

Scattered Tree Assessment Data Report

Clearance under section 28 of the *Native Vegetation Act 1991*

9 August 2019

Michaels Road, Mount Light

Prepared by Peter Tucker

Mister Tucker's Business

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1. Application information

Applicant:	Carillion Holding Pty Ltd		
Key contact:	John Davis		
Site address:	Michael's Road, Mount Light		
Local Government Area:	Naracoorte Lucindale Council	Hundred:	Jessie
Certificate of Title:	CT/5479/398	Section/Allotment:	D47474 A98
	CT/5479/397		D47474 A97
Summary of Application			
Proposed clearance area:	<p>This clearance application is for 15 paddock trees and 2.3577 hectares of SEB 1997-2118. in an existing vineyard. The trees are <i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i> (river red gum). Trees range in condition from moderate to excellent. All trees, except Tree 14, contained hollows, most with multiple hollows from small to large. Trees 3, 4, 5, 9, 10, 12 and 13 contained hollows considered suitable for South Eastern red-tailed black cockatoo nesting.</p> <p>The SEB area is a <i>Melaleuca lanceolata</i> (dryland tea tree), <i>Allocasuarina verticillata</i> (drooping Sheoak), <i>Eucalyptus fasciculosa</i> (pink gum) and <i>Eucalyptus leucoxylon</i> Low Woodland in poor condition with no understory species present. No hollows were found.</p>		
Purpose of the clearance:	<p>Carillion Holding Pty Ltd would like to remove the trees due to eucalypt taint reducing the quality and value of wine made from the vineyard. Currently, the trees also pose a Work Health Safety risk to vineyard workers with large limbs falling sporadically, often weighing several tonnes each.</p> <p>Carillion Holding Pty Ltd seeks to retain the trees as dead standing specimens. Physical removal is not required.</p> <p>Carillion Holding Pty Ltd seeks to remove the SEB area to plant additional grapevines. This location has been determined to be highly suitable for grape production.</p>		
Proposed SEB offset:	<p>If approval is granted Carillion Holding Pty Ltd will seek to purchase land in the South East with native vegetation and develop a 10-year SEB management plan for the site and be subject to approval from the NVC.</p> <p>Preliminary investigation of available land has occurred, but will not proceed unless vegetation clearance approval is granted.</p> <p>A future SEB will be required to achieve a minimum of 189.66 SEB points.</p>		

2. Background

2.1 Purpose of the proposal

This proposal is clear 15 *Eucalyptus camaldulensis* ssp. *camaldulensis* (river red gum) trees ranging in condition from moderate to excellent. If consent to clear is granted Carillion Holding Pty Ltd will kill the trees insitu and retain habitat value of the trees, particularly hollows. Outer limbs of the trees will be trimmed professionally to maintain vineyard safety.

The 2.3577-hectare SEB Area is proposed for clearance to plant grapevines.

2.2 Background

The property was purchased in 1997 for the purpose of planting a vineyard and wine grape production. In 1997 the Native Vegetation Council gave permission to clear 11 river red gum trees (1997 – 2118). However, the 15 trees subject of this application were refused clearance and were to be retained. The 15 remaining trees drop leaves at key times and are now tainting wine produced using grapes from this vineyard. The 15 trees are considered an impediment to primary production. Wine industry research articles are attached to this application detailing wine taint from eucalypt trees (eucalyptol). A eucalyptol analysis of grapes picked from this vineyard is also attached demonstrating a lower concentration of eucalyptol from hand picked versus machine picked grapes. However, Carillion Holding Pty Ltd has advised harvesting grapes by hand is not an economically viable option for this vineyard.

The SEB Area was not considered to be suitable for grape production when clearance application 1997 – 2118 was initiated. In the 20 years following the original application this area is now considered to be suitable for growing grape varieties that will produce high quality wine.

The surrounding land use is a mixture of dryland pasture, irrigated pasture, horticulture, forestry and native vegetation. Naracoorte Caves National Park is located approximately three kilometers to the south

This application is likely to be the last application to clear native vegetation on the property.

The property is situated in the Mount Light district, approximately six kilometers south east of Naracoorte within Naracoorte Lucindale Council.

2.3 General location map



Figure 1. Site map of vegetation included under this application (tree marked 1-15 and existing SEB 1997-2118 marked with red hash).



Figure 2. Location map showing surrounding land use. Red circle identifies location of proposed tree and vegetation clearance.

