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## Title of Proposal - South Gippsland Highway Realignment, Koonwarra

### Section 1 - Summary of your proposed action

Provide a summary of your proposed action, including any consultations undertaken.

#### 1.1 Project Industry Type

Transport - Land

#### 1.2 Provide a detailed description of the proposed action, including all proposed activities.

The realignment of the South Gippsland Highway south of the township of Koonwarra in South Gippsland will replace 3.4 kilometres of a steep, winding and slow section of the highway at a location known locally as Black Spur.

The realignment commences east of Old Koonwarra-Meenian Road, passing through farmland and crossing the existing highway and Great Southern Rail Trail. It then follows an existing ridgeline before crossing the Tarwin River both upstream and downstream of its confluence with Black Spur Creek and ties into the existing highway, east of Minns Road.

The proposed works include:

- Clearing and grubbing of vegetation, including tree removal and stripping and stockpiling of topsoil
- Establishment of an ancillary works area including construction of temporary access roads, site office, workshops and stockpiles
- Excavation of formation construction works including disposal of all waste and excavated material. Construction will include deep cuttings up to 20m in depth
- Construction of retaining walls
- Construction of verges and table drains
- Installation of drainage pipes and pits
- Construction of kerb and channel
- Construction of two new bridges over the Tarwin River West Branch.
- Construction of new full depth granular pavement between Old Koonwarra-Meenian Road and Minns Road
- Construction of a new intersection for Caithness Road including turn lanes and street lighting
- Upgrade of Minns Road intersection including turn lanes and street lighting
- Construction of a highway underpass east of the new Caithness Road intersection for the Great Southern Rail Trail
- Realignment of the Great Southern Rail Trail under the new river bridge at the Minns Road end
- Supply and installation of steel beam guardfence, wire rope safety barrier and concrete barrier
- Preparation and application of sprayed seal and asphalt surfacing
- Closure of access to the old section of highway to through traffic east of Caithness Road while



retaining access for local residents

- Landscaping the road reserve within the new alignment and redundant highway including topsoiling, seeding and planting

Plans of the project are included in Attachments 1 to 4.

**1.3 What is the extent and location of your proposed action? Use the polygon tool on the map below to mark the location of your proposed action.**

Area	Point	Latitude	Longitude
Project Area	1	-38.548604824998	145.95022048698
Project Area	2	-38.549511026317	145.95150794731
Project Area	3	-38.550601809053	145.95303144203
Project Area	4	-38.551189146749	145.95365371452
Project Area	5	-38.552112096292	145.95427598701
Project Area	6	-38.553186059027	145.95476951347
Project Area	7	-38.554243225426	145.9548982595
Project Area	8	-38.555803775983	145.95526303993
Project Area	9	-38.557834119008	145.95616426216
Project Area	10	-38.559361033419	145.95657195793
Project Area	11	-38.560116088999	145.95680799232
Project Area	12	-38.56045166671	145.95760192619
Project Area	13	-38.56095503034	145.95792379127
Project Area	14	-38.561542283453	145.9579023336
Project Area	15	-38.562230202425	145.95831002937
Project Area	16	-38.563119453778	145.96011247383
Project Area	17	-38.564142918131	145.9622153257
Project Area	18	-38.564612700167	145.96320237861
Project Area	19	-38.564897923476	145.96554126487
Project Area	20	-38.564998590256	145.96614207969
Project Area	21	-38.565199923392	145.96612062202
Project Area	22	-38.564931479085	145.96410360084
Project Area	23	-38.564663033774	145.96292342888
Project Area	24	-38.563908025962	145.9610566114
Project Area	25	-38.562750331911	145.95852460609
Project Area	26	-38.561642954933	145.95734443412
Project Area	27	-38.561508726261	145.95661487327
Project Area	28	-38.560887915393	145.95601405845
Project Area	29	-38.560350993561	145.95625009285
Project Area	30	-38.555753436171	145.95438327537
Project Area	31	-38.550115154184	145.95187272773
Project Area	32	-38.549922169445	145.95182981239
Project Area	33	-38.548669909302	145.95009130402





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Area	Point	Latitude	Longitude
Project Area	34	-38.548581805867	145.95019322796
Project Area	35	-38.548602782885	145.95022541447
Project Area	36	-38.548573415058	145.95019859238
Project Area	37	-38.548604824998	145.95022048698

**1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland).**

The project site is located approximately 500 metres from the township of Koonwarra on the South Gippsland Highway from Old Koonwarra-Meenyan Road and extending 2.3 kilometres to the south east to 300 metres east of Minns Road.

The site comprises the existing highway, grazing farmland, Great Southern Rail Trail and Tarwin River frontage. It is also adjacent to the Black Spur Creek Wetlands and Koonwarra Fish Beds Geological Reserve and is in the vicinity of the Koonwarra-Tarwin River Crossing population of *Eucalyptus strzeleckii* on Old Koonwarra-Meenyan Road, as named in the National Recovery Plan for Strzelecki Gum.

The land is either privately owned or crown land administered by VicRoads (road reserve), the Department of Environment, Land, Water and Planning (DELWP) and the Great Southern Rail Trail Committee of Management and crown land subject to private licences.

**1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?**

Project area is 13 hectares, with 4.766 hectares impacted by the roadworks.

**1.7 Is the proposed action a street address or lot?**

Lot

**1.7.2 Describe the lot number and title.** Lot 1 and 2 of Title Plan 333725, Crown Allotment 33D and Crown Allotment's 84L, 84M, 84N, 2001, 3

**1.8 Primary Jurisdiction.**



Victoria

**1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?**

No

**1.10 Is the proposed action subject to local government planning approval?**

Yes

**1.10.1 Is there a local government area and council contact for the proposal?**

Yes

**1.10.1.0 Council contact officer details**

**1.10.1.1 Name of relevant council contact officer.**

Mr David Simon

**1.10.1.2 E-mail**

david.simon@southgippsland.vic.gov.au

**1.10.1.3 Telephone Number**

(03) 5662 9807

**1.11 Provide an estimated start and estimated end date for the proposed action.**

Start date 02/2018

End date 12/2021

**1.12 Provide details of the context, planning framework and State and/or Local government requirements.**

The project site is located in the municipality of South Gippsland and is subject to zoning for Road, Farming, Public Park and Recreation and Public Conservation and Resources under the South Gippsland Planning Scheme. The site is additionally covered by two Environmental Significance Overlays – ESO2 (Special water supply catchment area), ESO5 (Areas subject to erosion) and LSIO - Land Subject to Inundation Overlay.

A Public Acquisition Overlay (PAO8) is in place over land affected by the highway realignment.





Early stakeholder engagement led to a number of environmental and cultural heritage investigations being undertaken, which have informed the planning context of this project. These early investigations have been recently updated to reflect current legislative requirements.

