

Native Vegetation Clearance Harrogate Road Upgrade Mt Barker District Council Data Report

Clearance under the *Native Vegetation Regulations 2017*

15 July 2021

Prepared by Jackie Ayre, JS Ayre & Associates



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1. Application information

Application Details

Applicant:	Mt Barker District Council		
Key contact:	Daniel Caddy Project Manager Infrastructure T: 8391 7200 E: dcaddy@mountbarker.sa.gov.au		
Landowner:	Mount Barker District Council		
Site Address:	Harrogate Road, Tee Road to Harrogate		
Local Government Area:	Mt Barker District Council	Hundred:	Kanmantoo
Title ID:	N/A Road Reserve	Parcel ID	N/A Road Reserve

Summary of proposed clearance

Purpose of clearance	Required for the upgrade of 1.2km of Harrogate Road
Native Vegetation Regulation	Regulation 12 (34), Infrastructure
Description of the vegetation under application	<u>Size, type and general condition</u> – juvenile to mature River Red Gum (<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>), and semi mature Drooping Sheoak (<i>Allocasuarina verticillata</i>) scattered trees, in poor to good condition.
Total proposed clearance	Up to 79 scattered trees are proposed to be cleared.
Level of clearance	Level 3
Overlay (Planning and Design Code)	Native Vegetation Overlay



Mitigation hierarchy	Designers requested to avoid important trees; draft concept amended to avoid trees, including steepening of batters, reducing impacts from 152 to 79 trees, with a further reduction likely following Arborist review of construction impacts, with potential to avoid or reduce impacts to a further 28 trees.
SEB Offset proposal	Use of SEB Credit Site No# 2010_3044, plus 6:1 onsite planting

2. Purpose of clearance

2.1 Description

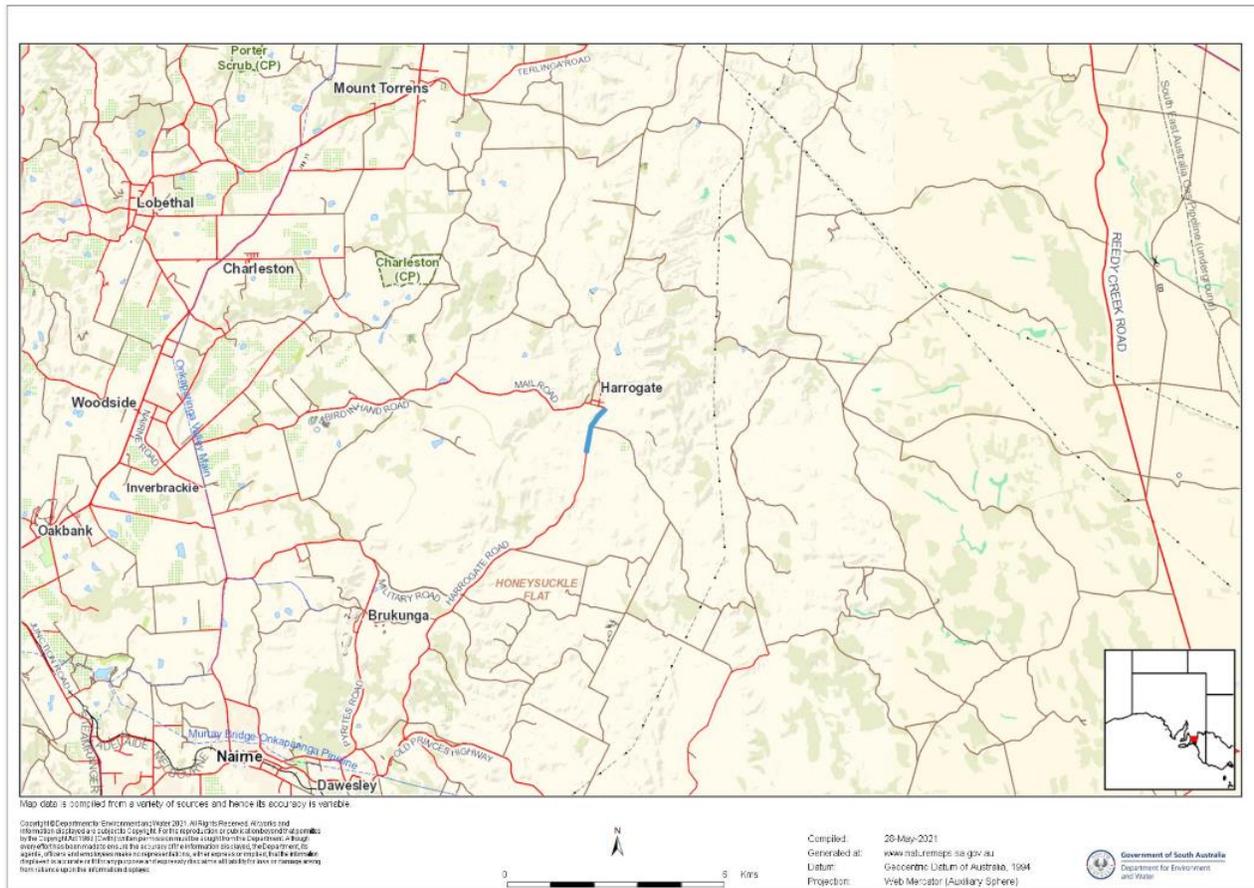
The unsealed section of Harrogate Road between Tee Road and the northern sealed section, south of Harrogate, is to be upgraded to improve performance, safety and comfort for road users. The upgrade aims to achieve a road width of 6m, with 0.5m sealed shoulders, and associated drainage, batters and Safe Intersection Sight Distance (SISD) for the junction with The Glen Road.

