

Western Highway Duplication. Section 2B: Paper No.4: Landscape and Habitat

30 March 2025



Part of the threatened landscape

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About KORS Inc and this Paper

KORS Inc. (Keep Original Route Supporters) is a community-based organisation of environmental advocates, locally concerned people and a landholder formed to promote a safer, lower-impact and more responsible alignment for the Western Highway Duplication between Buangor and Ararat. The group supports completing the safety improvements but argues that the approved southern deviation (“Option 1”) should be reconsidered. Since route selection in 2012-13, updated environmental and cultural heritage assessments have identified significantly greater impacts than originally understood on Option 1, including loss of native vegetation, threatened species habitat and Djab Wurrung cultural Heritage. KORS Inc proposes the Northern Option, an alignment that follows the existing highway corridor and delivers equivalent transport outcomes with lower cost, reduced construction risk, shorter build-time and far less environmental and cultural heritage damage. The paper calls on Victorian MPs to support a short modern reassessment of the alignment choices.

1. Option 1’s Deviation

A controversial 5.7-kilometre deviation is planned as part of the 12.4-kilometre Western Highway duplication from Buangor to Ararat. The deviation, shown in Figure 1:

- Runs to the south of the existing highway.
- Enters a new valley, going through hills, Aboriginal cultural heritage, rare habitats and vegetation, large old trees, boulders, wet areas and farms.

2. Option 1’s Flyover

The deviation includes a major flyover and interchange connecting to a quiet gravel road.

- This would be the only flyover–interchange on the Western Highway leading to a gravel road.
- All other interchanges connect to sealed roads.
- The interchange sits just seven kilometres from the existing Buangor interchange, yet closer to Melbourne it is 20 kilometres between the Trawalla and Windermere interchanges.
- This raises questions about proportionality, landscape impact and value for money.
- The interchange has a heavy environmental cost on Hillside Road and the surroundings.

3. New data: scope for improving the project

Option 1 was chosen because it was thought to be the least impact alignment. However:

- Data used to choose this deviation have now been superseded by more accurate data from MRPV’s consultants and independent experts.
- New data show that previously expected environmental advantages on Option 1 do not exist.

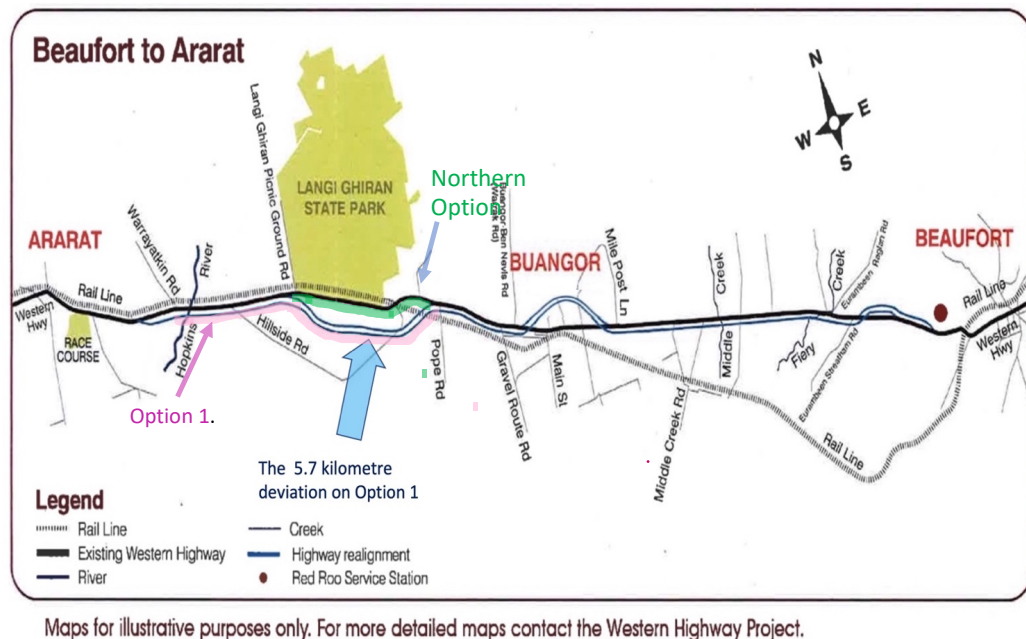


Figure 1. Location map from VicRoads' literature, showing Option 1's deviation south of Langi Ghiran State Park (blue arrow and label added)

4. A smarter, safer, more sustainable choice: the Northern Option (TTM Alignment)

KORS Inc proposes a route refinement, the "Northern Option", shown in **Figure 2**:

- Keeps the project where road infrastructure already exists.
- A new carriageway would run beside the existing highway, where Option 1's deviation leaves the existing highway unused.

5. Design work for a win-win-win result

We are advised design-work focussed on reducing environmental impactⁱ can lower impacts on the 5.2-kilometre stretch to well below those on Option 1.

- The Northern Option requires only **one bridge and much less excavation**.
- This means **faster build-time, lower cost, and far safer working conditions**.
- We think this combination of benefits **serves the public interest far better than Option 1**.

6. Lower Tree loss on Northern Option

VicRoads (now VIDA) Program Director Tim Price (2019) claimedⁱⁱ that an additional 5000 trees would be lost on the Northern Option.

