

CALL FOR EXPRESSION OF INTEREST FOR ERP 11 – APPLICATION OF SELF-EVACUATION ARCHETYPES

Proposals due **20 July 2018** to office@bnhrc.com.au

INTRODUCTION

The Bushfire and Natural Hazards CRC in conjunction with our clients, the Department of Environment Land Water and Planning (DELWP) representing the State of Victoria on behalf of Country Fire Authority (CFA), is seeking expressions of interest for the following project.

Application of self-evacuation archetypes

PROJECT AIMS AND OBJECTIVES

1. The purpose of the research is to test the application of self-evacuation archetypes as defined in [Strahan et al, \(2017\)](#) in a range of *Safer Together* bushfire risk reduction strategies. The research aims to:
 - a. Support best practice community engagement approaches
 - b. Enhance bushfire modelling by including a human behaviour component
 - c. To support the measurement of the effectiveness of bushfire risk reduction strategies and impact on communities
2. To answer the research question: To what extent, and in what ways, can self-evacuation archetypes be applied to:
 - a. Community engagement approaches
 - b. Bushfire modelling
 - c. The evaluation *Safer Together* bushfire risk reduction strategies?
3. To provide evidence that will have direct impact on practice as well as extending the existing research on archetypes in a bushfire context

BACKGROUND

Safer Together

1. In November 2015, the Victorian Government released the Safer Together policy platform, setting out the future direction for bushfire management in Victoria. Safer Together is part of broader government reform to Victoria's emergency management

- sector and sees land and fire management agencies working together, in partnership with local communities to combine fire expertise with local knowledge.
2. A key pillar to Safer Together is science data and technology. The policy specifically states “we use the latest science, data and technology to make sure our actions are targeted at reducing bushfire risk and protecting those things we care about. It also notes under “what we do:” “Commission bushfire science research” (p. 9), “What we will do: continue to invest in new science to address knowledge gaps and reduce uncertainties in our bushfire modelling.” (p. 17) and “Risk is dynamic and constantly shifting, so we need to keep building on our evidence base. We will continue our investment in science, and in partnership with research institutions, to build knowledge of the relationship between fire and the environment and to better manage risk.” (p. 18)
 3. In May 2017 \$23m was announced to fund a two-year Safer Together program. In part these funds were allocated to ensuring that Victoria’s significant investment in bushfire preparedness and response is supported by a systematic and ongoing investment in developing scientific evidence.
 4. The implementation of Safer Together is being improved by applying a systematic approach to understanding what some of the key sector knowledge gaps are, the resulting risks they may pose to the achievement of Safer Together objectives, and determining how these risks can be mitigated by specific pieces of research.
 5. Through being able to clearly articulate what existing research delivers, and where the priority knowledge gaps occur, the sector will be able to respond quickly and consistently in answering questions about resource requirements, in accessing external, collaborative or partnership opportunities, or in leveraging off existing programs.
 6. This project is one of nine intended for delivery through the Safer Together program.

CONTEXT

1. The CFA has been leading work in understanding the characteristics of individual/household protective action decision making. This work is complex and multi-faceted as recent research by Strahan et al, (2017) demonstrates. The research explored seven archetypes of self-evacuation (the term used by the author to describe voluntary leaving) that provides insight into the diverse factors shaping response to the threat of bushfires. The behaviours of the archetypes are influenced by a complexity of attitudes, values and beliefs. The archetypes help to explain how people make sense of the bushfire risk, influenced by a range of personal, social and situational factors, and balance the perceived threat, vulnerability, uncertainty and priorities
2. There is currently limited understanding of how to apply the findings from human behaviour archetypes research into existing bushfire risk reduction strategies or reflect

in fire modelling tools. This limits the sector's ability to adapt its bushfire risk reduction strategies to enhance effectiveness and measure impact, or factor likely human behaviour into incident planning. Therefore, there is a need to improve understanding of how to apply the findings from human behaviour archetype research in a bushfire context to enhance community engagement approaches, improve fire modelling and support evaluation of *Safer Together* bushfire risk reduction strategies

3. Applying the findings of the archetype research will benefit a range of *Safer Together* enabling projects, support tailored risk reduction strategies in a local context, and advance the sector's ability to make evidence-based decisions.
4. Benefits will begin to be realised during this action research project and fully realised on completion. The benefits will be measured through evaluation of the enhanced approaches. The benefits will be owned by CFA and DELWP for ongoing use in their bushfire risk reduction strategies and may have benefit to the wider emergency services sector.