Relevant state and local planning outcomes and requirements include:

Planning Acquisition Overlay 8 (PAO8) was approved in the South Gippsland Planning Scheme on 3 April 2003 to control development within the project footprint and allow for land acquisition for the project construction.

A Planning Permit for removal of native vegetation was granted on 11 November 2004 in accordance with Clause 52.17 of the South Gippsland Shire Council Planning Scheme under the Planning and Environment Act, 1987. The permit expiry date has been extended to 11 November 2017 and it will require a further extension for the contract duration. A copy is included in Attachment 5.

A Victorian Government Flora and Fauna Guarantee Act, 1998 permit to take or destroy seventeen species of identified native vegetation, including *Eucalyptus strzeleckii* will be required.

Assessment of Biodiversity impact and offset requirements for removal of native vegetation in response to the Planning Permit conditions and in accordance with the DELWP's permitted clearing of native vegetation – biodiversity assessment guidelines (the Guidelines).

A Cultural Heritage Management Plan is being prepared for the project to address any requirements under the provisions of the Aboriginal Heritage Regulations 2007.

Native title was found to exist on the river frontage of the Tarwin River. VicRoads has coordinated with DELWP to extend the procedural rights to the relevant native title parties. This process has now been completed in accordance with the Native Title Act 1993.



A Working on Waterways Permit is required from West Gippsland Catchment Management Authority for the two Tarwin River bridge crossings.

**1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders.**

VicRoads undertook extensive engagement in early 2000 and re-commenced consultation in 2015, with a range of stakeholders including:

- South Gippsland Shire Council,
- Department of Environment, Land, Water and Planning,
- West Gippsland Catchment Management Authority,
- Museum Victoria,
- Geological Survey of Victoria,
- Geological Society of Australia,
- Bunurong Land Council
- Gunaikurnai Land and Waters Aboriginal Corporation
- Boonwurrung Foundation
- Aboriginal Victoria
- Affected landholders,
- Local community,
- Road users including freight companies, and
- Local interest groups including the Great Southern Rail Trail Committee of Management and Nerrena Landcare Group

Consultation has included stakeholder meetings, letters, public information sessions, information bulletins, newspaper articles and electronic updates via VicRoads website.





Consultation with Indigenous stakeholders has been through preparation of the Cultural Heritage Management Plan and extinguishment of Native Title. Three local Indigenous groups, namely Bunurong Land Council Aboriginal Corporation, Boonwurrung Foundation Limited and Gunaikurnai Land and Waters Aboriginal Corporation have all participated in the complex assessment and salvage works.

Bunurong Land Council Aboriginal Corporation was appointed as the Registered Aboriginal Party over part of the project site on 19 July 2017.

**1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project.**

Not applicable.

**1.15 Is this action part of a staged development (or a component of a larger project)?**

No

**1.16 Is the proposed action related to other actions or proposals in the region?**

No



## Section 2 - Matters of National Environmental Significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The [interactive map tool](#) can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest. Consideration of likely impacts should include both direct and indirect impacts.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The following resources can assist you in your assessment of likely impacts:

- [Profiles of relevant species/communities](#) (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;
- [Significant Impact Guidelines 1.1 – Matters of National Environmental Significance](#);
- [Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies](#).

**2.1 Is the proposed action likely to have ANY direct or indirect impact on the values of any World Heritage properties?**

No

**2.2 Is the proposed action likely to have ANY direct or indirect impact on the values of any National Heritage places?**

No

**2.3 Is the proposed action likely to have ANY direct or indirect impact on the ecological character of a Ramsar wetland?**

No

**2.4 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?**

Yes

### 2.4.1 Impact table

Species	Impact
Eucalyptus strzeleckii (Strzelecki Gum)	Realignment of the South Gippsland Highway





Species	Impact
	leading to a reduction in the area of occupancy and long-term decrease in the size of the <i>Eucalyptus strzeleckii</i> population within the project area by the removal of 180 individual trees.

**2.4.2 Do you consider this impact to be significant?**

No

**2.5 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed migratory species, or their habitat?**

No

**2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?**

No

**2.7 Is the proposed action to be taken on or near Commonwealth land?**

No

**2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?**

No

**2.9 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?**

No

**2.10 Is the proposed action a nuclear action?**

No

**2.11 Is the proposed action to be taken by the Commonwealth agency?**

No

**2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place Overseas?**



No

**2.13 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?**

No





## Section 3 - Description of the project area

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed in Section 2).

### 3.1 Describe the flora and fauna relevant to the project area.

A total of 142 vascular plants were found to occur on site during site assessments. Of these, 85 are considered to be taxa native to Victoria.

The Protected Matters Search Tool (DoE, 2017b) was used to query a five kilometre radius of the study area and identified the possible presence of the following significant flora species:

- *Amphibromus fluitans* (River Swamp Wallaby-grass);
- *Caladenia orientalis* (Eastern Spider Orchid);
- *Eucalyptus strzeleckii* (Strzelecki Gum);
- *Prasophyllum frenchii* (Maroon Leek-orchid);
- *Pterostylis cucullata* (Leafy Greenhood).

Suitable habitat for *Caladenia orientalis*, *Prasophyllum frenchii* and *Pterostylis cucullata* was not identified.

*Amphibromus fluitans* was initially assessed as having a moderate likelihood of occurrence within the project area. Targeted survey was undertaken and no individuals were identified within or adjacent to the project area. However, three depressions subject to inundation were found adjacent to the project area within grazed farmland that may provide suitable habitat for *Amphibromus fluitans*. These areas will not be impacted by the project and the likelihood of occurrence was reduced to low.

*Eucalyptus strzeleckii* is nationally vulnerable and is the only significant flora species identified within the project area and is found consistently throughout.



Within the project area, 884 *Eucalyptus strzeleckii* have been identified and surveyed. Within a two kilometre radius of the project a further 86 records of *Eucalyptus strzeleckii* and 2,307 individuals have been identified within public land including roadsides and river banks.

The Protected Matters Search Tool (DoE, 2017b) was also used to query a five kilometre radius of the project area and identified the possible presence of the following significant fauna species:

Six bird species

- *Anthochaera phrygia* (Regent Honeyeater);
- *Botaurus poiciloptilus* (Australasian Bittern);
- *Calidris ferruginea* (Curlew Sandpiper);
- *Lathamus discolor* (Swift Parrot);
- *Numenius madagascariensis* (Eastern Curlew, Far Eastern Curlew);
- *Rostratula australis* (Australian Painted Snipe)

Six mammal species

- *Antechinus minimus maritimus* (Swamp Antechinus);
- *Dasyurus maculatus maculatus* (SE mainland population)(Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll);
- *Isodon obesulus obesulus* (Southern Brown Bandicoot (Eastern), Southern Brown Bandicoot (South-Eastern));
- *Mastacomys fuscus mordicus* (Broad-toothed Rat);
- *Petauroides volans* (Greater Glider);
- *Pteropus poliocephalus* (Grey-headed Flying-fox)

Two fish species





- *Galaxiella pusilla* (Eastern Dwarf Galaxias, Dwarf Galaxias);
- *Prototroctes maraena* (Australian Grayling)

One frog species

- *Litoria raniformis* (Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog)

The likelihood for the presence of the Swift Parrot and Growling Grass Frog was initially assessed as low to moderate and the Australian Grayling has been assessed as moderate to high. The remaining above mentioned fauna has either not been identified within the project area or has a low likelihood of usage due to unsuitability of habitat.

