17. Visual and Landscape

The Visual and Landscape Assessment examined the potential effects of the Project on landscape character and the visual amenity of residents.

As part of this assessment, landscape character types were defined for the study area to assist in determining the ability of the landscape to accommodate the Project. The majority of the proposed alignment is adjacent to the existing highway and within the 'Vegetated Highway' landscape character area. It has been established that this landscape character area has a high capacity to accommodate change and the Project would not significantly diminish the landscape character of this area with the incorporation of mitigation measures, including roadside tree planting and the retention of existing roadside vegetation where possible. Where there is a new alignment or where the existing highway alignment would be elevated, there would be a visual impact on the nearby dwellings.

The proposed alignment would have a moderate impact on the areas of cultural or natural significance, such as Sisters Rocks. These potential impacts from the Project can be reduced through sensitive design and screening vegetation.

Many dwellings located along the existing highway have an existing view encompassing the highway. Therefore, where the alignment utilises the carriageway of the existing highway, the anticipated visual impact upon these dwellings is considered to be minor. Where the duplication deviates around Great Western, the impact upon dwellings is considered higher due to changes in the physical landscape. However, with sensitive mitigation, such as sensitive design and screening vegetation, these impacts would be reduced.

Key areas where the landscape character is likely to be diminished include the proposed interchanges at Armstrong, Great Western and London Road where the alignment deviates from the existing Western Highway corridor and where new road structures are inserted upon 'Vegetated Rural' or 'Rural' landscape character types.

The visual impact and risk ratings on 'Vegetated Rural' and 'Rural' landscapes are reduced with careful mitigation, including the sensitive design of road infrastructure and planting characteristic of the locality.

By utilising the existing Western Highway alignment through the majority of its length, the proposed alignment reduces its visual impact upon dwellings, landscape character, townships and natural and cultural visual values. In areas where impacts are unavoidable, suitable mitigation measures can be incorporated to reduce the impacts and risks to acceptable levels. Therefore, the Project is considered to have an overall minor impact on visual and landscape characteristics.

17.1 EES Objectives

The EES objective relevant to this section of the EES is:

- *To minimise air emissions, noise, visual, landscape and other adverse amenity effects, during the construction and operation of the proposed duplicated highway to the extent practicable.*

This chapter identifies the visual and landscape characteristics of the area, establishes their value or significance, and assesses the level of sensitivity to change. It outlines the recommended management measures to be implemented to minimise potential impacts. More specifically, this chapter addresses the EES Scoping Requirements by:

- Characterising the existing landscape character, identifying sensitive viewpoints including dwellings, Sisters Rocks, Ararat Regional Park (including the Ararat Hills Block with McKays Circuit and Woodfines Track and Ararat Hill Scenic lookout), Great Western Bushland Reserve, Sisters Rocks Bushland Reserve, gold mining relics and shallow mine shafts, mining dams and water races, waterways and other recreational or community spaces) in the study area;
- Describing the significance of the landscape and its sensitivity to change;
- Identifying the key features of the Project and relevant alternatives, which may result in visual and landscape effects during construction or operation;
- Identifying and assess the potential changes to the landscape, and associated effects on visual amenity;
- Assessing the capacity of the landscape as a whole to accommodate the Project and any relevant alternatives without significantly diminishing the landscape character;
- Assessing potential visual effects from key vantage points in the landscape including at sites of topographical prominence and sites with notable natural, scientific, cultural, recreational or aesthetic values. This assessment could involve the use of computer-based simulation of route options or parts of the route options to assist with the evaluation of landscape changes and visual effects;

- Assessing potential effects of the Project and relevant alternatives (including ancillary works, such as acoustic barriers) on identified sensitive receptors in the study area including dwellings. This assessment takes into account relevant findings of the existing and future land use assessment;
- Assessing the effects of the Project on the visual and landscape character of the study area and adjoining areas taking into account distances and user group sensitivities to landscape modifications;
- Identifying measures to avoid, minimise and/or mitigate visual and landscape effects; and
- Assessing likely residual effects on the visual amenity of sensitive receptors and the landscape character within and adjoining to the project area.

This chapter is based on a Visual and Landscape Impact Assessment report completed by Aspect Studios Pty Ltd (2012), and included in Appendix N.

17.2 Study Area

The Visual and Landscape assessment study area encompasses a corridor extending up to 1500 metres (m) either side (east and west) of the existing highway, except around Great Western where it extends to 1800m (encompassing the extent of new alignment possibilities). However, there are instances when visual impacts have been investigated outside of this 1500m to 1800m proximity.

17.3 Methodology

Existing Conditions

The methodology used for the visual and landscape existing conditions assessment included desktop analysis, field inspections and review of the following:

- Background reports and relevant maps of the region
- Relevant strategic documents
- Site investigation and photography
- Identification of existing physical features
- Identification of natural and cultural values
- Identification of the visual and landscape characteristics of the area
- Identification of the value or level of significance and sensitivity to change of the landscape character types.

