Snorkelling Procedure

Section 1 - Purpose and Scope

(1) This Procedure outlines The University of Queensland's requirements for undertaking snorkelling and breath-hold diving by workers and undergraduate students at the University. The University acknowledges that snorkelling and breath-hold diving activities raise particular risks which must be effectively controlled. The purpose of this Procedure is to ensure the health, safety and well-being of snorkellers and compliance with relevant legislative requirements.

(2) This Procedure applies to all workers and undergraduate students participating in snorkelling and breath-hold diving and staff, including Supervisors and senior officers, who have responsibilities to ensure the health and safety of the workers and undergraduate students and those exposed to these activities.

(3) The objectives of this Procedure are to:

a. outline responsibilities of senior officers, Supervisors and snorkelling participants;
b. ensure adequate planning and OHS risk management of snorkelling;
c. ensure adequate information is provided to all stakeholders for approval and emergency preparedness and response; and
d. ensure the risk management process for snorkelling is documented and recorded.

Section 2 - Process and Key Controls

(4) Supervisors and senior officers must ensure the following processes have been completed before undertaking snorkelling or breath-hold diving activities:

a. A WOC plan has been completed, which includes a snorkelling and breath-hold diving plan, with associated risk management and emergency procedures.
b. The competency of the worker has been assessed in accordance with the ‘Competency’ provisions below (clauses 8-13), based on the information provided in the snorkeller registration form.
c. Duties are assigned to workers who are competent to undertake the role (for example, workers appointed as snorkel rescuers should meet the competency requirements in clause 12).
d. Snorkelling and breath-hold diving work is to be conducted in accordance with this Procedure and relevant industry guidelines/codes.
e. Records relating to the snorkelling and breath-hold diving activities are complete, accurate and maintained in accordance with the Records Management Procedure.

(5) To ensure the safety of workers and other persons, the following controls must be considered in the planning and preparation of snorkelling or breath-hold diving activities:

a. Screening of all persons for fitness and medical condition advice.
b. Minimum competency levels of persons undertaking the activity.
c. Minimum supervision levels for the proposed activity.

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d. Assessment of work tasks for snorkelling or breath-hold diving.
e. Access to first aid personnel and equipment, including oxygen resuscitation equipment.
f. Ensuring verification of returned snorkellers or breath-hold divers at the end of the activity.
g. The implementation of effective emergency procedures for the activity.

Section 3 - Key Requirements

Fitness to Snorkel

(6) The Supervisor must ensure that all snorkellers are advised that snorkelling can be a strenuous activity and may increase health and safety risks to persons suffering from:

a. A medical condition that may be made worse by physical exertion. For example, heart disease, asthma and some lung complaints.
b. A medical condition that can result in a loss of consciousness. For example, some forms of epilepsy or diabetes.
c. Asthma that can be triggered by cold water or salt water mist.

(7) The Supervisor is required to inform all persons undertaking snorkelling or breath-hold diving to advise the designated lookout, snorkelling supervisor or snorkelling guide of any concerns they may have with respect to their fitness to undertake the activity.

Competency

Minimum Competency for all Snorkelling and Breath-hold Diving Workers

(8) All snorkelling workers and persons undertaking snorkelling activities must be competent in all of the following:

a. Fitting and clearing a mask.
b. Fitting and clearing a snorkel.
c. Breathing via a snorkel and avoiding CO_2 toxicity from the extended dead air space.
d. Effective fin technique.
e. Swimming 200m effectively using a mask, snorkel and fins.

(9) In addition to the above, persons undertaking breath-hold diving must also be component in all of the following:

a. Clearing a snorkel while or after surfacing from a dive.
b. Equalising the middle ear and sinus gas spaces and recognising when not to continue breath-hold diving.
c. Avoiding shallow water (hypoxic) blackout.
d. Determining the correct weighting and use of weight belts.

(10) Snorkel supervisor must check the competency of persons undertaking snorkelling or breath-hold diving and provide additional training to persons who do not demonstrate competency in the first instance.

Requirements for Snorkel Guides

(11) In addition to the minimum competency set out in clauses 8-10, snorkel guides must also be competent in both of the following:

a. Recognising relevant hazards and snorkellers in difficulty.
b. Rescuing a snorkeller or directing a person capable of rescuing the snorkeller to rescue the snorkeller.