The Tarwin River has known records of the Australian Grayling from 2007 approximately 3.5 kilometres north of the project area between Koonwarra and Leongatha. No works are proposed to be undertaken within the bed and banks of the Tarwin River that will provide a barrier to fish migration and with the implementation of construction environmental plans and controls to minimise sedimentation and erosion impacts to the Tarwin River, impacts to the Australian Grayling are considered to be negligible.

An independent fauna expert inspected the project site and adjacent wetlands to assess the likelihood of Growling Grass Frogs being present. This assessment concluded that there was a low likelihood of occurrence due to there being no actual records of the species either in or adjacent to the project area or the Tarwin River catchment despite previous targeted surveys. Impact to the Growling Grass Frog is considered to be negligible.

Assessment of the possible habitat value of the project site for the Swift Parrot was undertaken by an independent fauna expert in June 2017. This assessment concluded that no record of the species has been reported in the project area and that the species does not appear to be dependent on habitat within the project area during their autumn-spring migration. Impact to the Swift Parrot is considered to be negligible.

A copy of the biodiversity assessment is included as Attachment 6.



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### **3.2 Describe the hydrology relevant to the project area (including water flows).**

The major hydrological element on the project site is the Tarwin River – West Branch, set in a distinct river valley with some areas of wetlands and river flats, bounded by steeply undulating land with deeply incised drainage lines.

Black Spur Creek, which is adjacent to the project area, has been artificially blocked from entering the Tarwin River downstream of the first highway crossing of the river with a small wetland at its natural confluence.

The river valley is also bisected by the Great Southern Rail Trail, which is set in cut and along the river flats through and adjacent to the project site. The rail trail includes three existing trestle bridges over Black Spur Creek and the Tarwin River to the south west of the highway realignment.

The total catchment area of the site is approximately 1500 km<sup>2</sup> and covers undulating terrain from the northern watershed in the Strzelecki Ranges to Bass Strait approximately 1.5 kilometres east of Venus Bay.

The catchment upstream of the project area has an area of approximately 740 km<sup>2</sup> and consists of predominantly rural land and small to medium sized rural towns including Leongatha and Korumburra. It drains the southern slopes of the Strzelecki Ranges from an elevation of approximately 91 metres Australian Height Datum (AHD), which reduces to a minimum Tarwin River elevation of approximately 15 m AHD at the project site.

The Tarwin River at the site of the proposed realignment is a slow moving meandering waterway with a longitudinal gradient of typically less than 1 in 200 and contains thick vegetation on the banks, particularly on and near the flood plain at the confluence with Black Spur Creek.

### **3.3 Describe the soil and vegetation characteristics relevant to the project area.**

The soil on site is derived from weathering of the underlying sandstones and mudstones of the Lower Cretaceous age Strzelecki Group of non-marine sediments and consists of clays, sandy clays, and silty topsoils that average 400mm in depth and may contain shallow perched water tables during wet periods.





Some of the lower lying areas on the site are poorly drained, with moist, soft and low strength soils. Some of the alluvial soils in the floodplains of the Tarwin River are up to 12 metres in depth.

The native vegetation on site is degraded and is categorised as belonging to three distinct Ecological Vegetation Classes (EVC's) comprising nine separate patches of native vegetation with twelve distinct habitat zones:

EVC 16 – Lowland Forest - characterised generally by the presence of sparse to dense canopy tree layer, diverse middle storey and significantly modified ground storey, with a moderate coverage of weeds.

EVC 18 – Riparian Forest - generally composed of a sparse to dense canopy layer over a moderately open to dense middle storey, moderate ground storey and high weed coverage.

EVC 23 – Herb-rich Foothill Forest – generally characterised from dense canopy above an absent middle story and exotic ground to diverse canopy above a diverse middle storey and modified understorey.

### **3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area.**

The Koonwarra fossil bed is located at the eastern end of the project site and will not be impacted by the realignment. It contains features of geological significance and was listed on the Register of the National Estate (closed in 2007) and is managed by the Great Southern Rail Trail Committee of Management.

The Koonwarra fossil bed was discovered in 1961 by workmen, who were straightening a curve on the South Gippsland Highway, west of Minns Road.

The fossil site has produced abundant fossils of fishes, plants, insects and feathers, preserved in thinly layered mudstones deposited in a freshwater lake about 115 million years ago.





The Koonwarra site is important scientifically because of the large number of species present, their excellent preservation, and the information they provide on the environment in which they lived.

VicRoads has consulted with Museum Victoria, Geological Survey of Victoria and the Geological Society of Australia to determine appropriate management strategies in the event that other fossil sites are discovered during construction of the realignment.

It is noted that the Protected Matters Search Tool (DoE, 2017b) identifies the Koonwarra Fish Beds Geological Reserve throughout much of the project site east of the new Caithness Road intersection. Advice from Museum Victoria is that the actual fossil location is at the eastern end of the project site near Minns Road and it is unclear why the reserve has been placed in areas away from the known fossil site.

As part of due-diligence, representatives from Museum Victoria inspected drilling cores extracted from the mapped reserve area to determine if any of the cores had intersected mudstone with equivalent sedimentary facies with varves, to that found at the fossil site. None of the cores provided evidence that the mudstone within the mapped reserve area was equivalent to the mudstone at the fossil site.

To the south of the highway realignment, there are three historical railway trestle bridges constructed in 1892 as part of the former South Gippsland Railway line. These bridges cross Black Spur Creek and two crossings of the Tarwin River and are of local historical significance. They were restored by the South Gippsland Shire and opened for rail trail users in March 2016.

### **3.5 Describe the status of native vegetation relevant to the project area.**

The current status of native vegetation within the study area is highly fragmented and shows extensive past disturbance and clearing, combined with extensive edge effects related to the existing South Gippsland Highway and former South Gippsland Railway Line. Aerial photography from 1975 shows both the highway and rail reserve to be largely cleared of any vegetation.

This long history of disturbance and agricultural land use has removed most of the original



native vegetation and what is remaining is generally of low to medium quality, with widespread weed invasion.

A large proportion of the remnant patches are located within road, rail and river reserves, with scattered trees on private property.

The three EVC's identified within the project area have a Bioregional Conservation status of vulnerable.

### **3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.**

The longitudinal gradeline of the natural topography along the realignment is generally steep and undulating, with grades up to 75% on hillsides and flat within the Tarwin River valley.

The design of the highway realignment has produced a maximum grade of 3.5% on the uphill approach to Minns Road.

