

JCU DIVING WORK HEALTH AND SAFETY MANAGEMENT FRAMEWORK

Document Contact: WHS Unit

Approved by: TBA

Document Version Number: 22-1

Table of Contents

1	Purpose.....	3
2	Scope	3
3	Diving legislation and how it applies to JCU	4
4	Diving Safety Standard at JCU	8
4.1	Diving WHS Management Framework	8
4.2	JCU Scientific Dive Operations Manual (technical diving standard).....	10
4.3	B&D Sub-Committee.....	10
4.4	Diving Officers – why are they important and what is their main purpose?	11
5	Components of JCU WHS diving safety management system	13
6	Diving Risk Factors – Components from Figure 2	14
6.1	Human Factors - People.....	14
6.2	Workplace Environment Factors - Equipment	18
6.3	Natural Environment Factors - Equipment	20
6.4	Planning, risk analysis and record management	21
6.5	During the Dive.....	24
6.6	Audit and Inspections	24
7	Chain of Authority.....	25
7.1	Overall chain of authority for University diving activities.....	25
7.2	On a dive site.....	25
7.3	In the event of a diving emergency	25
8	Responsibilities	25
8.1	James Cook University	25
8.2	Dean Research Infrastructure	26
8.3	Field Trip Approver	26
8.4	Diving Officer.....	26
	Definitions	27
	Related Documents.....	28
	Administration	28

1 Purpose

The purpose of this document is to describe the components of the JCU Diving Work Health and Safety Management System Framework. The framework also summarises JCU legislative requirements relevant to diving activities and JCU's approach to ensuring compliance with these requirements.

Each component is critical to ensure the safety of persons involved in diving activities. This document demonstrates how each component contributes to providing safe systems of work.

2 Scope

This framework covers Self Contained Underwater Breathing Apparatus (SCUBA) diving and snorkelling activities, regardless of the purpose (i.e. recreational, aquarium, resource management, research and teaching), conducted from JCU owned, hired or chartered boats, during an approved field trip or other land based facilities.

This framework applies to all people who carry out JCU managed diving activities. This includes people who take part in research or a recognised programme of study at the University including undergraduate and postgraduate studies, and collaboration with outside agencies.

This framework does not apply to student recreational clubs.

This framework does not include boating as a diving activity. The JCU Boating Work Health and Safety Management Framework should be referred to for boating activities at JCU.

3 Diving legislation and how it applies to JCU

The Work Health and Safety legislation classifies diving work into three categories:

- Recreational diving;
- High risk diving work; and
- General diving work, which includes;
 - Limited scientific diving work; and
 - Incident diving work.

Snorkelling has two categories:

- Recreational snorkelling; and
- Snorkelling work.

Type	Definition	JCU examples	Legislation & Codes of Practice	Australian Standards
General Diving Work	General diving work means work carried out in or under water while breathing compressed gas, but does not include high risk diving work.	Scientific diving, photographic / film making, aquaculture, marine harvesting, minor work in a bay or inlet or a marina for cleaning, inspecting, maintaining or searching for a vessel or mooring.	<i>Work Health Safety Regulations 2011</i> <i>Occupational Diving Work Code of Practice 2005 (Qld)</i>	<i>AS/NZS 2299.2 Occupational diving operations – Scientific diving</i>
	General Diving Work - <u>Incidental Diving Work</u> Means general diving work that- (a) Is incidental to the conduct of the business or undertaking in which the diving work is carried out; and (b) Involves limited diving; and Is carried out while being accompanied and supervised in the water by a person who has the qualifications or experience as required for general diving work.	This type of work is rarely conducted at JCU. This type of work is <i>not a core function for any JCU staff / students</i>. E.g. an actor undertaking diving during a film shoot	<i>Work Health Safety Regulations 2011</i>	

Type	Definition	JCU examples	Legislation & Codes of Practice	Australian Standards
	General Diving Work – <u>Limited scientific diving</u> means general diving work that— (a) is carried out for the purpose of professional scientific research, natural resource management or scientific research as an educational activity; and (b) involves only limited diving. Limited diving means diving that does not involve any of the following— (a) diving to a depth below 30m; (b) the need for a decompression stop; (c) the use of mechanical lifting equipment or a buoyancy lifting device; (d) diving beneath anything that would require the diver to move sideways before being able to ascend; (e) the use of plant that is powered from the surface; (f) diving for more than 28 days during a period of 6 months.	This category is specific to visiting overseas scientists working in Australia.	<i>Work Health Safety Regulations 2011</i>	

Type	Definition	JCU examples	Legislation & Codes of Practice	Australian Standards
High Risk Diving Work	High risk diving work means work— (a) carried out in or under water or any other liquid while breathing compressed gas; and (b) involving one or more of the following— (i) construction work (including of a minor nature); but does not include minor work carried out in the sea or the waters of a bay or inlet or a marina that involves cleaning, inspecting, maintaining or searching for a vessel or mooring.	This category will be determined by the Diving Officer's as part of the diving activity approval process. In general terms, if a structure needs to be constructed under the water (on SCUBA) it will be classed as 'high risk diving work'. Additional to this, if a 'structure' requires maintenance, this type of work will also be categorised as 'high risk diving work'. E.g. minor maintenance on a pipeline (structure) is classed as high risk diving. Deploying and retrieving instruments will in most cases not be classed as 'high risk'. The instrument, whilst attached to the structure, does not form part of the structure. NOTE: all diving activities will be assessed to determine if the activity needs to be managed as a 'high risk diving activity'.	<i>Work Health Safety Regulations 2011</i> <i>Occupational Diving Work Code of Practice 2005 (Qld)</i>	<i>AS/NZS 2299.1 Occupational diving operations, Part 1: Standard operational practice</i>
Snorkelling Work (not recreational)	Snorkelling involves the use of a mask, fins and a snorkel to explore the underwater environment. Most snorkellers swim at the surface although some will explore below the surface while holding their breath for short periods of time.	Scientific snorkelling	Not specified – general risk management obligations as detailed in the <i>Work Health and Safety Act and Regulations 2011</i>. JCU considers and implements recreational snorkelling controls when managing snorkelling work risks, where practical.	

