



The University of Melbourne  
School of Botany

Quantitative and Applied Ecology  
Group

# **Safety Training Document**

## **Induction, Training and Authorization Procedures for Safety and the Environment**

for all staff and students using the  
Quantitative and Applied Ecology Group Equipment and Facilities

Please ensure the workplace is safe for you and your colleagues

**This document is to be read in conjunction with the School of BioSciences Environment, Health and Safety Induction document.**

The University's environment and safety management system is a pro-active approach to managing the issues of personnel and environmental health and safety. It is about preventative action and the setting of standards that continually improve the environmental and safety performance of the University of Melbourne. The Management System provides a formal framework to identify and manage all of its environmental and safety risks.

The University holds a Self Insurance license from WorkSafe Victoria for workers' compensation. As part of its license, it must conform to a nominated audit standard. WorkSafe is currently adopting a new standard, the National Self Insurer OHS Audit Tool (NAT).

### Safety Information

This document outlines procedures for safety and the environment relevant to the **Quantitative and Applied Ecology Group**. Further information on safety and environmental issues can be found in the School of BioSciences Environment Health and Safety induction document and the University's Safety website <http://www.safety.unimelb.edu.au/>

Posters with **emergency and first aid personnel** and phone numbers are located on the walls in our work area (*ie in the kitchen, outside Mick McCarthy's office and in Room 106*).

**Heini Kujala and Reid Tingley** are the **Floor wardens** on the ground floor of **BioSciences 2**.

**Vanessa Mollard and Dean Goodman** are the **Floor Wardens** on the 1<sup>st</sup> level of **BioSciences 2** (*where some QAEco staff are located*).

**Ouda Khammy** is the Building Emergency Controller/Chief Warden for BioSciences 2 (Botany South).

**Nicole Middleton** is the **EHS Co-ordinator** for the School of Botany (x53188).

**Ross Hortin** is the **Deputy Safety Co-ordinator (x45261)**.

**Anton Cozijnsen** is the **Health and Safety Representative** for Botany (x45748)

The **Campus Security** (University Security and Emergency) 24 hour phone number is **8344 6666** (ext 46666).

**Fire Extinguishers** (*see School of BioSciences EHS Induction document for detailed information*)

**There are a number of fire extinguishers located around the QAEco work area:**

- Outside Room 106 and Old Library (Room 116) and in Botany North (next to electrical switchboard): A dry chemical extinguisher used for paper, wood, textile, oil, liquid and electrical fires.
- In Vesk Lab (Room 108) and in corridor leading to Botany North: Co2 extinguisher used for paint, oil, electrical and other liquid fires.

**First Aid (see School of BioSciences EHS Induction document for detailed information)**

- A first aid kit is located on the wall of the Vesk lab (Room 108) and in the corridor outside the Vesk lab (opposite Room 112).
- First Aid in the School of BioSciences is coordinated by Kaija Jordan (x45748; kaija@unimelb.edu.au).
- Inform Pauline Byron if an item in the first aid kit is running low or out of date and she will notify Kaija.
- There are a number of first aiders in our group and they are identified on the Emergency Posters.

**After Hours Work**

There is an After Hours log book inside the main entrance to the building. This must be filled in when you are in your work area outside of normal work hours (8.30 – 5.30 pm Mon-Fri) so that in case of an emergency, evacuation personnel know who is where in the building.

**Other**

- All aisles and doorways in the laboratory are to be kept clear at all times
- Bicycles are not permitted in the laboratory, or in the School of BioSciences buildings.

**EMERGENCY PROCEDURES****Incident Reporting**

All staff and students are required to report incidents and near misses as soon as possible to your local supervisor. This must be followed up with an official Incident Report on Themis or the S3 form within 24hrs of the incident occurring. Reporting accidents, incidents and near misses helps us to

Identify and eliminate the contributing factors reducing the likelihood of further injuries. Failure to report an accident, incident or illness could adversely affect insurance claims.

Serious incidents that result in medical treatment or expose people to a health risk must be immediately reported to Alex Buckle 8344 7718.

