective laboratory managers. After-hours visitors are required to complete a full induction.

### 5.3 TRAINING

**Clients should NOT use any laboratory equipment unless they have been trained in its operation by CMM staff.**

CMM provides training in electron microscope techniques from specimen preparation to use of instrumentation. A record is kept of those clients who have successfully completed training courses and/or instrument training and been issued licenses. CMM training courses and instrument training include coverage of associated WH&S & Sustainability issues. Both the CMM instructions for operation of equipment and the CMM laboratory procedures have been written from a Sustainability and WH&S perspective to assist clients to work safely in the laboratory.

Prior to training, all clients must complete safety inductions for the lab / labs that they need to access. They must also complete a Risk Assessment for their sample (as it comes into the CMM lab). The safety induction is ~~not~~ completed until the required forms are returned to the WHSC. Training cannot commence until the safety induction is completed.

Once the safety induction has been completed, CMM administration staff will arrange for access to the appropriate lab/labs to be added to the client's UQ swipe card or for an access card to be issued to external clients.

**Under no circumstances should you use any equipment for which you have not been trained by CMM staff.**

**Clients who have not used equipment recently (e.g., in the last 3 months) should consult CMM staff before they use the equipment so that any new procedures can be explained.**

## **6. LABORATORY ACCESS**

On completion of training, clients will initially only be allowed access to the appropriate laboratory during normal working hours. Requests for access outside of core working hours (8:30am to 4:30pm) may be granted by the lab manager when trainers consider the client is sufficiently competent and when the client has successfully completed an after-hours safety induction and assessment.

### **6.1 GUIDELINES FOR AFTER HOURS WORK**

It is recognized that working after-hours is frequently necessary. Indeed, this can be the best time to use some equipment that is sensitive to vibration and electrical interference. However extra care must be taken outside of normal (8:30am to 4:30pm) working hours because help will be less readily available if an accident occurs.

To have access to CMM laboratories after-hours the following criteria apply.

#### **Clients must:**

- be a licensed CMM client and have permission from the Lab Manager or CMM Director to be in the building. Only licensed clients are permitted "after hours" access and then only to use instrumentation they are licensed by CMM to use.
- understand general emergency information and after-hours emergency contact information which is in this handbook and located in each laboratory.
- ensure all main laboratory doors are locked and lights are off before leaving.
- ensure you let a family member, or a friend know that you will be working late and let them know when to expect you and who to contact if you do not return.

### **6.2 AFTER-HOURS SWIPE CARD ACCESS**

Certified CMM clients who are permitted to use the facilities after-hours will have after-hours access added to their swipe card. Clients who are working after-hours must not open the CMM security doors to allow anyone else access.

**CMM access swipe cards are only for individual use and must not be shared.**

### 6.3 VISITORS

Visitors are welcome to CMM labs during working hours, with prior arrangement. Visitors must undergo a brief visitor induction. **Visitors must be accompanied at all times by a CMM staff member or an approved appointee.** Staff may delegate supervision to clients for low-risk visits but must still be available for assistance.

No visitor access is permitted after-hours unless UQ and CMM full safety inductions have been completed and permission has been given by the Lab Manager.

### 6.4 VISITING GROUPS

Any tour or visit of CMM facilities must be organized prior to the visit through the main CMM office who will inform the tour organizer which particular CMM laboratory staff member needs to be contacted to make a booking.

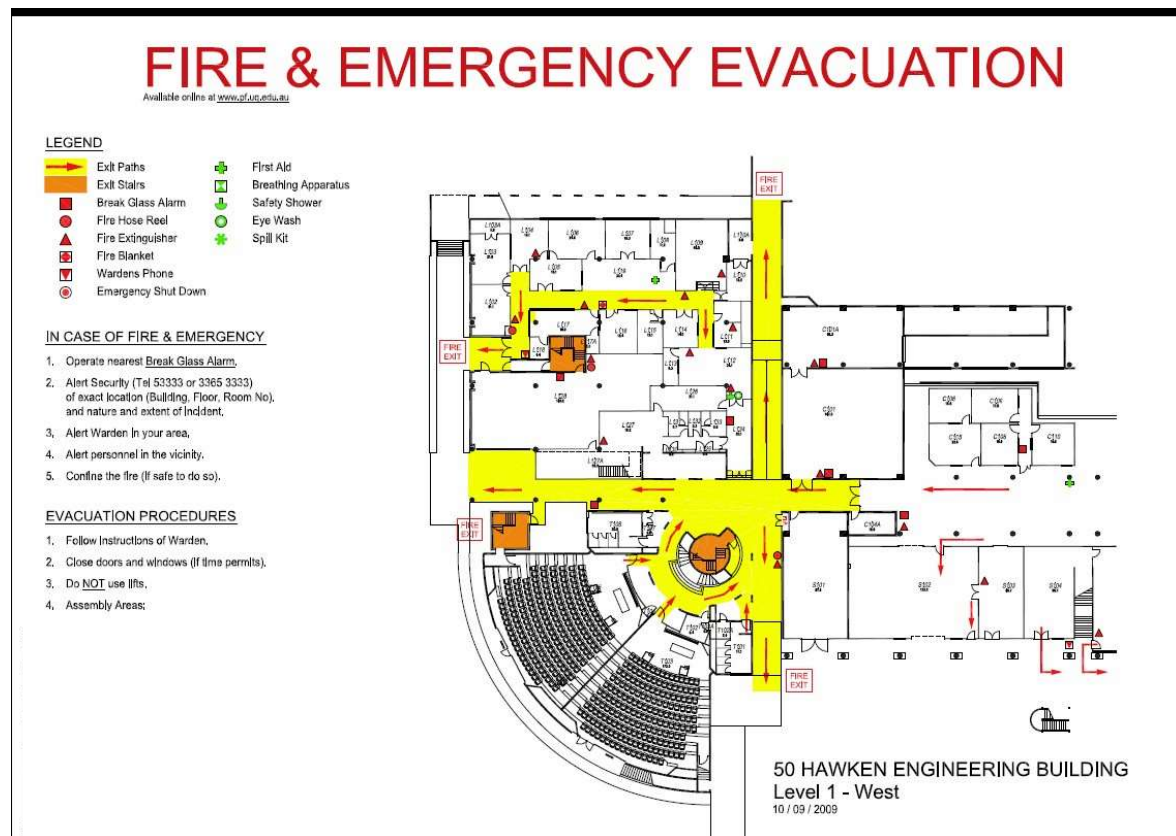
All visiting groups must be accompanied by a CMM staff member at all times.

