

March 2024



PROJECT BRIEF

Canungra Emergency Research and Educational Facility

Presented by

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Background Information

Natural disasters are a perpetual unpredictable threat, destroying lives and property globally. In the Asia Pacific region, impacts from climatic disasters cause massive human casualties, comprehensive infrastructure destruction, ecosystem impacts, and huge financial losses. Indeed, initial NSW flooding reports (Daily Telegraph, 4/6/22) recorded 83 flood-related rescues – with significantly more rain (and rescues) to come. One woman was “clinging to the tree ... for an hour ... when rescue workers arrived about 9 pm on Saturday night.” “The sad reality is bushfire incidents are increasing in intensity, and the social and financial costs are spiralling out of control.” “A 2016 Climate Council report stated that bushfires currently cost the NSW region around 100 million dollars annually, and this is forecast to rise to \$800 million by 2050.”

The frequency and intensity of natural disasters are increasing. According to the UN Office for Disaster Risk Reduction[1], between 1980 and 1999 there were 4,212 natural disasters worldwide, whilst, between 2000 to 2019, there were 7,348, close to double. Of the top ten countries by occurrence in this period, seven were in the Asia/Pacific region, with approximately 367 disaster events occurring worldwide per year.

[1] Reference for the above figures is the UN Office for Disaster Risk Reduction Report – “The Human Cost of Disasters – An Overview of the Last 20 Years 2000–2019”
<https://www.undrr.org/publication/human-cost-disasters-overview-last-20-years-2000-2019>



First image :Floods in Maryborough, Queensland, Australia, February 2022. Photo credit: [QFES](#)

Second Image:
A house burning in Lake Conjola, New South Wales, on New Year's Eve, January 2020. Photo credit: Matthew Abbott for [The New York Times](#)

Some Recent Australian Disasters

Category	Eastern Australia Flood 2022	Bush Fire 2019 - 2022	Tropical Cyclone Debbie 2017
Lives Lost	22	34	14
Property Lost	15k+ [2]	10k+	2,300 [6]
Wildlife Lost and/or rescue	Rescued 620 [3]	Lost 3b [5]	Lost - Damages impacted the Great Barrier Reef [7]
Damage Bill	AUD 2.5b+ [4]	AUD 103b+	AUD 3.5b+

[2] Source: The Guardian

[3] Source: ABC News

[4] Source: OLD Gov

[5] Source: WWF Au

[6] Source: Cyclone Debbie Review

[7] Source: WWF Au

Other sources: Wikipedia

Australians can therefore expect disasters to become part of our normality. Additionally, man-made events such as chemical releases, fires, explosions and transportation incidents still occur regularly. Effective, capable emergency response is needed, to minimise human impacts and physical damage arising from these occurrences.

The effectiveness of disaster response and recovery management is determined by the expertise of deployed personnel and available resources. The Royal Commission into National Natural Disaster Arrangements Report (Royal Commission report of October 2020) clearly articulates the need for robust, multi-skilled emergency response personnel who work collaboratively with an agile approach, regardless of organisational origin.

To create multi-skilled emergency response professionals and first responders (i.e. firefighters), requires completion of Certificate III in Public Safety (Firefighting and Emergency Operations training). Emergency Services Officers (ESO) in the Mining and Resources industry require Certificate III in Emergency Response and Rescue and Certificate IV in Healthcare to complete their training.

Excellent though these training and education programs are, they lack practical hands-on experiences in dealing with rapidly evolving, high-risk situations, like embankments and cliff rescues, fast-moving/dangerous water situations, helicopter evacuations, and rescuing individuals from collapsed structures (buildings/tunnels), and submerged vehicles. Currently available existent training facilities, provide their training in relatively benign, controlled environments, for example inside sheds and warehouses.

There is a lack of:

- A facility that offers close to real-life scenarios (e.g., submerged vehicles, collapsed tunnels, air rescues under extreme weather conditions).
- A facility that allows students to experience multiple terrain and weather situations, including simulated storms and high winds.
- A dedicated helicopter rescue simulation environment wherein students can practice activities such as crewman (including winching and drop zone), payload, patient packaging and care.
- A facility that, via its realism, promotes real-time risk assessment and response as demanded by actual field conditions.