The impact assessment is guided by the evaluation criteria established for the Project.

Four main tools were used to determine impacts, they are:

- Site Analysis
- Landscape and Visual Impact Assessment Plan
- Cross Sections
- Viewshed analysis
- 3D Photomontages.

A detailed description of the impact and risk assessment methodology is included in Technical Appendix N.

17.4 Legislation and Policy

The relevant legislation and government policies for visual amenity are discussed in Table 17-1.

Table 17-1 Relevant Visual and Landscape Legislation and Policies

Legislation / Policy	Description
National	
Environment Protection and Biodiversity Act 1999	Under the EPBC Act, any activity that could significantly impact threatened flora and fauna species and vegetation communities listed under the EPBC Act requires referral to and potentially, approval of the Minister for Sustainability, Environment, Water, Population and Communities
State	
Flora and Fauna Guarantee Act 1988	Under the *Flora and Fauna Guarantee Act 1988* rare, threatened and significant flora and fauna are protected, and require approval from the Department of Sustainability and Environment for removal on public land.
Heritage Act 1995	The Victorian *Heritage Act 1995* provides for the protection and conservation of places and objects of cultural heritage significance and the registration of such places and objects. Heritage Victoria maintains a list of State-significant heritage places and objects which are protected under the *Heritage Act 1995*. The Victorian Heritage Register is the highest level of protection and lists the non-Aboriginal heritage places/objects. The Victorian Heritage Inventory lists archaeological sites in Victoria that are older than 50 years. The value of heritage places and objects can be related to the landscape and visual setting.

Legislation / Policy	Description
Aboriginal Heritage Act 2006	The *Aboriginal Heritage Act 2006* forms the framework within which Aboriginal heritage assessment is undertaken in Victoria. The Act provides for the protection and management of Victoria's Aboriginal heritage with processes linked to the Victorian planning system. Cultural Heritage Management Plans and Cultural Heritage Permits are processes to manage activities that may harm Aboriginal cultural heritage.
Planning and Environment Act 1987	The *Planning and Environment Act 1987* establishes a framework for planning the use, development and protection of land in Victoria. The Victorian Planning Policy Framework is developed under the *Planning and Environment Act 1987*. Items relevant to the landscape and visual assessment include: Clause 15: Environment ▪ Planning authorities should plan for regional open space networks to be used for recreation and conservation of natural and cultural environments. Planning and responsible authorities should ensure that open space networks are linked through the provision of walking and cycle trails and rights of way. ▪ Planning and responsible authorities should ensure that land use and development adjoining regional open space networks, national parks and conservation reserves complements the open space in terms of visual and noise impacts.
Native Vegetation Management Framework 2002	The Native Vegetation Management Framework 2002 is implemented under the *Planning and Environment Act 1987*. The removal of any remnant patches of native vegetation or scattered indigenous trees requires consideration of Victoria's Net Gain Policy, described within the Native Vegetation Management Framework.
Landscape and Visual Assessment Guidelines 2009	There are no Government guidelines relating to landscape and visual assessment relevant to the scope of this project. The Landscape Assessment Guidelines 2009 by Heritage Victoria provides an approach to visual assessment, but is specifically limited to determining and assessing the impacts upon sites of cultural heritage significance. None of the cultural heritage elements (identified by Heritage Overlays) are related to their landscape setting or visually impacted upon by the Project. However, there are generally utilised guidelines and processes that have become 'industry standard' and are used in the preparation of this landscape and visual assessment. These are: ▪ Landscape Character Types of Victoria, 1983 by Leonard M and Hammond R; and ▪ Guidelines for Landscape and Visual Impact Assessment, 2003 by the Landscape Institute and the Institute of Environmental Management and Assessment.
Local	
Ararat Planning Scheme	The Local Planning Policy Framework contains a number of points relevant to the landscape and visual assessment. In summary, the policy identifies the following directions: ▪ The municipality contains a number of places of historic and cultural significance which are important to the local and wider community and must be protected and enhanced for their conservation and tourism potential. There are a number of overlays that are relevant to the landscape and visual assessment. A summary of each overlay is provided below: Heritage Overlay (HO): There are a number of Heritage Overlays within or in proximity to the study area. These include: ▪ HO 112 – Fountain Head Brewery Residence, Military Bypass Road, Armstrong; ▪ HO 113 – 'Westgate', Westgate Road, Armstrong; and ▪ HO 114 – Hard Hill Mining Site at Garden Gully Road and Hard Hill Road, Armstrong. Vegetation Protection Overlay VPO1 Significant and Remnant Vegetation Areas ▪ The Vegetation Protection Overlay VPO1 seeks to protect areas of significant vegetation for their ecological value. Vegetation Protection Overlay VPO2 Roadside Protection Vegetation Areas: ▪ The Vegetation Protection Overlay VPO2 seeks to protect areas of significant remnant roadside vegetation and wildlife habitat and acknowledges the contribution this vegetation provides to the quality of travel experience and visual quality. ▪ A number of roads, including the Western Highway within the study area are covered by this overlay.