2.2 Background

The local area is primarily grazing land, with pockets of revegetation, including an SEB site, to the west of the road. A small cemetery borders the road and Harrogate township is located at the northern end of the project. Scattered remnant trees are evident across the landscape and some of these fringe the road reserves, often in higher densities.

The section to be upgraded is the last unsealed portion from the Freeway to Harrogate. With crests, curves and junctions, the safety of this section will be significantly improved by sealing and associated works. There are no other proposed nor anticipated developments associated with this project.

2.3 General location map (site in blue)



2.4 Site boundary map



2.5 Details of the proposal

The section of road subject to the upgrade is approximately 1200m long and contains crests and curves which contribute to the potential for incidents and increase maintenance requirements. A cemetery is situated to the west, and several property accesses and a side road (Glen Road) join with Harrogate road in this section.

Works will include cut and fill battering, new and/or improved drainage, and carriageway and shoulder sealing. The works have potential to impact a number of remnant scattered trees on the road reserve, as some are within the new footprint, and others likely to be impacted by excavation for drainage, batters or shoulder sealing, or for the achievement of sight distance.

At 100% design stage, up to 79 trees are likely to be impacted, requiring removal. However, a proposed review of construction impacts to trees considered 'borderline' removals, has potential to reduce impact to, or avoid removal of, up to 28 of the 79 trees.

See Appendix 3 for detailed design drawings.

2.6 Approvals required or obtained

- Native Vegetation Act 1991 this report is in part fulfillment of the requirements of this Act. There is a previous Scattered Tree clearance application associated with this project - 2007_3101, relating to 13 trees on the road reserve.
- Planning, Development and Infrastructure Act 2016 - N/A
- Water Resources Act 1997 – N/A
- Environment Protection and Biodiversity Conservation Act 1999 - N/A
- National Parks and Wildlife Act 1972 – N/A
- Landscapes SA – a water affecting activity permit is to be applied for
- Aboriginal Heritage Act 1988 – work will be mainly within the previously disturbed road formation and verge and is not considered to pose a high risk of encountering Aboriginal sites or objects. Council has a Stop Works Procedure which is a guideline for the assessment and management of Aboriginal objects, sites and remains, should any be disturbed during construction of infrastructure projects or maintenance activities.

2.7 Native Vegetation Regulation

Regulation 12 (34), Infrastructure.

3. Method

3.1 Flora assessment

Following a review of background information and literature, a six hour site assessment was undertaken by Jackie Ayre on 24th May 2021. A follow up visit occurred on 1st, 10th and 28th June 2021, to address changes evident in updated design plans and investigate mitigation options. The scope of works was provided by the client prior to the field survey and the assessment informed by research using Naturemaps and Google Earth street view. The client was available to clarify the scope during the field work, and during report development. The survey involved an assessment of scattered trees, and a general assessment of the site including identification of possible habitat for species of conservation significance.

An online search was undertaken for Environment Protection and Biodiversity Conservation (EPBC) Act "Matters of Environmental Significance" and an interrogation of the Atlas of Living Australia (AoLA) and the BDBSA databases was completed as background to the field assessment. Eleven threatened plant species were recorded in the database search. None were found on site.

3.2 Fauna assessment

A review of databases including the EPBC Act "Matters of Environmental Significance", AoLA and BDBSA was undertaken prior to the site visit to establish fauna species known, or considered likely, to occur at the site. All observations, calls and evidence of presence were recorded as field notes. Bird species were recorded when heard calling, or when observed within, adjacent to, or flying over the site. Evidence of fauna species presence was searched for and recorded when observed. If hollows were found, closer inspection with binoculars was undertaken.

Seventeen threatened fauna species were recorded in the database search, including two EPBC Vulnerable, and seven State Rare, two vulnerable, and six at subspecies level. One listed species (White-winged Chough, State Rare), was observed on site. Also noted were faecal pellets of the State Rare listed Common Brushtail Possum, and whilst this species was not recorded in the database search, it is recorded just over 6km away at Charleston Conservation Park.

4. Assessment Outcomes

4.1 Vegetation Assessment

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

- *Landform, geography and soils*
Soils are described as reddish brown loamy surface soil overlying a well-structured dark brown clay subsoil (Soil Characterization Site data sheet CH059), with slopes of undulating to rolling rises and low hills.
- *Landform features of significance*
A stream of the order '2' runs alongside the road to the west, and eventually feeds into the Bremer River to the East. Two small rock outcrops were observed to the east of the site. Elevation is from 265m to 305m above sea level.
- *General overview of the vegetation under application as a whole*
A single vegetation association was observed on the road reserve and in adjacent property: *Eucalyptus camaldulensis* var *camaldulensis* +/- *Allocasuarina verticillata* Woodland. The vegetation impacted includes 71 *Eucalyptus camaldulensis* var *camaldulensis* and 8 *Allocasuarina verticillata* trees.
- *General description of the vegetation relating to type and condition*
The vegetation impacted is mainly mature or semi-mature River Red Gums, and several semi mature Drooping Sheoak scattered trees, many of which have suffered scalding from the last bushfire. The association is fairly consistent across the site and presents as few large mature, hollow bearing trees, a large number of semi mature, and few juvenile trees.
- *Provide a description of the landscape context for the vegetation*
The scattered trees on the road reserve are consistent with the pattern of remnant vegetation across the landscape. An SEB offset area associated with clearance application 2007_3101, occurs adjacent the western road reserve from Glen Road to the northern extent of the project site, and in the adjacent property. Charleston Conservation park is located approximately 6km to the northwest.