2.4 Approvals required or obtained under other legislation (including past clearance approvals)

In 1997 Carillion Holding Pty Ltd was granted permission to clear 11 river red gum trees on land parcels D47474 A98 and A97 in the Hundred of Jessie. The required SEB was met by setting aside nominated areas and locations of land.

Carillion Holding Pty Ltd owns a water license for irrigation: License No. 8837. A copy of this license is attached with this application for native vegetation clearance.

Compliance with the Natural Resources Management Act 2004 has been limited to normal land management obligations, such as pest animal and weed control as required. Carillion Holding Pty Ltd have never received a notification order to undertake pest control.

3. Method

3.1 Flora assessment

The site was inspected on 28 April 2019 using the method outlined in the Native Vegetation Council Scattered Tree Assessment Manual. SEB 1997 – 2118 was inspected on 13 May 2019 using the method outlined in the Native Vegetation Council Bushland Assessment Manual. The assessments included a search of the area around the proposed trees, grapevines and additional SEB locations.

3.2 Fauna assessment

A desktop fauna search was undertaken by accessing the DBDSA within the Naturemaps program and the Atlas of Living Australia. The search included the surrounding landscape for a radius of five kilometers. In addition, a search of birds likely to use scattered paddock trees or degraded vegetation within the Wimmera IBRA sub-region of the Kybybolite Environmental Association was undertaken (Source: G. Carpenter, Biodiversity Assessment Section, Department of Water, Land and Biodiversity Conservation).

The presence of native fauna observed during the assessment was recorded.

4. Assessment outcomes

4.1 Vegetation Assessment

General description of the vegetation, the site and matters of significance

The site is located within a vineyard, which has a sandy loam soil. The surrounding landscape is an undulating plain. Native vegetation in the nearby area comprised paddock trees and degraded native vegetation within SEB 1997-2118, which consisted of tree species only.

The closest one hectare or larger patch of Native Vegetation is 700m to the west. Several large patches of native vegetation occur in the surrounding landscape, including Naracoorte Caves National Park, approximately three kilometers to the south.

Database searches identified one EPBC Act listed species within a five kilometers radius that could potentially use the site; South Eastern red-tailed black cockatoo (*Calyptorhynchus banksii graptogyne*). Trees 3, 4, 5, 9, 10, 12 and 13 contained at least one hollow each that would be suitable as a nest site for this species. The remaining trees provide perching habitat for this species.

Database searches identified 11 NPW Act listed species that could use isolated paddock trees or degraded native vegetation as habitat. Table 1 lists threatened fauna that may use the site.

During the site assessment five species of native fauna were observed;

- Swamp wallaby (*Wallabia bicolor*);
- Whistling kite (*Haliastur sphenurus*);
- Crimson rosella (*Platycercus elegans*);
- Little corella (*Cacatua sanguinea*) and
- Australian magpie (*Gymnorhina tibicen*)

Table 1. Threatened fauna that may use the area subject to this Data Report for habitat.

Common name	Species	Conservation rating		
		AUS	SA	R
Red-tailed Black Cockatoo	<i>Calyptorhynchus banksii graptogyne</i>	EN	E	E
Little Lorikeet	<i>Glossopsitta pusilla</i>		E	E
Yellow-tailed Black-cockatoo	<i>Calyptorhynchus funereus</i>		V	V
Blue-winged Parrot	<i>Neophema chrysostoma</i>		V	V
Swamp Wallaby	<i>Wallabia bicolor</i>		V	R
Crested Shrike-tit	<i>Falcunculus frontatus</i>		R	V
White-winged Chough	<i>Corcorax melanorhamphos</i>		R	V
White-bellied Cuckooshrike	<i>Coracina papuensis</i>		R	R
Blue-faced Honeyeater	<i>Entomyzon cyanotis</i>		R	R
Jacky Winter	<i>Microeca fascians</i>		R	R
Restless Flycatcher	<i>Myiagra inquieta</i>		R	R
Peregrine Falcon	<i>Falco peregrinus</i>		R	R

Details of the vegetation associations/scattered trees proposed to be impacted

Tree 1 identified in Figures 1 & 3 is a *Eucalyptus camaldulensis* ssp. *camaldulensis* in good condition. The tree exhibits approximately 10% dieback. The tree contained two small and two medium hollows. The trunk diameter at 1m above the ground is 205cm. The total tree score is 10.23 requiring 10.75 SEB points.



Figure 3. Tree 1 identified in Figure 1, GPS co-ordinate 482520, 5905776.



Figure 4. One of two medium hollows identified in Tree 1. Figure 5. One of two small hollows identified in Tree 1.