### **3.7 Describe the current condition of the environment relevant to the project area.**

The project area comprises largely cleared pastoral land with fragmented pockets of highly modified native vegetation within roadsides and rail trail, along the river and creek frontages and ridge escarpments.

This vegetation is linked to larger patches of Riparian Scrub and Forest that are connected by the Tarwin River, Black Spur Creek and other smaller drainage lines that feed into the Tarwin River.

The dominant canopy species in the area is *Eucalyptus strzeleckii* with scattered *Eucalyptus cypellocarpa* (Mountain Grey Gum), *Eucalyptus viminalis* (Manna Gum), *Eucalyptus obliqua* (Messmate Stringybark) and large *Eucalyptus globulus* (Blue Gum) with this canopy layer measuring to 30 metres in height. An increase in canopy cover can be found in the northern section of the site especially bordering the Tarwin River, with higher canopy cover coinciding with low diversity and coverage of understorey species.





The middle storey is located mainly in the north and south of the site and is densely dominated by native species including *Acacia melanoxylon* (Blackwood) and *Acacia dealbata* (Silver Wattle). A diverse shrub layer occurs where canopy species are sparse including *Solanum aviculare* (Kangaroo Apple), *Bursaria spinosa* (Sweet Bursaria), *Goodenia ovata* (Hop Goodenia) and *Kunzea ericoides* (Burgan) being the most common species present.

The ground storey is dominated in most areas by exotic grasses including *Cenchrus clandestinus* (Kikuyu), *Cynodon dactylon* (Couch) and *Dactylis glomerata* (Cocksfoot) although there are large areas of *Poa labillardierei* (Common Tussock Grass) and scattered *Pteridium esculentum* (Austral Bracken) intermixed with various other indigenous grasses, herbs and scramblers.

High threat environmental weeds are present including *Rubus fruticosus* spp. agg. (Blackberry), *Cirsium vulgare* (Spear Thistle) and *Jacobea vulgaris* (Ragwort) with exotic grasses and herbs dominating the site.

### **3.8 Describe any Commonwealth Heritage Places or other places recognised as having heritage values relevant to the project area.**

Not Applicable.

### **3.9 Describe any Indigenous heritage values relevant to the project area.**

Geographic, archaeological and historical information relating to the Project area indicates the middle reaches of the Tarwin River as an important place of Aboriginal occupation. The region's geographic diversity, encompassing basaltic plains, sandstone hills and alluvial valleys, would have supported a variety of plant and animal life for subsistence and craft production, as well as stone sources used to make tools.

Ethnographic accounts suggest that during the mid-19th century, the Tarwin River formed a recently constituted ethnic boundary as well as a route of movement and a place of encampment. The river served as a border between the Bunwurrung to the west and the Gunaikurnai to the east, but as well as being a contested region, it might also have been a corridor of communication and perhaps a trade route for prestige objects such as stone axes.





Results of the complex assessment and salvage work undertaken within the Project area has identified numerous subsurface artefact scatter sites predominately located on ridges and crests.

### **3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area.**

The project area includes existing road reserve, permanent public purposes reserve, temporary public purposes (rail trail) reserve, temporary preservation of an area of ecological significance reserve, temporary public purposes (conservation and management of stream environs) reserve and private freehold property. A copy of the Survey Plans are included as Attachment 7.

The land to be acquired and amended to Road Reserve is currently in private ownership.

The crown land to be transferred from DELWP to VicRoads is currently administered by DELWP or the Great Southern Rail Trail Committee of Management and includes private licences of river frontage and rail trail.

### **3.11 Describe any existing or any proposed uses relevant to the project area.**

The privately owned land is currently farmed for grazing of beef and dairy cattle. The sections of privately owned land will become road reservation for the new road alignment.

The Great Southern Rail Trail is well used as a recreational cycling, walking and horse riding trail. There will be construction of an underpass and realignment of the rail trail as a result of the highway alignment crossings otherwise it will not be impacted by the project.

Sections of the existing road reservation will remain road reserve. Discontinued road reservation will be revegetated and most will remain managed by South Gippsland Shire Council.



## Section 4 - Measures to avoid or reduce impacts

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

### 4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action.

VicRoads has undertaken measures to avoid and reduce impact on *Eucalyptus strzeleckii* and native vegetation during the planning stages of the project by realigning the highway through private grazing land and crown land and modifying the design to reduce the width of the road and extent of earthworks with retaining walls and kerb and channel. This effort to undertake measures to reduce and avoid impact will continue throughout the preconstruction and construction stages as detailed below.

#### General Mitigation Measures

VicRoads has an environmental specification (Section 177 – Environmental Management (Major) which forms the standard project contractual requirements for the avoidance and minimisation of impacts for each aspect of the environment. The contract specification will be adapted to address all site specific identified risks and proposed mitigation measures including any additional requirements detailed below.

#### Specific Mitigation Measures

Initial Flora and Fauna investigations from the early 2000's identified approximately 60 *Eucalyptus strzeleckii* within the project area and five impacted by the realignment.



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Analysis of DELWP's Native Vegetation Information Management (NVIM) system in 2016, confirmed *Eucalyptus strzeleckii* occurred on the ridgeline adjacent to the Black Spur Creek wetlands.

The original design of the highway realignment from the early 2000's was required to be reviewed and updated to reflect current road design standards. This process began in 2016 with the inclusion of kerb and channel and a retaining wall added to the design to avoid and reduce the impact to *Eucalyptus strzeleckii* in the area adjacent the Black Spur Creek Wetlands where they were known to occur.

Nearing completion of the first re-design of the road alignment, targeted identification and survey for *Eucalyptus strzeleckii* within the project area was completed. This targeted survey identified 884 individual *Eucalyptus strzeleckii* within the project area, including 10 metres adjacent to the site. The road design impacted 347 trees.

A further re-design of the eastern end of the alignment near Minns Road was then undertaken to avoid and reduce the impact on a large number of *Eucalyptus strzeleckii* in this area. The design shifted the alignment approximately 10 metres to the south and elevated the longitudinal gradeline by approximately 5 metres.

This reduced the number of trees impacted near Minns Road by 14 trees and also the area adjacent the Black Spur Creek wetlands by 9 trees for a total overall reduction of 23 trees.

The next stage of the re-design focussed on the trees within the road/rail reserve at the western tie-in at Old Koonwarra-Meeniyar Road. The radius of the horizontal curve in this area was increased and the shoulder/verge area width reduced. This resulted in avoidance of a further 144 *Eucalyptus strzeleckii*.

Total re-design of the highway realignment from the initial design has resulted in avoidance of 167 *Eucalyptus strzeleckii*.

The residual impact to trees by the project according to the benchmark value for diameter at breast height (dbh) size classes includes:





- 111 very small trees
- 41 small trees
- 9 medium trees
- 9 large trees
- 10 very large trees

TOTAL IMPACT – 180 trees

704 *Eucalyptus strzeleckii* will be retained.