- This claim is based on VicRoads' version of the Northern Option: a 35-metre-wide clearing for each carriageway and the re-routing of Hillside Road through 800 metres of trees.

- This is not what KORS is suggesting and is not necessary according to advice from a VicRoads-experienced construction engineer.
- Tree loss is lower on the Northern Option when built as proposed, including one quarter the number of large old trees.

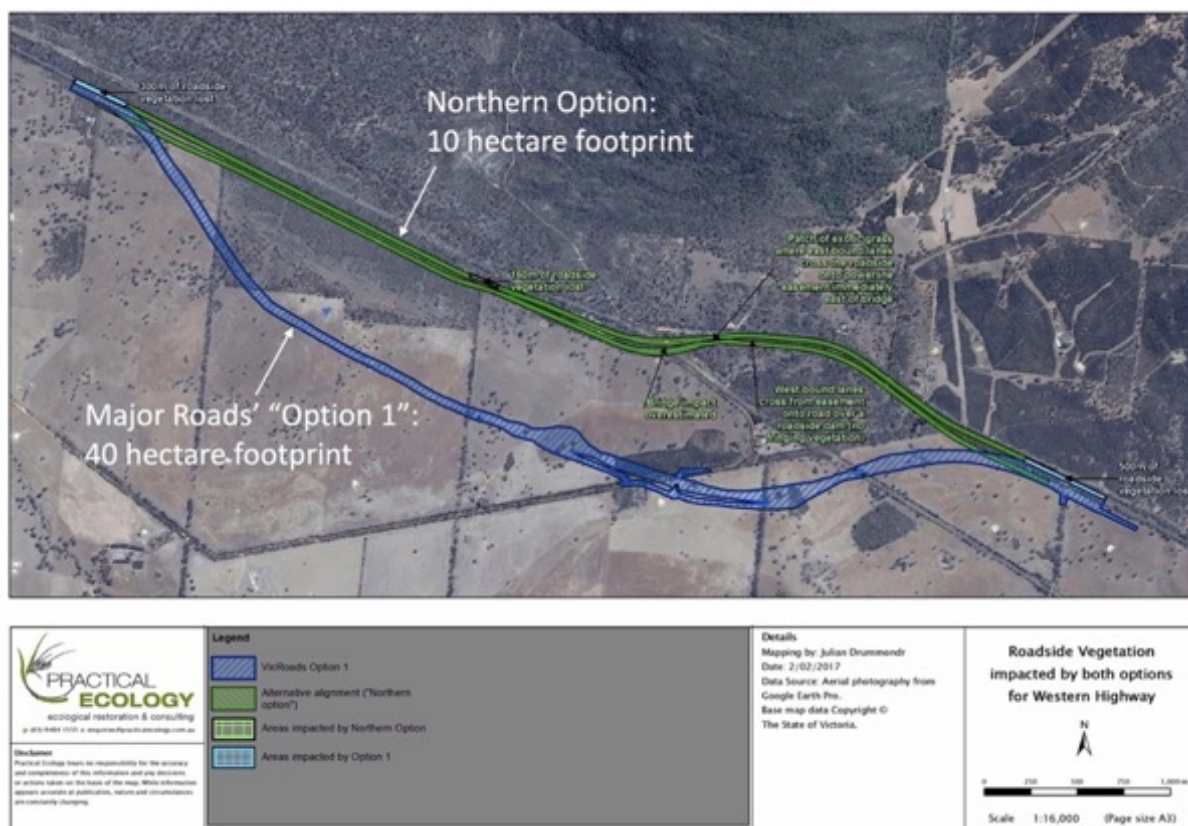


Figure 2. Carriageway added beside existing highway on the “Northern Option” (in green), the approved Option 1 in blue

7. Key impacts compared

Option 1 (approved Route), Deviation section	Northern Option (TTM Alignment)
31.85 hectares native vegetation destroyed (vs 10.61 ha originally reported to route-selectors) (identified 2018) ⁱⁱⁱ	9.36 hectares of native vegetation destroyed. Significantly less loss of native vegetation was a major reason for choosing Option 1
40.061 hectares of Golden Sun Moth habitat destroyed (vs 11.42 hectares originally reported) and remainder fragmented. (Identified 2021) ^{iv}	~ 2–3 hectares of Golden Sun Moth habitat destroyed. No worse impact on Golden Sun Moth habitat was a major reason for choosing Option 1.
95 ancient trees expected to be lost, including 7 Very Large Ancient Trees. ^v	21–25 ancient trees expected to be lost — around one quarter of Option 1.
40 hectares construction footprint. ^{vi}	10 hectares construction footprint.