Tree 2 identified in Figures 1 & 6 is a *Eucalyptus camaldulensis* ssp. *camaldulensis* in moderate condition. The tree exhibits approximately 40% dieback. The tree contained one large, five medium and one small hollow. The trunk diameter at 1m above the ground is 172cm. The total tree score is 3.76requiring 3.94 SEB points.



Figure 6. Tree 2 identified in Figure 1, GPS co-ordinate 482580, 5905699.



Figure 7. One large hollow identified in Tree 2.



Figure 8. One of five medium hollows identified in Tree 2.

Tree 3 identified in Figures 1 & 9 is a *Eucalyptus camaldulensis* ssp. *camaldulensis* in good condition. The tree exhibits approximately 5% dieback. The tree contained 12 large, eight medium and two small hollows. Four of the large hollows may be suitable for South Eastern Red-tailed Black Cockatoo nesting; alignment within 45 degrees of vertical. The trunk diameter at 1m above the ground is 208cm. The total tree score is 10.63 requiring 11.16 SEB points.

A large portion of Tree 3 fell down within the last five years. The tree is next to an equipment shed and where staff park their vehicles.



Figure 9. Tree 3 identified in Figure 1, GPS co-ordinate 481852, 5905793.



Figure 10. One of 12 large hollows identified in Tree 3.



Figure 11. One of eight medium hollows identified in Tree 3.

Trees 4 identified in Figures 1 & 12 is a *Eucalyptus camaldulensis* ssp. *camaldulensis*. Tree 4 is in good condition and exhibits approximately 5% dieback. The tree contained two large, four medium and three small hollows. One of the large hollows may be suitable for South Eastern Red-tailed Black Cockatoo; alignment within 45 degrees of vertical. The trunk diameter at 1m above the ground is 225cm. The total tree score is 10.63 requiring 11.16 SEB points.



Figure 12. Tree 4 identified in Figure 1, GPS co-ordinate 481834, 5905632.



Figure 13. One of two large hollows identified in Tree 4.



Figure 14. One of four medium hollows identified in Tree 4.

Tree 5 identified in Figures 1 & 15 is a *Eucalyptus camaldulensis* ssp. *camaldulensis* in good condition. The tree exhibits approximately 10% dieback. The tree contained two large, two medium and three small hollows. One of the large hollows may be suitable for South Eastern Red-tailed Black Cockatoo; alignment within 45 degrees of vertical. The trunk diameter at 1m above the ground is 178cm. The total tree score is 10.23 requiring 10.75 SEB points.



Figure 15. Tree 5 identified in Figure 1, GPS co-ordinate 482069, 5905504.



Figure 16. One of two large hollows identified in Tree 5.



Figure 17. One of two medium hollows identified in Tree 5.

Trees 6 identified in Figures 1 & 18 is a *Eucalyptus camaldulensis* ssp. *camaldulensis*. Tree 6 is in good condition. The tree exhibits approximately 5% dieback. The tree contained one small hollow. The trunk diameter at 1m above the ground is 169cm. The total tree score is 6.66 requiring 6.99 SEB points.



Figure 18. Tree 6 identified in Figure 1, GPS co-ordinate 481962, 5905443.



Figure 19. One small hollow observed on Tree 6.

Trees 7 identified in Figures 1 & 20 is a *Eucalyptus camaldulensis* ssp. *camaldulensis*. Tree 7 is in good condition. The tree exhibits approximately 10% dieback. The tree contained three small hollows. The trunk diameter at 1m above the ground is 146cm. The total tree score is 5.09 requiring 5.34 SEB points.



Figure 20. Tree 7 identified in Figure 1, GPS co-ordinate 482019, 5905422.



Figure 21. One of three small hollows observed on Tree 7.

Tree 8 identified in Figures 1 & 22 is a *Eucalyptus camaldulensis* ssp. *camaldulensis*. Tree 8 is in excellent condition and exhibits approximately 1% dieback. The tree contained one large, one medium and one small hollows. The trunk diameter at 1m above the ground is 232cm. The total tree score is 10.95 requiring 11.50SEB points.



Figure22. Tree 8 identified in Figure 1, GPS co-ordinate 481786, 5905396.



Figure 23. One large hollow identified in Tree 8.



Figure 24. One medium hollow identified in Tree 8.