Enter the proposed Canungra Emergency Response and Education Facility

This document seeks funding to advance CEREF. The CEREF training facility will provide emergency responder trainees with realistic, effective training and skills to identify and mitigate risks, contain damage and minimise public risk exposure. CEREF will drive successful operational, community and national outcomes by enhancing the capacity of first responders and others to operate in challenging rescue scenarios and constraints imposed by weather and equipment.

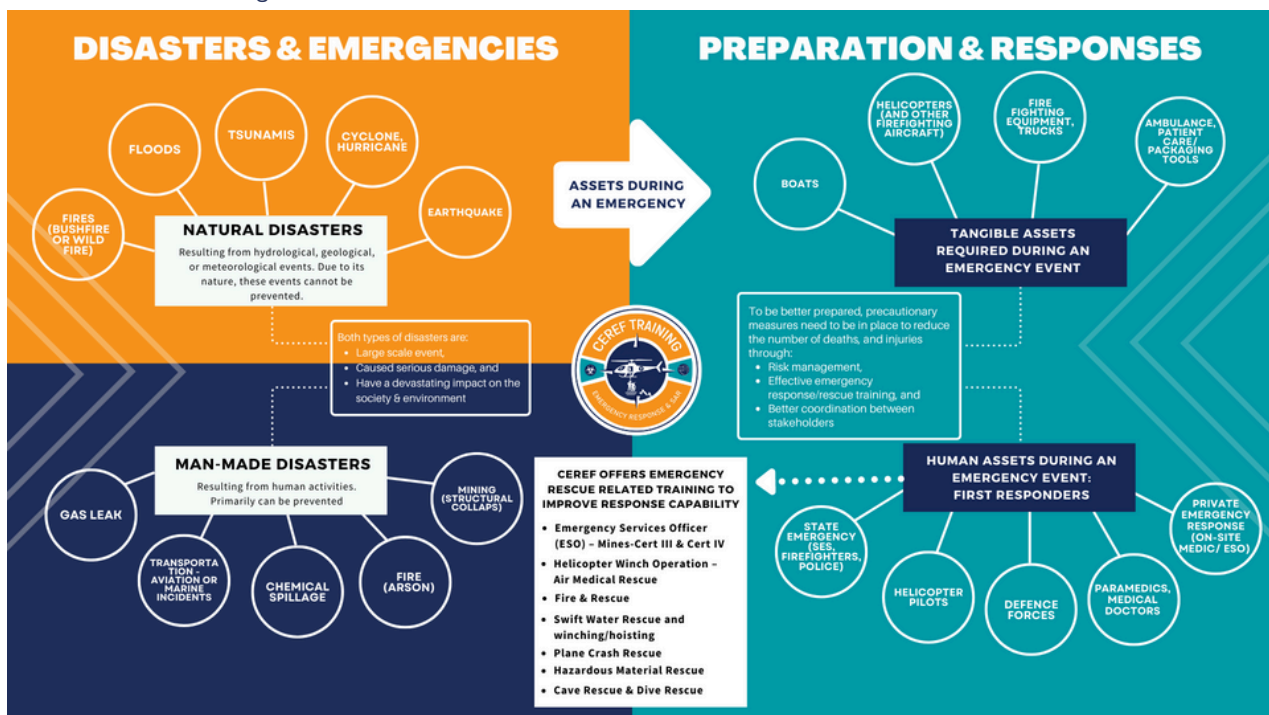
CEREF will prepare emergency workers for future natural or man-made disasters. During training, students will be immersed in hands-on, realistic emergency scenarios. These include rescuing individuals from submerged vehicles (a purpose-built pond is on site), collapsed structures (to be built), and airlifting victims under difficult conditions (a hanger and hoist will be constructed where varying wind, rain and water conditions can be simulated). Some on-site accommodation will be available, thus allowing for night training.