Type	Definition	JCU examples	Legislation & Codes of Practice	Australian Standards
Recreational Diving and Snorkelling: For the purpose of recreational diving and snorkelling conducted by an external group, JCU only has a responsibility to the group if JCU has management or control over the activity. Management or control over an activity may include: • The provision of access to a place; • Supervision; • Supply of anything; • Advice, demonstrations or training.				
Recreational Diving	Recreational diving means any of the following. Underwater diving for recreation using compressed air, other than diving in a swimming pool or decompression diving— (a) resort diving; (b) diving by a person undertaking training in diving for recreation, whether or not the person is being photographed, filmed or videoed while diving; (c) diving for recreation by a person with a qualification in underwater diving, whether or not the person is being photographed, filmed or videoed while diving.	External groups (i.e. persons who are not JCU staff/students) using OIRS can fall into the classification of recreational divers. This section does not apply to JCU staff / students. Staff / students on field trips at any location or staying at OIRS are required to follow JCU diving and snorkelling requirements for all activities at all times during the JCU approved trip timeframes, including activities conducted outside of official work hours (i.e. diving / snorkelling after the research / teaching is complete – for recreational purposes).	<i>Safety in Recreational Water Activities Regulation 2011</i> <i>Recreational Diving, Recreational Technical Diving and Snorkelling Code of Practice 2018</i>	<i>AS4005.1 -2000 Training and certification of recreational divers</i>
Recreational Snorkelling	Swimming for recreation with the aid of a snorkel, other than snorkelling in a swimming pool.	During field trips, participants may be snorkel for recreational purposes. If a staff/student is on a field trip, snorkelling activities must be conducted in accordance with the JCU Scientific Diving Operations Manual	<i>Safety in Recreational Water Activities Regulation 2011 (does not include snorkelling in a swimming pool)</i> <i>Recreational Diving, Recreational Technical Diving and Snorkelling Code of Practice 2018</i>	
Snorkelling and diving conducted for educational purposes. WHSQ have advised that diving for educational purposes is occupational diving (general diving work).	Diving and snorkelling activities conducted for educational purposes.	Education program activities as part of JCU course fieldwork; in-water activities mainly based at OIRS	<i>As above – refer to general diving work and snorkelling work (not recreational)</i>	N/A

4 Diving Safety Standard at JCU

JCU has developed a framework document and a technical standard for diving safety at JCU.

4.1 Diving WHS Management Framework

This framework shall be maintained as part of the JCU Work Health and Safety Management System by the Work Health and Safety Unit (WHS Unit) in consultation with the Boating and Diving Office.

Changes to this framework are required to be endorsed by the Work Health and Safety Advisory Committee (WHSAC) and approved by the Chair of WHSAC.

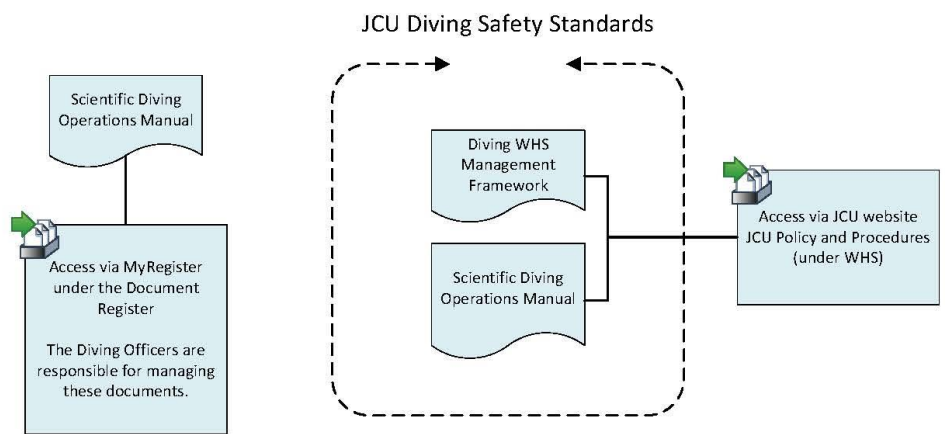
To ensure the Diving Safety Management System is effective, this framework will be reviewed every three years.

Reviews may be required outside the nominated three-year cyclic review period, due to:

- Legislative changes;
- System failures reported or identified during incident investigations;
- Suggestions from employees directly or via consultation arrangements; or
- Industry changes.

Figure 1 details the management of the diving safety management documents.

Management of Diving Safety Standards



How are changes to JCU Diving Safety Standards managed?

