2009 Victorian Bushfires Royal Commission


ROADS AND ROADSIDES

SUBMISSIONS OF COUNSEL ASSISTING

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1 INTRODUCTION

1.1 The Royal Commission has heard evidence in relation to the significance of roadside fuels and the safe use of roads during the fires of February 2009. There has also been consideration of firebreaks (both the use of existing roads and verges and the construction of new breaks) to aid suppression efforts.

1.2 Roadside vegetation and clearing were prominent issues in the community consultations conducted by the Commission in March and April 2009. Some participants spoke of roadside fuel acting as ‘wicks’ that drew the fires into townships. Others asserted that roadside fuel loads compromised the safety of firefighters and limited their capacity to engage in fire suppression efforts.

1.3 The issue of roadside clearing also produced a variety of responses in the submissions received from the public. To date, the Commission has received over 90 written submissions from individuals and organisations raising issues regarding roadside vegetation. Some proposed extensive clearing of roadside vegetation, while others advocated no clearing of native flora and fauna. Themes which emerged from the submissions included:

   a) suggestions that roadside fuel contributes to fire risk and spread, in particular assertions that roadside vegetation caused particular roads to act as a ‘fire corridor’, a ‘wick’ or a ‘fuse’;

   b) questions about the creation of strategic fire breaks and use of roads and tracks in forests and national parks as firebreaks;

   c) concerns regarding dangers caused by trees falling on the roads, and issues of access and egress in dead-end and narrow roads;

   d) questions about whether the removal of fallen trees and, dry and dead undergrowth along roadsides could have lessened the impact and severity of the fires;

   e) concerns about the impact of roadside clearing on threatened species and biodiversity;

   f) submissions expressing uncertainty as to who is responsible for particular roads and roadsides.

1.4 The Commission also received a small number of submissions (less than 10) from residents suggesting that permitting firewood collection from roadsides might assist in fuel reduction.
1.5 It is important in the context of examining these issues to distinguish between matters relevant to the management of roads (including the safe use of roads and maintenance of safe and efficient traffic flow) and issues directly related to fire prevention. The latter more directly brings into issue the clearing of roadside vegetation.

1.6 The Royal Commission heard evidence from representatives of the public authorities which manage the road network in Victoria and from others responsible for implementing the regimes applicable to native vegetation on our roadsides. This has exposed a number of concerns in relation to the complexity of the applicable regimes.

1.7 As was noted by Counsel Assisting when this matter was opened, the questions which arise and the polarised views which emerge in the debate concerning roads and roadsides are not new. In 1977, the report of Board of Inquiry into the Occurrence of Bush and Grass Fires in Victoria\(^1\) (Barber Report) explored similar questions.\(^2\) The report noted the following:

\begin{quote}
It is a regrettable conclusion, inescapable on the evidence, that in the summer of 1977 precautionary measures were far from adequate.

Personal observations made during last December and January in the very districts that were later devastated by the February fires, ... made it evident that more should have been done to clear roadsides of obvious fire hazards. Mile after mile of roadside were feet high with phalaris and other grasses, which of course burnt fiercely when the fires came.

The difficulty of creating firebreaks as well as their limitations in stopping a running fire are well appreciated and were emphasised during evidence. Burning of breaks in grassland can only take place when the grass is sufficiently cured and only when there is sufficient warmth in the atmosphere and the weather is dry. Days must be chosen with care, and those days on which burning can be safely and efficiently undertaken without careful preparation are relatively few. It is accordingly, difficult to arrange the mobilisation of brigades on such days. Moreover, volunteers are giving their own time to the exercise, meaning lost time for the pursuit of their own work. Other forms of making firebreaks, such as ploughing, slashing and spraying are expensive and the terrain at times makes one or other of these methods difficult or even impossible. There was evidence that the activity of making firebreaks had been reduced in recent years for various reasons, particularly lack of manpower. All this is true, but the fact remains that far more breaks should be made.

..... Breaks have a role in any plan, and must be pursued despite the difficulties.

The burning of the roadside vegetation is a major subject of controversy and requires some intelligent survey of the nature of the country. Different considerations apply in different regions of the state. In some areas, notably on and near the Great Dividing Range and the Grampians, native woodland survives along the sides of minor roads,
\end{quote}

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\(^1\) Exhibit 151 – Report of the Board of Inquiry into the Occurrence of Bush and Grass Fires in Victoria (TEN.058.001.0001)

\(^2\) Exhibit 151 – Report of the Board of Inquiry into the Occurrence of Bush and Grass Fires in Victoria (TEN.058.001.0001) at 0082-0084
and should be preserved because it adds charm and interest to the roads and because of its inherent worth as a survivor of the original environment. Indeed, well maintained native vegetation will, in certain cases, serve to keep fuel at a lower level by restricting the invasion of introduced grasses. On the other hand, on roads on the western plains the native grasses and plants have long since disappeared and it is unlikely that the most ardent conservationist would suffer much distress at the destruction of phalaris and other exotic vegetation on the roadsides of that part of the country.

The Board has much evidence from the fire prevention authorities and the SEC that their efforts to clear firebreaks or to cut trees were continually frustrated by groups of local conservationists, the more extreme of whom were said to oppose any tree cutting or any firebreak burning.

....

The responsibility for planning and construction of breaks lies primarily with the CFA in the settled rural areas. More planning should be effected and more work is needed through its advisory committees and brigades. Responsibility does not end here however. As well as the CFA (and the FCV – with parallel responsibilities in most forested lands), the municipalities, the CRB3 and the local landowners all have a similar duty. Fire prevention serves the whole community and all sections should play their part in seeing that it is carried out effectively and in providing the labour and expense.

1.8 The Barber Report contained strong criticism of the failure by the then Country Roads Board and Municipal Councils to take adequate steps to reduce fuel loads on the roadsides for which they were responsible.4 The report stated that:

...far more attention must be given to the clearing fire hazards from roadsides by burning or such other method as is preferred and a policy in relation to the clearing of roadsides should be formulated after discussions with the CFA and any other organisation involved in a particular area.

1.9 The above comments continue to resonate, as is evident from the high level of interest expressed by the public in relation to the question of management of roadside fuels. The tension referred to in the Barber Report between managing the fire risk posed by roadside vegetation and the desire to preserve native vegetation continues to exist. A delicate balance is often required to be struck between the primacy given to human life, and the related objective of reducing risk of bushfire, and the desire to protection important environmental values.

1.10 But it is important to separate myth and assumption from reality. Some assertions which have been made since the February 2009 fires in relation to the role played by roadside vegetation in promoting the spread of the fires do not withstand scrutiny. The Royal Commission has heard evidence from experts who have examined the role roadside vegetation played in relation to fire behaviour on 7 February 2009. This

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3 This is a reference to the then Country Roads Board which was the State government authority responsible for main roads in Victoria as at 1977: see Country Roads Act 1958
4 Exhibit 151 – Report of the Board of Inquiry into the Occurrence of Bush and Grass Fires in Victoria (TEN.058.001.0001) at 0194
has revealed that the conditions during the fires were such that most roadside treatments were almost ineffectual in halting their spread. This is discussed in more detail below.

1.11 These submissions consider a number of matters relevant to roads, roadside, fuelbreaks and firewood. The following questions are discussed:

**Roads and roadsides: who is responsible and what do they do?**

a) Which authority is responsible for the management of which roads?

b) Which authority has powers and responsibilities in relation to managing fire risk posed by roadside vegetation on which roads?

c) What is the role of each of VicRoads, Councils, CFA and DSE in relation to the management of roadside vegetation?

d) What procedures and guidelines have VicRoads and Councils implemented for management of the roadsides for which they are responsible?

e) What role does the CFA play in management of roadside vegetation, in particular in the context of fire prevention and fire risk reduction?

**Native vegetation**

a) What is the importance of remnant native vegetation along roadsides?

b) What are wildlife corridors and what role do they play in relation to flora and fauna?

c) What limitations exist on the capacity of road authorities to remove native vegetation from roadsides?

d) What are the exceptions to the limitations on road authorities to remove native vegetation from roadsides? In what circumstances are the exceptions available to the road authorities?

e) What are the obligations of road authorities with responsibilities and powers in relation to roads to maintain native vegetation and protecting native species of flora and fauna on roadsides?

**Fire behaviour and roadside vegetation**

a) Does roadside vegetation affect fire behaviour? How, and in what circumstances?
b) Does roadside vegetation act as a ‘fuse’ or ‘wick’ in a fire? Or conversely, may roadside vegetation act as a useful wind break in some circumstances?

c) Did roadside vegetation affect fire behaviour on 7 February 2009?

Fuelbreaks and Firebreaks

a) What use is made of public roads as fire breaks or fuel breaks in suppression efforts?

b) What is the role of strategic fuelbreaks and firebreaks in suppression efforts?

Roads: access and use during fires

a) What difficulties did residents and / or fire agencies experience during the February 2009 fires in relation to the safe use, particularly safe exit, of roads in fire affected areas?

b) What responsibilities are imposed on road authorities to ensure safe use, particularly safe exit, of roads in fire prone areas?

Firewood

a) What rights do members of the public have to collect fire wood from roadsides?

b) What impact does the presence of fallen logs on roadsides have on fire behaviour?

c) What is the importance of fallen logs in relation to maintaining native remnant roadside vegetation?

d) Does permitting firewood collection make an appreciable difference to fire risk?

2 MANAGEMENT OF ROADS: WHO IS RESPONSIBLE?

2.1 In Victoria, the legislation governing the management of roads is the Road Management Act 2004 (Vic) (RMA). Roads may be managed by a number of entities known under the legislation as ‘Road Authorities’.
2.2 The principal objects of the RMA are to 'establish a coordinated management system that will promote safe and efficient road networks... and the responsible use of road reserves for other legitimate purposes'.

2.3 The objects of the RMA are clearly focused on the safe and efficient use of roads, management of the road system and the rights of road users and do not refer directly to reduction or prevention of the risk of bushfire.

2.4 The RMA establishes two types of road authority. Generally, the coordinating road authority is the authority responsible for the creation of the road and controlling the use of the road reserve, while the responsible road authority is responsible for the care and maintenance of the road. The usual position under the RMA is that:

a) VicRoads is the coordinating road authority for freeways and arterial roads and is the responsible road authority for freeways and arterial roads in rural areas (and for the parts of arterial roads used by through traffic in urban areas).

b) Councils are the coordinating road authorities for municipal roads within their municipal districts and the responsible road authority for municipal roads (and for the parts of arterial roads not used by through traffic in urban areas).

2.5 Councils are responsible for the roads classified as municipal roads on the councils’ register of public roads and all those roads otherwise placed under the care of council by section 205 of the Local Government Act 1989 (Vic).

2.6 In these submissions, the authority responsible for a road is generally referred to as a road manager.

2.7 It should be noted for completeness, that the Secretary to the Department of Sustainability and Environment (DSE) is responsible for roads on public land including those in State forests and national parks. As a result, the DSE is responsible for a network of approximately 48,000 kilometres of roads. Most of these roads are unsealed and of low quality. Those roads are not discussed in detail in these submissions. It is assumed that any treatment of fuels on or near roads managed by the DSE is usually subsumed in the treatment of the fuels on the surrounding public land.
3 RESPONSIBILITY FOR FIRE PREVENTION WORKS ON ROADS

3.1 There is a clear obligation imposed on the public authorities who manage our roads by section 43 of the Country fire Authority Act 1958 (CFA Act), which provides as follows:

43. Duties and powers of councils and public authorities in relation to fire

(1) In the country area of Victoria it is the duty of every municipal council and public authority to take all practicable steps (including burning) to prevent the occurrence of fires on, and minimise the danger of the spread of fires on and from-

(a) any land vested in it or under its control or management; and

(b) any road under its care and management.

(2) A municipal council or public authority may-

(a) acquire any equipment;

(b) do any things;

(c) expend from its funds any amount-

that is necessary or expedient for the purpose of fulfilling its duty under subsection (1).

(3) If the cost of maintenance of a road is apportioned between municipal councils or public authorities or both the cost of fulfilling the duty imposed by subsection (1) must be apportioned in the same manner.

3.2 The reference to every 'public authority' in section 43 includes VicRoads and councils. By reason of the provision being limited to the 'country area' of Victoria, it appears section 43 does not apply to public land and therefore does not apply to roads managed by the DSE.12

3.3 Section 43 of the CFA Act imposes an obligation on councils and VicRoads in relation to the roads under their care to take 'all practicable steps ....to ... minimise the danger of the spread of fires on and from... any road under its care and management'. The obligation imposed is to 'minimise' danger, taking 'all practicable steps'. The obligation is not expressed to be subject to any other policy or regulatory regime.

12 Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [17]
3.4 The terms of section 43 of the CFA Act suggest that public authorities responsible for managing roads ought employ a robust risk identification and management model in order ensure they take all 'practicable steps' to reduce fire risk on the roadsides for which they are responsible.

3.5 As is discussed in detail below, councils have attempted to address their obligations under section 43 of the CFA Act in close consultation with the CFA and via works conducted under the auspices of each of Municipal Fire Prevention Plans (MFPPs), Road Management Plans (RMPs) and Roadside Vegetation Management Plans (RVMPs), but the requirement to comply with the regime concerning protection of native vegetation has rendered this a complex task.

3.6 In contrast, VicRoads has adopted a minimalist approach of focussing on a program of mowing or slashing grass on the roadsides for which it is responsible, and ‘defers to the fire experts’ in relation to other risk management works which might be undertaken on its roads. Its approach to the latter is usually reactive – depending on a matter being raised by a CFA brigade or perhaps being brought to its attention via complaint from the public.

3.7 It is submitted that neither of the above outcomes is ideal. There is much room for improvement. The way in which councils and VicRoads manage their responsibilities is discussed in more detail below in Sections 8 and 9.

4 WILDLIFE CORRIDORS

4.1 In some parts of Victoria, particularly where extensive clearing of grasslands has been undertaken, roadsides may provide the only remaining example of remnant native vegetation. Some species rely on remnant native vegetation found along roadsides as habitat or in order to move across the landscape. It is for this reason, that roadsides which support remnant native vegetation are sometimes referred to as ‘wildlife corridors’.

4.2 Dr Peter Mitchell (who gave evidence in the hearings for the purposes of speaking to a submission filed by the BEAM Mitchell Environment Group Incorporated13) has a PhD in zoology and experience including as a Landcare Coordinator and teacher of zoology and ecology at East Gippsland TAFE. He explained the significance of roadside vegetation as follows:

13 BEAM – Mitchell Environment Group Incorporated (BEAM) is a not for profit organization. Its membership is comprised of 80 individuals and families, representing a diverse range of residents from across the Mitchell Shire. BEAM promotes the local environment and highlights planning and roadside management issues. BEAM provides an avenue for members to express concerns about environmental issues, and to participate in the development of solutions. BEAM works closely with Mitchell Shire and is represented on its Environment Committee.
The first thing is that most of our roadsides are in areas that have been fairly extensively cleared in woodland, grassy woodland country, so we are looking at something like three or four percent left of what was there originally. These roadsides inform us about what the native vegetation used to look like. They are like ribbons of information, if you like, across the landscape. A lot of the work done with ... classification of ecological vegetation classes, is based on some of the vegetation on roadsides because that was the best that was available. Also it is a source of material for revegetation. It is where a lot of our seed collecting is done as well. As far as corridors, a lot of animals move along corridors and a lot of biodiversity in general moves along corridors because that is the safest place, it is where they find food and so on. You often see little bird groups going along the corridors moving through, but you also have a lot of invertebrates also using corridors ... to sort of move around the countryside and recolonise areas.  

4.3 Dr Mitchell said that species of fauna, including small thornbills, weebills and some small honeyeaters are reliant on roadside corridors of vegetation to move from place to place. Dr Mitchell noted that for some species, roadsides are the only remaining vegetation suitable for them. The roadsides act as corridors, providing ‘a good cover of trees and understory and logs and so on’.  

4.4 Fallen logs, whether on forest floors or along roadsides, are particularly valuable remnant vegetation as they ‘create a microclimate which is suitable for the survival of a lot of species’. Coarse woody debris found on the forest floor may provide shelter for animals, protect small plants from grazing and stormy weather and contributes to the building of soil as the debris breaks down. In particular, fallen trees and branches provide tree hollows. Tree hollows are particularly important for some species, and generally take 100 to 150 years to develop. Tree hollows are considered essential for 47 bird species in Victoria, 14 of which are listed as threatened. Reptiles may also depend on coarse woody debris, using logs for basking, nesting, shelter, hibernation and foraging. Marsupials, including several threatened species, depend on tree hollows, as do some species of spiders and beetles.  

4.5 Roadside vegetation (particularly fallen trees) may, therefore carry particularly high environmental value – a matter required to be considered by road managers when contemplating fuel reduction works. This often produces a need to engage in a complex balancing exercise.

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14 Mitchell T15648:20–T15649:9  
15 Mitchell T15649:10–T15649:21  
16 Mitchell T15650:2–T15650:19  
17 Mitchell T15649:22–T15650:1  
18 Miezis T15665:8–T15665:27; Exhibit 753 – Statement of Miezis, Annexure 6 (DSE.HDD.0052.1169) at 1183  
19 Mitchell T15650:25–T15650:28  
20 Exhibit 753 – Statement of Miezis, Annexure 6 (DSE.HDD.0052.1169) at 1184  
21 Exhibit 753 – Statement of Miezis, Annexure 6 (DSE.HDD.0052.1169) at 1184
5 COMPETING OBJECTIVES: FIRE PROTECTION VS PROTECTING NATIVE VEGETATION

5.1 Despite the unqualified terms of section 43 of the CFA Act and the obligation it imposes on road managers to reduce fire risk, the operation of Victoria’s native vegetation regime (principally via clause 52.17 of the Victorian Planning Provisions) (VPPs) subjects road managers to other obligations which, in many instances, compete directly with fire risk reduction objectives.

5.2 The Submissions of Counsel Assisting in relation to Land Use Planning contain a detailed analysis of the Native Vegetation Management Framework22 (see Section 4) and the principles of ‘Net Gain’, and ‘Offsets’. The objectives of the Planning and Environment Act 1987 (Vic) and the standard statewide planning provisions known as the VPPs (see Section 2 thereof).23 The administration of the Planning and Environment Act 1987 (Vic) and the way in which the VPPs operate generally has also been canvassed in detail in those submissions. Those matters are not repeated in detail here.

5.3 Clause 52.17 of the VPPs has as its key objective to protect and conserve native vegetation, to reduce the impact of land and water degradation and provide habitat for plants and animals. The clause applies to roadsides, along with other public and private land. The primary object of clause 52.17 is to prevent the removal of native vegetation.24 In the alternative:

- If the removal of native vegetation cannot be avoided, to minimise the removal of native vegetation through appropriate planning and design.
- To appropriately offset the loss of native vegetation.25

5.4 Neither of section 43 of the CFA Act or clause 52.17 of the VPPs on their face provide a guide to road managers as to the way in which any conflict between the provisions ought be resolved. Indeed, it appears from the evidence that the approach taken by each of the DSE (which manages the implementation of clause 52.17 of the VPPs); councils and VicRoads involves resort to a ‘case by case’ approach in many circumstances. This has been productive of a lack of coherence in the approach to the management of the two regimes where they intersect.

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22 Exhibit 678 – Victoria’s Native Vegetation Management – A Framework for Action (SUMM.020.038.4204);
Submission of Counsel Assisting on Land Use Planning (SUBM.600.001.0001)
23 Submission of Counsel Assisting on Land Use Planning (SUBM.600.001.0001)
24 Exhibit 749 – Statement of Dripps (WIT.3024.005.0124) [6]-[7]
25 Exhibit 685 – Statement of Dripps, Annexure 6 (DSE.HDD.0081.0095) at 0095
5.5 In its general submission filed in May 2009, the Municipal Association of Victoria (MAV) highlighted the difficulties that councils face in managing the fire risk posed by roadside vegetation and adhering to the requirements of clause 52.17 of the VPPs. The submission stated:

...a range of laws require Councils to have regard to considerations apart from bushfire management. There is an inherent tension between preservation of native vegetation and fire prevention on roadsides. However, there is little legislative prescription or policy guidance for Councils in relation to resolving this tension.

5.6 Clause 52.17 of the VPPs contains a table of exemptions which proponents, including road managers may rely on in order to undertake works on roadsides which have some impact on native vegetation: see Table at 52.17-6. Where those exemptions are not engaged, there is a requirement to obtain a permit to ‘remove destroy or lop native vegetation’.

Exemptions to clause 52.17

5.7 Part of managing the ‘inherent tension’ requires councils (and VicRoads) to navigate the suite of exemptions. The table of exemptions, in so far as they are relevant to planning and domestic building are analysed in detail in the Submissions of Counsel Assisting on Land Use Planning (see Section 4 thereof). A number of the exemptions are specifically relevant to the management of roadside vegetation and/or the creation of firebreaks. The relevant exemptions are:

<table>
<thead>
<tr>
<th>No permit is required to remove, destroy or lop native vegetation to the minimum extent necessary if any of the following apply:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grasses</strong></td>
</tr>
<tr>
<td>• The native vegetation is a grass and is to be mown or slashed for maintenance only. Under this exemption the grass must be:</td>
</tr>
<tr>
<td>• Located within a lawn, garden or other planted area; or</td>
</tr>
<tr>
<td>• Maintained at a height of at least 100 millimetres above ground level.</td>
</tr>
<tr>
<td><strong>Dead vegetation</strong></td>
</tr>
<tr>
<td>• The native vegetation is dead. This exemption does not apply to standing dead trees with a trunk diameter of 40 centimetres or more at a height of 1.3 metres above ground level.</td>
</tr>
<tr>
<td><strong>Weeds</strong></td>
</tr>
</tbody>
</table>
| • The native vegetation is to be removed, destroyed or lopped to enable the removal or destruction of a weed listed in the schedule to this clause. The maximum extent of native vegetation removed, destroyed or lopped under this exemption on contiguous

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26 Exhibit 154 – 2009 Victorian Bushfires Royal Commission General Submission by Local Government in Victoria (SUBM.002.040.0002) at 0090
27 Exhibit 685 – Statement of Dripps, Annexure 6 (DSE.HDD.0081.0095) at 0097–0104
28 Submission of Counsel Assisting on Land Use Planning (SUBM.800.001.0013)
land in the same ownership in a five year period must not exceed any of the following:
- 1 hectare of native vegetation which does not include a tree.
- 15 native trees if each tree has a trunk diameter of less than 20 centimetres at a height of 1.3 metres above ground level.

**Fire protection**
- The native vegetation is to be removed, destroyed or lopped for fire fighting measures, periodic fuel reduction burning, or the making of a fuelbreak or fire fighting access track up to 6 metres wide.
- The native vegetation is to be removed, destroyed or lopped for the making of a fuelbreak by or on behalf of a public authority in accordance with a strategic fuelbreak plan approved by the Secretary of the Department of Sustainability and Environment. The maximum width of a fuelbreak must not exceed 40 metres.
- The native vegetation is to be removed, destroyed or lopped in accordance with a fire prevention notice under:
  - Section 65 of the *Forests Act* 1958.
  - Section 41 of the *Country Fire Authority Act* 1958.
  - Section 8 of the *Local Government Act* 1989.

**Public roads**
- The native vegetation is to be removed, destroyed or lopped to maintain the safe and efficient function of an existing public road managed by the relevant responsible road authority (as defined by the *Road Management Act* 2004) in accordance with the written agreement of the Secretary of the Department of Sustainability and Environment.

5.8 First, it must be understood that the entire regime created by clause 52.17 applies only to native vegetation. Thus, the first matter to consider is whether the grass, weed or other vegetation in question located along the roadside is native or introduced. If the latter, then none of the considerations under clause 52.17 of the VPPs apply.29 For example, a common weed found on roadsides in country Victoria is phalaris. This is an introduced species, and thus is not affected by clause 52.17 and may be removed.30

5.9 Assuming, however, that the roadside vegetation in question is native, then prima facie the prohibition on removal applies, and there is a need to consider whether any of the exemptions in clause 52.17-6 apply.

29 Dripps T15585:1–T15585:6
30 Mitchell T15652:5–T15652:15; Exhibit 749 – Statement of Dripps (WIT.3024.005.0124) [10]
5.10 The scope of each of the exemptions and the way in which they interact raises a number of difficult questions of construction and practical implementation.

**Grasses, dead vegetation and weeds**

5.11 For example, the *grasses* exemption is expressed to apply only in circumstances where the mowing or slashing is to be done for ‘maintenance only’. It is assumed that ‘maintenance’ is broad enough to include maintenance undertaken for purposes including fire risk, but this is not made explicit in the clause. The exemption also requires that the grass be maintained at the height of at least 100 millimetres above ground level. This raises some practical compliance issues.

5.12 The *dead vegetation* exemption is of some utility, as it is likely to permit road managers to engage in some useful clean up operations in which leaf litter and debris is being removed (other than dead standing trees with a trunk diameter of 40 centimetres or more at a height of more than 1.3 metres above ground level).

5.13 The *weeds* exemption permits only native weeds listed in the schedule to the clause to be removed. In addition, the removal of native weeds is subject to certain volume threshold limits.

**Fire protection exemption**

5.14 The *fire protection* exemption has some curious features. It bundles together a number of quite distinct concepts:

a) Removal of native vegetation for *firefighting measures* is treated by the DSE as being restricted to urgent measures undertaken for the purpose of controlling an active fire. It is not treated as providing scope to permit works undertaken in anticipation of a fire or to reduce roadside fuels in order to reduce the risk of fire.

b) The reference to *periodic fuel reduction burning* is not expressed on its face to be limited to public land. It is apparently treated by the DSE as applicable to all fuel reduction burning, whether carried out on public or private land. Oddly though, this limb of the exemption does not appear to be used to its full extent by road managers. If taken literally, the exemption would appear to permit road managers to burn all fuels along roadsides, provided it is done as part of a periodic plan or cyclical program. However, it is clear from the evidence that the most common treatment of roadside fuels is mowing or slashing of grass rather than burning.
c) The part of the fire protection exemption which refers to: ‘the making of a fuelbreak or firefighting access track up to 6 metres wide’ and fuelbreaks which may be made in accordance with a strategic fuelbreak plan approved by the Secretary of DSE ...providing it does not exceed 40 metres in width are discussed in more detail below in Section 11.

d) Reliance on fire prevention notices. This part of the fire protection exemption raises some interesting questions.

5.15 Section 41 of the CFA Act is in the following terms.

41. Fire prevention notices

(1) In the country area of Victoria, the fire prevention officer of a municipal council may serve a fire prevention notice on the owner or occupier of land in the municipal district of that council (other than a public authority) in respect of anything-

(a) on that land, other than a building or in a building;
(b) on the adjacent half width of any private street that abuts that land-
(other than a prescribed thing or class of things) that by its nature, composition, condition or location constitutes or may constitute a danger to life or property from the threat of fire.

(2) A fire prevention notice may be served only if the fire prevention officer forms the opinion-

(a) that it is necessary, or may become necessary, to do so to protect life or property from the threat of fire; and
(b) that there is no procedure under any other Act or regulations made under any Act that is more appropriate in the circumstances to address that threat.

(3) …

[emphasis added]

5.16 Although section 41 provides that a fire prevention notice may not be served on a public authority, the definition section of the CFA Act (s3) provides that the meaning of the term ‘public authority’ in the CFA Act does not include a municipal council.
Thus, a fire prevention notice may be served on councils – though it may not be served on other public authorities such as the DSE or Parks Victoria.

5.17 The manner in which fire prevention notices and the surrounding regime usually operates in the context of planning has been the subject of detailed consideration in the Submissions of Counsel Assisting on Land Use Planning (see Section 9 thereof).

5.18 For present purposes, it suffices to note that it appears a Fire Prevention Notice can be served on a council in relation to a roadside where a Municipal Fire Prevention Officer (MFPO) has formed the view that fuels on the roadside pose ‘a threat to life or property’ because of fire risk within the meaning of section 41 of the CFA Act.

5.19 There is evidence that there have been cases of fire prevention notices being served on councils. Mr Spence and Mr Leslie were aware of MFPOs served Fire Prevention Notices on the councils that employ them, thereby activating this exemption. Mr Spence said he had heard of situations where the notice had possibly been used as a trigger to enliven the fire prevention exemption in clause 52.17. This is certainly an ingenious approach, but it would be more desirable for there to be a clear and easy means by which councils might undertake necessary fire prevention works.

‘Public roads’ exemption

5.20 The public roads exemption provides as follows:

The native vegetation is to be removed, destroyed or lopped to maintain the safe and efficient function of an existing public road managed by the relevant responsible road authority (as defined by the Road Management Act 2004) in accordance with the written agreement of the Secretary of the DSE.

5.21 The public roads exemption has been in force since 2008. Its implementation was explained in evidence by Ms Dripps. In order to avoid the need for a council or VicRoads to obtain the written agreement of the DSE each time it is sought to rely on the exemption, the DSE has devised a pro forma agreement which it has offered to VicRoads and to councils which has been designed to cover all works of the requisite kind.