Legislation / Policy	Description
Northern Grampians Planning Scheme	The Local Planning Policy Framework contains a number of points relevant to the landscape and visual assessment. In summary, the policy identifies the following directions: ▪ Identifying, protecting and conserving significant items, places and areas of natural and cultural heritage. ▪ Protecting and enhancing native flora and fauna to improve biodiversity; and ▪ Conserving and protecting sites and precincts of natural, archaeological, architectural, cultural and historic significance. There are a number of overlays that are relevant to the landscape and visual assessment. A summary of each overlay is provided below: Heritage Overlay: There two Heritage Overlays within or in proximity to the study area. These include ▪ HO1 – Seppelts Champagne Cellars, 36 Cemetery Road, Great Western; and ▪ HO7 – Hard Hill Mining Site, Garden Gully Road, Great Western. Environmental Significance Overlay ESO1 Significant Ridge Environs: ▪ The Environmental Significance Overlay ESO1 seeks to maintain the landscape qualities of the ridge system, especially when viewed from surrounding areas and the protection of remnant native vegetation. Areas covered by this overlay are outside the study area.

17.5 Existing Conditions

17.5.1 Dwellings

Concentrations of occupied dwellings within the study area are important sensitive receptors to changes in visual and landscape character. These concentrations of dwellings occur:

- Between Ararat and Great Western in a bushland and rural setting, particularly in Armstrong; and
- In Great Western township, where there is a relatively larger concentration of residences.

Other dwellings are scattered along the existing Western Highway.

17.5.2 Natural and Cultural Values

The main cultural and natural features within the study area are identified in other chapters throughout the EES, more specifically in Chapter 13 (Biodiversity and Habitat) and Chapter 14 (Cultural Heritage). However, key natural and cultural features within the region that have visual, aesthetic or landscape values are:

- Ararat Regional Park, Great Western Bushland Reserve, Sisters Rocks Bushland Reserve, Black Range Scenic Reserve.
- Recreational areas including Stawell Resort Caravan and Camping Park, Sisters Rocks, Sisters Rocks Bushland Reserve, Grange Golf Course, Great Western Memorial Park, Great Western Racecourse, Great Western Bushland Reserve, Ararat Regional Park (including the Ararat Hills Block with McKays Circuit and Woodfines Track and Ararat Hills Scenic lookout).
- Community facilities including the Great Western Primary School.
- Tourist facilities such as Best's Winery, Seppelt Winery and Grampians Estate Wine Centre.

17.5.3 Scenic Views

Across the study area there are a number of scenic views and viewing points, including lookouts from Ararat Regional Park and views towards the Black Ranges. It is a standard principle of landscape and visual assessment that a higher significance is placed on public viewpoints rather than residential viewpoints. Examples of views from the existing Western Highway and the Ararat Regional Park lookout are illustrated in Figure 17-1 to Figure 17-3.

Figure 17-1 View from Ararat Regional Park lookout towards the north

Figure 17-2 View from outside Great Western along the Western Highway west towards the Black Ranges

Figure 17-3 View from outside Stawell along the Western Highway south towards the Black Ranges

17.5.4 Landscape and Visual Character

Landscape character types have been defined for the study area to assist in determining the ability of the landscape to accommodate the duplication of the Western Highway. The character types have been established through the integration of site observations and surveys, and analysis of information, including: geology and geomorphology, topography, land use patterns, existing vegetation and aerial photography.

There are nine distinct landscape character types in the study area:

- Type 1 - Bushland
- Type 2 - Mountain Bushland
- Type 3 - Vegetated Rural
- Type 4 - Rural
- Type 5 - Township Fringe
- Type 6 - Great Western
- Type 7 - Vegetated Highway
- Type 8 - Highway
- Type 9 – Quarry.

Refer to Map 9 and 10 of Appendix A of Technical Appendix N for location and extent of landscape character types.

Type 1: Bushland

This is typical natural bushland character, comprising open eucalypt forest and understorey vegetation, as illustrated in Figure 17-4. Topography ranges from flat to gently undulating. It is highly valued for its perceived naturalness, and because it occurs relatively infrequently within the context of the general study area.

Figure 17-4 Landscape Character Type 1: Bushland

Type 2: Mountain Bushland

Similar to the Bushland character type, this comprises open eucalypt forest and understorey vegetation as illustrated in Figure 17-5. The topography is characterised by steeply undulating mountain ranges and isolated peaks, creating a visually dramatic vertical contrast to the generally flat and slightly undulating surrounding topography.

Figure 17-5 Landscape Character Type 2: Mountain Bushland

Type 3: Vegetated Rural

This landscape character type is of typical rural land character, with open agricultural land and scattered rural infrastructure including dams and low scale rural sheds and residences. It comprises pasture grasses and crops with scattered mature indigenous trees, including densely vegetated pockets. Linear bands of canopy vegetation, both indigenous and exotic, often line property boundaries and road reserves. It is of medium to high landscape value due to the visual qualities of the following attributes:

- Distinctive remnant vegetation bands exist along roadsides, waterways and scattered within the agricultural land. These include large old trees (LOTs);
- Variations in the topography from flat to slightly undulating;
- Expanses of similar vegetation pattern; and
- Regular occurrence within the surrounding landscape context.