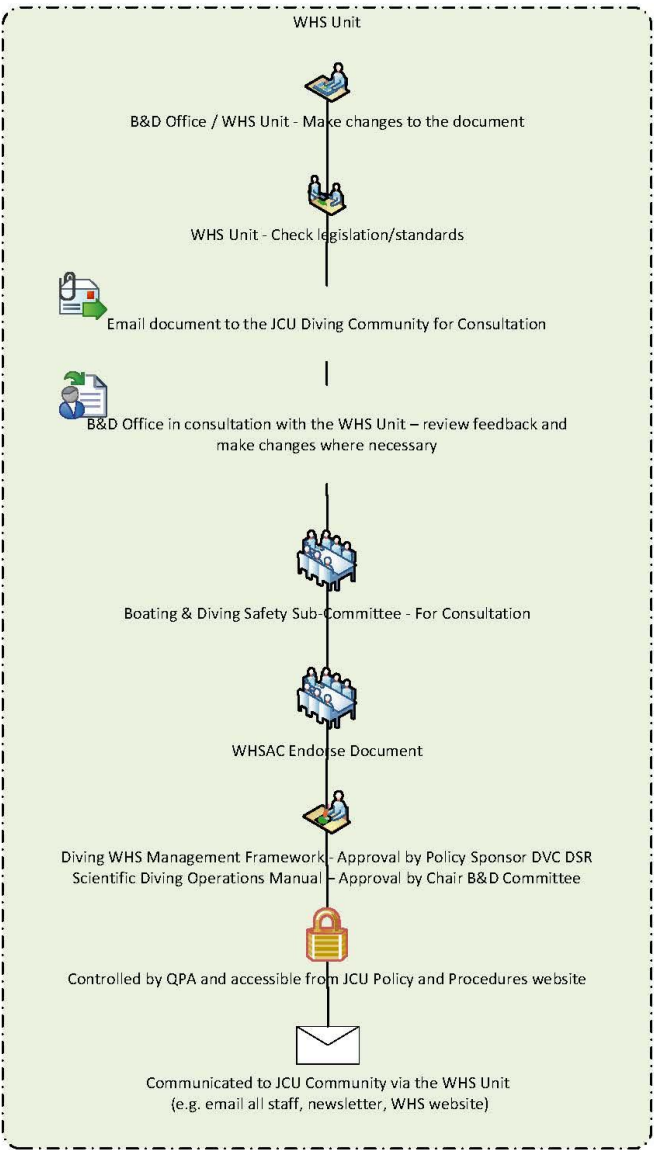


Figure 1 Management of Diving WHS Management Framework and Operations Manual

4.2 JCU Scientific Dive Operations Manual (technical diving standard)

In accordance with *AS/NZS 2299.2:2002 Occupational diving operations Part 2: Scientific diving*, JCU has developed a Scientific Diving Operations Manual.

The Manual has been developed by the University Diving Officers in consultation with the JCU Community.

The Manual is reviewed every two years or as required due to changes to operations / legislation / industry standards.

The Manual is endorsed by the Boating and Diving Sub-Committee (B&D Sub-Committee) and noted by WHSAC. The Manual is approved by the Chair of the B&D Sub-Committee following endorsement processes.

The manual covers technical requirements for:

- Medical fitness to dive;
- Competency;
- Risk management;
- Dive Supervision;
- Dive planning;
- Dive safety log – Record of Dive;
- Diving equipment and environment;
- Specific risks;
- Divers and vessel interactions;
- Equipment;
- Compressed air cylinders (filling, testing, maintenance);
- Air quality;
- Decompression management;
- Emergency plans; and
- Rescue procedures.

4.3 B&D Sub-Committee

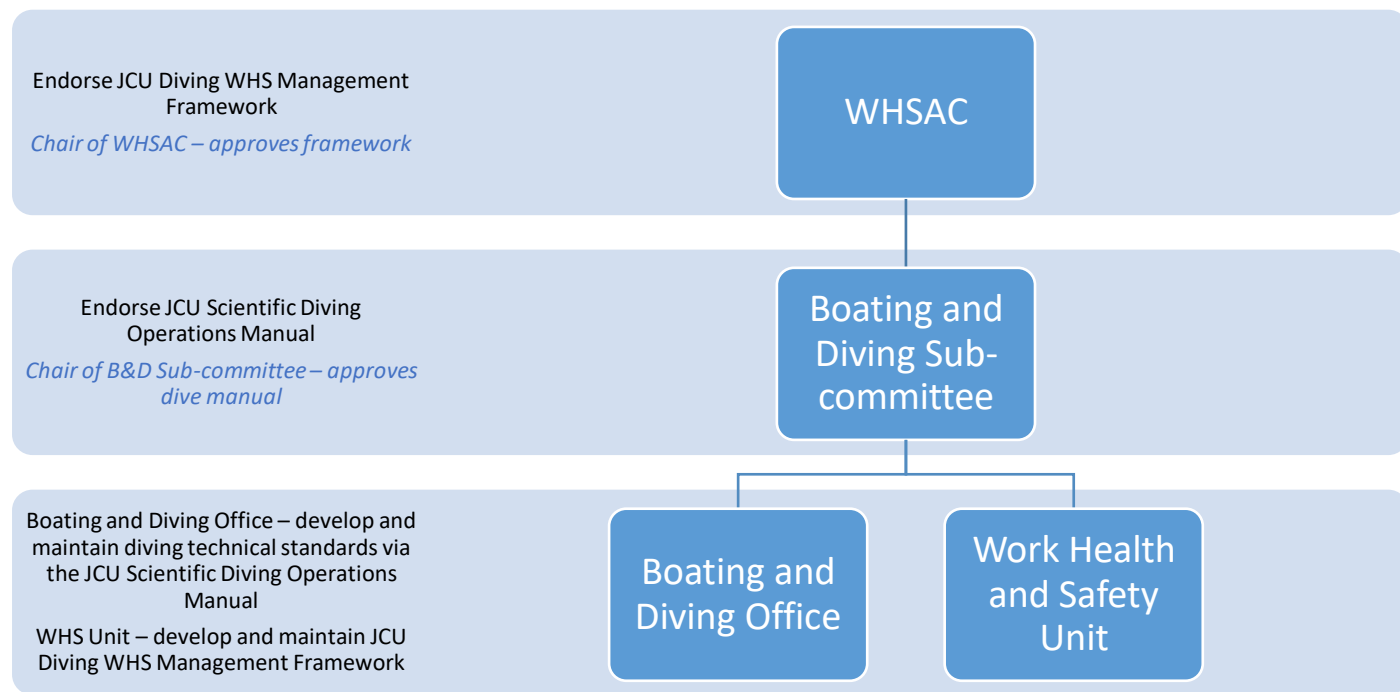
JCU has established an University Boating and Diving Safety Sub-Committee of the Work Health and Safety Advisory Committee (WHSAC).

The Sub-Committee is a consultative committee to promote co-operation, improve communication, information sharing and understanding between the Boating and Diving Office and key stakeholders within the JCU community. This enhances transparency, accountability and trust within the University.

The Sub-Committee contributes an academic perspective to inform the development and review of boating and diving frameworks, procedures, processes and priorities.

The Sub-Committee provides the opportunity for constructive consultation on boating and diving issues such as legislative, industry and technology changes to ensure improvements are practical for the organisation and the user.