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Requirements for Snorkel Lookouts/Rescuers

(12) In addition to satisfying the competency in clauses 8-11, snorkel lookouts and rescuers must:

a. have been assessed as competent for in-water rescue such as recreational dive Supervisor, rescue diver, SISCAQU306A Supervise clients at an aquatic facility or environment, PUA21012 Certificate II in Public Safety (Aquatic Rescue) or PUASAR013A Participate in aquatic rescue operations;
b. hold a current certificate for first aid;
c. hold a current certificate for CPR; and
d. hold a current certificate for advanced resuscitation or the provision of 100% oxygen.

Requirements for Snorkel Supervisor

(13) A snorkel supervisor must satisfy the competencies in clauses 8-12 and be appointed in writing as a snorkel supervisor by the Supervisor responsible for the snorkelling activity/work.

Minimum size of Snorkelling Teams

Snorkelling Operations in Open Water

(14) The following personnel must be present:

a. one (1) snorkel supervisor;
b. two (2) snorkellers, each acting as in-water rescuer for the other snorkeller; and
c. one (1) lookout.

(15) The snorkel supervisor may act as either a snorkeller or lookout. The minimum team is therefore three (3) persons. If the snorkel supervisor is acting as a snorkeller, a lookout must be appointed.

(16) One lookout may attend to more than one pair of snorkellers if:

a. this is supported by a documented risk assessment;
b. the snorkellers are working in the same immediate vicinity; and
c. this does not compromise the snorkel team's ability to respond to an emergency.

Snorkelling Operations in Water Depths up to 1.5m

(17) The following personnel must be present:

a. one (1) snorkel supervisor;
b. one (1) snorkeller; and
c. one (1) lookout.

(18) The snorkel supervisor may act as either a snorkeller or lookout if:

a. this is supported by a documented risk assessment;
b. this does not compromise the snorkel team's ability to respond to an emergency; and
c. the snorkelling operation does not involve:
    i. poor visibility;
    ii. danger to the snorkeller from currents either natural or associated with man-made structures such as dams, weirs, inlets, outlets or sluices;

iii. risk of entrapment of the snorkeller or entanglement and provides unimpeded access to the surface; or
iv. a situation in which third party assistance is not readily available in an emergency.

(19) If a snorkel team of two (2) is used, the attendant must maintain visual contact with the snorkeller and must be capable of removing the snorkeller from the water in an emergency or if the snorkeller requests assistance. The minimum team is therefore two (2) persons.

Snorkelling Operations in Sheltered Open Water

(20) The following personnel must be present:

a. one (1) snorkel supervisor;
b. two (2) snorkellers, each acting as in-water standby snorkeller for the other snorkeller; and
c. one (1) snorkeller's attendant.

(21) The snorkel supervisor may act as either a snorkeller or snorkeller's attendant. The minimum team is therefore three persons. If the snorkel supervisor is acting as a snorkeller, the supervisor's surface duties must be delegated to the attendant.

(22) In exceptional circumstances, where minimal risk is present, the Supervisor and Head of School or Head of Organisational Unit may authorise a minimum team of two snorkellers if:

a. this is supported by a documented risk assessment;
b. this does not compromise the snorkel team's ability to respond to an emergency; and
c. the snorkelling operation does not involve:
    i. poor visibility;
    ii. danger to the snorkeller from currents either natural or associated with man-made structures such as dams, weirs, inlets, outlets or sluices;
    iii. risk of entrapment of the snorkeller or entanglement and provides unimpeded access to the surface; or
    iv. a situation in which third party assistance is not readily available in an emergency.

(23) If a snorkel team of two (2) is used, each snorkeller must maintain visual contact with the snorkeller and must be capable of removing the snorkeller from the water in an emergency or if the snorkeller requests assistance. The minimum team is therefore two (2) persons.

Supervision of Large Groups

(24) For groups of snorkellers without rescuer skills, competent persons must be appointed by the Supervisor at ratios no lower than:

a. one (1) snorkel supervisor per 32 persons;
b. one (1) snorkel rescuer per 16 persons; and
c. one (1) snorkel guide per eight (8) persons.

(25) Snorkel rescuers may act as snorkel guides. Snorkel supervisors may act a guide and as a snorkel rescuer.

(26) The above ratios are for nominal low risk conditions. Minimum ratios of competent persons to snorkellers must be reduced according to a risk assessment where snorkellers are mostly inexperienced, at night, or according to the environmental conditions.