#### Pre-Construction

VicRoads will develop a revegetation management plan in consultation with DELWP, South Gippsland Shire, the West Gippsland Catchment Management Authority, the Nerrena Landcare Group and Great Southern Rail Trail Committee of Management for areas adjacent to the project area and complementary to the Nerrena Landcare Group's Black Spur Creek Wetland Project (September 2016). This plan and associated works will also be part of offset conditions under VicRoads Flora and Fauna Guarantee Permit and Planning Permit for removal of native vegetation as agreed by DELWP and the South Gippsland Shire.

The nominated areas for revegetation will include the crown land between the Tarwin River Crossing on Buckingham and Fowler's Road south to the new highway realignment and the redundant area of the existing South Gippsland Highway, east of Caithness Road to the third trestle bridge. Areas targeted for improvement will include the road/rail reserve from Old Koonwarra-Meeniyen Road to the nominated revegetation area and the area near the first bridge crossing to Black Spur Creek Wetlands.

The revegetation management plan will look to address the recovery actions and performance criteria as described in the National Recovery Plan for *Eucalyptus strzeleckii* as follows:



Specific objective 1 – Acquire accurate information for conservation status assessment:

Survey accurate locations and diameter at breast height of *Eucalyptus strzeleckii* and all other eucalypts has been completed within the project area and GPS locations of *Eucalyptus strzeleckii* on public land within a two kilometre radius of the project has also been completed (2,307 trees identified).

This information will be submitted for inclusion into the Victorian Biodiversity Atlas (VBA) to improve location and extent for this species.

Specific objective 2 – Identify habitat that is critical, common or potential:

In partnership with DELWP, VicRoads will develop and contribute to a regional population survey of *Eucalyptus strzeleckii* to acquire baseline population data and document known habitat and collect floristic and environmental information relevant to community ecology and condition.

Specific objective 3 – Ensure that all populations and their habitat are legally protected:

Nominated areas for revegetation are crown land and road reserve (sections of the existing highway will be made redundant by the realignment). VicRoads will work with DELWP and South Gippsland Shire Council to determine the most appropriate ways to ensure the long term protection of these areas.

Specific objective 4 – Manage threats to populations

VicRoads will develop and implement a targeted weed spraying/removal regime to improve existing areas of *Eucalyptus strzeleckii* and to prepare areas nominated for revegetation.



VicRoads will also seek a suitably qualified organisation to undertake a research project to develop techniques to facilitate appropriate microsite conditions for natural regeneration of *Eucalyptus strzeleckii*, including timing of seedfall.

#### Specific objective 5 – Identify key biological functions

VicRoads will engage a local contractor to undertake seed collection and propagation of vegetation including *Eucalyptus strzeleckii* contained within the project area for later revegetation planting outside of the project area and within landscaped areas of the road reserve.

There are currently 95 *Eucalyptus strzeleckii* recruits (less than 1cm in diameter) identified as being impacted by the realignment. Site observations on 22 August 2017 indicated that a number of identified recruits had already died from recent frosts. VicRoads will look to translocate all viable recruits impacted by the project within nominated revegetation areas.

#### Specific objective 6 – Determines the growth rates and viability of populations

As part of the research project, monitoring and reporting on the growth rates and health of *Eucalyptus strzeleckii* population's within revegetation areas will be undertaken, including assessment of hydrological requirements.

#### Specific objective 7 – Build community support for conservation

VicRoads will involve and support members of the Nerrena Landcare Group to actively participate in the revegetation program. In addition, it is intended to make a natural feature of this section of the Great Southern Rail Trail and to actively promote the works undertaken through DELWP and the South Gippsland Shire.





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## Construction

VicRoads has designed a Landscape plan for the project area in consultation with the Nerrena Landcare Group that reflects local Ecological Vegetation Classes and will utilise locally indigenous plant species, including 4,000 *Eucalyptus strzeleckii* and 330 *Eucalyptus ovata* (Swamp Gum) to encourage future usage of the site by Swift Parrot. This landscape plan covers an area of 9.5 hectares and will form part of the Construction Contract.

No – go zones have also been developed in consultation with DELWP for inclusion in the Construction Contract. This will include restrictions on ancillary activities such as access track locations.

The construction contract will specify a requirement for pre-start site briefings and inspection between VicRoads staff, the construction contractor and appropriate DELWP personnel to reinforce the environmental values of the Project including the no go zones. All no go zones will be fenced to limit access by the contractors.

### **4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved.**

The proposed environmental outcomes to be achieved for *Eucalyptus strzeleckii* as a result of this project are:

- to improve the viability of existing stands and small population's of *Eucalyptus strzeleckii* in the immediate vicinity of the site,
- connecting these populations of *Eucalyptus strzeleckii* through revegetation of crown land
- promote community support and ownership of *Eucalyptus strzeleckii* by supporting an existing Landcare project and promoting the area as a feature of the Great Southern Rail Trail
- to contribute to the knowledge base surrounding the distribution and status of extant *Eucalyptus strzeleckii* populations on a regional level.



Additionally, under the Victorian governments Permitted Clearing of Native Vegetation Guidelines offsets for the losses associated with this proposal have been identified and constitute:

- 1.267 General Biodiversity Equivalent Units (BEU's);
- 0.355 minimum strategic biodiversity score; and
- are to be found within the same municipality or catchment area.

Biodiversity equivalence scores are metrics used to quantify losses in the contribution to Victoria's biodiversity from removing native vegetation and quantify gains in the contribution to Victoria's biodiversity from securing and managing an offset site.



## **Section 5 – Conclusion on the likelihood of significant impacts**

A checkbox tick identifies each of the matters of National Environmental Significance you identified in section 2 of this application as likely to be a significant impact.

Review the matters you have identified below. If a matter ticked below has been incorrectly identified you will need to return to Section 2 to edit.

### **5.1.1 World Heritage Properties**

No

### **5.1.2 National Heritage Places**

No

### **5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)**

No

### **5.1.4 Listed threatened species or any threatened ecological community**

No

### **5.1.5 Listed migratory species**

No

### **5.1.6 Commonwealth marine environment**

No

### **5.1.7 Protection of the environment from actions involving Commonwealth land**

No

### **5.1.8 Great Barrier Reef Marine Park**

No

### **5.1.9 A water resource, in relation to coal/gas/mining**

No





#### 5.1.10 Protection of the environment from nuclear actions

No

#### 5.1.11 Protection of the environment from Commonwealth actions

No

#### 5.1.12 Commonwealth Heritage places overseas

No

#### 5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action.

VicRoads considers that the project will not have a significant impact on *Eucalyptus strzeleckii* as it addresses the significant impact criteria as follows:

##### 1. Lead to a long term decrease in the size of an important population.

The size of the population within and adjacent to the Black Spur project has been shown to be far more extensive than previously thought. An additional 86 records and 2,307 individual *Eucalyptus strzeleckii* have been located within 2 kilometres of the site and previously unrecorded on databases.