The WHS Unit is responsible for administering the sub-committee. Refer to the B&D Sub-Committee terms of reference for more details.



4.4 Diving Officers – why are they important and what is their main purpose?

The nature of diving at the University is very diverse. The skill level and experience of the divers varies greatly.

For these reasons, the management of diving at the University is overseen by appointed Diving Officers. The Diving Officers shall have a high level of qualification and experience in scientific diving activities. The qualification and experience of JCU Diving Officers is detailed in the Scientific Diving Operations Manual.

The University follows *AS/NZS2299.2 Occupational diving operations – Scientific diving requirements* to appoint a Diving Officer for oversight and administration of diving at the University. The Diving Officers ensure the trips are conducted in accordance with JCU minimum standards, legislative and industry requirements. The Diving Officers are also responsible for reviewing the Scientific Diving Operations Manual to ensure it meets legislative requirements and working with the Boating and Diving Sub-Committee to establish workable solutions.

The Diving Officers are specialist advisors to the University.

The Diving Officers technical responsibilities are detailed in the Scientific Diving Operations Manual.

The Diving Officers act as the official representatives for JCU in matters concerning the scientific dive program.

The Diving Officers are responsible for establishing / approving training protocols or standards through which a person can satisfy the requirements of JCU Scientific Diving Operations Manual.

The Diving Officers can issue and revoke diving activity authorisations.

The Diving Officers establish the criteria for diving equipment selection and use.

The Diving Officers are responsible for approving diving activities.

5 Components of JCU WHS diving safety management system

As with every safety management system, the Diving Safety Management System at JCU involves a number of key components. As demonstrated in figure 2, ensuring safe diving activities requires all of the components of the system to be working effectively. JCU Diving WHS Management System follow the principles provided by *AS/NZS ISO 45001:2018 Occupational health and safety management systems*. By adopting this framework, JCU can demonstrate continuous improvement, fulfilment of legal and other requirements and achievement of objectives:

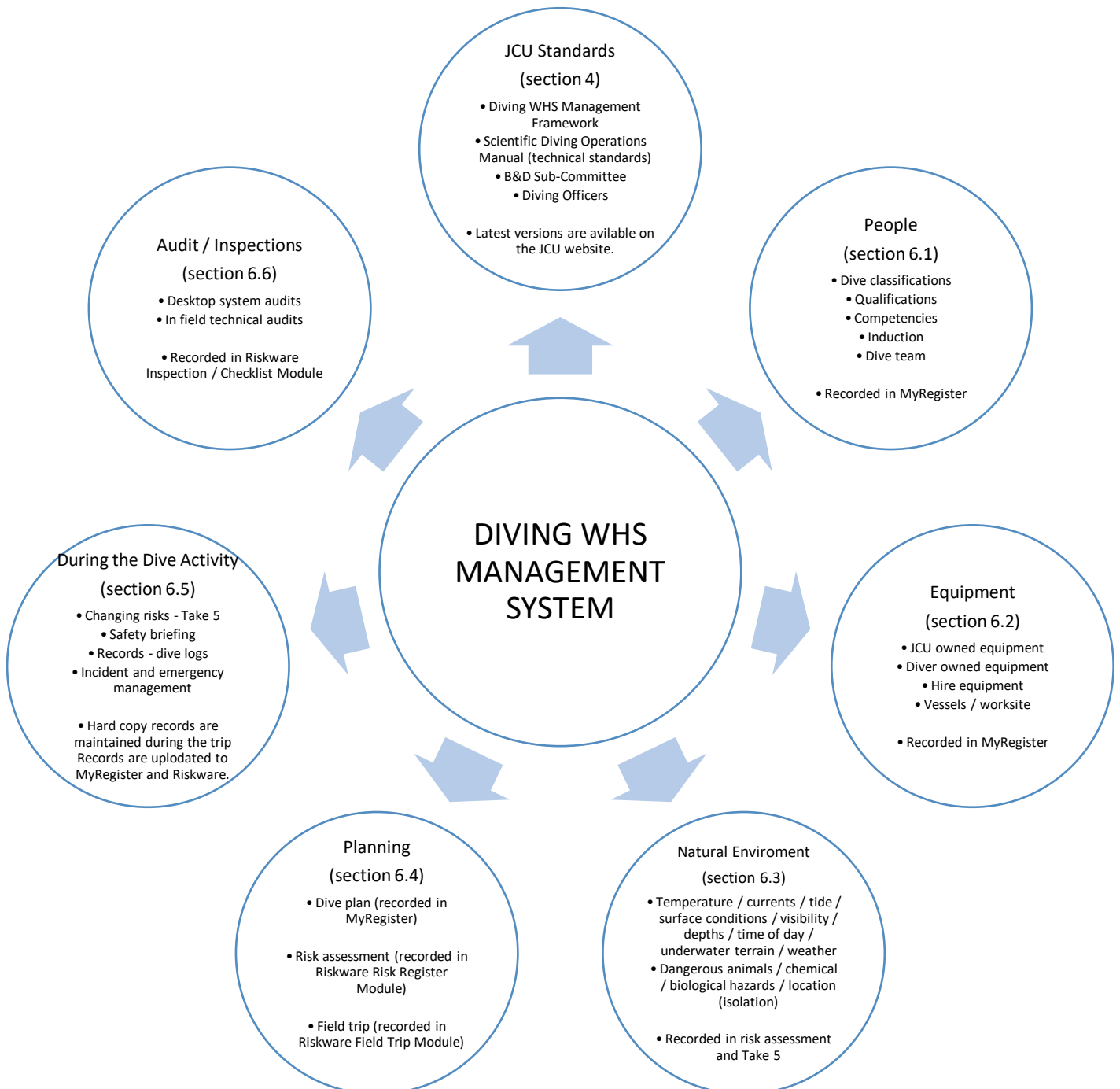


Figure 2 Components of the diving WHS management system

6 Diving Risk Factors – Components from Figure 2

6.1 Human Factors - People

All staff, students, contractors, visitors and volunteers who participate in SCUBA diving operations controlled by James Cook University must register and be approved for diving by a JCU Diving Officer. The registration process allows JCU to manage the human factors such as qualifications, competence and medical fitness for diving work.