5.22 The Public Roads Agreement recites the fact that the exemption applies in order to ‘maintain the safe and efficient function of existing public roads’. It provides that provision of offsets is not required, but ‘may be volunteered’.

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36 Submission of Counsel Assisting on Land Use Planning (SUBM.600.001.0001)
37 Spence T15696:22–T15697:6
38 Exhibit 885 – Statement of Dripps, Annexure 6 (DSE.HDD.0081.0095) at 0101
39 Exhibit 749 – Statement of Dripps, Annexure 2 (DSE.HDD.0052.1854) at 1858–1861
40 Exhibit 749 – Statement of Dripps (WIT.3024.005.0124) [15]–[21]; Dripps T15593:13–T15593:28
41 Exhibit 749 – Statement of Dripps, Annexure 3 (DSE.HDD.0052.1862)
42 Exhibit 749 – Statement of Dripps, Annexure 3 (DSE.HDD.0052.1862) at 1864
5.23 The Public Roads Agreement says that two categories of activities may be undertaken to provide the safe and efficient function of roads: (a) maintenance activities; and (b) safety treatments. Maintenance activities are described as including:

- Lopping / trimming of vegetation (said to involve removal of less than one third of the foliage from any individual plant or tree)
- Grass mowing, slashing / reach arm mowing, weed spraying and edge trimming
- Removing fallen timber
- Embankments and cutting maintenance
- Fire prevention maintenance [emphasis added] 43

5.24 Safety treatments are said to be:

- Safety barrier installations (e.g. wire rope / guard rail) shoulder sealing / widening and associated road formation works;
- Removal / trimming of hazardous vegetation where the aim is to remove or reduce known likely safety risks posed by native vegetation, rather than risks that are unlikely threats to safety. 44

5.25 A clearing threshold (expressed by reference to a formula) is expressed to apply to safety treatments, but not to maintenance activities.45

5.26 The Public Roads Agreement provides that councils are to notify the DSE prior to doing any clearing involving removal or destruction (but not lopping) of native vegetation; discussions will then take place. If the proposal is considered ‘significant’ by the DSE a site visit may be arranged in order to discuss the options for ‘avoiding or minimising impacts to biodiversity’. 46

5.27 The Public Roads Agreement also requires councils to keep a record of all maintenance activities and safety treatments undertaken and provide an annual report to the DSE of the aggregate losses that have occurred under this exemption in accordance with a reporting template provided by the DSE. 47

5.28 It is not clear why the two categories of ‘maintenance activities’ and ‘safety treatments’ are treated differently under the Public Roads Agreement. While the focus

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43 Exhibit 749 – Statement of Dripps, Annexure 3 (DSE.HDD.0052.1862) at 1864
44 Exhibit 749 – Statement of Dripps, Annexure 3 (DSE.HDD.0052.1862) at 1865
45 Exhibit 749 – Statement of Dripps, Annexure 3 (DSE.HDD.0052.1862) at 1865
46 Exhibit 749 – Statement of Dripps, Annexure 3 (DSE.HDD.0052.1862) at 1864
47 Exhibit 749 – Statement of Dripps, Annexure 3 (DSE.HDD.0052.1862) at 1865

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of the exemption and the related agreement is not specifically on bushfire prevention, nevertheless ‘maintenance activities’ are said to include a range of matters including ‘fire prevention maintenance’. It can be seen immediately that this phrase is broader in scope than the free standing fire protection exemption in clause 52.17 of the VPPs itself.

5.29 Ms Dripps confirmed that ‘fire prevention maintenance’ is regarded by the DSE as allowing more activities than are encompassed in the fire protection exemption in clause 52.17-6. She suggested that ‘fire prevention maintenance’ in the Public Roads Agreement enables the removal of dangerous trees, the removal of things overhanging the road and removal of any other vegetation ‘that was deemed necessary for fire maintenance and to enable the safe and efficient functioning of a road’ and might encompass a broad range of activity, including burning, removing debris, cutting, lopping, mowing and ploughing. In her opinion, the limitation on its scope is related to the purpose for which the work is performed – namely it must be ‘being done to maintain the safe and efficient function of the road’.

5.30 It is submitted that the breadth of the ‘fire maintenance’ activities sub clause within the Public Roads Agreement is unlikely to be as wide as Ms Dripps suggested in evidence. That is, for the work in question to properly fall within the ‘public roads’ exemption (which after all is the underpinning source of the power of the DSE to offer and accept the pro forma agreement with councils), it must be tied to maintenance which is being done to ‘maintain the safe and efficient functioning’ of the road in question. There are many examples of ‘fire prevention’ maintenance which might be desirable to carry out and which might reduce fire risk, but which will have no impact on the safe and efficient use of the road in question. Despite this, Ms Dripps asserted that:

\[I \text{ am not a manager of a road or a fire expert, but I would think that activities done by the sides of roads to prevent fires would have a subsidiary benefit of maintaining the safe and efficient function of those roads.}\]

5.31 This may not always be the case, and while the more generous approach apparently being taken by the DSE to the meaning of this exemption is likely to be welcomed by road managers, it involves stretching the language of the public roads exemption unnecessarily.

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48 Dripps T15607:6–T15607:13
49 Dripps T15594:23–T15594:31
50 Dripps T15595:8–T15595:18
51 Dripps T15595:14–T15595:18
52 Dripps T15595:23–T15595:28
5.32 In furtherance of the Public Roads Agreement, the DSE has also published in April 2009 guidelines entitled ‘Managing Native Vegetation on Roadsides – A guideline for implementing agreements under the local government public road exemption (Guidelines).’ These Guidelines contain a chart which sets out the applicable process for determining whether particular works are exempt under the Public Roads Agreement:

![Diagram of exemption process]

5.33 The complexity of the above chart underscores the difficulties associated with navigating this regime.

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52 Exhibit 749 – Statement of Dripps, Annexure 4 (DSE.HDD.0052.1867)
53 Exhibit 749 – Statement of Dripps, Annexure 4 (DSE.HDD.0052.1867) at 1877
5.34 Further, as the Guidelines point out, the Public Roads Agreement (even where applicable) only exempts the road manager from the need to obtain a permit under the *Planning and Environment Act* 1987. Permits may still be required under the *Flora and Fauna Guarantee Act* 1988 (Vic) or the *Environment Protection and Biodiversity Conservation Act* 1987 (Cth). The operation of these other Acts is discussed below in Section 6.

5.35 The Guidelines also contain the warning that ‘council staff should not classify projects in a particular way so that the public roads exemption applies’.\(^55\) No doubt this is aimed at discouraging creative use of the exemption.

5.36 Approximately 37 councils have taken up the offer to sign the Public Roads Agreement.\(^56\) While the response was described as generally positive,\(^57\) a number of councils have expressed reluctance to sign the Public Roads Agreement for reasons including what are regarded as onerous reporting and record keeping obligations.

5.37 Mr Spence suggested that a number of councils had been cautious about taking up the Public Roads Agreement,

...not because of its intent but [because] of the record keeping and reporting required and they are nervous about when they have contractors doing this work, whether they cross the line or not. So particularly the ones that are short on a dollar are really worried about the administrative burden that sits beside trying to sort out what is basically a roadside clearance issue.\(^58\)

5.38 The three councils which participated in a panel hearing in the Royal Commission expressed their opinions in relation to the Public Roads Agreement:

(a) The Shire of Yarra Ranges has not signed the agreement. Clause 53 of the Yarra Ranges Planning Scheme prevails over other planning requirements.\(^59\) Accordingly, many of the maintenance activities detailed in the DSE offer are not currently ones in relation to which the council must obtain a permit. The Shire of Yarra Ranges saw no benefit in consenting to the operation of the Public Roads Agreement.\(^60\)

(b) Colac Otway Shire are reluctant signatories to the Public Roads Agreement.

The Council initially refused to sign. It wrote to the DSE seeking some changes to the Public Roads Agreement on 24 September 2009.\(^61\) It suggested a

\(^{55}\) Exhibit 749 – Statement of Dripps, Annexure 4 (DSE.HDD.0052.1867) at 1874

\(^{56}\) Dripps T15599:31

\(^{57}\) Dripps T15623:27–T15624:3

\(^{58}\) Spence T15696:3–T15696:12

\(^{59}\) As counsel for MAV noted during the hearings, the provision usually referred to as clause 53 of the Yarra Ranges Planning Scheme is a State planning provision developed under the Metropolitan Green Wedge Protection Scheme set up by section 46AA of the *Planning and Environment Act*. It prevails over clause 52.17; Lyon T15769:20–T15770:17

\(^{60}\) Exhibit 758 – Statement of Jack (WIT.4019.001.0001) [66]–[71]

\(^{61}\) Exhibit 756 – Statement of Small, Annexure 4 (WIT.4020.001.0071) at 0072–0080
possible alternative approach and sought a less onerous reporting requirement, in exchange for an undertaking by council that its maintenance activities would be confined to adopting its current practices. The DSE replied in the negative by letter from Ms Dripps on 7 October 2009. The letter said the DSE, 'will not be tailoring Agreements to specific Councils' as it had been developed through consultation with the MAV and was regarded as already balancing questions of maintenance and safety considerations. Mr Green stated that the Shire believed the reporting requirements were onerous. But in the end, the Colac Otway Shire decided to sign the agreement because they found they were 'holding off on doing roadside clearance work'.

(c) Latrobe City Council has not signed the Public Roads Agreement. Latrobe City Council has had in place since June 2002 Environmental Guidelines which are an endorsed land management plan for the purposes of clause 52.17 of the Latrobe Planning Scheme. In short, works which comply with the Environmental Guidelines do not attract the requirement to also obtain a planning permit under clause 52.17-6. Mr Buckley explained that the council regards the Environmental Guidelines as striking an appropriate balance between conservation of vegetation and the need to manage roads and as being far less complex and less onerous in relation to reporting than the agreement offered by the DSE.

5.39 The public roads exemption and the related Public Roads Agreement do offer some scope to councils to undertake works on roadsides, including clearing of native vegetation, in a manner which may reduce fuel loads and fire risk. However, the exemption is primarily concerned with the safe and efficient function of roads. The suggestion by Ms Dripps that fire prevention maintenance has a subsidiary benefit of maintaining the safe and efficient functioning of roads is perhaps not an unreasonable interpretation. But fire protection does not appear to be the purpose at which the exemption is directed. Thus, it appears the scope of the exemption is being ‘stretched’ in order to provide a means by which councils may undertake fire prevention works. It would be far simpler if clause 52.17-6 contained a stand alone exemption which was sufficiently broad to enable road managers to undertake all works on roadsides which are undertaken for the purpose of reducing fire risk.

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62 Exhibit 756 – Statement of Small, Annexure 5 (WIT.4020.001.0081) at 0082–0083
63 Exhibit 756 – Statement of Small, Annexure 5 (WIT.4020.001.0081) at 0083
64 Green T15725:8–T15727:11
65 Exhibit 757 – Statement of Buckley (WIT.4015.001.0001) (25)–[32]: Annexure 4 (WIT.4015.001.0166)
66 Exhibit 757 – Statement of Buckley (WIT.4015.001.0001) (28)
67 Buckley T15727:15–T15728:6
Permits to remove native vegetation

5.40 Where the exemptions in Clause 52.17 do not apply, councils or VicRoads must obtain a permit from the DSE to perform works which impact on native vegetation. The process for permit applications provides for a maximum period of 28 days during which the DSE, as a referral authority under the Planning Scheme must make a determination in relation to the grant of a permit. If a permit is granted, it is necessary to comply with permit conditions, including any requirement to provide suitable offsets.

5.41 There was scant evidence of any councils seeking permits in order to undertake roadside works with the principal objective of fire risk reduction. It appears that in almost all circumstances where Councils undertake fire risk reduction works, they rely on the grasses or weeds exemption in clause 52.17-6. Alternatively, they regard the works as covered by the Public Roads Agreement, and thus do not often apply for permits.

5.42 There was, however, some evidence of road managers having sought permits from the DSE in relation to roadworks undertaken for other purposes, such as upgrading of roads. In that context, it emerged that the conditions attached to such permits by DSE are sometimes onerous, including requirements in relation to provision of offsets. This may be because questions of ‘fire hazard’ or ‘fire protection’ are not separately or specifically taken into account by the DSE when assessing applications for permits to remove native vegetation.

6 STATE AND FEDERAL ENVIRONMENTAL PROTECTION REGIMES

6.1 In addition to the requirements under clause 52.17 of the VPPs there is other significant legislation which must be considered by any road manager contemplating undertaking roadside works which may impact on native vegetation.

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68 Dripps T15600:13–T15600:19
69 See material annexed to Mr Spence’s statement: Exhibit 754 – Statement of Spence, Annexure 2 (WIT.4014.001.0013); Annexure 3 (WIT.4014.001.0029); and additional materials provided: Exhibit 754 – Response to VBRC request for supplementary information – Roadside Clearing (CORR.1002.0001); Table summarising Council responses to matters raised in witness statement of Ms Dripps (CORR.1002.0004)
70 Ms Dripps confirmed in evidence during the Planning Hearings that it is not ‘the primary role’ of DSE to undertake the consideration of reduction of fire hazard when assessing referrals for permits for removal of native vegetation, however she noted that there are a number of exemptions which relate to fire protection measures: Dripps T14056:20–T14058:25; Exhibit 685 – Statement of Dripps (WIT.3024.005.0081) [26]; Annexure 5 (DSE.HDD.0052.1822); Submissions of Counsel Assisting – Land use and Planning (SUBM.600.001.0001) [4.1]–[4.28]
6.2 The requirements of the Flora and Fauna Guarantee Act 1988 (Vic) (FFG Act) apply regardless of the outcome of any application of the exemptions in clause 52.17-6 of the VPPs.

6.3 The purpose of the FFG Act (see section 1) is to ‘enable and promote the conservation of Victoria's native flora and fauna’. The objectives set out in the Act (section 4) include:

(1) (a) to guarantee that all taxa of Victoria's flora and fauna other than the taxa listed in the Excluded List can survive, flourish and retain their potential for evolutionary development in the wild; and
(b) to conserve Victoria's communities of flora and fauna; and
(c) to manage potentially threatening processes; and
(d) to ensure that any use of flora or fauna by humans is sustainable; and
(e) to ensure that the genetic diversity of flora and fauna is maintained; and
(f) to provide programs-
   (i) of community education in the conservation of flora and fauna; and
   (ii) ...
   (iii) of assisting and giving incentives to people, including landholders, to enable flora and fauna to be conserved; and
(g) to encourage the conserving of flora and fauna through co-operative community endeavours.

(2) A public authority must be administered so as to have regard to the flora and fauna conservation and management objectives.

6.4 The FFG Act provides (see section 47) that a person must not take, trade in, keep or process protected flora from public land, including roadsides, without a licence or permit or under authorisation by order of Governor in Council. Protected flora are those on the list of threatened species of flora and fauna (see section 10) or that which is otherwise declared to be protected (section 26). The Secretary to DSE may also make a determination in relation to critical habitats (section 20).
6.5 The Secretary to the DSE and his delegates may issue licences or permits (see section 54 to section 56). Permits may not be issued where to do so would threaten the conservation of the species or community.\textsuperscript{71}

6.6 While there is no statutory time limit in relation to the issue of permits, Ms Dripps said that generally the DSE guidelines provide that protected flora permits and licences, where all required information is provided should be issued within four weeks, and in no more than six weeks, of application. She noted that the process of applying for a permit can be undertaken in parallel with an application for a permit under the VPPs as ‘quite often the same information is required’.\textsuperscript{72}

6.7 It appears that there is some overlap between the State and Commonwealth regimes. But there are some species listed under the Commonwealth Act which are not listed under the State Act and vice versa. In any event, it is possible for a party to seek a single assessment under both Acts, which limits the burden on those seeking to undertake works.\textsuperscript{73} Further, Ms Dripps said that the DSE staff are ‘generally trained ecologists’ with expertise in the State and Commonwealth regimes. Accordingly, if contacted by councils or VicRoads, they are in a position to give the necessary advice – including providing ‘reasonable assurance about matters related to the EPBC Act’.\textsuperscript{74}

6.8 It is noted that in 2009, the State indicated its intention to repeal the FFG Act.\textsuperscript{75}

\textbf{EPBC Act}

6.9 Mr Burnett is First Assistant Secretary in the Commonwealth Department of the Environment, Water, Heritage and the Arts (DEWHA).\textsuperscript{76} He has provided a statement in relation to the operation of the Commonwealth \textit{Environment Protection and Biodiversity Conservation Act 1999} (Cth) (EPBC Act), which is administered by DEHWA.

6.10 The EPBC Act protects Australia’s native species and ecological communities by means including identifying and listing the species and ecological communities that
are threatened and developing a register of critical habitats. As at 30 June 2009, there were 1752 species and 46 ecological communities listed under the EPBC Act.

6.11 The EPBC Act applies to proposed actions that will have a significant impact upon matters of national environmental significance which are not otherwise exempt or permitted under the Act. There are eight matters of national environmental significance to which the EPBC is capable of applying, including nationally threatened species and ecological communities and migratory species.

6.12 The EPBC Act regulates ‘controlled actions’, being those actions which are likely to have a ‘significant impact’ on a matter of national environmental significance. Mr Burnett described this as a ‘threshold test’: a controlled action requires an approval to be granted by the Minister, whereas an action which is not likely to have a significant impact does not require approval.

6.13 A significant impact is one which is:

*Important, notable, or of consequence, having regard to its context or sensitivity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts.*

6.14 Section 43B provides that lawful continuations of the use of land which were occurring prior to the commencement of the Act are exempt. The EPBC Act commenced operation in July 2000. The DEWHA has generally interpreted ‘continuing use’ as actions which are continuing in the same location without expansion or intensification including actions that are carried out cyclically over long periods. Mr Burnett suggested that actions which might fall within this class include maintenance of existing fire access tracks and firebreaks, routine controlled burns and roadside weed control.

6.15 This may offer some comfort to the DSE, councils and VicRoads in relation to some of the fire prevention works they regularly undertake. But only works which were already being conducted as at July 2000 (and which continue to be conducted in the same location without expansion or intensification) are saved by section 43B. This is confusing, arbitrary and obviously does not assist in circumstances where the proposed action constitutes an expansion of previous practice in relation to roadside treatments.
Exemptions under the EPBC Act

6.16 In relation to emergency actions performed during bushfires, DEWHA has apparently taken the view that the EPBC Act is unlikely to apply. It is, however, also possible to obtain an exemption in relation to the operation of the EPBC Act in relation to matters which are ‘in the national interest’ (section 158).

6.17 In any event, and apparently in order to avoid any ambiguity, on 11 February 2009, the Secretary to the DSE made contact with the then acting Secretary of the DEWHA to notify of works the DSE intended to carry out in relation to building firebreaks to contain the fires threatening Healesville. The Commonwealth Minister issued an exemption under section 158 of the EPBC Act the following day.\(^\text{84}\) The exemption applied to the following actions:

*All actions taken in response to the current severe bushfires in Victoria, including but not limited to clearance of vegetation, building of firebreaks and back-burning.*

6.18 The reasons provided for the grant of the exemption were that the proposed actions were regarded as in the ‘national interest’ and being undertaken in response to a ‘national emergency’.\(^\text{85}\)

6.19 The way in which the exemption power is couched and the background against which this exemption was sought and obtained suggests it is only likely to be granted in relation to emergency actions taken during bushfires.\(^\text{86}\) As a result, the capacity to obtain an exemption does not appear to be one likely to be used on a widespread basis in the context of fire prevention and fire risk reduction works.

6.20 Nevertheless, Mr Leslie, Fire Planning Coordinator with the CFA, said that the CFA has commenced the process of attempting to obtain an exemption with respect to any emergency works it might undertake (for example, grading of a control line or bulldozing when life and property are at risk). He said the initial reaction was positive.\(^\text{87}\)

Referrals for assessment and approval

6.21 It is possible for proponents seeking to undertake roadside works to refer the proposed action, and if necessary seek an assessment and, approval of the proposed action (see section 68 of the EPBC Act). Mr Burnett said proponents are encouraged

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\(^\text{84}\) Exhibit 744 – Minister for the Environment, Heritage and the Arts ‘Exemption under section 158 of the EPBC Act’ (DEWH.001.001.0411) at 0411

\(^\text{85}\) Exhibit 744 – Minister for the Environment, Heritage and the Arts ‘Exemption under section 158 of the EPBC Act’ (DEWH.001.001.0411) at 0412–0413

\(^\text{86}\) Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [18]–[20]; see further the email correspondence between the State and Commonwealth Departments: Annexure 1 (WIT.6007.001.0024) at 0025–0026. See also Dripps T15621.5–T15621.13

\(^\text{87}\) Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [70.5]
to make contact with DEWHA from the outset, in order to receive an initial indication as to whether their action will be subject to the EPBC Act.88

6.22 Where assessment and approval are sought, the matter is referred to the Commonwealth Minister who is required to make a decision within 20 business days as to whether or not the action in question is likely to have a significant impact on a matter of national environmental significance.89

6.23 If a proposed action is found not to constitute a controlled action then no approval is required and the proponent may proceed. In the alternative, the Minister may indicate that the proposed action will not offend the EPBC Act as long as it is undertaken in a particular manner specified in the Minister's decision (see s77A).90 Where a matter is identified as being a controlled action and requiring an approval, such approval must be sought through the assessment and approval process under the Act (see section 75).91 Where a controlled action is identified as being clearly unacceptable, it may not be undertaken (see section 74C).

6.24 The Minister may decide to approve an action after a consideration of matters including the impact of the proposed action (see sections 80 to 129 which provide for a variety of means of assessing the impact of a proposed action, including obtaining assessment reports and environmental impact statements).

6.25 The Minister’s decision as to whether to grant an approval is governed by the general considerations set out in section 136 of the EPBC Act and the specific considerations in section 139 and section 140 (in relation to threatened species and endangered communities and migratory species, respectively). The considerations set out in section 136 include ‘the principles of ecologically sustainable development’,92 ‘economic and social matters’ and the proponent’s ‘environmental history’.

6.26 There is no specific reference in the considerations relevant to a decision to grant an approval to whether the proposed action is being undertaken to reduce the risk of bushfire. It is possible that the reference in section 136 of the EPBC Act to ‘social matters’ is capable of encompassing steps taken to reduce risk to the community.

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88 Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [23]
89 Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [21]
90 Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [24(b)]
91 Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [24(c)]–[24(d)], [32]
92 Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [35]
Fire risk reduction activities: are they caught by the EPBC Act?

6.27 Mr Burnett suggested that actions relevant to land and vegetation management and fire prevention which are unlikely to have a significant impact on matters of national environmental significance include the following:

(a) maintaining existing firebreaks;
(b) routine burn offs not affecting significant areas of known habitat for EPBC Act listed species or an EPBC Act listed ecological community;
(c) weed control by hand or machinery.  

6.28 Mr Burnett also suggested that roadside works are unlikely to conflict with the EPBC Act. But of course this will depend on whether those works are being undertaken in locations and on a scale capable of breaching the significant impact test. This has occurred on at least one occasion (explored in more detail below). Mr Burnett also suggested that fuel reduction burns (including those undertaken along roadsides by councils) would be exempt from the EPBC Act so long as they were captured by the ‘ongoing land management use’ exemption and/or if they were localised low intensity burns.  

6.29 It is submitted this cannot safely be assumed to always be the case. For example, in circumstances where a road manager determines to increase the range, volume or intensity of roadside treatments compared with the routine prior to 2000, the works may travel outside the ‘ongoing land management’ exemption and the EPBC Act may be engaged.

6.30 Mr Burnett’s statement also identified fire prevention or fire risk reduction works which may be caught by the EPBC Act. He said that the clearing of a large amount of vegetation to create a, ‘significant new firebreak around an entire town could potentially have a significant impact on a matter of national environmental significance in certain circumstances’. Mr Burnett identified a number of other actions which could possibly breach the significance threshold under the EPBC Act and constitute controlled actions:

(a) construction of substantive new firebreaks;
(b) construction of access roads or tracks on a significant scale in habitat for EPBC Act listed threatened species or areas that form part of an EPBC Act listed ecological community;

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93 Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [25]
94 Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [31]
95 Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [26]
6.31 Matters (c) and (d) above are obviously more relevant to matters concerning fuel reduction and planned burning, and are addressed in the Submissions of Counsel Assisting in relation to Fuel Management. The prospect that the construction of new fuel breaks or firebreaks or creation of new access roads and tracks might fall foul of the EPBC Act again raises questions of the delicate balance to be struck between the primacy given to human life, by means including reduction of bushfire risk and the protection of the environment.

6.32 Mr Burnett noted that since the EPBC Act came into force, DEWHA has received 19 referrals from States and Territories in relation to proposed fire prevention and management actions, all of which have been determined either not to be controlled actions (ie no approval required) or not to be controlled actions so long as undertaken in a particular manner specified in the Minister’s decision. Mr Burnett provided a number of examples of referrals made by the DSE in relation to fire prevention works in respect of which the DSE was permitted to proceed, in accordance with certain conditions, without having to seek a formal approval:

a) the DSE made a referral on 10 December 2007, seeking to construct strategic firebreaks in Victoria’s central highlands. The DEWHA issued a decision on 13 February 2008 to the effect that the proposed actions were not controlled actions, if undertaken in the particular manner proposed by DSE in the referral. This involved a commitment by DSE to take steps in order to ‘avoid significant impacts’ on species including the Spotted Tail Quoll, Leadbeaters Possum, Spotted Tree Frog, Giant Burrowing Frog, Barred Galaxias, Purple Eyebright and Smoky Mouse. To this end, the DSE undertook to construct firebreaks no wider than 20 metres in habitat for all listed threatened species. In addition, the DSE were required to develop and

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96 Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [30(a)]–[30(b)]. See also the slides from the Power Point presentation presented to attendees at the Environment Protection and Biodiversity Conservation Act 1999 State Municipal Fire Prevention Officers Forum 23 June 2009: Exhibit 755 – State Fire Prevention Forum PowerPoint presentation (TEN.239.001.0001) at 0028–0029. The training package delivered in this session contained the advice that certain aspects of fire management that may be ‘significant’ within the meaning of the EPBC Act include activities with irreversible or permanent loss of protected ecological communities or key habitats for listed species at 0028–0029. One of the examples given was the creation of substantive new fire breaks, asset protection zones, access roads or once-off fuel reduction burns in remnant high value forests. On the other hand, the training materials suggested that activities with temporary or minor impacts which are not likely to enliven the EPBC Act include maintenance of firebreaks, routine burn offs and removal of individual trees. See further comments made by Counsel Assisting (Doyle) T15707:4–T15707:31
97 Submissions of Counsel Assisting in relation to Fuel Management (SUBM.700.001.0001)
98 Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [27]
99 Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [28(b)]
implement Construction and Fire Management Plans for all habitats listed as threatened species for all firebreak work units.\footnote{Exhibit 800 – Statement of Burnett, Annexure 2 (WIT.6007.001.0027) at 0029–0029_01}

b) The DSE made a referral on 20 January 2009 in relation to the maintenance and rehabilitation of existing fuel breaks in the Victorian central highlands. The DEWHA issued a decision on 21 February 2009 to the effect that the actions were not controlled actions if undertaken in the manner proposed.\footnote{Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [28(c)]} The DSE has undertaken that the maintenance and rehabilitation of the fuel breaks will not exceed 40 metres in the Main Catchment Divide and will not exceed 20 metres in the Catchment Protection. Further, it is specifically provided that ‘wildlife corridors of at least 20 metres width must be established on average every kilometre along each fuel break’.\footnote{Exhibit 800 – Statement of Burnett, Annexure 2 (WIT.6007.001.0027) at 0030}

c) the DSE made a referral on 27 May 2009 relating to the construction of fuel breaks and asset protection zones in the Otway Ranges. The DEHWA decided on 25 June 2009 that this was not a controlled action if undertaken in the particular manner proposed.\footnote{Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [28(d)] and for the full referral decisions see Exhibit 800 – Statement of Burnett, Annexure 2 (WIT.6007.001.0027) at 0031–0032} DSE has undertaken to construct fuel breaks to a maximum of 20 metres in width and to restrict Asset Protection Zones to 40 metres in width.\footnote{Exhibit 800 – Statement of Burnett, Annexure 2 (WIT.6007.001.0027) at 0031}

6.33 The issue of optimum width of fuel breaks is discussed in more detail below in Section 11. The issues pertaining to Asset Protection Zones are discussed in more detail in the Submissions of Counsel Assisting on Fuel Management.\footnote{Submissions of Counsel Assisting on Fuel Management (SUBM.700.001.0001)} Suffice to say, it appears from the above that the DSE’s referrals to DEHWA are carefully tailored to ensure that the EPBC Act is not infringed. A great deal of attention is being paid to crafting works which are environmentally sensitive. However, it is submitted that this involves giving insufficient weight to the need to maximise risk reduction to assets (including towns) and may be producing less than optimal risk reduction in respect of bushfires.