4.34 hectares Critically endangered, EPBC-protected Box–Gum Grassy Woodland and derived grassland lost and remaining areas fragmented. (identified 2015, 2018) ^{vii} .	Avoids this community
Highly culturally significant place of Aboriginal heritage area cut in two . (identified 2017)	Avoids cultural heritage on the eastern end of the section.
Two borrow pits required, involving approximately 300,000 m³ of additional material (identified in 2017) ^{viii} .	No borrow pits
Quiet gravel road habitat supporting powerful owls, barking owls, antechinus, echidnas, phascogales and bearded dragons, widened for approximately 9 kilometres, approx. 3.5 hectares (identified in 2018).	Undisturbed.
7 Wildlife corridors cut , a “ Catastrophic ” impact as defined by DWELP in 2012 (EES Section 2, Appendix H, Table 4, p.38)	1 corridor cut. Native animals need to travel and corridors allow this now that the landscape is less inhospitable to their movements.
“ Major ” impacts on scattered trees (EES Section 2, Appendix H, Table 4, Page 38) with around 320^{ix} of the 3000 trees to be felled being scattered trees.	No scattered trees destroyed. Scattered trees provide critical habitat in open agricultural landscapes.
“ Substantial severance ” (EES Appendix P, page 48, para 2; “Greatest negative impact on agricultural land and ... severance”, page 53, para 8,) of approximately 200 hectares of agricultural land and severance leaving seven remaindered parcels.	No “severance” or marooning of farmland.
Two bridges required	One bridge required.
Major “fragmentation” , or splintering of habitats and vegetation amongst manmade barriers; the habitat value of the land between old and new highways is degraded by the new road.	Minimal fragmentation
Spring soaks severed. Spring soaks are where water seeps out of hillsides in Spring-time due to sheets of underground rock conducting water to the surface. Spring soaks help keep the landscape cool and green	Spring soaks avoided.
Extensive cut-and-fill: an emissions-intensive 600,000 cubic metres of earth dug out (or 1.2 M Cu M “cut-and-fill”) ^x .	Minor earthworks
Area of native vegetation lost, adjusted for quality and scarcity, is around ~ 15 Habitat Hectares^{xi} .	Area of native vegetation lost, adjusted for quality and scarcity, is around - 11.84 “Habitat Hectares“. The Habitat Hectare unit allows impacts in different types of vegetation to be compared.
Adds a large new barrier into the landscape, approx. 80-100 metres wide .	New barrier 16-17 metres wide. The Northern Option has fringing vegetation making it less difficult for wildlife to approach and a good candidate for making wildlife crossings. This more

	closely retains the existing level of overall <i>landscape connectivity</i> (not just connectivity between two patches of bush, as Option 1 does to some extent).
Boulder extraction required.	No boulder extraction
Highway runs on the side of a ridge, visible for 15 kilometres to the south, maximising noise and light pollution	Runs on the flat or in valley. Minimises noise and light pollution in a valley.

8. Updated Alignment on Option 1.

We have sighted a schematic diagram of a proposed **update** to the Option 1 alignment in recent days. On privacy grounds, details about the proposed location have been withheld even from impacted landholders. We can still say that with a longer deviation and a heavier encounter with a ridge, the update will:

- Increase fragmentation impacts and financial cost (more land between old and new roads, more pavement to be built from scratch),
- Probably increase volume of excavation (with further cost increase) and native vegetation loss, and
- Only partially improve protection of cultural heritage, with large bridge ramps still imposed near the habitation/hollow tree.
- The updated design is unlikely to compete with The Northern Option's major advantages shown in Figure 3.

The well-researched figures in the table above for Option 1's impacts are a relevant guide to those on the proposed updated design.

VicRoads' earlier effort, in 2016, to reduce with a slimmed the design:

- Confirmed the very significant engineering scope for reducing direct impact after an alignment has been chosen.
- Produced far less reward for design-effort than on the Northern Option and a much greater improvement is still unachieved.

We see both as misdirected effort, as they both start with **a route with the fundamental disadvantages of being a "fresh cut" route, and a hilly route** (Option 1).

9. Project Aims – And Why Only One Route Meets Them All

The stated goals of the Western Highway Duplication are to:

1. Increase freight efficiency and traffic capacity.
2. Improve safety.
3. Maintain community access.
4. Minimise environmental and cultural heritage impact.
5. Use public funds responsibly

- **Only the Northern Option**, when built to VIDA's usual high-speed specifications and using full scope for impact reduction, **meets all five aims simultaneously**. **Figure 3** compares impacts assessed numerically.
- The road authority has recently confirmed its intention to reduce impact to the environment^{xii}.

10. New Information Independently Verified

Independent environmental and cultural heritage assessments by:

- Practical Ecology 2012,
- Blue Devil Consulting, 2015,
- Ecology Australia 2016
- Practical Ecology 2016,
- Foreman 2018 and
- McMahon 2018
- On Country 2018 (cultural heritage)
- Builth 2018 (cultural heritage)

with later reassessments by:

- VicRoads' /VIDA's Ecology and Heritage Partners 2017
- New CHMP 2026 (cultural heritage)

show that, as above, previously expected environmental advantages on the southern option do not exist.

11. Court Ruling and Public Interest

Although the Supreme Court ruled the approved route is legally valid:

- The judge decided the new information was inadmissible;
- The planning process has clearly not done its job of finding the least impact route;

But the ruling does not oblige the use of Option 1:

- It is not too late to remedy this;
- Public interest should take priority over contractors' interests and/or convenience for government.
- Long-term, short-term, broad and local public interest are shown to lie more extensively on the Northern Option.

12. A Request for Your Support

We respectfully ask Members of Parliament to:

- Review the updated evidence presented in this paper and later papers.
- Request that VIDA revisit its alignment decision and undertake a short, modern reassessment of the Northern Option using the full engineering scope to reduce impact on this alignment

A quicker-to-build, safer-to-build, cheaper, flatter, less destructive, culturally respectful route is available.

13. Figures 3-19.

Figures 3 - 19 below include maps and a chart of comparative impacts and photographs of threatened features along Option 1.