(27) For all night snorkelling activities, where a risk assessment permits no lookout to be used, or where the sea state

exceeds 1m, minimum ratios of competent persons to snorkellers must be reduced to:

a. one (1) snorkel supervisor per 16 persons;
b. one (1) snorkel rescuer per eight (8) persons; and
c. one (1) snorkel guide per four (4) persons.

(28) Snorkel lookouts for large groups should wear distinctive brightly coloured clothing and be equipped with binoculars, polarised sunglasses and communications equipment so that effective communications can be made with the snorkelling supervisor and people in the water.

(29) The Supervisor and snorkel supervisor must assess the snorkel registration form of all participants to identify any persons at higher risk when snorkelling. The Supervisor and snorkel supervisor must ensure that persons at higher risk when snorkelling have adequate supervision (e.g. by reducing the number of other snorkellers in a guide's group, or by visually identifying the higher risk snorkellers using different coloured snorkels or other PPE).

Work Off-campus (WOC) Plan for Snorkelling

(30) A WOC plan as per the Work Off-Campus and Fieldwork Procedure for snorkelling must include:

a. the method of carrying out the work whilst snorkelling;
b. tasks and duties of each person;
c. procedures to be used;
d. anticipated time in water; and
e. hazards with residual risk above low and the control measures to be implemented.

(31) Where the work is complex or where groups of over 8 persons are snorkelling, the plan should be completed on a separate snorkel plan to be attached to the WOC plan.

(32) As per the Work Off-Campus and Fieldwork Procedure, WOC plans should be completed in UQSafe-Field Trip.

Risk Management

(33) A risk assessment must be prepared by a person competent as a snorkel supervisor under this Procedure for all snorkelling work in accordance with the UQ Health and Safety Risk Assessment Procedure.

(34) In circumstances where the UQ Risk Management Database is not accessible to the entire snorkelling team, alternative methodologies that comply with the How to Manage Work Health and Safety Risks Code of Practice 2021 (Qld) may be utilised. These methodologies may be used to implement more effective controls in the event of variation in the previously identified hazards in Supervisor approved assessment.

(35) The hazard identification checklist in the approved snorkel plan should be used to assist in identifying the potential hazards.

(36) The snorkel supervisor must ensure that:

a. all workers are consulted regarding the risk assessment prior to work commencing; and
b. all of the controls nominated in the risk assessment have been implemented.

Conditions Under Which Snorkelling and Breath-hold Diving Should Not be Undertaken

(37) Due to the consequences of becoming entangled in unseen objects, snorkelling must not be conducted where there is:

a. a high residual risk of entanglement; or
b. very low visibility (<1m) unless the depth of water is less than 1m.

(38) Breath-hold diving must not be conducted where there is:

a. moderate or higher residual risk of entanglement; or
b. low visibility (<3m);
c. the work requires moderate or prolonged exertion whilst breath-holding; or
d. working depth exceeds 15m.

Snorkelling From Large (Over 12m Measured Length) Vessels

(39) A suitable small auxiliary vessel must be immediately available to assist with emergency procedures where snorkelling is conducted from a vessel larger than 12m measured length.

Management of Risk from Non-associated Vessel Traffic

(40) On navigable waters a dive flag in compliance with local regulation should be flown in a way to maximise visibility. In most waters, this is the international code of signals Code A flag.

(41) Where snorkelling is conducted from a vessel at night, the vessel must display restricted in ability to manoeuvre lights in accordance with Rule 27 of the International Regulations for Preventing Collisions at Sea 1972.

Shallow Water (Hypoxic) Blackout

(42) Due to the unavoidable risk of shallow water blackout, no work utilising breath hold diving should be conducted deeper than 15m.

(43) At all times, snorkellers undertaking breath-hold diving must work in pairs, with one snorkeller remaining at the surface while the second undertakes a breath-hold dive. The snorkeller remaining at the surface must be in a state of immediate readiness to rescue the breath-hold diver and should maintain visual contact with the breath-hold diver at all times the breath-hold diver is underwater.

Breath-hold Diving Following Compressed Gas Diving

(44) Breath-hold diving must not be undertaken following compressed gas diving until the diver has off-gassed the residual inert gas. Using DCIEM tables, the diver should have a repetitive factor of 1.0 before undertaking any breath-hold dive.

Snorkelling at Night

(45) All snorkellers undertaking snorkelling at night must carry a minimum of two light sources. One of these light sources should be a chemical light stick attached to a highly visible part of the snorkeller such as the snorkel.