Onsite accommodation will enable the invitation of select first responders from Pacific Island nations to deepen operational and national connections. CEREF training will provide valuable opportunities for interaction and learning with other emergency service professionals.

CEREF's facility design, materials and construction will be assessed to meet the BAL FZ. The facilities will incorporate multiple environmentally sustainable features including water harvesting, various recycling systems and solar power. CEREF's proposed facility has also been favourably received by the Defence Department as well as TAFE, both offering to participate in the construction and maintenance as part of their respective re-education/apprenticeship programs.

CEREF training, including advanced technological concepts and equipment, will produce trainees with greater functional abilities that will enhance available resources and capabilities. This, in turn, will aid in the speedy recovery of victims and communities, nationally and internationally regardless of the type of disaster, but will equably, be dependent on disaster magnitude and resourcing for overall outcomes.

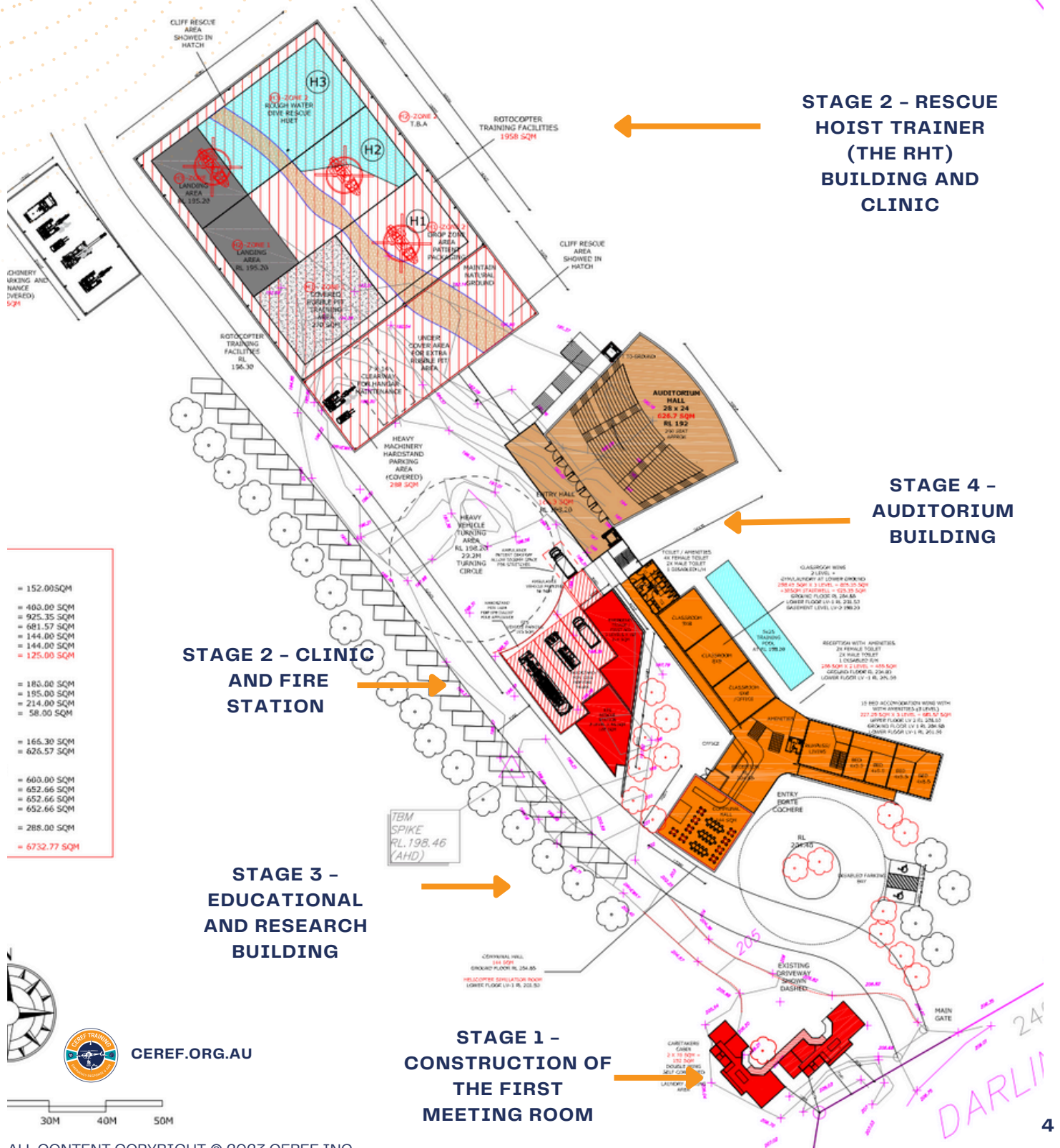
Figure 1 - CEREF Preparation and responses to Disasters and Emergencies