Details of the scattered trees proposed to be impacted

Tree #	Tree spp.	No. of trees	Height (m)	Hollows	Diameter (cm)	Canopy dieback (%)	Biodiversity Score	General comments	Photo #
3	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	1	14.0	0	75	40	2.16	Large tree in fair condition providing potential habitat for a number of threatened species	1
4	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	1	8.0	0	30	30	0.46	Small tree in fair condition providing limited habitat for threatened species	2
6	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	2	6.0	0	10	0	0.64	Small trees in fair-good condition providing limited habitat for threatened species	3
14	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	3	14.0	0	30	25	3.07	Small trees in fair-good condition providing limited habitat for threatened species	4
15	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	1	6.0	0	20	40	0.28	Small tree in fair condition providing limited habitat for threatened species	5
15a	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	2	6.0	0	10	0	0.64	Small trees in fair condition providing limited habitat for threatened species	6
16	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	2	14.0	0	40	30	2.45	Small trees in fair condition providing limited habitat for threatened species	7

Tree #	Tree spp.	No. of trees	Height (m)	Hollows	Diameter (cm)	Canopy dieback (%)	Biodiversity Score	General comments	Photo #
19	Eucalyptus camaldulensis var camaldulensis	1	12.0	0	50	15	1.39	Medium tree in good condition providing potential habitat for a number of threatened species. POTENTIAL TO RETAIN PENDING CONSTRUCTION IMPACTS	8
20	Eucalyptus camaldulensis var camaldulensis	8	9.0	0	25	10	4.20	Small - medium trees in good condition providing potential habitat for a number of threatened species	9
21	Eucalyptus camaldulensis var camaldulensis	1	16.0	0	65	10	3.32	Medium tree in good condition providing habitat for a number of threatened species	10
24	Eucalyptus camaldulensis var camaldulensis	1	14.0	0	40	5	1.98	Medium tree in good condition providing habitat for a number of threatened species POTENTIAL TO RETAIN PENDING CONSTRUCTION IMPACTS	11
31	Eucalyptus camaldulensis var camaldulensis	1	16.0	0	70	40	2.25	Medium tree in fair condition providing habitat for a number of threatened species POTENTIAL TO RETAIN PENDING CONSTRUCTION IMPACTS	12

Tree #	Tree spp.	No. of trees	Height (m)	Hollows	Diameter (cm)	Canopy dieback (%)	Biodiversity Score	General comments	Photo #
32	Eucalyptus camaldulensis var camaldulensis	1	16.0	0	80	20	3.55	Medium tree in good condition providing habitat for a number of threatened species POTENTIAL TO RETAIN PENDING CONSTRUCTION IMPACTS	13
33	Eucalyptus camaldulensis var camaldulensis	1	10.0	0	60	80	0.54	Small-medium tree in poor condition providing limited habitat for threatened species	14
34	Eucalyptus camaldulensis var camaldulensis	9	13.0	0	40	30	10.48	Small-medium trees in poor - good condition providing habitat for a number of threatened species POTENTIAL TO RETAIN 3 OF 9 TREES PENDING CONSTRUCTION IMPACTS	15
36	Eucalyptus camaldulensis var camaldulensis	5	14.0	0	40	15	6.89	Medium trees in fair-good condition providing habitat for a number of threatened species	16
38	Eucalyptus camaldulensis var camaldulensis	2	14.0	0	30	10	2.32	Medium trees in fair-good condition providing habitat for a number of threatened species	17
42	Eucalyptus camaldulensis var camaldulensis	2	14.0	0	40	10	2.86	Medium trees in fair condition providing habitat for a number of threatened species	18

Tree #	Tree spp.	No. of trees	Height (m)	Hollows	Diameter (cm)	Canopy dieback (%)	Biodiversity Score	General comments	Photo #
45	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	1	16.0	0	60	15	2.45	Large tree in good condition providing habitat for a number of threatened species POTENTIAL TO RETAIN PENDING CONSTRUCTION IMPACTS	19
47	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	2	9.0	0	35	40	1.02	Medium trees in poor condition providing limited habitat for threatened species	20
48	<i>Allocasuarina verticillata</i>	4	9.0	0	30	20	8.63	Small-medium trees in poor - fair condition providing limited habitat for threatened species. The trees are slow to recover from a recent fire.	21
49	<i>Allocasuarina verticillata</i>	2	8.0	0	20	20	2.34	Small-medium trees in poor-fair condition providing limited habitat for threatened species. The trees are slow to recover from a recent fire.	22
49a	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	1	8.0	0	30	30	0.46	Medium tree in fair condition providing limited habitat for threatened species	22
50	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	1	10.0	0	50	50	0.63	Medium tree in fair condition providing limited habitat for threatened species	23

