

Risk Assessment – Fieldwork Techniques (covering all techniques used in field studies, excursion and science-based modules)

| | | | | | | |
|--------------|----------------|---------------|----------------|-------------------|--------------|------------|
| Baseline | ✗ | Site Specific | | Vulnerable Person | | Temporary |
| Produced by: | Leigh Phillips | | Date of issue: | 17/01/2019 | Review date: | 17/01/2020 |

Operating notes:

- All sites used for fieldwork must be vetted before first use for their safety and suitability.
- Equipment used for fieldwork is subject to period inspection.
- Staff supervision will vary depending on the nature of the planned activity, site being visited and objectives of the group.
- *[Staff working in or around water must carry a Throw line and be qualified in RLSS NWSMP Level 2 specific to the environment they are working in (Still Water / River / Beach) – As of 1st March 2019]*

Risk – Benefit Statement: There is a low risk of minor injury arising from terrain in most fieldwork environments, rising to a medium risk for river work. However, hands-on fieldwork offers an unmissable opportunity to experience the natural world and human impact on it, making it an experience that all students should enjoy. The risk is therefore acceptable.

| Hazard Description and activities giving rise to risk | Who may be harmed | Control Measures | Risk Rating |
|---|-------------------|--|-------------|
| Aquatic investigations – Rivers, streams and ponds | | | |
| Accessing rivers – A participant can fall into a river, or be unable to climb out, if the bank is steep, slippery or heavily vegetated. | All | <ul style="list-style-type: none"> • Do not enter rivers from places where access is difficult or uncontrolled. Use an easier access point then walk upstream. • Choose access points where there is a gentle slope to the water, or where there is a short vertical distance from the bank or a platform to the water surface. • Stand in a place where you can offer assistance to those stepping into the water. | Low |

| Hazard Description and activities giving rise to risk | Who may be harmed | Control Measures | Risk Rating |
|---|-------------------|--|-------------|
| <p>Working in rivers (Kick sampling, width, depth, wetted perimeter, gradient, flow rate and temperature measurements, etc.) – Potential for being swept away by strong currents, becoming stuck in the substrate, becoming entangled in a submerged obstacle, or entering water too deep for a participant’s swimming ability. All can lead to drowning.</p> | All | <ul style="list-style-type: none"> • DO NOT ALLOW ANYONE TO ENTER WATER THAT YOU HAVE CONCERNS ABOUT FOR WHATEVER REASON. YOU ARE IN CHARGE AND YOU HAVE THE FINAL SAY. • <u>[Staff working in water carry Throwlines and are trained in their use as qualified RLSS NWSMP Level 2 award holders – As of 1st March 2019]</u> • Ensure that whenever a participant is in the river, a leader stands in the water immediately downstream of them and another leader is positioned on the bank with a reaching aid to assist if anyone gets into difficulty. • Do not allow anyone to enter fast flowing or turbulent water above knee-deep. • Choose study sites where the river bed is stable and reasonably even. Deep, soft mud and uneven, loose, rocky beds should be avoided. Areas where there are underwater obstructions, large tree roots or other obstacles should be avoided • Water clarity must enable a participant to see the river bed, unless knowledge of the site confirms that the bed is safe. • Ensure any participant who is intending getting into the water has appropriate clothing to wear and to change into. • <i>(See also entries under ‘Landform profiling’)</i> | Medium |
| <p>Working beside rivers (invertebrate analysis, field sketches, species identification, data recording and all other techniques undertaken from the river bank) – poor supervision or boundary setting for groups working on river banks or alongside ponds risks participants getting too close to the water and falling in.</p> | All | <ul style="list-style-type: none"> • Define a working area beside the water that participants must stay in. Allow enough space for the size of the group. • Where access to the river/pond is required (e.g. to replenish samples) lay down ground rules about how and where this can happen. • <u>[Staff working around water carry Throwlines and are trained in their use as qualified RLSS NWSMP Level 2 award holders – As of 1st March 2019]</u> | Low |
| <p>Pond dipping (depth and temperature measurements, or taking vegetation or faunal samples using a net or container) – reaching from a platform or the bank risks someone falling in.</p> | All | <ul style="list-style-type: none"> • <u>[Staff working around water carry Throwlines and are trained in their use as qualified RLSS NWSMP Level 2 award holders – As of 1st March 2019]</u> • Do not allow participants to lean out too far to collect water, vegetation or fauna samples. • Provide long-handled sampling equipment • Limit numbers at the pond edge or on the platform if one is provided • <i>(See also entries under ‘Working beside rivers’ and ‘Standing water’)</i> | Very Low |