**Strategic Assessments under the EPBC Act**

6.34 Under section 146 of the EPBC Act, the Minister may agree to assess the impacts of matters of national environmental significance of proposed actions under a policy, plan or program. This is known as a strategic assessment.

6.35 This process has the benefit that a proposed policy or program is able to be assessed as a whole under section 146. Subsequent actions taken in accordance with the
policy approved under the strategic assessment may not require separate referrals or approval under the Act. This provides greater certainty and reduces the administrative burden on proponents who take action on an ongoing basis under a policy or plan.\textsuperscript{106} Mr Burnett said:

\begin{quote}
A strategic assessment may be a suitable instrument for assessing, and where necessary modifying, fire management policies and procedures on a landscape scale so that, in preparing and implementing fire management plans, matters of national environmental significance are appropriately protected. It may also provide for transparent, joint assessment and management of risks associated with scientific uncertainty and assist with integrated and coordinated fire management regimes across the landscape.\textsuperscript{107}
\end{quote}

6.36 The first strategic assessment which has been endorsed was the \textit{Melbourne Urban Growth Boundary Assessment} endorsed on 2 February 2010.\textsuperscript{108} South Australia has sought a strategic assessment of its fire management policy for land under the care of the South Australian Minister for Environment and Conservation. This strategic assessment is in its early stages. On 15 January 2010, the Commonwealth and the State of South Australia entered into a strategic assessment agreement. Draft terms of reference for the assessment of South Australia’s fire management policy have been released for public comment. Following the consideration of those public comments, the South Australian Minister will revise the draft terms of reference and provide them to the Commonwealth Minister for approval. Assessment of the impacts of the policy will then be undertaken and a report provided to the Commonwealth Minister for approval of the policy.\textsuperscript{109}

6.37 The CFA has apparently commenced preliminary enquiries about the potential for a strategic assessment of its roadside vegetation management procedures. Mr Leslie (CFA) said the initial response from the DEWHA was positive. However, the estimated timeframe for approval of such a strategic assessment had been estimated to be 18 months to 2 years.\textsuperscript{110} Mr Burnett indicated that the possibility of a strategic assessment would be further explored with the CFA after the final report of the Royal Commission.\textsuperscript{111} It is not clear why the process need be delayed; indeed, given that current estimates are already in the order of 18 months to 2 years, it is submitted that the CFA and the DEWHA would be well advised to continue working on the matter.

6.38 The MAV has not yet considered or progressed the approach of seeking a strategic assessment of its roadside works programs. However, Mr Spence stated that the

\textsuperscript{106} Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [37]–[39]
\textsuperscript{107} Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [43]
\textsuperscript{108} Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [41]
\textsuperscript{109} Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [42]; Annexure3 (WIT.6007.001.0033) at 0036–0037
\textsuperscript{110} Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [70.4]; Leslie T15571:13–T15572:23
\textsuperscript{111} Exhibit 800 – Statement of Burnett (WIT.6007.001.0001) [63]
MAV was ready to engage with the Commonwealth on this matter.\textsuperscript{112} Ms Dripps said that if application were made for a strategic assessment of Victoria’s fire prevention policies, the DSE would be ‘able to assist’ in that application.\textsuperscript{113}

6.39 A strategic assessment of routine roadside fire prevention works programs undertaken by councils, VicRoads and the CFA would deliver greater certainty to road managers. This is a matter that might usefully be pursued by the road managers working with the DSE and the Commonwealth.

**Information and assistance**

6.40 DEHWA maintains a website where those contemplating actions which may infringe the EPBC Act can find information about the requirements of the Act and guidance as to what constitutes significant impact.\textsuperscript{114} In addition, the Commonwealth has initiated species information partnerships with a number of State and Territory Governments including Victoria. The aim of such a partnership is to improve the information available about threatened species listed by jurisdictions and with enhanced alignment where appropriate between the Commonwealth and State lists of threatened species.\textsuperscript{115}

6.41 The DEWHA manages a number of environmental information data sets including the National Vegetation Information System, the Species Profile and Threat Database and the Environmental Resources Information Network.\textsuperscript{116}

6.42 DEWHA has taken some steps to assist local government and State authorities in their understanding of their obligations under the EPBC Act. In particular, Mr Burnett pointed to a presentation conducted on 23 June 2009 in Melton directed to Victorian MFPOs. The presentation given at that session is in evidence.\textsuperscript{117} It is interesting to note that the attendees at the session were presented with the following advice: ‘Be wary of proposals likely to be contentious or controversial (may wish to refer even if not significant).’\textsuperscript{118} It is not clear why this is suggested, however it is understandable that entities, including road managers, may be anxious to ensure that they do not infringe the EPBC Act or inflame public debate, and thus may seek to obtain some sort of assurance from the DEWHA before engaging in new work programs.

6.43 Mr Spence said that compliance with the Commonwealth regime was a difficult matter for councils. He undertook his own examination of the Commonwealth website in...
order to gain an insight into the problem. By way of example, having performed a search in relation to his own house in Fitzroy, he found a number of endangered species listed, including the Regent Honeyeater, the Swift Parrot, the Australian Painted Snipe, the Growling Grass Frog, the Southern Bell Frog, the Golden Sun Moth and the Spot-tailed Quoll. He undertook the same exercise in relation to the corner of Swanston and Flinders Street where he found a long list of endangered and migratory species listed, including marine species such as the Great Egret and White-bellied Eagle. He presented these as examples of the bewildering complexity of navigating the regime and the available information in relation to threatened and migratory species. He said:

The problem I've got with this as an individual, not speaking for the MAV, is do I have to have a QC beside me every time I have to assess something? It is so complex. You can't simply get to the decision path if you look at it from a client, a citizen viewpoint.

6.44 It is submitted that road managers, particularly councils, have expressed not unreasonable concerns about their obligations under the Commonwealth regime. In those circumstances, all steps which might be taken by the DEWHA and the DSE to continue to educate, advise and support road managers when they are contemplating their obligations under the EPBC Act ought be taken.

Colac Otway Shire: Cressy Shelford Road Case

6.45 A particular example of council road works coming into conflict with the EPBC Act was examined in evidence. Although the works in question were directed at road reconstruction, rather than fire risk reduction per se, the example raised a number of matters in relation to the operation of the Commonwealth regime which clearly troubled council witnesses.

6.46 Mr Green (Colac Otway Shire) explained that Cressy Shelford Road required works to be performed. A contractor was engaged and required to submit an environmental management plan. It later became apparent that the plan submitted was not appropriate and a permit should have been sought. In undertaking the works the contractor did not take adequate care and moved into an area occupied by significant species including the spiny rice flower, the small milkwort and the striped legless lizard.

6.47 The council became aware of what had occurred and reported it to the DSE and the DEWHA. The DEWHA advised it was considering a prosecution. Ultimately, the
matter was resolved by means of Colac Otway Shire entering into an enforceable undertaking with the Commonwealth and a memorandum of understanding with the DSE pursuant to which it agreed to pay the DSE $250,000 to offset the impact on the native vegetation and the threatened species affected by the works. The council agreed to undertake restitution and rehabilitation works and to develop and implement further internal processes and initiatives. The final cost of the incident to Colac Otway Shire was $690,000: this sum included the $250,000 paid to DSE, $242,000 in legal fees with the remainder spent on the restitution works and awareness raising programs the council engaged in as part of the resolution of the matter.122

6.48 Mr Green (Colac Otway Shire) acknowledged that there was human error involved in the council’s conduct and that its own processes were not followed. But he emphasised the fact that the breach was not a wilful one and that the Shire had a good record in relation to environmental matters.123 He said the approach that was taken by DEHWA and the cost involved had the potential to exacerbate the resourcing issues for the council.124 He noted that the site in question has been the subject of a recent assessment, and appears to be regenerating well by reason of the works being undertaken by council. He queried the punitive nature of the steps taken against the council in a context where the regeneration works appear to be very successful.125

6.49 Mr Green said one of the impacts of the event was an increased levels of anxiety among council staff about undertaking works in accordance with the guidelines.126

6.50 The events surrounding the Cressey Shelford Road case have become notorious in the local government sector. Mr Spence said that in the local government sector when someone pays out such an amount of money, ‘everyone sits up and takes notice, so it changes the profile’.127 He said the amount paid by Colac Otway Shire was a, ‘massive hit to them, that’s all I’m saying, and it reverberates through the sector because it’s a pretty small pond, local government, and people then become sensitive to the issues.’128 Similarly, Mr Buckley and Mr Jack reported an increased awareness at each of Latrobe and the Shire of Yarra Ranges following the events at Colac.129

122 Exhibit 756 – Statement of Small (WIT.4020.001.0001) [27]–[41]; Green T15741:6–T15745:19
123 Green T15764:3–T15765:12
124 Green T15766:13–T15767:21
125 Green T15768:25–T15769:14
126 Exhibit 756 – Statement of Small (WIT.4020.001.0001) [44]
127 Spence T15705:13–T15705:26
128 Spence T15706:1–T15706:5
129 Buckley T15745:29–T15746:1; Jack T15746:4–T15746:12
6.51 It is clear that the event has served as an example in the local government sector of
the need for councils to have good processes to ensure compliance with legislative
regimes which protect environmental values. However, the incident appears also to
have increased the level of anxiety and confusion in the sector concerning the
capacity of local government to meet its obligations.

7 COMPLEXITY AND COMPETING OBJECTIVES

7.1 It is submitted that the regime constituted by clause 52.17 of the VPPs and the FFG
Act and EPBC Act is overly complex.

7.2 The flow chart set out below identifies the steps which an entity seeking to avail itself
of the regime need take to be satisfied that the work they were proposing to
undertake on a roadside did not infringe the prohibitions in clause 52.17 of the VPPs
or under the State and Commonwealth environmental regimes. 130

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130 Exhibit 752 – Flow Chart – Outlining those Responsible for Roadside Treatments, Permit Application Process,
and Native Vegetation Exceptions (TEN.220.001.0001)
It submitted that the suite of exemptions in clause 52.17-6 of the VPPs are too narrow. Its focus is on describing particular examples of permissible work based on actions taken during a running fire and the construction of fuel breaks. The ‘fire protection’ exemption is not purposive; it has not been drafted in a manner which permits a broad range of works undertaken with the aim of appreciably reducing fire risk or fire intensity on roadsides to be carried out.

The ‘public roads’ exemption is also narrowly drawn, and while DSE has attempted to ‘flesh it out’ via the Public Roads Agreement offered to councils and VicRoads, it is submitted that the resulting situation is one where many proposed fuel reduction works on roadsides risk falling between two stools: a wide range of works are not covered by the current version of the ‘fire protection’ exemption. On the other hand, while the reference to ‘fire prevention maintenance’ in the Public Roads Agreement is broad, the proposed works must fall within the scope of the Agreement and, for that reason, they must in some way contribute to the safe and efficient functioning of the road.

In relation to the way the current exemptions in Clause 52.17 – 6 work, Mr Spence said the following:

*I think the thing that’s missing out of it is we’ve got road safety and we’ve got environment as strong influences for the direction of the policy, but fire prevention isn’t strong enough. In my mind there needs to be an exemption in there that actually deals with it that is not articulated in the form of fire protection, as it is at the moment, which is really directed I think more to fire fighting responses for CFA than council activities.*

It is submitted that the exemptions in clause 52.17-6 should be reviewed and redrafted to:

a) reflect the obligations imposed by section 43 of the CFA Act on road managers in relation to fire risk;

b) to meet community expectations in relation to management of fire risk; and

c) to simplify the task for those seeking to rely on the exemptions.

In this context, it was suggested to witnesses that a new exemption with a focus on the purpose of works undertaken to reduce fire risk would be simpler than multiple, technical overlapping exemptions. Mr Spence said that the MAV might advocate such a new exemption. He agreed it would be an ‘entirely logical’ development.

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131 Spence T15697:10–T15697:18
132 Spence T15695:2–T15695:14
7.9 The DSE also indicated a willingness to consider an alternative approach, an exemption might permit a road manager to undertake works for the purpose of reducing the risk of fire where such work has been recommended by the CFA.  

7.10 It is submitted that an exemption focussed on the purpose of the roadside works in question and the goal of reducing risks posed by fuel levels will assist in resolving the competing objectives of fire prevention and protection of the environment. For example, an exemption in the following terms might be considered:

Roadside fire risk reduction works

Work undertaken on roadsides by councils, VicRoads or the DSE which is performed for the purpose of reducing fuel levels on roadsides, or for the purpose of reducing the risk of fires starting on or spreading from or along roadsides where such work is approved, recommended or requested by a Municipal Fire Prevention Committee, a CFA Brigade, or the DSE.

8 VICROADS – MANAGEMENT OF FIRE RISK ON ITS ROADS

8.1 VicRoads is established by the Transport Act 1983 (Vic). Its objects, functions and responsibilities are to be found in the Transport Act, and other legislation including the RMA and the Road Safety Act 1986 (Vic). VicRoads manages freeways and arterial roads (as is noted above) and has responsibilities in relation to road safety and traffic management generally on Victorian roads.

8.2 VicRoads manages approximately 80,000 hectares of roadside area which runs along 22,300 kilometres of freeways and arterial roads.

8.3 In his statement, Mr Stephen Brown (Executive Director, Regional Services, VicRoads) said that the RMA ‘does not impose any specific obligations on VicRoads in respect of the management of roadsides for fire prevention purposes, although section 43 of the CFA Act ... and section 84 of the Electrical Safety Act 1998 .... do appear to impose such obligations’.  

8.4 As is noted above, section 43 of the CFA Act imposes an obligation on VicRoads in relation to the roads it manages – being one to take all practicable steps (including burning) to prevent the occurrence of fires on, and minimise the danger of the spread of fires on and from roads under its management.
8.5 The ‘VicRoads Code of Practice for Fire Prevention on Declared Roads Reserves in Rural Areas’ (1985 Code)\(^{139}\) was devised in 1985 in conjunction with the CFA. The 1985 Code recites the terms of section 43 of the CFA Act, then notes that the Code is governed by a number of principles, including:

(a) ...
(b) [VicRoads] prefers the provision of fire control measures by slashing, mowing or ploughing rather than burning but accepts that, in some situations, burning may be the only practical means. [VicRoads] will normally construct fire breaks immediately behind the guideposts to minimise the spread of fire caused by road makers or users or vehicles. .."

(c) ...
(d) It is important that, as far as possible, damage to trees, shrubs, grass and natural features of the landscape be avoided to preserve the appearance of the roadside and prevent erosion. The value of the roadside as a habitat area for wildlife is also considered.

8.6 The 1985 Code contains an explicit statement of the means by which tension or conflict between the competing objectives of fire prevention and environmental protection is to be resolved. The 1985 Code states:

[T]here is a problem of providing a balance between the need to provide for countermeasures and retaining the natural environment of the road reserve.

(a) In planning fire control measures on road reserves in any particular area, consideration should be given to:

(i) Inflammability of the vegetation
(ii) Potential sources of ignition
(iii) Potential danger to life and property
(iv) Proximity of large areas of natural bushland
(v) The value of the roadside as part of an overall municipal or regional fire prevention plan

(b) The environmental attributes of the roadside .... including

(i) The presence of endangered or rare plant and animal species. The roadside may contain the last remaining geographical variants of some species in an area largely cleared for farming;
(ii) The availability of a suitable habitat for native fauna. Local bird life may require ground vegetation, medium level or high canopy cover for its preferred nesting and feeding conditions;
(iii) Plant species sensitive to fire and regeneration capability of the roadside vegetation;
(iv) The aesthetic value of the roadside;
(v) The roadside as a stopover point for migrating wildlife.

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\(^{139}\) Exhibit 746 – Statement of Brown, Annexure 2 (WIT.3027.001.0085); Mr Brown explained in evidence (T15544.7–T15544.16) that references in the 1985 Code to the Road Construction Authority (RCA) are to be read as references to VicRoads.
(c) The priority of fire prevention due to its importance as in (a) compared with the environmental considerations as in (b). [emphasis added]

(d) The impact of the various methods of fire break construction on the vegetation and inhabitants of the roadside habitat.

(e) The feasibility of implementing the method of construction which has the least detrimental impact.” [emphasis added]

8.7 As can be seen from the above, the 1985 Code gives primacy to fire prevention objectives. The protection and promotion of environmental values is recommended and required by the 1985 Code, but it is made explicit that the obligation to reduce risk of fire prevails in the event of inconsistency.

8.8 The 1985 Code also sets out a number of guidelines as to the way in which fire prevention works will be carried out in various categories of landscape. For most types of landscape the ‘cutting or slashing or both of vegetation up to 3 metres behind the line of the guideposts, where practicable’ is recommended.

Roadside Conservation Management Plans

8.9 VicRoads develops Roadside Conservation Management Plans (RCMPs) based on the principles in the 1985 Code. RCMPs are specific plans for a particular roadside (known as Road Management Plans (RMPs) prior to 2006), which take into account VicRoads’ broader roadside management objectives and local requirements. RCMPs are not routinely prepared for all roads, but rather for road reserves with the most significant assets.

8.10 Obviously, the content of each RCMP or RMP is different, reflecting the local requirements of each road. In his Supplementary Statement, Mr Brown explained that there are only four RCMPs in place in Victoria, for the following locations: Phillip Island, Diggers Rest, Western Highway East of Ararat and Eltham. RMPs continue to operate for other locations, including the Hume Freeway, the Grampians Tourist Road and the Great Ocean Road.

8.11 The RCMPs and RMPs provided by way of example by Mr Brown are very detailed documents, with those prepared more recently containing sophisticated maps depicting vegetation classes. What is striking about these RCMPs is that they

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140 Exhibit 746 – Statement of Brown, Annexure 2 (WIT.3027.001.0085) at 0088
141 Brown T15546.10–T15546.25
142 Exhibit 746 – Statement of Brown, Annexure 2 (WIT.3027.001.0085) at 0086–0088
143 Exhibit 746 – Statement of Brown (WIT.3027.001.0070) [12]
144 Exhibit 746 – Supplementary Statement of Brown (WIT.3027.001.0103) [10]
145 Exhibit 746 – Supplementary Statement of Brown, Annexure 6 (WIT.3027.001.0110)
146 Exhibit 746 – Supplementary Statement of Brown, Annexure 7 (WIT.3027.001.0216)
147 Exhibit 746 – Supplementary Statement of Brown, Annexure 8 (WIT.3027.001.0277)
148 Exhibit 746 – Supplementary Statement of Brown, Annexure 9 (WIT.3027.001.0337)
149 Exhibit 746 – Supplementary Statement of Brown, Annexure 10 (WIT.3027.002.0002)
150 Exhibit 746 – Supplementary Statement of Brown, Annexure 11 (WIT.3027.002.0052)
151 Exhibit 746 – Supplementary Statement of Brown, Annexure 12 (WIT.3027.002.0093)
generally refer to the 1985 Code only in passing. While most list key objectives as including ‘minimising the risk and impact of fire,’ they tend not to even refer to section 43 of the CFA Act in the sections dealing with ‘key legislation and policy.’

Rather, the focus of the RCMPs and RMPs is overwhelmingly on protection of environmental values. It appears that RMPs and RCMPs developed over the years have ‘drifted’ some distance from the policy and treatment guidelines originally enunciated in the 1985 Code. It is submitted that they now appear (contrary to the approach in the 1985 Code) to give primacy to environmental concerns over fire risk reduction and further, do not demonstrate a clear risk assessment approach to the question of ensuring compliance with VicRoads’ obligations under section 43 of the CFA Act.

### Contractual standards and use of contractors

Mr Brown confirmed that as a matter of practice, the focus of VicRoads’ roadside maintenance is on mowing and slashing and that roadside burning is virtually not done at all. VicRoads’ discharge of its obligations in relation to roadsides is undertaken by contractors, who perform mowing and slashing works in accordance with standard contracts.

Mr Brown described the approach adopted by VicRoads as follows:

(a) There is ‘routine’ maintenance undertaken of all roadsides, pursuant to which contractors are required to ensure roadside grass is ‘maintained to a maximum of 200 or 300mm. ... grass is cut to a minimum of three metres behind the guideposts on all roads, except where this is not possible.’ Although Mr Brown initially suggested that grass is maintained to a maximum of 200 or 300 mm, in
evidence he said that on an ‘ordinary’ freeway outside of the fire season, grass is usually mowed when it exceeds 300 or 400mm.\textsuperscript{157} It is not clear why these different figures were provided.

(b) In addition to the ‘standard three metre cut’, contractors may be required to slash or cut certain roadsides from boundary to boundary. This is referred to as a ‘full width cut’.\textsuperscript{158} Mr Brown said that full width cuts are undertaken where there is a community request for the same or because it is a requirement in the applicable MFPP.\textsuperscript{159}

(c) A ‘fire cut’ is undertaken on all rural roadsides at the beginning of each fire season, typically in November or December. These cuts are undertaken to the same width as usually applies for the road in question. In other words, if the road is usually cut to ‘at least 3 metres behind the guideposts’, then an additional 3 metre cut will be undertaken at the start of each fire season.\textsuperscript{160} In the case of a road to which a higher standard (ie wider cut) is usually applied, that treatment will be repeated at the beginning of the fire season.\textsuperscript{161}

8.15 Mr Brown confirmed in evidence that if requested by the CFA or a MFPC to undertake further clearance works beyond ‘normal practice’ VicRoads usually agrees.\textsuperscript{162} The reference to ‘requests’ from time to time by the CFA or a MFPC suggests that VicRoads’ response is reactive, rather than proactive and dependent upon another party raising issues concerning the roads for which VicRoads is responsible.

8.16 It was put to Mr Brown that VicRoads should undertake full width cuts based on its own risk assessment as to whether a particular stretch of road ‘carries an increased fire risk’. Mr Brown responded: ‘That is where we would take advice from fire experts’.\textsuperscript{163} He was asked whether VicRoads undertakes its own inspections, and he replied that they do, but said ‘not having that level of expertise from others we rely on that.’\textsuperscript{164}

8.17 It was squarely put to Mr Brown that there is a risk that if a particular MFPC or a local CFA brigade has not made a recommendation or noticed a particular problem, then a
stretch of road which poses a problem might be overlooked. He conceded ‘that could be a risk’. 165

8.18 VicRoads appears to treat mowing 3 metres behind the guidepost as a default position. This also involves a ‘drift’ from 1985 Code and the approach advocated by the CFA. In this context, Mr Leslie (CFA) indicated that the reference to 3 metre wide slashing in the CFA’s 1985 Code ought to be regarded only as a ‘baseline’. He said it might be regarded as an accepted minimum from which to negotiate.166 He said:

But in terms of real fire danger in lots of cases the risk would vary enormously. As I said, three metres is a great starting point. But in some places it could be less; other places it might need a lot more. That’s that part of that risk identification process.167

8.19 It is submitted that VicRoads has adopted an approach which is not responsive to local risk levels. Rather than treating the ‘three metres’ mowing guideline in the 1985 Code as a suggested treatment which may be suitable depending on the circumstances, VicRoads appears to have adopted this as a default position, with little attempt to assess risk attached to particular locations. Receipt of complaints from other parties cannot substitute for VicRoads discharging its own responsibilities in relation to roadsides.

8.20 It also appears that VicRoads focuses on standard mowing treatments of roadsides to the exclusion of fire risk which may be posed by other vegetation, such as shrubs, leaf litter and trees. Mr Brown said that while VicRoads has some involvement with the removal and management of trees, this is directed purely at road safety objectives and is not part of VicRoads’ roadside fire prevention and management activities. He said:

As a general rule, VicRoads defers to the CFA, DSE or the relevant MPFC in terms of any other fire management activities that are required to manage trees for fire hazard reduction purposes on any particular roadside.168

8.21 It is submitted that the above demonstrates a lack of appreciation of VicRoads’ real obligations under section 43 of the CFA Act. Of course it is perfectly appropriate and understandable that VicRoads would seek and act on the advice of the CFA, the DSE or the MFPC in relation to the need for fire prevention works on roadsides. But VicRoads cannot simply ‘defer’ to other authorities in relation to all matters pertaining

165 Brown T15538:30–T15539:4
166 Leslie T15579:2–T15579:12
167 Leslie T15579:18–T15579:23
168 Exhibit 746 – Statement of Brown (WIT.3027.001.0070) [21]
to roadsides other than mowing grass. The obligation imposed by section 43 of the CFA is imposed on VicRoads alone.

8.22 It was put to Mr Brown that VicRoads' methods appeared to be reactive and complaint driven, rather than based on a comprehensive approach to risk:

DOYLE: The mechanisms you have referred to and the different standards that might apply to different roads in different places do appear, Mr Brown, to rely on complaints, errors and failures being reported to VicRoads. There is apparently no statewide assessment done by VicRoads of the fire risk posed by the roads for which it is responsible. Is that a fair comment?

BROWN: I don't believe so because we would rely on the advice from others and seek that advice from others about that.

DOYLE: But does VicRoads have a program pursuant to which each of its freeways and arterial roads have been assessed in recent times or on any reasonable period you might care to nominate, assessed for the fire hazard posed by the roadside vegetation running alongside the roads you manage?

BROWN: In that at least annual discussion we have with our counterparts..... CFA, municipal fire prevention committees. 169

8.23 It is clear from the above that VicRoads does not have a statewide risk assessment program for the roads for which it is responsible. The suggestion by Mr Brown that ‘annual discussion’ with CFA brigades and MFPCs might somehow substitute for a statewide approach to risk assessments of the fuel load on roadsides is curious. It is submitted that VicRoads’ approach tends to confuse liaison with other authorities with fire prevention expertise with compliance with its own obligations. The obligation under section 43 of the CFA Act falls on VicRoads alone.

Compliance by VicRoads’ contractors

8.24 A further question arises: how does VicRoads ensure that it and its contractors comply with the standards it has set for the performance of roadside works? Mr Brown was asked to address this issue. In Mr Brown’s first statement provided to the Royal Commission he said:

As far as I am aware, the grass on all bushfire affected roads was within the standards required by the relevant terms of engagement for each contractor prior to February 2009. 170

8.25 Secondly, in response to a request made to address certain matters concerning compliance during the period 2007 to 2009, he said:

169 Brown T15542:22–T15543:8
170 Exhibit 746 – Statement of Brown (WIT.3027.001.0070) [20]
Standard three metre cuts were undertaken in 2007, 2008 and 2009 on roads managed by VicRoads across all rural shire areas. The only additional fire prevention work that has been carried out by VicRoads in 2007, 2008 and 2009 is full width cuts where required. Of the shires listed in the [letter from Counsel Assisting] full width cuts are carried out in Baw Baw, Casey, Latrobe, Macedon, Nillumbik, Wellington, Whittlesea and Yarra Ranges Shire Councils.\footnote{Exhibit 746 – Statement of Brown (WIT.3027.001.0070) [26]}

8.26 Of course when Mr Brown refers above to full width cuts which were ‘required’, this is to be understood as a reference to circumstances where the MFPP requires such a treatment and / or where a CFA brigade or possibly a member of the public has requested it.

8.27 Mr Brown was pressed in evidence as to the basis on which he had asserted in his statement that standard three metre cuts were undertaken in 2007, 2008 and 2009 in all rural shire areas. He said that VicRoads performs inspections in relation to a range of maintenance activities.\footnote{Brown T15540:8–T15540:20} He also suggested that compliance could be monitored by means of ‘other surveillance’ undertaken by members of the community who are ‘pretty hot on to us if they believe we are not doing the right thing’.\footnote{Brown T15540:17–T15540:24}

8.28 In relation to supervision and auditing of contractors generally, Mr Brown said that VicRoads has a standard maintenance contract, which entitles it to monitor contractors’ compliance by carrying out audits and surveillance of their work.\footnote{Exhibit 746 – Supplementary Statement of Brown (WIT.3027.001.0103) [16]} The ultimate sanction is that VicRoads may withhold payment where work is not performed in compliance with the terms of the contract.\footnote{Exhibit 746 – Supplementary Statement of Brown (WIT.3027.001.0103) [15], [17]; Annexure 13 (WIT.3027.002.0177); Brown T15561:1–T15561:7; T15541:23–T15542:9}

8.29 Mr Brown said that there are three main methods of ensuring contractors perform their work:

a) The contractors’ records are supposed to document non compliance with the contract and this is subject to audit;

b) VicRoads’ own surveillance people who do ‘risk based surveillance’; and

c) VicRoads receives comments from members of the public.\footnote{Brown T15541:9–T15541:20}

**Example: Hume Freeway**

8.30 In his Supplementary Statement, Mr Brown addressed specific questions concerning the Hume Freeway. Mr Brown confirmed that apart from what is recommended in the
MFPPs which apply to the freeway, VicRoads has never undertaken its own assessment of the Hume to ‘assess for itself whether it warrants more than a three metre wide cut’.  177

8.31 He said that the routine maintenance described in his first statement applies to the Hume Freeway generally.  178 Further, he said he had been advised that a ‘full width cut’ had been conducted on the Hume Freeway from 25 November 2007 to mid December 2007 and again in late November to mid December 2009.  179 He repeated in evidence that contractors had always done what was required under their contract along the Hume Freeway.  180

8.32 Mr Brown was asked what inquiries he made to ascertain whether contractual requirements in relation to the Hume Freeway had been complied with, and he said that he had discussions with staff in the region about ‘their records of what had been done’.  181 Mr Brown was not personally aware of whether VicRoads had ever made deductions from the contract price in relation to failures by contractors to undertake works on the Hume Freeway in accordance with their contract.  182

8.33 Mr Brown did not know why a full width cut was done in 2007 183 but said that it was undertaken in that year for the first time and was ‘in excess of what was required in the MFPP’.  184 When asked why a full width cut was undertaken in 2009, Mr Brown said it was because: ‘...there was an expectation.’  185 He did not provide an explanation as to why the full width cut was not undertaken in 2008.