OUR AIM

1. To create a state-of-the-art venue, space, and facility where public/training organisations can train and hire (see Letter of Support in Appendix A);
2. To expose young people/school students to career possibilities in emergency services;
3. To provide a venue for combined operations activities and competitions between emergency services organisations and companies; and,
4. To provide a place for companies to test new equipment in a controlled environment.
5. To forge closer ties with Pacific Island nations by offering free advanced rescue training and on-site housing to senior personnel from those countries.

FIGURE 2 - PROPOSED MASTERPLAN DRAWING



CEREF has Four Proposed Stages

CEREF will ultimately comprise four construction phases on 50 acres of a freehold property. The master plan above has been presented to the Local Council, who replied with favourable feedback and support. CEREF has received letters of endorsement from, the Assistant Minister for Road Safety and Freight Transport, The Hon, Scott Buchholz MP and Fire and Safety Australia CEO, Steve McLeod (Attached in Appendix A and B).

Stage 1 in Brief

Achievements to date:

- Acquisition of 50 acres of property located at 93-131 Kidston Road, Canungra, just 45 minutes north of the Gold Coast Coolangatta Airport and 60 minutes south of Brisbane Airport, respectively, by road.
- Preliminary 'Masterplan' drawings of Stages 1 to 4 (shown above)
- Letters of support from The Hon, Scott Buchholz MP (Appendix B), and Steve McLeod (CEO Safety Australia) (Appendix B).

1

Stage 1: Secure initial funding of \$1,500,000, which will be spent on meeting Council requirements and the DA submission, security gate and construction of the first meeting room.

2

Stage 2: Construction of the Rescue Hoist Training (RHT) facility, a simulated helicopter/airlift rescue facility (This facility is modelled after The Bavarian Mountain Rescue Centre facility in Bad Tolz, southern Germany, which experiences consistent demand for the provision of helicopter evacuation training) and a clinic.

3

Stage 3: Construction of the Education and Training Facility with limited on-site accommodation.

4

Stage 4: Construction of, e.g., the auditorium, 'rapid river environment', and additional accommodation.

Proposed use of initial funds (\$1,500,000 includes DA-development Approval)

- Architectural plans for buildings and costs associated with Stage 2 Construction of the Rescue Hoist Training (RHT) Facility
- Environmental impact analysis and other council-required consultants' reports
- Plant, equipment, and staffing cost estimates
- Council application and assessment fee
- Installation of the front security gate
- Administrative fees

