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| UOM-Rev_S_Black copy | field work RISK ASSESSMENT  Bush Walking – Traversing on foot |

| STEP 1 – ENTER INFORMATION ABOUT THE ACTIVITY/TASK, ITS LOCATION AND THE PEOPLE COMPLETING THE RISK ASSESSMENT |
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| Ra No.: [Local area RA number if applicable] | Date: 20 & 21 July | Version No.: [Version number of the RA] | Review Date: [Date RA due for review] | Authorised by: Peter Vesk, A/Professor |
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| School/Faculty/Department:  School of BioSciences | Date(s) of field work:  20 & 21 July | Assessed by (Field Work Supervisor):  Peter Vesk | | Health and Safety Rep.:  Anton Cozinjensen | |
| **Location of field work:**  Kinglake Ranges Wilderness Retreat Camp, 1419 Whittlesea-Yea Road Kinglake West, Victoria, 3757 | | Are there any licensing/permit requirements?  Yes  No | If “yes” provide details: | | |
| Description of the field work:  The activity is related to a Retreat and bushwalking, spotlighting are optional activities. | | | | | Number of Participant(s):  10-20 |

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| List systems of work for undertaking the field work:  Training  SOPs  Risk assessments  Leader competency  Equipment  Guidance material  Emergency situations | Field Work Plan  Field Work OHS Guidelines  Group briefing prior to departure |
| Is there past experience or background material regarding the plant operation that may assist in the assessment  Existing controls  SOPs  Standards  Industry standards  Legislation and Codes  Training  Incident Investigation  Guidance material | OHS Act 2004  Outdoors Victoria: Adventure Activity Standards  Forest Recreation Notes  Field Work OHS Guidelines  Most of the participants will be experienced in bush walking and spotlighting. |

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| Step 2: Select a Risk Rating Method |

Two Variable Risk Matrix

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| (1) Definition of likelihood label | | | |
| Level | Likelihood (Probability) | | |
| Descriptor | Description | Expected to occur |
| A | Almost certain | The event will occur on an annual basis | Once a year or more |
| B | Likely | The event has occurred several times or more in your career | Once every three years |
| C | Possible | The event might occur once in your career | Once every 10 years |
| D | Unlikely | The event does occur somewhere from time to time | Once every 30 years |
| E | Rare | Heard of something like the event occurring elsewhere | Once every 100 years |

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| **(2) Definitions of consequence labels** | |
| **Severity level** | **Consequences** |
| **V Catastrophe** | One or more fatalities and/or severe irreversible disability to one or more people |
| **IV Major** | Extensive injury or impairment to one or more persons |
| **III Moderate** | Short term disability to one or more persons |
| **II Insignificant** | Medical treatment and/or lost injury time <2 weeks |
| **I Negligible** | First aid treatment or no treatment required |

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| (3) Risk rating calculator | | | | | |
| Likelihood  label | Consequences label | | | | |
| I | II | III | IV | V |
| A | Medium | High | High | Very high | Very high |
| B | Medium | Medium | High | High | Very high |
| C | Low | Medium | High | High | High |
| D | Low | Low | Medium | Medium | High |
| E | Low | Low | Medium | Medium | High |

Three Variable Risk Calculator

Adapted from HB 436: Risk management guidelines

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| (1) Definition of exposure variable | |
| Exposure | E |
| Continuously or many times daily | 10 |
| Frequently: Approximately once daily | 6 |
| Occasionally: Once a week to once a month | 3 |
| Infrequently: Once a month to once a year | 2 |
| Rarely: Has been known to occur | 1 |
| Very rarely: Not known to have occurred | 0.5 |

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| (2) Definition of likelihood variable | |
| Likelihood | L |
| Almost certain: The most likely outcome if the event occurs | 10 |
| Likely: Not unusual, perhaps 50-50 chance | 6 |
| Unusual but possible: (e.g. 1 in 10) | 3 |
| Remotely possible: A possible coincidence (e.g. 1 in 100) | 1 |
| Conceivable: Has never happened in years of exposure, but possible (eg 1 in 1,000) | 0.5 |
| Practically impossible: Not to knowledge ever happened anywhere (e.g. 1 in 10,000) | 0. 1 |

