Evaluation Report

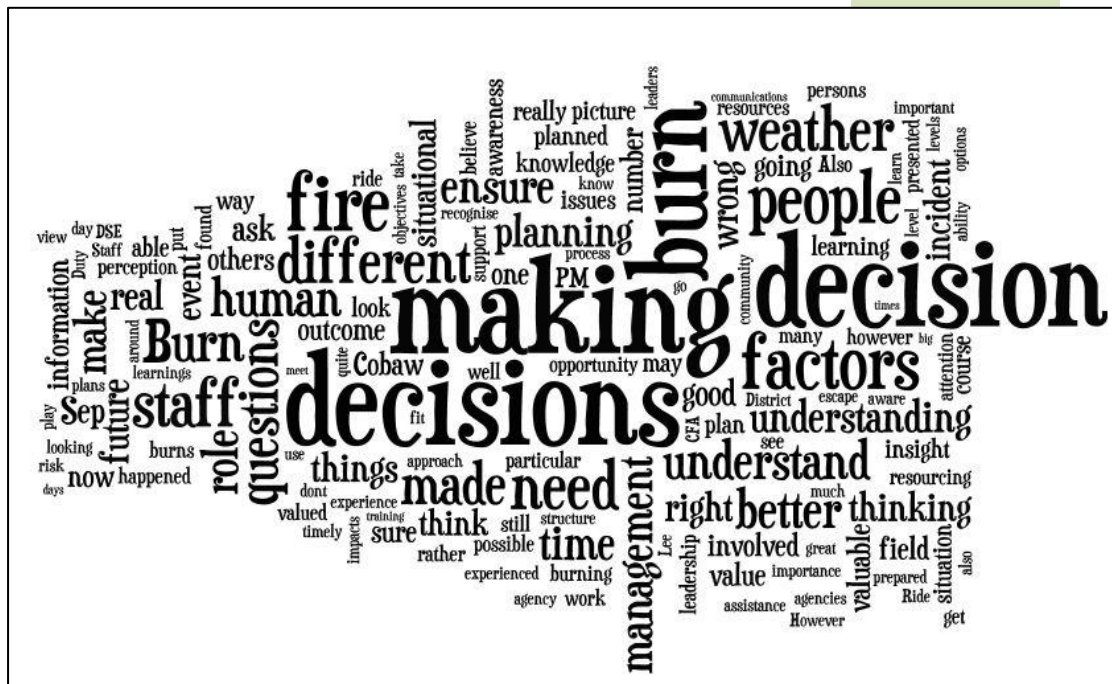# 2012 Cobaw Staff Ride Program

Conducted by Dr Sue Stack and Dr Christine Owen

Bushfire Cooperative Research Centre

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bushfire CRC

Authors

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COVER: This is a WORDLE analysis of participants' responses to questions in the post-survey about what they valued, their insights and what they would apply following attending the Cobaw Staff Ride. The larger the words the more frequently they were used by the participants.

Contents

1 Executive Summary

Introduction to the Cobaw Staff Ride

The Cobaw bushfire Staff Ride presented a unique leadership training opportunity to examine on site the sequence of events, in significant detail, that occurred when a planned burn escaped from the Cobaw State Forest near Woodend, 75 km north of Melbourne in April 2003.

This was the first time a bushfire staff ride had been tried in Victoria. It was designed for future leaders - fire managers and operational staff - in the Department of Sustainability & Environment (DSE), Parks Victoria (PV), Metropolitan Fire and Emergency Services Board (MFB), Melbourne Water, VicForests together with Country Fire Authority (CFA) volunteers, and operational and career staff involved in planned burning operations.

Intent of Cobaw Staff Ride program:

- Build leadership capacity – target future leaders
- Improve organisational culture – non-blame
- Part of suite of learning experiences – help integrate other learning
- Build up "Mental Slides"
- Build up knowledge of human decision-making
- Foster collaboration across organisations
- Seed further interest in staff rides

The Cobaw bushfire Staff Ride has proved a powerful form of experiential learning. Participants reported that they could see, hear and feel the environment where the decisions took place, and thus had an opportunity to learn from someone else's experiences. Participants were challenged to push past the basic questions of 'what happened' and examine the deeper questions of leadership, decision-making and the human factors involved in fire management together with identifying what opportunities there were to learn for the future. There is evidence that the Staff Ride experience engaged participants in deep and critically reflective learning in a way that was qualitatively different from other types of learning programs, addressing key learning gaps within the organisations.

The evaluation

An integrated evaluation of the Staff Ride was conducted by the Bushfire Cooperative Research Centre, providing interim feedback on the design of the program as well as a final evaluation of the following:

1. What were the participant reactions?
2. What did the participants learn?
3. Did the Staff Ride make a difference and change individual and organisational practice?
4. Was the Staff Ride effective as a learning program?

The evaluation drew on pre and post surveys of participants, follow-up emails, observation of the event, and interviews with participants and facilitators, with statistical analysis of data and qualitative thematic analysis providing a rigorous research base. This approach to evaluation of learning programs is unique within the fire sector.

Results

What were participant reactions?

The participants rated the Staff Ride as a highly relevant, engaging and well-executed learning program. Particularly valued were opportunities for reflective thinking around decision-making and human-factors, contribution by diverse group members, and an opportunity to build leadership skills. Further, there was significant interest in running or being involved in Staff Rides in the future, providing considerable endorsement of this type of learning program.

What did participants learn?

Evidence from participants' declarations of learning at the event and their written survey answers indicate that individuals were able to draw out particular learning relevant to their roles, in line with the program's intended learning objectives. Particular areas of learning were around thinking about thinking, decision-making, human factors, situational awareness, fire behaviour and weather, planning, and organisational responsibility and leadership.

Vignettes, composed of participants' reflections (in Appendix 1) provide indications of how their thinking changed during the program, moving from hindsight bias to explorative inquiry, and how they were able to surface and challenge assumptions about their own practices. One facilitator commented:

> *"In 10 years as an instructor I have rarely seen the impact on people as this type of learning – their change in thinking, their willingness to reflect and inquire and their curiosity to learn more. It is highly effective and efficient, compared to longer courses."*

Did the Staff Ride make a difference and change individual and organisational practice?

There are some early indications from the surveys and follow-up emails that suggest for some people it has already created a change in some behaviours and thinking agility. However, whether the intended learning outcome – that participants will be able to generate their own internal

Participant Reactions (from Survey):

Would recommend to others: 63/64 or 98% of respondents

Mean of over-all satisfaction: 6.2/7

Mean of relevance: 6.5/7

Mean of actively engaging: 6.5/7

Interested in using own incidents as part of future staff rides: 53/60 or 88% of respondents

Interested in Staff Ride Facilitation training: 33/64 or 52% of respondents

"Cobaw moments" – participants' insights declared at the event

"Being able to pull back and analyse and check in with another person."

"What struck me was the importance and the responsibility of the decision points, each like a 'sliding door' moment, each of which determined the whole future of the event. E.g., the decision to light."

"Question what you're seeing. Communicate what you're thinking."

"I am planning to use the Staff Ride Concept for local staff to reflect on what worked and areas for improvement at successful and unsuccessful burns, incidents and near misses that have occurred at a local level."

Participant's comments in a follow-up email

representation of a situation that they can later draw on (i.e., "mental slides" for Recognition Primed Decision Making during operations) – will not be testable until after this or future fire seasons. However, a clear outcome for the Cobaw Staff Ride was creating a positive model for how to consider past experiences – a learning culture – which could have lasting organisational implications if given appropriate organisational support.

> "I am now ensuring I include comment in burn planning process for burns - on post burn weather, fuels and fire behaviour."
>
> "I have noticed that I am scrutinising my decisions in all my activities now."
>
> Participants' comments in a follow-up email

Was the Staff Ride effective as a learning program?

There is a considerable body of evidence to suggest that the staff ride format specifically designed for the Cobaw incident provided a highly effective learning experience that was suited to the incident, the targeted audience and the learning intentions. Participant feedback indicated that components of the program were well targeted and executed. Particularly valued were the attendance of the original participants of the incident, the pre-reading background materials, orientation sessions, the mix of groups and the quality of the facilitation. There are some areas that could be improved and these are discussed in the report. The program team's commitment to continuous improvement also meant that each ride was refined with better targeting of learning. Participants of the second Staff Ride rated it as significantly better on some learning criteria than other leadership learning opportunities they recently experienced, as shown in the Figure below (see Appendix 5 for statistical significance tests).

Comparison of the 2^(nd) Staff Ride with participants' most recent learning experience
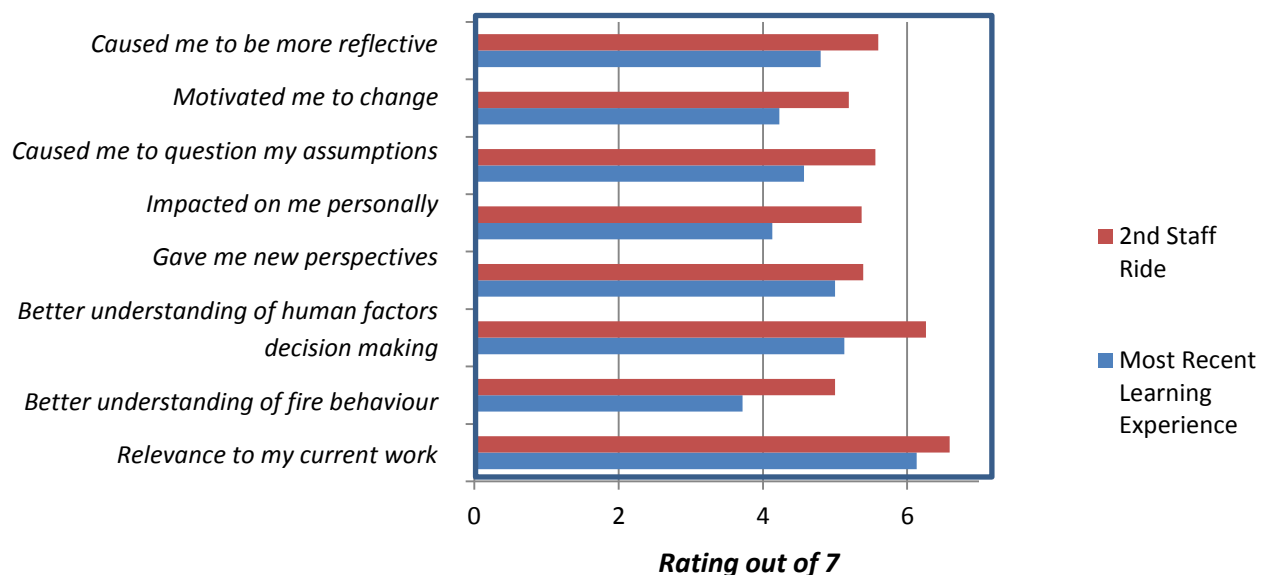
A value for money analysis shows that the Cobaw Staff Ride program offers:
- cost-effective learning (cheaper than or equivalent to most training programs) addressing learning gaps within the organisation,

- potential flow-on effects in terms of cultural impact and seeding of other staff rides;
- considerable knowledge capital in the organisers and facilitators that can be drawn on for development of other staff ride models, after action reviews or case studies;
- sustainable delivery options that take into account successional planning for the facilitation and the organisational team;
- creates synergy by supporting other training programs in cultivating an approach to learning through reflective inquiry.

Risks include the impact on the original participants in the incident, which needs to be sensitively managed, and with continuing organisational support.

Should the program be expanded?

Opportunities now exist to capitalise on the interest generated in staff ride learning and on the knowledge and resources developed. The following recommendations are included to assist in effective expansion and capitalisation of the Cobaw Staff Ride.

Recommendation	Actions
1. Endorse the Staff Ride program	1.1 The Evaluation Team recommends to the Multi Agency Capability Committee (MACC) that the staff ride program be endorsed and supported as a valuable program addition to its learning program repertoire.
2. Use the Cobaw Staff Ride as a seeding program	2.1 Continue to deliver the Cobaw Staff Ride in the current format with an emphasis on seeding further staff rides and fostering a culture of willingness to learn from past events. 2.2 Use a continuous improvement model where organisers and facilitators in the Cobaw Staff Ride continue to debrief and foster greater insight into indicators for the learning they are wanting to achieve, building facilitation and design expertise that can be shared by others.
3. Develop resources for others to run staff rides	3.1 Draw on the experiences of the program team and the Staff Ride evaluation information to create learning design guides, or videos for others considering running a staff ride in order to build internal capability.
4. Raise awareness about staff rides	4.1 Promote staff rides as an ability to learn from action and is accessible to all. Use video, newsletters or existing communications to help people get a sense of what different staff rides might be, and what a *culture of inquiry* looks like.
5. Use a repository to capture knowledge	5.1 Establish an on-line access point similar to the US Wildfire Lessons Learnt website, to capture the knowledge and experience in staff rides being developed in an Australian context. This would provide a resource for those considering the design of staff rides in their own contexts.

6. Acknowledge and support those in the original incident	6.1 Work with the original participants in the incident to determine their response to the process of the development of the Staff Ride, and to help design effective processes for others. 6.2 Develop a strategy that recognises the contribution towards the development and successful running of the Staff Ride of the original participants. 6.3 Use the participants of the original incident as ambassadors to other districts considering a staff ride.
7. Build design and facilitation capacity for staff rides	7.1 Invite past participants interested in building staff ride design and facilitation skills to be co-facilitators in the Cobaw Staff Ride, building up general skills to be used elsewhere, as well as developing a pool of facilitators that can be used for the Cobaw Staff Ride. 7.2 Run facilitation programs for designing and facilitating different types of staff rides. Consider doing this within an action research framework, building capacity for attendees for constant improvement. Consider a mentoring network around development of Staff Rides.
8. Model other types of Staff Rides	8.1 Offer other staff rides, following different formats and intents, using positive case studies as well as those with negative outcomes, for different audiences, building up a repertoire of possibilities, and engaging different groups within organisations and the sector.
9. Enhance the learning from staff rides through connection with existing learning programs	9.1 Provide future training opportunities in leadership, human factors, fire behaviour etc. to take advantage of interest stimulated by the Staff Ride. 9.2 Continue and enhance mentoring programs and existing debriefing practices to encourage "thinking about thinking" in order to continue to build thinking agility.

2 Introduction

2.1 Background

The Cobaw bushfire Staff Ride project was developed by a working group of the Multi Agency Capability Committee (MACC) which is made up from agencies involved in bushfire preparedness and response such as DSE, CFA, MFB and SES. The MACC was established to implement recommendations from the Victorian Bushfires Royal Commission regarding inter-agency training and development.

The Cobaw Staff Ride is a learning and development opportunity intended for employees and volunteers primarily from the Country Fire Authority (CFA) and the Department of Sustainability and Environment (DSE) as part of leadership capacity building to foster cultural change within the organisations.

The CFA and the DSE are two distinct organisations who engage in prescribed burn and wildfire fire management operations, and work collaboratively when the need arises. Each organisation has different cultures of volunteerism, leadership styles and fire management that are reflective of different organisational purposes. Both have been subject to high public scrutiny and legal review through the Victorian Bushfire Royal Commission, with a calling for better leadership, decision-making and organisational processes to deal with complex, time-critical, life-threatening, escalating situations. Both are aiming to continue to move to new cultures of operation which include a non-blame environment where people are willing to admit to and learn from mistakes. The Staff Ride requires such a non-blame environment to succeed as well as providing opportunities for participants to practice this.

The Staff Ride was initiated in early 2011 by some senior managers in the DSE who had positive experiences of staff rides in the United States, where the staff ride is a well-developed training event for fire-fighters. They believed it could value-add the training opportunities for Victorian fire-fighters in a post Black Saturday climate which demands greater leadership and decision-making capacity. Peter McHugh (DSE) was asked to explore the feasibility of using a staff ride for training of staff in the Victorian context. This led subsequently to the commitment to run a staff ride, endorsed by the Multi-agency committee (MACC), the setting up of a multi-agency project design group, the development of a rationale for it that links into existing leadership training programs, the engagement of Bushfire CRC to assist in evaluation of the program, the running of a pilot and then the subsequent delivery of two Staff Ride programs.

This report constitutes the evaluation undertaken by Sue Stack and Christine Owen, through the Bushfire CRC and the University of Tasmania.

2.2 Intent of the Cobaw Staff Ride

The design team's objectives for the Cobaw Staff Ride were that:

- It would build leadership capacity of future and potential leaders, targeting a vertical slice of leaders throughout the DSE and CFA organisations;
- It would assist in improving organisational culture through improving leadership;
- It was part of a suite of leadership learning experiences, with the intent that through providing a rich context for decision-making participants could integrate their learning from leadership, human factors and technical knowledge training courses;
- It could act in lieu of real events in helping participants to build up a bank of "mental slides" to be used in actual events through Recognition Primed Decision Making;
- It was a cross- organisation learning exercise to help build greater collaboration;
- It could act to seed further interest in staff rides;
- It would foster a reflective non-blame culture– one of willingness to examine past mistakes;
- It should do no harm to the original actors.

The staff ride model provides a different type of learning to courses, exercises or to mentoring. It enables reflective explorative dialogue around a complex incident at the scene that it occurred so that nuances are teased out. Rather than participants taking away specific skills or knowledge, the program team expected that participants would extract learnings relevant to their roles, contexts and current training.

2.3 Context of the evaluation

The need for a process of evaluation of the program external to the initiating organisations was identified early on in the project. The purpose was not just to measure whether the program was successful but to provide information that would enable continual learning and building of the program.

The design team approached the Bushfire CRC for support in conducting an evaluation, engaging Dr Sue Stack and Dr Christine Owen. The evaluation team met with the design team in June 2012 to review their plans, materials, and the trial program. An interim evaluation report was prepared that used a nine step method, based on the *Learning Evaluation Tool* compiled by Christine Owen.

Nine step evaluation approach

1. Discern the context
2. Build a solid base of support
3. Identify learning program ideas
4. Sort and prioritise those ideas
5. Develop learning program objectives
6. Design instructional plans
7. Devise transfer of learning plans
8. Formulate evaluation plans
9. Make recommendations and communicate results

The interim report evaluated the design logic of the program, recommending a range of strategies to mitigate risk and strengthen the program as well as approaches to the final evaluation. This report focusses on the evaluation of the program.

2.4 Scope of the evaluation

2.4.1 Evaluation Questions

The evaluation questions have been formulated from key questions sought by the design team, as well as drawing on Kirkpatrick's (1998) four level approach. This aims to evaluate how well a program meets its intentions:

1. What are participant reactions?
2. What did the participants learn?
3. Has this led to behavioural change or use of new knowledge or skills?
4. What are the results or outcomes for the organisation or community?   (e.g., increased productivity, less mistakes, less consequences of mistakes.)

The last question, which seeks to measure any changes in organisational productivity, is not possible in the scope of this report. It would be best assessed after the 2012/2013 fire season.

Evaluation questions

1. **What were the participant reactions?**
   - Did they find it relevant, practical, interesting and engaging compared to other training courses? What did they value?

2. **What did the participants learn?**
   - How does participant learning meet the learning objectives intended by the design team?
   - What was their key insight (their "Cobaw moment")?

3. **Id the Staff Ride make a difference and change individual and organisational practice?**
   - What are people doing differently?
   - How might it be promoting a culture of inquiry?

4. **Is the Staff Ride effective as a learning program?**
   - Is this Cobaw Staff Ride format the best for the learning objectives and the audience?
   - How can it be improved?
   - What elements were particularly valued and what are the implications for the design of other staff rides?
   - What are the opportunities and risks?
   - How does it compare to other learning?
   - Is it value for money?
   - Where do staff rides fit into the overall fire training program?
   - Should the program be expanded and what are implications for other organisational or design teams?

2.4.2 Evaluation Method

This report focusses on the evaluation of two Cobaw Staff Rides run in late August and early September 2012, with 40 participants in each. It draws on:

- observations of the August event by Sue Stack regarding the learning, alignment with learning objectives, and delivery of the Staff Ride program;
- comments made by the participants on the day of the Staff Rides;
- analysis of participant pre and post Staff Ride surveys of the August and October events (surveys available on request from the authors);
- follow-up emails with some participants to see if any changes in practice occurred;
- conversations with the program team;
- debriefing of facilitators after both events by Sue Stack.