The majority of the diving work conducted at JCU falls under the category of General Diving Work. Refer to section 3 for further information regarding General Diving Work.

Therefore it is important that there is a good understanding of the minimum legislative **qualifications** for this type of work.

6.1.1 JCU's interpretation of the minimum 'qualification' requirements for General Diving Work **Section 171(a) of the Work Health and Safety Regulation 2011:**

- a) Requirement 171(a)(i):
a statement of attainment for a specified VET course for general diving work that includes the type of general diving work to be carried out by the person;

The legislation does not specify any VET courses for general diving work.

- b) Requirement 171 (a) (ii):
a certificate for general diving work, issued by a training organisation, that mentions the subject areas covered in AS/NZS 4005.2:2000 (Training and certification of—recreational divers—Recreational SCUBA dive supervisor);

The Australian Standard named in the legislation has been withdrawn by Standards Australia. Even though it has been withdrawn, it is still referred to in the WHS Regulations and therefore is still applicable.

Workplace Health and Safety Queensland's Diving Compliance Unit has confirmed that they will accept a VET accredited Perform Diver Rescues qualification as a competency option for Work Health and Safety Regulation 2011 section 171(a)(i) QLD.

Assessing the diver against the requirements of section 171(b) can be undertaken by the University.

The Scientific Diving Operations Manual provides details of the qualifications and internal training / competency assessments required to conduct General Diving Work based on advice received from Workplace Health and Safety Queensland.

JCU has considered the advice from WHSQ and determined that 3 classifications levels are required for JCU due to the nature of diving activities.

6.1.2 [JCU classifications of diving personnel at JCU](#)

Every JCU diver will fall into one of three classifications:

- Scientific Diver;
- Restricted Diver; and
- Student Diver.

Scientific, restricted and student divers are classifications designed to meet the legislative requirements of competence for **general diving work**.

Although all classifications meet the requirements for general diving work under the legislation, the intent of further classifying divers is to add an extra level of protection for less experienced and less qualified divers.

Restricted and student divers have additional controls applied. The additional controls include supervision and restrictions related to dive conditions (refer to the Scientific Diving Operations Manual for details).

Restricted and student divers are also unable to perform the role of Dive Coordinator, Standby Diver or Dive Leader.

Visiting scientific divers will be classified as either a scientific or restricted diver, by the JCU Diving Officer, based on their qualifications and experience.

JCU does not provide accredited dive training qualifications. All qualifications must be completed by external registered training organisations.

JCU has an internal process to confirm diver competence and verify qualifications. This process is conducted by the Diving Officers.

6.1.3 [JCU Diving Related Roles](#)

JCU uses the roles as defined in AS2299.2. When planning a dive trip, the Field Trip Leader is required to nominate dive teams in the Diver Register. The Diving Officer reviews each dive trip to ensure the dive teams meet the requirements set out in the Scientific Diving Operations Manual.

The diving roles JCU uses include:

- **Boating and Diving Supervisor:** University-wide oversight of boating and diving activities and the boating and diving safety management system.
- **Diving Officer:** University-wide oversight of diving activities, which includes snorkelling.
- **Dive Coordinator:** Responsible for the overall safety of a dive team.

- **Diver Leader:** Appointed by the Dive Coordinator, the Dive Leader is responsible for directing divers while underwater.
- **Diver:** Any person completing scientific activities using SCUBA.
- **Standby Diver (an in-water Standby Diver is generally known as a Buddy Diver):** A diver in/out of the water who is fully dressed and equipped and ready to render emergency assistance to a diver.
- **Diver's Attendant:** The role of a Diver's Attendant is to provide assistance to the Dive Coordinator at the surface of the dive site for the safe conduct of the diving operation.

6.1.3.1 Who can carry out the different dive roles?

		Dive Roles			
		Dive Coordinator	Dive Leader	Standby Diver	Diver's Attendant
Diver Classification (based on qualifications and experience)	Scientific Diver	✓	✓	✓	✓
	Restricted Scientific Diver	x	x	x	✓

Note: the role of Dive Coordinator carries extra responsibility in dive management and emergency control, and as such, any person approved to act in this role will first be assessed as competent to do so by the Diving Officer. Roles are determined on a case-by-case basis, and classification as a Scientific Diver does not automatically confirm a diver as having the necessary skills to undertake the role of Dive Coordinator. This applies to all roles, in that the diver's competency assessment is essential prior to undertaking the duties required.

6.1.4 Human Factors Control Measures in the Safety Management System

The following is an overview of the types of diving safety controls directly related to 'people' that form the JCU Diving Safety Management System.

Specific parameters for the controls are detailed in the Scientific Diving Operations Manual.

Human factors controls listed below are recorded in the MyRegister.

6.1.4.1 Competence

- Minimum levels of **experience** for the task being conducted;
- Minimum **qualifications** for the type of diving and the role in the dive team;

- Verification of **competency** by Diving Officer.

6.1.4.2 *Medical fitness*

- Minimum medical fitness for the role being carried out as determined by a medical practitioner;
- Fitness to work **on the day** of the dive.

6.1.4.3 *JCU induction and training*

- JCU diving induction completed prior to conducting JCU related diving activities;
- The JCU induction covers the Scientific Diving Operations Manual requirements.

6.1.4.4 *Dive team composition*

- Dive team composition allow the dive activity control measures to be enacted, i.e. the divers need to be competent and fit to conduct their part of the activity.

6.1.5 How is the diver's competence measured?

The University uses MyRegister to record diver qualifications, fitness, experience and competence.

Regardless of qualifications held, the Diving Officer may require demonstration of competency in both practical and theory elements.

The Diving Officers are the only authorised people to allow a diver to be involved in dive activities for the University. The Diving Officers have been given this authority due to their qualifications, experience and knowledge of the University diving activities.