The typical form of this character type is illustrated in Figure 17-6.

Figure 17-6 Landscape Character Type 3: Vegetated Rural

Type 4: Rural

Similar to Type 3, but largely devoid of scattered canopy trees. Linear bands of canopy vegetation, both indigenous and exotic, infrequently line some property boundaries and road reserves, and strips of indigenous canopy and understorey vegetation occur along waterways. It is of medium landscape value due to expanses of similar vegetation patterns and regular occurrence within the surrounding landscape context. See Figure 17-7.

Figure 17-7 Landscape Character Type 4: Rural

Type 5: Township Fringe

This type is a transition zone between rural land and town centre, containing an increase in density of low scale residential and/or industrial buildings. It exhibits linear bands of indigenous and exotic canopy vegetation, following property boundaries and road reserves. The topography is generally gently undulating across the character type. It has a high landscape value for distinctive remnant vegetation bands and its gradual transition between farmland and rural settlement (refer to Figure 17-8).

Figure 17-8 Landscape Character Type 5: Township Fringe

Type 6: Great Western

Type 6 is of traditional rural town character, with a relative increase in density of low scale residential, commercial and heritage buildings on varying small to large allotment sizes. Landscape Character Type 6 provides a smooth transition from the surrounding rural land with some agricultural land uses within the town including wineries. Vegetation is characterised by small scale residential gardens, scattered street tree planting and entrance avenues. The topography is generally flat, however slightly rises towards the east and west.

The Great Western character type is of high landscape value due to the visual qualities of its following attributes:

- Remnant historic buildings;
- Tree lined entrance avenues; and
- Transition to rural land and visually prominent rural land uses such as the wineries.

Landscape Character Type 6 is illustrated in Figure 17-9.

Figure 17-9 Landscape Character Type 6: Great Western

Type 7: Vegetated Highway

This type comprises the existing highway where there is native tree and shrub vegetation within the road reserve. It is of moderate landscape value due to vegetation along the highway providing filtered views to the surrounding landscape, see Figure 17-10.

Figure 17-10 Landscape Character Type 7: Vegetated Highway

Type 8: Highway

This landscape type encompasses the existing highway alignment without roadside vegetation. It is considered to be of low landscape value due to the visual qualities attributing to only the road carriageway, apart from views towards other landscape character types. The typical form of this character type is illustrated in Figure 17-11.

Figure 17-11 Landscape Character Type 8: Highway

Type 9: Quarry

This landscape character type includes the quarry and landfill to the north of Great Western and comprises of deep exposed excavations into the topography and is devoid of vegetation. It is considered to be of very low landscape value as it does not contain any notable visual qualities, see Figure 17-12.

Figure 17-12 Landscape Character Type 9: Quarry

17.5.5 Landscape Character Type Sensitivity

Landscape sensitivity provides an indication of the ability for a landscape to absorb change without dramatically altering its character. The landscape sensitivity categories are:

- High - cannot absorb any physical change;
- Medium - can absorb change with sensitive mitigation; or
- Low - can absorb change.

Table 17-2 summarises the sensitivity of the identified landscape character types to change.

Table 17-2 Landscape Character Type sensitivity

Type	Landscape Character Type	Sensitivity	Reason
1	Bushland	High	Any development to occur within this character type may result in a significant visual change due to the loss of bushland vegetation and perceived sense of naturalness.
2	Mountain Bushland	High	Any development to occur within the character type may result a significant visual change due to its visual prominence and the loss of bushland vegetation and perceived sense of naturalness.
3	Vegetated Rural	Medium to High	Large scale development would result in the loss of some vegetation, but may retain the sense of open agricultural plains.
4	Rural	Medium	Any development to occur within the landscape type may result in the loss of some vegetation, but may retain the sense of open agricultural plains.
5	Township Fringe	Medium	Any development to occur within the landscape type may visually affect local residents who are sensitive to landscape change.
6	Great Western	High	Any development to occur within the landscape type may impact the rural town character of the town and visually affect the local residents who are sensitive to landscape change.
7	Vegetated Highway	Low	Any road development to occur within the landscape type may impact the character through the removal of native vegetation.
8	Highway	Very Low	Any road development to occur within the landscape type would not detrimentally impact upon the landscape character of the immediate area.
9	Quarry	Very Low	Any development to occur within the landscape type would not detrimentally impact upon the landscape character.

17.6 Impact Assessment

The impact assessment uses three different attributes to evaluate the likely visual impact and level of change:

- The type of duplication proposed to be constructed, i.e. duplication along existing Western Highway, overpass or bridge or new highway alignment.
- A qualitative judgement based on the extent of visual change, i.e. cut and fill, distance from construction footprint, overpass proximity and scale, retained vegetation, vegetation to be removed and topography.
- The quantity of dwellings likely to be affected.