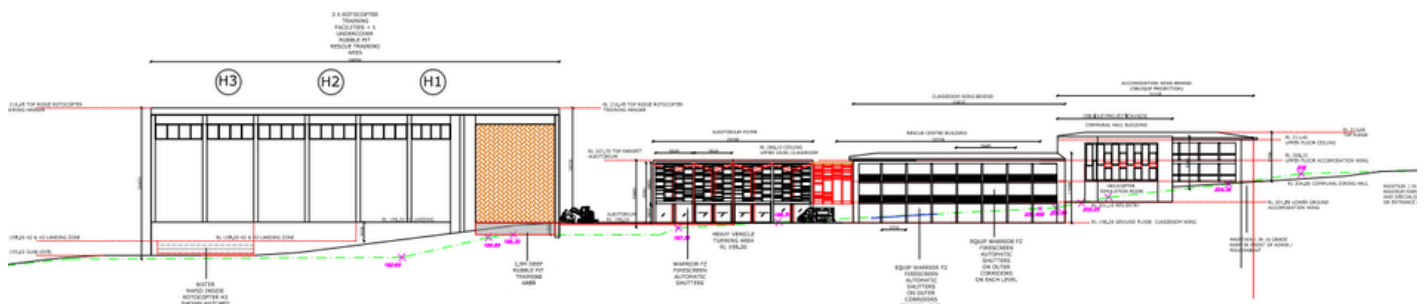


Figure 3 - CEREF Facility Overall Elevation



The Future

Stage 2

After completing Stage 1, our next milestone is securing funding for Stage 2, which requires \$100 million. During this stage, we'll initiate the construction and launch of the first training facilities in a series: the Rescue Hoist Training (RHT) and High Altitude/Space Training Cells.

Stage 2 entails constructing approximately 2,294.92 square meters of dedicated space for RHT and space training cells. Additionally, it involves erecting structurally sound buildings to house the necessary engineering for RHT installation, constructing three climate-independent cells, temporary training rooms, acquiring mobile equipment, and developing roads and parking facilities.

Table 2 outlines the proposed training courses for Stage 2 and their anticipated revenue. It's worth noting that CEREF operates as a not-for-profit entity, meaning any income generated will be reinvested to further enhance our mission and capabilities.



**TABLE 2
PROPOSED TRAINING COURSES
AND ANTICIPATED REVENUE**

Ref	Training	Objectives and Goals	Potential Annual Income
1	Dive Rescue	To train people in resurfacing unresponsive diver	\$4,300.00
2	Cave Rescue	To train people in saving/rescuing victims trapped in caves. To develop strategies in rescuing people in challenging conditions	\$12,000.00
3	Working at Heights	To provide real-life scenario-based training for people working in roles such as roofers, tilers, ceiling maintenance repairs, SES for tarping	\$31,050.00
4	Confined Space/Rescue	Search and rescue at the underground facility Tanks	\$20,700.00
5	Swift Water Rescue and winching/ hoisting (for helicopter Rescue)	To train people to rescue victims caught in floods, rapid rivers, and storms. Providing close to real-life scenarios	\$19,600.00
6	Cert III in Emergency Response and Rescue, and Cert IV in Health Care	To provide students with a training environment where they are exposed to a real-life situation, such as in the mining environment. Providing training for emergency night calls Providing a unique and real-life scenario to the employees/emergency personnel in the resource industry (and other emergency services personnel) by exposing them to/ preparing them for all possible emergencies such as car/vehicle rollover, rescue victims in cliff/embankment position, and fire.	\$840,000.00
7	Security Training	To provide training for individuals who would like to work/ break into the resource industry as a security officer.	\$234,000.00
8	Helicopter Winch Operation - Air Medical Rescue	To undertake helicopter winch operations	\$300,000.00
Ref	Facility Hire & Others	Types of equipment or room	Potential Annual Income
1	Facility Hire	Meeting rooms, board room, zoom/online meeting/recording room, Tower, Rapid river, Drones, Research & Development, testing environment/space, Science Lab, Training space in the bushland, trees, foliage environment, Car crash pad, Breathing Apparatus, and others	\$20,000
2	Facility Hire	Rescue Helicopter Trainer (RHT) Hire, Organisations using RHT to conduct their own training, such as SAS, Police, and Defence.	\$14,400,000
3	Accommodation	On-site accommodation, 15 rooms, 300 nights per year at \$100/room	\$450,000
4	Food and beverages	On-site food and beverages	\$30,000



Preparedness

The CEREF facility is designed to prepare people for a role in emergency services, including the resource industries. As a privately funded and independent not-for-profit organisation, CEREF will be a First Responder nexus in the southern hemisphere and globally to provide a one-stop, full-service training facility, providing unique, accredited emergency training.



Personnel

The training facility will be managed and operated by highly experienced, skilled and accredited First Responders, providing services locally, nationally, and globally. These employees can provide valuable life experience directly to students during training, enhancing their training experience and potential contribution to current and future employers.