**Evacuation**

Break glass alarms (Fire, Emergency Door Release & Emergency) are used to set off the building alarms and inform personnel to evacuate. The alarms closest to our area are located:

BioSciences 2: entrance to building (*on the fire panel on the right hand side as you enter the building*) and in the corridor next to the main stairs on 1<sup>st</sup> floor. In case of fire or other emergency, evacuate the area via the front door, or through the Tea Room to the garden. The emergency muster location is the raised area in front of BioSciences 2 at the west end of the Student Union building.

BioSciences 1 (*where the meeting rooms are located*): inside door to fire panel next to main external glass (sliding) doors. In case of fire or other emergency, evacuate the laboratory via the sliding exit doors (*you can only exit by pressing the green "Exit" button located on the wall next to the doors*). The emergency muster location is the raised area in front of BioSciences 2 at the west end of the Student Union building.

To report an emergency, phone Campus Security 24 hours 83446666 (ext 46666) or Fire, Ambulance (000).

## EQUIPMENT / FACILITIES

### **Electrical**

All portable electrical equipment is annually tested and tagged – do not use any equipment which doesn't have a current tag.

### **Fumehoods**

There is a fume hood in the Vesk lab which is never used. If you need to use it, please speak to your Supervisor.

## ERGONOMICS

Ergonomics involves finding the best fit between the user, equipment and their environment to prevent muscular skeletal injuries such as Repetitive Strain Injury (RSI). The Computer Workstation Ergonomic Self-Assessment Checklist included in the School of BioSciences safety induction document is an educational tool that must be completed once you have a permanent desk. If the form highlights any issues with your seat and/or desk, inform your supervisor. The completed form is kept with the safety training documents held by the QAeco Administrator. Report any physical discomfort you believe is associated with your work to your supervisor or EHS Coordinator.

## VEHICLES

Vehicles are managed through "Smartfleet Online Pool Car Booking System" and a Smartfleet Account is required to use the vehicles. To register with Smartfleet provide a copy of your driver's license and completed registration forms (*pages 22, 23 & 24 of the School of BioSciences Safety Induction document*) to [Jess Salvador x59973, jessica.salvador@unimelb.edu.au](mailto:jessica.salvador@unimelb.edu.au).

When possible, the use of public transport is encouraged for short trips. Cabcharge vouchers are available for taxi use (see the QAeco Administrator), and vehicles can also be hired through GoGet, Carshare and AVIS. See [Third-party Vehicle Bookings](#) for further information.

## FIELD WORK

Read the following:

- <http://qaeco.com/> (Field Work & Safety tab on right hand side of screen)
- <http://safety.unimelb.edu.au/topics/travel/>
- **Appendix 2 below.**

All staff and students who propose to undertake field trips must complete a risk assessment and field work plan with their supervisor prior to departing (see above links) **and** undertake the online risk management training (see below for details). The risk assessment process will involve the identification and measurement of the risks involved and the development of methods to control or eliminate them. An itinerary and communication plan should be developed and adhered to. Failure to report in when indicated on your plan could result in a search party being sent looking for you.

Examples of risk assessments are provided in the QAECO Risk Assessment folder in the Administrator's office.

- Read the documents contained in this link <http://qaeco.com/> (*Field Work & Safety tab on right hand side of screen*)
- Read the QAECO Field Work Risk Assessment Cover Sheet (*Appendix 2 below*).
- Complete a risk assessment and field work plan of the fieldwork as outlined in the procedures. The risk assessment should be accompanied by the proposed itinerary detailing time of departure and arrival, exact location/s, names and emergency contact details for people involved, communication arrangements, maps, etc. As part of the assessment procedure, persons nominated to take part in fieldwork should complete a medical information and authorization form shown in Appendix 1 of the Fieldwork Guidelines. A field trip briefing prior to departure should discuss the completed risk assessment and any additional safety concerns.

### **Risk Management Training**

In this course you learn to identify risk management legislative requirements, principles, types of hazard and risk control methodologies in the context of the University's Risk Management procedure and framework. This training is for anyone (professional staff, academics, researchers, postdocs, postgrads, honours students, etc) who works in a wet lab or carries out field work. If you completed this training more than 3 years ago you can simply do a short refresher test this time around.

### **Accessing the online training**

To access the courses log on to the University Safety website (<http://safety.unimelb.edu.au/support/training>).

### **Safety Training**

See School of BioSciences Induction Manual – page 19 for examples of safety training available.