Please refer to Section 7 of Technical Appendix N for cross section figures of the proposed alignment and aerial perspectives of the proposed overpasses for the Project.

17.6.1 Key Issues

A number of key impacts, those that resulted in a visual impact rating of moderate or higher, have been identified from the assessment of the proposed alignment. They are as follows:

- The duplication overpass of Garden Gully Road in Armstrong, impacting upon adjacent dwellings and landscape character;
- The bypass of Great Western including overpasses, that impacts upon surrounding landscape character;
- The proximity of the duplication to Sisters Rocks, detrimentally impacting upon its outlook and general amenity; and
- The overpass of the realigned London Road, impacting upon adjacent dwellings and landscape character.

The Visual and Landscape Impact Assessment has been divided into seven separate areas to assess the impact on dwellings, the affected landscape character type, identified in Section 17.5.4, and the impact on townships and places of natural and cultural value. Refer to Technical Appendix N for an outline of the six areas discussed below.

Area 1: Ararat Hills

The area is characterised by steeply undulating topography towards the north-east and the south-west. The Western Highway largely traverses along a valley defined by the slopes rising away from the alignment.

The Ararat Regional Park is the dominant visual element and is of the 'Mountain Bushland' landscape character type, containing steep topography and dense vegetation on both the east and west sides of the highway. These visual elements act as a visual gateway between the Ararat township and rural land to the north.

The land adjacent to the park comprises of undulating 'Vegetated Rural' land. There are a total of 10 dwellings along the Western Highway, located at varying distances away from the highway. Two of these dwellings are located on a single hill with elevated panoramic views over the highway towards the south-west.

Table 17-3 shows the impact assessment summary for Area 1.

Table 17-3 Area 1 – Impact Assessment Summary

Item	No. Affected	Sensitivity	Level of Change	Impact Assessment
Dwellings	10	Low	Moderate	Insignificant
Ararat Regional Park		High	Insignificant	Insignificant
Landscape Character – Vegetated Highway		Low	Major	Minor

Area 2: Armstrong

The area is characterised by 'Vegetated Rural' undulating land. The existing Western Highway and Armstrong Deviation traverse through a valley, with topography rising towards the east and west. A concentration of dwellings is located around the Garden Gully Road, some with views towards the highway and others located behind ridgelines. Additional dwellings are located south of this intersection, but views from these dwellings are screened by topography and dense vegetation.

The duplication utilises the current Western Highway and Armstrong Deviation alignment and comprises an overpass above Garden Gully Road with associated intersection works and adjacent road upgrades. The Garden Gully Road overpass and associated on ramps, off ramps and batters inserts a large scale road infrastructure element along the existing alignment of the Western Highway. Figure 17-13 provides an existing view looking east along Garden Gully Road. The existing view along Garden Gully Road is characterised by pastures with a band of native and exotic canopy vegetation. Figure 17-14 identifies the anticipated visual change from the duplication and overpass. The duplication would result in a major visual change upon this visual outlook.

Table 17-4 shows the impact assessment summary for Area 2.

Figure 17-13 An existing view looking east along Garden Gully Road

Figure 17-14 Photomontage with the duplication and overpass

Table 17-4 Area 2 – Impact Assessment Summary

Item	No. Affected	Sensitivity	Level of Change	Impact Assessment
Dwellings along Garden Gully Overpass	8	High	Major	Moderate
Dwellings Ch. 4500-5000	5	Low	Moderate	Insignificant
Landscape Character – Vegetated Rural		Medium to high	Major	Moderate
Landscape Character – Vegetated Highway		Low	Major	Minor

Area 3: Garden Gully

The area is comprised of predominantly flat 'Vegetated Rural Land' with land rising towards the north-east and south-west. Four dwellings are located along the Western Highway, three of which are less than 50m from the proposed alignment Right Of Way (ROW). The Grampians Estate Winery is also located along the highway at chainage 11000. The Grampians Estate Winery is considered to be of medium visual sensitivity, characterised by linear vineyards and an open presentation to the existing Western Highway. The Project proposes widening the road corridor adjacent to the winery, however as it does not dramatically alter the outlook of the winery, nor impact upon its visual characteristics, the duplication results in an insignificant visual change and insignificant impact rating. Table 17-5 shows the impact assessment summary for Area 3.

Table 17-5 Area 3 – Impact Assessment Summary

Item	No. Affected	Sensitivity	Level of Change	Impact Assessment
Dwellings	3	Low	Moderate	Insignificant
Grampians Estate Wines		Medium	Insignificant	Insignificant
Landscape Character – Vegetated Highway		Low	Major	Minor

Area 4: Great Western

Great Western comprises a small township with a concentration of residential dwellings. The topography rises to the north east and peaks across Sandy Creek Road. This elevated land comprises of the Great Western Bushland Reserve with dense bushland screening two quarries and a former landfill. The elevated 'Bushland' across the north eastern ridgeline and adjacent 'Vegetated Rural' land establishes a vegetated visual boundary to the town. Best's Winery is located to the north-east and the Seppelt Winery to the south west of the town centre.