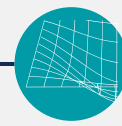
Facility & Training Environment

Training opportunities provide real-life environmental scenarios, covering the spectrum of weather conditions and situations typically experienced in natural disasters. State-of-the-art technology, equipment and facilities combine to service a range of global businesses and industries, the full suite for emergency services, defence forces and students year-round, incorporating day and night operations.



Rescue Training

Specific courses will include an intensive two-week on-site training module involving hands-on training in high-risk activities such as HUET/ underwater rescue, helicopter winching crew coordination, and operating around hazardous chemicals. Training will include rescue in various challenging built and natural environments, such as cliffs, embankments, and structures, during day and night operations.



Technology

Advanced technology will feature in the facility to enable students to experience the impacts of the spectrum of weather conditions whilst handling emergency events, like a strong wind, rapidly flowing or rising water, and the use of AI/drones in times of critical structure collapses.



BOARD MEMBERS



TROY CUFF **CEO, FOUNDER OF CEREF AND CHAIRMAN OF THE BOARD**

Justice of the Peace, Diploma Applied Science Paramedical, Diploma Work Health & Safety and Cert III in Emergency Response.

Troy Cuff is an Emergency Management and Safety Specialist, which includes working as a trainer and safety specialist on some of Australia's largest mining, Oil and Gas companies. During his 30 years responding to emergencies and volunteering in some of Australia's biggest disasters (for example, the fires in Queensland, New South Wales and Western Australia, and floods on the Gold Coast and Brisbane), he has worked with a variety of emergency response related organizations, including Red Cross, QFES, RFS, QAS and St John ambulance.

He is keenly aware of the training that emergency responders receive, but having witnessed rescue operations in the field, he is also aware of deficiencies. For example, there is a need for more real-life helicopter rescue scenarios, such as operating in high winds and rain. For this reason, Troy is passionate about creating a state-of-the-art world-class training and education facility that would help people excel in their emergency response duties as well as advance their careers in Emergency Services. In his spare time, Troy teaches Certificate IV, Diploma in WHS and HSR at TAFE Queensland.

As the founder of CEREF, Troy is the driving force behind taking the training and technology from concept to design and ultimately implementation. Troy has outstanding connections relevant to the success of CEREF, as evident by the Advisory Board Members. He has acquired 50 acres of rough, bushy terrain ideal for simulating rescue environments where he wants to see his vision realized.

OTHER BOARD MEMBERS

ROBERT BOTT **HEALTH SAFETY AND SECURITY**

Master of Applied Science and Master of Management in Occupational Hygiene and Environmental Certificate IV in TAE 40116 Training and Assessment

Rob has had a diverse career spanning both public and private sectors: nine years in the defence force, 16 years in law enforcement including counter-terrorist and bomb response duties, and twenty years in health and safety across multiple industry sectors.

Rob's experience has led to a drive to assist others to meet and exceed their potential in first response roles. Two post-graduate degrees, years as a first responder and responsible roles in major resource projects have provided Rob with the knowledge and experience to understand industry and trainee needs. Alongside the dissemination of knowledge, Rob also understands the need to safeguard proprietary knowledge, materials and trained personnel that will belong to CEREF and become its operational collateral.

MATT CARTWRIGHT EMERGENCY TRAINER AND ASSESSOR

Matt started his journey in the lifesaving industry as a lifeguard 20 years ago in Canada and has worked with distinguished companies such as the Red Cross, Lifesaving Society, and SAR before moving to Australia and becoming involved with Coast Guard and SES QLD in both active work and training. His background in business development has allowed him to build multiple businesses in sales, cleaning, and training. Currently, Matt's Certificate in Training and Assessment has provided many opportunities to teach and train in the emergency services industry including first response, drone operations, water rescue and many other aspects of the industry. As a Board member, his aspiration is to see the not-for-profit CEREF become a state-of-the-art facility for emergency and tech rescue training and research.

LYDIA HALIM CO-FOUNDER OF CEREF, RECRUITMENT ADVISOR

Postgraduate Degree in Human Resources Management and Bachelor of Arts in Business Administration and Management.