The evaluation has drawn on a number of research approaches:

- An analysis of demographics of the two cohorts;
- Development of vignettes that capture a range of participants' learning (Appendix 1);
- Thematic analysis of the survey written responses (Appendix 2);
- Comparison of participants' perceptions of the Cobaw incident before the Staff Ride Field Trip with their insights afterwards;
- An analysis on whether learning objectives were met (Appendix 3) and what may be done to strengthen these;
- A detailed analysis of the components of the program, what was valued, issues, and opportunities for strengthening (Appendix 4);
- Quantitative analysis of the survey responses, including a comparison with participants' perceptions of the Cobaw Staff Ride with a most recent learning program they were engaged with (Appendix 5).

2.4.3 Sample demographics

81 participants attended the two Staff Rides with the following break-up from organisations:

Organisation	Numbers	Percentage
CFA	41	51%
DSE	27	33%
Victoria Forests	2	2.5%
MFB	3	3.7%
FSC	1	1.2%
Parks Victoria	5	6.2%
Melbourne Water	2	2.5%
TOTAL	81	100%

The group cohort was predominantly male with only four females (5%). Sixty-six (66) participants responded to the surveys with respondents evenly split between the larger agencies, CFA (32/70 or 46%) and DSE/NEO (34/70 or 48%). From the survey responses it was clear that both Staff Ride

cohorts had considerable fire experience, though the first group contained members who had somewhat less exposure to large scale Level 3 incidents, with 23% (n=9/39) have experienced 5 or less Level 3 incidents.

Figure 1 - Percentage of participants with Level 3 fire experience
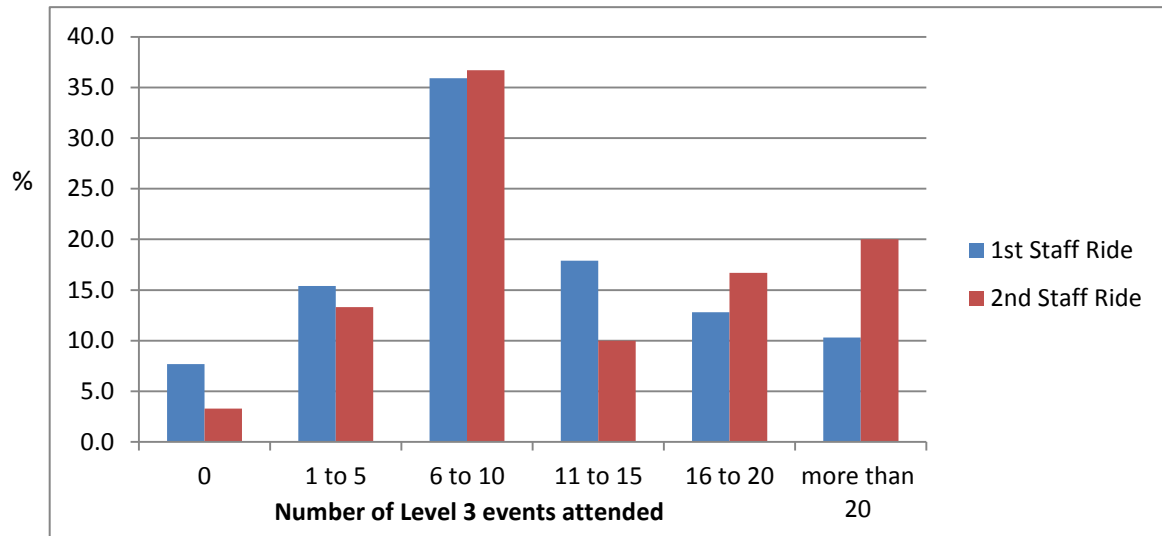
The median number of years in the industry was over 20 for both groups. The median age in the first group was between 36-45 years second group was 46-55 years.

Figure 2 – Age of participants
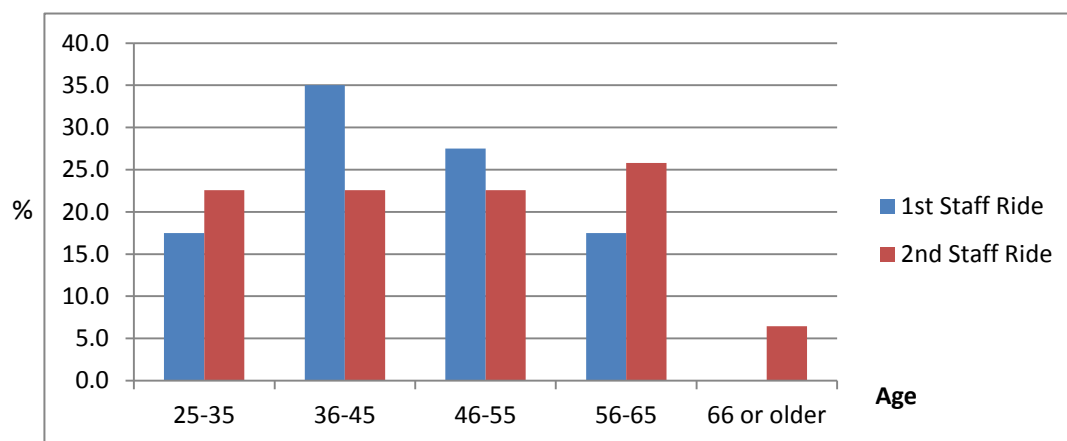
Participants described a number of fire roles that they had undertaken in the previous 5 years as indicated in the box to the left. Recent training included:

- Plan a prescribed burn
- Incident Leadership
- Fire investigation
- Operations Officer
- Fireline leadership course
- Incident controller
- Fire weather
- Exercises
- Safety Officer
- Mentoring

Recent fire roles of participants

Crew leader
Burn OIC
Incident Controller
Operations Officer
Air Ops Manager
Information Officer
Fire Behaviour Analyst
Division Commander
Regional Controller
Situation Officer
Incident Controller Planning
Burn Planning

3 Results and evaluation

3.1 What were participant reactions?

Did they find it relevant, practical, interesting and engaging compared to other training courses?

3.1.1 Endorsement for the staff Ride by participants

The program team for the Cobaw Staff Ride, and in particular its leader Peter McHugh, should be congratulated on a very tight and well executed learning program. They created a learning experience that was highly appreciated by most of the participants as evidenced both on the day and also in the Survey responses. There was considerable endorsement for this type of learning and willingness to be part of the creation or running of future Staff Ride programs.

The level of satisfaction by participants in the second Staff Ride increased over the first one, possibly reflecting the view of the design team that it went more smoothly and better targeted some of the learning objectives. However, it may also be due to a different cohort, with more volunteers and a greater spread of age.

Participant Reactions (from Survey):

Would recommend to others: 63/64 or 98% of respondents
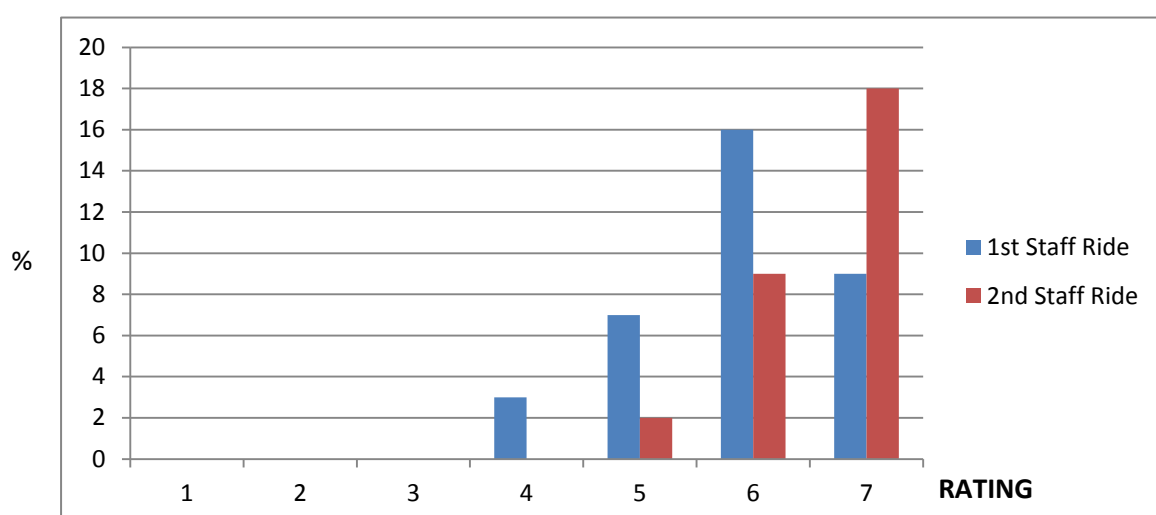
Average over-all satisfaction: 6.2/7

Average relevance: 6.5/7

Actively engaging: 6.5/7

Interested in using own incidents as part of future staff rides: 53/60 or 88% of respondents

Interested in Staff Ride Facilitation training: 33/64 or 52% of respondents

Figure 3: How satisfied were you with the Staff Ride (1 low, 7 high)

3.1.2 What did the participants value?

The following themes were identified (see Appendix 2) from participant responses to what they valued about the program. Note different participants highlighted different elements.

Decision-making – Many participants noted that they felt that the Staff Ride experience gave them a better appreciation of the complexity of the incident as well as the human factors involved through being able to identify various influences**.** Comments also included a recognition of the need to ask better questions as well as developing an understanding of how information available at the time shapes decision-making.

Contribution of the different people in the group – Some participants noted that they appreciated meeting new people, hearing their views and knowledge, hearing perspectives of different roles, building an understanding from the collective experiences of the group, and hearing the juxtaposition of different views (no right approach);

Leadership – Some participants noted that they appreciated building better leadership skills and supporting previous leadership courses;

Reflection – Some participants noted that they appreciated being able to reflect on a real incident, bring able to work through trains of thought to see how a decision was made, visit site and do so with others;

Inter-operations - Some participants noted that they appreciated hearing how another agency makes decisions and getting a sense of their culture;

"I valued the focus on **leadership and decision making**, in particular the importance of understanding the factors that are influencing a person's decision making and how important it is to ask the right questions and really **listen** to the answers."

"I valued liaising with senior staff of different agencies, discussing strategy with experts and not so expert exponents in an environment tailored to generate constructive analysis **without attributing blame**."

"I think the staff ride course applied some of the concepts that other training courses cover in a very **practical and interesting** way that many of the participants can relate to."

"I valued the opportunity to **understand** the complexity and different approach from **another agency**; understanding different drivers and doctrine that influence a different agency's decision making."

Participants' comments

Learning tool – Some participants noted that they could utilise the notion of learning from past mistakes in other courses and in debriefings.

These are congruent with the aims of the Staff Ride.

3.2 What did the participants learn?

- *How does participant learning meet the learning objectives intended by the design team?*
- *What was their key insight (their "Cobaw moment")?*
- *Have they become more aware of human factors in fire fighting and more about themselves? Do they have a better understanding of leadership decision making?*

3.2.1 What were the design team's intended learning objectives for participants?

The design team identified a range of learning objectives for participants, as detailed in the text box on the right. These are intended to work together synergistically. For example, it was anticipated that developing some language around human factors would assist in thinking about thinking, in understanding decision-making and fostering a non-blame culture. However, it was not expected that every participant would take-away the entire range of learning.

> **The learning design team's intended Learning Objectives for participants:**
>
> - Improved understanding and skill in decision-making;
> - building "mental slides" that can be recruited through Recognition Primed Decision-making during the pressure of an incident;
> - enhancing leadership, human factors or fire behaviour knowledge;
> - encouraging inter-operability;
> - enabling thinking about thinking;
> - fostering a non-blame culture; and
> - applying into own context.

3.2.2 To what extent did it meet the learning objectives for participants?

Appendix 1 contains some vignettes composed from participants' individual responses from different post survey questions and, in some cases, from follow-up emails. The range of responses indicates how each person has taken away something different from the day. The following vignette shows the impact on a planner in being able to "step into the shoes" of a Burn OIC, and then challenge his own assumptions about procedure:

> *The Staff Ride allowed me to view decision making from a different perspective. Looking at fires historically gives participants tools which they can utilise in the future. When planning a fire, I have not paid that much attention to the weather or resourcing. I have usually left that up to the Burn OIC. Since the Staff Ride I see how much reliance we put on the Burn OIC's own capabilities and capacity to carry out the plan safely. I now see their role from a different perspective. I wasn't aware of the pressure put on Burn OIC's. Also the lack of insight they or the planners had with regard to the weather. In the future I will endeavour to provide as much information as possible to assist them with their decision making. I will make sure the Burn OIC's nominated are comfortable with the plan and have all the information they need. I will make sure they are resourced properly and encouraging our Operations personnel to take more of an active role in the plans delivery.*

Participant insights

Appendix 2 draws out key themes from participant responses to the surveys and includes a list of the "Cobaw moments". Participant insights following the field trip covered the following themes:

- **Thinking about thinking** – e.g., "identifying when I am below the waterline thinking."
- **Decision-making** - e.g., "being able to identify with the hard decision required on a burn when things are not going well – to kill or change strategies? It gives me more confidence to make this decision in the future."
- **Human factors** - e.g., "realising I have experienced some Human Factors previously without realising it."
- **Situational awareness** – e.g., "that observations are powerful and there shouldn't be a reliance on what we assume such as prescriptions and statistics."
- **About the incident** - e.g., "without a well-planned escape option this burn was doomed to failure"
- **Fire behaviour and weather** – e.g., "inversion layers falling at night"
- **Planning** – e.g., "plan for worst case"
- **Organisational responsibility and leadership** - e.g., "management must provide strategic leadership and support those on the ground."

Most outstanding was an apparent shift into a much more critically reflective, open and explorative approach to considering a past incident. For some participants this appears to have been have translated into greater "agility in thinking" – being able to bring new questions and processes to what they do.

Most participants (53/64 or 83% of respondents) translated their insights into injunctions for application into their own practice at either a personal level, or at leadership level with

POST SURVEY participant questions (self-assessment of learning) – Average of both groups. *To what degree did the staff ride build knowledge or skills in the following:*	Out of 7
Leadership	**5.3**
Fire behaviour	**5.0**
Human decision-making	**6.0**
Communications	**5.3**
Seeing things from different perspectives	**5.95**
Helped in thinking about thinking	**6.0**
Helped to consolidate insights or experiences from other learning or development programs	**5.7**

Facilitator comment:

"In 10 years as an instructor I have rarely seen the impact on people as this type of learning – their change in thinking, their willingness to reflect and inquire and their curiosity to learn more. It is highly effective and efficient, compared to longer courses."

implications for the organisation (see Appendix 2). In follow-up emails a number of people were able to detail how it has created a change in practice or thinking.

Appendix 3 provides an analysis for each learning objective for the first Staff Ride:

- whether there was sufficient opportunity for the learning objective to be met;
- what was seen by Sue Stack and the facilitators in terms of participant engagement and learning;
- evidence from the surveys of their learning; and
- how the learning objective might be strengthened.

There is strong evidence that across the range of participants the intended learning objectives were covered, with different people taking different things away from the event. However, it is useful for the design team and the facilitators to continue to ask what "good" learning sounds like and looks like, and to continue to look at ways to draw out aspects more explicitly.

The program team has engaged in continuous improvement after each successive staff ride, and as a result have been able each time to focus on different learning objectives to provide better opportunities for learning. For example, it became clear after the first Staff Ride that human factors could be made more explicit and this was addressed in the second Staff Ride. Part of the issue with having such a range of learning objectives is that it is difficult for the facilitators to have them in mind together with complexity of the case study and the management of the group culture of thinking. However, the survey responses provide a strong indication that the program delivery is well aligned with its intent and learning objectives.

3.3 Did the Staff Ride make a difference and change individual and organisational practice?

- *What are people doing differently?*
- *How might it be promoting a culture of inquiry?*

3.3.1 What are people doing differently?

There are some early indications from the surveys and follow-up emails that suggest for some people it has already created a change in some behaviours or thinking agility. However, whether these are sustainable over time or under pressure is yet to be tested. Further, participants may have developed mental slides around this incident but until they are in a fire incident that resonates with it, these may not be used. Although participants in the after-glow of the ride might be keen to develop their own staff rides within their local contexts, barriers to this may deter action. Barriers identified by participants that may act against their intended endeavours include lack of manager

> **Have you noticed any change in practice?**
>
> "I am now ensuring I include comment in burn planning process for burns - on post burn weather, fuels and fire behaviour."
>
> "I have noticed that I am scrutinising my decisions in all my activities now. I am attempting to keep stressors to a minimum, I have been relating my new knowledge to people I interact with also. I believe the staff ride definitely impacted on me."
>
> "I have applied more effort to defining required outcomes and standards when deriving a plan or task direction, including identifying variables that may be less than conspicuous in influencing project delivery."
>
> Participants' comments in a follow-up email

buy-in, colleagues not exposed to similar learning experiences, volunteer culture.

The Interim Evaluation Report identified that **Transfer of Learning** strategies could be strengthened in the Staff Ride program. Some aspects of the program act already to assist transfer of learning (e.g. the highly emotive, experiential and memorable learning; the pre and post reflections.) However, for effective and lasting change support needs to be at a more systemic level.

A follow-up email to participants after the 2012/2013 fire season may also elicit further information on how the Staff Ride experience may or may not have impacted on their behaviours and what barriers might have acted against their efforts. Change in behaviours may also be noted by supervisors or colleagues. Such information could inform strategies to provide better organisational support.

3.3.2 How might the Staff Ride promote a culture of inquiry?

A key intent for the Staff Ride is in building a culture that moves from blame, scapegoating or "burying" past mistakes to one that is open and willing to learn from past mistakes. A major risk in running a staff ride for people who may be enculturated in a blame culture is that they become too judgmental of the original actors. This puts these actors under the spot-light and can have negative repercussions for them. Further, the participants will feel reluctant for any of their mistakes to be considered for learning in the future.

> **Pre-survey:**
>
> 40% of survey respondents said that their organisation buried what happened when things went wrong
>
> 28% said that blame was assigned to people

A key challenge is then to create a learning experience which helps shift participants from evaluative thinking and hindsight bias into more explorative, reflective and dialogical thinking where they seek to understand the reasons why, imagine themselves in the event, consider alternatives, hear perspectives from a range of roles, and are better able to understand and manage contradictions.

> *A clear outcome for the Cobaw Staff Ride was*
> *creating a positive model for how to consider*
> *past mistakes – a culture of inquiry*

In the pre-course notes participants were required to analyse the event. Participants were also sent a pre-Staff Ride expectations survey and asked their opinions of the event based on what they were reading in preparation. A review of the comments (See Appendix 2) illustrates the tendency of many falling into evaluative and judgmental hindsight bias… "why wasn't…?". This is in contrast to the transition observed by Dr Sue Stack into a different way of talking and thinking on the day. In short, people were catching themselves for hindsight bias.

> "I realise now that given what was known I would have made the same decision."
>
> Participant comment

In addition, when asked in the post Staff Ride survey if their views about what had happened had changed based on their participation 61% (37/61) said "yes".

For most, their Cobaw moments or insights (both declared on the day and afterwards in the post-Staff Ride survey) indicated more reflective ways of engaging with the incident, drawing understandings for themselves personally and also as leaders. There was development of a culture of *thinking about thinking*, a seeking to understand how decisions are being made and curiosity to learn more. The fact that so many people want to be involved in further staff rides is a strong indicator that the program team hit the mark in fostering an open and non-judgmental opportunity for learning from mistakes. It also indicates there is a thirst for this type of inquiry and learning.

Particularly valued by participants was the ability to explore an issue with a mixed group (in terms of across organisations, roles and levels); hearing the different perspectives of others. For some, these perspectives from the other side gave them new insights that could inform what they did. However, in some group dialogues, in order to keep the atmosphere of goodwill, there were hidden tensions or issues that people chose not to press or interrogate, particularly related to current practice, cultures and the relationship between CFA and DSE.

> "It is always beneficial to learn from real scenarios in a safe and friendly environment. I really valued the opportunity to interact with other DSE, PV and CFA staff and volunteers to learn from our collective experiences. We traditionally haven't learnt well from past mistakes in a timely manner."
>
> Participant comment

In building High Reliability Organisations it takes time to develop open and communicative cultures, where people are comfortable in examining habitual assumptions and can engage in productive dialogue that can imaginatively navigate contradictions and tensions. These types of conversations require people to operate at high adult developmental levels, well beyond black and white thinking. In five years' time, after a program of staff rides or other such programs we would expect the capacity of a mixed cohort (some strangers, and others with a hierarchical relationship) to go deeper.

> "It is easy for experienced people to miss "obvious" signs and clues as to what is going on. I need to think about how I can get people reporting to me to recognise this and look more closely at "things that don't fit".
>
> Participant comment

A key benefit of generating an inquiring culture is that people are empowered to do their own learning, and empowered to facilitate the learning of others. The challenge is for the organisations to support wider spread of this culture, encouraging its infusion into normal practice, existing learning programs, mentoring and after action reviews.