8.34 It emerged that the works undertaken on the Hume Freeway were controversial. A letter dated 25 November 2008 from the Wangaratta branch of the Victorian Farmers’ Federation (VFF) to VicRoads was put to Mr Brown in evidence.  186 The letter recited the fact that a resolution had been passed by the Wangaratta branch of the VFF expressing concern at the ‘low level of fire prevention on the Hume Freeway this summer, only one width of the slasher. This is of little use to alleviate the danger to the travelling public, the adjoining landholders (farmers) and the general community’.  187

8.35 The letter went on to call for the slashed break to be extended to the full width of the Hume Freeway roadside. It concluded as follows:

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177 Brown T15548:26–T15548:29
178 Supplementary Statement of Brown (WIT.3027.001.0103) [19]
179 Exhibit 746 – Supplementary Statement of Brown (WIT.3027.001.0103) [20]; Brown T15547:14–T15548:1
180 Brown T15551:17–T15551:18
181 Brown T15559:1–T15559:7
182 Brown T15561:8–T15561:11
183 Brown T15547:26–T15548:10
184 Brown T15548:2–T15548:10
185 Brown T15549:2–T15549:7
186 Exhibit 747 – Letter to the Regional Director of VicRoads from Keiran Kemm (SUBM.002.035.0347)
187 Exhibit 747 – Letter to the Regional Director of VicRoads from Keiran Kemm (SUBM.002.035.0347)
Given the area’s fire history, one width of a slasher is not wide enough.

Who is going to stand in front of the Coroner and admit that they had been informed that the smaller ‘Fire Break’ was inadequate if we have a disastrous fire? 188

8.36 On 28 November 2008, the Regional Director for VicRoads North Eastern Victoria replied to the VFF. 189 He stated that:

[R]oadside mowing of the Hume is conducted pursuant to VicRoads’ road management plan and in excess of Statewide standards agreed between VicRoads and the CFA which defines a 3m slashing/ mowing width as acceptable for fire prevention. Grass length is monitored and additional cuts will be conducted as necessary in accordance with the Road Management Plan. There are no plans to extend the width of mowing. [Emphasis added]

8.37 There was also in evidence a letter from the North East Area CFA to the VFF dated 28 November 2008. 190 The letter said that ‘the recent change’ to slashing on the Hume Freeway is ‘part of a statewide standard that VicRoads has adopted across most of Victoria. There is concern by some members of the CFA in the Northeast that this level of works may not be adequate.’ 191

8.38 The letter suggested that a meeting was being sought with senior VicRoads staff in relation to the matter. Mr Brown was not aware of the results of any such meeting. 192

8.39 It appears from the chain of correspondence that the VFF then raised its concern with the local member for Murray Valley. The local member raised the matter with the Minister for Police and Emergency Services, Mr Cameron on 2 December 2008. The Minister responded to the local member on 7 April 2009. 193 The Minister said:

The Department of Justice has consulted with the CFA regarding fire prevention plans for the Hume Highway. CFA has advised that the previous slashing criteria for roads (under VicRoads control) was 3 metres outside the guideposts. This changed over time to meet local needs and eventuated in a wide range of treatments across Victoria for similar asset types. CFA has advised that this year, VicRoads has slashed to 5 metres outside the guideposts as a trial.

8.49 Mr Brown indicated that the reference in the Minister’s letter to a ‘trial’ was not correct, as it was his understanding that slashing to five metres was in fact the requirement under the contract. Further, the cut undertaken in 2007 was a full width cut – which is different again. 194 The letter from the Minister goes on to note that:

I am advised that the CFA is aware of concerns raised by the VFF and the CFA’s North Eastern Area is in the process of undertaking a review to ascertain fire prevention and management requirements across major arterial roads. A risk based
approach will be used for an overall fire management package that will include discussions at the regional, municipal and local levels and the risks will be considered including the loss of the freeway, risk to the travelling public and the risk to adjacent assets.\footnote{Exhibit 747 – Letter from the Minister for Police and Emergency Services – Fire Protection along Hume Highway (SUBM.002.035.0348_07)}

8.40 Mr Brown apparently had no knowledge of the above. However, the suggestion by the Minister that the CFA is undertaking a review of a ‘risk based approach’ to be applied as part of an overall fire management package capable of being applied to all major arterial roads is certainly welcome.

8.41 It also appears from the evidence that the advice given to Mr Brown concerning contractual compliance along the Hume Freeway is not accurate. The Hume Freeway Roadside Management Plan dated September 2009 (Hume Freeway RMP) was attached to Mr Brown’s Supplementary Statement.\footnote{Exhibit 746 – Supplementary Statement of Brown, Annexure 10 (WIT.3027.002.0002)} The RMP expressly states that: ‘there was excessive slashing along the entire alignment going well beyond the current grass cutting contract as well as slashing in inappropriate places. In other places the contract width was not being achieved.’\footnote{Exhibit 746 – Supplementary Statement of Brown, Annexure 10 (WIT.3027.002.0002) at 0032} [Emphasis added] Mr Brown confirmed that the inquiries he had made about contractual compliance on the Hume Freeway had not informed him of this issue.\footnote{Brown T15559:1–T15559:13} This suggests there is some deficit either in the record keeping in relation to the Hume Freeway or the auditing of those records.

8.42 The content of the Hume Freeway RMP merits further consideration. The provisions in the Hume Freeway RMP in relation to roadside slashing are confusing. The Hume Freeway RMP provides that slashing is limited to three metres ‘in areas supporting remnant vegetation’. It specifically states that ‘no slashing shall be carried out inside the remnant vegetation areas’. It says that ‘roadside slashing is limited to five m in grassland and plantation areas’.\footnote{Exhibit 746 – Supplementary Statement of Brown, Annexure 10 (WIT.3027.002.0002) at 0015} However, it also states that roadside slashing can exceed five metres in grassland and plantation areas under certain specified conditions, which include ‘to meet additional fire prevention criteria (see Section 2.10 Fire Prevention)’\footnote{Exhibit 746 – Supplementary Statement of Brown, Annexure 10 (WIT.3027.002.0002) at 0016}

8.43 Section 2.10 Fire Prevention contains a summary of some aspects of the 1985 Code. It goes on to state that:

\textit{Subject to consultation between VicRoads, DCNR, CFA and local interest groups, fallen timber in indigenous vegetation outside the 3 metres and clear of the table drain will generally be left unless the fuel level is such as to be considered dangerous. If fuel levels become dangerous then a decision through consultation will specify required works.}

\footnote{Exhibit 746 – Supplementary Statement of Brown, Annexure 10 (WIT.3027.002.0002) at 0015\footnote{Exhibit 746 – Supplementary Statement of Brown, Annexure 10 (WIT.3027.002.0002) at 0016}}
The slashing operator shall demonstrate competency in identifying areas of indigenous vegetation before slashing or mowing works commence, to ensure no damage is sustained. Indigenous grassland with minimal exotic grasses shall not be slashed. Indigenous grassland with more than 50% exotic grasses can be slashed before seeding of the exotic grasses.

Fire prevention measures including removal of flammable material from around bridge abutments, stack sites and culverts shall be done prior to the summer period.201

8.44 This suggests that the Hume Freeway RMP provides that slashing along the Hume Freeway will be undertaken:

(a) generally to three metres;

(b) up to five metres on some unspecified parts of the Hume Freeway;

(c) more than five metres under certain limited conditions which meet ‘Fire Prevention’ criteria.

(d) but not in native remnant vegetation areas; and

(e) not in areas of ‘indigenous grassland’ with more than 50 per cent native grasses.

8.45 In light of the above, it remains unclear why parts of the Hume Freeway were the subject of a full width cut in 2007. The decision to undertake a full width cut in 2009 may indeed have occurred for the reason suggested by Mr Brown in evidence, namely community expectation and the fact that VicRoads received, ‘comments about the fact that we had done a five metre cut ... so we took that up’.202

8.46 In the Hume Freeway RMP also appears the following text:

**3.10 Fire prevention**

It is recognised that fire prevention is a major contentious issue along the Hume Freeway.203

... Consultation with CFA captains along the Hume indicated that there is wide opinion and knowledge about risk, risk identification and fire behaviour. Some opinions were in conflict with published CFA research and guidelines about firebreaks and fire behaviour. CFA fire statistics were not available nor were Fire Hazard rating Maps and Bushfire Threat Indexes for each CFA Brigade area.

**The way forward**

It is essential that the CFA have a standard tool that can be used by all Brigades to assess risk and apply risk minimisation programs. This is consistent with the risk management approach being taken by the CFA and underpins all new Municipal Fire Prevention Plans and is endorsed by the CFA Director of Risk Management.

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201 Exhibit 746 – Supplementary Statement of Brown, Annexure 10 (WIT.3027.002.0002) at 0021–0022
202 Brown T15549:2–T15549:7
203 Exhibit 746 – Supplementary Statement of Brown, Annexure 10 (WIT.3027.002.0002) at 0030
Use of this tool by the CFA will see objectives and approaches standardised according to the risk. This risk assessment would take into account existing environmental values. This tool will greatly assist in reconciling competing objectives and bringing the CFA, community groups and environmentalists to the same table.

......

Strategic Direction

There is a requirement to take a far more strategic approach to fire prevention.

The Hume Freeway corridor should be the Strategic Firebreak. ....

An outcome would be a targeted approach to where slashing for fire prevention beyond the 3m line needs to occur. This approach would include intervention levels. For example, in a high fire risk year, VicRoads would carry out extra works in exotic grassland areas... 204

8.47 As the above candid commentary demonstrates, there is diversity of opinion about how the roadside should be managed along the length of the Hume Freeway. It is curious that the Hume Freeway RMP calls for provision by the CFA of a standard risk assessment tool. It might be thought that such a tool is already clearly embodied in the 2001 Guidelines devised by the CFA – if not in VicRoads’ 1985 Code. It is not clear why those tools would not simply be applied in a systematic fashion to the Hume Freeway.

8.48 The above analysis of the Hume Freeway RMP and the surrounding events (including the VFF complaint, the divergent views expressed by the CFA brigades, complaints from the public, the discovery of breaches of contractual standards and uncertainty expressed in the Hume Freeway RMP in relation to applicable risk assessment tools) all serve to highlight the complexity and uncertainty in this area.

8.49 In any event, it appears that there is a need for the CFA and VicRoads to work together to devise a risk assessment process for the length of the Hume Freeway which will then result in a detailed program of works suitable for the differing conditions and fire risk along the Hume Freeway.

Involvement by VicRoads in Municipal Fire Planning

8.50 Mr Brown noted that some roadsides managed by VicRoads are covered by MFPPs. 205 VicRoads’ representatives attend MFPC meetings when invited, but are not members of the committee nor routine attendees. VicRoads does not monitor its attendance at MFPC meetings. 206 Mr Brown remarked that generally VicRoads staff have minimal involvement in the development of MFPPs. 207
8.51 It is submitted that it is desirable for VicRoads representatives to participate in MFPCs, at least for those councils where VicRoads is responsible for significant roadsides within the shire.

8.52 Mr Brown indicated in response to a suggestion from the MAV that integration and co-operation in relation to roadside clearing activities may be improved if VicRoads was a mandatory member of the MFPC, that VicRoads had ‘no concerns with that’ and ‘are always happy to undertake as best we can’.208

8.53 Apparently under the new proposed Integrated Fire Management Planning framework, VicRoads will be a member of the new Regional Strategic Fire Management Planning Committees.209

9 COUNCILS – MANAGEMENT OF FIRE RISK ON THEIR ROADS

Challenges: competing objectives and limited resources

9.1 Collectively, councils manage 129,235 kilometres of roads, 119,444 kilometres of which fall within the CFA district and thus are likely to raise questions of fire risk.210

9.2 The cost borne by councils of discharging their responsibilities in relation to road management and the attendant complexity of the applicable regulatory regimes imposes a significant burden on local government.

9.3 Mr Spence (CEO of the MAV) and a panel of council representatives presented a large body of material to the Royal Commission concerning roads and roadsides – including material drawn from surveys of all councils and a detailed analysis of the circumstances of the three councils (each of which supplied a representative to participate in a panel discussion).

9.4 On 26 February 2010, counsel for the MAV advanced a number of key propositions on behalf of the MAV and the 77 councils. Dr Lyon SC emphasised that councils are given, ‘no real guidance as to how to balance the protection from bushfire risk against the native vegetation net gain.’211 He said, ‘municipal officers are left to pragmatically strike the balance on a case by case basis and must often seek approval for roadside clearance activities from an agency (the DSE) with an inherent conservation bias.’

208 Brown T15562:30–T15563:10
209 Redwood T15563:17–T15563:22
210 Spence T15677:26–T15678:1
211 Lyon T15673:19–T15673:22; Exhibit 154 – Key Propositions of MAV and 77 Councils – Roadsides (document handed up on 26 February 2010) (TEN.246.001.0001)
9.5 Mr Spence suggested in his evidence that there is a clash between the following three components: road safety, fire safety and environmental management. He said: ‘Those three things push against each other ...all the time.’ Mr Spence remarked further that:

_There is no doubt that native vegetation is important, the habitat is critical, but also the safety of humans is critical. Getting that balance right requires I think a stripping back of the legislation and a re-think of the whole model. We are heading in the right direction, I think, with the Commission and the reviews that are occurring. We are getting there, but this is just being layered up and layered up. For councils who are generally just doers, they take the task and they try and get on and do it with the resources they have got available. Having layer and layer of regulation just grinds them to a halt almost._213

9.6 Mr Jack (Shire of Yarra Ranges) said:

_In terms of the challenges we have ahead of us, I understand why there are various policies and Acts and regulations put in place for environmental protection, and I applaud those, but we tend to have things in isolation. I think the commentary we had earlier was around the layers of different legislation, regulations, codes of practice, Acts, and not a lot of them are actually aligned or interwoven and assist you in navigating this minefield of challenges and Acts. I'm hoping that something out of this process is that we can impact on those and have a common sense approach to this rather than a polarised view on Road Management Act, vegetation management protection, planning and those sorts of things._214

9.7 Mr Green (Colac Otway Shire) suggested that a more participative approach is required ‘because it is getting to the stage where it is almost impossible to manage these things from a local government level with the level of resources that are available’.215

9.8 The MAV’s submission also noted the fact that councils differ in size, topography, population, bushfire risk and the environment along with different community needs, expectations, preferences, rate bases and resources.216 Obviously, expenditure on roadside vegetation works varies greatly from council to council, depending on matters including the nature and standard of roads in the shire, the shire’s commitment to road construction and maintenance, the proportion of urban areas within the shire and the amount of traffic expected in a particular shire.217

9.9 In relation to resourcing, Mr Spence noted that it is sometimes the councils with the smallest rate base which have the heaviest obligations in relation to road management. Mr Spence said that the majority of councils which fall in the CFA or country area of Victoria are those councils with the longest road networks, the most

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212 Spence T15678:10–T15678:16
213 Spence T15699:1–T15699:12
214 Jack T15756:13–T15756:25
215 Green T15757:13–T15757:17
216 Exhibit 154 – Key Propositions of MAV and 77 Councils – Roadsides (document handed up 26 February 2010) (TEN.246.001.0001) [7]
217 Spence T15680:1–T15682:9
dispersed population, the greatest amount of State parks and the lowest revenue base. 218

9.10 Councils were surveyed as to what proportion of their resources are devoted to roadside vegetation management and clearing.219 The amounts spent and the proportion of the budget expended on roads varied greatly between each council. For example:

- Alpine Shire Council spent $45,000 in 2008/2009 on local road vegetation works and $69,000 on grass slashing.220
- Baw Baw Shire Council estimated it spent between $500,000 and $600,000 on roadside vegetation management activities.221
- Loddon Shire Council allocated approximately $20,000 to the removal of fire hazard through its municipality.222
- Mitchell Shire Council has an annual fire prevention budget of approximately $280,000 which includes roadside slashing, tree maintenance, fire access track maintenance, weed spraying and block maintenance.223
- Murrindindi Shire Council spent approximately $410,000 on vegetation clearance along roads with a further $55,000 spent on slashing and other fire prevention works.224
- The Surf Coast Shire Council spent approximately $382,000 on roadside vegetation management, $87,000 on roadside vegetation, re-seal and re-sheet program and $210,000 on fire prevention seasonal works.225
- In contrast, Maroondah City Council indicated that no specific council resources were devoted to roadside vegetation management.226

9.11 The dramatic variation between councils on roadside expenditure indicates that councils’ practice depends on its rural/urban mix, its approach to maintenance for road safety purposes, as well as its commitment to fire prevention goals.

218 Spence T15679:7–T15679:17
219 Exhibit 754 – Statement of Spence, Annexure 2 (WIT.4014.001.0013)
220 Exhibit 754 – Statement of Spence, Annexure 2 (WIT.4014.001.0013) at 0014
221 Exhibit 754 – Statement of Spence, Annexure 2 (WIT.4014.001.0013) at 0014
222 Exhibit 754 – Statement of Spence, Annexure 2 (WIT.4014.001.0013) at 0020
223 Exhibit 754 – Statement of Spence, Annexure 2 (WIT.4014.001.0013) at 0022
224 Exhibit 754 – Statement of Spence, Annexure 2 (WIT.4014.001.0013) at 0024
225 Exhibit 754 – Statement of Spence, Annexure 2 (WIT.4014.001.0013) at 0025
226 Exhibit 754 – Statement of Spence, Annexure 2 (WIT.4014.001.0013) at 0021
How do councils manage roads and roadsides?

9.12 Councils manage the fire risk attaching to roads for which they are responsible via a number of instruments, including:

(a) MFPPs;
(b) RMPs; RVMPs and RCMPs.

9.13 Mr Spence’s statement attached the collected responses from councils to questions about the management of roadsides for fire prevention purposes.227 In relation to MFPPs, the answers from the councils demonstrated great variation. A number of councils indicated that their MFPP identifies roads which are designated as ‘strategic firebreaks’. In those circumstances, the MFPP may identify the fire prevention measures and works to be carried out along roadsides designated as strategic firebreaks. 228 It appears that when councils identify roads as ‘strategic firebreaks’, this usually involves slashing the grass to a greater width than that otherwise applied throughout the shire in standard roadside treatments.

9.14 Some MFPPs contain lists of fire access tracks or priority access roads. Some MFPPs also contain a statement of the roadside works to be carried out across the shire regardless of whether the roads are formally designated as firebreaks or fire access tracks.

9.15 It appears from the answers supplied that MFPPs do not ordinarily designate particular ‘exit’ roads for use during fires. It is possible that this will change as MFPPs are revised in line with new Township Protection Plans and / or in light of the critical works program being undertaken on roads in some Victorian towns.

9.16 The overwhelming majority of councils indicated that they have regard to the CFA 2001 Guidelines (discussed below), either in the development of their MFPP and/ or when resolving roadside vegetation issues on a case by case basis. Indeed, MFPPs sometimes incorporate reference to CFA brigade sub plans, and often bear the hallmarks of having been prepared in close consultation with the local CFA. The council panel representatives agreed that they worked well with the CFA and were engaged in numerous projects with the local brigades.229

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227 Exhibit 754 – Statement of Spence, Attachment 2 (WIT.4014.001.0013); Annexure 3 (WIT.4014.001.0029); Request to VBRC for Supplementary Information – Roadside Cleaning (CORR.1002.0001); Table summarising Council responses to Matters raised in Witness Statement of Ms Dripps (CORR.1002.0004)
228 Exhibit 754 – Statement of Spence (WIT.4014.001.0001) [25]; Annexure 2 (WIT.4014.001.0013); Annexure 3 (WIT.4014.001.0029)
In contrast with MFPPs, which have a primary focus on fire prevention and management of fires, RMPs, RCMPs and RVMPs are policy documents which enunciate councils’ overall approach to their responsibilities for roads, including construction and maintenance of roads, traffic flow, safety and roadside treatments, as well as those directed at reducing the risk of fire.

Mr Green (Colac Otway Shire) noted that the council’s RMP is directed at providing an effective and efficient road system, and not driven by fire. Mr Buckley (Latrobe City Council) agreed that the RMP is principally about road safety and making sure the road network functions, while environmental guidelines set out elsewhere are aimed at protecting native vegetation.

In so far as roadside works are concerned, RMPs or other vegetation or conservation plans prepared by councils are usually directed towards the treatment methods and standards which apply across all the shire’s roads. They will often have regard to the balance to be struck between fire prevention and environmental protection. Some plans contain a statement of the methodology to adopt in assessing the conservation values of particular roadsides. Other plans literally describe vegetation classes to be found near the shire’s roads and then set out the conservation values which attach to roads (and even parts of roads) across the shire.

Many plans set out the types of roadside treatments which will be carried out in the shire and may even set out the standards to be applied to the same (although some councils will house those standards in other documents or tender guidelines). Most plans state that fire prevention works are to be carried out in accordance with the MFPP.

Panel discussion: experiences of councils

A panel of three council representatives was convened to examine in more detail the way councils manage their roads and road sides. Representatives from the Colac Otway Shire, the Latrobe City Council and the Shire of Yarra Ranges constituted the panel.
The municipalities and their resources

9.22 Mr Jack Green, representing the Colac Otway Shire, was the shire’s Chief Executive Officer from November 2008 to May 2009. Colac Otway Shire is a municipality located between the Surf Coast Shire to the east, Corangamite Shire to the west, Golden Plains Shire to the north and the Victorian coastline to the South. The landform is diverse and includes volcanic lakes, craters and plains in the north, neighbouring forests of the Otway Ranges and the Great Ocean Road coastline to the south. The shire has an area of 3,530 square kilometres, and a population of approximately 21,800, which increases to almost 45,000 during the summer months. Industries located within the Colac Otway Shire include substantial dairy, sheep, cattle and pig farming, milk and meat processing, forestry, timber processing, tourism, fishing and craft enterprises. The shire has approximately 2,100 km of roads of which the shire council manages about 1,660 km. Of the shire’s ratepayer base and revenue, Mr Green stated that:

It is on the lower end of the scale….it is a low rate base for the area of land and the responsibilities that Council has….the diverse topography and the diverse issues that we face make it even more complex.

9.23 The total budget for the Colac Otway Shire is approximately $32 million per annum, of which $413,600 has been set aside for vegetation control and roadside slashing in the 2009-2010 budget. Mr Green confirmed that, compared to the other shire councils, the budget is limited. This has caused significant resources concern for the Colac Otway Shire with respect to its roadside maintenance regime, especially when the MFPP notes that the allocation of resources to the management of roadside fire prevention must be a priority. He stated further that:

…the Council has to manage its responsibilities …in terms of funding that can be available…in the type of topography we have…fire prevention is also an important consideration …a large part… of the area is State responsibility so we don’t get any ratebase from that, which makes it difficult as well.

…the difficulty for a Council like us is that we are covering a hugely diverse amount of responsibilities with a limited ratebase and we struggle to provide the appropriately trained resources to administer them in some cases…

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233 Exhibit 756 – Biographical Details for Jack Green - Colac Otway Shire Council (TEN.237.001.0001)
234 Exhibit 756 – Statement of Small (WIT.4020.001.0001) [5]–[7]; Green T15711:30–T15712:10
235 Green T15712:15–T15712:18
236 Exhibit 756 – Statement of Small (WIT.4020.001.0001) [10]; Green T15712:18–T15712:22
237 Green T15712:23–T15713:3
238 Exhibit 756 – Statement of Small (WIT.4020.001.0001) [98]–[99]; Green T15715:1–T15715:4;
239 Exhibit 756 – Statement of Small (WIT.4020.001.0001) [66]; Green T15725:8–T15725:19
240 Green T15715:4–T15715:16
241 Green T15742:22–T15742:26
Mr Paul Buckley is Chief Executive Officer for Latrobe City Council. He stated that Latrobe City Council is 'very different' from the Colac Otway Shire. Latrobe City Council is a combination of regional and rural community and has four major urban areas, namely Traralgon, Morwell, Moe/Newborough and Churchill, and smaller townships such as Boolarra, Toongabbie, Glengarry, Tyers, Traralgon South, Yalloum North and Yinnar. The shire has an area of about 1,422 square kilometres, population of approximately 73,000, a rate base of about 40,000 assessments, and a total annual budget of approximately $90 million.

Latrobe is dominated by forestry industries, coal mining, electricity generation activity centres, pulp and paper production, dairy and beef farming. Latrobe City Council manages about 1,486 kms of roads. Latrobe City Council has devoted resources to roadside vegetation management including $65,000 set aside for slashing during the 2008/2009 fire season and $220,000 budgeted for tree clearance and arborists' fees for the 2009/2010 fire season.

Mr Grant Jack, MERO and Manager of Asset Maintenance and Services for the Shire of Yarra Ranges also took part in the panel. Mr Jack described the Shire of Yarra Ranges as comprising country with suburban development, forested hills and the valley of the Yarra River. He noted that the shire is also made up of large areas of water catchment, forest and park areas. In evidence, Mr Jack stated further that:

...It [Yarra Ranges Shire] has a low area of urban element to it with most of the population in the urban element, probably around three to five percent, and the balance with rural or forestry areas. There is a total of 2,500 kilometres of roadside that the shire is responsible for. All up there are 145,000 residents with about 50,000 assessments and an annual budget of around $140 million.

As for council resources devoted to roadside clearance activities, Mr Jack noted that the Shire of Yarra ranges has allocated the following funds to vegetation management programs for fire prevention purposes:

- slashing works - $627,217 ($530,000 directly referable to fire prevention);
- weed blackspot program - $300,000;
- tree removal on request - $1,082,881;
- rural roads pruning - $750,000;
- urban/electric pruning - $490,000; and

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242 Buckley T15713:4–T15713:17
243 Exhibit 757 – Statement of Buckley (WIT.4015.001.0001) [6]–[7]; Buckley T15713:9–T15713:12
244 Exhibit 757 – Statement of Buckley (WIT.4015.001.0001) [6]; Buckley T15713:9–T15713:12
245 Exhibit 757 – Statement of Buckley (WIT.4015.001.0001) [11]
246 Exhibit 757 – Statement of Buckley (WIT.4015.001.0001) [89]–[90]
247 Exhibit 758 – Statement of Jack (WIT.4019.001.0001) [8]–[14]
248 Jack T15714:2–T15714:9
• fire break capital works - $40,000.249

9.28 In addition, on 17 November 2009 the council approved an additional $500,000 for a roadside works program for the 2009/2010 fire season. The proposed works include fuel loads modification through weed, tree and small dead tree removal, grass slashing, ribbon bark and storm debris removal.250 Of the 42 roads nominated for the program, 16 have been assessed as being Group A - highest priority roads.251

Policies used to manage roads and roadsides

9.29 Each of the councils represented on the panel had a different way of managing roads and roadsides. The Shire of Yarra Ranges, has a RMP252 and a MFPP.253 The Shire of Yarra Ranges also has a Bushfire Management Program which is reviewed annually and endorsed by the MFPC. The Bushfire Management Program is designed to complement the MFPP and to outline specific bushfire prevention and community awareness programs.254 Mr Jack said that the majority of roads identified in the Bushfire Management Program where fuel reduction works are undertaken are identified by CFA brigades working with the MFPC.255

9.30 The Shire of Yarra Ranges also has a detailed set of specifications for contractors who are engaged to undertake roadside clearance activities. The tender documentation specifies the service standards contractors are required to meet.256 It is of note that the tender documentation includes an environmental code of practice which aims to minimise the impact of the works undertaken by councils on the environment.257

9.31 The Colac Otway Shire has a MFPP.258 Roads which are designated as strategic firebreaks within the Colac Otway Shire are identified in a firebreak plan which complements the MFPP.259 Those roads which are designated as strategic firebreaks are slashed from fence line to fence line in most circumstances.260

9.32 The Colac Otway Shire also has a RMP.261 The RMP is not focused specifically on fire risk or mitigation but it does refer to roadside vegetation from a road safety
perspective. The Colac Otway Shire also has a RVMP\textsuperscript{262} which outlines how all vegetation management activities are to be undertaken in the Shire. In particular, Part 15 of the RVMP sets out detailed guidelines for roadside slashing.\textsuperscript{263}

9.33 The City of Latrobe has a MFPP\textsuperscript{264} which provides for a number of strategic firebreaks, which it defines as 10 metre strips of land including road surfaces or other suitable areas where fuel load has been reduced.\textsuperscript{265} The MFPP refers to primary and secondary firebreaks. The MFPP identifies roadside fuel reduction works as being a high priority on all strategic firebreaks.\textsuperscript{266} The designation of roads as primary or secondary firebreaks is determined by the MFPC on the basis of advice from CFA brigades within the shire.\textsuperscript{267} The MFPP and related contractual standards for contractors require that strategic firebreaks are slashed prior to the fire season and as required thereafter depending on growth and fuel load. The MFPP provides that slashing should occur on both sides of the road to one metre behind the guidepost (where there is one) or 1.5 metres from the edge of the road surface where practicable. The objective is to achieve a minimum 10 metre clearance including the road surface.\textsuperscript{268}

9.34 Latrobe City Council also has a RMP (updated in 2009)\textsuperscript{269} and Environmental Guidelines endorsed by the DSE on 7 June 2002 (which are an endorsed land management plan for the purposes of clause 52.17 of the Latrobe Planning Scheme).\textsuperscript{270}

Compliance and permits

9.35 Panel members gave examples of permit applications referred to the DSE in relation to roadworks. Mr Jack (Shire of Yarra Ranges) referred to the permit sought in 2007 for Macclesfield Road in Yellingbo.\textsuperscript{271} The proposed works were directed at road safety, and not specifically at fire prevention. There were trees on the road which were interfering with the road envelope. The roadside was recognised as possessing high conservation values, with the potential to affect the habitat of the helmeted honeyeater and leadbeater possum, both of which are protected species.\textsuperscript{272} A permit was obtained to perform the necessary works. There were detailed conditions attached to the permit, including the requirement to develop a biodiversity vegetation
management plan in consultation with the DSE and other stakeholders and to make provision for offsets. The provision in relation to offsets required the council to provide a plan ‘showing the location of the 103 indigenous plants to be offset, of which 15 percent must be an over storey species and must be recruited in high priority ecological sites along Macclesfield Road’. This application was also referred to the Commonwealth DEWHA, which considered the project and advised that it did not constitute a ‘controlled action’ within the meaning of the EPBC Act.