Implementation of a landscape and revegetation plan including:

- Planting of 4,000 *Eucalyptus strzeleckii* within the project area,
- Targeted weed spraying/removal program to facilitate establishment of natural regeneration
- Protection of revegetated areas from grazing,
- Translocation of all viable recruits impacted by the works,

##### 2. Reduce the area of occupancy of an important population.

The population of the Koonwarra-Tarwin River Crossing in the National Recovery Plan was estimated to be 115 trees. Whilst this area is not impacted by the works it is in the immediate vicinity. The number of *Eucalyptus strzeleckii* has been shown to be in excess of 3,100



individuals within a 2 kilometre radius of this population.

The 4.766 hectares of native vegetation removed by the project will be replaced with 9.5 hectares of revegetation within road and rail reserve.

3. Fragment an existing important population into two or more populations.

Implementation of a revegetation plan will connect an existing population within road and rail reserve to a small population of very large trees near the Tarwin River.

4. Adversely affect habitat critical to the survival of a species.

The implementation of the revegetation plan will assist in replacing lost habitat for *Eucalyptus strzeleckii* in this area and will re-establish vegetation communities and other understorey species to support regeneration and reduce mortality of recruits.

5. Disrupt the breeding cycle of an important population.

Research opportunities are being explored to develop and implement management techniques to promote regeneration and natural recruitment and to report on learning's and outcomes to assist future *Eucalyptus strzeleckii* revegetation projects.

6. Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

The habitat available for *Eucalyptus strzeleckii* will be extended and linked as part of the revegetation plan.

7. Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.

Spread of invasive weeds will be managed through the construction contract and the revegetation plan is to include pest plant and animal management and control activities as preparatory works prior to planting.



8. Introduce disease that may cause the species to decline.

As part of the construction contract, all vehicles and machinery used for construction works will be required to be clean and free from soil, pathogens and other disease causing materials.

9. Interfere substantially with the recovery of the species.

The revegetation and research opportunities including the regional population survey proposed will result in an improvement in habitat quality, extent and knowledge in regard to recruitment and regeneration of *Eucalyptus strzeleckii* in the vicinity of the project area.





## Section 6 – Environmental record of the person proposing to take the action

Provide details of any proceedings under Commonwealth, State or Territory law against the person proposing to take the action that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

### 6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Please explain in further detail.

VicRoads has a history of responsible environmental management in sensitive areas and protection of important species and vegetation.

Some regional examples include management of the Sale Common RAMSAR wetland and Dwarf Galaxias south of Sale during the realignment of the South Gippsland Highway (2009/4959), management of the Giant Gippsland Earthworm during upgrade works on the South Gippsland Highway between Loch and Bena (2001/243), management of Colquhoun Grevillea and Giant Burrowing Frog on the Bruthen-Nowa Nowa Road (2001/194), and management of Gippsland Red-gum Grassy Woodland as part of the duplication of the Princes Highway between Fulham and Sale (2010/5332).

The Victorian Roads Corporation (VicRoads) has initiated and completed a significant number of both major and minor road projects across the State, all of which have the potential for environmental impact. In any one year, it is estimated that approximately 200 projects are completed, of which, on average, five projects per year are referred for approval under the EPBC Act.

Although not established under the Corporation Act 2000, VicRoads publically reports its environmental performance in the Annual Report. In recent years, the environmental incident reporting system was upgraded to automatically track and escalate issues as appropriate. Since January 2010, there have only been [3] significant environmental incidents reported (significant is defined as Level 4 and Level 5 incidents) of which only one related to EPBC issues and resulted from contractor non-compliance with VicRoads specifications and requirements. Details are as follows:

The incident occurred on 6.12.2010:



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VicRoads notified the Department of the Environment on 8.12.2010.

The incident was investigated by VicRoads and corrective action taken.

In addition, to the best of our knowledge, neither VicRoads or its directors have been refused a licence, permit or authority under any environment protection legislation or had any such licence, permit or authority suspended, revoked or withdrawn in Australia or elsewhere been prosecuted for an offence under any environment protection legislation either in Australia or elsewhere been found guilty of an indictable environmental offence either in Australia or elsewhere.

A search of EPA Victoria's prosecutions database as at 5 June 2015, [<http://www.epa.vic.gov.au/our-work/compliance-and-enforcement/epa-sanctions/prosecutions>] in relation to enforcement of the Environment Protection Act 1970 and the Pollution of Waters by Oil and Noxious Substances Act 1986, has indicated no prosecutions involving VicRoads.

VicRoads has been involved in EPBC compliance audits as noted below.

#### EPBC 2005/1990 – Construction of Bayles Bridge

Approval conditions attached to a project by VicRoads to replace the Bayles Bridge in Victoria were audited on 25 to 26 October 2006. The conditions related to the protection of Growling Grass Frog (*Litoria raniformis*), Southern Brown Bandicoot (*Isodon obesulus*) and Dwarf Galaxias (*Galaxiella pusilla*).

The audit identified compliance with eight of the 12 conditions of approval. Two instances of noncompliance were found, these related to the implementation of an offset strategy and bridge construction material. Five elements of the conditions were found to be partially compliant. These related to construction methods and materials, water quality testing, and reporting to the Department. A formal warning was issued to VicRoads and recommendations for rectification of the compliance issues made. The non-compliances have been addressed to the satisfaction of the Department in accordance with the Department's Compliance and Enforcement Policy.

#### EPBC 2008/4486 – Geelong Ring Road – Section 4A, Victoria

A compliance audit of the Geelong Ring Road – Section 4A, Victoria, was conducted by the Department on 21 August 2012.

There are seven particular manner requirements set out in the decision notification. VicRoads





demonstrated compliance with requirements 2, 5, 6 and 7 relating to best practice erosion, siltation and sediment controls being implemented; controls to manage a one in two Year Average Recurrence Interval event being implemented and maintained; construction activities that could potentially impact on the breeding of the Yarra Pygmy Perch and the Growling Grass Frog not being undertaken during September and October in associated habitat; and the construction area being fenced off to ensure that areas outside of the construction area are not impacted.

Non-compliance was found with elements of requirements 1, 3 and 4 relating to the implementation of the Project Environment Protection Strategy and water quality monitoring requirements for the project. The non-compliances have been addressed to the satisfaction of the Department in accordance with the Department's Compliance and Enforcement Policy.

#### EPBC 2010/5741 – Western Highway Project Section 2: Beaufort to Ararat, Victoria

VicRoads self reported an alleged breach of conditions attached to EPBC 2010/5741 to the Department the day following the potential impact to an area less than 0.1 hectare of Grassy Eucalypt Woodland of the Victorian Volcanic Plain (GEWVVP).