Tree 9 identified in Figures 1 & 25 is a *Eucalyptus camaldulensis* ssp. *camaldulensis* in good condition. The tree exhibits approximately 5% dieback. The tree contained two large and one small hollows. One of the large hollows may be suitable for South Eastern Red-tailed Black Cockatoo; alignment within 45 degrees of vertical. The trunk diameter at 1m above the ground is 186cm. The total tree score is 10.63 requiring 11.16 SEB points.



Figure 25. Tree 9 identified in Figure 1, GPS co-ordinate 481983, 5905305.



Figure 26. One of two large hollows identified in Tree 9.



Figure 27. One small hollow identified in Tree 9.

Tree 10 identified in Figures 1 & 28 is a *Eucalyptus camaldulensis* ssp. *camaldulensis* in good condition. The tree exhibits approximately 10% dieback. The tree contained four large, two medium and three small hollows. Two of the large hollows may be suitable for South Eastern Red-tailed Black Cockatoo; alignment within 45 degrees of vertical. The trunk diameter at 1m above the ground is 231cm. The total tree score is 10.23 requiring 10.75 SEB points.



Figure 28. Tree 10 identified in Figure 1, GPS co-ordinate 482097, 5905301.



Figure 29. One of four large hollows identified in Tree10.



Figure 30. One of two medium hollows identified in Tree 10.

Tree 11 identified in Figures 1 & 31 is a *Eucalyptus camaldulensis* ssp. *camaldulensis* in excellent condition. The tree exhibits approximately 1% dieback. The tree contained one small hollow. The trunk diameter at 1m above the ground is 191cm. The total tree score is 6.88 requiring 7.23 SEB points.



Figure 31. Tree 11 identified in Figure 1, GPS co-ordinate 482291, 5905198.



Figure 32. One small hollow identified in Tree 11.

Tree 12 identified in Figures 1 & 33 is a *Eucalyptus camaldulensis* ssp. *camaldulensis* in good condition. The tree exhibits approximately 5% dieback. The tree contained two large and two medium hollows. One of the large hollows may be suitable for South Eastern Red-tailed Black Cockatoo; alignment within 45 degrees of vertical. The trunk diameter at 1m above the ground is 168cm. The total tree score is 10.63 requiring 11.16 SEB points. In 2017, Tree 12 dropped a major limb reducing the tree's mass by and estimated 50%.



Figure 33. Tree 12 identified in Figure 1, GPS co-ordinate 482337, 5905114.



Figure 34. One of two large hollows identified in Tree 12.



Figure 35. One of two medium hollows identified in Tree 12.

Tree 13 identified in Figures 1 & 36 is a *Eucalyptus camaldulensis* ssp. *camaldulensis* in moderate condition. The tree exhibits approximately 40% dieback. The tree contained two large and two small hollows. One of the large hollows may be suitable for South Eastern Red-tailed Black Cockatoo; alignment within 45 degrees of vertical. The trunk diameter at 1m above the ground is 280cm. The total tree score is 5.38 requiring 5.65 SEB points.



Figure 36. Tree 13 identified in Figure 1, GPS co-ordinate 481989, 5904888.



Figure 37. One of two large hollows identified in Tree 13.



Figure 38. One of two medium hollows identified in Tree 13.

Tree 14 identified in Figures 1 & 39 is a *Eucalyptus camaldulensis* ssp. *camaldulensis* in good condition. The tree exhibits approximately 5% dieback. The tree contained no hollows. The trunk diameter at 1m above the ground is 139cm. The total tree score is 3.03 requiring 3.18 SEB points.



Figure 39. Tree 14 identified in Figure 1, GPS co-ordinate 482134, 5904836.

Tree 15 identified in Figures 1 & 40 is a *Eucalyptus camaldulensis* ssp. *camaldulensis* in good condition. The tree exhibits approximately 5% dieback. The tree contained three large and two small hollows. The trunk diameter at 1m above the ground is 203cm. The total tree score is 10.63 requiring 11.16 SEB points.



Figure 40. Tree 15 identified in Figure 1, GPS co-ordinate 482298, 5904874.



Figure 41. One of two large hollows identified in Tree 15.



Figure 42. Two small hollows identified in Tree 15.

Site A1 (2.3577 hectares) is an existing SEB (1997-2118) and is comprised of a *Melaleuca lanceolata*, *Allocasuarina verticillata*, *Eucalyptus fasciculosa* and *Eucalyptus leucoxylon* Low Woodland in poor condition. Native species were limited to the canopy species only. The ground layer vegetation consisted of a range of exotic species. The most abundant species were various exotic annual grasses, *Marrubium vulgare* (horehound), *Heliotropium europaeum* (common heliotrope) and *Chenopodium album* (fat hen). Two large *Eucalyptus camaldulensis* ssp. *camaldulensis* and a small number of *Dodonaea viscosa* ssp. *spatulata* were located outside the assessment area. Small hollows were limited to base of old *Melaleuca lanceolata*, which pre-date the establishment of the SEB. Evidence of sheep and rabbits was present.