3.4 Is the Staff Ride effective as a learning program?

- *Is this Cobaw Staff Ride format the best for the learning objectives and the audience?*
- *What elements were particularly valued and what are the implications for the design of other staff ride formats?*
- *What are the opportunities and the risks?*
- *How does it compare to other learning?*
- *Is it value for money?*
- *Where do staff rides fit into the overall fire training program?*
- *Should the program be expanded and what are the implications?*

3.4.1 Is this Cobaw Staff Ride format the best for the learning objectives and the audience?

The Cobaw Staff Ride format is on the high-end of a spectrum of possible ways of organising a staff ride in terms of cost, organisational intensity, preparation effort and facilitator capability. However, a review of the costs of the Staff Ride with other professional learning programs by the evaluators demonstrates that cost is comparable to other training courses. Other staff ride formats include on-site after action reviews with the people involved in the incident, involve scenarios for role-play exercises, or involve the original actors in telling their stories to a wider audience for learning. The Cobaw Staff Ride format was carefully considered and designed to suit the incident, the audience, and the intended learning objectives.

Indications by the participants are that this format worked for them, and few improvements were identified as necessary. They assessed their learnings gained from the Staff Ride as comparable or better to other courses, exercises or mentoring learning opportunities. Assessment of their learning through evaluating their survey written responses, through observations on the day and evaluating video footage demonstrate that many of the learning objectives were achieved to various extents across the range of participants. Constant program improvement, however, can strengthen these (see Appendices 3 and 4).

Cobaw Staff Ride format:

- Considerable pre-reading to understand the incident(requiring good literacy);
- Careful group selection with a mixture of agencies, experience and roles;
- Afternoon and evening sessions at training venue to orient participants to incident, human factors, attitude of inquiry;
- Field trip the next day to the location where the groups travelled to various "stands" representing key decision moments from the perspective a particular fire role. Discussions into the reasons behind the decisions;
- Short integration phase involving a talk by one of the actors and a declaration of participants "Cobaw moment" or insight back at the venue.

A robust format

There is already considerable investment in setting up this ride. While there are some constant improvements that can be made within the existing format to strengthen participant learning, the format itself is robust for the intended audience of vertical slice of future and current leaders. The participants highly valued each component of the program, in particularly the mix of groups and the attendance by an original actor in the incident at the end (see details in the box to the left.) It should be noted that the second Staff Ride gave slightly higher ratings than the first. See Appendix 4 for a detailed analysis of each component of the program.

Considerations could be made to value-add to the existing Cobaw Staff Ride format through an additional day follow-on workshop that might target particular learning (e.g., strategic analysis of the issues that arose, Human Factors, or Staff Ride facilitation training), though most respondents indicated they were happy with the time allocated.

It should be noted that the pre and post surveys were designed with multiple purposes in mind. The principle purpose was to evaluate the program. A secondary purpose assisted participants to reflect on the reading materials prior to the event, and to reflect on their learning and how they might put this into practice following the event. There is evidence that the elapse of time from participants giving their Cobaw moment at the event between providing their survey responses potentially enabled more nuanced insights and injunctions for application. Some form of continuation of this would be an important strategy to encourage transfer of learning.

POST SURVEY Questions (Average of both groups)	Rating out of 7
How important is it to have the background reading materials to understand the incident prior to the field trip?	6.2
How useful were the reading materials?	5.9
How important were the afternoon session in orienting you to the incident and human factors?	6.1
How satisfied were you with the orientation sessions?	6.0
How effective were the tactical decision-making exercises?	5.6
How useful was it to have role plays at the stands?	5.5
How valuable was it to have a mix of participants?	6.4
To what extent were you able to walk in shoes of original actors?	5.4
How valuable was it to have someone attend from the original incident?	6.6
How important was it to have an integration phase?	5.9
How well did this phase help you consolidate your learning?	5.5
How important was it that the facilitators have strong background knowledge of the incident?	6.3
How satisfied were you with the quality of facilitation?	6.2

Implications for design of further staff ride program formats

There are many options in choosing the components of a staff ride program and each have trade-offs. Key elements include:

- The learning intentions
- The amount of pre-reading
- How the participants might be orientated initially
- The type of activities used at each stand
- The time for integration, including follow-up activities
- Transfer of learning
- How to utilise the original participants in the incident

While the evidence from participants about what they valued in this program is important in informing future programs it should not lock new designers into following the same format or approach. Having a range of Staff Ride models for people to experience may build up greater design fluidity and imagination for what is possible.

3.4.2 What are the opportunities and risks?

Talent spotting and successional planning

Some participants were able to shine in this format – some people stood out in contributing information from the context, or taking on roles, or helping to facilitate productive dialogue, or in their nuanced insightful contributions. This could be seen as an event that identifies potential leaders, or facilitators.

Seeding program for other staff rides

There is a strong interest by participants in using the staff ride concept in their own contexts. The Cobaw Staff Ride could be positioned as an event that seeds new approaches to learning (learning from mistakes, culture of inquiry) as well as initiating interest in the running of Staff Rides of various formats. It is not just helping individuals enhance their own knowledge, but also encouraging them to bring the culture of reflecting on past mistakes to their pre-season or post-season briefings, running staff rides in different formats, encouraging on-site after action reviews. Targeting people involved in learning as well as leadership to attend the staff ride would be an important strategy in ensuring flow-on.

> "I am planning to use the Staff Ride Concept for local staff to reflect on what worked and areas for improvement at successful and unsuccessful burns, incidents and near misses that have occurred at a local level. I think that I would take a more succinct approach and analysis for local staff (2-3 hours), however, it could be as brief or as complex as you want to make it. I think that I could easily dissect local incidents without too much work i.e. maps, weather and eyewitness accounts.
>
> For me it is more about trying to create a safe environment to discuss local instances and develop a culture at a work centre and district level that encourages learning rather than blame."
>
> Participant comment in follow-up email

However, designing and running staff rides does require skill and understanding of the different options and issues, in particular the need to orient

participants carefully so that they are in an open culture of inquiry. Thus it is important that people hopeful of running staff rides are supported, to avoid the risk of it back-firing.

Sustainability

The Cobaw Staff Ride was never designed to take thousands of people through the program. The commitment to the reading and the understanding of the incident requires particular knowledge, literacy and the capacity to be articulate, which should suit those participating in the agencies' leadership framework program. It requires continued participation by the original actors and therefore there are a limited number of events that might be considered in every year. Given that it is based on 2003, its longevity for the future will diminish as practices change.

Further, its smooth running is very much dependent on the behind the scenes organisation as well as the expertise of the facilitators. It needs to have a successional plan – for example, training new facilitators through co-facilitation. While it has considerable resources for participants and facilitators it would need considerable support or mentoring by existing organisers to be run by another group. A key is utilising it strategically as a model for learning that can "go viral" and continuing to target those who might be in a position to take its ethos into creating similar learning opportunities for others.

Sensitivity to the needs of the original participants in the incident

Many risks to the program were identified by the program team and also in the Interim evaluation report. While many of these have been mitigated, a key risk is the impact of the program on the original participants of the incident, such as danger to their reputations and insensitivity to their needs. The Cobaw Staff ride was based on an incident that for many of the original participants' indications were that it was not resolved, for some it caused physical and mental ill health, had high media fall-out, created friction in the communities in which they live and between each other.

> **Cobaw moments:**
>
> "The Burn OIC presenting himself and taking ownership for his actions – an impressive role model."
>
> "Appreciation for being able to walk in someone else's shoes."

Their participation in helping to create the case study for this Staff Ride was crucial, requiring considerable courage and willingness not just to provide information, but also to expose their actions and decisions to scrutiny of an audience. Further, some have stepped forward to be present at the Staff Ride to give their stories, which was highly valued by the Staff Ride participants. Although the original participants were given assurances of confidentiality, in reality the names are likely to be communicated to others by the participants of the ride.

There is a need for the organisation to take responsibility for assisting in the healing for this group and at the very least providing commendation for their willingness to come forward and offer their experiences for the learning of others. This is also important in modelling an ethic of care that will encourage others to participate in future learning about mistakes.

As new staff rides are considered, some potentially with worse outcomes (e.g., deaths), it is important to understand early what may be unresolved and how to create opportunities for healing. For example, prior to designing a staff ride for others' learning it might be important to do an after action review on site, taking the original actors through the event so they can gain a greater understanding or what happened, the impact of theirs and others' decisions. These need to be done sensitively and it would be useful to create guidelines to help those who are thinking of designing staff rides.

High reliability on the effectiveness of facilitation

The quality of the facilitation is critical to the success of the Cobaw Staff Ride program. The demand on the facilitators is high in terms of what they need to keep in mind. After each successive ride the facilitators have reported being able to have more of the case study under their belt, have been able to better manage opinionated group members who block discussion, able to better frame questions for the group around each stand and to draw out more of the human factors.

In developing a new type of learning it takes a while to build up a sense of what good learning looks like, sounds like and feels like during the event. It is important to build up facilitator capacity in this sort of learning; not just understanding the case study or the knowledge components (fire behaviour, human factors, and leadership) but also the skill in taking the participants on a journey of a certain type of thinking and learning. Given the current age of the facilitators, if the Cobaw Ride is to be continued it is important to have a successional plan. For new facilitators taking a large group of 10 or 12 alone it is a big ask.

Facilitation Skills required:

- Clear view of program and learning objectives. Knowing what to aim for and listen out for;
- Detailed knowledge of the case study – clear sense of the story and key decision making points;
- Facilitator skills (role plays, managing judgmental people, helping people to unpack and go deeper, encouraging dialogical contribution by the group, challenging assumptions and thinking);
- Knowledge of human factors, fire behaviour;
- Knowledge of fire roles;
- Knowledge of the learners and the range of backgrounds and experiences.

A successional model for the Cobaw Staff Ride could include a co-facilitation arrangement where new facilitators work with the current ones to build up skill. It would be crucial for briefing and debriefing processes to help the new facilitator developed a nuanced understanding of the learning they need to engender. Further, this apprenticeship could build facilitator skill for running other models of staff rides in the trainee facilitator's contexts.

It should be noted that while other models of staff ride may require slightly different facilitator skill or knowledge the capacity to help people unpeel deeper and deeper layers in a comfortable environment is crucial for this type of learning.

Utilisation of the knowledge capital of the current organisational team

The program team has been on a steep learning curve in the design and running of the Cobaw Staff Ride. They have endeavoured to hold debriefings with the facilitators following each ride, as well as gain feedback from participants to inform continuous improvement. Sue Stack was able to contribute to this process and provide suggestions following the August ride which the facilitators and organisational team took on board.

Each time a better understanding is gained as what is important and what "good learning" looks like. In developing these understandings it is often easy to forget how much knowledge capital has been created within the program team and the value of the processes used along the way. This is important to capture for the benefit of those not just looking at running the Cobaw Staff Ride but also in the design of other similar learning experiences. This continuous improvement process used by the design team is a model for other learning programs.

> **Continuous improvement process:**
>
> 1. Feedback from participants
>   - About the program
>   - About their learning
> 2. Pre-briefings with the facilitators
>   - What is our intent?
>   - What do we need to emphasise?
>   - What do we need to look out for?
>   - What strategies can we use?
> 3. Debriefings with the facilitators and design team following the event
>   - What was our intent?
>   - What did we see and value? Any issues? Were the learning objectives met?
>   - Why was it happening?
>   - How to improve? Alternatives? New knowledge needed?
> 4. Check in with the original actors in the incident

3.4.3 How does it compare with other learning?

As part of the pre-survey, participants were asked to rate a most recent fire learning experience (course, mentoring, exercise) against a number of indicators. These were then compared to similar questions asked about the Staff Ride following the event. The responses from the second Staff Ride group were analysed using a *related sample Wilcoxin Signed Rank Test* to determine if there was any significant difference between their assessment of the Staff Ride versus their most recent learning experience. The "N/A" responses were removed. The medians and the items that are significantly different are reported in Appendix 5.

Of significance is that they perceived **the Staff Ride to have higher relevance and impact on them compared to their previous learning experience.** They also perceived it as being significantly better in building up specific skills in fire behaviour and human factors decision making. Further, they rated the Staff Ride significantly better than their other recent learning in causing reflection and challenging of assumptions. The figure below compares the mean rating for the Staff Ride with the participants' most recent learning experience for those items that are significant.

Figure 4 - Comparison of the 2nd Staff Ride with participants' most recent learning experience
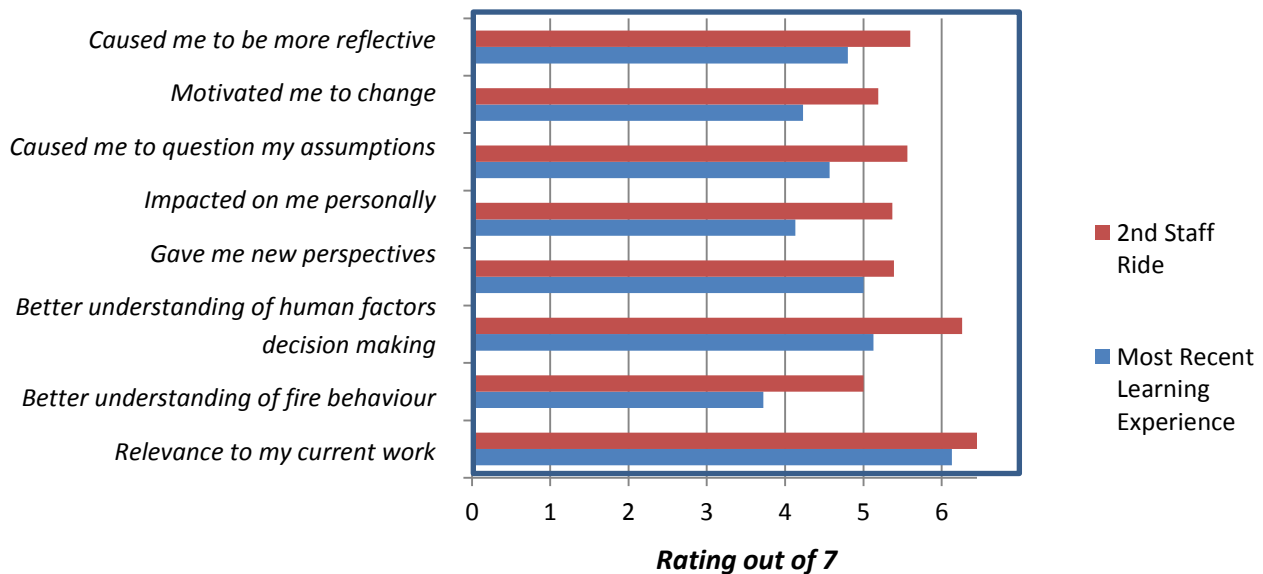
Although these figures are strong indicators that the Staff Ride is providing a new niche within the existing training repertoire, it should be noted that the comparative impact of different training programs on the organisation is not being measured here.

3.4.4 Is it value for money?

In asking whether the Cobaw Staff Ride is value for money, it is useful to consider its importance to the organisation in helping it to achieve its goals and the feasibility of provision. While the Cobaw Staff Ride program, like all other learning programs, has had an initial development cost it is relatively cheaper than other learning programs to run at around $18,000 for 40 people. These costs are associated with the cost of the workbook, training facility and accommodation hire, and hire of busses and other facilities for the site visit.

The following table assesses 'value for money' criteria (that were identified in the Interim Evaluation report) against findings from the final evaluation. In a post-ride workshop with the design team, the evaluation team asked them to compare the Cobaw Staff Ride with other learning programs (mentoring, exercises, courses) to give the rating of LOW, MEDIUM or HIGH importance or feasibility as shown.

Importance Criteria	Intended, actual or potential benefits	Rating
How does it address learning gaps in the organisation?	The following gaps were identified in existing learning programs which the Staff Ride aims to address: • Need more opportunities to develop mental slides for Recognition Primed decision making. • Course knowledge (such as Human Factors, technical knowledge and Leadership) needs to be integrated within an experiential context. • Build "thinking about thinking". • Opportunity to reflect on past mistakes. • Develop an open culture of inquiry.	HIGH importance in addressing learning gaps and culture.
How many people does it impact on directly, and through flow-on effects?	• 40 leaders directly at a time (possibly 2 to 4 times a year). Some of these leaders are likely to positively influence others (given their survey responses). • It has the potential to seed more staff rides (given the interest indicated by participants) which will impact on many others. However, this will need organisational support.	HIGH importance in ability to impact on numbers of people
Does it contribute towards individual learning and growth?	• Evidence from the surveys is that it builds new skills, knowledge, attitudes and thinking in line with the learning objectives and identified organisational learning gaps. • Participants are able to take away learning appropriate to their own work and role to improve performance. • Links into leadership opportunities. • It provides an opportunity of network building across role, levels and organisations.	HIGH importance in being able to contribute towards individual learning
To what extent does it have wider influence? How does it support other learning interventions?	• Helps address successional leadership issues for the organisations by targeting young leaders and mixing with more experienced. • Provides a role model as pioneer for new learning models where people can learn from mistakes and develop greater thinking agility. • May infuse new cultures of learning and inquiry into existing learning modes. • The knowledge of the program team can flow-on into their other endeavours and be drawn on by people entering the staff ride design field.	HIGH importance in influence and synergy with other learning
Does it contribute to organisational productivity?	Yet to be seen. It is hoped that it will contribute to changes in culture (willing to examine past mistakes for learning), improved leadership and decision-making, greater inter-operability, less impact of mistakes.	HIGH potential

Feasibility Criteria:	Issues	Rating
Resources required (Learning design, materials, people, equipment, facilities, financial, time, organisational)	• Preliminary learning design was considerable but now in place, materials developed, organisational team in place that worked well together, good quality training venue near site. • It required considerable financial investment in development and now on-costs of around $18,000 per event + time of organisers and facilitators (which is comparable to or cheaper than other courses). • With the existing materials and apprenticeship with the current organisers this ride could be run by a new organisation/facilitation team.	HIGH feasibility in cost-effective continuation of the program by original design team
Facilitation skills required	• Facilitation skills required for the Cobaw Staff Ride are high, but now have skilled facilitators in place. • Consider co-facilitation, roaming experts, successional facilitator plan.	MEDIUM feasibility in access to facilitators
What is a sustainable frequency that it can be run?	• This is dependent on availability of original actors, facilitators, organisers and the venue. • What is the longevity of the story? • This could be turned over to new organisers and facilitators (with a successional facilitation/organisation plan.) • Indications are that demand is likely to be greater than ability to deliver.	HIGH feasibility to run this 2 times a year
Ability to incorporate transfer of learning strategies to help participants apply to their own contexts	• This was not formally built in and needs improvement. • Follow-up in providing staff ride training. • Link to mentoring and leadership programs.	HIGH feasibility in improving transfer of learning
Risks in doing it, risks in not doing it	**Risks in doing it**: • Intent can backfire, creating climate of blame, with the participants taking home the wrong messages. • Legal issues. • Organisation and logistics. • Highly dependent on good facilitation. • Impact on the original actors in the incident. It needs to have strategy that can be used by future rides of working with the original actors to ensure they are valued, checked up on, and any fall-out mitigated. **Risks in not doing it:** • Continue a blame/bury culture • Not learning from past	HIGH feasibility as a result of mitigation of risk strategies
Commitment by the organisation and alignment with their goals	• MACC group and manager buy-in at different levels of the organisations. • Needs further endorsement and awareness raising through newsletters, support of project team and provision of resources for others to develop staff rides	MEDIUM feasibility

3.4.5 Where do staff rides fit into the overall fire training program?

The design team saw the Staff Ride as part of a suite of leadership learning experiences, with the intent that through providing a rich context for decision-making participants could integrate their learning from leadership, human factors and technical knowledge training courses. Figure 5 below indicates four learning areas that have emerged from the Cobaw Staff Ride as key potentials for personal and organisational change.