The Diving Officer will determine the type of competency testing requirements on a case by case basis. Diving competence can be proven in a variety of ways. Competence needs to be relevant to the type of diving activity that the diver will be involved in for the University.

6.2 Workplace Environment Factors - Equipment

Diving activities rely heavily on equipment to keep people safe while working underwater. Equipment selection, use and maintenance are key risk management considerations in diving.

The Scientific Diving Operations Manual details the technical requirements for equipment used for diving activities.

The following provides an overview of important equipment factors and controls.

6.2.1 What is reasonably practicable in controlling diving equipment?

- Pre-dive equipment checks;
- Calibration of equipment;
- Maintenance in accordance with manufacturing instructions;
- Keeping equipment logs with built in reminders for servicing / calibration / replacement / testing;
- Setting a minimum JCU standard for diving equipment used at JCU;
- Keeping abreast of equipment recall and safety alerts;
- Competence in the selection and safe use of equipment; and
- Equipment meets accepted standards (e.g. Australian Standards, International Standards).

Examples of diving equipment:

- Wetsuit;
- Diving mask;
- Fins;
- Scuba tank;
- Regulator;
- Depth gauge, submersible pressure gauge, compass;
- Buoyancy compensator;
- Dive computers;
- Dive watch;
- Dive knife;
- Snorkel.

6.2.2 JCU Workplace Environment Factors Controls

Equipment is recorded in the MyRegister (including servicing, automatic expiry notification, etc.).

The Diving Officers verify diver's competence for the equipment being used.

Equipment is required to be added to the MyRegister dive trip, this gives the Diving Officer an opportunity to confirm that the equipment is suitable for the activities and expected conditions and the equipment meets the correct standards.

Divers receive training on selection, inspection and safe use of equipment as part of their diving qualifications.

Equipment safety recalls are monitored by the Boating and Diving Office and notifications posted on the MyRegister where relevant. Individual divers are contacted directly where recall notices specifically affect them.

<https://www.productsafety.gov.au/>

6.2.2.1 JCU owned equipment

JCU owned equipment is managed by the Boating and Diving Office.

All diving equipment records are recorded in the MyRegister.

All JCU owned equipment is maintained in accordance with manufacturer's instruction, JCU Scientific Diving Operations Manual, Australian and other relevant Standards.

The Boating and Diving Office is responsible for ensuring the equipment is fully maintained and working correctly at the point of handover to the diver.

6.2.2.2 Diver owned equipment

Diver owned equipment is managed by the equipment owner.

The equipment must meet the requirements of the JCU Scientific Diving Operations Manual.

Records must be provided to verify the condition and maintenance of the equipment.

All equipment records are maintained in the MyRegister.

6.2.2.3 Hired equipment

Hired equipment must meet the requirements of the JCU Scientific Diving Operations Manual.

It is the responsibility of the Diver and Dive Coordinator to ensure that hired equipment meets the requirements.

Associated records can be included in the MyRegister.

6.3 Natural Environment Factors - Equipment

As diving generally takes place in the natural environment there are a number of risks that have the potential to change regularly. The natural environment risks need to be assessed during the planning phase (risk assessment completed in Riskware) and then reassessed immediately prior to the diving activity using the Take 5 Checklist. Risks must also be considered throughout the activity. Refer to the Scientific Diving Operations Manual for details on natural environment risks.

Natural environmental factors include but are not limited to:

- Water temperature;
- Current and tide;
- Visibility;
- Depths;
- Time of day;
- Underwater terrain;
- Surface conditions – waves and surge;
- Weather;
- Isolation;
- Chemical and biological hazards;
- Dangerous marine animals such as jellyfish, sharks and crocodiles.

6.4 Planning, risk analysis and record management

6.4.1 JCU Scientific Diving Operations Manual

The procedures in the Scientific Diving Operations Manual are designed to eliminate or control general diving risks, and as such they are the primary risk management tool for scientific diving activities.

All JCU divers and team members who have assigned duties within a dive team are inducted to the Manual to ensure appropriate knowledge of and adherence to procedures.

Procedures and planning to control specific task-related risks that are not covered in the manual must be assessed, and appropriate controls identified in a separate risk assessment.

6.4.2 Riskware Field Trip Module

The Riskware field trip module is required to be completed for all diving field trips. Refer to WHS-PRO-015 Field Trip Procedure for details. The Field Trip Leader's Supervisor is the person responsible for approving the overall field trip. The Field Trip Leader's Supervisor should not approve a field trip if the Boating and Diving Officer rejects the trip in MyRegister.

6.4.3 Riskware Risk Assessment Module

A field trip risk assessment including the diving risks is required to be completed as part of the planning phase of the trip. This risk assessment should be recorded in the Riskware Risk Register Module. The risk assessment is required to be attached to the Field Trip Module and to the trip in MyRegister.

Refer to the Scientific Diving Operations Manual for details.

Riskware WHS Risk Assessment(s) are required to be attached to the field trip and are approved as part of the field trip approval.

The WHS Unit are responsible for the administration of the Riskware WHS Risk Register Module.

6.4.4 MyRegister

Administration of the register is managed by the Boating and Diving Office. Every dive trip must be entered into MyRegister and be approved prior to commencement of the trip. MyRegister captures all records relevant to diving and boating. The Boating and Diving Officer's review and approve trips using MyRegister.

A summary of the types of information included in MyRegister are:

Key Information	Why is it important to JCU?
Destination, dates, times and location	Allows JCU to monitor staff working away from campus to ensure their safety.
Emergency management plan	Trip specific emergency plan.
Diving and boating specific activities	Activities identified allowing the Diving Officer and Supervisor to assess the risks with knowledge of the activities being carried out.
Dive team (roles designated)	Planning tool for the Dive Coordinator. Allows the Diving Officer to assess if the dive team meet the requirements of the JCU Scientific Diving Operations Manual.
Participant details • Medical fitness • Qualifications • Experience • Emergency • Induction • Currency	Allows the collection of medical information, qualifications, experience and emergency contact information. Automatically alerts of expired certificates. Allows easy assessment of dive teams by the Diving Officer.
Boat information	All compliance documents for vessels are stored in this central location. Automatic alerts for expired vessels.
Dive profiles	Allows the Dive Coordinator to plan the dive profiles and allows the Diving Officer to assess the profiles against JCU requirements. Dive logs are scanned and attached post trip.
Dive equipment	Central location for recording dive equipment compliance details and servicing records. Automatic alerts for expired equipment.

