

# CALL FOR EXPRESSIONS OF INTEREST

## FRM 05 – BUSHFIRE BEHAVIOUR DATABASE

PROPOSALS DUE **30 AUGUST 2022** TO [research@naturalhazards.com.au](mailto:research@naturalhazards.com.au)

### SUMMARY

#### INTRODUCTION

Natural Hazards and Disaster Resilience Research Centre Ltd t/as Natural Hazards Research Australia (Centre), in conjunction with our client, the Department of Environment, Land, Water and Planning (Victoria) (DELWP) is seeking expressions of interest for the following project.

#### FRM 05 – BUSHFIRE BEHAVIOUR DATABASE

#### PROJECT AIMS AND OBJECTIVES

The object of this project is to improve access to the data required for bushfire reconstructions. Much of the data required is stored within fire agencies' systems, however, it is often in different formats and not always linked to the fire being reconstructed. Specifically, the objectives of this project are to:

1. Identify data flow and consistency issues within and across Victorian fire agencies relating to data required for bushfire reconstructions.
2. Make recommendations on best practices for managing bushfire reconstruction information (including recommendations on how to manage incident IDs across multiple platforms and with complex events).
3. Develop templates for storing fire incident information and for undertaking reconstructions.
4. Develop templates for the fuel and potential fire behaviour information that should be stored prior to an event to aid response.
5. Identify new data or new data collection methods.
6. Make recommendations on software engineering solutions to ensure information can be stored and recalled on a per-fire, district, date and fire season basis.

#### BUDGET

The total maximum budget for service provision in this project is **\$136,360 (excl. GST)**.

All work must be completed **within 16 months of project initiation**.

## KEY STEPS SUMMARY

Key steps	Lead	Due date
1. Determination of data requirements for Bushfire Reconstructions	Fire agencies	30 September 2022
2. Audit of available data for bushfire reconstructions based on requirements stipulated in output one	Research organisation	31 December 2022
3. Delivery of draft outputs	Research organisation	30 November 2023
4. Delivery of final outputs based on end-user feedback	Research organisation	30 January 2024

## RESPONSE

Any proposal once submitted will be treated as commercial in confidence. Applications must be submitted to: [research@naturalhazards.com.au](mailto:research@naturalhazards.com.au) by **11:59 pm 30 August 2022**.

Project teams responding to this Call for Expressions of Interest are required to submit a project proposal of up to eight pages clearly addressing the requirements of the specifications set out in this document, and a project budget including details of any in-kind contribution from the provider organisations. The proposal must include an introduction, project plan for delivery, a clear description of what the project team will deliver through the various stages of the project, a detailed project budget and a summary of staff and skills.

## INTRODUCTION

Natural Hazards Research Australia, in conjunction with our client DELWP, is seeking expressions of interest for the following project.

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## BACKGROUND

The lack of complete and accessible retrospective bushfire event information is a recognised gap within the Victorian bushfire management sector. This gap is obstructing several actions that are required for fire agencies to be able to commit to a thorough adaptive management approach to bushfire risk management. The lack of accessible and comprehensive data means that agencies are unable to perform regular and thorough analyses to:

- a. access local intelligence on fuels and potential fire behaviour at a local scale
- b. compare fire spread predictions to actual fire behaviour and operational need
- c. assess the effectiveness of fire suppression approaches
- d. assess whether our fuel reduction program has contributed to mitigating spread and/or reducing risk.

A lack of information to support the above questions has flow on implications for bushfire risk management at both strategic and operational levels and across short- and long-term time scales. Decisions are not always able to be made using local intelligence and lessons are unable

to be learned and improvements are unable to be made. The gap also impacts training and education, as there is a lack of resources available for exercises.

Bushfire reconstructions should be undertaken to improve our understanding of planned burn effectiveness, suppression effectiveness, validate the accuracy of bushfire prediction models, and to better understand key fire behaviour elements that can pose a risk to the community and firefighters. Understanding this will help to enable a more robust cost/benefit assessment of our risk mitigation activities across the prevention, preparedness, response and recovery (PPRR) spectrum. Fire agencies are not adequately resourced to do bushfire reconstructions, they are generally only done by consultants following major events.

The Bushfire Behaviour database project links with the national Bushfire Information System project, aimed at developing a national database of bushfire observation data. A scoping study will be undertaken to deliver a high-level consideration of jurisdictional data availability as part of this national project. The Bushfire Behaviour database project, funded through Safer Together, will build on this by developing a detailed data analysis on data from CFA, DELWP and FRV that will feed into the Bushfire Information System when (if) developed.

## SCOPE

### INCLUSIONS

The appointed service provider will be required to complete the following tasks:

1. Audit of available data across Victorian fire agencies relating to bushfire reconstructions.
2. Identifying data flow and consistency issues within and across Victorian fire agencies and recommend solutions.
3. Recommendations on best practices for managing information (including recommendations on how to manage incident IDs across multiple platforms and with complex events)
4. Developing templates for storing fire incident information and for undertaking reconstructions.
5. Identifying new data or new data collection methods.
6. Making recommendations on software engineering solutions to ensure information can be stored and recalled on a per-fire, district, date, and fire season basis.

### EXCLUSIONS

The following tasks are excluded from the project:

1. Development of data end-user requirements for completing a bushfire reconstruction.
2. Development of data storage solution.
3. Consideration of data beyond that required for Bushfire Reconstructions.