Figure 5 – Learning outcomes of the Staff Ride and their application
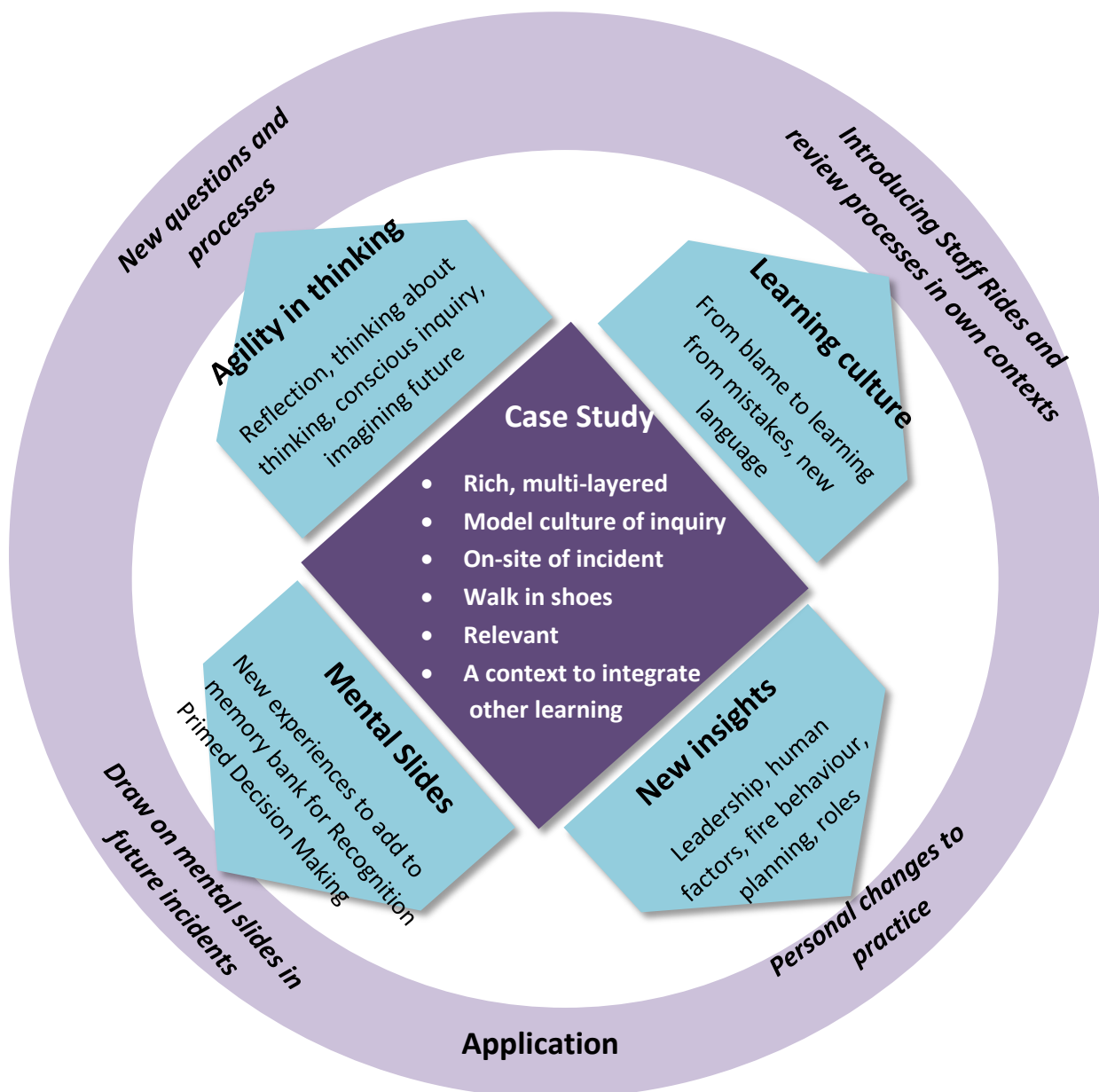
Evidence from the evaluation suggests that the Staff Ride provides a rich form of learning that could be used synergistically with courses, mentoring programs, exercises, and after action reviews. Not only can it help participants to connect knowledge from past courses but also encourages them to continue further training. The cultures of inquiry developed in the staff ride format can be brought into other forms of learning, as well as develop greater empowerment in self-learning and facilitation of the learning of others.

> "We don't normally create the situation to have this reflection."
>
> Participant comment

Strategies to enhance its impact and foster greater synergies could include:

- Provision of future training opportunities in leadership, human factors, fire behaviour etc. to take advantage of interest stimulated by the Staff Ride.
- Provision of memory joggers (e.g. Human factors phone app – error traps, biases and strategies).
- Mentoring programs and existing debriefing practices to encourage "thinking about thinking" in order to continue to build thinking agility.
- Development of resources and facilitation training programs to develop staff rides, with organisational support for these at all levels of management.
- The organisation to promote, model and encourage cultures of inquiry.

Participants interest for further training	Number out of 70 respondents
Incident control/operations	9
Leadership	5
Fire behaviour / weather	8
Human factors	6
Staff Ride facilitation	33 (47%)
Mentoring / facilitation	2

3.4.6 Should the program be expanded and what are the implications?

The results of the evaluation provide initial endorsement on the value and potentials of the Staff Ride program for the participants and the organisation in terms of learning, thinking, cultures of inquiry and in some cases new behaviours. However, its impact on the productivity of the organisation (e.g. reduction in mistakes or impact of mistakes) is yet to be measured.

The following table lists some recommendations for consideration. These build on this initial endorsement by providing possible actions for deepening its impact and expanding its reach.

Recommendation	Actions
10. Endorse the Staff Ride program	10.1 The Evaluation Team recommends to the Multi Agency Capability Committee (MACC) that the staff ride program be endorsed and supported as a valuable program addition to its learning program repertoire.
11. Use the Cobaw Staff Ride as a seeding program	11.1 Continue to deliver the Cobaw Staff Ride in the current format with an emphasis on seeding further staff rides and fostering a culture of willingness to learn from past events. 11.2 Use a continuous improvement model where organisers and facilitators in the Cobaw Staff Ride continue to debrief and foster greater insight into indicators for the learning they are wanting to achieve, building facilitation and design expertise that can be shared by others.
12. Develop resources for others to run staff rides	12.1 Draw on the experiences of the program team and the Staff Ride evaluation information to create learning design guides, or videos for others considering running a staff ride in order to build internal capability.
13. Raise awareness about staff rides	13.1 Promote staff rides as an ability to learn from action and is accessible to all. Use video, newsletters or existing communications to help people get a sense of what different staff rides might be, and what a *culture of inquiry* looks like.
14. Use a repository to capture knowledge	14.1 Establish an on-line access point similar to the US Wildfire Lessons Learnt website, to capture the knowledge and experience in staff rides being developed in an Australian context. This would provide a resource for those considering the design of staff rides in their own contexts.
15. Acknowledge and support those in the original incident	15.1 Work with the original participants in the incident to determine their response to the process of the development of the Staff Ride, and to help design effective processes for others. 15.2 Develop a strategy that recognises the contribution towards the development and successful running of the Staff Ride of the original participants. 15.3 Use the participants of the original incident as ambassadors to other districts considering a staff ride.
16. Build design and facilitation capacity for staff rides	16.1 Invite past participants interested in building staff ride design and facilitation skills to be co-facilitators in the Cobaw Staff Ride, building up general skills to be used elsewhere, as well as developing a pool of facilitators that can be used for

	the Cobaw Staff Ride.
	16.2 Run facilitation programs for designing and facilitating different types of staff rides. Consider doing this within an action research framework, building capacity for attendees for constant improvement. Consider a mentoring network around development of Staff Rides.
17. Model other types of Staff Rides	17.1 Offer other staff rides, following different formats and intents, using positive case studies as well as those with negative outcomes, for different audiences, building up a repertoire of possibilities, and engaging different groups within organisations and the sector.
18. Enhance the learning from staff rides through connection with existing learning programs	18.1 Provide future training opportunities in leadership, human factors, fire behaviour etc. to take advantage of interest stimulated by the Staff Ride. 18.2 Continue and enhance mentoring programs and existing debriefing practices to encourage "thinking about thinking" in order to continue to build thinking agility.

4 Appendices

4.1 Appendix 1 – Vignettes – First Cobaw Staff Ride

The following have been constructed from responses to the survey monkey questionnaire and to a follow up question. Each paragraph represents the views of one participant.

The Staff Ride allowed me to view decision making from a different perspective. Looking at fires historically gives participants tools which they can utilise in the future. When planning a fire, I have not paid that much attention to the weather or resourcing. I have usually left that up to the Burn OIC. Since the Staff Ride I see how much reliance we put on the Burn OIC's own capabilities and capacity to carry out the plan safely. I now see their role from a different perspective. I wasn't aware of the pressure put on Burn OIC's. Also the lack of insight they or the planners had with regard to the weather.

In the future I will endeavour to provide as much information as possible to assist them with their decision making. I will make sure the Burn OIC's nominated are comfortable with the plan and have all the information they need. I will make sure they are resourced properly and encouraging our Operations personnel to take more of an active role in the plans delivery.

_____

I valued the opportunity to reflect on a real world situation and look at what happened in some detail. We don't normally create the situation to have this reflection. I now recognise the situation better and the complexities that were at play. My insight is the importance of recognising situational awareness and how human factors will focus attention in decision making. It is then about recognising the need to support leaders at different levels, particularly the burn OIC. Asking the 'right' questions when trying to gain info at a burn is critical. Be aware that the human factors will limit people's ability to make good decisions. It has caused me to reflect on new ways of undertaking my role in planned burning and bushfire response. I have thought about the right questions to ask and when.

_____

I valued the focus on leadership and decision making, in particular the importance of understanding the factors that are influencing a person's decision making and how important it is to ask the right questions and really listen to the answers. As best as possible you need to put yourself into the other person's environment (not necessarily their shoes). It helped me to reflect on the role of the region, in particular the decision making and communication. It reaffirmed a number of ideas/issues regarding regional approvals and risk management decisions.

_____

The ability to share knowledge with other participants was very valuable. My first impression was that of a poorly managed burn gone wrong. However, there were many factors that contributed to the event, many of which were beyond the control of the crews in the field.

The stand out moment for me was when the BOIC talked about sitting down with the people who were impacted by the fire to discuss what could be done to help them. I think there needs to be an acceptance of responsibility at all levels of management to ensure field operations are supported appropriately. There were a number of triggers that should have had alarm bells ringing however nothing was done to alert the field of the potential.

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It is always beneficial to learn from real scenarios in a safe and friendly environment. I really valued the opportunity to interact with other DSE, PV and CFA staff and volunteers to learn from our collective experiences. We traditionally haven't learnt well from past mistakes in a timely manner and I think the use of a tool such as the Staff Ride, if conducted in an efficient, timely manner would be extremely beneficial.

My Cobaw moment was realising that I have been experiencing some of the human factors previously but not actively realising it. I'm sure this kind of event could have happened at one of my burns. When reading the pre-course material the decisions seemed so obviously wrong, but when walked through the event, the decisions made seemed quite reasonable based on the perspectives of those involved. This has generated a greater awareness of human factors and how these influence my decision making. I will undertake a more conscious review process, particularly when I'm involved in high risk decision making. I will promote the Staff Ride as a tool to learn from events and make our continual improvement more timely.

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I valued being able to walk around the Cobaw Forest and reflect on the decisions that led to the Cobaw Bushfire through people in the group sharing their own experiences, thoughts and knowledge. After reading the initial handbook, I was probably quick to judge. Once I was out in the field and retracing the steps of the people involved, it was easier to see perhaps why they made some of the decisions they did.

My Cobaw moment was probably the affect human decision making has on planned burning and fire management, in particular in relation to cognitive thinking and below the water line thinking. As an individual if I'm able to identify when I'm utilising below the water line thinking, I believe this will enable me to become a better practitioner. It is important to think about alternatives. Do not get hemmed in to thinking about one option. Perhaps my major insight is that amongst the group there was a variety of opinions regarding how the planned burn should have been conducted or handled. Amongst these opinions there was no definitive right and wrong, just different judgement calls from people with varying degrees of knowledge.

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I valued the interactive sessions, the frank and open discussion, working with other agencies and the value of learning from others' errors. Standouts for me were: maintain overall situational awareness,

need to double check weather info and develop a further in depth understanding of these impacts, the need to be able to say no at the start of the job and feel that your choice will be valued and supported. My biggest insight was understanding the process that was followed and that it was the Swiss cheese holes all lining up to produce the end result.

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The value for me was in creating awareness and perceptions. I went from thinking that the scheduled burn was too ambitious and the weather unfavourable, to a better understanding that different leaders with different perceptions and actions would have seen a different result and that human factors play an important role. I believe I will be a better leader, and I have some learnings that I can pass on to my brigade and group.

Since the Staff Ride, I have noticed that I am scrutinising my decisions in all my activities now. I am attempting to keep stressors to a minimum, I have been relating my new knowledge to people I interact with also. I believe the Staff Ride definitely impacted on me.

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I found it valuable to be onsite and discuss options. This was critical in being able to put yourself in "their shoes" and make decisions on instinct rather than with all the facts and figures and hindsight on your side. I found that my views prior to the Staff Ride after reading the pre course material are now drastically different once I attended the site and discussed real time options. I was quite judgmental before. This is partly because of Cobaw, but I have been grappling with the idea of when I am making decisions, strategic or tactical, being able to think about myself in the 3rd person. What pressures am I currently under that may affect my decision making? What biases do I have? What information do I know and what do I need to know? If this goes wrong, what will it look like and what will be impacted? These are all the types of questions I have been training myself to ask.

In future I need to be more active in monitoring the weather forecasts and cross checking these with actual occurrences in my District to gain a better understanding of local weather patterns. Once you light a planned burn you are lighting a bushfire. With this in mind I will make sure that all planning, support and resourcing is appropriate to conduct Planned Burn operations in my district.

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I valued the opportunity to understand the complexity and different approach from another agency; understanding different drivers and doctrine that influence a different agency's decision making. Why is agency interoperability so difficult? Agencies still seem focused on agency issues rather than real or perceived impacts on the community. My take-aways are: Do not wait before you ask for assistance and facing the community. Have the courage to seek assistance or ask for advice from other agency or people. As leaders ensure that you can provide structure/system to provide cognitive decision making to support those immersed in the emotional decision domain.

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I valued the ability to actually understand why decisions were made. This was achieved through the immersion in the topic and the site visit. I have more understanding of why the management

personnel made the decisions that they made. My key insight is that I need to ensure that I maintain good situational awareness and if I am at the scene level of the incident and that someone is maintaining good situational awareness at a wider level. In this case monitoring weather on a wider footprint, interpreting concern from the surrounding community, etc.

I would be keen to see how we could utilise some of the processes that are used within a staff ride and introduce this into our Tactical Exercise Without Troops (TEWT) programs in Gippsland. I believe that we could add value to the TEWTS by discussing previous incidents in the same that a Staff Ride is undertaken.

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I valued liaising with senior staff of different agencies, discussing strategy with experts and not so expert exponents in an environment tailored to generate constructive analysis without attributing blame. The Staff Ride provided a unique opportunity to see developments through the eyes of the various players, and understand how minor decisions cascaded to produce an unanticipated outcome. It stressed the importance of employing expert knowledge as available, careful planning with respect to resourcing, scale of operation and the provision of "escape" options. In respect to quality planning:

- Resourcing (numbers, type, experience, training);
- Provision of "escape" options and quality communications at all levels;
- Establish a structure that enables and make the time to "step back" and examine the big picture rather than being tied to the initial plan/concept, and finding too late that it will not deliver objectives. Regardless of position in structure, be prepared to ask questions of all involved and, in turn, be prepared to listen to and honestly respond to the questions of others – be aware for light bulb moments;
- Be equipped and prepared to adopt plans B and C as necessary;
- Quality briefings, so expectations are clear;
- Watch for the unanticipated – establish why fire behaviour is varying from anticipated, or examine outcomes to ensure they can be explained.

Experience is no substitute for careful planning. I heartily endorse as a valuable tool in the rounded' development of current and future fire management practitioners.

Since the Staff Ride I have:

- Applied more effort to defining required outcomes and standards when deriving a plan or task direction;
- Devoted more time and effort into identifying variables that may be less than conspicuous in influencing project delivery;
- Taken additional care in allocating responsibilities to individuals charged with project delivery, and ensuring the extent of influence required of the role together with appropriate protocols are in place and understood;
- Focussed on adopting a longer duration planning-delivery window so as to better consider potential repercussions in the later delivery phases and post-delivery.

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I valued the in depth look at a real life situation that didn't go perfectly, and the learning opportunities it provided. I am now looking at how I can apply the lessons I learnt to improve my own performance, especially in fire. Obviously this will benefit the organisation and will hopefully lead to better analysis, decisions and management. It has also given me greater confidence in my abilities, capacity and management style. I always try to analyse what is going on and look behind the obvious. The Staff Ride reassured me that this is a good approach and that even if others don't like my questioning and detailed approach and planning, I will persevere and try and encourage others to do likewise.

My key take-aways are: to pay attention to what is going on and not dismiss things that don't quite fit what I was expecting. If it doesn't fit, then perhaps my assumptions of what is going on and why are wrong and need more investigation, analysis and thinking. It is easy for experienced people to miss "obvious" signs and clues as to what is going on. I need to think about how I can get people reporting to me to recognise this and look more closely at "things that don't fit". Clear, accurate communication is essential, especially to those that are relying on your observations to build an accurate picture of a situation.

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This type of training encourages you to question and attempt to understand why decision are made and the influences on those making decisions. This is very useful in gaining understanding. My insight is that while first impressions can be good, they are not always. It is important to understand the background and circumstances.

For me, the Staff Ride has made me think more about why people may react or take a particular course of action. It is very easy to be critical of people or say you "should have done this". By providing background information you can better understand why decisions are made and what people may have been thinking or what they based a decision on.

I recently completed another fire course that prompted self-reflection. I think the Staff Ride course applied some of the concepts that other training courses cover in a very practical and interesting way that many of the participants can relate to.

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Email by a participant to his staff

Hi everyone,

FYI on Mon-Tues of this week I was fortunate enough to be invited to be part of a pilot Fire Development program run by DSE & CFA, called a "Staff Ride", at the Australian Emergency Management Institute at Mt Macedon.

I thought while it's fresh in my mind I would send this brief message on to fellow VF Burn OIC and Ops Officers in the Alex Ops Area to share my experience and some of the things I got out of this excellent program. Quinton, feel free to distribute this to others in Noojee Ops, although you may prefer to discuss with them your own impressions/experiences when you go later in the year.

Attached is an Explanatory Note about the Staff Ride for some background. There were about 40 participants from DSE, PV, CFA, MFB, Melb Water, and VF (i.e. Me!), from all over the state.

Essentially it was a short course whereby participants examined in great detail the events that led to an escape of an FRB in 2002/03 in the Cobaw State forest, which caused damage to neighbouring private property assets and significant reputational damage to DSE. Some of you may recall this incident (Tom was there, with his CFA brigade).

There were detailed 'As it happened' notes provided as pre-course preparation, and we made a tour (or 'Staff ride') of various locations on the fireground, with detailed discussion at each site.

Without going into too much detail, this incident was your classic 'Swiss Cheese' situation ie. All of the holes lined up at the same time to make things turn to shite, such as:

- extended drought period, meaning the bush was drier than people (experienced and with very good knowledge of that forest) had assumed it to be
- fatigued individuals following the largest campaign fire season for years (over a million ha burnt in the Great Alpine fires)
- pressure on politically to do more burning in light of the large fires just witnessed (release of Esplin Report on these fires was imminent)
- budgetary constraints in light of season that had just been – therefore very limited resources and overtime capacity
- burn ignited on PFF's last day (Friday) – including break-up/farewell function that evening
- deceptive weather – strong inversion meant dewy evenings, but giving way to warm night air at fireground elevation (700m) hence stronger fire activity overnight than anticipated

Participants were asked to put themselves in the shoes of the key burn operatives (burn OIC(s), FMO, Duty Officer, Regional Fire Manager, Crew Leaders) and re-visit their strategies, tactics and decisions. We were challenged to walk in their shoes, given the culture and way of doing things nearly 10 years ago as compared to today, and avoid the classic criticism of 20:20 hindsight.

We were also given information about the way people react and behave when under pressure. Typically when things are going well we have good cognitive capacity ie. We're able to think clearly about objectives, strategies, resourcing, weather, fuel moistures, rates of spread, etc. However, when things start going wrong we lose our cognitive ability and our thought processes start moving into the area of our emotions i.e. Memories, past experiences. Typically our focus narrows to what's in front of us – we lose sight of the 'bigger picture', and lose the ability to react to changing situations.

For me, the 'take-home' message is that the AIIMS incident management structure is so important to 'spread the load' of work and decision-making, and give support to individuals to give them the best chance of staying in the 'cognitive' state of mind. At Cobaw, too much was placed on too few (but that's how it was back then).So even for what may seem to be a routine operation, such a typical regen burn, we need to maintain the rigour of the ICS structure, in case things do go 'pear shape'. I believe that this will become increasingly important in the Central Highlands as the fuel-reduced effect around our burns (from Feb 09) lessens over the next few years.