Condition 5 of the approval required VicRoads to implement the Threatened Species Management Plan approved by the Department. The Plan required no-go zones to be installed at the section of the site where unapproved works were undertaken. Vegetation, located outside the no-go zone, that had been marked and agreed to be cleared by VicRoads and its Contractor was fallen and stored in the no-go zone by a subcontractor.

An audit by the Department determined that although condition 5 of EPBC 2010/5741 had been contravened, no matters of national environmental significance were impacted in this instance.

No further action was taken by the Department at that time.

**6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application.**

Not applicable.

**6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?**

Yes





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**6.3.1 If the person taking the action is a corporation, please provide details of the corporation's environmental policy and planning framework.**

VicRoads Environmental Risk Management Guidelines is included as Attachment 8.

VicRoads maintains a comprehensive environmental management system consistent with ISO 14001 – Environmental Management Systems.

- VicRoads Sustainability and Climate Change Policy (2014)
- VicRoads Environmental Risk Management Guidelines (2012);
- Environmental procedures for management of projects;
- Project Environment Protection Strategies;
- Where appropriate, specific guidance documents e.g. integrated water management, fauna sensitive design, etc
- Contract specifications with specific environmental clauses
- Surveillance audits of contractor activities based on a risk based approach
- Independent environmental audits of contractor environmental management systems prior to commencement of major works
- Independent environmental audits throughout the life of major construction projects
- Training modules including e-learning modules for environmental aspects of project construction

When managing projects, VicRoads exercises high standards of environmental diligence both in the contract preparation and administration. The VicRoads Environmental Risk Management Guidelines provide more detail about VicRoads systems which are utilised to manage risk and protect the environment and how these systems and tools are implemented throughout the life cycle of a project.

**6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?**



Yes

#### 6.4.1 EPBC Act No and/or Name of Proposal.

VicRoads referrals since 2010 are listed below.

2016/7809 - VICROADS/Transport - Land/chainage 10.90 and 15.00 Pyrenees Hwy/Victoria/Road safety works, Pyrenees Hwy, Green Gully, Vic, 10/11/2016

2014/7252 - Roads Corporation trading as VicRoads/Natural Resources Management/Mortlake Ararat Road, Lake Bolac/Victoria/Construction of the Mortlake Ararat Road firebreak, Lake Bolac, Vic, 26/06/2014

2013/6850 - Roads Corporation VicRoads/Transport - Land/between Warren St in Echuca Vic & Perricoota Rd in Moama NSW/Victoria/Construction of a second Murray River crossing Echuca-Moama, Vic, 30/04/2013

2013/6792 - ROADS CORPORATION VICROADS/Transport - Land/Kilmore within the Shire of Mitchell/Victoria/Construction of the Kilmore - Wallan bypass road, 18/03/2013

2012/6642 - ROADS CORPORATION T/A VICROADS/Transport - Land/western fringe of Kaniva in far west Victoria/Victoria/Upgrade of Western Highway rail overpass at Kaniva, VIC, 26/11/2012

2012/6640 - VicRoads Western Region/Transport - Land/Between Nurcoung and Minimay in West Wimmera Shire/Victoria/Road Safety Improvement Works - Natimuk Frances Road

23/11/2012,

2012/6417 - VicRoads Geelong Ring Road Project/Transport - Land/Winchelsea/Victoria/Barwon River Bridge & Hesse Street Intersection, Winchelsea, VIC, 5/06/2012

2012/6291 - VicRoads /Transport - land/Grovedale, approximately 85km south west of Melbourne /VIC/Pioneer Road and bridge Duplication, 24/02/2012

2012/6264 - Roads Corporation t/a VicRoads/Transport - land/Between Mitta Mitta and Omeo /VIC/Upgrade and seal existing unsealed sections of the Omeo Highway, 23/01/2012

2012/6238 - VicRoads- Geelong/Transport - land/Foxhow Road approx 140km west of Melbourne/VIC/Foxhow Road Realignment, 6/01/2012

2011/6180 - VICROADS WESTERN REGION/Transport - Land/Between Stawell and Halls Gap/Victoria/Grampians Road Safety Improvement Project, 7/11/2011





2011/6054 - Roads Corporation t/a VicRoads (Western Victoria)/Transport - land/Within Grampians National Park (GNP)/VIC/Flood Recovery Works, 28/07/2011

2011/5805 - VicRoads/Transport - Land/Between Willow drive and Livingstone Rise, Hampton Park VIC/Victoria/Hallam Road Duplication between Pound Rd & Ormond Rd, 11/01/2011

2010/5784 - VICROADS/Transport - Land/Healesville - Koo Wee Rup Road/Victoria/Pakenham Bypass to South Gippsland Highway, 20/12/2010

2010/5744 - VicRoads/Transport - Land/Between Ararat and Stawell/Victoria/Duplication of the Western Highway, 24/11/2010

2010/5741 - VicRoads/Transport - Land/Between Old Shirley Road Beaufort & Heath Street Ararat/Victoria/Western Highway Project: Beaufort to Ararat, 19/11/2010

2010/5738 - VicRoads/Department of Transport/Transport - land/Williams Landing/VIC/Palmers Road Rail Overpass and Bridge Works, 18/11/2010

2010/5705 - VicRoads/Transport - land/Between Burrumbeet and Beaufort/VIC/Upgrade of the Western Highway, 25/10/2010

2010/5640 - VICROADS/Transport - Land/Stammers Road, Traralgon East to Templetons Road, Fulham /Victoria/Princes Highway Duplication - Traralgon East to Fulham, 10/09/2010

2010/5604 - Roads Corporation trading as VicRoads/Transport - land/Henty HWY, approx 6.5km southwest of Hamilton /VIC/Construction of road deviation to side of existing carriageway and new bridge, 4/08/2010

2010/5509 - VicRoads /Transport - land/Between Princes Freeway, Laverton North & Greensborough /VIC/M80 Ring Road Upgrade, Part 2, 25/05/2010

2010/5375 - VicRoads/Transport - land/Nhill /VIC/Proposed Heavy Vehicle Trailer Exchange, 26/02/2010

2010/5369 - VicRoads/Transport - Land/Taylors Lakes/Victoria/Calder Freeway/Kings Road Interchange & Kings Road Duplication Project, 23/02/2010

2010/5332 - VicRoads/Transport - land/Fulham to Sale/VIC/East Princess Highway Duplication, 25/01/2010

2010/5328 - VicRoads/Natural Resources Management/Norbank Road to Morris Road, Lake Bolac/Victoria/Ararat-Mortlake Road Grassland Restoration Project, 21/01/2010

2010/5314 - VicRoads/Transport - land/Western Highway Chainages 119515 to 127662/VIC/Western Highway Duplication - Ballarat to Burrumbeet, 14/01/2010





## Section 7 – Information sources

You are required to provide the references used in preparing the referral including the reliability of the source.

### 7.1 List references used in preparing the referral (please provide the reference source reliability and any uncertainties of source).