Lydia has over twenty years of experience providing human resources and executive support across the local government, not-for-profit, and commercial sectors, providing high-quality services to key stakeholders from CEOs, Board Members, Senior Managers, Executives, colleagues, business partners, and members of the public and community. She is highly focused, results-oriented, a problem solver, motivated to succeed and always trying to find innovative ways of improving service delivery while also managing her priorities and projects. She is adaptable, approachable, and flexible with a passion for excellent service delivery.

Lydia has the great ability to find the right person for the job and connect candidates to businesses with the best talent through the correct recruitment and selection process. She plays a key role in integrating and coordinating the various stakeholders, resources and documents associated with CEREF.

ADAM BERNHARDT – BOARD MEMBER

Executive Safety Leader, Motivator Disrupter, Transformer & Enabler Of Integration, Growth, Simplicity And Capability (Airbus)

Adam's career saw him work all over the world as a special operation professional for law enforcement up until his most recent role as the Senior Manager of Safety Systems for a Brisbane based helicopter organisation, charged with looking after both aviation and people safety for several civilian and military helicopter programs.



APPENDIX A



The Hon.

Scott BUCHHOLZ MP

Federal Member for Wright



Mr Troy Cuff
Canungra Emergency Research & Educational Facility
Darlington & Kidston Streets
Canungra. 4275.

Troy_cuff@hotmail.com
0488 772 930

Dear Mr Cuff,

I was most interested to hear of your plans for the construction of the new project you propose to construct in the Scenic Rim at Canungra. The Canungra Emergency Research and Educational Facility (CEREF) to be positioned on the 50 acres you have purchased next door to the township offers a very accessible venue for a training facility. The varied terrain on your property will expose participants to a large range of differing environments and so enhance the programmes offered at the proposed training facility to make the whole experience very well worthwhile.

There is no doubt that a facility such as you propose would be of enormous benefit to not only the Emergency Services Workforce on all levels, the Australian Defence Force and all other volunteer organisation as well as offering youth organisations such as the Junior SES, Scouts and Guides real time/real life experiences in emergency response and management. Large companies who also need to offer their staff real life scenarios for Vertical and Tower Rescue, Road Crash situations, Hazmat, Mines Rescue and Plane Crash rescue as well as the myriad of other emergency situations we Australians find ourselves faced with, would, I am sure be pleased to utilise the programmes.

I think your plan to have onsite accommodation is worthy. Living onsite will enable participants to really immerse themselves in the very intensive programme such as you are planning.

I am pleased to write this letter in support of your proposal and would like to be kept apprised of your progress with your venture.

Yours sincerely,

The Hon. Scott Buchholz MP
Federal Member for Wright
Assistant Minister for Road Safety and Freight Transport

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APPENDIX B



CEREF Letter of Support

28th February 2022

Mr Troy Cuff
CEREF Facility
93-131 Kidston Street, CANUNGRA, QLD 4275

Dear Mr Cuff,

On behalf of Fire and Safety Australia, we endorse the CEREF Canungra Emergency Research and Educational facility and its potential in meeting industry demand, to ensure realistic training for emergency response professionals.

Fire and Safety Australia (FSA) has more than 115 employees nationally, and we are a large provider of emergency response and medical personnel in industrial, mining, construction, renewables, and oil & gas environments. We work with many of Australia's largest companies, in high-risk environments. FSA sees a large opportunity that the CEREF facility could provide companies like FSA and our emergency responders, to ensure that they are well prepared to save life and property in the event of an on-site incident.

FSA would be a user of this facility, and many of our employees and clients would highly benefit from the realistic training proposed in the CEREF facility.

On behalf of Fire and Safety Australia, I am happy to express our support for this development, and we will be a user of the facility once completed. We feel that this facility will be of enormous benefit for the industrial emergency response industry, and that this will lead to a higher standard of training for emergency responders.

Please reach out to me if I, or my organisation can provide any further assistance.

Steve

Kind Regards,

Steve McLeod
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