Seppelt Winery provides scenic views of the Great Western periphery towards the east, and is characterised by sloping land with linear vineyards. This visual outlook will undergo change through the introduction of the Great Western Bypass and Southbound Overpass, large scale road infrastructure elements. However, given the distance between the winery and overpass, and its scale within the overall outlook of the winery and the effective screening canopy vegetation located along Concongella Creek, the visual change is minor, resulting in an insignificant impact. Figure 17-15 and Figure 17-17 provide a digital visualisation of the anticipated visual change from the bypass and overpass.

Figure 17-15 Existing view from the Seppelt Winery towards the east, note screening along Concongella Creek within the middle ground.

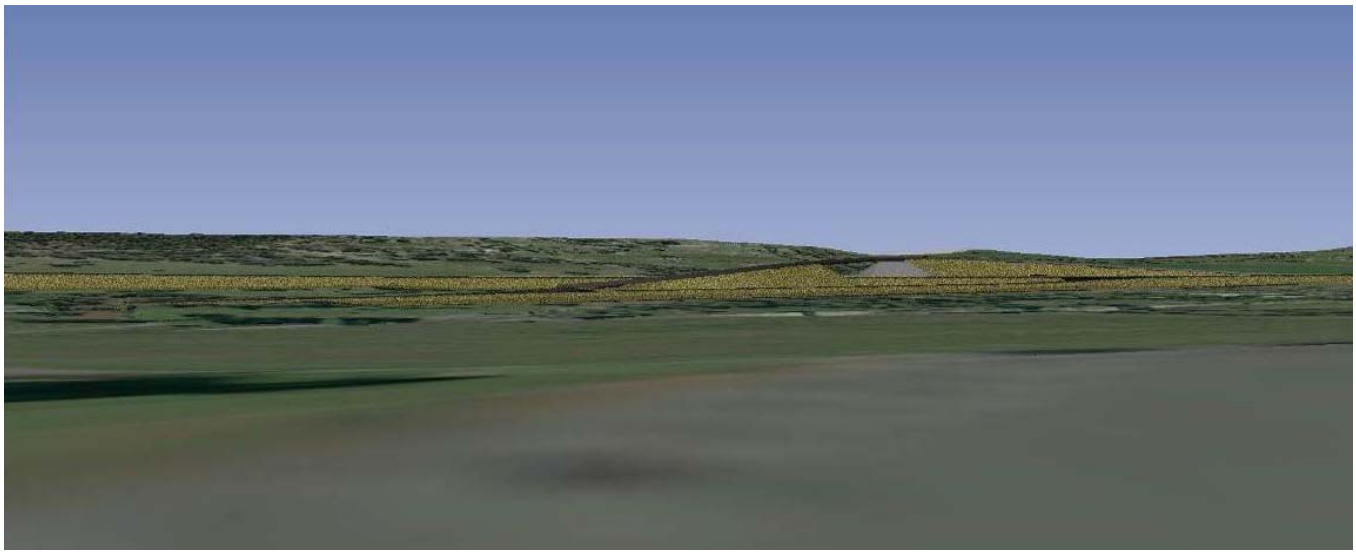

Figure 17-16 Indicative digital visualisation of the view from Seppelt Winery towards the Southern Overpass

The duplication diverts around the Great Western township traversing through 'Vegetated Rural' landscape character, across "quarry" landscape character and elevated 'Bushland' landscape character to the northeast. Figure 17-4 shows a digital model / aerial perspective of the duplication cut, north of Great Western.

Table 17-6 shows the impact assessment summary for Area 4.