Scoring for Site A1 is,

- Ecosystem score - 1.00
- Threatened Flora score – 0.02
- Threatened Fauna score - 1.12
- Unit Biodiversity Score - 12.25, and
- Total Biodiversity Score is 28.89.

Clearance of an existing SEB (1997-2118) requires a loading of 10% for each year since established to a maximum of 10 years, or 100%, consequently the required SEB points are 57.78.



Figure 43. Site A1 (SEB 1997-2118) identified in Figure 1, GPS co-ordinate 481993, 5905175. View to the south.



Figure 44. Horehound and exotic grasses within Site A1.



Figure 43. A typical small hollow identified in Site A1.

Site map showing areas of proposed impact

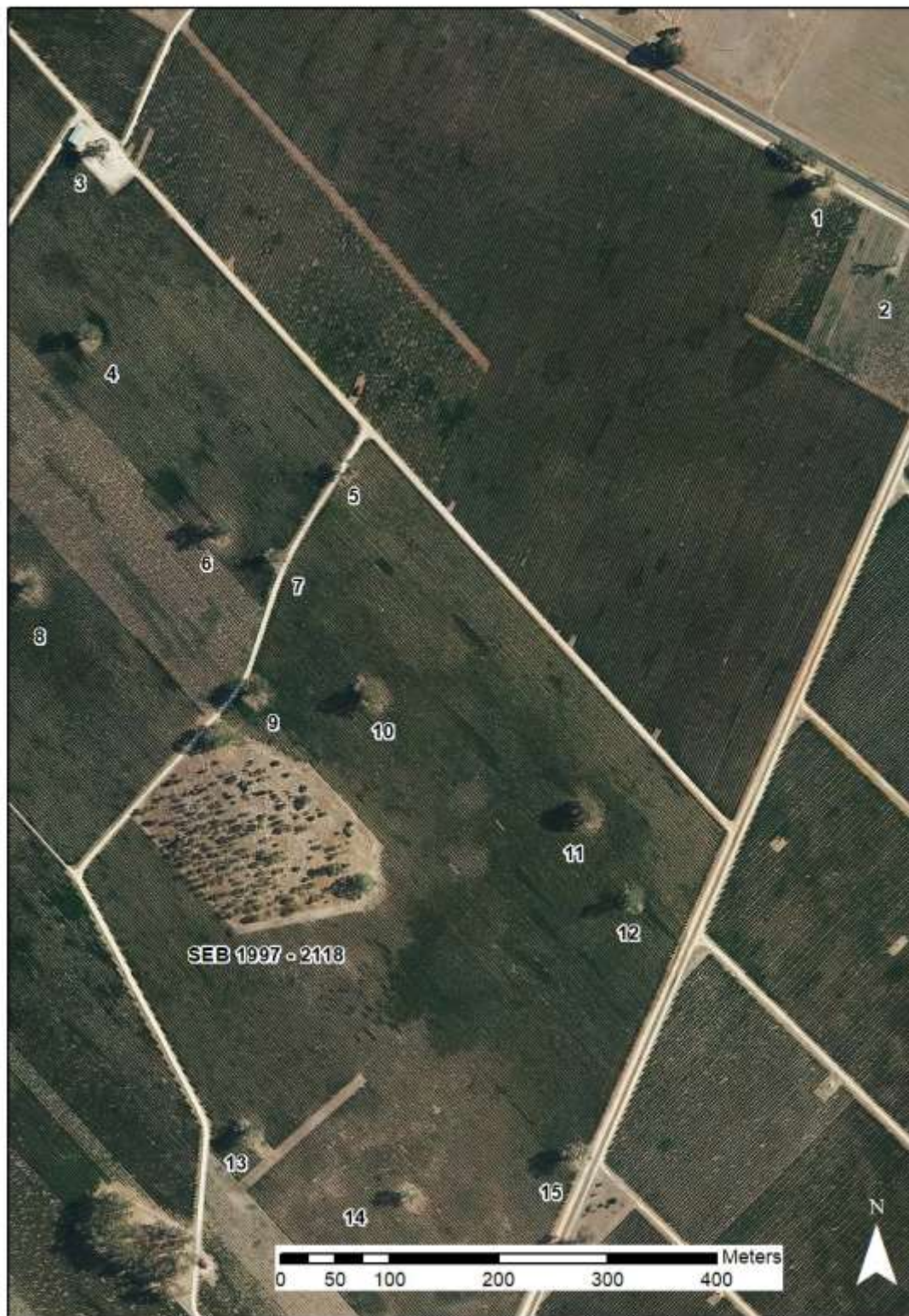


Figure 44. Site map that identifies Trees 1 to 15 and SEB 1997-2118 proposed to be cleared to address eucalypt taint in wine (trees) and for future planting of grape vines (SEB 1997-2118).

4.2 Presence of Substantially Intact Vegetation

If the vegetation is considered to represent a substantially intact stratum, the NVC cannot approve clearance, unless for the purpose of harvesting native vegetation (section 27(3)). For more information see the NVC's [Guide for Applications to Clear Native Vegetation](#).

4.2.1 Provide information on whether the native vegetation constitutes a continuous intact stratum.

Trees 1 to 15 do not constitute native vegetation in a continuous intact stratum. No other native plants were found in the areas around the trees.

Site A1 does not constitute native vegetation in a continuous intact stratum. The understory component exists entirely of exotic species.

4.2.2 Provide information on whether the native vegetation has been subject to degradation within the past 20 years.

The property has been in the ownership of Carillion Holding Pty Ltd since 1997. Human induced degradation of Trees 1 to 15 and Site A1 has not occurred since property purchase. Carillion Holding Pty Ltd was granted NVC approval to clear 11 trees in 1997, resulting in the establishment of several SEB areas. Site A1 is one of these SEB areas.

4.2.3 Provide a key finding on whether any or all of the area of impact could be considered as substantially intact – see [Guide for Applications to Clear Native Vegetation](#).

None of the area of impact could be considered as substantially intact.

4.3 Principles of Clearance (Schedule 1, Native Vegetation Act 1997)

Provide the following information and key finding for each of the Principles of Clearance (Principles a-g) – for information on how to make an assessment of *variance* against the Principles of Clearance, see the [Guide for Applications to Clear Native Vegetation](#).