If any of you get the opportunity to participate in this program in the future, I recommend you take it.

4.2 Appendix 2 – Thematic analysis of survey written responses

This section looks at the pre and post survey written questions to see the emergent themes. Is there a shift in thinking? Does this provide evidence of meeting the learning objectives?

Pre-survey

What are stand-outs for you after reading the materials?

These are some of the themes that participants identified:

- Planning and resourcing (financial and staffing)
- Communication between DSE and community
- Situational awareness – reading the signals
- Following the plan (or not following it)
- External pressures to meet quotas
- Fatigue levels of ops people
- Leadership issues – who in command, transfers
- Decision-making and judgment, lack of anticipation, sticking with same approach
- Not seeking outside information or assistance
- Complexity of factors – weather, fuel, topography, drought conditions

> **Examples of judgmental language**
>
> "Repeated failure to adequately assess risks. No situational awareness."
>
> "No action plan for anticipated burning or plans to deal with outbreaks."
>
> "Failure to appreciate the dryness of the fuel layer."

Many of the comments were expressed quite judgmentally. These were focussed on the details of the incident rather than a bigger picture interpretation.

What are critical decision-making points?

Some of the points indicated by participants include:

- Lighting on the Friday without Over Time in place, with a fatigued crew and when it was outside the prescription
- Lighting on Saturday when the lighter was alone
- Roads not closed to the public
- Crews leaving site in evenings – in particularly leaving it unattended on Sunday evening
- Continuing to back-burn when there were problems with spotting – kept using the same strategy
- Change in OIC losing continuity
- Not communicating to the community the true state affairs
- Not asking for extra resources when situation called for it, lack of urgency when things began to go pear-shaped

Most participants identified decision-making points, or key factors that lay within the incident itself – not looking beyond operations.

Recommendation: it would be beneficial to ask the question "What do you think are the critical decision-making points?" at the last stand. By everyone hearing the views of different people of different roles and levels they would get a sense of the locus shifting beyond the operational ground. This might help in moving those who are still judgmental after the ride.

What questions do you have about the incident?

- *Why wasn't*… the dozer there, the community engaged, the fire attended overnight, the CFA involved, better resourcing, more frequent weather forecasts…????
- Do we do it differently now?
- If a particular decision was made differently would the incident have occurred?
- What was the understanding of the people involved? What processes were in place then?
- Given the weather information could this have been predicted on Friday?

Judgmental language

The majority of people framed their question judgmentally (*Why wasn't…???)* , applying current protocols and procedures in judging why this didn't happen then. One person noted that examining a more recent event would be closer to existing protocols and culture. However, some people were showing a suspension of judgment and more interested in understanding why, what if, and how it has changed. In particular, the question of wanting to understand whether a slightly different decision might have meant a different outcome or not is a very useful question that could have been highlighted more in the Staff Ride. (Would this decision make a difference?)

Building a picture of the incident

The responses to the series of questions shows that most people had spent some time in becoming familiar with the pre-reading materials and had established in their own minds enough of a picture to determine key aspects. Giving people questions like those in the survey to reflect on and write before the Staff Ride could be considered as an integral process to getting people into the space needed. The evidence from the afternoon group orientation session is that people need time to get their heads around the details and sequence of the incident.

The trade-off between familiarisation with the incident and hindsight bias

In asking pre-questions there is a tension in encouraging an evaluative, judgmental hindsight view, which a couple of people were unable to let go of even after the ride. However, for most of the participants, the transition to more explorative thinking – understanding the reasons why - was evident in their post responses. This transition in thinking is perhaps the invisible cultural change lesson – that to learn from mistakes we need to change how we engage in thinking about them.

Post-survey

What did you value about the Staff Ride?

- **Decision-making** –
  - complexity, many factors
  - working through trains of thought to see how decision was made
  - understand why and the influences
  - consider impact of decisions
  - important to ask right questions
  - understand how the information available shapes decisions.
- **Contribution of the different people in the group** – meeting new people, hearing their views and knowledge, different roles, collective experiences
- **Leadership –** building better leadership skills, supporting previous leadership courses
- **Reflection –** reflect on a real incident, visit site and do so with others
- **Inter-operations** - hearing how other agency makes decisions, getting a sense of their culture
- **Learning tool** – can utilise the notion of learning from past mistakes in other courses and in debriefings.

Different people valued different things from it indicating it is rich enough to provide different people different experiences. Decision-making was valued by the majority.

What was your Cobaw moment? (From survey)

These were key themes:

- **Thinking about thinking** – "identifying when I am below the waterline thinking."
- **decision-making** - "being able to identify with the hard decision required on a burn when things are not going well – to kill or change strategies? It gives me more confidence to make this decision in the future."
- **human factors** - "realising I have experienced some Human Factors previously without realising it."
- **situational awareness –** "that observations are powerful and there shouldn't be a reliance on what we assume such as prescriptions and statistics."

Cobaw moments declared at first Staff Ride

Question what you're seeing. Communicate what you're thinking.

How important to pick up the subtle signs and interpret them.

Plan for the worst case scenario, and keep one step back to maintain a true overview.

Will the decisions I make stand the test of scrutiny later?

Appreciation for opportunity to walk in another's shoes.

Appreciate the many issues of prescribed burning. Appreciate how to support decisions. Appreciate it's a team effort.

The Burn OIC presenting himself and taking ownership for his actions – an impressive role model.

- **about the incident** - "without a well-planned escape option this burn was doomed to failure"
- **fire behaviour and weather** – "inversion layers falling at night"
- **planning** – "plan for worst case"
- **organisational responsibility and leadership** – "management must provide strategic leadership and support those on the ground."

These responses indicate that people took a range of things from the Ride, and it was often dependent on their level and role. This indicates the benefit of a rich complex case study that has different dimensions, rather than one moral or solution. People can hook onto different components while getting a sense of its place in a more complex whole.

Shift in thinking

The comments by participants in the post-survey in comparison to the pre-survey are indicative of a shift in thinking for most. They appear more reflective, getting inside the issues to why they might have been happening with injunctions for new practice for others or for self. Compared to the Cobaw moments that were declared at the first Staff Ride, these written responses have more re nuances, and in many cases are more "objectified." There is a personal rawness to the Cobaw moments given at the first Staff Ride. Both are useful reflective moments for the participants as part of consolidation.

Cobaw moments declared at first Staff Ride

Being able to pull back and analyse and check in with another person.

Using another's experience to build my own knowledge.

Always question what you know; ask about what you don't.

Don't presume that what you assume will happen will actually happen.

Ask a lot of questions.

Planned burning is a collaborative approach.

Need to know when to draw the line in prescribed burning.

I learnt that not everyone knows what I know, so I should not presume this.

Don't presume, be cautious about not questioning someone in a senior position.

Communication is critical - there can never be a dumb question.

Burning is quite complex, so do quality pre-planning.

3 things – at planning stage, think of worst case scenario, at operation stage, keep a step back, communicate as a team.

Don't trust the weather, and the importance of communicating.

What are your insights, issues or questions since?

There were several types of responses:

The majority were in the form of personal injunctions – how they or others could do things differently at personal, and leadership level in areas of human factors, decision-making, planning, or organisational structures. E.g., Stepping into the perspective of the BOIC has inspired a planner to do things differently.

One person saw that different people in his group would do things differently – so no uniform answers. Two people were concerned that Lee's presentation created a contradiction to the thrust of the program. Several people were still concerned with the incident – a couple saying "why didn't they...?"

How has your view of the incident changed?

36 people out of 63 said that their view had changed. First impressions include – poorly managed, obviously wrong decisions. Now they:

- Better appreciate the complexity of factors, including the wider political context
- Better understand the human factors behind the decisions
- Could have made the same decisions as the people involved
- But some still have concern about some issues

> "I felt quite judgmental prior to attending, and in some instances I still do with regards to some actions, however overall I now feel that many of the staff involved were quite admirable in their efforts over the course of the 4 day event and made decisions similar to ones that I would have made in their shoes. However, what let them down was in the planning and support part of the dire, not the on ground resources that were attempting to undertake the burn and suppress the fire."

What will you apply?

Two key ways of framing this: –
- **personal set of injunctions or new ways of thinking –**
  - new mental slide
  - more conscious review process – look for things that don't fit mental model, look outside, see bigger picture, consider different perspectives, new questions to ask myself
  - learn from errors
  - awareness of human factors affecting thinking
- **leadership-**
  - Provide strategic support for others prior, during and after incidents
  - Planning and resourcing
  - Providing learning for others (e.g., building learning from mistakes into pre-season briefings, promoting staff ride, or using processes in other learning.)
  - Better communications (e.g., between region and BOIC)
  - Contingency plans
  - Asking better questions of staff

Barriers include volunteer culture, manager buy-in, colleagues not exposed to same experience.

Some people put into leadership frame, while for some it only seemed to be in personal context and some were able to do both. Both perspectives are valuable and people could be encouraged to think at both levels.

Areas of interest for further training

The following numbers are based on both Staff Rides.

Areas of interest for further training	Numbers
Incident control/operations	**9**
Leadership	**5**
Fire behaviour / weather	**8**
Human factors	**6**
Staff Ride facilitation	**33**
Mentoring / facilitation	**2**

The request by 33 people for further training in Staff Ride facilitation is a strong indicator that people valued it as a mode of learning.

Summary:

From the responses we can see that learning corresponds to the learning objectives. However, each person drew key learnings that were personal to them and each person did not necessarily achieve the range of learning objectives.

4.3 Appendix 3 – How did it meet the learning objectives? An evaluation of Staff Ride 1

Learning Objective	Opportunity and Evidence on the day (Observations by Sue and debriefing of the Facilitators)	Evidence from survey (group 1)	Consider Strengthening
Develop personal capacity for tactical decision making: • Building up an experience bank of decisions within certain contexts (mental slides), that they can draw on in time critical situations, a process called Recognition Primed Decision Making	We saw a key mental slide – iceberg model, which people referred to. There was opportunity for people to build mental slides from the incident discussions. There is evidence from the Cobaw moments that people had created some slides.	Several people referred to creating mental slides in their survey response. How memorable and whether used later is to be seen.	
• Build skills in creating mental simulation of possibilities, identifying trade-offs, predicting how small changes might impact on outcomes	There was opportunity for people to do this, at some stands more than others. I heard some people asking about other options and weighing up possibilities. Some questions or thinking about what might happen now, and whether such decisions might be made under today's policies. Roger heard some in his group. This could be strengthened.	In the pre-survey (group 1) one person was interested in how a different decision might have played out.	Groups could use a couple of role plays to see whether it might play out differently
• Build skills in determining critical decision points	There was opportunity for some discussion around key critical decision making points that were part of the story at each stand (eg. When it was shifting from planned burn to wildfire) but no explicit question following the stands asking *where do you think the critical decision making points are now*? For some these points might have expanded/changed after the Staff Ride but this was not drawn out.	Many people identified a range of decision points in the pre-survey and some referred to these again in post-survey– still saw them as key but had a better understanding why. Someone referred to classic Swiss Cheese model both before and after.	It would have been worthwhile drawing this out as an integration question and seeing if views had widened – and helping people to see that others from different roles see other decision-making points different to themselves.

Learning Objective	Opportunity and Evidence on the day (Observations by Sue and debriefing of the Facilitators)	Evidence from survey (group 1)	Consider Strengthening
Appreciate the dynamics of Human Factors in operations of a complex nature	On the day people were making an effort to understand the reasons behind why people were making the decisions they were doing. People were referring to below the line and above the line thinking. Stand 4 provided opportunity for other human error traps to come out. I heard people refer to *captured by the present* and *reluctance to change plans*. Evidence in the Cobaw moments on the day that many were thinking in terms of human factors.	On post-survey (group 1) 8 specifically mentioned insights relating to human factors. People gave an average rating of 5.83/7 for building knowledge for human decision-making on post-survey (group 1)	At stand 4 more connections could be made with error traps and human factors. For example, use the error trap wheel. It could be more personalised by asking what experience have you had, early indicators you are falling into a bias, what strategies do people use. If running a post-workshop on human factors then the Cobaw incident provides good examples to better understand biases.
Develop an awareness of how they think and make decisions – thinking about thinking	On the day people were picking themselves up for hindsight bias, beginning to reflect on the way of thinking they could be bringing to the discussions. There is evidence in the Cobaw moments on the day that are creating new questions or criteria for self.	There is evidence in the post-survey (group 1) of participants unpacking of their own thinking, and developing a more reflective and self-monitoring approach. People gave a rating average of 6/7 for thinking about thinking on post-survey (group 1).	

Learning Objective	Opportunity and Evidence on the day (Observations by Sue and debriefing of the Facilitators)	Evidence from survey (group 1)	Consider Strengthening
Develop a more nuanced understanding of the role of fire behaviour and the use of technical information in a complex situation.	Evidence in the Cobaw moments on the day for some people.	7 people on post-survey (group 1) specifically refer to it in their insights. People gave a rating average of 4.94/7 for building fire behaviour knowledge on post-survey (group 1), which is significantly higher than what on average they are picking up from other learning and development opportunities.	Not all people interested in this space, but those that were gained useful understandings.
Able to connect to and value-add learning from the Leadership Program	On the day, this was not explicitly referred to that I heard. Though one person told me it had similar scope to the fire line leadership course.	On post-survey some people were pulling out leadership implications for their role. People gave rating of 5.06/7 for building leadership knowledge.	For Cobaw moment it might be useful to ask for a personal insight and something for their leadership role. However, there is a tension here of leading too much. By allowing participants to draw out their own learnings it is more powerful.
Work with others across organisations in order to enhance inter-operability OR appreciate the approaches and reasons behind what other agencies do.	On the day, I saw people listening carefully to other people and willing to ask for further explanations or to provide their organisation's perspective. Some people said to me about their surprise at the others' approaches – seemed to get them thinking. However, there were some tensions that weren't fully unpacked. Has this improved inter-operability or not?	In post-survey (group 1), the mixed groups were explicitly valued by 12 people.	

Learning Objective	Opportunity and Evidence on the day (Observations by Sue and debriefing of the Facilitators)	Evidence from survey (group 1)	Consider Strengthening
Help build a more open, "non-blame" culture – a willingness to respectfully and openly consider past mistakes with the light of learning from them.	People moving out of hindsight bias to consider what it was like from the shoes of the person.	Evidence in post- survey of change in view to less judgmental, though some still there. Some explicitly refer to the value of learning from past mistakes. With 27 people in first group interested in having an incident that they were involved in being part of a staff ride is strong evidence that this is a good first step in building a more open culture.	
Put into practice what they have learnt into their own contexts		In the follow-up emails some gave evidence of putting into practice, particularly in new ways of thinking or questioning.	
Integrate learning from other contexts	Probably needed to be deliberately elicited in the discussions – how does this connect to your other learning and experiences? Didn't hear people reflecting or comparing much to their own experience. Perhaps others heard this?		

4.4 Appendix 4 – Analysis of the components of the Cobaw Staff Ride

Component	What do we want to know?	What was valued about it? Any issues?	Recommendations to strengthen the Cobaw Staff Ride	Options for other staff ride formats
Preparation of the Case Study Legal issues. Getting agreement by the original particpants, willingness to be part of the creation of the case-study and also participate in the ride. Re-constructing the incident (piecing together photos, reports, first –hand accounts, maps, ignition sequence) Choosing the story for learning (tactical decision-making exercises, choice of perspectives, driving narrative, discussion points.)	Does the case study provide enough richness for learning? Is the incident clear enough so that people can follow it? (are there contradictions that detract from it, or value- add to the complexity.) Do the original actors get any bad fall-out? What is the impact on them?	*Peter:* in developing the case study there were many meetings with the original actors drawing out info. By luck came across someone with photos. There were some contradictions – only got a good sense of the ignition sequence the week before so I could do a map. Many decisions made about what would be the "stands" or key learning moments, and the roles that they might be written from. *Facilitators:* it helped in doing a pilot beforehand to become familiar with the case study. Even after the second attempt they were picking up inconsistencies, or re-framing the "story" and seeing key moments. Third time around could focus more on drawing out human factors. *Participants valued:* involvement of the original actors, richness of the case study, opportunity to think from others' perspectives. *Peter:* important to check-in with the original participants of the incident after the ride to ensure no fall-out.	Look at ways to acknowledge the original participants of the incident Bring new facilitators in as co-facilitators to give time for familiarisation	More simple case studies? Consider the option of bringing the original participants to the site as a group to do an after action review in order to reconstruct the incident and determine key learning points. Then construct a learning experience for others.

Component	What do we want to know?	What was valued about it? Any issues?	Recommendations to strengthen the Cobaw Staff Ride	Options for other staff ride formats
Organisational team Leadership Mix of expertise Different roles and jobs allocated.		Organisation team worked to their strengths at the day by taking on various roles – seamless operation.	Important to have agreement regarding the range of learning objectives and the different roles people might take in enabling some of these.	Mix of expertise is essential
Selection of participants – vertical slice – younger less experienced people with leadership potential and also managers (showing leadership and contributing their wisdom), across regions and organisations	How important is it for this to be a "select" event for upcoming leaders? How important was the mix of people? How did participants draw on different perspectives of each other? Is there an opportunity for it to be run by these leaders for others? Was this relevant to this group? Was there any tension as a result of two different cultures, or hierarchical relationships?	Evidence from participants: valued hearing range of perspectives, from different roles and levels and organisations. Was highly relevant to their work. Many of those selected were in a position to run or organise Staff Rides for others and wished to. Valued by Sue: Opportunity for young future leaders to shine.	Selection of people and mixing into groups is critical. Continue to target a vertical slice and future leaders with successional aims in mind. Consider those in a position to bring into other training programs as well as to organise their own staff rides. Someone to organise group mix.	Local groups
Pre-Information – providing clear expectations of participation requirements, the type of learning	How important? Was this clear enough?	Valued by Peter: Expectations of pre-course reading required commitment (don't come if you can't be committed – acted as filter.)	Consider using pictures or quotes from past rides as part of the information Get more awareness-raising around the name – Staff Ride	

Component	What do we want to know?	What was valued about it? Any issues?	Recommendations to strengthen the Cobaw Staff Ride	Options for other staff ride formats
Pre-reading - large resource book, many sections, requiring good literacy.	Was this necessary or too much? How would a different audience cope? Did it create too much hindsight bias? How did people use the resource materials?	Valued by Peter: Represented typical objective information around burns plus photos. Lesson was to move from this hindsight mindset to one that was interested in understanding the deeper reasons why. Valued by participants: could land running, resource to use through-out the ride, well put together. But also positioned into hindsight bias. Evidence from surveys: in general a literate audience though some people less literate. Took most people more than 1 hour and 34% over 2 hours. Valued by Sue: people were conversant with it, offering information from it to help the group. Photos seemed to be used as well as weather maps.	Include ignition map Consider asking each person in group to become an expert in a different section, so that they take the memory load off the facilitator and can offer information when needed.	Consider less reading. What material is essential to get enough background? Do you need people to get into hindsight bias beforehand? What amount of time do people have in busy work schedule?
Facilitator ringing participants Reminding them of what they needed to be ready for in the group discussion	How important was this? Could an email have worked?	Personal touch People more prepared, regarding their thinking.	When piloting programs a lot more work is put into make things work, so need to be careful of those important touches that might be dropped off once more main-streamed.	

Component	What do we want to know?	What was valued about it? Any issues?	Recommendations to strengthen the Cobaw Staff Ride	Options for other staff ride formats
Survey reflective questions What are the stand-outs, where are the critical decision-making points, anything that surprises you, any questions.	How important in assimilating the pre-reading materials was it for participants to reflect on the survey questions? How useful was it for the facilitators?	Facilitators valued getting a sense of people's thinking prior to the ride. Participants???? Sue: believe it was useful in helping participants to make sense of the materials.	In future could consider asking participants to email short reflections to key questions directly to their facilitator.	In evaluating new programs surveys can provide useful data. The Cobaw Staff Ride surveys could be modified for new purposes.
Afternoon Orientation session prior to site visit – orienting to what a staff ride is, the incident, the attitude to be in when viewing the incident, to 2003 greater context, to the group members, to human factors.	How critical were each of those elements? What could be improved? Where were people most engaged? What did they want to know?	Program team and Sue valued: Critical in shaping the attitudes (explorative rather than judgmental), and building enough theory, and enough understanding of the incident. Participants' sessions: high importance and satisfaction, particularly the group discussions around the incident. Saw people referring to below the waterline thinking and catching themselves on hindsight bias. Participants' suggestions for improvement included needing more time to flesh out the issues. Concern that they were positioned by the pre-reading to take a stance.	Jamie's talk to include naming up some error traps or biases. 2003 presentation in lecture theatre (done in second ride) Larger map for group discussion (done for second ride) Consider longer group discussion times.	Depending on the focus of the staff ride different types of orientation may be required. Fundamental is orientation in attitude and giving a rationale for it.
Stands – selection of decision points, clarity of story, opportunity to foster	Was the demarcation of the incident into the stands providing logical flow? Did	Sue and facilitators valued: Participants contributing to the knowledge building, referring to the resource. Participants	Human Factors needed to be drawn out more. Consider using the error	Selection of the key moments is critical.