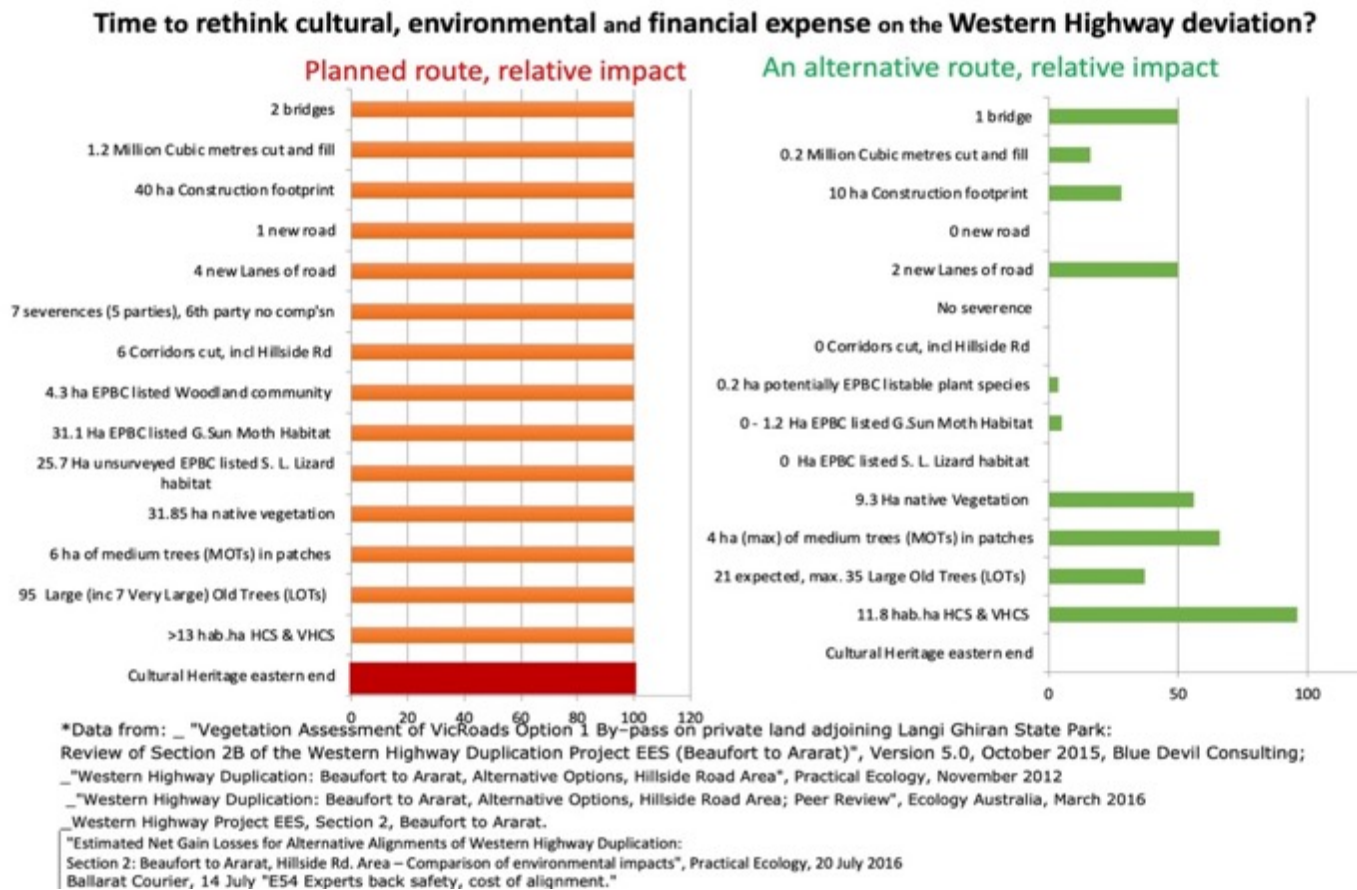


Figure 3. Comparative impacts of the Northern Option and Option 1 for 15 aspects of the Duplication