9.36 The Budgeree Road project was provided as a further example by the Latrobe City Council. Again, this was a safety issue, not a fire prevention issue. The council sought to widen the road, which was regularly used by logging vehicles, to enable cars and trucks to pass safely on the road. The council applied to the DSE for a permit to undertake the works, and the DSE duly issued a Notice of Decision to grant a permit. The DSE’s decision was challenged in VCAT by an environmental group and a contested hearing followed. While VCAT determined that the proposed works were generally satisfactory, it formed the view that more could be done to minimise the reduction in native vegetation. Accordingly, Latrobe City Council redesigned the works, which involved altering the alignment of the road. A planning permit was subsequently granted; a major condition attached to the permit was the requirement to provide a native vegetation offset on private land. This was ultimately achieved by entering an agreement with the family who owned land on the corner of Budgeree and Prosper Valley Road. Mr Buckley said the family had a ‘long history of civic responsibility’ and agreed to allow their land to carry the offset vegetation in exchange for a rebate on rates. It is likely that this agreement with the private land owner will find expression in a Trust for Nature Covenant to be attached to the land.

9.37 As can be seen from the above, the process of obtaining permits by councils can be time consuming and impose a burden on resources. Even when permits are obtained from DSE, the completion of works may be delayed or prevented if others object.

9.38 In terms of resources devoted to ensuring compliance with environmental issues, each of the council representatives on the panel stated that their council employs environmental planners or advisers. In addition, the Shire of Yarra Ranges, Latrobe

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273 Exhibit 758 – Statement of Jack, Annexure 9 (WIT.4019.001.0484) at 0498
274 Exhibit 758 – Statement of Jack, Annexure 9 (WIT.4019.001.0484) at 0501
275 Exhibit 757 – Statement of Buckley (WIT.4015.001.0001) [66]–[71]; Buckley T15738:28–T15740:17
276 The VCAT decision is at: Exhibit 757 – Statement of Buckley, Annexure 10 (WIT.4015.001.0409) at 0410–0416; and the planning permit ultimately issued is at: Annexure 11 (WIT.4015.001.0418) at 0419–0424
277 Exhibit 757 – Statement of Buckley (WIT.4015.001.0001) [70]–[72]; Annexure 12 (WIT.4015.001.0425) at 0426; Buckley T15740:6–T15740:26
278 Green T15721:8–T15721:20; Buckley T15721:24–T15722:1; Jack T15722:3–T15722:6
City Council and the Colac Otway Shire all have GIS mapping and databases which assist them in ascertaining the location of areas of environmental value. 279

Community views

9.39 The representatives on the panel indicated that there had been a marked alteration in community sentiment in relation to roadsides since the February 2009 fires. Mr Jack (Shire of Yarra Ranges) reported a ‘significant increase in requests and awareness and activism’. In particular, the council had noticed its arborists receiving over 160 percent increase in workload in the year following the fires and council officers receiving a 200 percent increase in requests for fire slashing on roadsides. 280

9.40 Mr Buckley (Latrobe City Council) said there had been a ‘significant shift’ in people’s attitudes, particularly in fire affected areas such as Boolarra, Traralgon South and Callignee, where people were now calling for council to ‘get as much stuff off the roadside as you possibly can’.281 Mr Green (Colac Otway Shire) said there was an initial increase in matters relating to roadsides being raised, although working with the community and the CFA and the DSE had ‘calmed that down’. He suggested the pressure had not been as intense for Colac as it had not been affected by the fires 282

9.41 Mr Green (Colac Otway Shire) said that media coverage after the fires had suggested that the problem lay with councils:

...refusing to provide permits. I think what you are hearing here is the difficulty councils have to do that because of the legislation that we are only responsible for..... local government is really just administering legislation from higher levels of government. I think that was probably the biggest damage that was done to local government in a broader context as far as community perceptions and understanding are concerned.283

9.42 Mr Jack (Shire of Yarra Ranges) also noted that since the fires, council staff were finding they were dealing with ‘very emotional people’ seeking works while others were still asking that native vegetation not be touched:

But it is definitely a balancing act. There are a lot more people becoming very active about requesting work, but equally so the environmentally based people have just as much resistance to that work occurring. So it is a volatile situation at the moment with the community groups and trying to balance those competing needs.284

9.43 Dr Mitchell (representing BEAM Mitchell Environmental Group Incorporated) expressed a concern that the media reaction constituted an overreaction. He said:

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280 Jack T15750:24–T15750:31
281 Buckley T15749:30–T15750:4
282 Green T15749:19–T15749:25
283 Green T15751:18–T15751:31
284 Jack T15751:11–T15751:16
In the local media it has been strongly against the native vegetation. There have been suggestions of clearing 10 metres off roadsides, all vegetation 10 metres, up to 50 metres in a couple of suggestions, all trees that might fall on roadsides. The debate has been rather one-sided because of the reaction to the fires. We [ie BEAM Mitchell Environment Group] have actually kept our heads down, basically.  

9.44 Councils are required to balance the different views expressed by community members. Mr Jack highlighted the differences in community views by reference to the particular example of Old Kinglake Road in the Shire of Yarra Ranges. In August 2008, the Yarra Ranges Council wrote to the owners of the ten properties which accessed Old Kinglake Road, an unsealed dirt road near Kinglake National Park with a substantial population of the highly flammable Burgan bush, in relation to proposed additional roadside clearance. The aim of the proposed works, which were additional to the regular slashing program, was threefold:

(a) to reduce fuel loads for fire prevention;
(b) to improve access for roadway maintenance equipment; and
(c) to improve access for emergency services vehicles.

9.45 The proposed works involved removal of fallen branches, selective pruning and removal of dead saplings, trees, weeds and regrowth in order to restore the roadside to the condition it had been in five to six years earlier. The council arranged an on-site meeting for December 2008 with residents of Old Kinglake Road and the neighbouring road and regional and local CFA representatives, including the brigade captain. Mr Jack said they explained to the meeting that the works were proposed to maintain compliance with the RMA and Council’s fire prevention plan and roadside slashing contract. Mr Jack described the response by the five residents who attended the meeting and the eventual agreement reached at the meeting:

It was a fairly heated debate by residents and a lot of opposition initially. There were some people who were quite angry that we were even proposing to do any work on that environment because they saw it as a very high conservation value area and were very keen on protecting it at all costs. There was a concern that any work we did in terms of roadside slashing would introduce weeds and be to the detriment of the area.

Through that meeting we ended up walking through the whole site and literally identifying by hand each and every plant that we were talking about and sections of the road that we wanted to prune back the cunzia. …

Through that meeting we did have objectives to push back that Burgan at least two metres back from the top of the batter. Unfortunately that wasn't considered.
suitable by the residents and there was quite a bit of opposition to that. CFA were keen for us to do whatever we could but were trying to remain neutral…. 

At the end of that meeting we had some agreement to carry out dead wooding, some removal of dead trees or plants, and some very selected hand based work rather than a more agricultural mechanism that we would normally use in terms of a box slasher or a slashing implement mounted on a tractor.289

9.46 Mr Jack said that because of the compromise that was reached, the works ultimately undertaken were more ‘finicky’ than normal. There was a need to resort to secateurs and hand weeding and pruning.290 As a result, the works were labour intensive (requiring 160.5 hours work) and costly, with the Council spending $7,500 on this site instead of ‘a couple of hundred dollars, maybe $1000’, being the amount likely to have been spent on any other similar job.291 The works were completed on 6 February 2009.292

9.47 Mr Jack said he had gone back to Old Kinglake Road since the fires. It was significantly hit by the fires and there were deaths in the region. The council met with residents once again, and indicated its desire to do more works and clean up works in relation to fire damage. Nevertheless the residents are:

‘...still committed to not touching it. Despite the amount of debris and damage done in that area, there is still a commitment to the environment not to touch it and leave it in pristine condition’.293

9.48 The matters explored in the evidence given by lay witness Mr Chris Petreis,294 resident of Coombs Road Humevale, also underscore the delicate balancing act which must be engaged in by councils when negotiating their responsibilities, and the wishes of residents’ groups and other entities like the CFA. There has been a history of resident complaints made to the City of Whittlesea concerning matters of access and safety in relation to Coombs Rd.295 Resolution of the matters has not been easy, as different priorities have been expressed by residents, by the CFA and by Melbourne Water (which owns part of the land through which part of the road traverses). The council is now in receipt of two petitions from residents: one is from residents who seek that the road be improved; and the other is from residents who ask that the part of the road designated as a fire access track be closed to traffic.296

289 Jack T15747:22–T15748:20
290 Jack T15748:21–T15749:3
291 Jack T15749:4–T15749:7; Exhibit 758 – Statement of Jack (WIT.4020.001.0001) [99]
292 Exhibit 758 – Statement of Jack (WIT.4020.001.0001) [99]
293 Jack T15750:12–T15750:23
294 Exhibit 750 – Statement of Petreis (WIT.142.001.0001); Petreis T15627:18–T15639:10; Exhibit 750 – Letter from Mallesons Stephen Jaques– Request for Supplementary information – Coombs Road, Annexure 2 (INDX.685.001.0001); Lyon T15643:1–T15643:16
295 Exhibit 750 – Statement of Petreis (WIT.142.001.0001) [21]–[44]
296 Lyon T15643:1–T15643:16
Clearly, councils are engaged in a delicate balancing act: both of their obligations under competing regulatory regimes, and of the interests of different sectors of the community.

10 CFA’S ROLE IN RELATION TO ROADSIDE WORKS

Power to perform works

10.1 Section 42 of the CFA Act provides as follows:

42. Brigades may carry out fire prevention work

(1) The officers and members of any brigade, at the request of-

(a) the owner or occupier of any land;
(b) a Minister in whom any land is vested;
(c) a municipal council or public authority-

(i) in which any land is vested;
(ii) that has any land under its control or management;
(iii) that is responsible for the care and management of any road-

may carry out on that land or road any work (including burning) for the removal or abatement of any fire danger or for the prevention of the occurrence or spread of fire.

(2) Any work carried out under subsection (1) must be paid for by the owner, occupier, Minister, council or authority requesting the work and, if not paid, is recoverable in the Magistrates’ Court as a debt due to the Authority.

(3) Subject to the general direction of the Authority and the Chief Officer, the officers and members of any brigade, with the consent of the relevant owner, occupier, Minister, council or authority, may carry out any work (including burning) that the officer in charge of the brigade thinks necessary or expedient for the prevention of the occurrence or spread of fire.

(4) This section does not apply to an industry brigade.

10.2 Thus, pursuant to section 42 of the CFA Act, brigades are empowered (but not obliged) to carry out work on roadsides including burning, so long as such work is done either:

(a) at the request of the road manager (section 42(1)); or
(b) with the consent of the road manager (section 42(3)).

10.3 Where work is carried out by the CFA at the request of the road manager under section 42(1), the latter is required to pay for it: section 42(2).
Mr Leonard Leslie is a Fire Planning Coordinator employed by the CFA. He has experience in education (both in schools and for the CFA). The projects on which he has worked at the CFA enabled him to comment authoritatively on the way in which roadside questions are handled by the organisation, as well as the way in which CFA employees and volunteers are trained to understand and implement the applicable legislative regimes.

Mr Leslie explained that the way in which section 42 of the CFA Act operates in practice is that the CFA usually undertakes roadside works at its own expense (predominantly through the use of its volunteers). The payment provisions in section 42(2) of the CFA Act are not often enforced by the CFA as the majority of the work on roadsides is done following discussion between the CFA and the road manager, rather than formally arising from a 'request' under section 42(1) of the CFA Act. Mr Leslie stated that 'usually not even cost recovery' is sought by the CFA. Mr Leslie said the practice of not even seeking cost recovery has developed because roadside works are generally driven 'from the field'.

Mr Leslie said:

'The local people have both an altruistic and a vested interest reason for undertaking works. If you are a farmer in the Mallee and you have 70,000 hectares, it is important for you to make sure of crop. So people have done it for a really long time…'

The CFA therefore finds itself in a position where it devotes considerable resources, including volunteer time, to roadside projects, despite not being principally responsible for roadsides under the CFA Act.

2001 Guidelines

The 'Roadside Fire Management Guidelines CFA 2001 (2001 Guidelines)', though not formally in force, continue to influence the CFA’s policy and its performance of fire
prevention works, including on roadsides. CFA field facilitators continue to use the 2001 Guidelines as reference material when planning roadside works with brigades.

10.9 The 2001 Guidelines contain a great deal of useful scientific and practical guidance in relation to roadside fuel management.

10.10 Much of the 2001 Guidelines’ contents are confirmed by the observations made in the field by Mr Strickland (see discussion below in Section 13). For example, in relation to grass mowing and slashing, the 2001 Guidelines state that the rate of spread of a fire in slashed grass is about the same of that in standing grass; however the flame height will be approximately halved. This reduction in flame height in turn increases the likelihood of suppression being successful. The 2001 Guidelines also note that: ‘if the road reserve is mostly grassed and the grass is 100% cured/grass, and the fire danger is moderate, fire will cross a 10 metre reserve in about a minute… slashing the full width of a road reserve is unlikely to achieve the objective of keeping fires contained to the road reserve unless fires are burning under low fire danger’.

10.11 The 2001 Guidelines note further that in cases where there are no trees present, the slashing of grass along a fence line reduces the flame height, which may be beneficial in preventing a fire from breaching an adjacent clear earth break through direct flame contact. However, if trees are present the fire break is likely to be breached by spotting activity.

10.12 The 2001 Guidelines underscore the fact that ‘the level of treatment is based on the level of risk’. In this context, the 2001 Guidelines discuss a number of possible treatment approaches for roadsides.

10.13 A great deal of the ‘science’ set out in the guidelines supports the approaches to roadside works implemented by VicRoads and councils. For example, it is likely that the ‘3 metre slashing’ which is employed in many places in Victoria derives from the suggestion in the 2001 Guidelines that a possible roadside treatment is a ‘fuel free area’ of 3 metres. The 2001 Guidelines suggest that in some cases a fuel free road shoulder will be sufficient, while in other cases a slashed verge adjacent to the road shoulder may be preferred if the road shoulder width is inadequate. It is suggested

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302 Exhibit 748 – Statement of Leslie, Annexure 1 (WIT.3004.028.0029)
303 Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [18]
304 Exhibit 748 – Statement of Leslie, Annexure 1 (WIT.3004.028.0029) at 0045
305 Exhibit 748 – Statement of Leslie, Annexure 1 (WIT.3004.028.0029) at 0045
306 Exhibit 748 – Statement of Leslie, Annexure 1 (WIT.3004.028.0029) at 0046
307 Exhibit 748 – Statement of Leslie, Annexure 1 (WIT.3004.028.0029) at 0047
308 See generally Exhibit 748 – Statement of Leslie, Annexure 1 (WIT.3004.028.0029) at 0045–0049
that the slashed verge should be maintained at 10 centimetres height during a fire danger period.\textsuperscript{309}

10.14 The 2001 Guidelines provide a frank assessment of the utility of treatments which might be applied to roadsides: the effectiveness of bare earth fire breaks depends on the width of the break, the fire intensity and the presence or absence of trees and scrubs within 20 metres. It is stated that:

\textit{For road reserves with heavy grass fuel loads, if there are trees present on the road reserve, the success of a 3 metre bare earth fire break is limited to about 20\% on fire danger days above moderate.}

\textit{If there are no trees, this break would be effective on about 50\% of occasions. For a 6 metre bare earth break, the success rates are about 40\% and 95\% with and without trees respectively.}\textsuperscript{310}

10.15 The 2001 Guidelines also note that in some circumstances roads might be useful as control lines, but only if located in areas with little or no fuel. In a landscape which is predominantly grassland, the road reserve may in fact be one of the more heavily treed parts of the landscape. In such circumstances, the 2001 Guidelines note that, the road reserves are likely to be the least suitable place to plan a control line as the fire behaviour there will be more intense than in surrounding areas. This is likely to compromise fire-fighter safety.\textsuperscript{311}

10.16 The 2001 Guidelines continue to be used by the brigades and field facilitators. In particular, the worksheets set out in the 2001 Guidelines are useful tools to assist in undertaking a roadside risk assessment and to support the decision-making framework for selecting appropriate treatments.\textsuperscript{312} The 2001 Guidelines demonstrate that risk assessment ought always be conducted on a case by case basis, having regard to the fuel load on the roadside, surrounding areas and in particular the presence or absence of trees.

10.17 It is submitted that the 2001 Guidelines constitute a useful guide to the effectiveness of various treatments which might applied to roadsides.

\textbf{Complexity and administrative burdens}

10.18 Since 2005, there have been a number of changes to the legislative and regulatory regime which have required the CFA to alter its practices in relation to roadside works. For example, section 63 of the \textit{Road Management Act} now contains the offence of undertaking roadside works without written consent and section 99A of the
Road Safety Act creates an offence of undertaking roadside works in a manner that is unsafe for road users or those carrying out the works.

10.19 Mr Leslie stated that prior to 2005, the CFA brigades often undertook work at a local level without informing the Region, as ‘Many brigade members were farmers or graziers and they saw the fire prevention works as in the interests of their community as well as an effective way to protect their own lives and property in the event of a fire’.313

10.20 Mr Leslie indicated that in the course of his duties as Fire Planning Coordinator in 2005, before he became aware of the fact that roadside fire prevention works were being undertaken in various ways across the State on a somewhat ad hoc basis. As a result, and in response to the new legislation, the CFA sought to develop a comprehensive and consistent approach to fire management on roadsides and rail corridors in Victoria.314

10.21 As a result of these changes, and a desire to achieve greater uniformity across the State, CFA brigades are now subject to a number of new requirements in relation to the performance of roadside works:

(a) a written ‘road use’ consent must be obtained from the coordinating road authority (ie VicRoads or a council) to undertake all non-emergency fire prevention works;

(b) Signs to control traffic and affect speed limits around roadside works require a Memorandum of Authorisation (MOA) from VicRoads. The MOA must be accompanied by a traffic management plan, prepared by an accredited Traffic Management Planner prior to the commencement of the works. The CFA has developed templates for standard traffic management plans which are used to assist in fulfilling this requirement.

(c) There must be appropriate warnings to road users;

(d) Occupational Health and Safety requirements also apply: the brigade must engage appropriately trained and qualified persons to carry out the works or direct traffic and must give appropriate directions to persons engaged in carrying out the work315.

10.22 The CFA has taken a number of steps to facilitate and support the introduction of the above changes, and in order to achieve more uniformity across the State, namely:

313 Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [22]
314 Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [23]–[26]
315 Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [20], [38]–[42]
(a) The *Road Management Act 2004* Worksite Safety – Traffic Management Code of Practice was developed. This provides the ‘benchmark for the planning and execution of roadside fire prevention works’.316

(b) A project was initiated in July 2006 known as the Roadside and Rail Corridor Fire Management Project, designed to develop new procedures for the CFA.

(c) In 2007, the CFA Board endorsed a new position in relation to the new approach to be adopted for roadside management. The document (titled *Roadside Fire Management – CFA Position on Roadside Fire Management Works*) contains the policy. 317 It states that CFA Areas and Brigades which choose to become involved in the planning and delivery of roadside fire management works on public road reserves must fulfil certain minimum requirements. The overarching responsibility of brigades carrying out roadside fire management works is to ensure that the works are conducted in a manner that is safe for road users and for those carrying out the works. Further, roadside fire management work should be identified and approved within a relevant MFPP or a document attended to or referenced by it. Any works not identified in an MFPP must be approved by the relevant CFA Area General Manager or their delegate.

(d) The CFA also introduced the *Roadside Fire Management Works Guidelines and Procedures of 2007*, which set out the appropriate procedures for planning and implementing roadside works.318

(e) Since November 2006, the CFA has employed six field facilitators (now to be known as Vegetation Management Program Facilitators) whose duties include liaison with brigades to facilitate their compliance with the legislative regime and supporting brigades in relation to planning roadside and rail corridor fire management works.319

10.28 Further, as has been noted above in Section 6, there are some roadside treatments which affect native vegetation or habitat for some species, and thereby engage the provisions of the FFG Act and/or the EPBC Act. Where this be the case, the CFA may require a permit or approval to undertake the works in question. 320

10.29 In an effort to simplify some of these procedures, the CFA has engaged in extensive liaison with VicRoads and as a result, has entered into an agreement pursuant to which the DSE may issue permits to burn issued for periods of six months; roads in

316 Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) at [21]
317 Exhibit 748 – Statement of Leslie, Annexure 2 (WIT.3004.028.0070) at 0070–0071
318 Exhibit 748 – Statement of Leslie, Annexure 3 (WIT.3004.028.0073)
319 Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [48]–[53]
320 Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [41]
specific brigade areas may be grouped together for the purpose of obtaining permits.\textsuperscript{321}

10.30 Further initiatives are now under way under the auspices of the Vegetation Management Project to ensure program facilitators are in a position to develop and deliver comprehensive education and awareness programs for CFA areas, brigades and MFPOs in the context of a wider vegetation management program but also with specific reference to roadside management.\textsuperscript{322}

10.31 Mr Leslie noted that the CFA has spent approximately $1 million over the three years since 2006 on the Roadside and Rail Corridor Fire Management Project. The expertise provided and works performed by volunteers using the CFA equipment is not included in this calculation.\textsuperscript{323} A significant proportion of the CFA expenditure to date has been for salaries and associated costs for staff directly involved in compliance work in order to ensure the legislative regime was adhered to.\textsuperscript{324}

10.32 Mr Leslie noted that the current process for approvals of roadside vegetation works is ‘complex, time consuming and costly for CFA. Clear, transparent and accountable arrangements, supported by appropriate public compliance reporting against responsibilities, are needed to facilitate roadside vegetation management work’.\textsuperscript{325}

10.33 A number of initiatives are currently being canvassed or pursued with the aim of streamlining matters. The CFA is keen to promote collaboration with VicRoads and the MAV in order to simplify the regulatory framework for roadside vegetation management procedures and streamline consent to processes. Further, the CFA want to work with the DSE to access and utilise its biodiversity data which would assist the CFA in the early stages of planning works on roadsides to identify whether there are biodiversity concerns.\textsuperscript{326}

10.34 In terms of costs borne by the CFA, Mr Leslie noted that at present the CFA pays external contractors to provide traffic management training to its staff and volunteers. Volunteers who would otherwise be available for conducting roadside works are being diverted to traffic management duties. Mr Leslie said that volunteers are, ‘happy to do the burn and probably there is less appeal to holding a stop/slow bat than there is to actually conducting the burn’.\textsuperscript{327} He stated that the CFA would like to

\textsuperscript{321} Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [43]; Annexure 4 (WIT.3004.028.0086), (WIT.3004.028.0088)
\textsuperscript{322} Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [55]–[57]
\textsuperscript{323} Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [46]
\textsuperscript{324} Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [47]
\textsuperscript{325} Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [71]; Leslie T15568:18–T15569:30
\textsuperscript{326} Exhibit 748 – Statement of Leslie (WIT.3004.028.0001) [70]
\textsuperscript{327} Leslie T15575:15–T15575:30
investigate ways of removing this burden, with traffic management services provided by VicRoads or others.  

11 FUELBREAKS AND FIREBREAKS

Terminology

11.1 The terms ‘fuel break’ and ‘firebreak’ tended to be used interchangeably in the evidence. The DSE uses the term ‘fuel break’ as an umbrella term which covers any break or discontinuity in fuel that may be used to segregate, stop or control the spread of a wildfire or to provide a fire control line from which to suppress a fire. In contrast, it uses the term ‘firebreak’ to refer to one specific type of fuel break, namely a mineral earth strip. In these submissions, whether the term fuel break, firebreak or break is used, the intention (unless otherwise stated) is to describe a strip of land in which trees have been removed and fuels significantly reduced if not removed entirely.

11.2 The DSE also refers at times to a ‘strategic break’, which it has defined to mean:

[A] break (fire and / or fuel) constructed / maintained in a strategically useful location to provide an effective and safe means to undertake fire prevention or suppression activities in advance of a future bushfire event occurring. It is designed specifically to protect assets assessed as having national, state or regional significance; and where possible, to provide essential linkages between fire control systems across the landscape.

11.3 These submissions are primarily concerned with fuel breaks which run through forested areas. However, there is another important species of firebreak which is commonly referred to in MFPPs – namely those constituted by pre-existing public roads, on which the roadsides are treated to remove or reduce vegetation. These sorts of fuel breaks are given prominence in MFPPs and appear to be designated in close consultation with local CFA brigades. They appear to be designed to offer opportunities for suppression and for establishing control lines.

11.4 Fire breaks of fuel breaks which use existing public roads obviously do not usually require ‘construction’. Rather, usually what is required is that the roadside vegetation be mowed to a certain width in order to widen the break already provided by the road. For this reason, those sorts of breaks do not raise either the practical difficulties of construction or the conflict with the native vegetation and biodiversity regimes which may arise in relation to fuel breaks constructed in forested areas.

328 Leslie T15575:10–T15575:16
329 Fogarty T15845:1–T15845:13; Exhibit 761 – Statement of Fogarty, Attachment 4 (DSE.HDD.0052.1751) at 1753
330 Exhibit 761 – Statement of Fogarty, Attachment 4 (DSE.HDD.0052.1751) at 1755
What are fuel breaks for?

11.5 The terminology fuel break and firebreak certainly suggests to the lay observer that the area in question might be used to stop a fire, or to retard or change its spread. This is perhaps an overly simplistic description of the use to which fuel breaks are put.

11.6 In 2008, the DSE published a Discussion Paper titled: ‘DSE’s Strategic Fuel and Firebreak Policy Discussion Paper February 2008’ (Discussion Paper). Mr Fogarty confirmed that the Discussion Paper continues to be used to inform the work of the Land and Fire Division and to provide advice to other sections in the DSE.331

11.7 The Discussion Paper recites in its opening paragraphs the facts that in January 2007, the Victorian Government had announced that the DSE and the CFA would ‘establish strategic permanent firebreaks around Melbourne’s water catchments, continue work on permanent protection in the Otways and investigate other possible locations for further firebreaks’. 332 The Discussion Paper also recites the background that a recommendation had been made in 2007 (in the report ‘Recommendations on Fire Line Construction for the Protection of Melbourne’s Water Catchments’, Ian Christie January 2007) that strategic fire control lines be constructed to ‘better protect Melbourne’s catchments’.333 It also notes remarks by Victoria’s Emergency Services Commissioner, Mr Esplin to the effect that the ‘creation of strategic firebreaks, complemented by fuel reduction burning where possible, would help make towns and other important community assets safer from fire’.334

11.8 The Discussion Paper goes on to state that:

A fuelbreak is part of a strategic network when it is located to enhance the protection of state or nationally significant assets through the provision of:

- Local protection and/ or links across the landscape;
- Efficient access for fire fighting resources; and
- The reduction of risks through dangerous tree removal and the local reduction of fuel.