6.4.5 How does JCU manage safety risks at the dive site

JCU recognises that the hazards and risks identified in planning risk assessments conducted prior to the trip in Riskware may change during the trip. For this reason, the Dive Coordinator in conjunction with the Dive Team, is responsible for completing a risk assessment (i.e. Take 5 Checklist) as part of the Dive Briefing prior to commencing the dive. The Scientific Diving Operations Manual provides details of this process, including templates.

6.4.6 Approval of diving trips:

Every trip that involves diving must be approved by a JCU Diving Officer for the relevant area prior to commencement.

The diving trip must be linked to a field trip in Riskware. The Field Trip Leader's Supervisor is responsible for approving the overall trip however, does not have the authority to approve a dive activity that been rejected (not approved) by the Diving Officer. Refer to the Field trip procedure for further details.

Diving activity approval by a JCU Diving Officer means, the dive plan meets the requirements of the JCU Scientific Diving Operations Manual and legislative requirements. Approval requires the Diving Officer to confirm the following:

- Equipment is up to date with maintenance requirements and is appropriate for the proposed activities;
- Diver classifications are correct and current;
- Dive team configuration is suitable for the proposed diving activities;
- Dive plans meet the requirements of the DCIEM dive tables;
- Emergency plan is correct for the location and the diving activities;
- Communication plan is suitable for the diving activities;
- Risk assessments cover all the proposed diving activities and the controls are practicable and suitable for the level of risk.

Where dive controls do not meet the requirements of the JCU Scientific Diving Operations Manual, the Diving Officer is responsible for assessing the dive against legislation and relevant standards and providing advice to the University on the correct risk controls and the residual risk level.

A trip shall not commence unless approval has been granted formally on MyRegister by a Diving Officer.

6.5 During the Dive

The Dive Coordinator is responsible for ensuring the dive plan is implemented on site. Risks and hazards may have changed since the development of the plan therefore a risk assessment must be completed at the site immediately prior to the dive. The Dive Coordinator is responsible for completing this risk assessment with the dive team and providing a safety briefing to the team on the controls and plan for the day.

Where the plan is modified due to changing risks, the Dive Coordinator is required to record the changes on the Take 5 checklist (refer to the JCU Scientific Diving Operations Manual) or the dive log as appropriate.

JCU processes for approving Divers to act as Dive Coordinators is detailed in the Scientific Diving Operations Manual. This process allows JCU to have confidence that the Dive Coordinators are competent to make changes to the risk assessment and dive plan as required to suit the conditions at the dive site, the people and equipment involved.

During a dive trip, the decision to dive is that of the Diver. The ultimate responsibility for safety rests with the individual Diver. The Diver will not receive a penalty if he/she believes for any reasons (e.g., fitness for work, environmental conditions) that it is unsafe to dive.

Hard copy records that are completed during a dive are required to be uploaded to MyRegister by the Field Trip Leader on completion of the trip.

6.6 Audit and Inspections

To ensure the diving safety management system operates in an effective and efficient manner, audits will be conducted. The audit will assess whether trips are being conducted in accordance with JCU standards.

Audit tools are maintained in the Riskware Audit Register. The audit tools are developed by the WHS Unit in conjunction with the Boating and Diving Office.

Audits shall assess:

- Diving WHS Management Framework (desktop audit):
 - Boating and Diving Sub-Committee functions meet the Terms of Reference and the needs of the University;
 - Diving Officer and other key roles and responsibilities are being carried out in accordance with this framework;
 - Diving Framework and Scientific Diving Operations Manual are being reviewed and managed as detailed in this framework.
- JCU dive trips (desktop and in the field audits):
 - Desktop (reviewing Riskware Field Trip Module, Riskware Risk Assessments and MyRegister);
 - In the field (reviewing the dive team composition, suitability of equipment in use, the competence of divers, the safety briefing and take 5 process, etc.).
- Equipment servicing records will be periodically reviewed to confirm they are being carried out in accordance with the manufacturer's instructions.

7 Chain of Authority

7.1 Overall chain of authority for University diving activities

- The Deputy Vice Chancellor, Division of Services and Resources, approves this Diving Procedure.
- The Chair of Boating and Diving Sub-Committee approves the JCU Scientific Diving Operations Manual.
- The Diving Officer approves the diving activities.
- The Field Trip Leader's Supervisor approves the field trip (NOTE: both the trip and diving activity approval are required before the trip can proceed).

7.2 On a dive site

- The Vessel Master has responsibility for the overall safety of the vessel and its occupants.
- When divers are in the water, the Dive Coordinator is responsible for managing the diving operation in coordination with the Vessel Master.
- The Dive Leader is responsible for their dive team in-water.

7.3 In the event of a diving emergency

- The Vessel Master has responsibility for the overall safety of the vessel and its occupants.
- The Dive Coordinator is responsible for managing the initial emergency response in coordination with the Vessel Master.
- Emergency Services will take over control of the emergency once they are able.
- The JCU Critical Incident Management team will take over the JCU incident management once Emergency Services have managed the initial response.

NOTE: If the Dive Coordinator is unable to respond (e.g. the Dive Coordinator is the injured person) the person with highest level of diving experience / qualifications will automatically be responsible for working with the Vessel Master to enact the emergency response plan.

NOTE: Boating emergencies are under the responsibility and authority of the Vessel Master.

8 Responsibilities

8.1 James Cook University

In accordance with the Work Health and Safety Act 2011 (the Act), the University as a 'Person Conducting A Business Or Undertaking' (PCBU), has a primary duty of care to ensure workers and others are not exposed to a risk to their health and safety when undertaking diving activities.