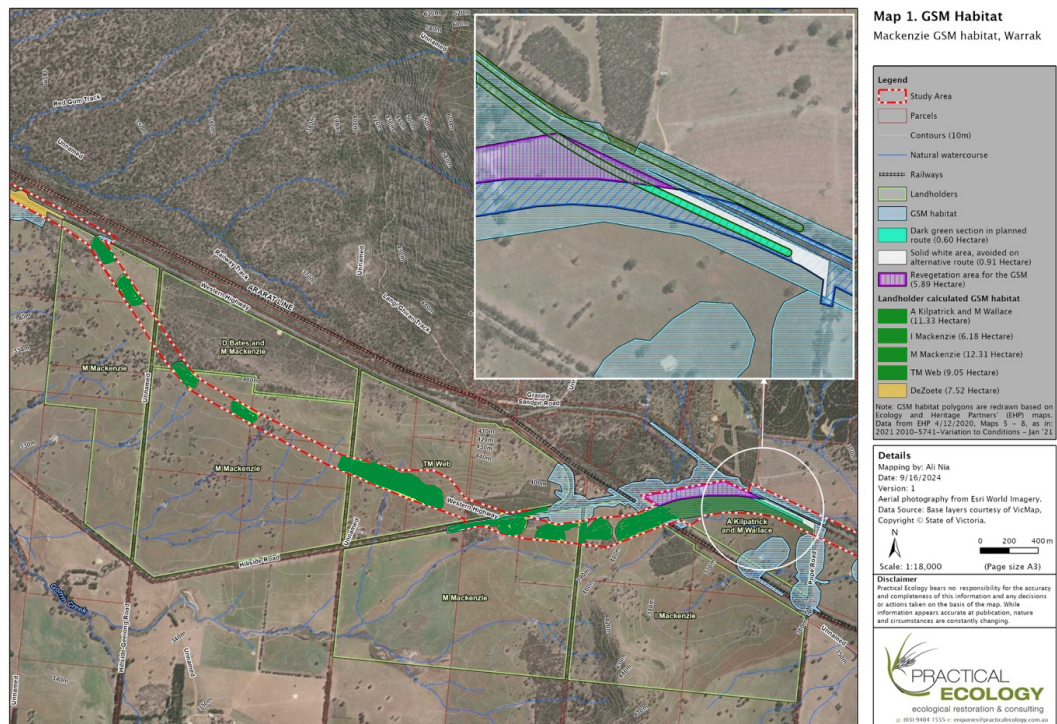


Figure 4. The deviation has 40.06 hectares of Golden Sun Moth habitat (green shading). The Northern Option has only 2-3 hectares

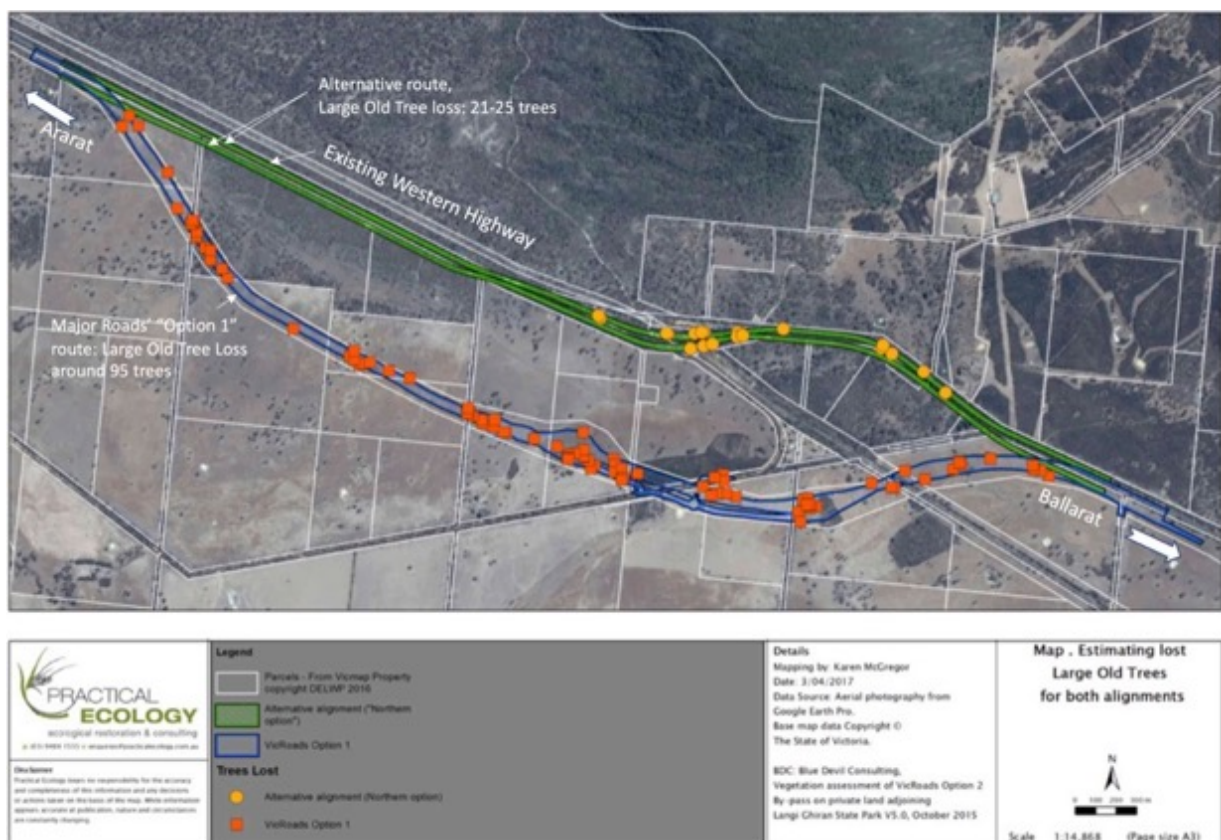


Figure 5. Comparative loss of Large Old Trees on the Northern Option and Option 1.