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| (3) Definition of consequences variable | |
| Consequences | C |
| Catastrophe: Multiple fatalities | 100 |
| Disaster: Fatality | 50 |
| Very serious: Permanent disability/ill health | 25 |
| Serious: Non-permanent injury or ill health | 15 |
| Important: Medical attention needed | 5 |
| Noticeable: Minor cuts and bruises or sickness | 1 |

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| (4) Risk Score Calculator | |
| **Risk Score = E x L x C** | |
| Risk score | Risk rating |
| > 600 | Very high |
| 300 - 599 | High |
| 90 - 299 | Medium |
| < 90 | Low |

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| STEP 3 – Identify hazards and associated risk Scores and controls | |
| For each of the following prompts:   * **Check the box** for each hazard that may potentially exist for the field work; * Either:   + if using the **two variable risk matrix**, determine and record the likelihood, consequences and the **risk rating**, or   + if using the **three variable risk calculator**, determine and record the exposure, likelihood, consequences and the **risk score**. * In the **comments** box, describe when and where the hazard is present; * Specify the risk **control type** from the hierarchy of control at right, for each current or proposed risk control; * Provide a **control description** for each current or proposed risk control; and * Determine the **residual risk score** using the same two variable risk matrix or three variable risk calculator used to determine the raw risk score.   **Note:** Field work with a medium to very high risk score requires a Field Work Plan. | Hierarchy of Control (Control Type)  El – Elimination  S – Substitution  En – Engineering Is – Isolation G – Guarding  Sh – Shielding  A – Administrative T – Training In – Inspection  M – Monitoring H – Health Monitoring  P – PPE |

| Category | Raw Risk score | Comments (when and where hazard is present) | Control type | Control description  (Current And Proposed) | Residual Risk Score |
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| Can anyone be adversely affected by the ENVIRONMENTAL conditions: | 3 x 1 x 25 = 75  Low | **Hot weather** brings the risk of cramps, dehydration and heat stress (leading to heat stroke if allowed to continue) and sunburn.  **Cold weather** brings the risk of hypothermia and frostbite.  Unprepared for overnight conditions.  Caught in bushfire | S  A  PPE | Chose seasons/times of least exposure and weather extremes  Check weather forecast  Check fire conditions  Refer to weather conditions prior to activity including: severe weather warnings, fire bans and CFA web site.  Protective Clothing, e.g. wet weather clothing  For long walks in wet weather a spare change of clothing to reduce the possibility of hypothermia  Appropriate footwear (carry spare boot laces)  Socks which are wool or composite materials are advisable (not cotton as it retains perspiration and can cause blisters)  Sun glasses  Sunscreen  Hat (preferably with broad brim)  Beanie for cold weather  Plan walks, where possible, to have an estimated completion time several hours before dusk  Energy food eg: dried fruit, chocolate, emergency food supply  Toilet paper and small hand trowel or spade  Towel  Communication equipment (see