In general, for visiting groups, a minimum of 2 weeks' notice is required so that the appropriate instrumentation can be booked, and staff can be available.

Ad-hoc unannounced visits are not acceptable.

## 7. LABORATORY EVACUATION MAPS

### 7.1 LABORATORY EVACUATION MAP – HAWKEN



Assembly Point - Great Court



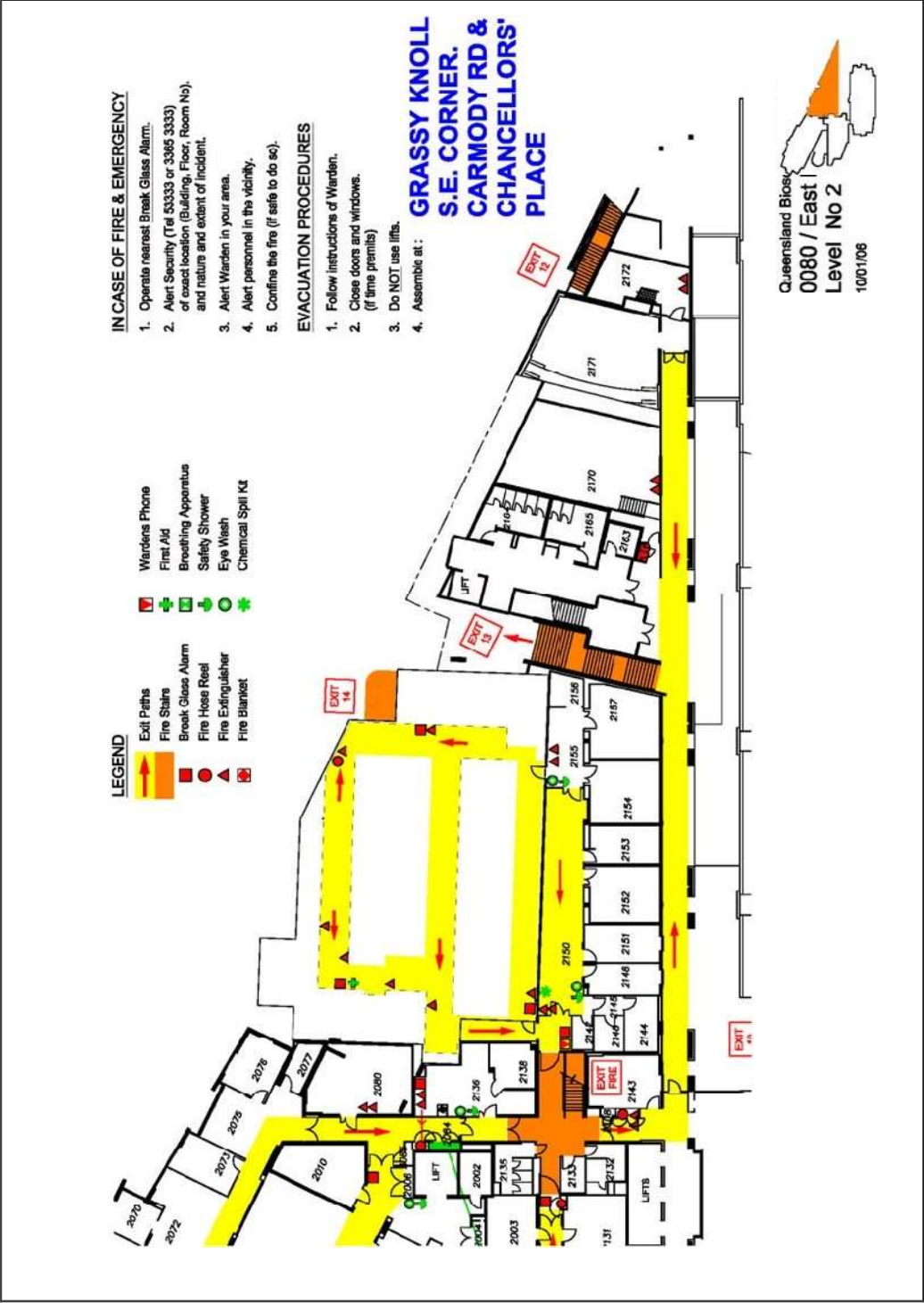
## 7.2 LABORATORY EVACUATION MAP - AIBN

AIBN Level 1 West



Assembly Point - Oval 1

### 7.3 LABORATORY EVACUATION MAP – CRYOMICROSCOPY RESEARCH FACILITY QBP BUILDING



## 7.4 LABORATORY EVACUATION MAP – X-RAY AF

# FIRE & EMERGENCY EVACUATION

### LEGEND

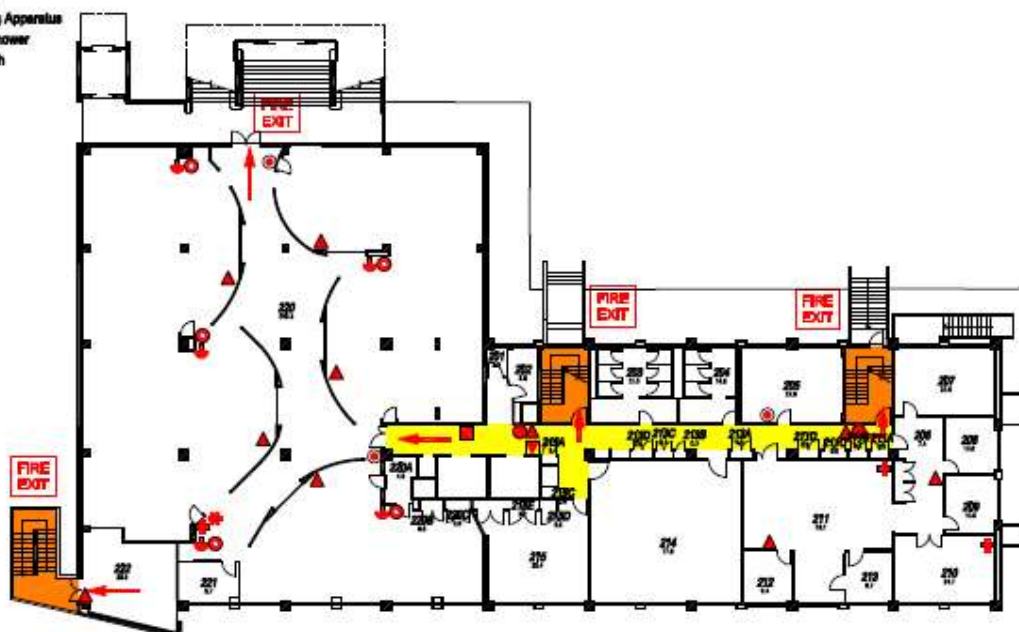
	Exit Paths		First Aid
	Exit Stairs		Breathing Apparatus
	Break Glass Alarm		Safety Shower
	Fire Hose Reel		Eye Wash
	Fire Extinguisher		Spill Kit
	Fire Blanket		
	Wardens Phone		
	Emergency Stop Button		

### IN CASE OF FIRE & EMERGENCY

1. Operate nearest Break Glass Alarm.
2. Alert Security (Tel 53353 or 3365 3333) of exact location (Building, Floor, Room No.), and nature and extent of Incident.
3. Alert Warden in your area.
4. Alert personnel in the vicinity.
5. Confine the fire (if safe to do so).

### EVACUATION PROCEDURES

1. Follow instructions of Warden.
2. Close doors and windows (if time permits).
3. Do **NOT** use lifts.
4. Assembly Area:



68 CHEMISTRY BUILDING  
Level 2  
19 / 03 / 2009

Assembly Point - Oval 1

## 8. APPENDICES

### 8.1 APPENDIX 1—SUITABLE ENCLOSED FOOTWEAR

#### ATTENTION



**All staff, clients and visitors are required to wear suitable enclosed footwear in CMM Laboratories**

- Footwear must cover all the foot up to the ankle
- The heel must be covered to the ankle
- The sides of the foot must be covered to the ankle
- The top of the foot must be covered to the ankle
- The fabric must be continuous
- The fabric must be fluid resistant
- Heel must be no more than 50mm high
- Heel must be at least 25mm wide across the boot

#### Unacceptable Footwear Styles:

You will not be allowed entry to any CMM laboratory without suitable footwear.



Ugg boots and thongs are never allowed



These shoes don't cover the heel



These shoes don't cover the top of the foot



These shoes don't cover the sides of the foot



These shoes don't have continuous fabric



These shoes have holes in the foot covering



Far boot heel is too high (more than 50mm)  
Near boot heel is too narrow (less than 25mm)

## 8.2 APPENDIX 2-ST LUCIA CAMPUS MAP