Tree #	Tree spp.	No. of trees	Height (m)	Hollows	Diameter (cm)	Canopy dieback (%)	Biodiversity Score	General comments	Photo #
51	<i>Allocasuarina verticillata</i>	1	9.0	0	25	50	1.16	Small tree in poor condition providing limited habitat threatened species. The tree is slow to recover from a recent fire POTENTIAL TO RETAIN PENDING CONSTRUCTION IMPACTS	24
52	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	1	10.0	0	20	60	0.29	Small tree in fair condition providing limited habitat for threatened species POTENTIAL TO RETAIN PENDING CONSTRUCTION IMPACTS	25
53	<i>Allocasuarina verticillata</i>	1	4.0	0	5	20	0.29	Small tree in poor condition providing limited habitat for threatened species	26
54	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	3	2.0	0	4	30	0.39	Small trees in poor-fair condition providing limited habitat for threatened species	27
55	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	1	12.0	0	60	20	1.97	Medium tree in fair condition providing habitat for a number of threatened species POTENTIAL TO RETAIN PENDING CONSTRUCTION IMPACTS	28
56	<i>Eucalyptus camaldulensis</i> var <i>camaldulensis</i>	1	11.0	0	40	20	1.14	Medium trees in poor-fair condition providing habitat for threatened species POTENTIAL TO RETAIN PENDING CONSTRUCTION IMPACTS	29

Tree #	Tree spp.	No. of trees	Height (m)	Hollows	Diameter (cm)	Canopy dieback (%)	Biodiversity Score	General comments	Photo #
57	Eucalyptus camaldulensis var camaldulensis	3	12.0	0	40	5	4.05	Medium trees in good condition providing habitat for threatened species POTENTIAL TO RETAIN PENDING CONSTRUCTION IMPACTS	30
62	Eucalyptus camaldulensis var camaldulensis	13	14.0	0	50	40	16.35	Small-large trees in fair-good condition providing habitat for a number of threatened species POTENTIAL TO RETAIN PENDING CONSTRUCTION IMPACTS	31

Site maps showing location of scattered trees/groups impacted



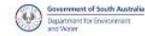


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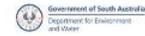


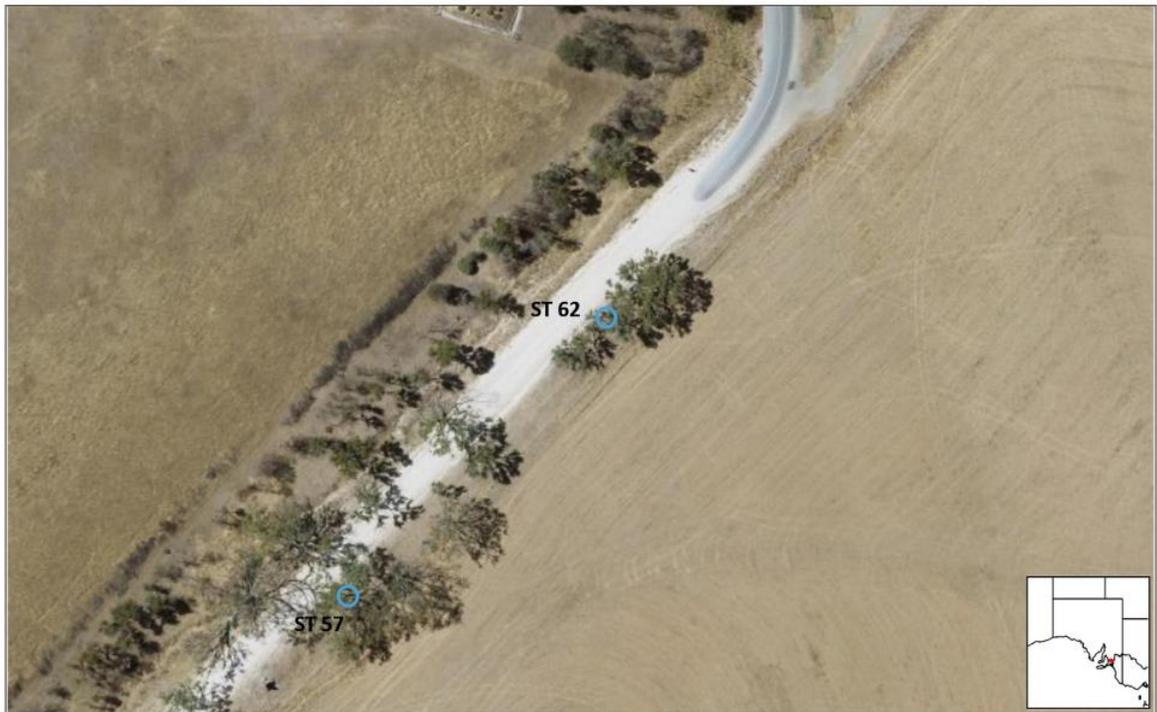
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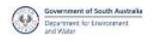


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4.2 Threatened Species assessment

Species observed on site, or recorded within 5km of the application area since 1995, or the vegetation is considered to provide suitable habitat