communication section)  Individual torches for spotlighting with spare batteries  Matches or firelighters  Knife  Map and Compass  Whistles - should call and blow whistles to attract the attention of the lost walkers  Communication equipment (see communication section)  Leader must take and record a head count before, during and immediately following the activity  Navigation training  Familiarizing group with the journey  Group must not separate during a bushwalk  Discuss strategies with the group in case someone gets lost/separated such as:   * Be aware of who is walking in front and behind of you, and keep them in sight. * Pass a message to the leader if anyone drops behind. * If lost, STOP and SHOUT. Blow your whistle in groups of three blasts. * If lost, either stay where you are or move a short distance to a clearing – don’t wander further. * If an individual is missing the leader will organise for the group to return to where the person first went missing.   Requirements as listed in the **Emergency** section | 50  Low |
| Extremes in temperature that could cause hyperthermia or hypothermia  Weather conditions such as strong winds, rain or continuous sunshine (high UV)  The location is difficult to access  The location is remote  The terrain is rocky, uneven, very step.  There are bodies of water such as dams, rivers or the ocean  Working at heights (eg abseiling)  Other – specify:   * caught out overnight * bushfire * separated from group |  |  |  |  |  |
| Can anyone be adversely effected by the FAUNA and FLORA: | 3 x 1 x 50 = 150  Medium | Snakebite  Insect stings  Stings from plants such as nettles  Allergic reaction/sensitivity to flora  Injuries from animals, both native and exotic | A  T | First aid kit (ensure have compression bandage)  Brief group on the flora and fauna that they may encounter e.g. snakes  Walk as much as possible on cleared pathways/ground  Ticks are often found in warm sandy areas - check yourself at end of day (make sure the head of the tick is removed)  Wear adequate protection against snakes such as long trousers/gaiters/thick socks  Requirements as listed in the **Emergency** section with particular attention to:   * Emergency access and emergency escape routes planned * Qualified first aiders | 50  Low |
| Poisonous fauna such as snakes, scorpions, octopi  Biting and stinging insects/arachnids  Known allergies to sensitivities to plants  Dense forest or undergrowth  Burrowing animals  Other – specify: |  |  |  |  |  |
| Can anyone be injured from the PLANT and/or EQUIPMENT used during the field work: |  | Nil |  |  |  |
| Struck, crushed or entangled  Cut or stabbed  Shearing or friction  Slip, trip or fall  Manual handling/ergonomics  Vibration  Other – specify: |  |  |  |  |  |
| Can anyone be injured or adversely effected by CHEMICALS |  | Nil |  |  |  |
| Storage  Handling  Decanting/Mixing  Applying/Using  Spill/Leak  Disposal  Other – specify: |  |  |  |  |  |
| Can anyone be injured or adversely effected from the MANUAL HANDLING requirements of the activity: | Nil |  |  |  |  |
| Excessive effort  Awkward postures  Repetitive body movement or posture  Lack of consideration for human behaviour causing mental or physical stress  Other – specify: |  |  |  |  |  |
| OTHER |  |  |  |  |  |
| Other – specify: |  |  |  |  |  |