| Hazard Description and activities giving rise to risk | Who may be harmed | Control Measures | Risk Rating |
|--|-------------------|---|-------------|
| Standing water – can become polluted or diseased if it becomes stagnant or contaminated with urine or faeces, or if algal blooms occur, causing infections such as Weil's disease. | All | <ul style="list-style-type: none"> Do not enter any water body that has no flow and looks stagnant, polluted or has large amounts of algae growing in or on it. Pollution may be indicated by discolouration, suspended matter in the water or chemical films on the surface Ensure all open cuts are covered with a dressing to prevent infection, and that participants wash their hands after the activity. | Very Low |
| Geomorphology investigations – Coastal and inland landforms | | | |
| Fieldwork on coasts (walking on dunes, beaches, groynes, and other beach defences, pebble analysis, wave counts, field sketching) – causing slips and trips or falls from height, or being caught by the tide. | All | <ul style="list-style-type: none"> Check participants have footwear appropriate to the terrain and planned activity. Where groups are split into sub-groups, ensure boundaries are set for work areas. Tell participants that they are not to climb on any of the coastal defences. Keep away from groynes where there is a large drop on one side. <u><i>[Paddling is permitted up to the participant's knee deep – As of 1st March 2019]</i></u> <u><i>[Staff working in water carry Throwlines and are trained in their use as qualified RLSS NWSMP Level 2 award holders – As of 1st March 2019]</i></u> Do not touch any sea creatures (jelly fish) that may be washed up on to the beach. Be mindful of your impact on other beach users. Check the tide times before leaving centre and allow sufficient time to complete activities before the tide comes in. | Very Low |
| Landform profiling (beaches, sand dunes, cliff slumps, groynes/Long Shore Drift measurement) – injuries arising from equipment misuse, terrain or falls from height. | All | <ul style="list-style-type: none"> Check participants have footwear appropriate to the terrain and planned activity. Tell participants that ranging poles must never be thrown and must be carried with the point down. Keep away from landforms that appear unstable or sections displaying recent instability. Where possible, longshore drift measurements should be taken from the 'lower' rather than the 'higher' side of the groyne to avoid work at height. Warn participants to take extreme care when working on slopes, particularly if these are steep. | Very Low |
| Fieldwork on or near cliffs, steep slopes or river banks – landforms may be unstable causing slips, falls or serious injury if features give way. | All | <ul style="list-style-type: none"> Tell participants to keep to paths and away from cliff edges, river banks and steep slopes. Keep away from landforms that appear unstable or sections displaying recent instability. When working at the base of cliffs, define a safe working area and a minimum separation distance between the cliff and participants. No-one should go nearer to the cliff than you do. | Low |
| Biogeography, biology and ecology investigations – Woodlands, grasslands, sand dunes and rockpools | | | |