### **Herbarium**

Dr Gillian Brown, Herbarium Curator, has prepared a guide for collecting herbarium specimens when doing ecological fieldwork (see Appendix 3).

## **GENERAL HOUSEKEEPING**

### **Power Use**

The use of power should be kept to a minimum.

- Turn off lights in areas that are not in use
- Completely turnoff computers and printers (don't simply leave them on standby)
- Turn off the airconditioner/heater when not required
- Turn off ovens, growth cabinets etc. when not in use

### **Using kitchens/kitchenettes**

There are several small kitchens scattered throughout the School. These provide basic appliances such as fridges, microwave ovens, kettles, sandwich toaster, etc, for cups of tea/coffee and reheating lunch. Each area has its own system regarding supply of milk, tea, coffee etc. You will be shown the nearest kitchen/s told about this in your Induction tour. There are some standard rules for using the kitchens:

- DO NOT TAKE LABORATORY PPE, EQUIPMENT, CHEMICALS, ETC, INTO THE KITCHENS.
- Do not leave food in the fridge for more than a day or so.
- Bring your own cup.
- Use boiling water and sharp cutlery with care.
- Clean up after yourself, including spills on the floor.
- Always turn off appliances, especially sandwich toasters, when you have finished.
- If there is a dishwasher, get someone to show you how to use it before attempting to turn it on.
- If there is a fire blanket, know its whereabouts.
- There is an MSDS in the kitchen for cleaning chemicals.

## **Appendix 2: QAECO Field Work Risk Assessment Cover Sheet & Checklist**

There are certain things you **MUST** do/note before heading into the field:

1. **Discuss the field work** with your supervisor and, if necessary, Nicole Middleton, School of BioSciences EHS Coordinator on [n.middleton@unimelb.edu.au](mailto:n.middleton@unimelb.edu.au) or 9035 3188.
2. Note that **fieldwork is not to be conducted alone or on Code Red fire danger days**.
3. Complete the **Risk Management online training course** (*see link below*).
4. Complete the **Health and Safety Roles & Responsibilities** online training course (*see link below*). **NB: Students should complete the “Staff” training module of this course.**
5. Fill in the ‘**Field work risk assessment**’ form and give to Pauline (*with a copy to your supervisor and designated contact person*).
6. Fill in the ‘**Field work plan**’ form (includes your itinerary) and give to Pauline (*with a copy to your supervisor and designated contact person*).
7. Complete **first aid training**. (*Organise this through Pauline*). **The number of first aiders required on field trips is 1 for 1-9 participant; 2 for 10-30 participants.**
8. **Register your travel** on the Student Portal (*students only and only if you are flying into the field or driving interstate*).
9. Fill in the ‘**Non Travel Portal risk assessment form**’ and return to Pauline.
10. Fill in the **Volunteer Registration form (if applicable)**. Once the form has been signed by your Supervisor, you can return it to Pauline or take it up to Jess in BioSciences 2 reception.

You can find all the forms and additional information at [www.qaeco.com](http://www.qaeco.com) in the bottom right hand corner.

### **Risk Assessment online training course**

To complete a Risk Assessment form (or **are the supervisor of** someone completing a form) you must have completed the “Risk Management: online training course”, with review every three years.

<http://safety.unimelb.edu.au/#training>

### **Health and Safety Roles & Responsibilities for Staff and Supervisors**

All fixed-term, continuing, casual staff (*whether going into the field or not*) should complete the Health and Safety - Roles and Responsibilities for Staff/Supervisors online training module providing an introduction to:

- the health and safety legal framework
- health and safety risk management at the University’s workplaces
- health and safety response and reporting

The link to this training is here <http://safety.unimelb.edu.au/#training>

### **Forms**

You can find all the forms and additional information at [www.qaeco.com](http://www.qaeco.com) in the bottom right hand corner.

You must make two printed copies of each form:

- one printed copy of each form should be placed in the Risk Assessment folder in the QAECO administration office.
- one printed copy of each form should go with you into the field.

A copy of each form should also be emailed to your lab contact and your supervisor

If you are making many return visits to the field on different occasions, you need a new Field Work Plan each time, but you can re-use the Field Work Risk assessment if it still applies.