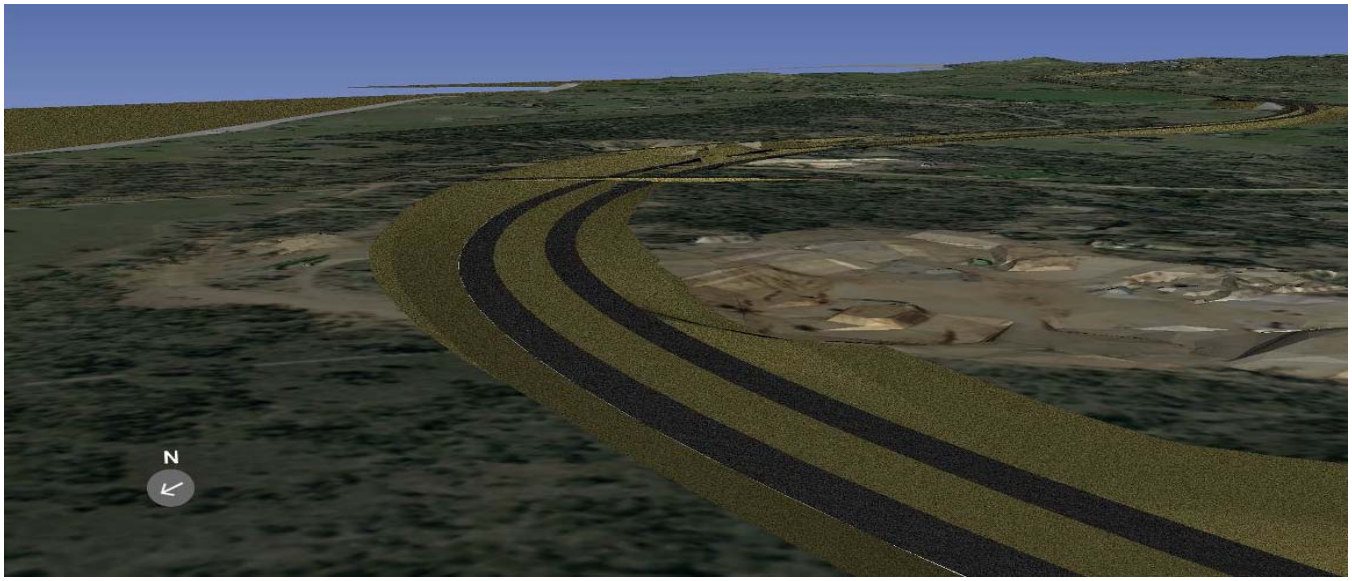

Figure 17-17 Digital model showing the duplication cut, north of Great Western

Table 17-6 Area 4 – Impact Assessment Summary

Item	No. Affected	Sensitivity	Level of Change	Impact Assessment
Dwellings Ch. 11400 - 12600	4	High	Major	Minor
Dwellings Ch. 14400 - 16500	9	High	Moderate	Minor
Great Western Town Centre		High	Insignificant	Insignificant
Outer Great Western		Medium	Moderate	Minor
Great Western Primary School		High	Insignificant	Insignificant
Great Western Bushland Reserve		High	Insignificant	Insignificant
Best's Winery		Medium	Minor	Insignificant
Seppelt Winery		Medium	Minor	Insignificant
Landscape Character - Bushland		High	Minor	Minor

Area 5: North Great Western

This area includes the rural land north west of Great Western between Briggs Lane (Ch. 16600) and past Harvey Lane (Ch. 21000). The area is characterised by undulating 'Vegetated Rural' land with a general fall towards the north-east. Four residential dwellings are located along the Western Highway. The existing Western Highway includes an overpass across the Melbourne-Adelaide railway line in a cutting, and the proposed alignment would introduce two new overpasses across the railway line. Table 17-7 shows the impact assessment summary for Area 5.

Table 17-7 Area 5 – Impact Assessment Summary

Item	No. Affected	Sensitivity	Level of Change	Impact Assessment
Dwellings along rail overpass	1	High	Major	Minor
Dwellings Ch. 17000 - 17200	3	Low	Moderate	Insignificant
Landscape Character – Vegetated Rural		Medium to high	Moderate	Minor
Landscape Character – Vegetated Highway		Low	Major	Minor

Area 6: South Stawell

The landscape character is defined by a heavily vegetated road corridor transitioning from surrounding 'Bushland' to 'Rural' land upon approach to Stawell. This transition and vegetated road reserve defines the entry experience into Stawell. The topography is gently undulating with localised rises towards the east around Sisters Rocks and a general fall towards Pleasant Creek in the west.

The 'Bushland' contains a number of scattered dwellings along the highway and their orientation and character becomes more suburban in nature along Robson Road and then Mossman Road.

Sisters Rocks is of high landscape sensitivity as an important cultural asset within a bushland setting. Being located directly adjacent to the existing Western Highway carriageway, the area containing the rocks and the informal car park has a visual outlook upon the highway. The existing south western view from Sisters Rocks (see Figure 17-18) is characterised by a foreground of gravel paving and scattered canopy vegetation. Through this vegetation the Western Highway carriageway is visible in the middle ground with dense vegetation behind it. In the far background the Black Ranges are slightly visible above and between the tree canopies of the middle ground (see Figure 17-19).

Given the increase of road infrastructure upon this view the duplication results in a moderate visual impact upon the view. As Sisters Rocks is of high landscape sensitivity, the resultant impact rating is moderate, refer to Table 17-8.

Western Highway looking north to Stawell from Panrock Reservoir Road intersection

Figure 17-18 Existing view from Sisters Rocks to the south west and the Western Highway

Figure 17-19 Photomontage of the duplication alignment upon the existing view from Sisters Rocks

The Stawell Resort and Caravan Park is comprised of a collection of small dwellings and caravans and is of low landscape sensitivity. The existing Western Highway is visible from the Stawell Resort and Caravan Park through partially screening roadside vegetation along this interface. The duplication widens the existing highway at this point and removes this screening vegetation.

The Grange Golf Course is of medium landscape sensitivity as the scenic qualities of the golf course can be considered as an important visual attribute. The golf course does not have a visual outlook upon the existing Western Highway due to its orientation and surrounding screening vegetation. Thus, the anticipated level of visual change and impact is insignificant.