Component	What do we want to know?	What was valued about it? Any issues?	Recommendations to strengthen the Cobaw Staff Ride	Options for other staff ride formats
thinking to achieve learning objectives, clarity of facilitators about the content and their objectives, each stand with different key themes to draw out	the description at each stand help situate people into the incident? What did people want to know at each stand? Did they get inside the "role" perspective at the stand? Did that help them think of the issues, trade-offs and human factors elements? How did their talk change (eg from hindsight to …?) Were the role plays useful? Did the stands enable the learning objectives to be met? Are there other ways that these could have been set up to enhance the experience? What problems were encountered?	asking each other questions. Each stand had a different role perspective which was important in helping people to get insight into what a person in that role might see and thus being able to explore why the decisions might have been made. Facilitators valuing comments "I would have done the same thing." The role plays added to the understanding – showing that when people communicate it is easy not to say the things in hindsight people think should have been said. Some valued the fire behaviour / weather talk. Reading out the story seemed a bit long in some cases– needed more time for discussion and teasing out human factors. Participant suggestions for improvement included encouraging quiet people to speak up, allowing more time for discussion, allowing time for people to walk to Stand 4 before starting the discussion, separating the groups to allow	trap wheel. (This was done for second ride) Refine story and questions for each stand. Debrief the role plays – asking for additional insights in playing them or listening to them. At the end, ask how has your notion of the critical decision making points changed from your pre-reading?	Seeing the incident through different actor's eyes is highly useful. Other formats might consider other approaches – eg original actors, strategy games.

Component	What do we want to know?	What was valued about it? Any issues?	Recommendations to strengthen the Cobaw Staff Ride	Options for other staff ride formats
		for less interruptions, having original actors at the different stands, clearer scenario setting at each stand.		
Actor involvement At last stand a person involved with the incident shares their perspective	How important was it for a past actor to be there?	Participants highly valued this, despite a couple seeing contradictions in the person's story. Peter: valued people getting a reality check and it being pulled back.	Orientation of audience to speaker critical in creating right environment. Need someone to lead speaker through by asking some questions, before opening to the audience.	Actors might be involved at each stand. Or not at all. Consideration to the sensitivity of the incident.
Integration – opportunity for participants to reflect and extract a transferrable learning that can apply to their own practice	Were participants able to draw out a key learning for themselves that had transferability? What else could have been done to maximise on the learning so far? (eg develop strategies, more info on human factors?) Was it better to keep this short or to build on it? Were the participants too full up?	Roger: concern this is too short. Need to have thinking time. Time constraints on needing to finish cut this short. Sue: Clear from the post-surveys that consolidation/learning is continuing to happen after the event. May not be that important that it is "consolidated" at the venue with others. Some participants found this a little rushed.	Consider an opportunity for people to reflect on the different layers of the swiss cheese, to consider where their view of critical decision making points are now.	Option to have another night to enable more discussion and consolidation – useful if a workshop might follow-on the next day.

Component	What do we want to know?	What was valued about it? Any issues?	Recommendations to strengthen the Cobaw Staff Ride	Options for other staff ride formats
Facilitator experience and training – needed to understand the incident, have good generic facilitation skills (including ability to set up a role play), human factors knowledge, clear sense of the learning objectives and what sort of conversation they wanted to generate at each stand, personal experience in different fire roles, could tap into the fire experience/roles of their group members. Needed to be on the ball, seeing opportunities in the discussions.	What background materials/info, learning tools (maps), facilitator guide, briefing and debriefing is helpful for the facilitators? What do they need in order to be more comfortable? What emerged from the discussions that they needed greater depth in? What facilitation techniques would help? How can they be better prompted to draw out key HF ideas? Who might be potential facilitators in the future and how can they be brought through? Which younger participants shone in this activity that could be tapped on the shoulder?	Facilitators – difficult to refer to the information on the story of the stand and to remember all the discussion questions, talked about other things that came up. Questions on the guide could be improved. Sue – concern that the learning objectives weren't part of the guide. Sue – concern that this required high facilitation skill. After three goes facilitators could start to draw in more deeply aspects of human factors – previously recruiting a lot of thinking capacity to holding the incident in their head. Co-facilitation may take off some of this burden. Participants appreciated the knowledge of the facilitators and their ability to foster discussion. Some commented that the latter could be improved.	Too much information for one person to hold… invite others in group to be experts in different aspects and then contribute to building the group knowledge. Consider co-facilitation with also the aim of both sharing the load and building capacity of new facilitators. Facilitation guide improvement: Have learning objectives in the facilitator guide. On the tactical decision exercise pages have in a box some underpinning HF that could be pulled out as a reminder. Put the discussion questions opposite the story. Have a "cheat sheet" of one page of the story outline for the facilitators to have. (Max did this for second ride.) Sign-post the stories for the Stands with key icons or words (Dozer).	

Component	What do we want to know?	What was valued about it? Any issues?	Recommendations to strengthen the Cobaw Staff Ride	Options for other staff ride formats
Logistics	Weather proof?	Participants highly satisfied with the logistics despite weather (cold or rainy)		
Survey post questions		These were important in helping people to reflect on their learning. Questions that ask about the format of the staff ride are useful in helping constant improvement.	Consider, even without an official evaluation building this in. Written answers could be used to go onto a follow-up newsletter.	
Transfer of learning Left up to individuals	Should this be more targeted on the day? What follow-up support is needed?	Most participants translating insights into injunctions for action	Organisational support required	
Follow-up offerings – interest by participants in running staff rides, understanding more about decision making and human factors	What is in place to take advantage of the interest shown by people? (eg staff ride guides, staff ride depository, Human factors workshops)		Organisational support required	

4.5 Appendix 5 – Comparison with participants' other learning experiences

The following is a result of a *related sample Wilcoxin Signed Rank Test* using the data from the Second Staff Ride. Participants were asked in a pre-survey to rate their most recent fire learning experience against specific indicators. In the post-survey they rated the Staff Ride experience using the same questions. The N/A results were removed. The statistically significant items (where participants perceived the Staff Ride as better than a previous learning experience) are listed in the top of the table and the non-significant items (no statistical difference) at the bottom. There were no items where the Staff Ride was perceived as worse than a previous learning experience.

Note that items 6 to 9 have strong statistical significance.

Significant Items –where participants perceptions of the Staff Ride were better than a most recent learning experience.	Other Learning Median (out of 7)	Staff Ride Median (out of 7)	Significance
1. Was relevant to my current work	7	7	.009
2. Will be relevant to my future work	7	7	.009
3. Build skills and knowledge in *fire behaviour*	3	5	.005
4. Build skills and knowledge in *human factors decision making*	5.5	6	.008
5. Being able to see things from new perspectives	5	6	.024
6. It had an impact on me personally	4	6	.002
7. It caused me to questions my assumptions or the way I think	5	6	.001
8. It has motivated me to change the way I do things	4	5	.002
9. It has caused me to be more reflective about the way I do things	5	6	.001
Non-significant Items – no difference in perceptions			
10. Building skills and knowledge in *leadership*	6	6	
11. Building skills and knowledge in *communication*	5	6	
12. Providing new frameworks for thinking about bushfire management	5	5	

4.6 Appendix 6 – Interim Evaluation Report – Cobaw Staff Ride Learning Program

Dr Sue Stack and Dr Christine Owen, July 2012

Context

This interim evaluation report follows an initial meeting, June 8th 2012, with the advocates and designers of the "Cobaw staff-ride" professional development program. The purpose of the meeting was to understand the contexts, define scope of the evaluation, articulate key learning objectives, discuss the pilot and consider possibilities to enhance the design of the program. The team clarified that the key evaluation that they would like the evaluation team to conduct is around determining how well the staff ride program achieves its <u>learning objectives</u>.

Meeting Participants: Peter McHugh (DSE), Kevin Pettit (CFA), Lisa Frye (DSE), Roger Strickland (CFA), Claire Johnson, Carolyn Sinclair(CFA), Christine Owen (UTAS, Bushfire CRC), Sue Stack (UTAS, Bushfire CRC)

The evaluation approach

This interim evaluation report uses the ***Learning Evaluation Tool*** compiled by Christine Owen for this project, based on the work of Rosemary Caffarella (2002). This approach embeds evaluation as part of the design and development process, enabling reflection and adaption at different stages of the process. It provides a rigorous process which is particularly useful when the learning design is high-stakes as it appears to be in this case. There are nine key elements:

1. Discern the context
2. Build a solid base of support
3. Identify learning program ideas
4. Sort and prioritise those ideas
5. Develop learning program objectives
6. Design instructional plans
7. Devise transfer of learning plans
8. Formulate evaluation plans
9. Make recommendations and communicate results

We, the evaluation team, have considered the first eight elements in light of what we understood at the June meeting, from the documentation and supplementary conversations. Below we give a checklist of how well the learning design meets the eight elements and then in the bulk of the report we explain further the issues identified to date. We have highlighted areas that appear weak and where it would be valuable for the learning design team to clarify, and consider strengthening. Where we believe strengthening would be useful we have proposed some possible strategies.

The design team may already have considered many of these issues, and chosen pathways based on optimising resources and results, in which case it is important to note these constraints and name the subsequent risks in order to manage expectations of stakeholders.

Evaluation Checklist

To what extent does the learning design meet the following elements?

Element	Comment
1. **Discern the context** – *How well does the learning design align with organisational goals, organisational culture, training structures and wider political environment?*	Strong link to existing training program. Needs better clarification of how this aligns with intended organisational cultural change. Be wary of having a specific Staff Ride structure locked in.
2. **Build a solid base of support** – *Is the support at all levels of the organisation sufficient?*	Considerable support has been garnered which is essential to a high-stakes learning innovation as this one. Consider further strengthening by involving participants, supervisors and middle managers for buy-in and transfer of learning.
3. **Identify Learning Program Ideas** – *To what extent are the learning ideas well developed and clear?*	While the ideas for the Staff Ride have been well thought out and developed, consider how to better frame this as a "learning program" for participants.
4. **Sort and prioritise ideas** - *Have appropriate processes been used in selecting the learning approach?*	A thorough process was used by DSE in selecting the format and the incident for the Staff Ride. We recommended the learning design team to evaluate the Staff Ride against other types of learning interventions to determine effectiveness (see Appendix 1).
5. **Develop Learning Program Objectives** - *To what extent are the program and learning objectives clear, agreed upon and visible to the stake-holders?*	The program and participant learning objectives need further clarifying and prioritising. Consider how building the capacity of the designers and facilitators will have a flow-on effect in contributing to organisational change.
6. **Design instructional plans** - *To what extent is the learning design aligned with the intended program and learning objectives?*	The instructional design has a number of risks. Consider a range of possible strategies to mitigate these as detailed in section 6.
7. **Transfer of learning plans** - *To what extent has transfer of learning been considered as part of the learning design?*	While the active and memorable learning from a Staff Ride format assists in transfer of learning, there appears to be little explicit planning by the learning design team for transfer of learning using structured strategies. The learning design team should consider to what extent they want to create stronger transfer of learning and consider possible strategies as suggested in section 7.
8. **Evaluation framework -** *What evaluation framework can meet the aims of stakeholders?*	Initial questions for evaluation have been canvassed by the Learning design team, but these need to be refined in light of clarifying the program and learning objectives. What participant change is anticipated and what are the indications for the change? The evaluation team have prepared some suggestions for evaluation which need to be reviewed by the Learning Design Team.

1. Discern the Context

How well does the learning design align with organisational needs, goals, culture, training structures and the wider political environment?

What is the organisational setting that the learning program is going to occur in?

We understand that the Staff Ride is a Professional Development opportunity intended for employees and volunteers from the Country Fire Authority (CFA) and the Department of Sustainability and Environment (DSE) as part of leadership capacity building to foster cultural change within the organisations.

> **To be clarified by the Learning design team:**
>
> **What is the desired organisational cultural change that this learning program is aiming to address?**
>
> What are the principles that underlie this? What does this look like?

The Staff Ride is a partnership between the CFA and the DSE, two distinct organisations who engage in prescribed burn and wildfire fire management operations, sometimes collaboratively. Each organisation has different cultures of volunteerism, leadership styles and fire management, reflective of different organisational purposes. Both have been subject to high public scrutiny and legal review through the Victorian Bushfire Royal Commission, with a calling for better leadership, decision-making and organisational processes to deal with complex, time-critical, life-threatening, escalating situations. Both are aiming to move to new cultures of operation which include a non-blame environment where people are willing to admit to and learn from mistakes. The Staff Ride requires such a non-blame environment to succeed as well as providing opportunities for participants to practice this.

Each organisation has different cultures of training (competency-based learning, on-the-job, mentoring, professional development, individual learning plans, simulation exercises, after action reviews, debriefing) with different degrees of accreditation or assessment. The Staff Ride constitutes a new type of training event to those already in place. It is not assessed nor accredited. It has the intention of supplementing classroom accredited learning. This innovation is being done in a high stakes environment.

> **To be clarified by the Learning design team:**
>
> **What type of training should the Staff Ride be considered as:**
>
> - Professional Development?
> - Course or event?
> - Assessed and/or accredited program?
> - Part of Individual Learning Plan?
>
> **What are the implications of how it is considered?**

Why was this project initiated?

We understand that the Staff Ride project was initiated by some senior managers in the DSE who had positive experiences of staff rides in the United States, where the staff ride is a well-developed

training event for fire-fighters. They believed it could value-add the training opportunities for Victorian fire-fighters in a post Black Saturday climate demanding greater leadership and decision-making capacity. They asked Peter McHugh (DSE) to explore the feasibility of using a staff ride for training of staff in the Victorian context. This has led subsequently to the commitment to run a staff ride, the setting up of a multi-agency project design group, the development of a rationale for it that links into existing leadership training programs, and the running of a pilot.

The approach to the learning program design has been back-engineered from the desire to run a staff ride. It is therefore primarily *solution-led (providing the means of the training up front)*, rather than *needs-led (e.g., designing the means of training from a needs analysis.)* The danger of this approach to training design can be a focus on maintaining the "solution", rather than being willing to modify it to better meet the organisational or individual needs. Because it hasn't had a needs assessment the program may not target as well.

The design team have aimed to mitigate against this by taking the concept of the staff ride and looking at where in the organisation it might provide the most benefit. Thus it has been targeted for future leaders and seen as providing a single event learning opportunity that can build on and integrate learning from the more formally assessed competency-based leadership learning program conducted at other times.

> *To be clarified by the Learning Design Team:*
>
> **What will this learning program address that other approaches may not?**
>
> Participants in the leadership program need greater opportunity to connect theoretical learning with practical contexts.
>
> They need to develop "mental slides" of key decision moments that can be recruited in time critical situations.
>
> They need to develop reflective thinking and conscious inquiry approaches to considering mistakes and past actions.

The United States Staff Ride program is considered by US fire-fighting organizations as a highly successful part of their training programs, with a positive learning culture already associated with them. Can that be replicated here? It should be noted that while Staff Rides can be delivered as one-off training events, they are often delivered in the US as an embedded part of longer workshop programs enabling participants to immediately connect theory to the staff ride experience, with workshop time following for transfer of learning. They are often done within a High Reliability Organisation (HRO) framework, which names up front the principles and strategies in achieving a "no-blame" culture. Participants may have been embedded in such a HRO culture for some time. Further, whole brigades may be engaged in a staff ride providing critical mass for organisational change in behaviours or procedures, with opportunity for continuing unpacking of the experience with their work cohort following the event.

Although the Cobaw Staff Ride is seen by the learning designers as an event which can help participants link into their learning from the Leadership course, this may not be explicit to participants. This may need to be made more obvious, or in the future consider embedding a staff ride as part of the Leadership training workshops.

Suggested strategies for the Learning Design Team to consider:
- *Managing expectations of first event*
- *Actively looking at ways to build up a positive culture around the Staff Ride – prior to it and following it – newsletters with stories of participants?*
- *Clarifying the cultural change objectives and principles and making these explicit*
- *Strongly linking into existing training programs – e.g. considering in future how it might be embedded in Leadership program, or linked to Individual Learning Plans*

2. Build a Solid Base of Support

Is the support at all levels of the organisation sufficient?

We are aware of a range of supports in place including partnerships between DSE and CFA, the endorsement by the Multi-Agency Committee and sponsorship by some key managers in the organisations. Other aspects can also be considered to ensure participants, supervisors and middle management get buy-in and to ensure better transfer of learning. The key levels of support are indicated below with some comments for consideration by the Learning design team.

Support groups	To be clarified by the Learning Design Team
Sponsors A project to investigate the Staff Ride was approved by Alison Stone, General Manager of Land and Fire on 9 March 2011. The Cobaw Staff Ride has been endorsed by the Multi-Agency Committee on 29 March 2012. Key sponsors include Andrew Buckley (DSE)….	*What are the needs of the sponsors?* *What are their indicators for success?*
The Design Team The design team is a multi-disciplinary team across the agencies, including middle-managers, training designers and facilitators.	*Consider inviting a participant and supervisor to be part of the design team to consider issues such as learning transfer and buy-in.*
Potential protagonists Potential protagonists could include political figures, community members who were affected by the Cobaw fire, fire-fighters involved in the incident. The legal implications have been checked out by DSE legal and OHS who have endorsed the Staff Ride program.	*Given that the Staff Ride is about an incident that affected a community, to what extent should the community be informed or involved?*
Partnerships The Cobaw Staff Ride is a partnership between the CFA and DSE.	*To what extent are the purposes shared between the two agencies? Should there be other agencies involved?*
Organisational support – participants, supervisors, middle and senior manager strategies The design team hope to gain buy-in of 4 senior managers by inviting them to participate in the learning event. Supervisors have been asked to assist in the selection of the participants.	*Programs can be enhanced by involvement of participants, their supervisors and their trainers, and middle and senior management in the planning, carrying out and post-stages of a learning program in order to get transfer of learning and change in behaviours. We have listed some possible strategies below.*

Possible Strategies for garnering support from participants, supervisors and managers

These are generic strategies that Caffarella (2002) suggests to increase buy-in and transfer that may be useful in this context:

	Planning of Program	**During Program**	**After Program**
Participant	Learning design team find out what participants want to learn and how. Participants identify issues and potentials for transferring what they learn into their work situations.	Participants come up with a plan of application of their learning to their practice, or consider how they can integrate "transfer strategies" into their practice	Participants collect evaluation data Reflect on whether transfer plans helping and what alternatives might be needed. Peer mentoring Act as advocates
Supervisor	Learning design team determine if supervisors understand and support objectives. Supervisors select participants and identify their needs, help prepare them, collect baseline data, assist with designing transfer of learning strategies.	Supervisors attend part of the learning program. Deliver some of the learning program, or provide resources.	Supervisors mentor staff to apply what they have learnt. Provide opportunities for learning transfer. Collect data on whether any changes to performance.
Middle and Senior Managers	Designers provide to managers clear documentation of the goals, objectives and benefits of the program and how it meets with organisational mission. Managers issue formal policy and procedural statements supporting the program. Managers be involved in design of the program.	Managers attend part of the learning program. Deliver part of the learning program.	Managers be involved in the evaluation of the program. Be interested in finding out organisational blocks or barriers to the transfer of learning.

It should be noted that the shortcomings of one-off learning events without transfer strategies are limited opportunities to pick up and correct misconceptions, the decay of the learning over time, the limited transfer of learning to the workplace with little change in performance (Salas et al, 2001.) The involvement of participants, supervisors and managers before, during and after the program can address this issue of short-term learning.

3. Identify Learning program ideas

To what extent are the learning ideas well-developed and clear?

It is our understanding that the key ideas around the learning are:
- The Cobaw staff-ride is a professional development program designed for future leaders in the DSE and CFA.
- The staff-ride will provide an opportunity for participants from the different organisations to mix and engage together in tactical decision making based on a real case-study (of a fire that over-extended), on the site that the case study occurred.