Reference Source	Reliability	Uncertainties
High Risk-Based Pathway Biodiversity Assessment Report for South Gippsland Highway, Black Spur Realignment, Indigenous Design (July 2017)	High	Nil
South Gippsland Highway Realignment Black Spur – Koonwarra, Swift Parrot Lathamus discolor, Ninox Pursuits Environmental Services (June 2017)	High	Nil
Habitat assessment and targeted survey for River Swamp Wallaby Grass (Amphibromus fluitans) at Black Spur, Koonwarra, Indigenous Design (July 2017)	High	Nil
South Gippsland Highway, Koonwarra – Growling Grass Frog Assessment, Aquatica Environmental (September 2017)	High	Nil
Survey of Eucalyptus strzeleckii (Strzelecki Gum) surrounding Black Spur, Koonwarra, Indigenous Design (August 2017)	High	Nil
Cultural Heritage Desktop and Complex Assessment, Dr Vincent Clark & Associates (June 2017)	High	Complex assessment and Cultural Heritage Management Plan currently being finalised (September 2017)
South Gippsland Highway Black Spur Realignment - Hydrological / Hydraulic Report, Engeny (September 2017)	High	Nil



<b>Reference Source</b>	<b>Reliability</b>	<b>Uncertainties</b>
Investigative Biological Survey, High PPK Environment & Infrastructure Pty Ltd (June 2001)	High	Investigative report from 2001.
Nerrena Landcare Group Black Spur Creek Wetland Project Report (Sep 2016)	High	Nil
Preliminary Proposal for Excavation of the Koonwarra Fish Beds, Thomas H. Rich, (10 May 2013)	High	Nil



## Section 8 – Proposed alternatives

You are required to complete this section if you have any feasible alternatives to taking the proposed action (including not taking the action) that were considered but not proposed.

### 8.0 Provide a description of the feasible alternative?

Four options for the realignment of the South Gippsland Highway, south of Koonwarra were presented to the community in 2000 and all had significant impacts on private property, services, native vegetation, including *Eucalyptus strzeleckii*, the Tarwin River, Great Southern Rail Trail and the Koonwarra Fossil site.

The current and preferred alignment resulted directly from public consultation and was selected due to the reduced impact on private property and community assets and because the straighter alignment resulted in a shorter route and lower road user costs.

The 'do-nothing' option was considered unfeasible due to the high likelihood of ongoing increases in casualty crashes through the existing steep and winding highway alignment, as well as a continued deterioration in the highway's condition leading to even further reductions in the level of service to road users.

The option of providing safety improvements to the existing highway by installation of additional safety barriers, shoulder sealing, improved signage and linemarking, further speed controls, and removal of hazards such as overhanging branches was also considered. This option had the potential to provide many of the safety improvements sought but would have a detrimental effect on the other project objective of improving the regional economy and cost and time savings to the freight industry.

### 8.1 Select the relevant alternatives related to your proposed action.

### 8.27 Do you have another alternative?





No



## Section 9 – Contacts, signatures and declarations

Where applicable, you must provide the contact details of each of the following entities: Person Proposing the Action; Proposed Designated Proponent and; Person Preparing the Referral. You will also be required to provide signed declarations from each of the identified entities.

### 9.0 Is the person proposing to take the action an Organisation or an Individual?

Organisation

#### 9.2 Organisation

##### 9.2.1 Job Title

Project Director

##### 9.2.2 First Name

Raymond

##### 9.2.3 Last Name

Paterson

##### 9.2.4 E-mail

raymond.paterson@roads.vic.gov.au

##### 9.2.5 Postal Address

PO Box 2214  
Fountain Gate VIC 3805  
Australia

##### 9.2.6 ABN/ACN

ABN

61760960480 - ROADS CORPORATION

##### 9.2.7 Organisation Telephone

03 5172 2329



9.2.8 Organisation E-mail

SGH.BlackSpur@roads.vic.gov.au

9.2.9 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:

Not applicable

Small Business Declaration

I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small a business entity and confirm that I qualify for a small business exemption.

Signature:..... Date: .....

9.2.9.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations

No

9.2.9.3 Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made

Person proposing the action - Declaration

I, RAYMOND PATERSON, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature: *Raymond Paterson* Date: 13-10-17

I, RAYMOND PATERSON, the person proposing the action, consent to the designation of DAVID GELLION as the proponent of the purposes of the action describe in this EPBC Act Referral.

Signature: *Raymond Paterson* Date: 13-10-17

9.3 Is the Proposed Designated Proponent an Organisation or Individual?





Organisation

## 9.5 Organisation

### 9.5.1 Job Title

Project Delivery Manager

### 9.5.2 First Name

David

### 9.5.3 Last Name

Gellion

### 9.5.4 E-mail

david.gellion@roads.vic.gov.au

### 9.5.5 Postal Address

PO Box 158  
Traralgon VIC 3844  
Australia

### 9.5.6 ABN/ACN

ABN

61760960480 - ROADS CORPORATION

### 9.5.7 Organisation Telephone

03 5172 2329

### 9.5.8 Organisation E-mail

SGH.BlackSpur@roads.vic.gov.au

### Proposed designated proponent - Declaration

I, DAVID GELLION, the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.



Signature: *[Handwritten Signature]*

Date: *13/10/2017*

**9.6 Is the Referring Party an Organisation or Individual?**

Organisation

**9.8 Organisation**

**9.8.1 Job Title**

Senior Project Engineer

**9.8.2 First Name**

Deborah

**9.8.3 Last Name**

McLees

**9.8.4 E-mail**

deborah.mclees@roads.vic.gov.au

**9.8.5 Postal Address**

PO Box 158  
Traralgon VIC 3844  
Australia

**9.8.6 ABN/ACN**

ABN

61760960480 - ROADS CORPORATION

**9.8.7 Organisation Telephone**

03 5172 2329

**9.8.8 Organisation E-mail**

SGH.BlackSpur@roads.vic.gov.au

**Referring Party - Declaration**



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I, Deborah McLees, I declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence.

Signature:.....D. McLees..... Date: ....13-10-17.....





## Appendix A - Attachments

The following attachments have been supplied with this EPBC Act Referral:

1. attachment\_1\_-\_sgh\_black\_spur\_project\_plan.pdf
2. attachment\_2\_-\_sgh\_black\_spur\_plan.pdf
3. attachment\_3\_-\_sgh\_black\_spur\_plan.pdf
4. attachment\_4\_-\_vegetation\_files.zip
5. attachment\_5\_-\_planning\_permit\_2002\_250b.pdf
6. attachment\_6\_-\_biodiversity\_assessment\_report\_part\_1.pdf
7. attachment\_6\_-\_biodiversity\_assessment\_report\_part\_2.pdf
8. attachment\_6\_-\_biodiversity\_assessment\_report\_part\_3.pdf
9. attachment\_7\_-\_survey\_plans.pdf
10. attachment\_8\_-\_vicroads\_environmental\_risk\_management\_guidelines.pdf