If the clearance is seriously at variance with one or more of the principles, the NVC cannot approve clearance, however, the Act provides the NVC with a degree of discretion in certain situations - see [Guide for Applications to Clear Native Vegetation](#).

Principle a) it comprises a high level of diversity of plant species (patches of vegetation only).

Site A1 contained four native species and 14 exotic species with one additional native species occurring outside the assessment area. A species list is provided in the appendices.

The Bushland Plant Diversity Score for site A1 is 4.0.

Not at variance.

Principle b) it has significance as a habitat for wildlife.

Database searches identified potential threatened species that may be in the area and therefore utilise the paddock trees or Site A1 as habitat. These include one EPBC listed species, South Eastern Red-tailed Black Cockatoo, and 11 NPW listed species;

- Little Lorikeet
- Yellow-tailed Black-cockatoo

- Blue-winged Parrot
- Swamp Wallaby
- Crested Shriketit
- White-winged Chough
- White-bellied Cuckooshrike
- Blue-faced Honeyeater
- Jacky Winter
- Restless Flycatcher
- Peregrine Falcon.

Trees 3, 4, 5, 9, 10, 12 and 13 (Figure 45) contain a total of 11 hollows considered suitable for South Eastern Red-tailed Black Cockatoo, i.e. they are within 45 degrees of vertical and over eight metres above ground level. South Eastern Red-tailed Black Cockatoo prefer to nest within two kilometres of suitable food resources, but will nest up to five kilometres away. Figure 46 demonstrates the proximity of Stringybark (*Eucalyptus baxteri/arenacea*) Woodland to these trees. One suitable food source exists within two kilometers and an additional six within five kilometres.

All trees and Site A1 may also provide nesting, feeding and perching habitat for the eleven listed NPW species.



Figure 45. Trees with hollows potentially suitable for South Eastern Red-tailed Black Cockatoo on Tree 1.



Figure 46. South Eastern Red-tailed Black Cockatoo potential feeding habitat in relation to trees proposed for clearance. Blue hashed area is the site of proposed clearance, green circle is 2km radius and red circle is 5km radius from the property. Green ticks are identified as potential feeding habitat: Stringybark Woodland.

Considering the above information, it is recommended the assessment against this Principle of Clearance be considered **Seriously at Variance**.