### **Student Portal**

Students must register their travel plans on the student portal (*if they are flying to their destination or driving interstate*): <https://fpg.unimelb.edu.au/io/internal/students/std-travreg.html>

### **Volunteer Registration**

If you are taking a volunteer out into the field, they should complete the Volunteer Form under “Group Links” on the QAECO website (*bottom right hand corner*) <http://qaeco.com/>. Please give Pauline the completed form.

### **Lab check in procedure**

You are required to check in within 1 hour after sunset each day you are in the field and/or traveling to field sites. Checking in means that you are sure that your communication has been received, i.e. you have spoken to your contact person or you receive a reply to your text message or voicemail. If you are doing night field work within Melbourne and returning to an empty residence follow the same procedure, notifying the designated contact person when you finish field work for the night. The designated contact person will acknowledge receipt of this notification the following morning.

If the field worker does not check-in, the lab contact person will attempt to contact them. If there is no response within one hour, the lab contact person will alert the field worker’s supervisor and the accommodation contact (if applicable), then the external emergency contact. For night field work in Melbourne, someone should then go to the field worker’s house.

If at this point the field worker is still not contactable, the police will be alerted. Each morning after checking in the calendar will be marked to record this.

Special precaution must be taken during the fire season. Read the Fire Danger Ratings document ([http://www.cfa.vic.gov.au/firesafety/bushfire/documents/fire\\_danger\\_rating.pdf](http://www.cfa.vic.gov.au/firesafety/bushfire/documents/fire_danger_rating.pdf)) and make a plan that can be adjusted for changing conditions. Check the Fire Danger Rating each day. You may need to check in with the local CFA.

The departmental Emergency Personal Locator Beacon should be taken if required (read the [http://www.botany.unimelb.edu.au/admin/EHSwebmanual/forms\\_download/AccusatManual.pdf](http://www.botany.unimelb.edu.au/admin/EHSwebmanual/forms_download/AccusatManual.pdf) beforehand) - Email Paul Beardsley <paulab@unimelb.edu.au> with the details of your trip and contact numbers as he will be the one contacted in an emergency.

**CHECKLIST**To do:

- √ Ensure that the items in points 1 – 10 above have been checked off.
- √ Ensure you know the procedure for booking Botany Vehicles eg how do I book them; where do I collect the keys; can I take them home overnight; where the cars are kept; where can I get petrol; what is the pin number for the petrol card; who is allowed to drive the cars; what do I do if I'm going to get back late? If you don't know, ask Jess in BioSciences 2 reception or Pauline.
- √ Check the weather.
- √ Check the fire conditions.
- √ Check spare tyre.
- √ Contact the Park Service or relevant agency.
- √ Check in with the CFA (if applicable).
- √ Ensure that volunteers are made aware of the travel arrangements, understand the physical demands of the work, your expectations and the duration of the activity (eg how long the day/s will be).

To bring:

- √ Adequate food and water.
- √ Vehicle First Aid Kit (should be in the car).
- √ Hiking First Aid Kit (from Botany office).
- √ Copy of Collecting Permit (if applicable).
- √ Copy of Risk Assessment and Field Work Plan forms.
- √ GPS/Maps.
- √ Appropriate Clothing (Gaiters, hats, raincoat, rain pants, spare dry clothing).
- √ Equipment (meter tapes, flagging tape, compass).
- √ Data Sheets and Pencils/Textas.
- √ Batteries.
- √ Bug spray/Sunscreen.

Are you working, camping or hiking in remote areas such as the Mallee?

- √ Have you read the Remote Field Work Document on the QAEco website <http://qaeco.com/>?
- √ Whistle.
- √ Shovel.
- √ Thick woollen blanket (one per person) for fire protection or warmth overnight.
- √ Mobile, satellite phone, distress beacon (EPIRB); UHF radios where appropriate
- √ Enough food & water: in hot weather at least 10L of drinking water in the car at all times
- √ Be aware of fire danger and always have fire escape routes planned.
- √ Have location and travel routes planned for the nearest hospital.