Species (common name)	NP&W Act	EPBC Act	Data source	Date of last record	Species known habitat preferences	Likelihood of use for habitat – Comments
<i>Corcorax melanorhamphos</i> White-winged Chough	R	-	4	2020	Open forests and woodlands, wetter areas with leaf litter and mud	Known - observed within 60m of the site during the assessment
<i>Dromaius novaehollandiae</i> Emu	ssp	ssp	4	2018	Mainly sclerophyll forest and savannah woodland	Likely, recent record and suitable habitat
<i>Falco peregrinus macropus</i> Peregrine Falcon	R	-	4	2017	A range of habitats, preferring coastal and inland cliffs or open woodlands near water	Likely, recent record and suitable habitat
<i>Falcunculus frontatus frontatus</i> Eastern Shrike-tit	R		4	2018	Eucalypt forest and woodland, gullies and along rivers, parks, gardens	Possible – recently recorded but suitable habitat limited
<i>Melanodryas cucullata</i> Hooded Robin	ssp	-	4	2018	Prefers open eucalypt woodlands, acacia scrub and mallee, with tall native grasses, often near clearings or open areas.	Possible – recently recorded but suitable habitat limited
<i>Melithreptus gularis</i> Black-chinned Honeyeater	ssp	-	4	2009	Upper levels of eucalypt forests/woodlands with box and ironbarks, sometimes gardens and street trees	Possible – recently recorded but suitable habitat limited
<i>Microeca fascians</i> Jacky Winter	ssp	-	4	2017	Open woodland with open shrub layer and bare ground	Possible – recently recorded but suitable habitat limited
<i>Myiagra inquieta</i> Restless Flycatcher	R	-	4	2017	Open forests, woodland; farmland	Likely, recent record and suitable habitat
<i>Neophema elegans elegans</i> Elegant Parrot	R	-	4	2017	A wide range of habitats, grasslands, shrublands, mallee, woodlands, thickets, and farmland	Possible – recently recorded but suitable habitat limited
<i>Petroica phoenicea</i> Flame Robin	V	-	4	1995	Prefers wetter forest and woodlands with clearings and less understorey, open woodlands, grasslands	Unlikely – old record and suitable habitat not available
<i>Spatula rhynchotis</i> Australasian Shoveler	R	-	4	2017	Large, undisturbed vegetated freshwater swamps and open waterways	Unlikely – suitable habitat not present
<i>Stagonopleura guttata</i> Diamond Firetail	V	-	4	2020	Grassy eucalypt woodland, open forest, mallee, grasslands	Possible – recently recorded but

						suitable habitat limited
<i>Strepera versicolor</i> Grey Currawong	ssp	-	4	2017	Broad habitat range including mallee, woodlands, heaths, farms, orchards	Likely, recent record and suitable habitat
<i>Turnix varius varius</i> Painted Buttonquail	R	-	4	2018	Grassy eucalypt woodland, open forest, mallee, grasslands	Possible – recently recorded but suitable habitat limited
<i>Zoothera lunulata halmaturina</i> Bassian Thrush (sthn FR, MLR, KI)	SP	VU	4	1995	Damp Eucalypt forest or woodland, favouring densely forested areas and gullies, usually with dense canopy and understorey, leaf litter. Also in Pine plantations	Unlikely – suitable habitat not present
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox	R	VU	4	2020	A range of habitats including urban gardens	Possible – recently recorded but suitable habitat limited
<i>Tachyglossus aculeatus</i> Short-beaked Echidna	ssp	ssp	4	2002	Wide range of habitat types	Possible – recently recorded but suitable habitat limited
Source; 1- BDBSA, 2 - AoLA, 3 – NatureMaps 4 – Observed/recorded in the field, 5 - Protected matters search tool, 6 – others NP&W Act; E= Endangered, V = Vulnerable, R= Rare EPBC Act; Ex = Extinct, CR = Critically endangered, EN = Endangered; VU = Vulnerable						

Criteria for the likelihood of occurrence of species within the Study area.

Likelihood	Criteria
Highly Likely/Known	Recorded in the last 10 years, the species does not have highly specific niche requirements, the habitat is present and falls within the known range of the species distribution or; The species was recorded as part of field surveys.
Likely	Recorded within the previous 20 years, the area falls within the known distribution of the species and the area provides habitat or feeding resources for the species.
Possible	Recorded within the previous 20 years, the area falls inside the known distribution of the species, but the area provide limited habitat or feeding resources for the species. Recorded within 20 -40 years, survey effort is considered adequate, habitat and feeding resources present, and species of similar habitat needs have been recorded in the area.
Unlikely	Recorded within the previous 20 years, but the area provide no habitat or feeding resources for the species, including perching, roosting or nesting opportunities, corridor for movement or shelter. Recorded within 20 -40 years; however, suitable habitat does not occur, and species of similar habitat requirements have not been recorded in the area. No records despite adequate survey effort.

4.3 Cumulative impact

Describe all the sources of likely impact on native vegetation that have been considered and addressed as part of this application and the expected extent and severity of those impacts.

The impacts quantified in this assessment assume removal (Loss Factor 1). There are likely to be cases where impact is less, for example Loss Factors potentially between 0.8 – 0.4, where root impacts cannot be quantified until works begin, such as for excavation of batter slopes to facilitate minor widening, shoulder formation and drainage.

Clearance directly required for the development:

This report documents all associated clearance including that for construction, sight distance, and operation of the asset. There is not likely to be any further clearance associated with the works as the impact has, in many cases, been overestimated (for example, where actual impacts on root systems are impossible to quantify).

Subsequent clearance that will be permitted or required (e.g. 10m around a building, 20m around a dwelling, clearance for fire protection):

No further clearance, including that associated with fire safety or prevention will be necessary.

Indirect clearance that may occur as a result of the development:

The current impact of dust nuisance will be reduced as a result of sealing the road. Changes to roadside drainage are minimal and should not have any detrimental impact other than that accounted for in this assessment and required to achieve functionality.

Future stages or associated components of a development:

Future stages are unlikely – this section completes the sealing of Harrogate Road from the south (via the SE Freeway and Nairne) and east (via Woodside).