- The Staff Ride has 3 phases: the preliminary study (consisting of coming to terms with the documentation around the incident), the field trip (visit to the site and tactical decision-making games) and the integration phase (drawing out key learnings).
- The 76 participants of the first two cohorts in 2012 will be selected for their potential as future leaders and targeted from the four levels of the existing Fire Leadership program (planning, ops, logs, public info), which has three core strands (Human Factors, technical fire knowledge and practical.)
- The staff-ride is seen as providing a practical context for the integration of leadership classroom learning, enabling participants to build on understandings of human factors and technical fire knowledge, through actively engaging in tactical decision-making. We have provided a visual representative in Figure 1 of how the sta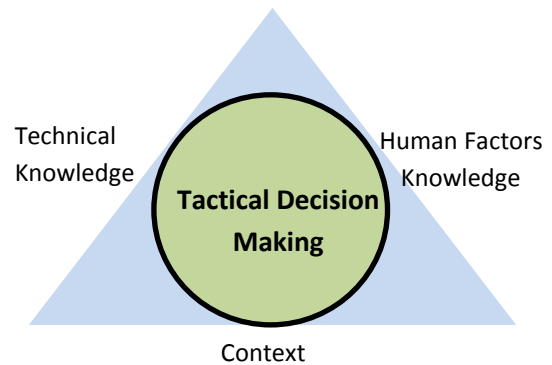ff-ride intends to integrate the learning. *The learning Design Team should assess whether this representation is a good fit.*

Technical Knowledge — Human Factors Knowledge — **Tactical Decision Making** — Context

Figure 1

- Tactical decision-making exercises around rich case-studies help participants to build up "mental slides", experiences and mental simulations from which they can make good decisions rapidly in future situations, using a process called *Recognition Primed Decision Making* (Klein 1999).
- Insights from the issues exposed in the Staff Ride could result in change of attitudes, values, understanding and practice, and is likely to be different for different participants. (There is no fixed knowledge endpoint expected, no intention for assessment nor for accreditation of the program).

We suggest that the design team consider how to frame this as a "learning program" to participants.

- *Is it an event or field trip with some preparation? Or, is it a month long "learning program" which involves pre-reading, a field trip, and then post-reflection and discussion with supervisors and colleagues?*
- *What acknowledgement of completion will participants get?*
- *How does it fit into participants "Individual Learning Plans" and who helps them to understand this?*

4. Sort and Prioritise ideas

Have appropriate processes been used in selecting the learning approach?

Choosing the right incident and the right format for a staff ride

Staff rides come in several different formats with different objectives such as:

- Opportunity for an on-site after-action review with the participants of an incident, walking chronologically through the events, leading to enhanced understanding of

- what happened, the underlying issues and then being able to make recommendations for policy and operational improvement.
- Opportunity for learners to learn from a case-study through visiting the site of an incident and hearing the stories of the people who were involved in the incident, to better understand issues and draw lessons learnt to apply to their own practice.
- Opportunity for learners to learn from a case study, by engaging in targeted learning experiences, such as tactical decision making games, on-site of an incident, taken through by trained facilitators with domain knowledge, though not originally part of the incident.

Mark Smith, Mission Centred Solutions, US provided advice that a tactical decision-making format for the Staff Ride should be used. This format is suitable when the intent of the ride is to take learners (non-participants of the original event) through an on-site case study. It means that the original participants of the incident do not have to take an onerous roles of being on-site and telling their stories. However, it does rely on facilitators being familiar with the context and the key decision issues, as well as having strong skills in facilitation of "non-blame" learning environments, being able to foster "think out aloud" mental simulations and connect to ideas in the leadership course. Given that this is a new type of learning program, it is critical that attention is paid to the necessary facilitator training.

Issue: **What capacity building of facilitators is in place?**

The context for this staff ride – the Cobaw incident – was selected after reviewing a number of incidents for their suitability by Peter McHugh. Mark Smith reviewed the Cobaw incident as suitable for such learning. The suitability of this incident was later confirmed in the pilot study, when all but one of the participants (a non-fire expert) were able to engage with the context, join in the tactical decision-making discussions and gain new insights from the experience.

This type of staff ride is highly organised requiring considerable resources in development, multi-agency support, training of facilitators, legal checking, and working with the original actors of the case study. Such an approach lends itself to a long term commitment to such a program, bringing through considerable numbers of participants, and encouraging transfer of learning.

Choosing the right learning/change approach

In the context of evaluation, it is important to review how the Staff Ride learning approach compares with other possibilities. Could another type of learning achieve the learning expected from the Staff Ride, or indeed another format of the Staff Ride? Because of the way this project was initiated the choice of the Staff Ride as a vehicle for learning was essentially "a fait acommpli". There may be good reasons why this has been chosen, but in terms of assessing value of money it is important to do a comparison of this vehicle with others, such as action research, classroom based learning, after action reviews, mentoring, simulation exercises, web discussion groups, organisational procedural or structural changes.

Caffarella (2002) suggests a range of criteria to assess the effectiveness, importance and feasibility of different learning and change strategies. We have created an evaluation grid in Appendix 1 that we recommend the learning design team utilise to assess the staff ride approach.

5. Develop Learning Program Objectives

To what extent are the program and learning objectives clear, agreed upon and visible to the stake-holders?

From the discussion with the learning design team the following program and learning objectives were canvassed.

Program Objectives

- Building leadership capacities of individuals.
- To assist in changing organisational culture through improving leadership.

Learning objectives for the participants

- Develop personal capacity for tactical decision making:
    - Building up an experience bank of decisions within certain contexts (mental slides), that they can draw on in time critical situations, a process called Recognition Primed Decision Making (Klein, 1999)
    - Build skills in creating mental simulation of possibilities, identifying trade-offs, predicting how small changes might impact on outcomes
    - Build skills in determining critical decision points
- Appreciate the dynamics of Human Factors in operations of a complex nature
- Develop an awareness of how they think and make decisions – meta-cognition
- Develop a more nuanced understanding of the role of fire behaviour and the use of technical information in a complex situation.
- Able to connect to and value-add learning from the Leadership Program
- Work with others across organisations in order to enhance inter-operability
- Help build a more open, "non-blame" culture – a willingness to respectfully and openly consider past mistakes with the light of learning from them.
- Put into practice what they have learnt into their own contexts

We recommend that the Learning design Team address the following:

- *To what extent are these objectives shared or agreed upon by the design team?*
- *To what extent are these represented in the documentation or a counter to the documentation?*
- *To what extent are these objectives all compatible? Do they need to be prioritised?*
- *Which ones should be measured? What are indicators – what do they look like? What are anticipated changes?*
- *Which ones are important even though they may have difficulty in being measured?*
- *Which ones should be made clear to participants as expectations of the program and their learning?*

> *Issue:* **What evidence of change are you expecting to see?**
>
> - During the event?
> - After two weeks?
> - After 6 months?
> - After 5 years?

Further, given that the program objectives include intentions to change culture and increase leadership capacities it is important to also consider the Staff Ride as a learning vehicle for facilitators and the design the team, as well as the targeted "future leader" participants. The learning that the facilitators/designers gain will have important flow-on effects, affecting many others through improved training and training design in other contexts, and through advocacy. It is suggested that this is named up as a key program objective, thus enabling it to be planned for, valued and measured.

6. Develop Instructional Plans (learning design)

To what extent is the learning design aligned with the intended program and learning objectives?

Format

The format of the staff ride consists of:

- **Preliminary Stage** – participants are sent several weeks before the Field Trip a resource about the incident which they are asked to familiarise themselves with prior to the Field Trip
- **Field Trip** – overnight Macedon Training Centre
    - Day 1 - afternoon and evening - introduction to the event, learning groups, dinner
    - Day 2 – morning - visit to Cobaw site, moving through 7/8 stands where key decisions were made, facilitators explain context and incident and run tactical decision making
- **Integration** – Day 2 early afternoon – Macedon Training Centre – share what has been learnt, hear experience of people who were there at the actual incident.

It should be noted that this format is different to the running of most Staff Rides, which provide a night following the field event to enable integration at a dinner, provide sleep-time, and then time the following day for more discussion, analysis or theoretical learning, and the development action plans for personal or group application of learning. Not having the overnight integration phase creates a risk that the integration is not sufficient for effective transfer of learning. However, the advantages are a reduction in training cost.

Pilot

A pilot of the project was conducted in May 2012 with a different cohort compared to the target audience. The advantages of doing such a pilot seeking feedback from participants and trainers were:

- Experience in running such a new type of program.
- Identification of logistics, learning design, facilitation and resource issues for improvement – in particular the inadequacy of the integration phase (due to lack of time to do what was planned)

- Identifying potential affordances of such a program – naming up what is valued, learning objectives and indicators of learning.
- Identification of risks – reputation damage, unwillingness of participants, entrenching of misconceptions, legal issues, continued program funding.
- Building capacity of the trainers.

Identifying and mitigating risks

As part of the review process we have identified a list of potential risks where the learning design might not meet the intended learning objectives. Strategies to mitigate some of these risks were discussed in the meeting with the design team and we list these along with possible supplementary ones for consideration. It should be noted that this is not a comprehensive list of risks nor strategies and we recommend that the design team review these findings to identify other strategies that might be needed.

Some key strategies that could strengthen the learning design include:

- Articulate up front the learning objectives for the participants – so they are clear of the underpinning expectations and can engage in their own self-learning towards specific goals. Thus the value of what they are doing is made clear and how it connects with their other learning and development of skills. This correlates with recommendations by the decision-making research (Phillips, Klein, Seick, 2004).
- A learning contract to enhance learner engagement and motivation – requiring completion of set tasks (e.g., pre and post reflective questionnaires to help with preparation and learning transfer.)
- Devising transfer of learning strategies (this is detailed in section 7).
- Designing in opportunity for facilitators to orient to the program, and de-brief following it.

Risk of learning design not enabling effective learning	Possible strategies (discussed at meeting)	Possible supplementary strategies
Poor participant motivation • Participants not treating the program as serious learning – e.g. seen as a day in the park, not committing time to the preparation or to put into own practice, too many other commitments • Participants not understanding relevance to them and their goals • The program is knocked by peers and supervisors, low visibility, poorly valued in the organisation	• Target future leaders – seen as "elite" opportunity • Seen by organisers as fitting into the Leadership course program – drawing across all four levels and three strands of Human Factors, technical and practical. • Provide information sheets to advertise and explain the Staff Ride – increase its profile as a training tool	• Provide clear learning objectives that participants can aim for with clear expectations of their learning tasks. (in invite letter, in resource materials, in introduction and post reflection opportunities.) • Explicitly frame the staff ride as a key link to the leadership course • Employ strategies such as asking participants to sign a learning contract which involves commitment to pre and post event reflections. • Give participants an opportunity to reflect on how the Staff Ride fits into their own individual learning plans and how it may relate to their context.

Disconnected Learning Participants do not connect their learning to their leadership course or to their practice.	Opportunity to draw from participant experience and courses during the Field Trip discussions.	• Consider drawing on participant experiences and understandings from the leadership courses on the first day group discussions at 4pm. • Specific questions could be used on a post-event reflective questionnaire that asks the participant to connect to prior learning in the leadership course and to embed into practice. • Embed the staff ride event in Leadership training courses
Poor participant attitudes • Participants bringing own opinions, judging, blocking fruitful discussions. • Participants blaming, denigrating those who were involved in the original incident, which could have repercussions in terms of the ethical/legal pursuit of the program. • Participants starting with misconceptions and not open to change • Participants reading the event as an organisations attempt to justify past decisions, rather than fostering a culture of open inquiry	• It is important to set up a culture from the beginning (first invite letter) – open inquiry, respect, connecting to HRO principles - and reinforce at key moments of program (first evening of field trip). • Name up-front hindsight bias. • Emphasise part of tactical ability is being able to move into other perspectives. • Build facilitator dexterity in handling people who exhibit these characteristics	• Invite participants to be cultural change agents to encourage more openness of mistakes. • When blame behaviours occur, name it up as deeply entrenched cultures, rather than individual behaviours. • Ensure that facilitators and presenters are not defensive of the original decisions, rather helping participants to see how they fall into generic error traps (can be explained) and are often made, though not necessarily with the same consequences.
Poor prior knowledge • Lack of familiarity with incident prior to the ride, leading participants with reduced opportunity to engage and participate in the field discussions. This may be due not to having read, or having read, not understanding the material. • Novices in fire experience	• Facilitators could ring participants a week before to remind them to read the material. • It may be useful for facilitators to give participants a preparatory learning task – *imagine you are in a particular role in the event* – be prepared to share this with your group. Where were you when Cobaw happened? • Some re-formatting/ "chunking" of the material to make it more accessible. Putting in a time-line? • Start "field trip" at 4pm the day before to allow time for facilitators to meet with their groups to start engaging with the material.	• A reflective guide could be developed as a required pre-assignment to be completed by a set date prior to the field trip. This could: o Assist the participant in making sense of the material o Provide information for the facilitators about what their group are thinking o Provide evaluation evidence (base-line) • Pair up novices with more experienced people

Facilitation issues during the field trip: • Participants have insufficient orientation to the event and the place to engage with the discussion questions – too big a learning gap. • Lack of appropriate aids. • Lack of facilitator knowledge and familiarity with context. • Lack of facilitator skill in helping participants to generate mental simulations. • Participants are stuck in well-trodden routes of thinking – not pushing their learning edges – not enough challenge.	• Better maps and teaching aids set-up in the field • Having gone through it once, facilitators are more familiar with the context.	• Consider a facilitator orientation prior to the Field Trip highlighting the objectives, techniques. • Facilitators checking for understanding of participants during the field trip. • Facilitators having indicators for what good tactical decision making looks like – and can hear when participants lift their game so that they can provide enough challenge/support. • **Evaluation:** observing how the quality of the thinking changes during the exercise.
Problems in groups • Due to range of experience in the groups (from different levels of the leadership courses) and some hierarchical relationships there is some disharmony in the groups, some dominant voices with some people silent. • Mixed groups of DSE and CFA , volunteer/non-volunteer creates friction and competitiveness. This is counterproductive to the aim to build better inter-operability.	• Start team building and sharing on first day in 4pm exercise. • Groups in single bus building collegiality. • DSE staff attending with CFA volunteers on the weekend will have time off in lieu, rather than over-time rates.	• Name the hierarchical issues up front. • Establish a new culture where everyone has opportunity to contribute and test ideas and perspectives to the discussion. • Valuing of individuals as to what they can bring • Name the cultural issues due to different organisations. • Stress the objective of using this occasion to build inter-operability and networks.

Poor integration
• Integration phase insufficient to make the most of the experience in the field. People are still in the detail of the event, and the actual decisions, and yet to move to a more abstract stance, and to pull out learning to apply to own practice.
• There is a limited amount of integration possible at the time of the field trip – too full a head/tired - needs sleep time, and time the following day for abstraction.
• While they will integrate and connect with some of it later it is likely to be ad-hoc.
	• Provide a longer time for the integration discussion.
	• Consider a jigsaw group arrangement at the beginning of it so people shift into new groups and share their key insights.
	• Time for Gary White, and then time to extract some more abstract learnings.
	• Come back to the Macedon venue for the integration phase so people are comfortable.
	• Bus ride on way back gives time for groups to discuss.
	• At the end of the integration ask for participants' to provide (on a sticky-note?) their Cobaw moment. Send out a small flyer/memory jogger about the event – picture of the group and the Cobaw moments.
		• It is important to connect back to the learning objectives and make the learning transparent against these.
		• There needs to be opportunity to extract some key underpinning ideas about human factors, technical, tactical decision making.
		• Consider time to discuss how participants can generate open inquiry and non-blame cultures within their own sections.
		• Consider spending overnight following the field trip to enhance integration and transfer of learning.
		• Participants could be required to do a post-reflection assignment within 2 weeks of the ride as part of their completion requirement. The purpose is:
		  o To help the participants *reflect – connect-embed* (Key ideas learnt, How can I apply?)
		  o To give the organisers and facilitators feedback about the learning gained and other useful info to help improve the program
		  o To provide post-event evaluation data to compare with base-line data.

Poor transfer of learning
• Lack of specific learning to latch onto. The "mental slides" that have formed are too nebulous to refer to in future real events as intended.
• Lack of opportunity to think about how to apply learning
• Barriers in participants own context make transfer difficult. They have little power to make the cultural changes necessary. Thus little traction in terms of changed behaviour is seen.
		• Facilitators consider using the 4 pm group session of the first day to raise the issue of transfer of learning. Provide some techniques that participants can use during and after the field trip to maximise learning.
		• Recruit several participants from one section to provide a critical mass.
		• Post-evaluation several months down the track can ask:
		   ○ Whether any of the decision exercises helped them think through an incident they encountered
		   ○ What key ideas that have stayed with them
		   ○ Have they applied anything
		   ○ Barriers encountered
		• Engage supervisors up front in the program to be involved in selection, pre-evaluation and post-evalution.
		• Consider further strategies detailed in section 7.

Logistics fail • Bus breaks down, rains with teaching aids in the field no longer viable, tree falls down on someone, heart attack.	This is covered?	
Lack of organisational support • The staff ride is not seen as a cost-effective learning experience by leaders in the organisations.	Key leaders are brought through the experience to help them understand it.	• Importance of these leaders being engaged in the learning evaluation process, understanding the rationales and the need for a culture to be established over time. • Consider interviewing them as part of a newsletter article to promote the Staff Ride.
Lack of learning by the design team and facilitators for improvement for next event • Lack of time for reflection • Little room to make changes because the structure is locked in	Facilitators and designers could stay a second night to debrief and have opportunity to maximise learning from the activity.	An overnight debrief involving evaluators, facilitators and learning design team, should be seen as an essential element of capacity building for the organisation. Such debriefing could go beyond conversations about how to improve the running of the event. It can help to build better organisational understanding about the issues associated with: • Non-blame cultures • Facilitation methods • Tactical – decision making

7. Devise transfer of learning plans

To what extent has transfer of learning been considered as part of the learning design?

In effective learning design, *transfer of learning plans* are embedded in the design through pre, during and post strategies in order to help the participant transfer their learning, thus resulting in changed behaviours on the job. Strategies to assist in participant transfer of learning can be devised for the design team, the facilitators, supervisors, participants, stakeholders and management. Good learning processes can help towards effective transfer; however it is also useful to consider explicit strategies.

While the active and memorable learning from a Staff Ride assists in transfer of learning, the Learning Design team do not appear to have explicit transfer of learning strategies in place for the participants. Because this section is particularly weak we provide below some possible ways of framing the issues and potential strategies to ensure stronger transfer. *We recommend that the design team consider to what extent they want to explicitly design in transfer strategies.*

Barriers to transfer of learning

Typical barriers to transfer of learning are listed in the table below. The Staff Ride, due to its contextual and tactical decision making format already addresses some of these barriers, however some mitigation strategies (in italics) are worth considering for the other issues. *The design team should consider what particular barriers are likely to be most problematic, what they have span of control in addressing, and which stakeholders might be important in recruiting.*

	Barrier	Mitigation examples
Program participants	Lack of the needed prior knowledge, lack of power, attend as lone individual, type of learning style, attitudes, motivation	*Link to prior knowledge, come to learning event as a team* *Link to personal goals*
Program design and execution	Insufficient opportunity for active learning, mismatch between participants' contexts and the learning context, no transfer of learning strategies included, knowledge focus when attitude change is required, focus on content rather than application	Active learning, critical thinking and application exercises Contextual Learning *Transfer of learning is explicitly discussed, with clear understanding of what is to be transferred, giving suggested techniques*
Changes required to apply learning	Requires longer time than expected, time between learning and opportunity to apply, unrealistic and disruptive to current practice	*Set realistic goals, get feedback about what can realistically be transferred*
Organisational context	Organisational resistance to change, weak support from supervisors, peers and organisation, inadequate financial and other resources, existing cultures or reward systems work against change	*Garner support from supervisors, teams and managers* *Provide rewards and recognition for learning transfer*
Community or Social forces	Community not supportive, adverse political and economic climate	*Garner support*

Possible strategies for the learning designers and facilitators to assist participant transfer of learning

These are generic strategies that Caffarella (2002) suggests to increase transfer of learning that may be useful in this context:

	Learning designers	**Facilitators**
Strategy before the program	• Understand the likely contexts and the transfer barriers of the participants. • Create guidelines for what constitutes successful transfer. What skills, knowledge, attitudes, beliefs should be transferred? • Ensure expectations of supervisors, facilitators, managers and learners are clear about what is to be transferred, and they understand their role in assisting in transfer • Involve people in the learning event who are key to the transfer stage • Train facilitators so that they understand the transfer issues and have appropriate techniques.	• Have a clear picture of what learning is to be transferred and the likely contexts that it will be transferred to by the learners. • Help learners to clarify the expectations of the program, consider how they might be transferring into their own context, and link to their own learning goals.
Strategy during the program	• Monitor the program as it is being run to see if facilitators are providing active learning and opportunities for participants to develop application plans. Provide facilitator debriefing to build facilitator capacity.	• Use active learning techniques that encourage critical reflection and application • Provide learners opportunity to develop specific application plans, where they can assess likely barriers • Teach learners about specific transfer techniques so that they can use them
Strategy after the program	• Use evaluation process to discern what is being transferred and what is realistic following the event. Provide feedback to stakeholders on what learning can be realistically transferred. • Develop new transfer techniques based on feedback	• Reflect and improve on delivery • Provide follow-up assistance to participants, including mediating a range of transfer techniques, and determining issues with the use of these

Improving transfer of learning by extending the learning opportunity of the Staff Ride

The current staff ride design is particularly light on the back-end of transfer. Because of the shortness of the event there is little opportunity during the field trip and integration phases for participants to develop application plans and consider the use of specific transfer techniques. This degree of transfer planning may not be appropriate for this type of learning event where a key value is in the development by the participants during their learning experience of "mental slides" that are added to an "experience bank" that can be called upon in later incidents. However, if stronger transfer is required then a couple of options are possible:

• Consider the embedding of the staff ride in longer workshops programs where there is time to plan how to transfer learning.