## PROJECT SPECIFICATIONS

### KEY STEPS

In developing the project proposal to be submitted in response to this Call for Expressions of Interest applicants should be mindful of the following project requirements.

Key steps	Lead	Due date
1. Determination of data requirements for Bushfire Reconstructions	Fire agencies	30 September 2022
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### EXPECTED OUTPUTS

1. Detailed report prepared in close consultation with fire agency representatives that represents data systems used operationally, and a solution that is realistic based on internal system architecture requirements. The report will include:
  - audit of available data across Victorian fire agencies relating to bushfire reconstructions
  - data flow and consistency issues within and across Victorian fire agencies and recommended solutions
  - recommendations on best practices for managing information (including recommendations on how to manage incident IDs across multiple platforms and with complex events
  - making recommendations on software engineering solutions to ensure information can be stored and recalled on a per-fire, district, date, and fire season basis.
2. Templates for storing fire incident information and for undertaking reconstructions. As per output 1 above, the templates should be consistent with current system architecture within fire agencies and must be prepared in close consultation with agency representatives.

### QUALITY CONTROL

#### Final report and other project outputs

It is the expectation of the Centre and our client DELWP that the material delivered as part of this project will meet the highest standards and will be suitable for internal and external distribution.

It is a requirement that all reports (and any supporting material) be submitted to the Project Control Board's satisfaction (see under Project Governance). 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. Project teams are required to ensure an internal peer review process is undertaken before the draft final report is submitted for DELWP consideration.

Before the final report is submitted to the Project Control Board for approval it must also have been professionally proofread and copy-edited.

These steps must be arranged by the project team and be costed as part of the project budget and completed within the project timeframe. **Reports that have not been professionally proofread and copy-edited will not be considered final.**

Project teams should ensure that sufficient time is included in the proposed project timeline for review of the draft final report by DELWP, revision, and completion of the final report. This may take up to two months.

### **Communication**

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

- The project team will utilise a consultative approach throughout the project and will demonstrate this by documenting engagement activities within the relevant reports. This will involve seeking input from DELWP, CFA, and FFMVic subject matter experts to ensure the development of prototypes that are fit for purpose.
- The project team will work collaboratively with DELWP and the Centre in developing any public communications about the project.
- The project team leader will give periodic presentations (e.g., annually) to key stakeholder groups 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 upon with the DELWP Research Lead as part of the planning process.

## PROJECT MANAGEMENT AND PROCESSES

### CONTRACTUAL ARRANGEMENTS

This project is being delivered under an Agreement in place between Natural Hazards and Disaster Resilience Research Centre Ltd, t/as Natural Hazards Research Australia (the Centre), and the Department of Environment, Land Water and Planning (DELWP) in the State of Victoria. Under this Agreement, the Centre is responsible for the delivery of several bushfire, ecological and compliance related research projects. The contract put in place between the Centre and the Lead Provider Organisation selected to undertake this work will reflect the terms of the Agreement between DELWP and the Centre.

A draft copy of the contract between the Centre and the successful Lead Provider Organisation is available by request at any time during the EOI process by emailing [research@naturalhazards.com.au](mailto:research@naturalhazards.com.au). **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 Centre. 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 the Centre has 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 Provider Organisation/s, and (ii) no changes can be made to the publications approvals processes.

In the case of consortiums, the Centre requires one consortium member be nominated as Lead Provider Organisation for contractual arrangements.

### 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 the Centre and DELWP.

While the contractual relationship for the delivery of this project will be between the Lead Provider Organisation and the Centre, there will also be a strong relationship between the project team and DELWP staff. Communication is an important element of the success of this project and providers will be required to maintain strong links with the DELWP Research Lead, the Project Reference Group, and the Centre Project Manager throughout the project.

A governance plan has been prepared which shows the roles and responsibilities of each of the participants: DELWP, Natural Hazards Research Australia, and the Provider Organisation/s. 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 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 DELWP Research Lead and will become an attachment to the contract.

## REPORTING

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

In addition to the Expected Outputs listed above, the project team will also be required to:

- provide a fact sheet within three months of signing the contract between the research organisation and the Centre (DELWP/Safer Together template)
- provide detailed Quarterly Progress Reports
- contribute to a Project Evaluation Report.

Dates for submitting Quarterly Progress Reports:

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



## SUBMISSION OF EXPRESSION OF INTEREST

### SUBMISSION REQUIREMENTS

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

- A project proposal of up to eight pages, clearly addressing the requirements of the specifications set out in this document. The proposal should include an introduction, project plan for delivery, a detailed project budget and a summary of staff and skills. Proposals must include achievable timelines, which will be used to monitor progress.
- 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

- The total maximum budget for service provision in this project this project is \$136,360 (excl. GST).
- **All work must be completed within 16 months of project initiation.**

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

Applications must be submitted to: [research@naturalhazards.com.au](mailto:research@naturalhazards.com.au) by **11:59 pm 30 August 2022**.

### EVALUATION CRITERIA

After the closing date, Natural Hazards Research Australia along with the DELWP Research Lead will review proposals against the evaluation criteria below and make a recommendation to the State's Representative on the most appropriate organisation/s to undertake this work. The evaluation criteria indicate those matters that should be included in the project proposal and associated documentation – details are provided in the table below.

You will be advised by **Tuesday 20 September 2022** if your application has been accepted and it is expected work on the project will commence upon signing of the contract.

The decision of the Centre and our client DELWP will be final. The Centre 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 providers as it sees fit to submit proposals before or after the closing date.

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