4.4 Address the Mitigation Hierarchy

When exercising a power or making a decision under Division 5 of the Native Vegetation Regulations 2017, the NVC must have regard to the mitigation hierarchy. The NVC will also consider, with the aim to minimize, impacts on biological diversity, soil, water and other natural resources, threatened species or ecological communities under the EPBC Act or listed species under the NP&W Act.

a) Avoidance – outline measures taken to avoid clearance of native vegetation

The design consultant was instructed to avoid the removal of notable trees, adjusting the alignment wherever possible to achieve reduced impact. Following review of the draft assessment report, further design changes were undertaken to avoid impacting many scattered trees. These include minor alignment changes and steepening of batters at some locations to avoid or reduce impact to trees. The outcome was a reduction of impact from 152 to 79 scattered trees. Furthermore, Council is planning to undertake tree removals in two stages; Stage 1 will remove the 'definitely impacted' trees, and Stage 2 will review the trees potentially impacted during construction (impacts are likely to be within root zones) and remove only those that present a safety hazard which cannot be resolved in other ways. This has potential to reduce impact to, or avoid removal of, up to 28 trees, and will ensure that no tree is removed without necessity.

- b) Minimization – if clearance cannot be avoided, outline measures taken to minimize the extent, duration and intensity of impacts of the clearance on biodiversity to the fullest possible extent (whether the impact is direct, indirect or cumulative).**

There is limited scope to change the location, but horizontal and vertical alignment and changes were made to avoid impacts wherever possible. Council intends to have their arborist review impacts of construction within root zones of trees considered 'borderline' removals, who can then determine the need for removal based on safety and impact level.

- c) Rehabilitation or restoration – outline measures taken to rehabilitate ecosystems that have been degraded, and to restore ecosystems that have been degraded, or destroyed by the impact of clearance that cannot be avoided or further minimized, such as allowing for the re-establishment of the vegetation.**

Council will apply its 6:1 replacement planting policy and plant up to 500 trees on the roadside following completion of construction works, and natural regeneration will be encouraged. In addition, the appropriate SEB offset will be provided via on ground works at Council's SEB offset site # 2010_3044.

- d) Offset – any adverse impact on native vegetation that cannot be avoided or further minimized should be offset by the achievement of a significant environmental benefit that outweighs that impact.**

The proponent intends to achieve the required SEB offset by on ground works at the registered SEB offset site #2010_3044. In addition, Council will apply its 6:1 replacement planting policy and plant up to 500 trees on the roadside following completion of construction works.

4.5 Principles of Clearance (Schedule 1, Native Vegetation Act 1991)

The Native Vegetation Council will consider Principles 1(b), 1(c) and 1(d) when assigning a level of Risk under Regulation 16 of the Native Vegetation Regulations. The Native Vegetation Council will consider all the Principles of clearance of the Act as relevant, when considering an application referred under the *Planning, Development and Infrastructure Act 2016*.

Principle of clearance	Relevant information	Assessment against the principles	Moderating factors that may be considered by the NVC
<i>Principle 1b - significance as a habitat for wildlife</i>	See 4.2 for details of threatened species that were recorded or may use the vegetation. 14 of the 17 recorded are considered known, likely or possibly using the vegetation assessed. Scattered Trees; Threatened Fauna Habitat Score 1.8 Total Biodiversity Score 90.66 No trees have an individual TBS of >7.	<u>Seriously at Variance</u> All scattered trees assessed have a Threatened Fauna habitat score of > 1.2 and thus clearance is seriously at variance.	<ul style="list-style-type: none"> • Significant benefit • Non-essential habitat
<i>Principle 1c - plants of a rare, vulnerable or endangered species</i>	None of the listed threatened plant species were observed on the site, nor are considered likely to be present. Threatened Flora Score(s) - 0	<u>Seriously at Variance</u> N/A <u>At Variance –</u> N/A	
<i>Principle 1d - the vegetation comprises the whole or part of a threatened plant community</i>	No threatened communities under the EPBC Act or threatened ecosystems under the DEW Provisional list of threatened ecosystems were recorded or present Threatened Community Score N/A	<u>Seriously at Variance</u> N/A	

4.6 Risk Assessment

Determine the level of risk associated with the application

Total clearance	No. of trees	79
	Area (ha)	N/A
	Total biodiversity Score	90.66
Seriously at variance with principle 1(b), 1(c) or 1 (d)		1(b)
Risk assessment outcome		Level 3 elevated to L4