So they allow more efficient large bushfires containment and significantly reduce their impacts.335

11.9 The Discussion Paper states that a: ‘pre-established strategic break network allows suppression efforts to focus on the containment of bushfires that have escaped initial
attack ..... through the use of back-burning and burning out operations while conditions are suitable...”.336

11.10 Although the DSE has proceeded to construct strategic fuel breaks since the release of the Discussion Paper, those breaks are largely confined to a network designed to protect water catchments. The aspect of protecting other assets such as towns appears to have been lost in translation.

11.11 Mr Fogarty said that fuel breaks had two major uses:
(a) assisting in suppression efforts, including to engage in backburn or burning out operations during fires; and
(b) during planned burns.337

11.12 Mr Fogarty sought to dispel any view that fuel breaks (such as the one which rings the town of Marysville)338 are designed to protect the town.339 He said that fuel breaks such as these are not designed for active defence of the town during a fire. Rather, a break such as that is constructed ‘to help with ... back burning and burning out operations ... and planned burning operations’. In this context he agreed that while fuel breaks assist in the protection of towns, ‘the backbone of it needs to be planned burns’.340

**Utility of fuel breaks: the science**

11.13 Mr Fogarty said that the effectiveness of fuel breaks depends on the physical dimensions of the break, the fuels surrounding the break, the alignment with roads and tracks with prevailing wind and fire spread direction, the intensity and behaviour of the fire and the prevailing conditions on the day of a fire.341

11.14 The 2008 Discussion Paper notes that the effectiveness of cleared fuelbreaks depends on their width, fuel type, fire intensity and distance of spotting. Direct flame contact and radiant heat over a fuelbreak are the ‘most obvious’ ways in which breaching occurs. The commonly used ‘rule of thumb’ for a break is that the width ought to be at least 1.5 times the anticipated flame height.342

11.15 The Discussion Paper goes on to note that under very high fuel hazard conditions, crowning will occur where the FFDI approaches and exceeds 30. As a result, the width of a break necessary to restrict breaching by flame and heat transfer increases

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336 Exhibit 761 – Statement of Fogarty, Attachment 4 (DSE.HDD.0052.1751) at 1753, 1756
337 Fogarty T15849:13–T15849:31
338 Exhibit 768 – Marysville Post Fire Aerial Photography (EXH.678.0004); Parsons T14290:18–T14291:3
339 Fogarty T15850:7–T15850:10
340 Fogarty T15850:11–T15850:28
341 Exhibit 761 – Statement of Fogarty (WIT.3024.004.0331) [20]
342 Exhibit 761 – Statement of Fogarty, Attachment 4 (DSE.HDD.0052.1751) at 1757; Fogarty T15831:25–T15831:28;
Power Point Presentation (TEN.240.001.0001) at 0004; Exhibit 761 – Statement of Fogarty (WIT.3024.004.0331) [29]
dramatically from 20 to 40 metres in medium forest types and more in tall forests. The Discussion Paper suggests that, ‘at this point, a break width of 20 m defines the reasonable limits for fuelbreak width in forest fuel, beyond which additional construction is likely to be of marginal value’.\(^{343}\) It also notes that once fire spotting becomes the major method of fire propagation, the width of a break ceases to be significant.\(^{344}\)

11.16 The Discussion Paper clearly distinguishes between construction of fuelbreaks in forest complexes and construction of fuelbreaks in ‘locations to protect high value resources’. The following table appears in a section in the Discussion Paper devoted to construction of breaks in forests:\(^{345}\)

<table>
<thead>
<tr>
<th>Application</th>
<th>Effectiveness</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The construction of fuelbreaks around and inside a forest complex is a common method of separating fuels and providing access for fire suppression.</td>
<td>• Effectiveness of cleared fuelbreaks is dependent on: the width of the break; the fuel type in which the fire is burning; the fire intensity or flame length (refer to figure 1 below); and the distance of spotting ahead of the fire.</td>
<td>• The cost of fuelbreak establishment and maintenance can vary depending on its prescription. For example an access road will be less expensive than a 20 - 40m wide cleared break.</td>
</tr>
<tr>
<td></td>
<td>• Limited in large fires: Using McArthur’s Forest Fire Danger Meter MkV, it is predicted that the spotting under Very High Fire Danger will be (if available fuel is more than 15 t/ha) at least 1.2 kilometres. Other research has suggested spotting can occur between 2 and 20 km in very high to extreme conditions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Very wide, non-vegetated breaks may actually increase the risk of fire moving across since they act as channels for increasing wind speed and causing turbulence.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• In extreme burning conditions fuelbreak networks within forests will only assist by: enabling quick access for rapid attack; as an anchor point for suppression while the fire is accelerating; or to restrict the lateral spread of the fire once the head fire becomes uncontrollable.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• In the two recent megafire events (2003 and 2007), the critical containment strategy was to prevent the easterly spread of the fires. While this proved the most</td>
<td></td>
</tr>
</tbody>
</table>

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\(^{343}\) Exhibit 761 – Statement of Fogarty, Attachment 4 (DSE.HDD.0052.1751) at 1757; Exhibit 761 – Statement of Fogarty, (WIT.3024.004.0331) [30]–[31]

\(^{344}\) Exhibit 761 – Statement of Fogarty, Attachment 4 (DSE.HDD.0052.1751) at 1757–1758; Fogarty T15832:19–T15832:27; Exhibit 789 – Effectiveness of Fuel Breaks – Fire Science and Practical Considerations – Presentation (TEN.240.001.0001) at 0007

\(^{345}\) Exhibit 761 – Statement of Fogarty, Annexure 4 (DSE.HDD.0052.1751) at 1756
11.17 In contrast, the following table appears in the section concerned with protection of high value assets:

<table>
<thead>
<tr>
<th>Application</th>
<th>Effectiveness</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>• In locations to protect high value resources (eg. houses).</td>
<td>• Rarely designed to stop fires but to allow suppression forces a higher probability of successfully attacking a wildfire.</td>
<td>• Fuel-breaks can potentially occupy a large area of land.</td>
</tr>
<tr>
<td>• Provide safe access to firefighting crews on the ground.</td>
<td>• Limited in large fires: unless fuel-breaks are 2 kilometres wide, they will not help with containment of head fires spreading under the extreme conditions.</td>
<td>• Usually high maintenance cost</td>
</tr>
<tr>
<td>• Most located where indirect attack strategies would be employed, such as along ridges, or roads along valley bottoms.</td>
<td>• Fuel-breaks 10 - 40 metres wide (commonly referred to as asset protection zones) adjacent to settlement, support by prepared residents and residences, and where possible by fuel reduced areas within several hundred metres of a threatened structure have been found to increase the chance of house survival by reducing fire intensity and allowing safe access for residents and firefighters to the structures soon after the fire-front has passed.</td>
<td></td>
</tr>
<tr>
<td>• Shaded fuel-breaks are commonly used within the forest industry to reduce fuel loads. A shaded fuel-break is created by altering surface fuel, increasing the height to the base of the live crown, and opening the canopy by removing trees. The objective is to reduce the quantity in fuel (in litter and understorey) to about 1 to 3 t/ha.</td>
<td>• Ember Ignition, the most common cause of house loss, is more difficult to prevent. Fine fuel loads (including bark hazards) have to be reduced to 0.5t/ha (moderate bark fine fuel) to create a medium level of ignition risk to houses.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• To be effective, significant fuel reduction burning and ‘candling’ would need to be carried out to keep the fine fuel loads at a moderate level.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Any strategic breaks should have dead trees removed for at least 1.5 times the tree height to significantly reduce ember attack and therefore the breach of fire-breaks.</td>
<td></td>
</tr>
</tbody>
</table>

346 Exhibit 761 – Statement of Fogarty, Annexure 4 (DSE.HDD.0052.1751) at 1762
11.18 In evidence, Mr Fogarty explained the matter in the following way:

In the sort of broad forested landscape like we have around our catchments we have looked at it closely and while there may be a tendency for people to always want to go out to 40, 60, 80 metres, when you look at how closely fires spread and propagate, and it is a bit consistent with Mr Strickland’s evidence, there is a point where the way breaks are breached is dependent on the fire behaviour and there is a point where it is largely driven by embers and the critical threshold there seems to be at around that 20 to 30 metre mark where embers take over. So we have actually found that going much wider than that doesn’t add a lot of value. When you are looking at fuelbreaks around towns, similar principles apply, but you look more closely at radiation intensity transfer, if you like, and in those instances because the properties of, say, a home are different to the properties of forest, you can get some added benefit by going out to 30 or 40 metres and it is largely consistent with the state’s 10/30 rule, if you like, about the distance that you are trying to move out from. In terms of the breaks that we construct in the Otways where we are doing some trials with this sort of thing, we generally are looking at breaks between 20 to 40 metres. There are areas where if it’s in a part of the landscape where it’s down a back southerly aspect that it is not likely to be hit by the full brunt of the fire, it may be 20 metres, but if we have a steep pinch and so on, then we are looking at the 40 metres.  

When may fuel breaks be constructed?

11.19 Any plan to construct fuel breaks of any significance in Victoria’s forested areas is likely to ‘clash’ with the prohibition in clause 52.17 of the VPPs on the removal of native vegetation. In addition, it may give rise to a need to obtain a permit under the FFG Act and/or a need to seek approval or exemption under the EPBC Act (this latter prospect is discussed in detail above in Section 6). This is acknowledged in the DSE’s 2008 Discussion Paper.  

11.20 So far as the native vegetation regime in clause 52.17 of the VPPs is concerned, there are two limbs to the fire protection exemption in clause 52.17-6 of the VPP which specifically exempt fuel breaks from the native vegetation regime:

Fire protection:

The native vegetation is to be removed, destroyed or lopped for fire fighting measures, periodic fuel reduction burning, or the making of a fuel break or fire fighting access track up to 6 metres wide.

The native vegetation is to be removed, destroyed or lopped for the making of a fuelbreak by or on behalf of a public authority in accordance with a strategic fuelbreak plan approved by the Secretary of the Department of Sustainability and Environment. The maximum width of a fuelbreak must not exceed 40 metres.

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348 Exhibit 761 – Statement of Fogarty, Attachment 4 (DSE.HDD.0052.1751) at 1766
The 6 metre wide exemption: private or public land

11.21 The exemption allows for fuel breaks up to six metres wide to be constructed on public or private land by an individual or a public authority. The only detailed evidence before the Commission of use of the exemption by a member of the public emerged in the evidence of a lay witness, Mr Ray Maino, who has relied on the provision to construct a fuel break on his property.

11.22 The exemption does not appear to be used often, if at all, by councils. Mr Jack (Shire of Yarra Ranges) said he was not aware of the shire ever seeking to construct a 6 metre or a 40 metre fuel break. Mr Buckley (Latrobe City Council) said he was not aware of either fuel break exemption being used. Mr Green (Colac Otway Shire) said he believed there are some breaks in the shire which have been in place for some years, but was not aware of any recent plans for the creation of fuel breaks in the shire. Mr Brown (VicRoads) said there are examples of VicRoads using the provision.

11.23 There has not been a high take up rate of this exemption. But there is no reason why it could not be used regularly by road managers (to construct fuel breaks running parallel to roads along the road reserve), or councils (on their land) or the DSE on public land.

The 40 metre wide exemption: use by DSE

11.24 In contrast to the six metre fuel break exemption, this exemption is restricted to fuel breaks constructed by public authorities. While it is not restricted on its face to public land, it is unlikely that a private land owner would agree to permit construction of a 40 metre wide fuel break on their land.

11.25 To make use of this exemption, the fuel break must be constructed in accordance with a ‘strategic fuel break plan’ which has been approved by the Secretary of the DSE. While the exemption is available to councils and VicRoads, it appears the DSE is the only public authority which has relied on this exemption.

11.26 Councils have not been active in proposing or attempting to devise strategic fuel break plans for approval under the exemption. It was put specifically to Mr Spence that councils might work with the CFA and the DSE to devise a sound plan in relation...
to strategic fuel breaks and seek approval for the same from the Secretary to the DSE. Mr Spence said this was ‘worth a try’.357

11.27 The 40 metres exemption has been used by the DSE in limited circumstances, to construct strategic fuel breaks near water catchments and in the Otways.358 There have been two DSE strategic fuel break management plans approved by the Secretary; the work under those plans commenced during the fires of 2006 and some of it is not yet complete.359 None of the fuel breaks made in pursuance of those plans are wider than 40 metres.360 Though not required on the face of the exemption, the DSE has provided offsets in respect of native vegetation affected by the construction of the breaks.361

11.28 In addition, various undertakings in relation to the manner in which the works will be conducted have been supplied to the DEWHA in order to manage anticipated impact on some species which may be affected by the works (see Section 6 above).

11.29 Members of the community may be surprised to learn that Victoria’s strategic fuel breaks network is only in its nascent stages. The existing strategic breaks are depicted on a map supplied by Mr Fogarty.362

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357 Spence T15687:7–T15687:12
358 Dripps T15587:15–T15587:30
359 Dripps T15587:7–T15587:19
360 Dripps T15587:25–T15587:30
361 Dripps T15624:29–T15625:4; Fogarty T15853:11–T15853:31
362 Exhibit 761- Statement of Fogarty, Annexure 2 (DSE.HDD.0052.1897); Fogarty T15851:10–T15851:21
11.30 In light of the small number of fuel breaks depicted on this map, Mr Fogarty was asked what had happened to ‘the rest of the State?’ He responded that the catchments were seen as ‘being of high priority’ and those new approaches were being modelled and trialled based on the initial work in the Otways. Mr Fogarty confirmed that no other plans seeking approval for strategic networks of fuel breaks have yet been submitted to the Secretary. Mr Fogarty said that the approach adopted has been to ‘address all of the policy and practical issues of working in these pre-existing difficult environments’ prior to proceeding further. He said a ‘detailed stock take’ of other parts of the state had not yet been done. He suggested there was still a need to do more modelling and determine ‘where the cost benefits lie’.

11.31 It is submitted that this slow progress in planning and constructing strategic fuel breaks in Victoria is inexplicable, particularly in circumstances where the science of fuel breaks has been understood for some time, and an increase in the network was specifically called for in 2007 and 2008.

40 metre exemption: use by councils

11.32 After the February 2009 fires, the DSE took steps, purportedly in reliance on this exemption, to encourage councils to submit ‘local strategic fuel break plans’. The DSE prepared a pro forma agreement in January 2010 which it has offered to councils. It was suggested in the statement of Ms Dripps that this agreement is intended to assist councils to carry out fire protection works. However, it emerged in the evidence that the ‘offer’ recently made to councils in fact offers them less than what they are entitled to by the fire protection exemption in clause 52.17-6 of the VPPs.

11.33 First, the proposed agreement suggests that councils may submit something called a ‘Local Strategic Fuelbreak Plan’ for approval by the Secretary to the DSE. The attached documentation asserts that plans which seek fuelbreaks wider than 20 metres are unlikely to be approved unless ‘exceptional circumstances’ can be demonstrated. This qualification is not present on the face of the 40 metre fuel break exemption in clause 52.17-6 of the VPP.

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363 Fogarty T15851:22–T15852:14
364 Fogarty T15854:22–T15855:1
365 Fogarty T15855:2–T15855:6
366 Fogarty T15855:23–T15855:27
367 Fogarty T15855:28–T15856:7
368 Exhibit 749 – Statement of Dripps, Attachment 8 (DSE.HDD.0142.0037)
369 Exhibit 749 – Statement of Dripps, Attachment 8 (DSE.HDD.0142.0037) at 0039
11.34 Ms Dripps suggested that this approach had been taken because she had been advised by Mr Fogarty and his colleagues what is ‘necessary to enable the protection of particular assets. So this measurement is based on his advice.’\textsuperscript{370} Ms Dripps suggested that the ‘20 metre’ concept had been hit upon because she had been advised ‘by fire experts including Mr Fogarty’ that the need for a fuelbreak to be in excess of 20 metres would be exceptional including ‘in dense forest’. Thus, she suggested, it would be ‘exceptional’ if such a need existed ‘around a township that was to be protected, but there will be some’.\textsuperscript{371}

11.35 Ms Dripps insisted that her advice from Mr Fogarty and his colleagues is that the fuel breaks may retain ‘canopy cover’ and ‘older trees’ along the break. She declined to comment on the impact of radiant heat on a firefighter attempting to use a fuel break in which tree canopy cover and ‘old trees’ in the break have been retained.\textsuperscript{372}

11.36 In terms of what might constitute ‘exceptional circumstances’ sufficient to support a council’s plan to construct fuel breaks wider than 20 metres, Ms Dripps said the DSE had not yet turned its mind to this matter, as the Department has not yet been approached by councils to consider such plans.\textsuperscript{373}

11.37 It was put squarely to Ms Dripps by counsel for the MAV councils would be better off avoiding the application of DSE’s arbitrary 20 metre rule, and applying directly under the ‘up to 40 metres’ exemption and seeking to have their application judged on ‘its merits’. Ms Dripps suggested that if councils were left to apply under the exemption ‘at large’, the following would occur: :

...[If you only put a maximum figure on it, then most of the plans would suggest a fuelbreak of that size, where it is neither necessary for fire protection purposes nor desirable from a biodiversity impact point of view.\textsuperscript{374}

11.38 It is submitted that there is no basis for Ms Dripps’ apparent assumption that responsible road authorities or councils might submit plans seeking construction of fuel breaks wider than is ‘necessary for fire protection purposes’. It ought to be assumed rather that such plans will be prepared on the basis of sound information in relation to fire behaviour, fire risk and the need for asset protection in the region in question.

11.39 There is a further oddity concerning the agreement proffered by the DSE to councils. The agreement asserts that offsets will be required, in so far as any fuel break is

\textsuperscript{370} Dripps T15592:6–T15592:15
\textsuperscript{371} Dripps T15614:4–T15614:15
\textsuperscript{372} Dripps T15626:5–T15626:24
\textsuperscript{373} Dripps T15592:16–T15592:31
\textsuperscript{374} Dripps T15614:21–T15614:26
located on public land. The exemption does not require offsets. This was put to Ms Dripps and she replied:

My opinion as the executive director of biodiversity and ecosystem services is that offsets ought to be provided. However, there are circumstances in which offsets are not provided and if the government were to make a decision that they weren’t to be required for those things, then clearly I would implement it.

Ms Dripps confirmed that councils would need to provide the offset within the same bioregion as where the loss occurs. This is apparently being insisted upon despite the fact that offsets are not required under the ‘40 metres wide’ fuel break exemption in clause 52.17-6 itself. This was explored further with Ms Dripps:

Doyle: What I’m getting at is a strategic fuelbreak, if it is ringing a town, could give rise to a very high requirement in terms of offset if trees are being cleared for, say, 20 metres?

Dripps: The offsets are required to cater for the fact that the vegetation they are intended to offset would be state forest or national park which has been protected for a particular reason. So it would be my expectation that offsets would be provided in that instance.

Doyle: But you appreciate obviously that a strategic fuelbreak by definition is sought to be made to protect another very important asset, namely the townsfolk within the circle. So does that not override the need to provide offsets?

Dripps: The usual situation that we find ourselves in is that the more substantive biodiversity impacts can be avoided by carefully choosing where the fuelbreaks are placed, and that includes in the case of the strategic fuelbreaks which have been put around Melbourne’s water catchments.

Ms Dripps confirmed that when DSE considers whether offsets will be required the amount of offset required is determined without regard to bushfire prevention which might be achieved by the clearing; the sole criterion apparently is ‘the conservation significance of the vegetation removed’. She said

I would suggest that it is still necessary as it is my experience in the construction of DSE’s fuelbreaks that the efficacy is not impacted by keeping old tall trees within the fuelbreaks as long as vehicles can get through them to do the work that they’re intended to do. And as an alternative to an airstrip-type fuelbreak, in fact the more variegated ones can be more effective. So I would suggest that, yes, it is necessary.
11.42 The agreement offered by the DSE has not been popular. At the time of the hearings, only two councils had responded to the DSE’s offer – and both indicated they did not intend to submit Local Strategic Fuel Break plans. It appears the MAV was not consulted prior to the offer being made by the DSE to councils. Mr Spence said that councils had expressed nervousness about the DSE proposal, because of the suggestion that offsets are required.

11.43 Mr Fogarty indicated that in relation to the ‘20 metres unless exceptional circumstances’ offer he had provided advice on the matter to the Biodiversity and Ecosystems Services section of the DSE, but ‘I guess it is fair to say that in the context of that advice to other public agencies it is not entirely consistent with what I have had to say on this matter’. He said that it ‘would have… improved the outcome if we [ie the Land and Fire Division] had had input into that’ and that the information was ‘a little bit more absolute than I would have liked to have seen it being used’.

11.44 He went on to explain that the appropriate width of a break depends on the ‘sort of environment’ and gave some examples of circumstances where a 20 metre break would be appropriate, and others where a 30 to 40 metre range would be more appropriate. This tends to underscore the fact that an arbitrary ceiling of 20 metres on breaks is unlikely to deliver the best outcome.

11.45 It is submitted that DSE has no basis on which to restrict councils to the scope of the agreement proffered in relation to local strategic fuel break networks. Councils ought to be permitted to make full use of the exemption provided in clause 52.17-6.

11.46 There is clearly scope for greater use to be made of the ‘40 metre fuel break’ exemption in clause 52.17-6 of the VPPs. Councils (with the assistance of the CFA and DSE) could develop sound plans for the creation of strategic fuel breaks near critical towns and assets. Further, if such a plan were devised having regard to the regime of fuel reduction burns planned for the region, one might have confidence that the plan would feature the most sensible location of fuel breaks in order to assist suppression efforts.

11.47 But this issue really highlights a more fundamental problem with the exemptions in Clause 52.17-6 of the VPPs in relation to fuel breaks: the reference to an arbitrary width takes the focus away from the purpose and utility of the breaks. The emphasis ought to rather be on enabling the preparation of the best plans for construction of

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382 Exhibit 749 – Statement of Dripps (WIT.3024.005.0287) [8]; Dripps T15593:1–T15593:5
383 Spence T15685:12–T15685:29
384 Spence T15686:1–T15686:15
385 Fogarty T15826:22–T15826:28
386 Fogarty T15829:27–T15829:29
387 Fogarty T15830:2–T15830:5
388 Fogarty T15827:1–T15828:17
fuel breaks, which will best complement the planned burning regime and improve chances of successful suppression.

12 FIREWOOD

12.1 The use of firewood as domestic fuel and its role in increasing risk of fire along roadsides has been the focus of speculation following the February 2009 fires.

Fuel

12.2 Although data in relation to domestic use of firewood is not comprehensive, it appears from a study commissioned by DSE in 2007 that the portion of firewood used by the public which comes from roadsides is about 2.4% of a total consumption of around 13,000 cubic metres a year.389

Important habitat

12.3 As has been discussed in detail above in Section 4, coarse woody debris, including fallen logs and tree hollows, may provide an important native habitat for some species. Victoria’s Firewood Strategy for Public Land Discussion Paper July 2009 notes that ‘Some roadside vegetation contains highly significant remnant ecological values and roadsides can act as wildlife corridors.’390

Fire behaviour

12.4 The most significant element in the debate concerning firewood found on roadsides is that firewood (principally in the form of coarse wooden debris and fallen logs) does not possess the capacity to dramatically affect fire behaviour on roadsides, nor does it pose the greatest risk in terms of fuel load along roadsides.

12.5 Mr Miezis noted that the research by the DSE indicated that firewood collected on roadsides tended to be larger than 10 centimetres. Fire behaviour is primarily determined by the fine fuels which are less than six centimetres in size. Thus, the removal of firewood or ‘coarse woody debris’ does not have a significant impact on rate of spread or flame height.391 Mr Strickland confirmed that heavy logs do not usually ‘carry’ fire. While they may pose issues in terms of suppression and mopping

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389 Miezis T15663:27–T15664:2
390 Exhibit 753 – Statement of Miezis, Annexure 6 (DSE.HDD.0052.1169) at 1180, 1183–1185; Miezis T15665:8–T15665:27
391 Miezis T15664:25–T15664:7
up (due to their tendency to smoulder) they are not as strong a determinant of fire behaviour as fuels with a diameter of less than 6mm.\textsuperscript{392}

### No right to firewood

12.6 First, it must be understood that all forest produce in Victoria is the property of the State (Crown).\textsuperscript{393} Thus, there is no freestanding entitlement in any member of the public to take firewood – either from State forest or other public land, or from roadsides.\textsuperscript{394}

12.7 As with many policies, the approach in Victoria to firewood found on roadsides can be divided into the policy pre the February 2009 fires, and thereafter.

12.8 Prior to the fires, the position was that firewood could only be collected from public land and roads under the management of the DSE pursuant to a domestic firewood permit issued by the Secretary to the DSE under section 52 of the \textit{Forests Act 1958} (Vic).

12.9 Firewood could only be collected from roadsides where authorisation has been obtained from the relevant road manager (ie council or VicRoads). If such an authorisation had been granted by the road manager, then the Secretary to the DSE might issue a domestic firewood permit.\textsuperscript{395} In practice, this generally occurred by means of the road manager issuing a letter of authority to an individual, which is then presented by the individual to DSE in support of an application for a permit.

12.10 Prior to the fires, councils had a range of approaches to the collection of firewood found on roadsides managed by them.\textsuperscript{396} Some simply referred applicants to the DSE; some had a policy of not issuing any such permits; others granted permits following an assessment; some councils had a policy of not granting permits in respect of roadsides in areas with high conservation values; and others enacted local laws in order to regulate the situation.\textsuperscript{397}
12.11 The DSE was already taking steps prior to the fires to revise the State’s policy in relation to firewood. This culminated in the release of a discussion paper: ‘Victoria’s Firewood Strategy for Public Land in July 2009’.398

12.12 In September 2009, a new firewood policy was announced.399 It relaxes the requirements for members of the public to take firewood from the sides of roads.400 While the policy change was announced as part of a suite of changes directed at reducing fire risk from fuel (eg including the 10/30 right), it is likely to have an almost negligible impact on fuel loads on roadsides.

12.13 The new policy is set out in a publication titled ‘Making Victoria Fire Ready – Preparing for Bushfire’.401 It provides that firewood can now be removed from certain roadsides without a permit during ‘firewood collection periods’. The periods will be advertised in local papers and will occur in the two weeks prior to planned fuel reduction burns. Outside the advertised periods, permission must still be obtained.402

12.14 Mr Miezis said the new policy is regarded as ‘subservient’ to the primary objective of managing fuels on roadsides. 403 But the new policy only applies to areas in which planned burns are to be conducted. It is submitted that this not only significantly limits the roads in relation to which the new policy applies, but also underscores the minimal additional value offered in terms of reducing fuel levels. That is, in circumstances where the area in question is going to be the subject of a planned burn, the permission granted to the public to take wood from the area appears rather to be directed at avoiding waste (ie the wood will be burnt in any event), rather than at any appreciable benefit in relation to fuel reduction.

Limited importance

12.15 In the end, there are a number of key considerations:

a) There is no freestanding right in members of the public to take firewood from roadsides.

b) Roadside firewood does not constitute a significant portion of Victoria’s domestic fuel.

c) Coarse woody debris, including fallen logs and tree hollows, provide an important native habitat for some species. For this reason, where they are...

398 Exhibit 753 – Statement of Miezis (WIT.3024.004.0315) [22]–[30]; Annexure 6 (DSE.HDD.0052.1169); Miezis T15666:21–T15666:29
399 Miezis T15667:22–T15667:24
400 Exhibit 753 – Statement of Miezis, Annexure 5 (DSE.HDD.0052.1576) at 1576
401 Exhibit 753 – Statement of Miezis, Annexure 5 (DSE.HDD.0052.1576)
402 Miezis T15667:12–T15667:24; T15668:8–T15668:30
403 Miezis T15667:26–T15667:31; T15669:18–T15669:28
found on roadsides they may contribute to the preservation of wildlife corridors.

d) Fallen trees and logs are of less importance as a determinant of fire behaviour on roadsides than other fuels found on roadsides like grass and leaf litter.