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| STEP 4 – Identify the support SYSTEM requirements for field work |
| For each of the categories describe:   * Identify the **requirements** for each of the support system categories that will be used during the field work. * Describe the **possible hazards or adverse outcomes** that may be associated with the support system. * The specific **controls** to mitigate or reduce the possible hazards or adverse outcomes. |

| **What Are the Requirements for the Following SUPPORT SYSTEMS:** | **Possible Hazards or Adverse Outcomes** | **Control Description**  **(Current and Proposed0** |
| --- | --- | --- |
| TRANSPORT | * Vehicle incident | Check vehicle prior to journey  Vehicle regularly serviced  Driving vehicle risk assessment  Driving vehicle SOP |
| Road vehicle/car  Four wheel drive  Mini bus  Bus  Boat  Bicycle  Other – specify: |
| COMMUNICATION and NAVIGATION | Communication may not work in remote locations:   * Often mobile phones will be unreliable   Communication equipment is lost/broken  Navigation system doesn’t work in remote location  Navigation system breaks down/battery runs out | Spare communication equipment  Often mobile phones will not provide service. Send two people to a higher place to see if they can establish communication. If communication cannot be established, two experienced people must be sent to get help.  Check communication before commencing  Training in communication  Navigation system such as satellite:   * Check it’s working before leaving * Participants all trained to use navigation system * Check back up battery before leaving |
| Mobile phone  Land line  Satellite radio  Marine radio  Compass  Maps  Satellite navigation  Other – specify: |
| FOOD and WATER | Not carrying sufficient food or water for the activity  Food poisoning  Drinking contaminated water  Litter/rubbish left behind  Unsatisfactory toilet arrangements  Unable to wash hands | Carry sufficient food and water; for example on a long day walk include:  Meals for the day  i.e. breakfast, lunch and dinner plus snacks  Energy food e.g. dried fruit, chocolate, emergency food supply if caught out overnight  Two liters of water or more per person may be required on hot days.  Non-perishable food  Carry sufficient water  Water tablets  Food handling training/briefing for personnel handling food  Bags for storing litter so it can be carried out.  Toilet paper and small hand trowel or spade.  Toilet wastes, including toilet paper are to be properly buried 150 - 200 mm deep (not only by rocks or leaves).  Where practicable toilet stops to be at least 100 meters from any water source.  Remove all litter (includes peelings, plastic, foil etc).  Adequate water for hand washing |
| Take food in Number of days: [Days]  Take water in Number of litres: [Litres]  Hygiene – water for washing  Hygiene – litter  Toilet arrangements and requirements  Other factors – specify: |
| LEGAL COMPLIANCE | Lighting fire during total fire ban days  Fire becomes uncontrolled  Accessing areas that require a permit without a permit  Removing specimens that where there is a requirement for a permit and this has not been obtained | Provide other means of cooking food or take food that does not require heating/cooking  No lighting fires during fire ban  Be aware of Fire Regulations  Check that ashes are COLD before departing  Seek permission prior to lighting fire  Light in a purpose built fire place  Identify locations that do not require permits/permission  Obtain any National Park permits that may be required  Obtain any additional permits/permission that may be required |
| Boat licence  Fishing licence  Firearms  Moisture gauge use licence  Permits for National Parks entry/removal of specimens  Fires in the open  Other – specify: |
| EMERGENCY PLAN | Injured whilst walking. Eg strained ankle, snake bite  Injured from associated activity  Participants become lost or separated  Not being fit for the activity   * Collapsing in a remote location * Requires medical assistance | Trained first aider –appropriate level of training  The leader should inform the participants of any unusual risks likely to be encountered  Participants must inform the leader of any medical conditions likely to affect their ability to undertake the walk (and advise of the appropriate treatment)  The following should be documented and carried on the walk and a copy kept with a nonparticipating contact:   * Trip plan/itinerary * Emergency strategy/plan * Participant’s emergency contact details * Participant’s medical conditions * Emergency trigger time for nonparticipant to notify emergency services of failure to return * Contact details, including how they are best contacted (eg telephone, HF radio) of key emergency organisations such as police, land manager   Emergency access and emergency escape routes planned  Consider appointing an assistant to the leader who is familiar with the requirements of the activity and has the ability to competently participate in emergency response procedures |
| First aid arrangements  Communication arrangements  Closest help - remoteness  Transport arrangements  Medical conditions/fitness of participants  Other – specify: Distress Beacon - PLB |

| STEP 5 – ImpleMEntation and consultation process | | |
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| Determine the person responsible for reviewing and implementing the risk assessment including the identified controls. For field work activities assessed as a medium to high risk, ensure that a Field Work Plan has been completed, reviewed and signed off.  Obtain the authorisation of the management representative.  Ensure the HSR (if applicable) has been consulted. Ensure the participant(s) undertaking the fieldwork have been consulted. | | |
| Person Responsible for implementing the controls | Peter Vesk | **Date:** 13 July 2017 |
| Signature of management representative |  | **Date:** |
| Signature of HSR/employee representative |  | **Date:** |
| Field work participants  Multiple participants/groups will briefed on risk assessment and field work prior to the activity | Multiple participants who will be briefed on safety procedures prior to going out. | **Date:** |
|  | **Date:** |
|  | **Date:** |

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| Extra writing room - use this page to enter extended comments or descriptions |
| **Review:**  Review risk assessment prior to each new field trip.  Review risk assessment where there is an incident with the field work or new information becomes available.  **Emergency and First Aid procedures**  Ensure that first aid procedures and resources are in place and available.  First aid risk assessment and procedures that take into account the risks associated with the field work and possible adverse outcomes.  All participants must have been briefed and be familiar with the field work and associated controls/plans prior to undertaking the field work. |

For use in conjunction with the *OHS risk management procedure* and the *Off-campus risk management procedure*.

For further information, refer to <http://safety.unimelb.edu.au/implementation#risk-management> or contact your local OHS practice expert.