SCOPE

INCLUSIONS

1. Consolidation of existing research on archetypes in the context of human behaviour in preparation and response to bushfires, including consultation with Dr Ken Strahan
2. Establishment of a Project Reference Group (in consultation with the Policy Lead) comprised of cross-sector agency staff and relevant experts to inform design of the three identified applications of archetypes to:
 - a. support best practice community engagement approaches
 - b. enhance bushfire modelling by including a human behaviour component
 - c. support the measurement of the effectiveness of bushfire risk reduction strategies and impact on communities
3. Development and pilot testing of the three applications of archetypes in the context of *Safer Together* bushfire risk reduction strategies
4. Project reporting addressing the research questions for each of the three identified applications

EXCLUSIONS

1. Ongoing curation of the approaches/tools developed through the research

PROJECT SPECIFICATIONS

Key Steps

In developing the project proposal to be submitted in response to this Call for Expression of interest researchers should be mindful of the following project requirements.

- A detailed project plan (using the DELWP template) will be required as an early project deliverable.
- Initial meetings between partners to finalise the scope of the work and to understand and agree on any matters related to constraints and feasibility.
- Establishment of a Project Reference Group
- Consultation with end-users and external experts (as required) on the three identified applications of archetypes
- Consolidation of existing research on archetypes in the context of human behaviour in preparation and response to bushfires
- Identify requirement for each the three applications of archetypes
- Develop the approaches / tools for the three applications of archetypes
- Pilot test the approaches / tools for the three applications of archetypes
- Produce project report documenting all elements above, recommendations for future work, and peer reviewed publications from study findings
- Project completion

Key Steps	Lead	Due Date
1. Project commencement		September 2018
2. Establishment of a project reference group		September 2018
3. Consultation with end-users and external experts (as required) on the three identified applications of archetypes		October 2018
4. Consolidation of existing research on archetypes in the context of human behaviour in preparation and response to bushfires		October 2018
5. Identify requirements for each the three applications of archetypes		October 2018
6. Develop the approaches / tools for the three applications of archetypes		November 2018
7. Pilot test the approaches / tools for the three applications of archetypes		March 2019

8. Produce project report documenting all elements above, recommendations for future work, and peer reviewed publications from study findings		June 2019
9. Project completion		June 2019

Expected Outputs

1. The precise nature of the outputs will emerge through consultation with end-users and external experts, and through the application of the archetypes during the research phase. Possible tools/approaches may include:
 - a. A guide to community engagement based around self-evacuation archetypes;
 - b. A human behaviour data input for predictive bushfire modelling; and
 - c. An analytical framework based around the archetypes to support monitoring and evaluation of community engagement approaches.

Quality Control

Final report and other project outputs

It is the expectation of the Bushfire and Natural Hazards CRC and our clients DELWP and CFA that the material delivered as part of this project will meet the highest scientific standards and will be suitable for internal and external distribution.

It is a requirement of this project that the final report (and any supporting material) is 'submitted to the States' satisfaction'. To ensure the final report meets this expectation it will be subject to up to two rounds of review (with a minimum of two weeks for each review) by DELWP and CFA. Research organisations are required to ensure an internal peer review process is undertaken prior to the draft final report being submitted for consideration.

Before the final report is submitted to the State's representative for approval it must also have been

- Through an independent peer reviewer approved by the Bushfire and Natural Hazards CRC Project Manager
- Professional proof read and copy edited

These steps must be arranged by the research organisation costed as part of project budget and completed within the project timeframe.

Reports that have not been independently peer reviewed and professionally proof read and copy edited will not be considered final. A copy of the independent peer review and the researcher response to any comments must be provided to the CRC.

Communication

To further assist with the quality assurance it is expected that:

- The project team will utilise a consultative approach when developing the overall framework and data management processes/criteria, and will demonstrate this by documenting engagement activities within the relevant reports. This will involve seeking input from DELWP and CFA subject matter experts to ensure development of a framework and processes that are fit for purpose.
- The research team leader will give periodic presentations to the project reference group (to gain critical feedback on project milestones).

Any further quality control processes that are required for this piece of work, as well as key success measures, will be agreed with the Policy Lead as part of the planning process.

PROJECT MANAGEMENT AND PROCESSES

Contractual Arrangements

This project is being delivered under an Agreement in place between the Bushfire and Natural Hazards Cooperative Research Centre and the Department of Environment, Land Water and Planning (DELWP) in the State of Victoria. Under this Agreement the CRC is responsible for the delivery of a number of bushfire related research projects. The contract put in place between the CRC and the research organisation selected to undertake this work will reflect the terms of the Agreement between DELWP and the CRC.

A copy of the draft contract the CRC will provide to the successful research organisation is provided with this document. This contract should be reviewed as part of the EOI process. This is a standard agreement, and any changes will be at the sole discretion of the CRC. If you would like to request amendments to any of the terms and conditions set out in the proposed contract, details of the proposed changes and the reason the changes are requested must be included with the submitted response. In considering, this contract and proposing changes please note we have been advised by DELWP that (i) changes to provisions relating to the ownership of Intellectual Property will only be varied to take account of substantial in-kind contribution from the successful research organisation/s and (ii) no changes can be made to the publications approvals processes.