12.16 In light of the above, it is unlikely that firewood on roadsides is of much importance in any consideration of the fire risk posed by roadsides. Mr Miezis appeared to accept that in reality the utility of a policy which permits member of the public to collect wood before it is burnt actually lies in avoiding waste, more than anything.404

13 ROADSIDE VEGETATION AND FIRE BEHAVIOUR

13.1 Roger Strickland is an endorsed Fire Investigator, Senior Wildfire Instructor, Level 3 Planning Officer and Near Miss Incident Investigator employed by the CFA since 2001. Prior to joining the CFA, he worked with a number of agencies including Parks Victoria and the Department of Sustainability and Environment.405

13.2 Mr Strickland was asked by the Royal Commission to provide expert advice in relation to nominated locations where roads and roadsides may have been relevant to the fires that burned on 7 February 2009. He prepared a detailed report. His methodology involved reviewing fire investigation reports, fire progression reports, maps and photographs of relevant locations and the witness statements of Fire Investigators, Stephen Keating and Fabian Crowe.406 He was assisted by another CFA Wildfire Instructor, Peter Cecil, in relation to some locations. Where possible, he and Mr Cecil conducted field investigations, phone and face-to-face interviews with eyewitnesses.407

404 Miezis T15670:9–T15670:14
405 Mr Strickland has also worked as a sessional instructor at Holmesglen TAFE, delivering courses on wildfire behaviour and wildfire suppression. He is currently completing the final stages of his training to become a Fire Behaviour Analyst for the CFA, and he is rostered as a trainee Fire Behaviour Analyst at the IECC for the 2009-2010 fire season. Following the 7 February fires, Mr Strickland was seconded to the Bushfire CRC to conduct Fire Spread Mapping in relation to three of the fires that burned on 7 February. Mr Strickland holds various TAFE and University qualifications, and has completed numerous fire related courses, including wildfire-firefighter, Crew Leader-wildfire, Sector Commander-wildfire, Safety Advisor-wildfire and prescribed burn planning. He has also participated in national and international deployments. Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [1], [3], [9]–[12], [16.4], [21]–[24]; Strickland T15773:1–T15774:10
406 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [26.1]–[26.3], [26.5], [26.7]; Strickland T15775:10–T15775:18
407 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [26.4], [26.6]; Strickland T15775:19–T15776:1
13.3 Mr Strickland was asked to consider the suggestion that vegetation on certain roadsides in fire affected areas may have acted as a ‘fire corridor’, ‘wick’ or ‘fuse’ – being suggestions made repeatedly in submissions from members of the public. He cautioned against use of such terms, noting that:

Once ignited, roadside vegetation will not invariably burn ‘like a fuse’, steadily and rapidly along the roadside, independent of the conditions. In general, this will only occur where the factors within the roadside vegetation that affect fire behaviour are different to that of the surrounding vegetation. A common example would be tall dry roadside grasses in a landscape of drought – affected eaten – out pasture lands. Fire intensities, flame length and spread rates in such roadside vegetation would be greater than in the pasture.408

13.4 Mr Strickland said members of the public may form the impression that roadside vegetation has a direct impact on fire behaviour, by reason of localised effects which may be apparent:

[B]ecause the vegetation is closer to people as they pass by, if it’s on fire they are going to feel a lot more heat. The same heat out in the wider landscape is not going to impact on people and firefighters as much, of course.409

13.5 He also stated:

Of course, observers are closer to that vegetation than any other, quite often. Hence, misperceptions can arise. But the bottom line is that the fire behaviour in that vegetation is influenced in exactly the same way as the fire behaviour in the wider landscape. … It is subject to the same three major factors, that is fuel, weather and topography, just the same as the wider landscape is.410

13.6 Mr Strickland was asked to comment on the relevance of spotting in the context of roadside vegetation. He noted that:

[O]ne might expect on first glance that a mineral earth fuelbreak as wide as a road might stop a fire and it would if it were not for the effect of spotting; that is, the fire throwing embers ahead of the fire, carried by the wind and crossing the fuelbreak in that way, so spotting is a major problem. Once the fire starts to spot, there is no normal road or normal width road that’s going to stop it, really.411

13.7 In this context Mr Strickland noted that different roadside fuels behave in different ways. Grass fuels are likely to spot the least or shortest distances, typically between 10 to 100 metres.412 In contrast, shrubs and trees will give rise to a flame height about the height of the shrubbery or the trees in question.413 Trees pose a particular risk of spotting:

408 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [29]
409 Strickland T15776:27–T15776:31
410 Strickland T15776:13–T15776:21
411 Strickland T15777:4–T15777:11
412 Strickland T15777:16–T15777:23; Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [27.4]
413 Strickland T15778:19–T15778:24
If the bark is flammable and will carry fire up the trunk, you are straight away getting vertical flame at a much greater height, which is of course an issue for greater radiation and heat load on firefighters trying to deal with it.414

13.8 In particular, Mr Strickland noted, some species of trees produce more problematic bark — such as stringybarks, which produce fine bark, which persists up the trunk and out to the crown, being capable of carrying fire up to the crown quite readily.415

13.9 The production of embers by trees pose a particular threat, as the release of burning embers from the upper branches of a tree might float ‘tens to hundreds of metres and, in extreme conditions like February 7th, kilometres’.416

13.10 Mr Strickland confirmed that the slashing or mowing of grass physically reduces the ‘release height’ of the embers.417 Even in circumstances where slashed grass is left on site, it assists in affecting fire behaviour because it changes the ‘arrangement of the fuel’, by leaving it in a more compact manner. He said, ‘you have a more of a smouldering burn rather than a blazing burn. Standing grass burns the hottest and the fastest and burns with a greater flame height’.418

13.11 Mr Strickland was asked about the role fallen logs on roadsides might play in any contribution to fire behaviour. He explained that heavy fuels like logs do not:

  Carry the fire. They give the suppression and mop-up issues, in that they smoulder for very long periods of time.... [t]hey take some time to ignite, but once they do ignite they will smoulder, whereas the fine fuels, and the rule of thumb is anything less than about a biro or 6 millimetres thick, ignite quickly.419

13.12 The comments made by Mr Strickland in relation to the different categories of roadside fuels are important. It is clear that it is possible to ‘rank’ roadside fuels in terms of the manner in which they contribute to fire spread. Mr Strickland was asked whether, if it were necessary to do so for ‘reasons of practicalities or resources’ to prioritise fuels on roadsides one proposed to reduce, which fuels would it be best to focus on. He said ‘[t]he fine litter fuels first and foremost’.420 He went on to explain:

[T]here has been a scientific project being run funded by multiple fire agencies recently for some years called Project Vesta, which has discovered that not only is it the surface litter fuels that carry the fire, there is another layer called near surface fuels, .... that is very important in determining the rate of spread of fire as well. That’s

414 T15778:24–T15778:28
415 Strickland T15778:31–T15779:7
416 Strickland T15780:4–T15780:10; Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [27.8]
417 Strickland T15777:30–T15778:3
418 Strickland T15778:7–T15778:14
419 Strickland T15800:11–T15800:17
420 Strickland T15800:23–T15800:28
your grass layer. So keeping that to a low height would be critical in reducing fire spread.421

13.13 The presence of standing trees along roadsides and their importance in relation to fire risk depends, said Mr Strickland, on what species they are; in this context he noted that stringybark is highly flammable, while redgums have relatively non flammable bark.422

13.14 Mr Strickland explained that in some circumstances, public roads might be useful to firefighters in aiding suppression efforts. However, the utility of roads which might be used by firefighters is likely to be compromised in severe conditions.423 He said that the position of any road vis a vis the fire front also has an impact on its effectiveness in aiding suppression efforts. Mr Strickland noted that the western flank of a fire (following a wind change) tends to be, ‘more a backing fire, that is the flames are leaning away from the direction of spread’. Backing fires are more benign to firefighters, as the winds are carrying the spots into the burnt area. As a result, roads on the western flank of a fire tend to be more useful than roads on the eastern flank.424

13.15 The angle of the road compared with the direction of fire spread is also important. In circumstances where a fire is approaching a road at right angles, the spotting effect tends to be restricted to a shorter length of the road, with the result that firefighters may be more easily able to deal with the fire from that point.425

13.16 Mr Strickland considered a number of particular roads for which he had been asked to investigate the role of roadside vegetation with respect to the spread of the fire. Mr Strickland found that only in a very small number of instances did roadside vegetation contribute to fire behaviour.426 In short, Mr Strickland found that roadside vegetation proximate to roads in fire affected areas in some limited instances had the following impact:

a) It caused a temporary or localised change in fire behaviour, principally in the form of increased flame height and/or spotting. This localised effect would, if witnessed at the time, been likely to have the appearance of changing the fire’s rate of spread in the vicinity of the roadside.427 He noted that roadside vegetation may have precipitated, ‘a shower of embers across the road,
Submissions of Counsel Assisting – Roadside clearing

allowing the fire to spread across the road and perhaps even giving the fire a momentary increased rate of spread by virtue of that spotting. 428

b) Where roadside vegetation in question was a heavier fuel load, in more continuous form than the surrounding vegetation (for example drought affected pastures with lower and less continuous fuels) there may have been faster movement of the fire in the roadside fuels than in the pasture lands in that area. 429

c) In a very small number of cases, roadside vegetation contributed to increased lateral spread of the fire for a period of time. 430

13.17 Significantly, Mr Strickland did not identify any instance where roadside vegetation changed the overall shape of the fire or the overall forward rate of spread of the fire. Further, he explained that the severe conditions on 7 February 2009 had the effect that the impact of roadside vegetation on fire behaviour was negligible:

_The weather on 7 February was so extreme that in most cases roadside vegetation played little to no part in the overall spread of the fire, and this can be seen by the shape of the fire spread on the maps, for the most part._ 431

13.18 He stated further:

_During the high intensity fire runs of January and February 2009, because of mass spotting occurring many kilometres downwind of the fires, the presence or absence of any fuelbreak, such as a track or road at or near to 90 degrees to the direction of fire travel, and the presence or absence of vegetation beside these particular fuelbreaks, tracks or roads, would have been largely inconsequential to the overall spread of the fire._

...  

_The impact of roadside vegetation on the fires which burned on 7 February 2009 was therefore largely limited to road safety, and compromise of access or egress due to fire intensity and debris falling on the road._ 433

13.19 Mr Strickland said that if the fire conditions had been less severe, then fuel on roadsides would have played a ‘greater role’. In more mild conditions, he said, ‘the roadside vegetation would more come into play in that sense’. 434

13.20 Mr Strickland provided the following examples of instances where roadside vegetation contributed to the spread, speed or intensity of a fire. He noted that this

428 Strickland T15784:18–T15784:23
429 Strickland T15784:31–T15785:13
430 Strickland T15785:14–T15785:24
431 Strickland T15784:14–T15784:26
432 Strickland T15786:17–T15786:21
433 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [27.14]–[27.16]
434 Strickland T15801:16–T15801:27
usually involved the roadside vegetation burning more intensely than surrounding fuels – and usually involved a contribution only to lateral, not forward spread.\footnote{Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [31]}

<table>
<thead>
<tr>
<th>Location</th>
<th>Surrounding Circumstances</th>
<th>Findings</th>
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</thead>
</table>
| Kilmore East Fire | • Fire movement influenced by strong southerly wind  
• Pastures surrounding road were eaten-out  
• Location of section of road within broad valley further increased wind channelling  
• Crews faced difficulties gaining access given nature of terrain | • Spotting from roadside trees likely to have exacerbated spread of fire (as did local topography and wind channelling caused by location in Sunday Creek valley and road cuttings which concentrate the southerly wind flow).  
• Also, possible difficulties with suppression in the environs of the freeway  
• Headfire crossing the road: ‘I formed the view that the roadside vegetation ... would have played very little part or had very little effect in whether the fire had crossed or not. ... that fire would have crossed the Hume freeway whether it had been basically all concrete or not, because of the mass spotting and the distance of that spotting coming out of that fire’.\footnote{Strickland T15792:23–T15793:1}  
• Lateral spread after wind change later in day: ‘The roadside fuels being slightly taller and more continuous and heavier than the pasture either side, that combined with the southerly wind influence helped push the fire up the road’.\footnote{Strickland T15789:17–T15789:20; T15793:6–T15793:12; Exhibit 759 – Statement of Strickland, and see map at Annexure 4 (WIT.3004.034.0117)} |

\footnote{Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [32.1]–[32.5]; Annexure 3 (WIT.3004.034.0073) at 0075-0077}

\footnote{Strickland T15792:23–T15793:1}

\footnote{Strickland T15789:17–T15789:20; T15793:6–T15793:12; Exhibit 759 – Statement of Strickland, and see map at Annexure 4 (WIT.3004.034.0117)}
### Bunyip Fire

**Labertouche Road between Tarago River and Kydd Road**

- Roadside vegetation on western verge contained mix of pine trees, shrubs and tall grass. Fine fuels arranged vertically to the height of tree crowns.
- Surrounding pasture was short grass.
- Flame on western side of road removed most of crowns from line of trees on eastern side of road.
- Increased flame height in roadside vegetation due to differences in nature and arrangement of the two different types of vegetation.
- Roadside vegetation increased spotting distance momentarily.
- The roadside trees gave rise to increased flame height and resulted in a crown fire. However, it had no impact on overall path or rate of spread of the fire.\(^\text{440}\) The roadside vegetation may have 'given it a momentary surge forward ... but that spotfire was always going to move across that bit of landscape with that shape anyway'.\(^\text{441}\)
- Roadside vegetation contributed to localised boost to forward rate of spread of fire but little effect on lateral spread.
- No wick or fuse effect demonstrated in terms of lateral fire spread, as shortly after crossing the road, the fire slowed along a line parallel with the creek, due to higher fuel moisture and shelter from wind in the creek environs.

**Labertouche North Road adjacent to the Hall**

- Roadside vegetation on western verge consisted of thicket of native shrubs and young trees.
- Roadside vegetation created a flame length at least 2-3 times the height of the vegetation. Crew abandoned attempts to protect telephone exchange.

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\(^{439}\) Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [32.6]–[32.8]; Annexure 3 (WIT.3004.034.0073) at 0078, 0079; Annexure 5 (WIT.3004.034.0118); Annexure 6 (WIT.3004.034.0120)

\(^{440}\) Strickland T15794:3–T15795:1; Exhibit 759 – Statement of Strickland, Annexure 6 (WIT.3004.034.0120)

\(^{441}\) Strickland T15796:5–T15796:9

\(^{442}\) Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [48.1]–[48.4]; Annexure 3 (WIT.3004.034.0073) at 0114
13.21 Mr Strickland was asked to consider whether there were instances where roadside vegetation acted to retard the spread or speed of fire or where vegetation acted as a wind break. He found three such examples, which are set out below:

<table>
<thead>
<tr>
<th>Location</th>
<th>Surrounding Circumstances</th>
<th>Findings</th>
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| Kilmore East Fire | • Runs parallel to North Eastern Railway line between Kilmore East and the Hume Freeway near Wandong.  
• Railway lies in cuttings or is built up on a formation  
• Effect of road as fuel break | • The road itself, rather than roadside vegetation, appeared to have acted as fuelbreak acting as windbreak. This effect was ‘doubled by the effect of the railway line, which lies alternately in cuttings or is |

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443 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [32.9]–[32.12]; Annexure 7 (WIT.3004.034.0123); Annexure 8 (WIT.3004.034.0124) at 0125; Annexure 3 (WIT.3004.034.0073) at 0099

444 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [64.1]–[64.3]; Annexure 3 (WIT.3004.034.0073) at 0115; Annexure 20 (WIT.3004.034.0149) at 0150-0152

445 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [35.1]–[35.7]; see also map at Annexure 9 (WIT.3004.034.0126) at 0127
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<tr>
<th>Location</th>
<th>Surrounding Circumstances</th>
<th>Findings</th>
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|                                | doubled by effect of railway line  
• Fire jumped road in a couple of places but suppressed as result of active presence of strike teams | built up on a formation’.  
• The road provided fire-fighter access to western flank of fire  
• Noted that as the fire impacted O’Grady’s road, the wind direction would have been generally parallel with the road, having the effect that flames would have been bent away from the road |
| Bunyip Fire                    |                                                                                           |                                                                                                                                          |
| Labertouche North Road, Labertouche | • Row of oak trees lined the road                                                           | • The oak trees provided very high moisture content which acted as a water jacket radiation barrier. The placement of the trees also acted to provide a wind break. |

13.22 On the question of oak trees along the roadside in Labertouche acting as a windbreak, Mr Strickland explained that the ‘windbreak’ effect was the combined product of the high moisture content of oak leaves and the arrangement of the trees in a row. The issue of whether there are certain species of trees capable of acting as windbreaks was also raised in evidence by Dr Mitchell (who spoke to a submission filed by the BEAM Mitchell Environmental Group Incorporated). He called for further research to be done to explore the species of trees and the sorts of landscape in which trees might be used to moderate wind and act as a windbreak.

13.23 In relation to a number of other roads, Mr Strickland was asked to investigate the allegation that the roadside vegetation had caused the ‘fuse’ effect. He provided the following detailed analyses:

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446 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [35.6] – [35.7]; Annexure 3 (WIT.3004.034.0073) at 0080–0081
447 Exhibit 759 – Statement of Strickland, Annexure 3 (WIT.3004.034.0073) at 0080-0081, Strickland T15799:4–T15799:27
448 Strickland T15799:19–T15799:27
449 Mitchell T15653:2–T15654:16
<table>
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<tr>
<th>Location</th>
<th>Surrounding Circumstances</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kilmore East</td>
<td></td>
<td>• Insufficient detail regarding roadside vegetation to make comment</td>
</tr>
<tr>
<td>Fire</td>
<td></td>
<td>• Substantial spotting from grass fire and trees in pasture would have easily crossed the road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Position of road within gully system likely to have influenced direction and spread of fire</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Roadside vegetation itself did not contribute in any substantial way to the spread of the fire at the point it crossed Saunders Road</td>
</tr>
<tr>
<td>Eagles Nest</td>
<td>• Between fire’s point of origin and road crossing were clumps of stringy-bark and smooth bark trees which have propensity to produce medium to long distance spotting</td>
<td>• Hot, dry northerly winds</td>
</tr>
<tr>
<td>Road450</td>
<td>• Substantial spotting from grass fire and trees in pasture would have easily crossed the road</td>
<td></td>
</tr>
<tr>
<td>Saunders</td>
<td>• Position of road within gully system likely to have influenced direction and spread of fire</td>
<td></td>
</tr>
<tr>
<td>Road451</td>
<td>• Roadside vegetation itself did not contribute in any substantial way to the spread of the fire at the point it crossed Saunders Road</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Substantial spotting from grass fire and trees in pasture would have easily crossed the road</td>
<td></td>
</tr>
<tr>
<td>Clonbinane</td>
<td>• Both sides of road has mature eucalypts, understorey shrubs and dry grasses</td>
<td>• During headfire – fire of higher intensity in the roadside vegetation than in pasturelands owing to greater amount of fine fuels (surface litter, elevated and bark fuels). As a result, fire would have moved unevenly ‘more as tongues of fire rather than a broad fire front’. This more intense fire behaviour on the roadside may have contributed to perception that vegetation acting as ‘fuse’</td>
</tr>
<tr>
<td>Road452</td>
<td>• Surrounding vegetation was grazed to eaten-out pasture with pockets of trees and native vegetation</td>
<td>• After the wind change: the fire commenced to move at right angles to road. During this phase, roadside vegetation contributed no more to spread than any other pockets of trees/scrub on landscape</td>
</tr>
<tr>
<td></td>
<td>• During headfire – fire of higher intensity in the roadside vegetation than in pasturelands owing to greater amount of fine fuels (surface litter, elevated and bark fuels). As a result, fire would have moved unevenly ‘more as tongues of fire rather than a broad fire front’. This more intense fire behaviour on the roadside may have contributed to perception that vegetation acting as ‘fuse’</td>
<td></td>
</tr>
<tr>
<td>Whittlesea-</td>
<td>• Fire behaviour intense and confused in this area</td>
<td>• Ridge had effect that large fire was throwing mass firebrands under the influence of a north-westerly wind, resulting in very intense headfire moving rapidly south–east up the north</td>
</tr>
<tr>
<td>Yea Road53</td>
<td>• The alignment of much of the road is on a pronounced ridge running south west to north east</td>
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450 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [37.1]
451 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [37.2]–[37.7]; Annexure 10 (WIT.3004.034.0129)
452 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [37.9]–[37.12]; Annexure 11 (WIT.3004.034.0131)
453 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [37.13]–[37.16]; Annexure 3 (WIT.3004.034.0073) at 0094
face of the ridge towards the road, showering firebrands across the ridgetop and road onto the opposite, more sheltered, southern facing ridge. This resulted in numerous spot fires, which ignited on the southern face of the ridge and then were drawn back towards and into the main fire.

- Roadside vegetation itself would have had virtually no influence on the spread of the fire given intense conditions

### Hume Highway near Heathcote Junction

- Fire had been burning in pine and blue-gum plantations when crossed into pasture in an area bounded by Hume Freeway, O’Grady’s Road and The Dene
- There were high intensity fuels in the plantation logging slash nearby and pockets of native vegetation on the freeway
- High-intensity fire behaviour
- Eye witness account that fire seemed to ‘surge forwards’ like a fireball just before crossing the freeway
- In the conditions, the fire would have been producing mass spotting from the plantation fuels which would easily have crossed freeway regardless of the roadside vegetation

### Horsham Fire

#### Remlaw Road

- Gravel road 8m wide flanked by verges between 7.4-44m wide
- 1m high grass in verges
- Easy for headfire to cross the mineral earth carriageway under the extremely hot, dry and windy conditions

#### Horsham-Lubeck Road

- Pasture grass was eaten-out at time of fire, wind had dropped at time of fire and verge was only a few metre wide
- Fire intensity in roadside vegetation on south side of road limited. This enabled direct attack to stop fire just north of the road.

#### Western Highway at fire crossing point

- Fire moved from southern side to northern side of highway
- Southern side of highway lined with gum-barked eucalypts
- Northern side had dry water channel with limited number of crossing points running parallel with highway
- Strong winds and difficult terrain
- Vegetation on south side of highway aided fire crossing because of spotting
- Channel on north side of highway no barrier to fire and impassable for fire appliances which hampered suppression efforts

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454 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [37.17]–[37.20]; Annexure 3 (WIT.3004.034.0073) at 0095–0096
455 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [39.1]–[39.3]; Annexure 3 (WIT.3004.034.0073) at 0097; See also map at Annexure 7 (WIT.3004.034.0123)
456 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [39.4]–[39.6]
457 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [39.7]–[39.8]; Annexure 3 (WIT.3004.034.0073) at 0098–0099
### Princess Highway near point of origin

- Roadside vegetation was dry straw-yellow fully cured grass almost at edge of asphalt
- Origin of fire was dry grass on southern road verge
- Roadside vegetation at this location, irrespective of its height, would have allowed the fire to ignite but otherwise played no part in affecting speed or spread of the fire

### Weerite Fire

- Sealed road 6m wide with grassy verge of 4m either side (fully cured) enclosed by two stone walls
- Grass had heavy seed heads which are prone to spotting
- Gum-barked eucalypts along one section of road
- Suppression of fire resulted from combined effect of stone walls, mineral fuel break, sealed road, suppression activity on scene and fact that fire impacted road at 45 degree angle
- That the road was breached in 3 areas attributed to extremity of weather, porosity of stone walls, long distance spotting eucalypts along section of road, and height of the grass

### Churchill Fire

- West side of road was cleared paddocks of dry grass
- East side was state forest with mixed species of eucalypts, mainly yellow stringybark with peppermint and some gums
- Road verge contained immature mixed eucalyptus species and grass
- Very high winds reported by eyewitness – lifting trees out of ground, rather than simply being blown over
- Mass spotting out of grassfire
- Fire moved west to east side of road
- Roadside vegetation did contribute to forward spread of fire by increasing both the flame height and the spotting, but did not contribute to lateral fire spread

### Redesdale

- None of the roads in the area played a role in halting the fire edge (achieved by

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458 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [41.1]–[41.3]; Annexure 3 (WIT.3004.034.0073) at 0100–0101
459 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [41.4]–[41.8]; Annexure 3 (WIT.3004.034.0073) at 0102–0105; See also map at Annexure 13 (WIT.3004.034.0135)
460 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [41.9]–[41.11]; Annexure 14 (WIT.3004.034.0137), see also map at Annexure 15 (WIT.3004.034.0138)
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redesdale fire</td>
<td>Unable to discover any information regarding effect of roadside vegetation. Road not involved in burnt area at any point.</td>
<td></td>
</tr>
<tr>
<td>Coliban Park Road</td>
<td>• Thick grassy verge either side of road compared to eaten-out pasture in surrounding grazing land</td>
<td>• Noted the receipt of an indication from CFA Region 2 Officer, Mr Cutting that in his opinion, roadside vegetation contributed to the fire spread due to the thick grassy verge either side of road compared to eaten-out pasture in surrounding grazing land</td>
</tr>
<tr>
<td>Siddles Road</td>
<td>• Extreme weather • Sealed road 5 metre wide with a 3 metre slashed fuel break at each road shoulder</td>
<td>• Road did not impede spread of fire in any way</td>
</tr>
<tr>
<td>Metcalfe-Redesdale Road</td>
<td>• Tall fully cured grass fuels and gum-barked eucalypts on either verge causing mass spotting • Phalaris up to one metre high beside eaten out pasture • West of road was eaten-out rocky pasture and forested gorges which caused multiple spot-fires</td>
<td>• Fire would have crossed the road without pause due to mass spotting</td>
</tr>
<tr>
<td>Kyneton-Heathcote Road</td>
<td>• Grassy verge about 11 metres from carriageway to fenceline; three and a half metre slash • Further 3 metres of one metre tall phalaris to the fenceline</td>
<td>• Type and amount of roadside vegetation would have resulted in an increase in flame height and spotting as fire moved out of eaten-out pasture into road reserve</td>
</tr>
<tr>
<td>Bendigo Fire</td>
<td>• Fire started at mouth of culvert running north under Bracewell Street in an area which would</td>
<td>• At origin – roadside vegetation did not contribute to speed, spread or intensity of this fire</td>
</tr>
<tr>
<td>Bracewell Street</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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461 Exhibit 759 – Statement of Strickland, see also map at Annexure 16 (WIT.3004.034.0141); Annexure 3 (WIT.3004.034.0073) at 0106
462 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [45.1]
463 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [45.2]-[45.4]; Annexure 3 (WIT.3004.034.0073) at 0107
464 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [45.5]-[45.9]; see also map at Annexure 16 (WIT.3004.034.0141); Annexure 3 (WIT.3004.034.0073) at 0108
465 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [45.7]-[45.9]; Annexure 3 (WIT.3004.034.0073) at 0109
### Submissions of Counsel Assisting – Roadside clearing

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
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</table>
| Pascoe Street        | - Area had been progressively fuel reduced over a number of years using planned burning; most recent burn was in 2008 (26 hectare burn)  
                      - Fire in fuel reduced area shows at worst scorched vegetation, and even areas which are green and untouched  
                      - Impact and spread of fire considerably reduced due to removal during the previous planned burn of the surface litter. Firebrands that landed were unable to ignite new surface fires due to lack of surface fine fuel  
                      - Conclusions about fuel reduction burning should not be drawn too hastily – noted that other areas which had also been fuel reduced (in 2000 and 2005) did burn  
                      - Fuel-reduced area will burn with reduced intensities and spotting behaviour for approximately 10 years                                                                                          |
| Coleraine Fire       |                                                                                                                                                                                                             |
| Glenelg Highway      | - At point where fire first crossed highway, there is an 8m wide asphalt carriageway; grassy verge on either side of carriageway (27m on south side and 5m on north side) – predominantly phalaris up to 1.5m with some shrubs and trees  
                      - Very severe conditions  
                      - Fire crowned in roadside trees  
                      - Embers from roadside grass easily blown across road and started spotfires in dry fuelbed.  
                      - Presence of trees on southern side increased spotting distance and assisted the spread of the fire.                                                                                             |

13.24 Mr Fogarty was asked also to consider roads relevant to the fires for which DSE was the control agency. He concluded that roadside vegetation was ‘largely

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467 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [46.1]–[46.3]; Annexure 3 (WIT.3004.034.0073) at 0110 and 0111
468 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [46.4]–[46.11]; see also map at Annexure 17 (WIT.3004.034.0144) at 0144-0155; Annexure 3 (WIT.3004.034.0073) at 0112
469 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [47.1]–[47.4]; see also map at Annexure 18 (WIT.3004.034.0146); Annexure 3 (WIT.3004.034.0073) at 0113
inconsequential with fires of the intensity of 7 February.

He reached the following conclusions:

a) Myrtleford –Yackandandah Road (Beechworth Fire): While there may have been some localised flaring and flaming around the roadside, it is extremely unlikely that roadside fuels changed the overall extent of the fire. Roadside vegetation was inconsequential with respect to the overall spread of the fire.

b) Labertouche Rd – Bunyip Fire: There was some minor lateral spread likely to be caused by the fire moving through the relatively drier fuels along the roadway (compared with the greener grass leading into the riparian reserve to the south of the road). Overall spread was not strongly influenced by roadside vegetation.

c) Redesdale Fire: The overall spread of the fire was ‘as expected’, and most fire control was achieved in pastures where firefighters could take advantage of lighter fuels. The roads in question had little impact, as medium spotting was the predominant mechanism for forward spread.