Emergency Plans

(46) Emergency plans must be in writing and provide procedures for:

a. the recall of all snorkellers;
b. recovery of a snorkeller to the vessel or shore or other place where first aid can be effectively provided;
c. the minimum number of persons with first aid training and the minimum level of first aid training of those persons (see clauses 8-13 and clauses 14-23);
d. the minimum volume of medical grade oxygen to be onsite;

e. transfer of an injured snorkeller to:
    i. the emergency services; or
    ii. a facility that administers medical aid; and
f. lost or overdue snorkeller/s.

Section 4 - Roles, Responsibilities and Accountabilities

(47) Staff at all levels at The University of Queensland have specific responsibilities for ensuring occupational health and safety. Senior officers, Managers, and Supervisors have duties under relevant legislation to exercise due diligence to ensure the health and safety of participants engaged in snorkelling.

(48) Snorkelling participants have duties relating to workers under relevant legislation to take reasonable care for their own health and safety, and for the health and safety of other persons.

Senior Officers

(49) Senior officers have the following additional responsibilities:

a. Acquire and keep up-to-date knowledge of work health and safety matters in relation to snorkelling.
b. Ensure adequate resources have been allocated for carrying out the work in accordance with approved WOC Plans and OHS Risk Assessment pertaining to snorkelling.
c. Ensure appropriate processes are in place for receiving and considering information regarding incidents, hazards and risks and responding in a timely way to that information.
d. Ensure that appropriate approvals have been granted, and records maintained, relating to snorkelling activities.

Supervisors

(50) Supervisors have the following additional responsibilities:

a. Supervise the development of the WOC Plans, including additional snorkelling plans where required, and OHS Risk Assessment for snorkelling activities.
b. Ensure adequate information is provided to all stakeholders for review and emergency preparedness and response.
c. Approve WOC Plans, including additional snorkelling plans where required, and OHS Risk Assessment.
d. Ensure that appropriate emergency procedures and equipment are in place for work off-campus.
e. Ensure that WOC Plans, snorkelling plans and OHS Risk Assessment are updated if the nature of the work changes and new OHS risks are introduced or a WOC Plan proves inappropriate.
f. Ensure appropriate induction and training for snorkelling participants.
g. Ensure the provision, maintenance and proper use of PPE associated with snorkelling.
h. Provide appropriate supervision (appoint the snorkel supervisor and, where necessary, snorkel guides or lookouts) to ensure that all snorkelling participants comply with the requirements of the WOC Plan and OHS Risk Assessment.
i. Ensure that timely reporting and appropriate corrective action is taken for all incidents involving snorkelling participants.

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Workers

(51) Workers must:

a. Comply with legislative requirements and the University's Policies and Procedures.
b. Participate in the development of WOC Plans, including additional snorkelling plans where required, and OHS Risk Assessment and obtain approval from the Supervisor prior to the commencement of snorkelling work.
c. Participate in snorkelling induction and training programs, as instructed by the Supervisor.
d. Implement OHS risk control measures as described in OHS Risk Assessment.
e. Limit snorkelling to the approved, specified activities detailed in the WOC plan or snorkelling plan and OHS Risk Assessment.
f. Consult with the Supervisor if the nature of the work changes and new OHS risks are introduced or a WOC Plan proves inappropriate.
g. Update WOC Plans and OHS Risk Assessment if the nature of the snorkelling activity changes.
h. Ensure that emergency procedures and equipment are in place for snorkelling.
i. Report any injury, illness or near-miss event to the supervisor.

Snorkel Supervisor

(52) In addition to the responsibilities in clause 51, snorkel supervisors must:

a. To work as a team and consult with other workers.
b. To assist other workers as required, including rescue and first aid.
c. Understand and be able to implement the emergency procedures.
d. To request assistance if needed.
e. Provide appropriate levels of supervision to participants assessed by the snorkelling supervisor as requiring higher levels of supervision.

Snorkel Guide

(53) In addition to the responsibilities in clause 51, snorkel guides are responsible for:

a. Being primarily engaged in observing the snorkellers under their care for any difficulty or distress.
b. Acting as a rescuer where competent to respond, or attracting the attention of the lookout to respond.
c. Ensuring they maintain an appropriate level of cardiovascular fitness to perform their duties.
d. Providing appropriate levels of supervision to participants assessed by the snorkelling supervisor as requiring higher levels of supervision.