- The evaluation process of asking the participants to reflect on their learning and discuss how they might be applying it, is in itself a transfer technique. These post reflective exercises might be valuable to embed in the program.
- Provide opportunity for participants to reflect about this learning in future leadership learning experiences.

Further, given that the learning design team and the facilitators are important agents in bringing about organisational change it is important to consider their own individual transfer of learning into their other roles or training programs. This may include setting up collegial conversations that help build on insights and questions raised by the staff ride, or setting up a longer term "action research" project that might enable trainers to explore, for example, how to bring about desired cultural changes through training.

Suggestions: Transfer Techniques (Caffarella, 2002)

1. Participants develop an application plan for what has been learnt
2. Participants deliberately try out new ideas, or learning in own setting, be willing to modify
3. Participants develop an individual learning plan – set own objectives and criteria for learning
4. Coaching / mentoring
5. Job aids – reminder of new learning
6. Job rotation – provide new opportunities to try out new skills
7. Participants use an application notebook – ideas that have worked or not worked
8. Regular support groups
9. Follow-up training sessions
10. Follow-up reflective questionnaires or evaluation
11. Networking and chat rooms
12. Participants engage in reflective practice or action research
13. Review effectiveness of transfer techniques

8. Evaluation framework

What evaluation framework can meet the aims of stakeholders?

There are many evaluation frameworks. Already in creating this interim report we are drawing from an *Accountability Framework* approach (Vella, Berardinella & Burrow, 1998) which evaluates the learning design, learning objectives, the processes of development and helps to clarify what the anticipated changes are likely to be, prior to evaluating whether any evidence of change occurred.

The learning design team clarified that the key evaluation that they would like the evaluation team to conduct is around determining how well the program achieves its <u>learning objectives</u>.

In evaluating how well a learning program meets its intended objectives, Kirkpatrick (1998) suggests a four level approach:

1. Participant reactions
2. Participant learning
3. Behavioural Change or use of new knowledge or skills
4. Results or outcomes - organisational or community

The Learning Design team indicated that they are interested in getting evaluation data from the first three levels of the Kirkpatrick schema, as well as determining the effectiveness of the program. We

have listed below what we understand the design team want to know with suggested evaluation approaches for each section. *The Learning Design team need to clarify whether this matches what they would like evaluated.*

What the Learning design Team want to know:	Possible evaluation approach
Participant reactions What is their attitude to the learning experience (before and after)? What did they think of the program quality, understandability, usefulness? How would they apply it? Would they recommend to a friend? What do they think could be improved?	• Participant reactions to be measured by a participant survey (see Appendix 3) taken after the event. It is proposed that this is administered within 1 -2 weeks of the event using Survey Monkey. • Motivation towards learning will be compared to transfer of learning.
Participant learning • *during the program* - Are the participants during the exercise developing new "mental slides" – rich decision experiences as part of their data bank? Are they identifying decision-making points, trade-offs? Engaging in "what ifs"? Are they developing an open, non-blame culture in the way they talk and engage with each other and the material? • *after the program* - Did the participants develop better understandings of tactical decision-making, human factors, technical fire knowledge or the ways they think about these things (meta-cognition)? How has their thinking about the incident changed?	• Participant learning during the event can be assessed by an evaluator/observer, who then debriefs the facilitators (the evening of the Field Trip) to pull out their impressions of the quality of learning. *It is important that key indicators for understanding the learning that is anticipated to happen are developed by the learning design team up front, or a decision is made that they will emerge from the evaluation/observation and debriefing process.* • Participant learning immediately after the event can be assessed by key open ended survey questions that enable judgement to be made on the quality and breadth of learning achieved. *This is likely to need support by a facilitator/domain expert to check the quality of answers.* This can be compared to pre-event understanding administered in a pre-event questionnaire (Appendix 2). • Three participants with different learning gains could be targeted for 30 minute interviews to better understand what and how they made meaning of the experience. This will help in the design of the instruments to measure behavioural change.
Behavioural change (after the summer fire season – March 2013) - Has this changed participants' ways of thinking, valuing or behaviours? In what ways? How have they transferred this knowledge into an actual decision-making situation? Did they use "mental slides" of the Cobaw incident during a real experience to help in decision-making? Has this enhanced inter-operability? Have they adopted more	• Participants can be asked in a questionnaire in March 2013 to reflect on how they were able to apply what they learnt and barriers to transfer. Being self-administered it may not give rigorous data. • Supervisors of participants could be identified at the beginning of the program and recruited to help with transfer of learning strategies as well as assess the degree that the participants have changed (through a questionnaire aligned with the participant questionnaire). They could be asked to

openness and willingness to inquiry about mistakes? What might be barriers to transfer of learning?	make comparisons with those who only participated in the Leadership Course, not the staff ride, to provide a control group comparison. • Three participants (who reported different amounts of change) could be targeted for interviews. 2 supervisors could be interviewed.
Program effectiveness - Is the Staff Ride the best way to meet the learning needs? What is the value of the program in terms of training, or organisational change? Were the participants able to integrate learnings from the leadership courses? How can we improve the design?	• Questionnaire could be given to facilitators and designers in March 2013 to seek what affordances have arisen from their own engagement in the program. Interviews with a facilitator, designer, and one of the key managers who are attending. • The learning design team do a cost-benefit analysis comparison with other delivery modes using the data gained on the learning outcomes. (Consider drawing upon Appendix 1 evaluation table.) • A debriefing with the evaluators, the design team and the facilitators on the night of the first Staff ride will give some immediate feedback for refinement of the program. A further discussion in April/May 2013 once the other information has been collected and analysed will enable further consideration of how the program can be developed.

Rigour

The rigor of such an evaluation as this relies on the fact that it is multi-levelled, includes data from different groups of people (participants, designers, supervisors) and different types of data (observation, self-administered questionnaires, judgement by domain experts, interviews to get depth of understanding.)

Salas et al (2001) critically reviewed over 50 evaluation studies of various CRM training events in the Aircraft and hospital sectors. The aims of such studies were to investigate the effectiveness of such learning, and each used one or more levels of Kirkpatrick's schema. Salas et al (2001) alerted to the difficulty of such studies in providing hard evidence: the problems with questionnaire instruments, the subjective nature of observations, and the difficulty in assigning change of behaviours or organisational change to one training event.

Thus it is important that the Learning Design team and stakeholders have realistic expectations of what such an evaluation process can actually say. More value may be gained from the evaluative process in building capacity of those involved in the facilitation and design of the program, rather than giving definitive answers to what extent was the training effective.

Questionnaires

In Appendices 2 to 5 we have included possible questions for participants and facilitators. *These need to be reviewed by the Learning Design team to reduce, refine and align with any changes in the learning objectives.*

In Appendix 2 we have created sample questionnaires for participants prior to the event and Appendix 3 is 1 to 2 weeks following the event. They have multiple purposes, which we have tried to make clear. In the post questionnaire we have provided a self-assessment test against the currently expressed learning objectives (to help discern participant learning). While this will give useful information about how the participant perceives their learning gains, it should be recognised that it is very subjective. The scales are related to assessing the perceived amount of "improvement" – not measuring against specific standards for knowledge/skill acquisition, as is the case in most self-assessment approaches. However, since this learning program is not about learners aiming for understanding of specifically set knowledge or skills (end points), instead enhancing and building on where they currently are, it is not appropriate to ask them to measure themselves against set standards.

In the post questionnaire it should be noted that the Part 2 questions to discern participant reactions to the program (to give feedback on the learning design) are not as specific as the questions from the pilot evaluation - thus they will not give specific feedback about each component of the staff ride format. Rather they are targeted to understanding how well the learning design intentions are delivered. *Does the learning design team require more specific questions to help determine how to improve the learning program?*

Note that if the learning design team clarify or change their learning objectives then this will affect the questionnaire.

Appendix 5 lists some questions for the facilitators in an immediate debriefing of the staff ride. Some of these questions aim to triangulate with the participant responses, some aim to build capacity of the trainers, and some are about finessing the program design.

Appendix 1 – Evaluation Grid for Comparing Learning and Change Strategies   *Give a rating of LOW (1), MEDIUM (2), HIGH (3)*

Criteria *Importance:*	Weight of criteria	Staff Ride	Classroom Learning	Mentoring	Simulation exercises	Action Research	After Action Reviews	Change in procedures or structures
Addresses identified learning gaps – e.g. • need for development of mental slides • integration of HF and technical knowledge • modelling open culture of inquiry								
Number of people affected: • Participants – how many through program? • Supervisors, facilitators, flow on effect								
Contribution to individual growth • build new skills, knowledge, attitudes and performance • alignment with personal goals, needs & learning styles								
Influence (to what extent does this intervention work with and value-add other interventions, or meet other needs?)								
Contributing to organisational productivity (through improved leadership and decision-making)								
Feasibility:								
Resources required (Learning design, materials, people, equipment, facilities, financial, time, organisational)								
Facilitation skills required Knowledge of adult learners, instructional techniques, Content/context knowledge, Facilitating mental simulation								
Sustainability								
Ability to incorporate transfer of learning strategies (Identify and overcome organisational barriers to transfer)								
Risks in doing the program **Risks in not doing it**								
Commitment by organisation (alignment with goals)								
TOTAL								

Appendix 2 – Pre-event questionnaire for participants

Questions – following the pre-reading	Rationale

Demographic data
  1. Name
  2. Contact
  3. Section, Organisation
  4. Location/region
  5. Role – strategic, incident, team, personal fire role
  6. Doing the leadership course?
  7. Level of Leadership Course AIIMS – planning, ops, logs, public info
  8. Years experience
  9. Volunteer?
  10. Mentor, superior or supervisor
	• To get a sense of level of participant
	• To be able to track the participant
	• To determine the supervisor so that they can be recruited to help with transfer of learning and to help assess if there has been any behavioural change.
	
	Learning Design Team to give advice on these categories

11. What are the issues or insights that are standing out for you after reading the preliminary study material? 12. What do you think are the tactical decision-making points in this event? Why?	• to gain a sense of the participant's quality and breadth of understanding and use of conceptual language (these will be coded against knowledge based on technical, human factors, tactical decision making and other)to compare to later changes in understanding • to help the participant reflect on the material to help sense-making

13. How would you describe your understanding of the incident at this stage?
    a. Not able to get a clear picture - confusing
    b. Have a sense of the incident as a whole but fuzzy on the details
    c. Familiar with the event and the sequence of events
 	
14. How long have you spent with the pre-reading?
 	
15. What questions do you still have? What do you need to know?
 	
16. What sort of learner would you describe yourself as? What would help you to learn more effectively?
	• to get a sense of the participants preparedness for the staff-ride (which might impact on their learning during it, and transfer afterwards)
	• to alert the facilitators to the work they need to do to ensure participants can make the most out of it.

17. What are your objectives in participating in this learning program? 18. How do you intend to apply your learning? What help do you need?	• to encouraging transfer of learning through self-goal setting and thinking about the applications

Appendix 3 – Post-event (1-2 weeks later) questionnaire for participants

Name:

Part 1 – Participant learning – open ended questions

Reflective Questions	Rationale
<u>Take-away learning</u> 1. What are the issues or insights that are standing out for you after attending the Staff-ride? 2. How has your view about the Cobaw incident changed from your first impressions? Why?	• Draws out what they have learnt – not pre-empted (code into Human Factors, Tactical decision-making, Technical/fire knowledge) • Compare to pre-survey and March Survey. • Gives indication of quality of understanding, which can be compared to the self-assessment of learning below.
<u>Perturbation</u> 3. Has this challenged you to re-think any of your previous experiences, ideas, or ways of doing things? Explain. 4. Do you have any unresolved questions or dilemmas as a result of the ride? Explain.	• This tests the degree of perturbation to their own established ways of doing things. This is important to know if you want to understand whether this might be creating deep change as opposed to just topping up knowledge. • This assists in transfer of learning by making the need to change more visible.
<u>Connection to other learning</u> 5. Are there particular parts of the Leadership Course that you are finding that are connecting with this Staff Ride experience in a useful way? Explain.	• Checking whether they can see any connections with the leadership course and what areas in particular seem to connect • Encouraging them through this reflection question to make connections with the course
<u>Application</u> 6. What are your key learnings from this that you will apply in your own practice? 7. Who will you talk about these insights or learnings with – friends, team, work colleagues, anyone? In what way? 8. What would you like to apply, but you feel it will be difficult within your own context? Why? What are the barriers? 9. What support strategies might help you apply these learnings?	• Finding out what they value and will take on as part of evaluating effectiveness of the learning program • Providing baseline data to compare if they do take on later in follow-up questionnaire in March • Helping the participant to start thinking about transfer of learning strategies (could be useful to give suggestions for techniques in an information sheet. • Help learning design team to see what might be needed to organise to better help participants transfer learning
<u>Further Training</u> 10. What further training would like as a follow-on to this? What would you like to know more about, or build skills in?	Connecting to self-goals
<u>Over-all Benefits</u> 11. What have been the benefits of being part of the Staff Ride program to you? (Were there any issues for you in being part of this program?)	• To see if there are other aspects that people value

Self-Assessment of Learning against learning objectives	Not at all (1), Slight (2), Moderate(3), High (4), Very high (light bulb moments, significant impact)(5)				
1. To what extent do you have a better appreciation of the dynamics of Human Factors in decision making?	1	2	3	4	5
2. To what extent do you have a better appreciation of the nuances of technical fire knowledge in a complex situation?	1	2	3	4	5
3. To what extent did you enhance your knowledge of the issues of tactical decision making?	1	2	3	4	5
4. To what extent did you enhance your ability to identify key decision making moments during an incident?	1	2	3	4	5
5. To what extent did you enhance your ability to identify and evaluate trade-offs in decision making?	1	2	3	4	5
6. To what extent were you able to better appreciate the perspectives and ways of thinking of others in different positions/roles/organisations?	1	2	3	4	5
7. To what extent do you have a better appreciation of some of the ideas from the Leadership Course?	1	2	3	4	5
8. To what extent do you have a better appreciation of what an open, "no blame" culture is like and how it can be encouraged?	1	2	3	4	5
9. To what extent do you have a better appreciation of the way you think and make decisions (meta-cognition)?	1	2	3	4	5

Comments:

Part 2 - Participant reactions to program – Opportunity for comment/suggestions in each scale

How well the program met its learning design intentions:	Not at all (1), Slightly (2), Moderately (3), High (4), Very high (5)				
1. To what extent was the Staff Ride learning program a positive experience for you?	1	2	3	4	5
2. To what extent did this program suit your learning style?	1	2	3	4	5
3. To what extent was this program relevant to you?	1	2	3	4	5
4. To what extent do you think this program is building your capacity for leadership?	1	2	3	4	5
5. How clear were you about what the program was about?	1	2	3	4	5
6. How clear were you of what was expected of you?	1	2	3	4	5
7. How much did your supervisor prepare you for this program?	1	2	3	4	5
8. How well do you think you grasped the pre-reading materials before the field trip?	1	2	3	4	5
9. How important do you think it was to understand the pre-reading material to participate in the Field Trip discussions?	1	2	3	4	5
10. To what extent did the facilitator set the context, give good explanations and ensure your group understood?	1	2	3	4	5
11. To what extent was the facilitator knowledgeable and able	1	2	3	4	5

to respond to deep questions?					
12. To what extent did the facilitator ensure your group members all had opportunity to participate in generating the "what if" mental simulations?	1	2	3	4	5
13. To what extent did you learn from hearing others' experiences and mental simulations?	1	2	3	4	5
14. To what extent were you able to think aloud through "what if" scenarios and get feedback from others?	1	2	3	4	5
15. To what extent did the facilitator encourage you to draw on learning from the Leadership Course?	1	2	3	4	5
16. To what extent did the integration phase enable you to pull out key insights?	1	2	3	4	5
17. How much did you value being able to hear from people who were at the original incident?	1	2	3	4	5
18. To what extent did the discussions cause you to challenge existing ideas and thinking?	1	2	3	4	5
19. To what extent do you think the discussions modelled a culture of openness, and willingness to inquire into past mistakes in order to learn?	1	2	3	4	5
20. To what extent did the facilitator help you to think how you would apply what you had learnt?	1	2	3	4	5
21. To what extent have you continued to think about aspects of the Staff Ride?	1	2	3	4	5
22. To what extent would you be comfortable in having an incident (near miss) that you were involved with being made into a staff ride for the learning of others?	1	2	3	4	5
23. Were there any particular parts of the running of the program that you particularly valued or stood out for you?	open				
24. How does this sort of program compare with other types of programs that you have been exposed to?	open				

How can we improve the program design:
25. Were there any particular parts of the running of the program that you believe could be improved? e.g.:
    o Pre-reading materials
    o supervisor support
    o introductory evening
    o facilitators
    o group dynamics
    o stands
    o integration phase discussions
    o the contribution by the original people involved in the incident
    o logistics
    o choice of participants
    o time
    o follow up
    o other?
	open				

26. I would recommend this program to others	Yes /No				
27. Any other comments?	open				

Appendix 4 – participant interview questions - 3 weeks after the Staff Ride

(after questionnaires have been received)

- What was the experience of the Staff Ride like?
- Learnings? (Probes around Tactical decision making, mental slides, Culture, Human Factors)
- Leadership course – relevance and interconnections
- Application and barriers
- In what way have you been challenged? Did anything surprise you? Have you noticed any changes in self?
- Comparison to other learning

Appendix 5 – facilitator focus group / debriefing immediately following the Staff Ride

- What have been the stand-outs for you? What surprised you?
- What did you notice about participants' preparedness, experience/knowledge and attitudes coming into the program? How did you manage variations between learners?
- What changes did you notice during the day in participants' attitudes, capability for tactical decision making, or modelling an open inquiring culture? What helped create these changes?
- Consider a moment that you think modelled effective mental simulations – what did it look like and sound like? What are indicators of this? When participants are struggling what does it look like and sound like? What helped them?
- How were participants connecting to their learning in the leadership course? How important is this? What did you do to help this, and how might you improve this?
- To what extent were participants thinking of how to apply their learnings back on the job? In what ways did you encourage this?
- How would you rate the quality of the learning that occurred? How does this compare to other courses that you have taken?
- What do you think worked well with the facilitation processes that you used? What difficulties did you experience? Possibilities for next time? What new facilitation skills do you think it is important for you to acquire to make this sort of learning work?
- Was your own thinking challenged? What dilemmas have surfaced for you – about the context/content or about facilitation and learning?
- What will you take away from this that you could bring into other training situations? What further training would you like?

Program design – are there issues with the program design that could be improved? Suggestions?

References

Caffarella, R. S. (2002). *Planning programs for adult learners*. San Francisco: Jossey-Bass.

Kirkpatrick, D. L. (1998). *Evaluating training programs: The four levels.* (2nd ed.) San Francisco: Berrett-Koehler.

Phillips, J. K., Klein, G. & Seick, W. R. (2004). Expertise in judgement and decision making: A case for training intuitive decision skills. In D. J. Koehler & N. Harvey (Eds.), *Blackwell handbook of judgement and decision making* (p 297-315). Victoria, Australia: Blackwell Publishing

Salas, E., Burke, S., Bowers, C.A., Wilson, K. A. (2001) Team training in the skies: Does Crew Resource Management (CRM) training work? *Journal of Human Factors and Ergonomics Society*, 43: 641

Vella, J. Berardinelli, P. & Burrow, J. (1998). *How do they know? Evaluating adult learning*. San Francisco: Jossey-Bass.