Principle c) it includes plants of a rare, vulnerable or endangered species.

Eucalyptus camaldulensis ssp. *camaldulensis* is not listed as a threatened species.

Eucalyptus fasciculosa within Site A1 is listed as Rare under the NP&W Act and the site received a Threatened Flora Score of 0.02, making the clearance of Site A1 to be **At Variance** with this Principles of Clearance.

Principle d) the vegetation comprises the whole, or a part, of a plant community that is rare, vulnerable or endangered (patches of vegetation only).

Not applicable.

Not at Variance.

Principle e) it is significant as a remnant of vegetation in an area which has been extensively cleared.

Remnancy within the Kybybolite IBRA Association is 4% and Wimmera IBRA sub-region is also 4%. Remnancy within a five-kilometer radius of the property is 6%. For scattered trees the remnancy figures are considered to be **At Variance**.

Site A1 has a Total Biodiversity Score of 28.89, which is also considered to be **At Variance** in this location.

Principle f) it is growing in, or in association with, a wetland environment.

The trees and Site 1A are not growing near a wetland as listed on Naturemaps.

Not at Variance.

Principle g) it contributes significantly to the amenity of the area in which it is growing or is situated.

Trees 1 and 2 are located next to Langkoop Road, which is a minor tourist route to Western Victoria from Naracoorte. The remaining trees are not readily visible the road. Being large *Eucalyptus camaldulensis* ssp. *camaldulensis* the removal Trees 1 and 2 may be considered to be **At Variance** with this principle of clearance.

Principles of Clearance (h-m) will be considered by comments provided by the local NRM Board or relevant Minister. The Data Report should contain information on these principles where relevant and where sufficient information or expertise is available.

The proposed clearance of Trees 1 - 15 (Figure 1) has been assessed against the Principles of Clearance a-g and found to be Seriously at Variance against one principle;

- Wildlife habitat.

The proposed clearance was also found to be At Variance against three principles;

- Rare plants (Site A1);
- Significant remnant (Trees and Site A1); and
- Amenity value (Trees 1 and 2)

Carillion Holding Pty Ltd acknowledges the value of the trees and does not seek to fully remove the trees, but has offered to retain the trees insitu keeping the structural value of the trees intact, specifically retaining the availability of hollows for wildlife.

Carillion Holding Pty Ltd requests Trees 3, 4, 5, 9, 10, 12 and 13 be considered for clearance approval despite being Seriously at Variance with Principle (b) *significance of wildlife habitat*.

5. Significant Environmental Benefit

A Significant Environmental Benefit (SEB) is required for approval to clear under Section 28 of the *Native Vegetation Act 1997*. The NVC must be satisfied that as a result of the loss of vegetation from the clearance that an SEB will result in a positive impact on the environment that is over and above the negative impact of the clearance.

The Data Report must propose how the SEB will be achieved in accordance with the [SEB Policy and Guide](#), by providing the following information.

DETERMINATION OF THE SEB OBLIGATION

Clearance Area

Table 2. Summary table of trees proposed for clearance.

Tree Number	Tree Species	Total Tree Score	SEB Points Required
1	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	10.23	10.75
2	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	3.76	3.94
3	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	10.63	11.16
4	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	10.63	11.16
5	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	10.23	10.75
6	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	6.66	6.99
7	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	5.09	5.34
8	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	10.95	11.50
9	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	10.63	11.16
10	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	10.23	10.75
11	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	6.88	7.23
12	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	10.63	11.16
13	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	5.38	5.65
14	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	3.03	3.18
15	<i>Eucalyptus camaldulensis</i> ssp. <i>camaldulensis</i>	10.63	11.16
TOTAL		125.59	131.88*

*Note: The Scattered Tree Scoresheet SEB tab returned an incorrect value for SEB Points of 131.86.

Site A1 was assessed using the Bushland Assessment Method with the following results;

Area: 2.3577

Unit Biodiversity Score: 12.25

Total Biodiversity Score: 28.89

SEB Points required: 57.78 (includes loading of 10% for each since SEB 1997-2118 was established, up to a maximum of 100%)

TOTAL SEB POINTS TO BE ACHIEVED: 189.66

ACHIEVING AN SEB

Indicate how the SEB will be achieved by ticking the appropriate box:

- ☒ Establish a new SEB Area on land owned by the proponent.
- ☐ Use SEB Credit that the proponent has established. Provide the SEB Credit Ref. No. _____
- ☐ Apply to have SEB Credit assigned from another person or body. The [application form](#) needs to be submitted with this Data Report.
- ☐ Apply to have an SEB to be delivered by a Third Party. The [application form](#) needs to be submitted with this Data Report.
- ☐ Pay into the Native Vegetation Fund

FOR A PAYMENT SEB

Carillion Holding Pty Ltd proposes to meet the required SEB through the purchase of land in the South East of South Australia if approval to clear the trees and Site A1 is granted by the NVC. Land purchased will be subject to an assessment by a NVC Accredited Consultant to determine the achievable SEB points. A 10-year SEB Management Plan will be developed and presented to the NVC for approval.