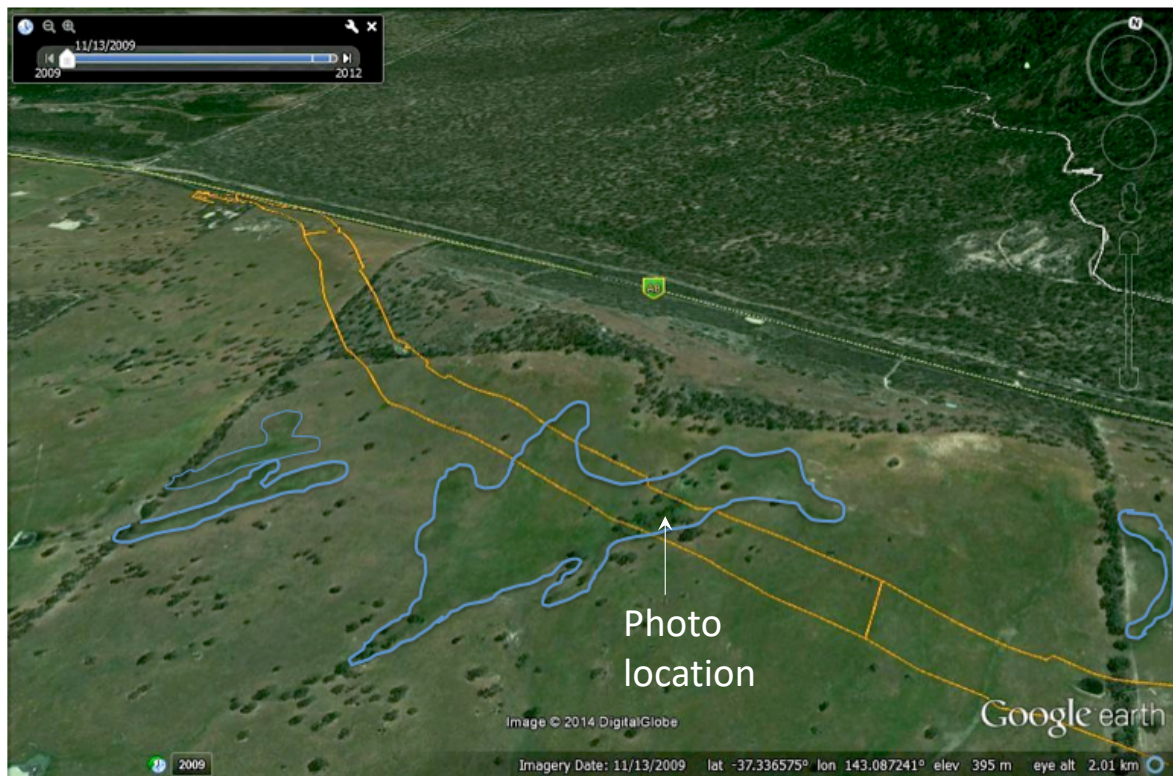


Figure 6 Aerial showing several Spring soaks that would be disrupted by Option 1, and photo point in next Figure.



Figure 7 A Spring soak threatened by Option 1.



Figure 8 Contractor's vehicle bogged in Spring soak in early summer, 2016

Best Route for Avoiding Fragmentation Impacts				
	Section 2 B Western Highway			
	Option 1	Northern Option	Notes on Northern Option	
Scope for Habitat to Improve with Time*	✓	✓		
Pro-Conservation Tenure* of remnant vegetation in question	✓	✓	Vegetation overlay and sympathetic owner	
Crossing Locations easy to select*	✓		Note: Northern option has natural underpass near Colonial road	
Best with Best*	✓			
Least Earthworks*		✓		
Least Number of Linear Infrastructure Corridors*		✓		
Increase Area of Reserves		✓	Willing to covenant, and to donate or bequeath	
Keep Road to Area of Existing Disturbance*		✓	Hwy Corridor has Powerline, Old Hwy, Rlwy, Wayside stop	
Restrict Noise, Headlights & protect EPBC Roadside from trucks & extra traffic*		✓	Noise and headlights low and confined	
Avoid Offsite Impact*		✓	Spring soaks protected	
Avoid Patch-Size Reduction		✓	EPBC paddock patches not bisected	
Avoid Severance-induced Infrastructure Replication & Resulting Patch Loss		✓		
Macropod Fencing* can be satisfactorily built on both routes				
* Factors from list prepared by Rodney van der Ree, ARCUE, Sep 2015				

Figure 9. Option 1 has only 2 advantages, compared with 10 on the Northern Option, for avoiding and minimising fragmentation effects. International road ecology expert R. van der Zee gave this list, in 2015. Three additional factors have been added.



Figure 10. Person standing next to very large old Yellow Box tree, around 400 years old, in the path of Option 1.