5. Clearance summary

Scattered trees Summary table

Tree or Cluster ID	Number of trees	Fauna Habitat score	Threatened flora score	Biodiversity score	Loss factor	SEB Points required	SEB Payment	Admin Fee
3	1	1.8	0	2.16	1.0	2.27	\$1,750.45	incl
4	1	1.8	0	0.46	1.0	0.49	\$376.14	"
6	2	1.8	0	0.64	1.0	0.67	\$520.48	"
14	3	1.8	0	3.07	1.0	3.23	\$2,488.18	"
15	1	1.8	0	0.28	1.0	0.29	\$224.11	"
15a	2	1.8	0	0.64	1.0	0.67	\$520.48	"
16	2	1.8	0	2.45	1.0	2.57	\$1,983.72	"
19	1	1.8	0	1.39	1.0	1.46	\$1,123.13	"
20	8	1.8	0	4.20	1.0	4.41	\$3,400.94	"
21	1	1.8	0	3.32	1.0	3.48	\$2,687.77	"
24	1	1.8	0	1.98	1.0	2.08	\$1,605.56	"
31	1	1.8	0	2.25	1.0	2.37	\$1,826.05	"
32	1	1.8	0	3.55	1.0	3.73	\$2,875.17	"
33	1	1.8	0	0.54	1.0	0.57	\$436.74	"
34	9	1.8	0	10.48	1.0	11.00	\$8,486.99	"
36	5	1.8	0	6.89	1.0	7.23	\$5,579.74	"
38	2	1.8	0	2.32	1.0	2.44	\$1,879.60	"
42	2	1.8	0	2.86	1.0	3.01	\$2,319.00	"
45	1	1.8	0	2.45	1.0	2.57	\$1,983.72	"
47	2	1.8	0	1.02	1.0	1.07	\$824.19	"
48	4	1.8	0	8.63	1.0	9.06	\$6,991.15	"
49	2	1.8	0	2.34	1.0	2.45	\$1,892.41	"
49a	1	1.8	0	0.46	1.0	0.49	\$376.14	"
50	1	1.8	0	0.63	1.0	0.66	\$507.21	"
51	1	1.8	0	1.16	1.0	1.22	\$938.20	"
52	1	1.8	0	0.29	1.0	0.31	\$237.24	"
53	1	1.8	0	0.29	1.0	0.31	\$237.24	"
54	3	1.8	0	0.39	1.0	0.41	\$317.86	"
55	1	1.8	0	1.97	1.0	2.07	\$1,595.53	"
56	1	1.8	0	1.14	1.0	1.20	\$923.91	"
57	3	1.8	0	4.05	1.0	4.26	\$3,283.76	"
62	13	1.8	0	16.35	1.0	17.17	\$13,241.74	"
Total	79			90.66		95.19	\$69 937.63	\$3846.57

Totals summary table

	Total Biodiversity score	Total SEB points required	SEB Payment	Admin Fee	Total Payment
Application	90.66	95.19	\$69 937.63	\$3846.57	\$73 784.20

Economies of Scale Factor	0.5
Rainfall (mm)	557

6. Significant Environmental Benefit

A Significant Environmental Benefit (SEB) is required for approval to clear under Division 5 of the *Native Vegetation Regulations 2017*. 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.

ACHIEVING AN SEB

Indicate how the SEB will be achieved by ticking the appropriate box and providing the associated information:

Use SEB Credit that the proponent has established. SEB Credit Ref. No. 2010_3044

7. Appendices

Appendix 1. Fauna and Flora Species Lists

CLASS NAME	SPECIES	COMMON NAME	NATIONAL RATING	STATE RATING
AVES	<i>Corcorax melanorhamphos</i>	White-winged Chough		R
AVES	<i>Dromaius novaehollandiae</i>	Emu	ssp	ssp
AVES	<i>Falco peregrinus macropus</i>	Peregrine Falcon		R
AVES	<i>Falcunculus frontatus</i>	Eastern Shriketit		R
AVES	<i>Melanodryas cucullata</i>	Hooded Robin		ssp
AVES	<i>Melithreptus gularis</i>	Black-chinned Honeyeater		ssp
AVES	<i>Microeca fascinans</i>	Jacky Winter		ssp
AVES	<i>Myiagra inquieta</i>	Restless Flycatcher		R
AVES	<i>Neophema elegans elegans</i>	Elegant Parrot		R
AVES	<i>Petroica phoenicea</i>	Flame Robin		V
AVES	<i>Spatula rhynchotis</i>	Australasian Shoveler		R
AVES	<i>Stagonopleura guttata</i>	Diamond Firetail		V
AVES	<i>Strepera versicolor</i>	Grey Currawong		ssp
AVES	<i>Turnix varius varius</i>	Painted Buttonquail		R
AVES	<i>Zoothera lunulata halmaturina</i>	Bassian Thrush (southern FR, MLR, KI)	VU	SP
MAMMALIA	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	VU	R
MAMMALIA	<i>Tachyglossus aculeatus</i>	Short-beaked Echidna	ssp	ssp