Project Governance

Each project is carried out under the supervision of a Project Control Board (PCB) and in accordance with the governance arrangements agreed between CRC and DELWP.

While the contractual relationship for the delivery of this project will be between the research organisation and the Bushfire and Natural Hazards CRC there will also be a strong relationship between the research team and DELWP and CFA staff. Communication is an important element of the success of this project and Researchers will be required to maintain strong links with both the Policy Lead and the CRC Project Manager though out the project.

A governance plan has been prepared which shows the roles and responsibilities of each of the participants. The successful research team will be required to comply with the processes and expectations as set out in that document.

Project Planning

The project overview included in this document describes the way the DELWP and CFA subject matter experts believe the project can most successfully be undertaken. Alternative approaches can be considered. Any alternative approaches must ensure the delivery of the required outputs including any intermediate outputs identified in this document.

Following acceptance of a project proposal the successful research organisation must prepare a detailed project plan and risk treatment plan **using the DELWP template**. This plan must be approved by the Policy Lead and will become an attachment to the contract. The project plan must be approved within 3 months of the notification of the acceptance of the project proposal.

Reporting

The successful research organisation will be required to make at least one presentation (and possibly two) to the Project Control Board or other nominated group during the life of the project.

Research organisations will also be required

- to provide a poster for the annual AFAC/BNHCRC conferences;
- detailed progress reports on a quarterly basis; and
- and contribute to the Project Evaluation Report

Dates for submitting Quarterly Progress Reports

Period covered	Report required
1 July to 30 September	24 October
1 October to 31 December	24 January following calendar year
1 January to 31 March	24 April
1 April to 30 June	24 July

SUBMISSION OF EXPRESSION OF INTEREST

Submission Requirements

Research teams responding to this Call for Expression of Interest are required to submit their response, including:

- A draft project proposal (4-6 pages) clearly addressing the requirements of the specifications set out in this document. Proposals must include achievable timelines, which will be used to monitor progress. A statement of capability demonstrating the ability of the proposed project team to undertake the work. This statement of capability should include the names and experience of key team members and their proposed contribution to the project. (The capability statement should not exceed 4 pages)
- Project budget including details of any in kind contribution from the research organisation. A statement of acceptance of the terms and conditions of the proposed

contractual arrangements. If such arrangements are not acceptable details of any changes must be included with the submitted response.

Additional information

- Research bids from a consortium of research organisations with expertise in the relevant fields are specifically encouraged.
- Attached is a draft contract which we ask your organisation to review. In your response to the EOI you should identify any items in this contract that will require attention /amendment should your organisation be selected to undertake this piece of work. This contract is based on the Head Agreement between DELWP and the Bushfire and Natural Hazards CRC and as such there is very limited scope to make changes to the draft contract.

The total maximum budget for this project is \$200,000 (excl GST) and all work must be completed by 30 June 2019.

Any research proposal once submitted will be treated as commercial in confidence.

Applications, must be submitted to: office@bnhcrc.com.au by 20 July 2018.

Evaluation Criteria

After the closing date the Bushfire and Natural Hazards CRC along with the Policy Lead will review proposals against the evaluation criteria below and make a recommendation to the State's representative on the most appropriate organisation to undertake this work. The evaluation criteria provide an indication of those matters that should be included in the project proposal and associated documentation. Details are provided below.

Successful applicants will be advised by 13 August 2018 and it is expected work on the project will commence no later than 3 September 2018.

The decision of the BNHCRC and our clients DELWP and CFA will be final. The BNHCRC reserves the right not to offer the work, or only allocate a proportion of the available funding, if a proposal does not meet the client's needs. The Project Control Board reserves the right to invite any other specific researchers as it sees fit to submit proposals before or after the closing date.

Evaluation Criterion	% weighting
Research Capability The capacity and capability to deliver an excellent applied research project in a Victorian environment.	15
Project Proposal A clear demonstration that the research team has an understanding of the project scope through the proposed research approach The proposal must also include an indicative timetable of work and interim milestones/project outputs as described in this document Quality Control Clear documentation of quality control processes including proposed internal and external reviewers. Identification of copy editors and proof readers.	50
Industry Engagement Strong Track record of industry engagement with the ability to support and influence bushfire management in Victoria through interaction with land and fire agency personnel Victorian Focus Ability to undertake research in Victorian environments individually and/or in cooperation with land and fire managers	15
Value for Money Delivery of required outcome within available budget along with the ability to leverage the funds provided with in-kind contributions or supplementary opportunities. The evaluation team will consider the membership of the project team and the proposed roles and time commitment.	20

Attachments

1. Call for expression of interest in this project
2. Copy of the Governance Agreement
3. BNHCRC subcontract including project plan template and evaluation report template
4. Quarterly report template
5. DELWP report template