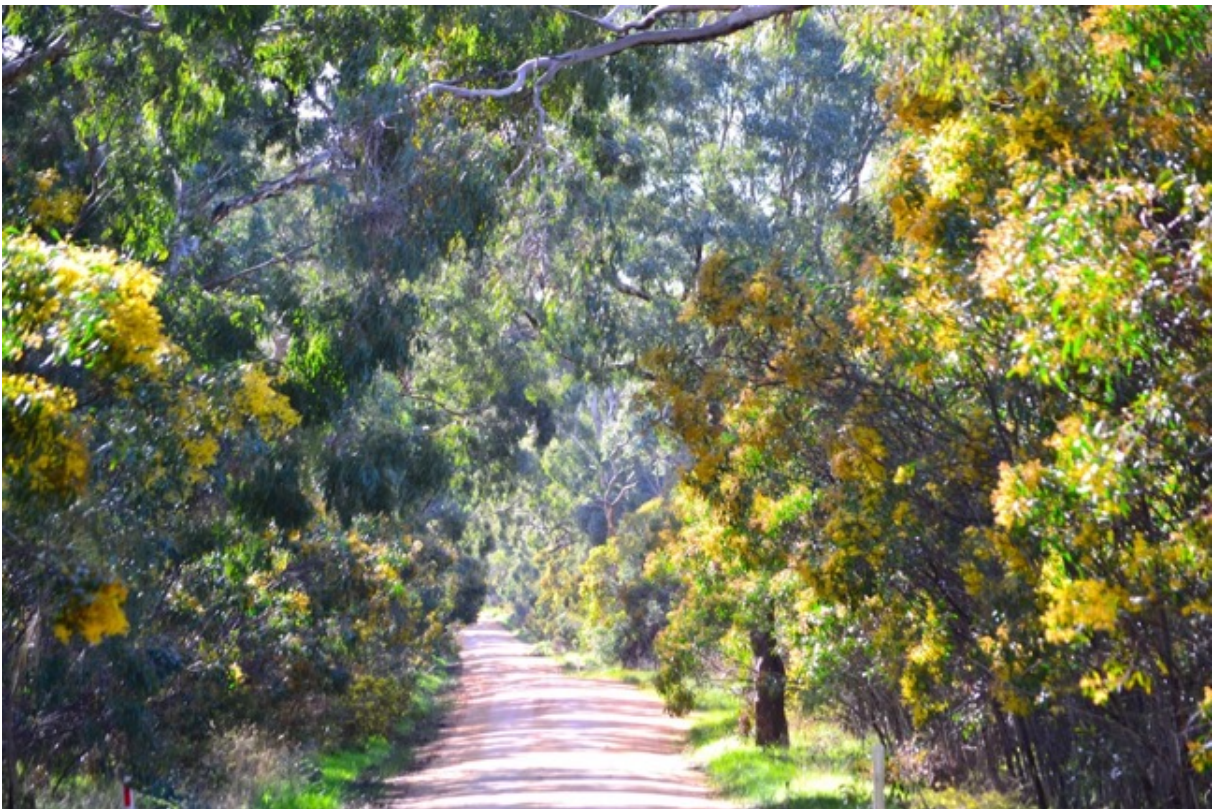


Figure 11. Hillside Road has good woodland vegetation along it. Hillside Road supports powerful owls, phascogales, echidnas, antechinuses and bearded dragons.



Figure 12. This patch of native grass was found on Option 1's deviation after route selection.



Figure 13. Eastern Habitation or birthing tree, with unburnt wood in the opening.



Figure 14. “Ancestor tree” next to the eastern Habitation or Birthing tree



Figure 15. At least 800 years old and probably over 1000 years old, this culturally modified tree on the western end of the project has in its base a large smooth hollow, made or enlarged by Aboriginals. This tree and the hollow tree on the eastern end (above) are more notable for being alive. This tree is now safe due to protest and a minor realignment.



Figure 16. Native groundcover overlooked along Option 1



Figure 17. Some of the granite boulders that lie in the path of Option 1



Figure 18. Box's Cutting on the Beaufort to Buangor section, 1.2 million cubic metres of Cut-and-Fill.

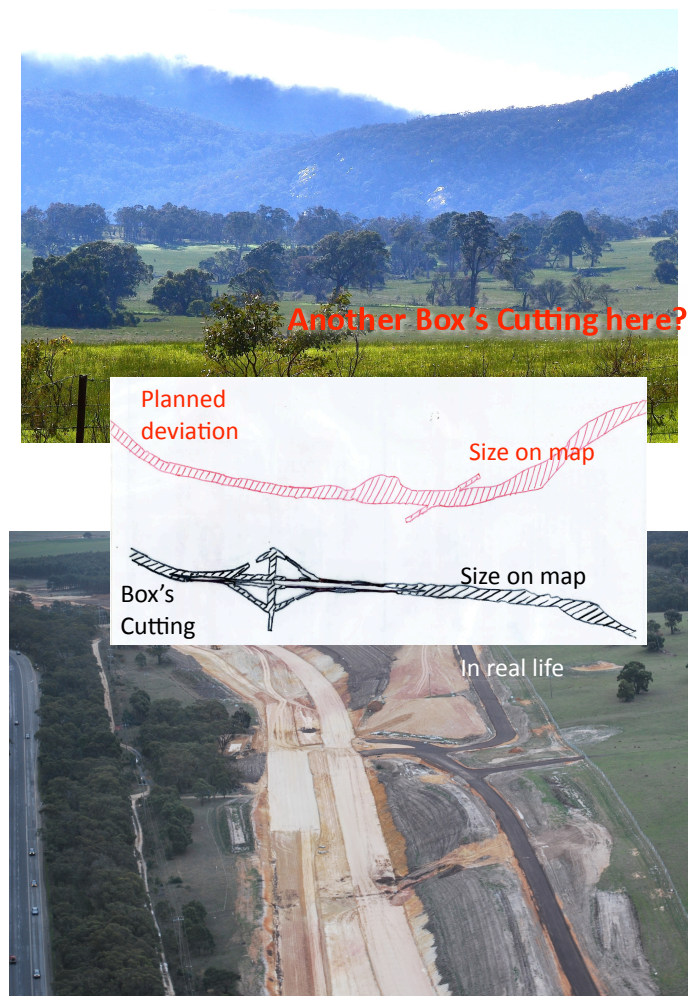


Figure 19. Lower: Box's Cutting on the previous section of highway duplication. Upper: Land where Option 1 will be cut through with a similar sized excavation.