6. Appendices

Appendix 1. Scattered Tree Vegetation Assessment Scoresheets associated with the proposed clearance and SEB Area (to be submitted in Excel format)

Tree No.	Species (plus form and location description)	Height (m)	Diameter at 1m above ground level (cm)	Dieback %	Hollows			Suitability for threatened species		Density 1,2 or 3pts	Proximity to other veg. (m)	Individual Tree Score [sum of categories cubed, and then divided by 55.5] 0 - 100	NP&W Act Listed plant species	Habitat for an EPBC listed species	Total Tree score	Loss Factor	SEB Points Req.
					No. of small	No. of med	No. of large	No. of uncommon species	No. of rare species								
1	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	20.0	205	10	2	2			11	1	1550	71.1		Yes	10.23	1.0	10.75
2	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	18.0	172	55	1	5	1		11	1	1580	39.1		Yes	3.76	1.0	3.94
3	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	20.0	208	5	2	8	12		11	1	960	73.8		Yes	10.63	1.0	11.16
4	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	20.0	225	5	3	4	2		11	1	880	73.8		Yes	10.63	1.0	11.16
5	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	21.0	178	10	3	2	2		11	1	1050	71.1		Yes	10.23	1.0	10.75
6	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	20.0	169	5	1				11	1	900	55.5		Yes	6.66	1.0	6.99
7	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	19.0	146	10	3				11	1	950	42.4		Yes	5.09	1.0	5.34
8	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	21.0	232	1	1	1	1		11	1	730	76.0		Yes	10.95	1.0	11.50
9	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	20.0	186	5	1		2		11	1	890	73.8		Yes	10.63	1.0	11.16
10	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	22.0	231	10	3	2	4		11	1	980	71.1		Yes	10.23	1.0	10.75
11	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	20.0	191	1	1				11	1	1160	57.4		Yes	6.88	1.0	7.23
12	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	21.0	168	5		2	2		11	1	1190	73.8		Yes	10.63	1.0	11.16
13	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	17.0	280	40	2		2		11	1	830	44.8		Yes	5.38	1.0	5.65
14	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	17.0	139	5	0	0	0		11	1	970	31.5		Yes	3.03	1.0	3.18
15	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	21.0	203	5	2		3		11	1	1140	73.8		Yes	10.63	1.0	11.16

SEB Required for Scattered Trees

(Version - 4 January 2018)

NRM Region	SE
Mean Annual Rainfall (mm)	551

Total SEB Points required	131.86
Total SEB \$ required	\$95,360.30

Tree Species	Number of Trees	Total SEB Points required	Payment in NV Fund	Administration fee
Eucalyptus camaldulensis	15	131.86	\$90,819.34	\$4,540.97
	0	0.00	\$0.00	\$0.00

Appendix 2. Site A1 species list.

Native Plants

Species	Common Name	EPBC	SA
<i>Eucalyptus fasciculosa</i>	pink gum		R
<i>Eucalyptus leucoxylon</i>	SA blue gum		
<i>Allocasuarina verticillata</i>	drooping sheoak		
<i>Melaleuca lanceolata</i>	dryland tea tree		

Weeds

<i>Marrubium vulgare</i>	horehound
<i>Lolium rigidum</i>	Wimmera ryegrass
<i>Medicago sp.</i>	medic
<i>Heliotropium europaeum</i>	common heliotrope
<i>Malva parviflora</i>	small flowered marshmallow
<i>Hirschfeldia incana</i>	hoary mustard
<i>Chenopodium album</i>	fat hen
<i>Cynosurus echinatus</i>	rough dog's tail grass
<i>Avena barbata</i>	bearded oat
<i>Diplotaxis tenuifolia</i>	Lincoln weed
<i>Bromus diandrus</i>	great brome
<i>Rumex crispus</i>	curled dock
<i>Hordeum marinum</i>	sea barley grass
<i>Erodium botrys</i>	long heron's bill