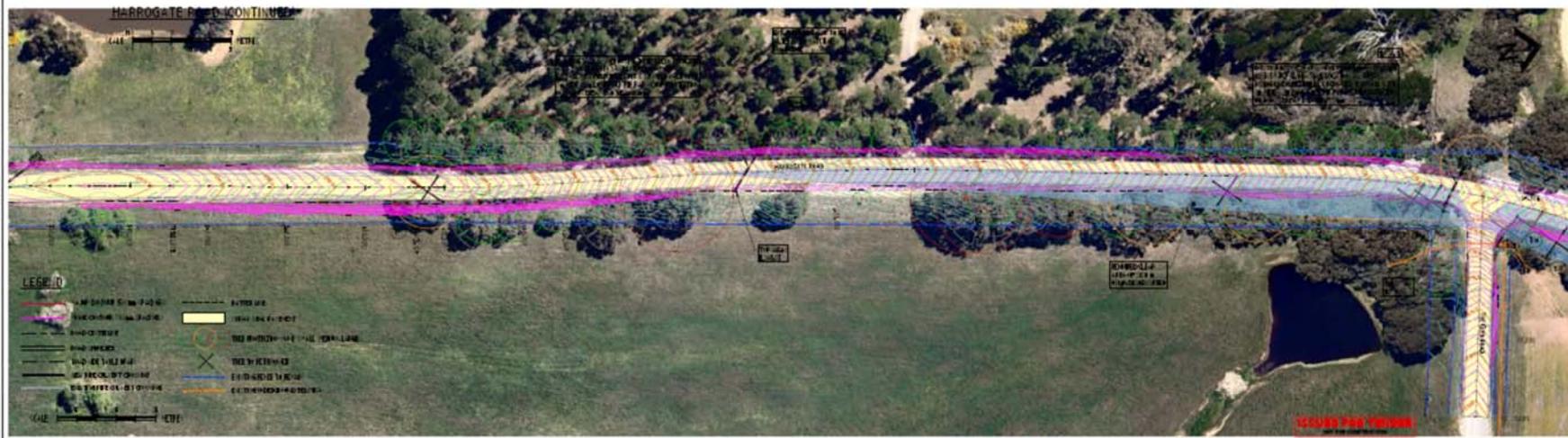
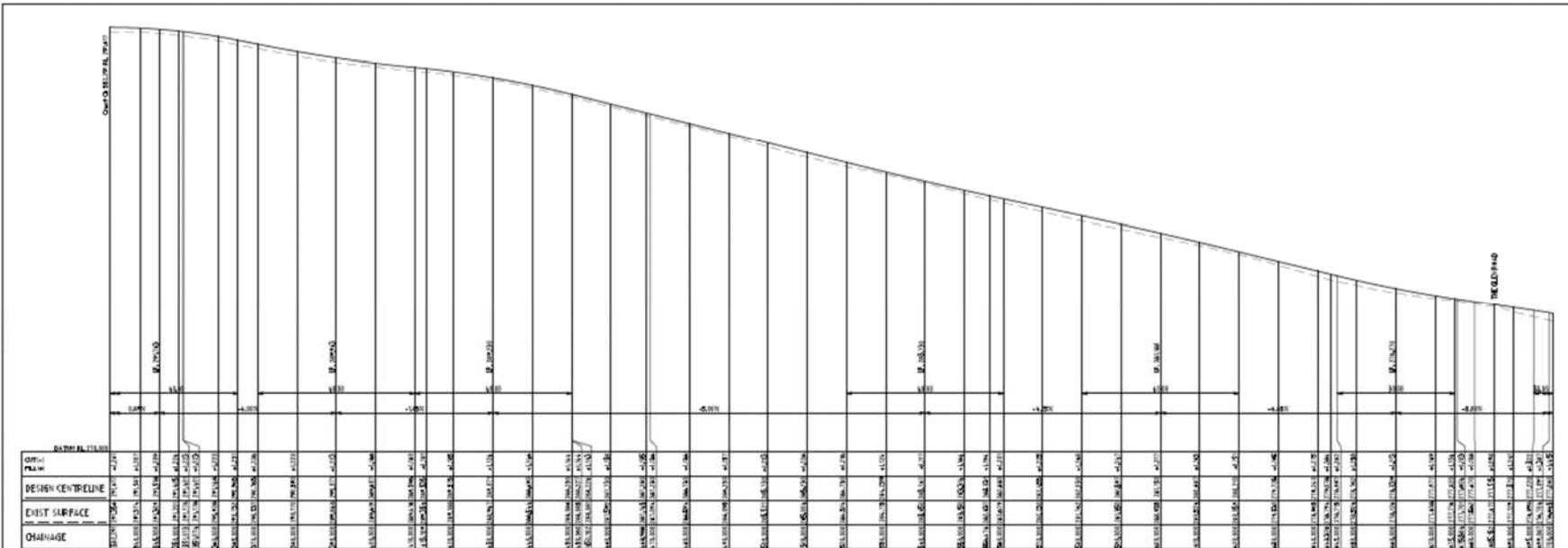
FAMILY NAME	SPECIES	COMMON NAME	NATIONAL RATING	STATE RATING
AMARANTHACEAE	<i>Ptilotus erubescens</i>	Hairy-tails		R
GRAMINEAE	<i>Austrostipa densiflora</i>	Fox-tail Spear-grass		R
GRAMINEAE	<i>Bothriochloa macra</i>	Red-leg Grass		R
LEGUMINOSAE	<i>Acacia menzели</i>	Menzel's Wattle	VU	V
LEGUMINOSAE	<i>Sphaerolobium minus</i>	Leafless Globe-pea		R
LILIACEAE	<i>Dianella longifolia</i> var. <i>grandis</i>	Pale Flax-lily		R
MYRTACEAE	<i>Eucalyptus fasciculosa</i>	Pink Gum		R
MYRTACEAE	<i>Eucalyptus viminalis</i> ssp. <i>viminalis</i>	Manna Gum		R
ORCHIDACEAE	<i>Caladenia argocalla</i>	White Beauty Spider-orchid	EN	E
ORCHIDACEAE	<i>Thelymitra holmesii</i>	Blue Star Sun-orchid		V
ORCHIDACEAE	<i>Prasophyllum pallidum</i>	Pale Leek-orchid	VU	

Appendix 2. Scattered Tree Vegetation Assessment Scoresheet

SEB Required for Scattered Trees			(Version - 1 July 2020)		
Landscapes Region	H&F		Total Biodiversity Score	90.66	
Mean Annual Rainfall (mm)	557		Total SEB Points required	95.19	
Economies of Scale factor	0.5		Total SEB \$ required	\$73,784.20	
IBRA Association		Eden Valley			
Tree Species	Number of Trees	Total SEB Points required	Payment in NV Fund (GST Exclusive)	Administration fee (GST Inclusive)	Total
Eucalyptus camaldulensis	28	82.15	\$60,357.64	\$3,319.67	\$63,677.31
Allocasuarina verticillata	4	13.04	\$9,580.00	\$526.90	\$10,106.90
	0	0.00	\$0.00	\$0.00	\$0.00



Harrogate
Scattered Tree Score



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<p>T. J. SMITH M. JONES</p>	<p>DATE: 15/05/2024</p>				

Appendix 4. Scattered Tree Photographs