A primary duty of care is owed by the University when it:

- Directs or influences work carried out by a worker;
- Engages or causes to engage a worker to carry out work; or
- Has management or control of a workplace.

JCU shall:

- Establish an effective administrative system for the management and control of diving;
- Have and maintain a current Scientific Diving Operations Manual;
- Delegate to the Diving Officer, authority and control for all technical aspects diving; and
- Ensure that adequate financial and material support is available to undertake diving operations in accordance with JCU Diving Safety Management System and legislative standards.

8.2 Dean Research Infrastructure

The Dean Research Infrastructure responsibilities include:

- Overseeing the Diving Safety Management System;
- Appointing Diving Officer's in line with the management system;
- Understanding the hazards, risks and controls relating to diving (this means a good working knowledge of diving, but need not necessarily be in-date with personal training);
- Providing financial and material support to ensure the Diving Safety Management System can be implemented as per JCU and legislative standards; and
- Ensuring that there is never any doubt about the chain of command.

8.3 Field Trip Approver

Approvers of field trips that involve diving work responsibilities include:

- Approving the trip as per WHS-PRO-015 Field Trip Procedure;
- Understanding the JCU Diving Safety Management System; and
- Specific to the diving activities – ensuring that a University Diving Officer has reviewed the dive activities and has approved the proposed controls (i.e. the dive plan, diving competencies, dive team, diving components of the risk assessment).

8.4 Diving Officer

Detailed diving responsibilities can be found in the JCU Scientific Diving Operations Manual.

Additional responsibilities that relate to the content of this procedure include:

- Carrying out any tasks as determined by the Boating and Diving Sub-Committee;
- Keeping up to date with current developments in regulation of occupational diving as well as diving technology and safe practice in diving;
- Reviewing and updating the JCU Scientific Diving Operations Manual and associated processes when changes occur to legislation or industry standards in accordance with the process detailed in Section 3.3.2 of this document; and
- Serve as a member of the Boating and Diving Sub-Committee.

To ensure this role can achieve the requirements of the Diving Safety Management System that Diving Officer has:

- The power to restrict, prohibit or suspend any diving operations, program or practice which he/she considers unsafe; and
- The power to require such additional safety practices, procedures or equipment as he/she thinks necessary in any diving operation.

Definitions

Term	Definition
Boating and Diving Officer	The person appointed by the Dean Research Infrastructure whom is responsible to oversee all diving activities at James Cook University.
Dive / Diving	An operation that involves the complete or partial submergence of a person below the surface of the water such that their ability to breathe atmospheric air is restricted. Diving can also include other methods outside of aquatic environments, such as exposure to pressure through hyperbaric systems - for example, recompression chambers.
Dive Coordinator	Nominated leader for the operation of dive teams in the field. The Dive Coordinator will direct the operations of diving work at the dive site, as per the dive plan.
Dive Attendant	The role of a Diver's Attendant is to provide assistance to the Dive Coordinator at the surface of the dive site for the safe conduct of the diving operation.
Diver	A person diving as part of his / her work.
Dive Register (MyRegister)	An electronic register containing the following details: Training, qualifications and experience of divers, relevant to the type of diving work undertaken; Written evidence of relevant competence to undertake or supervise diving work; Certificates of medical fitness; and Diving related plant and equipment records.
Boating and Diving Office	The unit of JCU which oversees diving operations and management of boats utilised by JCU to undertake JCU boating activities. The Boating and Diving Office is comprised of Boating and Diving Officers, delegated Diving Officers or Boating Officers (e.g. Orpheus Island Research Station).
Diving Officer	The person appointed by the University that is responsible to oversee any diving activities conducted as part of James Cook University operations. May undertake a dual role of Boating & Diving Officer.
Lower risk conditions	LOWER RISK Conditions are defined in the JCU Scientific Diving Operations Manual.
Recreational Water Activity	A recreational water activity is an activity carried out— (a) for the purposes of recreation; and (b) on, in or under waters. <i>Examples of water activity—</i> diving, snorkelling <i>Note—</i> The <i>Safety in Recreational Water Activities Act 2011</i> deals with recreational water activities only in the context of them being provided by a person in the conduct of a business or undertaking and under the management or control of the person.
Provision of recreational water activity	Summarised from the <i>Safety in Recreational Water Activities Act 2011</i> Section 8 Meaning of provision of recreational water activity A business provides a recreational water activity if the recreational water activity is provided under the management or control of the person. The provision of recreational water activity includes any of the following done as part of the management or control of the provided activity— (a) the provision of access to a place;

Term	Definition
	(b) supervision; (c) supply of anything; (d) advice, demonstrations or training. <i>Example – Classed as a Recreational Water Activity:</i> <i>A commercial diving business that provides recreational diving trips to the Great Barrier Reef with all necessary training, equipment and supervision</i> <i>Example – Not Classed as a Recreational Water Activity</i> <i>A retail business selling fins and snorkelling masks and not providing any of the above (supervision, access to a place) - is not a business providing recreational water activities.</i> A business providing recreational water activities does not provide them to a person only because the person is a worker carrying out work in the business or undertaking.

Related Documents

JCU Scientific Diving Operations Manual Version 2020

JCU Critical Incident Policy

Work Health and Safety Act 2011

Work Health and Safety Regulation 2011

Occupational Diving Work Code of Practice 2005

Recreational Diving, Recreational Technical Diving and Snorkelling Code of Practice 2011

Standards Australia AS2299.2: 2002 Part 2 – Scientific Diving

Administration

NOTE: Printed copies of this framework are uncontrolled, and currency can only be assured at the time of printing.

Approval Details

Policy Domain	Corporate Governance
Policy Sub-domain	WHS Governance
Policy Custodian	Vice Chancellor
Approval Authority	Work Health and Safety Committee
Date for next Major Review	05/05/2027

Revision History

Version	Approval date	Implementation date	Details	Author

22-1	05/05/2022	06/05/2022	Initial development of the JCU Diving WHS Management Framework.	Principal Technical Advisor, WHS Unit and the B&D Office
------	------------	------------	---	--