Snorkel Rescuer

(54) In addition to the responsibilities in clause 51, snorkel guides are responsible for:

a. Recognising and reporting relevant hazards (e.g. changing conditions) to the snorkelling supervisor.
b. Identifying people in difficulty or distress.
c. Acting as rescuer or direct another rescuer to respond to any person in distress.
d. Scanning the area effectively and efficiently to observe all snorkellers.
e. Alert snorkellers moving outside the designated site.

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Snorkel Lookout

(55) In addition to the responsibilities in clauses 51 and 54, snorkel lookouts are responsible for:

a. Being solely engaged in being the lookout whenever people are in the water unless engaged in an emergency response.
b. Providing appropriate levels of supervision to participants assessed by the snorkelling supervisor as requiring higher levels of supervision.

(56) Snorkel lookouts may also act as the master of a small vessel (under 12m) providing that those duties do not interfere with the provision of adequate supervision or adversely affect the capacity to respond to an emergency.

Snorkeller (Including Undergraduate Students)

(57) All snorkellers are responsible for disclosing to the University any relevant medical condition that may effect that snorkeller's safety (see ‘Fitness to Snorkel’ provisions).

Section 5 - Monitoring, Review and Assurance

(58) As the first line of defence, senior officers will monitor and review operational activities, risks and controls associated with snorkelling and breath-hold diving activities. Monitoring and reviews performed at this level will be facilitated by OHS staff and is generally embedded in the routine processes, procedures and activities of front line operating management.

(59) The Health, Safety and Wellness Division will monitor and review the compliance practices and health and safety management performance across the University to ensure the ongoing effectiveness of the related controls associated with snorkelling and breath-hold diving.

Section 6 - Recording and Reporting

(60) Organisational units must retain WOC plans, including any additional snorkelling plans, for a minimum of seven (7) years after completion of the work.

(61) An assessment of competency must be made for all persons undertaking snorkelling and recorded on the approved form which must be kept by the organisational unit for a minimum of three (3) years after the completion of the work.

(62) A written snorkelling record of persons entering and returning from the water must be made. Where snorkelling is conducted from a vessel independent counts by two persons appointed by the snorkel supervisor must be made before the vessel leaves the site to ensure all persons have returned, or by one (1) person using two independent methods. In the latter case, one of these methods must be an active count such as a role call or signature sheet. A record must be made and kept by the organisational unit for a minimum of one (1) year after the completion of the work.

(63) If an incident occurs, relevant WOC plans, snorkeller registration forms and snorkel records must be attached to the incident report.

Section 7 - Appendix

Definitions, Terms, Acronyms

Terms	Definitions
Breath-hold Diving	Snorkelling where the worker is submerged to an extent where they are unable to breathe for the duration of the dive.
HSW Division	The Health, Safety and Wellness Division of The University of Queensland.
OHS Risk Assessment	May refer to one or multiple OHS risk assessments.
Relevant Legislation	Refers collectively to all laws associated with the work or activity being undertaken, the relevant work health and safety laws of Queensland and those associated with the local jurisdiction where the work is being undertaken. Legislation in this context includes Acts, Regulations, Codes of Practice and relevant standards. E.g. Work Health and Safety Act 2011(Qld), Biosecurity Act 2015 (Cth), Occupational Diving Work Code of Practice 2005 (Qld)
Risk	The possibility that harm (injury, illness or death) might occur when exposed to a hazard.
Senior Officers	The Senior Executives, Executive Deans, Heads of School and Directors of Institutes and major centres and the Directors of central services and administrative divisions.
Sheltered Open Water	A body of water that is not a swimming pool that provides swimming pool-like conditions - no or minimal current, clear visibility of underwater surrounds, minimal wave or sea state. For example, a coral reef lagoon where the tide height is below the reef crest.
Snorkelling	Swimming in any body of water other than a swimming pool using a mask and/or snorkel without the use of other breathing apparatus.
Supervisor	Means the person responsible for day to day supervision of a staff member or other person so designated by the University (see the University of Queensland Enterprise Agreement 2021-2026, or as amended or replaced).
Work Off-campus (WOC)	Commonly known as fieldwork. Work off-campus relates to research, teaching, learning, instruction or other activities, which takes place at locations that are not registered as UQ sites. Work off-campus may include unfamiliar surroundings or uncontrolled environments.
Workers	Staff, students, visitors, volunteers and contractors of The University of Queensland.

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