## APPENDIX 3: Guidelines for collecting herbarium specimens during ecological fieldwork

Dr Gill Brown, University of Melbourne Herbarium, April 2014

*“Accessible voucher specimens are critical for accurate identification and subsequent verification of species. Species are the raw material of biodiversity research, whether the focus of that research is taxonomic, evolutionary, ecological, genetic, behavioural or physiological.”<sup>1</sup>*

### Why do I need to collect plant specimens during ecological fieldwork?

- As a voucher specimen, so you have a verifiable record of your research data/study organisms  
A herbarium voucher specimen allows you to confirm the identity of the plant at a later date. This is extremely useful if you get odd/misleading results, perhaps you do not actually have the species you think you have!
- Add dots to maps!  
Detailed species distribution maps have to come from somewhere. Herbarium specimens provide verifiable collection records of species through space and time.
- To help other researchers by making material available for study and sampling. Below are some examples of how herbarium specimens have been used by researchers:
  - Seed mass measurements
  - DNA sampling (e.g. for systematic, phylogenetic, population genetic or evolutionary studies)
  - Lead isotope analyses to trace the change in lead concentration and composition around Australian capital cities from the late 1800s until the present day.
  - Morphological variation assessment
  - Identifying populations/areas to target their fieldwork
  - Change in flowering times in response to climate change
  - Track the spread of weeds over time to identify to inform management of future spread

### What do I need to collect?

Voucher specimens from ecological studies should include as many identified species as possible from across the range of habitats, seasons, treatments or other variables examined in the study<sup>1</sup>. The number of specimens per site/trip will be variable depending on your project and site. Please talk to Gill Brown prior to going in the field for advice on your specific project.

- You must have permits and/or permission from the land holders before you collect plants (see Kathy Vohs or Gill Brown for School of Botany permit)
- The plant material you collect should be fertile and include all parts of the plant (i.e. fruits, flowers and buds, as well as bark, leaves, juvenile or coppice foliage, etc.). No scraps will be accepted. It is often useful to collect two samples of the plant, one for dissection and identification, and another for the herbarium specimen. Material for one specimen should fit into one newspaper fold (i.e. between front and back page of Herald Sun).
- Take photos (e.g. habit, close ups of flowers/fruits/etc.). These can be added to the herbarium database if you are able to match the collecting number to the photo.
- Record detailed notes on the plant in your field notebook. Your notebook can be hardcopy, electronic or a phone app, but to be lodged at MELU it will need to be in an excel spreadsheet or the Specify mobile workbench. See “Data entry notes for field collections.doc” and the “MELU Collecting Data spreadsheet.doc” for further information about data requirements.

### What do I need to do after I collect them?

- Press and dry the specimens.
- Mount the specimens on archival card. Come to Voucher Specimen Mounting Day, run twice a year, to help you find time to do this before you finish your project!
- Lodge your data and specimens at the herbarium (labels for your specimens will be produced from your data).

Contact Gill Brown ([browngk@unimelb.edu.au](mailto:browngk@unimelb.edu.au); ph: 8344 5040) if you have any questions.

See how to [Make Your Own Herbarium Specimen](#) document on the University of Melbourne Herbarium website for more detailed information on collecting and preserving specimens.

<sup>1</sup> Wheeler, T.A. (2003), The Role of Voucher Specimens in Validating Faunistic and Ecological Research, *Biological Survey of Canada (Terrestrial Arthropods) Document series no. 9*.

Name:

Position:

Supervisor:

**Quantitative and Applied Ecology Group Safety Induction**

I have read the :

Quantitative and Applied Ecology Group Safety Document ( <i>this document</i> )	
I have been shown the location of:	
University Safety Website <a href="http://www.safety.unimelb.edu.au/">http://www.safety.unimelb.edu.au/</a>	
Emergency Information Safety Notice ( <i>ie in the kitchen, outside Mick McCarthy's office and in Room 106</i> )	

I have been taken on a tour of QAECO work area and know the location of:

<u>First Aid Kits</u> located on the wall of the Vesk lab (Room 108) and in the corridor outside the Vesk lab (opposite Room 112).	
<u>Fire Extinguishers</u> : outside Room 106 and Old Library (Room 116) and in Botany North (next to electrical switchboard): A dry chemical extinguisher used for paper, wood, textile, oil, liquid and electrical fires.  In Vesk Lab (Room 108) and in corridor leading to Botany North: Co2 extinguisher used for paint, oil, electrical and other liquid fires.	
<u>Break Glass Alarm</u> : located in entrance to building (on the fire panel on the right hand side as you enter the building) and in the corridor next to the main stairs on 1st floor.)	

Signed:.....Date:.....