| Hazard Description and activities giving rise to risk | Who may be harmed | Control Measures | Risk Rating |
|--|-------------------|--|-------------|
| Faunal Sampling (Mark/release/recapture of invertebrates or mammals, limpet analysis, freshwater invertebrate identification) – causing possible bites or stings, or illness through contagion of faunal bacteria. | All | <ul style="list-style-type: none"> • If handling creatures is planned then all participants should wash their hands with non-perfumed soap before the activity. • Participants must only touch or handle creatures if it is absolutely necessary. • All participants must wash their hands at the end of the task, and before eating. • If a packed lunch will be eaten, and where participants do not have access to hand-washing facilities, a packet of hand-wipes must be provided. | Very Low |
| Floral Sampling (Assessment of flora in different floral layers, tree height measurement, examination of floral adaptations, rocky shore zonation) – causing cuts, grazes, stings or skin irritation. | All | <ul style="list-style-type: none"> • Ensure participants have clothing and footwear appropriate to the terrain and planned activity. • Long sleeves and trousers should be worn in woodland and grassland areas to avoid tick bites and cuts and grazes to bare arms and legs. • Tell participants about any plants they should NOT touch, and locations they should stay away from • All participants must wash their hands at the end of the task, and before eating. • If a packed lunch will be eaten, and where participants do not have access to hand-washing facilities, a packet of hand-wipes must be provided. | Very Low |
| Soil analysis (Infiltration rate measurements, moisture content, temperature, profile analysis) - causing possible illness through contagion of soil bacteria. | All | <ul style="list-style-type: none"> • All participants must wash their hands at the end of the task, and before eating. • If a packed lunch will be eaten, and where participants do not have access to hand-washing facilities, a packet of hand-wipes must be provided. • <i>(See also entries under 'Chemical Handling')</i> | Very Low |
| Sampling methods (grid, point or transect systems) – may cause minor injury depending on terrain, or disruption to other site users. | All | <ul style="list-style-type: none"> • Where groups are split into sub-groups, ensure boundaries are set for work areas. • Select a sampling method that is safe for the terrain and the ease of access to locations that it allows. • Be mindful of your impact on other site users. | Very Low |
| Human Geography | | | |

| Hazard Description and activities giving rise to risk | Who may be harmed | Control Measures | Risk Rating |
|---|-------------------|--|-------------|
| Techniques in urban areas (Field sketching, pedestrian and traffic counts, land use mapping, retail and environmental quality index, surveys, questionnaires, etc.) – Attention devoted to surroundings or data recording risks attention being diverted from traffic, other pedestrians and the group’s location . | All | <ul style="list-style-type: none"> • Where possible choose sampling/fieldwork locations where there is sufficient space to stop and concentrate on the task in safety. • Tell groups to be vigilant to vehicle movements when working alongside roads. Always find a safe place to stop for data collection and recording • Don’t block footpaths when working in larger groups, and be mindful of the needs of your impact on pedestrians. • Keep an eye on the time. Pace your fieldwork so as not to get left behind. | Low |
| Chemical Handling | | | |
| Water testing or soil solution testing (pH, NPK levels, Biological Oxygen Demand, etc.) may require chemicals which could get into eyes or skin during decanting, syringing or disposal. | All | <ul style="list-style-type: none"> • Chemicals should be used in small quantities only and according to the instructions provided. • Wear any eye-protective or gloves specified. • Do not force any chemical equipment. If lids are too tight or syringe nozzles blocked seek assistance from the Leader. • All participants who have handled chemicals must wash their hands at the end of the task, and before eating. • If a packed lunch will be eaten, and where participants do not have access to hand-washing facilities, a packet of hand-wipes must be provided. | Very Low |
| Powders used during finger-print testing could cause eye or throat irritation. | All | <ul style="list-style-type: none"> • Tell participants not to shake or blow fingerprint powder too vigorously or in the direction of other people • All participants who have handled chemicals must wash their hands at the end of the activity, and before eating. | Very Low |
| Electronic Equipment | | | |
| Electric heat sources such as heat lamps used to view disguised writing risking minor burns. | All | <ul style="list-style-type: none"> • Tell participants not to touch the surface of heat lamps. • Electric lamps will be subject to Portable Appliance Testing (PAT) | Very Low |
| Microwave ovens used to dry soil samples can be damaged by metal contents, and samples may be hot on removal. | All | <ul style="list-style-type: none"> • Never put metal containers into a Microwave • Take care when removing samples from the microwave; they may be hot. Use an oven-glove or cloth • Microwaves will be subject to Portable Appliance Testing (PAT) | Very Low |

| Hazard Description and activities giving rise to risk | Who may be harmed | Control Measures | Risk Rating |
|--|--------------------------|--|--------------------|
| Microscopes with powered lights can get hot, and glass microscope slides risking cuts. | All | <ul style="list-style-type: none">• Demonstrate the correct set-up of the microscope where necessary, and indicate the places where it may get hot.• Take care when handling glass slides. Any that break should be wrapped in newspaper and disposed of immediately.• Microscopes will be subject to Portable Appliance Testing (PAT) | Very Low |