13.25 Mr Fogarty agreed in evidence with the opinions expressed by Mr Strickland, and confirmed that while he had found some localised contribution or change in fire behaviour, he had not found any example where roadside vegetation affected overall fire spread. He noted, however, that observers may form the view that roadside vegetation changes fire behaviour, but that this is really the result of ‘flame rollover’ due to the local atmospherics of the road and turbulence, and not an indication that the fire behaviour has accelerated.

13.26 As can be seen from the above analysis, in the overwhelming majority of instances, roadside vegetation produced either no appreciable effect, or had only a localised effect not responsible for any overall impact on the fire’s final shape or its forward rate of spread. In most circumstances, this was at least in part due to the severity of the conditions on 7 February 2009 and in particular the spotting at great distances.

13.27 As is noted above, Mr Strickland said that if the fire conditions had been less severe, then fuel on roadsides would have played a ‘greater role’. In more mild conditions, he said, ‘the roadside vegetation would more come into play in that sense’. Likewise, Mr Fogarty said that in less severe conditions roadside vegetation ‘could’ have an impact, thought it was unlikely to be ‘major’ given the localised nature of the impact of

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469 Exhibit 761 – Statement of Fogarty (WIT.3024.004.0331) [34]
470 Exhibit 761 – Statement of Fogarty (WIT.3024.004.0331) [37]–[38]
471 Exhibit 761 – Statement of Fogarty (WIT.3024.004.0331) [39]–[40]
472 Exhibit 761 – Statement of Fogarty (WIT.3024.004.0331) [41]–[43]
473 Fogarty T15842:7–T15847:0
474 Fogarty T15842:11–T15843:5
475 Strickland T15798:14–T15798:21
476 Strickland T15801:16–T15801:27
such fuels.\textsuperscript{477} He said further that in a forested environment, in less severe conditions, the capacity to use roads to undertake back burning and burning out would be assisted by having ‘more favourable roadside conditions’.\textsuperscript{478}

13.28 The above suggests that although roadside fuel loads were not important in the overall outcome on 7 February 2009, they continue to be a factor which influences fire behaviour in relevant ways during less severe conditions.

14 SAFE ROAD USE DURING FIRES

14.1 A number of submissions from the public have raised the question of safe use of roads during fires, both by members of the community seeking to escape the fires and by emergency services attempting to obtain access. For example, Mr Petreis gave evidence concerning the frightening escape he had along a virtually impassable section of Coombs Road.\textsuperscript{479}

14.2 It is obvious that the capacity of individuals to escape should they find themselves in the path of a fire and the capacity of firefighters to render assistance and engage in suppression is compromised if roads are impassable, badly maintained or blocked by fallen trees.

Access and egress for emergency workers

14.3 Mr Strickland was also asked to specifically consider the question of use of roads and safe access and egress by firefighters. He said:

\textit{The issue of falling trees during and after fires is probably one of the biggest hazards that firefighters face. In fact, our only fatality was from a falling tree. I’m always amazed that we don’t get more injuries and fatalities from them.}\textsuperscript{480}

14.4 He provided the following examples of instances where the capacity to suppress fires (or to safely suppress fires) was compromised by reason of access or safety issues caused by fallen trees.

\textsuperscript{477} Fogarty T15843:6–T15843:21
\textsuperscript{478} Fogarty T15844:4–T15844:9
\textsuperscript{479} Exhibit 750 – Statement of Petreis (WIT.142.001.0001) [16]–[19]; Petreis T15631:22–T15633:3. See further examples of difficulties with road access, such as Ms Hainsworth (in relation to the impassable section of Pine Ridge Road): Exhibit 134 – Statement of Hainsworth (WIT.059.001.0001); Dr Fraser (in relation to tree coming down on corner of Lyell and Sedgwick streets, trapping driver): Exhibit 95 – Statement of Fraser (WIT.048.001.0001_R [19]; Mr Kennedy (fallen trees along Maroondah Highway) Kennedy T8550:7–T8550:13; Mr John Brown (CFA forced to drive through private property to reach residents in Strathewen when road became blocked): Exhibit 48 – Statement of Brown (WIT.029.001.0001_R) [13]; Ms Barrow (CFA forced to clear trees with chainsaw): Exhibit 533 – Statement of Barrow (WIT.121.001.0001) [75]–[76]; Mr Wood (CFA led convoy of residents from Callignee oval to Traralgon South blocked by fallen trees): Exhibit 426 – Statement of Wood (WIT.3004.017.0268)
\textsuperscript{480} Strickland T15802:18–T15802:20
<table>
<thead>
<tr>
<th>Location</th>
<th>Surrounding Circumstances</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bunyip Fire</strong></td>
<td></td>
<td>• Large number of trees and branches fallen onto and across road at numerous places; tree trunks and branches located from road edge up to a few metres into the verge, varying from 100 to 600 millimetres in diameter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• This prevented fire-fighters extinguishing fire at houses in Drayton and Kydd Roads due to blocked access</td>
</tr>
<tr>
<td><strong>Kilmore East Fire</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whittlesea-Kinglake Road</td>
<td></td>
<td>• Many roads in area blocked by trees during and after passage of fire</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Survivors blocked by fallen trees while trying to leave</td>
</tr>
<tr>
<td><strong>Delburn Fire</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darlimurla and Macintosh</td>
<td></td>
<td>• Access to these roads were blocked by fallen trees; also entry to a residence blocked by fallen tree</td>
</tr>
<tr>
<td>Roads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piggery Road</td>
<td>• No-through road</td>
<td>• Resources withdrawn from road prior to arrival of fire due to perceived likelihood of appliances becoming trapped or injuries occurring because of fire and falling trees</td>
</tr>
<tr>
<td></td>
<td>• Forest vegetation close to road</td>
<td>• Large burning trees blocked eastern end of road and other trees fell across road at various points</td>
</tr>
</tbody>
</table>

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481 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [51]–[53]; Annexure 3 (WIT.3004.034.0073) at 0082-0086
482 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [54]–[56]; Annexure 3 (WIT.3004.034.0073) at 0093
483 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [57]–[59]; Annexure 20 (WIT.3004.034.0149); Annexure 3 (WIT.3004.034.0073) at 0087-0090
484 Exhibit 759 – Statement of Strickland (WIT.3004.034.0025) [60]–[61]; Annexure 3 (WIT.3004.034.0073) at 0091-0092
14.5 Since the fires of February 2009, a joint project has been entered into by VicRoads, the MAV, the DSE and the CFA. The project is summarised in a document titled: *Township Protection Plans - Essential Access and Egress Roads - Roadside Clearance Standard and Process.*

14.6 The initial aim of the project was to perform an analysis of the 52 towns to be provided with the first Township Protection Plans. These towns have had their roads assessed to ascertain whether there are particularly vulnerable towns or locations which effectively have only ‘one road in and one road out’. For each town, an analysis was made of the applicable Township Protection Plan, whether the particular town had a Neighbourhood Safer Place and general question of risk and road access in relation to the town in question. The aim is to preserve the integrity of the ‘one road out’ to promote the capacity of community members to escape – but also of firefighters and emergency service workers to get in. The joint project has to date identified 15 high risk roads where critical works need to be undertaken urgently.

14.7 The methodology for the project involves joint site inspections by the CFA, the DSE, council and VicRoads to identify sites where critical works are needed. The critical works identified by the joint inspections are required to commence promptly and their progress documented and monitored.

14.8 The agreed criteria on the ‘critical works list’ include removing:

- dead trees that lean towards or overhang the road and would likely block the road if they fell;
- trees which lean significantly towards the road and limbs in immediate danger of falling on the road;
- diseased trees which would block the road;
- debris which has built up on the road reserve, including by slashing, use of herbicides;
- trees at the top of cuttings with exposed roots or partial support which are exposed to high wind and susceptible to falling;
- unstable trees.

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485 Exhibit 754 – Statement of Spence, Annexure 4 (WIT.4014.001.0037) at 0038
486 Spence T15687:12–T15687:30; T15688:2–T15691:14
487 Exhibit 754 – Statement of Spence, Annexure 4 (WIT.4014.001.0037) at 0038
488 Exhibit 754 – Statement of Spence, Annexure 4 (WIT.4014.001.0037) at 0038
14.9 The principal aim of the criteria are to make the roads safe to get in and get out, or both for residents and emergency services, but there is also a fuel reduction component.489 Mr Spence said the success of this project was referable to the fact that the four agencies had come together to work the policy up very quickly and engaged in joint inspections of particular sites where they would agree on the strategy and commence work immediately. He said that having all the parties there at the same time assisted the process.490

14.10 By way of example, one of the roads on which critical works will be performed is the main road (Hepburn Springs Road) south towards Daylesford. It has been determined that VicRoads will be the agency responsible for the works which are described as follows:

"Access and egress routes must be treated to minimise the possibility of passage being blocked by fallen trees particularly main road through Hepburn as this road is narrow, winding and could easily be blocked by trees or other incidents ie a motor vehicle accident. Hepburn does not have a NSP. Given the lack of NSP in Hepburn a multi-agency team needs to be formed to develop a plan to establish an NSP in Hepburn. Potential sites are the football oval or an existing building however both will require significant works and planning to achieve."491

14.11 Despite the obvious good work being undertaken in relation to this project, the implementation has perhaps unsurprisingly run into issues with the native vegetation regime. Ms Dripps suggested that the DSE had been keen to expedite the program, and as a result had issued both a general permit to the CFA (ie to enable it to undertake the critical works) and a proposed agreement to councils designed to obviate the need to obtain permits. The DSE’s intention in issuing these documents is to:

a) offer councils an exemption from the VPPs – provided the work is being performed pursuant to the critical works program. Councils who accept the agreement are exempt from clause 52.17 of the VPPs, but are bound nevertheless by the requirements of the FFG Act;

b) provide a permit to the CFA to enable it to undertake works at the direction of, or with the agreement of the council, free of the requirements of the FFG Act.492

14.12 However, in the execution of these aims, as became apparent during the course of Ms Dripps’ evidence, some aspects of the permit and the scope of the rights it affords the CFA are unclear. Ms Dripps agreed that some of the terms of the permit for the

489 Spence T15687:11–T15689:14
490 Spence T15689:23–T15690:4
491 Exhibit 754 – Statement of Spence, Annexure 4 (WIT.4014.001.0037) at 0039
492 Dripps T15605:22–T15606:6
roads at risk project did not make sense and would benefit from redrafting to make it clear that the CFA has a permit to perform all works on the critical works list.493 Mr Spence said he was committed to finding a form of words which would facilitate the process.494

14.13 It emerged that only six councils have stated an intention to take up the agreement offered by the DSE.495 Oddly, none of the councils who have purported to accept the agreement are shires where roads on the critical works list are located.496 This is clearly nonsensical. Mr Spence suggested this may be the result of a failure in the communication chain.497

CONCLUSION

Proposed findings

The legislative regime

1. There is a balance required to be struck between affording primacy to the protection of human life by means including reducing risk of bushfire, and the protection of important environmental values.

2. Roadsides in some parts of Victoria provide the only examples of remnant native vegetation. In some places, they operate as important wildlife corridors, important for the preservation of certain species of flora and fauna. As a result, it is necessary to strike a balance between protection of life and assets (through reduction of bushfire risk) and promotion of environmental values.

3. In combination, the regime comprised of clause 52.17 of the VPPs, the FFG Act (Vic) and the EPBC Act (Cth):
   a. tends to favour promotion of environmental values above the objective of reducing bushfire risk; and
   b. is complex and difficult for councils and VicRoads to navigate while attempting to meet their obligations as road managers under section 43 of the CFA Act.

493 Dripps T15602:20–T15604:7
494 Spence T15691:14–T15692:8
495 Exhibit 749 – Supplementary Statement of Dripps (WIT.3024.005.0287) [15]; Dripps T15606:7–T15606:10
496 Dripps T15620:14–T15620:27; Spence T15691:3–T15691:30
497 Spence T15691:24–T15691:30
4. The regime comprised of clause 52.17 of the VPPs, the FFG Act (Vic) and the EPBC Act (Cth) is complex and difficult for councils and VicRoads to navigate while attempting to meet their obligations as road managers under section 43 of the CFA Act.

5. In particular, the native vegetation regime embodied in clause 52.17 of the VPPs favours protection of environmental values to a degree which renders it extremely difficult for road managers to comply with the obligations imposed by section 43 of the CFA Act in relation to reduction of fire risk on roadsides.

6. The exemptions in clause 52.17-6 of the VPPs are drafted in a manner which is overly narrow and without a clear focus on the purposes of fire prevention and reduction of fire risk posed by roadside fuels.

7. A new exemption directly focussed on reduction of fuels on roadsides should be introduced which evidences a purposive approach. The following form of exemption would better capture the obligations of road managers to reduce fire risk:

   **Exemption: Roadside fuel fire risk reduction works**

   *Work undertaken on roadsides by councils, VicRoads or the DSE which is performed for the purpose of reducing fuel levels on roadsides, or for the purpose of reducing the risk of fires starting on or spreading from or along roadsides where such work is approved, recommended or requested by a Municipal Fire Prevention Committee, a CFA Brigade, or the DSE.*

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**DSE**

8. The approach by the DSE to the administration of the regime established under clause 52.17 of the VPPs and the exemptions to that regime has been overly rigid. This has given rise to circumstances in which fire protection objectives have been subjugated to the concern for protection of environmental values. This is particularly evident in the DSE’s approach to creation of fuel breaks under the fire protection exemption.

9. The DSE’s offer to councils noting that they may seek approval for the creation of fuel breaks up to only 20 metres wide unless they demonstrate ‘exceptional circumstances’, and that offsets are required (in so far as the fuel breaks are constructed on public land) misstates the breadth of the second limb of the fire protection exemption in clause 52.17-6 of the VPPs.

10. It does not appear that the DSE takes into account benefits which might be achieved in terms of reduction of bushfire risk when assessing applications for permits to perform works on roads and roadsides which would otherwise infringe clause 52.17-
6. The DSE should prepare guidelines to direct the decision makers to take into account such relevant matters.

CFA

11. The CFA is empowered by section 42 of the CFA Act to undertake fuel reduction works on roadsides.

12. The CFA’s 2001 Guidelines in relation to roadside fuels continue to be used by the CFA and councils and offer useful and practical assistance in relation to assessing the risk posed by roadside vegetation and a range of suitable treatments thereof.

13. The CFA, principally through local brigades, undertakes significant work in order to manage roadside vegetation to reduce fire risk. The CFA generally performs this work without compensation, or even cost recovery. A significant portion of the work is performed by volunteers.

14. The CFA is exposed to considerable administrative burdens because of the regime under which it performs roadside works. In addition, the CFA is required to provide resources in order to implement traffic management plans during the conduct of roadside works.

Commonwealth regime

15. The EPBC Act applies to controlled actions, being actions which are likely to have a significant impact on nationally threatened species and ecological communities or migratory species.

16. It is possible that roadside works constitute controlled actions prohibited by the EPBC Act in certain circumstances. The types of actions which might be controlled actions include construction of new fire breaks or fuel breaks of substantial sizes and treatment of roadside vegetation – at least where this is undertaken on a large scale in places where EPBC Act listed species or ecological communities are to be found.

17. An exemption from the provisions of the EPBC Act was granted in the immediate aftermath of the 2009 fires, but its scope was limited to works undertaken to control the fires while they were going.

18. DSE has made a number of referrals to the DEHWA in respect of proposed fuel break construction, all of which have been the subject of a determination that formal approval is not required – on the basis that certain conditions are observed by the DSE. These conditions may restrict the value of the strategic breaks.

19. The CFA has had initial discussions with the Commonwealth in relation to the prospect of obtaining a strategic assessment of its roadside fuel reduction works. So far the State has not made any formal application for a strategic assessment under the EPBC Act with respect to fuel reduction and fire risk reduction works in Victoria.
Councillors

20. Councils manage the roads for which they are responsible pursuant to MFPPs, RMPs; RVMPs and local laws.

21. Local government carries heavy responsibilities for bushfire risk management in relation to each of land use planning, municipal fire prevention, municipal emergency management and management of roads and roadsides (being responsible for the management of 129,235 kilometres of municipal roads). Victoria’s bushfire risk is greatest in rural and regional municipalities where resources are likely to be scarce for reasons including low rate payer bases. It is essential that local government be adequately resourced to discharge their responsibilities in relation to roads and roadsides.

22. Councils have expressed concerns in relation to the inherent tension between their obligations as road managers under section 43 of the CFA Act to reduce bushfire risk and their obligations under clause 52.17-6 of the VPPs to protect native vegetation.

23. Councils have experienced considerable difficulties in navigating the multiple and overlapping requirements of the native vegetation regime (in particular clause 52.17-6 of the VPPs), the FFG Act and the Commonwealth EPBC Act. The experience of the Colac Otway Shire in relation to its contravention of the EPBC Act has been instructive, but raised the level of concern among council officers as to the need to ensure compliance with the Commonwealth regime.

24. Training, information and advice concerning the operation of each of clause 52.17-6 of the VPPs, the FFG Act and the EPBC are made available by the DSE and the DEWHA. However, more ought to be done to assist councils to navigate the requirements of these regimes.

VicRoads

25. The VicRoads 1985 Code of Practice contains valuable information and advice, and ought to be revised to ensure it is up to date and in conformity with VicRoads’ obligations under section 43 of the CFA Act.

26. The content of the various RMPs and RCMPs in force for roads for which VicRoads is responsible has ‘drifted’ from the clear expressions of objectives evidenced in the 1985 Code of Practice.

27. The VicRoads program for the maintenance of roadsides it is responsible for is:

a) Narrowly focussed on standard grass mowing and slashing programs to the exclusion of almost all other fire risk reduction works on roadsides for which it is responsible;
b) Relies heavily on the receipt of advice or complaints from CFA brigades, MFPCs or members of the public requesting it to perform additional roadside works.

c) Demonstrates no systematic approach to risk assessment as is required by the obligation imposed on it by section 43 of the CFA Act.

28. VicRoads has tended to ‘defer’ to the CFA and the DSE in relation to the management of fire risk on roadsides it is responsible for, rather than developing its own comprehensive and proactive risk assessment program.

29. In relation to the example of the Hume Freeway, VicRoads has adopted an inconsistent approach both from year to year and across the length of the Freeway. There is a lack of clarity about what VicRoads was obliged to do, what it in fact did in various years, and why. In addition, CFA brigades with responsibilities along the length of the Hume Freeway have expressed differing views as to the appropriate fuel reduction treatments on the Freeway.

30. VicRoads’ auditing of contractual works aimed at discharging its responsibilities in relation to roadside fire risk is imperfect, as is demonstrated by the evidence regarding the Hume Freeway where failures in relation to contractual standard have occurred.

31. VicRoads does not routinely attend meetings of MFPCs. This means that it may not be in attendance when the MFPC raises matters of importance in the context of municipal fire planning in relation to roadside works on VicRoads’ Freeways and arterial roads.

Fire behaviour and roadside vegetation

32. Roadside vegetation is affected by all the matters which affect fire behaviour generally, including fuel levels, wind and topography.

33. It is possible to ‘rank’ the importance of roadside fuels as determinants of fire behaviour: the fine surface fuels and near surface fuels, especially grass, are the most important predictor of the way in which roadside fuels will affect fire behaviour.

34. As a result, in many instances, the mowing or slashing of grass along roadsides is likely to provide benefits in reducing the influence of roadside vegetation on fire behaviour, particularly flame height.

35. The presence of trees along roadsides with highly flammable bark capable of producing mass spotting (particularly stringybark) is also likely to have a strong impact on the fire behaviour and spread. However, the presence of other standing trees (ie without highly flammable bark) and fallen trees and logs along roadsides does not strongly influence fire behaviour.
36. In some circumstances, the structure of roadside fuels (especially grass, shrubs and
trees with flammable bark) has a localised impact on fire behaviour, and can give rise
to temporary increased flame height and increased lateral spread.

37. In attending to the reduction of fire risk posed by roadside vegetation, priority ought to
be given to keeping grass and weeds mown and to avoid rows of trees with highly
flammable bark.

38. In extreme weather, roadside vegetation is unlikely to have a strong influence on the
forward spread and overall shape of a fire due to the predominant role played by
spotting and the weather conditions.

39. In less than extreme weather conditions, roadside vegetation is likely to play a
stronger role in fire behaviour, and for that reason the management of roadside
vegetation to reduce fire intensity remains important. In particular, reduction of flame
height (ie by slashing or mowing grass) will be an important feature in reducing fire
intensity and radiant heat, both of which assist suppression efforts.

Fire behaviour and roadsides during the 2009 fires

40. Expert examination of the roadsides in a number of fire affected areas has revealed
that while there are limited instances in which roadside vegetation contributed to a
temporary, localised increase in fire behaviour (including promoting lateral spread of
the fire), in the overwhelming majority of cases the severe weather conditions on 7
February 2009 and during the Delburn fires had the effect that roadside vegetation
had no significant impact on the overall spread or shape of the fires.

41. However, had the conditions been less severe, roadside vegetation is likely to have
played a more significant role in affecting fire behaviour.

Logs and Firewood

42. Fallen logs (whether found in forests or along roadsides) play an important role in the
promotion of environmental values, often providing habitat for species.

43. However, the presence of fallen logs and tree debris on the sides of roads has little
impact on fire behaviour. While logs may promote smouldering burns, they are not
important predictors of fire ignition or spread.

44. Accordingly, the removal of fallen logs and tree debris along roadsides is of little
importance in relation to the question of reduction of fire risk.

45. The introduction of new measure permitting the removal of fire wood from roadsides
in areas which have been earmarked for prescribed burning is a pragmatic step
aimed at promoting efficient use of firewood fuel by members of the public, being fuel
which would otherwise be wasted. However, it offers little value in terms of fuel
reduction objectives.
Fuel breaks

46. Fuel breaks (particularly when constructed in a manner complemented by a sound planned burning program) offer important opportunities to engage in suppression efforts.

47. The ‘fire protection’ exemption in clause 52.17-6 of the VPPs has two limbs in relation to fuel breaks. Provision is made for:
   a) 6 metre fuel breaks constructed on public or private land; and
   b) 40 metre fuel breaks constructed by public authorities pursuant to a strategic fuel break plan approved by DSE.

48. There has been limited take up of the 6 metre wide fuel break option by private citizens or road managers.

49. DSE is the only entity which has taken advantage of the ‘40 metre’ fuel break option, to construct a limited network of fuel breaks around water catchments and in the Otway Ranges.

50. The construction of fuel breaks by the DSE is proceeding too slowly, and appears to be being limited by considerations relevant to environmental values and the possible operation of the EPBC Act. The DSE’s fuel breaks have been focussed on the protection of water catchments, rather than principally directed at town protection.

51. The DSE’s Land and Fire Division accepts that fuel breaks constructed near towns may need to be wider than those in forested areas in order to offer the best potential for asset protection.

52. DSE has suggested to councils that their capacity to rely on the ‘40 metre’ exemption is in fact limited to a right to construct fuel breaks only up to 20 metres wide (unless they demonstrate exceptional circumstances ) and requires provision of offsets for loss of native vegetation in so far as the fuel break is constructed on public land. Neither of these conditions exists on the face of the exemption in clause 52.17-6.

53. In any event, the 40 metre exemption available to public authorities (ie including councils and VicRoads) is likely to be too restrictive in some areas, where greater benefits might be obtained from constructing wider breaks.

54. Councils have not to date been proactive in seeking creation of fuel breaks. Councils should further explore, particularly with the advice of the DSE and CFA brigades, their ability to rely on the exemptions in clause 52.17-6 in relation to the creation of fuel breaks. The creation of such fuel breaks should be seen as complementary to planned burns undertaken in the same region.
Road access

55. There were a number of instances during the February 2009 fires of residents and emergency services workers experiencing difficulties with safe road use.

56. Since the fires, the MAV, the CFA and VicRoads have entered into a joint project pursuant to which they have identified critical works on roads servicing fire prone 'one road in, one road out' towns, necessary to protect the integrity of those roads during fires.

57. The project has been very successful in addressing the needs of towns in high risk areas with limited road access. The attempt by the DSE to facilitate the works within the operation of Clause 52.17-6 has created unnecessary confusion and the drafting of proposed agreements and permits ought to be revisited to clarify some of the operational matters.

Proposed recommendations:

State

1. The State should revise the exemptions in clause 52.17-6 of the VPPs to ensure they are more focused on a purposive approach which permits the performance of roadside works capable of reducing fire risk. In particular, the State should make provision for a new exemption in the following form:

   Exemption: Roadside fuel fire risk reduction works

   Work undertaken on roadsides by councils, VicRoads or the DSE which is performed for the purpose of reducing fuel levels on roadsides, or for the purpose of reducing the risk of fires starting on or spreading from or along roadsides where such work is approved, recommended or requested by a Municipal Fire Prevention Committee, a CFA Brigade, or the DSE.

2. The State should amend the present exemption in clause 52.17-6 in relation to fuel breaks to remove the 40 metre limit on width. The exemption should rather focus on the purpose for which the fuel break is constructed and the benefits it might achieve. Accordingly, the exemption should be revised to provide that road managers, the CFA or the DSE may submit fuel break plans for approval by the Secretary of the DSE, and that such plans will be approved where the proposed fuel breaks are designed to reduce risk of fire and promote ease of suppression.

3. The State should increase the resources provided to local government in Victoria to discharge its bushfire risk management functions, in relation to its responsibilities with respect to safe use of roads (including during fires) and the management of fire risk on roadsides.
4. The State, working with the DSE, the CFA and the MAV, ought to seek a strategic assessment from the Commonwealth DEHWA under the EPBC Act, to cover all appropriate aspects of bushfire risk measures undertaken in Victoria including conduct of planned burning, construction of fuel breaks and roadside vegetation works.

**DSE**

5. The DSE should withdraw its ‘offer’ to councils in relation to proposed fuel breaks up to 20 metres width and permit all public authorities to rely on the full scope of the exemption in relation to 40 metre fuel breaks in clause 52.17-6.

6. The DSE should develop guidelines in relation to the assessment of applications for permits for works on roads and roadsides that would otherwise infringe clause 52.17-6 of the VPPs in order to prompt decision makers to take into account the benefits the proposed works offer in terms of reduction of risk of bushfire.

7. The DSE should accelerate its program of constructing strategic fuel breaks. In particular the DSE ought to liaise with MFPCs and the CFA to ensure they are constructed in a manner best designed to offer maximum protection to assets including towns, and to complement planned burns in the area, particularly Asset Protection Zones. Where it is recognised that proposed works would infringe the EPBC Act, the DSE should consider seeking exemptions, rather than restricting the works to be undertaken.

**VicRoads**

8. The VicRoads 1985 Code of Practice should be revised to ensure it is up to date and conforms with VicRoads' obligations under section 43 of the CFA Act.

9. VicRoads should review the content of RMPs and RCMPs for roads VicRoads is responsible for to ensure conformity with the obligations in section 43 of the CFA Act and with the objectives evidenced in the 1985 Code of Practice (or any revised version thereof).

10. VicRoads ought to establish a statewide systematic program of risk assessment of the roadsides of Freeways and arterial roads it is responsible for and such a program should evidence a commitment to reducing fire risk posed by roadside vegetation.

11. VicRoads ought immediately review the roadsides it is responsible for to ascertain whether works in addition to its standard mowing and slashing program for grass are necessary (including in relation to shrubs and trees with flammable bark).

12. VicRoads should review its auditing system in relation to fuel reduction works conducted by contractors to ensure it is robust and not dependent upon ad hoc complaints from the public and the CFA brigades.
13. VicRoads should attend meetings of MFPCs and Regional Fire Prevention Committees for shires and regions where significant arterial roads and freeways managed by VicRoads are located, to ensure it manages these roads in a systematic way which conforms with the overall fire planning for the municipality or region in question.

Councils

14. Councils should more proactively consider the ‘6 metre’ fuel break exemption in Clause 52.17-6 of the VPPs to ascertain whether there are roadsides where it might be used to construct fuel breaks parallel to roads.

15. Councils should consider devising plans for the construction of strategic fuel breaks (in consultation with the CFA and the DSE) and submit them for approval under the exemption in Clause 52.17-6 of the VPPs. The focus of such plans ought to be the protection of towns and assets in the municipality, and to complement planned burns in the area in order to provide the best possible measures of fire protection and increased ease of suppression.

CFA

16. Additional resources should be provided to the CFA to enable its brigades to be released from the burden of ensuring administrative compliance with and provision of personnel for traffic management plans when undertaking roadside works.

Commonwealth

17. The Commonwealth should provide additional training, information and advice to road managers (particularly resource poor councils in fire prone areas of Victoria) in relation to how they can best obtain information concerning their obligations under the EPBC Act and ensure compliance with the requirements of the EPBC Act.

18. The Commonwealth should work with the State to rapidly progress a strategic assessment to cover all suitable aspects of bushfire risk measures undertaken in Victoria including conduct of planned burning, construction of fuel breaks and roadside vegetation works.

Dated: 22 March 2010

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