ⁱ Impact can be reduced by:

- Rigid or semi-rigid safety barriers instead of a 5 or 9 metre clear zone,
- using curb and channel drainage with frequent, smaller diameter cross drains. (not table drains)
- steeper batters
- increasing crossfall on curves to allow slightly smaller radius curves, within MRPV's specifications for high speed roads, where useful.
- more design work to fit the required curves into already-disturbed-areas as much as possible.
- no "10-metre buffer" on disturbance width
- matching crossfall direction to natural fall of the land if possible – saves digging into the land on the uphill side of the road.
- Approximately 1 hectare of groundcover can be transplanted to similar microclimate and soil nearby

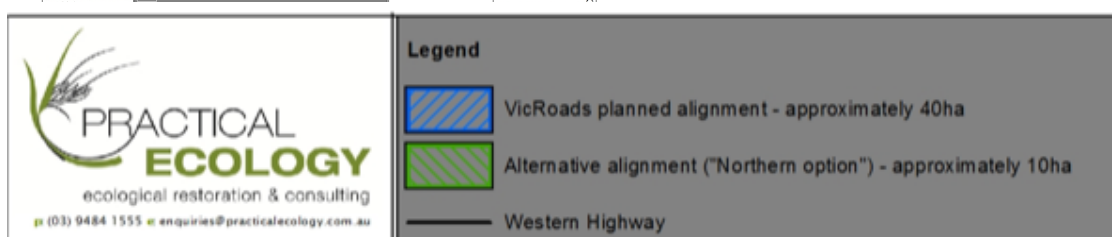
According to experienced construction engineer David Clark*, it's feasible to construct a standard-width highway carriageway with construction disturbance limits around a metre wider than the finished 16-metre carriageway-plus-crash-zones. Sixteen metres includes the two-metre "stretch-zone" behind wire rope safety barriers (could be a rigid safety barrier, leaving the 2 metres for drainage) a generous four-metre stopping lane and a metre to the right of the right-hand white line. A slimmer worksite is not as convenient for roadbuilders but it's commonly done when there is no other choice, as in cities.

ⁱⁱ <https://www.theage.com.au/national/victoria/federal-highway-approval-could-be-end-of-the-road-for-sacred-tree-saga-20190724-p52ae5.html>

ⁱⁱⁱ Using EHP's data from the Project's 2012 EES, 10.61 hectares of native vegetation was calculated to be on the deviation and this basis for impact comparison was used when presenting an alternative route to the 2012 Planning Panel (route decisionmakers). However, the submitters were misled by the EES data and understated the benefits of this route. Using data from EHP 2017 and BDC 2015, Foreman 2018 (paragraph 44) calculates three times as much total native vegetation on deviation: **31.85** hectare. This is made up of **26.32** hectares of native vegetation on private land on deviation (5.13 originally mapped and **21.19 ha overlooked** by the EES process (an increase from 16.79 ha, Foreman's 2015 estimate of the overlooked area)) **plus 5.53** hectares on public land.

^{iv} Practical Ecology used the "Variation" maps (Maps 6, 7; pages 17, 18) to calculate areas of GSM habitat in Section 2B. In contrast to the 2014 TSMP maps in Figure 3, Practical Ecology (2016) calculated^{iv} that around 40.061hectares of GSM habitat lie in the path of Option 1.

^v Practical ecology 2016, page 1, paragraph 4. An additional 7 threatened Large Old Trees were accidentally omitted from the count for Option 1. They are situated on the highway roadside at the eastern end of Option 1 (pers. Comm., L Kern, July 2016).



^{vii} Foreman, 2018, Page 2, paragraph 6

^{viii} Ararat Planning Scheme Planning Permit No 026726, Condition 7a, Page 2.

^{ix} VicRoads states that in total 3000 trees of all sizes (over 100mm diameter) will be felled on Section 2B; Around 23% of total are scattered trees (documentation available), so around 690 scattered trees will be felled under current plans on 2B. Approx. half of these, 320, are on the deviation. Loss of scattered trees on Section 2 as a whole, lies in the “Catastrophic” impact range (1000 or more).

^x Three consistent calculation available, also consistent with pers. Comm. from, engineer Charles Fairbairn, Lend Lease, around March 2016, for Box’s Cutting, which has slightly smaller plan-area of excavation on VicRoads’ map.

^{xi} Practical Ecology, 2016, 10.28 HaHa +1 HaHa from areas dismissed as Degraded Treeless Vegetation + 14% loss of quality from fragmentation of remnant = **12.68 HaHa**.

The Ararat Rural City Council advised in 2018 that Hillside Road would be widened under Option 1 to allow trucks, able to access Hillside road via the planned interchange, to pass in both directions. This is a major additional loss not considered in selecting Option 1. Hillside Road has high quality critically endangered fringing vegetation that would be lost along its nine kilometre-length and this would add at least 3 habitat hectares, at 3 metres of widening, to the impacts on Option 1. This brings the total on Option 1 to around **15.68 HaHa**.

^{xii} Interim CEO Paul Roth, in a letter 27 March 2026 to KORS members, wrote “This improved design delivers a safer and more efficient Western Highway while reducing the impact on Aboriginal cultural heritage and the environment.”