The proposed alignment includes an overpass over the realigned London Road. Dwellings near this overpass are located along Robson Road (8 dwellings), London Road (2 dwellings) and Mossman Road (6 dwellings). All of these dwellings have a visual outlook upon the existing Western Highway, through either roadside vegetation or vegetation within private property. While retained vegetation would provide some screening, the overpass would result in a major change to the visual outlook of these dwellings. An additional three dwellings are located within dense bushland along London Road. These dwellings do not have a visual outlook to the existing Western Highway and it is anticipated that the Project will not be visible from these dwellings.

Table 17-8 shows the impact assessment summary for Area 6.

Table 17-8 Area 6 – Impact Assessment Summary

Item	No. Affected	Sensitivity	Level of Change	Impact Assessment
Dwellings Ch. 21400 - 22200	3	Low	Moderate	Insignificant
Dwellings along London Road near proposed overpass	16	High	Major	Moderate
Sisters Rocks		High	Moderate	Moderate
Sisters Rock Bushland Reserve		Medium	Insignificant	Insignificant
Grange Golf Course		Medium	Insignificant	Insignificant
Stawell Resort and Caravan Park		Low	Minor	Insignificant
Landscape Character - Rural		Medium	Major	Moderate
Landscape Character – Vegetated highway		Low	Major	Minor

17.7 Risk Assessment

An environmental risk assessment was undertaken on the proposed alignment to identify key environmental issues associated with the construction and operation of the Project. The Visual and Landscape Risk Assessment prepared independent consequence criteria for each attribute assessed and their level of sensitivity for:

- Dwellings
- Township and Cultural Values
- Landscape Character Type

The detailed methodology for this risk assessment has been described in Section 5.2 of Technical Appendix N. A risk assessment report that explains the process in detail and contains the complete project risk register has also been included as Technical Appendix Q.

Table 17-9 shows a summary for landscape and visual of:

- The impact pathways identified
- A description of the consequence.

Table 17-9 Visual and Landscape Risks

Risk No.	Impact Pathway	Consequence Description
LV1A	Construction and operation of the duplication along the existing Western Highway alignment will visually impact upon adjacent dwellings (Ch. 400-900, 1400- 3600, 4500-5000, 9300, 10600, 17000- 17200 and 21400- 22200).	Approximately 24 dwellings and those located within the caravan park would be located adjacent to the duplication and will receive a moderate or minor visual change upon their views.
LV1B	Construction and operation of a new overpass along the current Western Highway alignment will visually impact upon adjacent dwellings (Ch. 5300- 6500).	Eight dwellings will be located adjacent to the Garden Gully Overpass and would receive a major visual change upon their views.
LV1C	Construction and operation of the duplication along a new highway alignment including overpasses will visually impact upon adjacent dwellings (Ch. 11500-12600).	Approximately four dwellings would be located adjacent to Great Western Bypass and Southbound Overpass and will receive a major visual change upon their views.

Risk No.	Impact Pathway	Consequence Description
LV1D	Construction and operation of the duplication along a new highway alignment including overpasses will visually impact upon adjacent dwellings (Ch. 14400-16500).	Approximately 10 dwellings would be located adjacent to Great Western Bypass and Bests Road Overpass and would receive a moderate visual change upon their views.
LV1E	Construction and operation of a new overpass along the existing Western Highway alignment will visually impact upon adjacent dwellings (Ch. 20200- 21000).	One dwelling would be located adjacent to the Rail Overpass and would receive a major visual change upon their views.
LV1F	Construction and operation of a new overpass along the existing Western Highway alignment will visually impact upon adjacent dwellings (Ch. 23000- 242000).	Approximately 16 dwellings would be located adjacent to the proposed London Road Overpass and would receive a major visual change upon their views.
LV2A	Construction and operation of the duplication will visually impact upon the Ararat Regional Park (Ch. 1000-2400).	It is not anticipated that the duplication would be visible from the Ararat Regional Park and would receive an insignificant visual change.
LV2B	Construction and operation of the duplication will visually impact upon Grampians Estate Wines (Ch. 11000).	The duplication would be visible from Grampians Estate Wines but the winery would receive an insignificant visual change.
LV2C	Construction and operation of the duplication will visually impact upon the Great Western Town Centre.	It is not anticipated that the duplication would be visible from the Great Western Town Centre and will receive an insignificant visual change.
LV2D	Construction and operation of the duplication will visually impact upon Outer Great Western (Ch. 11200-16400).	The duplication would be visible from Outer Great Western and receive a moderate visual change.
LV2E	Construction and operation of the duplication will visually impact upon the Great Western Primary School (Ch. 14600).	It is not anticipated that the duplication would be visible from the Great Western Primary School and would receive an insignificant visual change.
LV2F	Construction and operation of the duplication will visually impact upon the Great Western Bushland Reserve (Ch. 12400-13000).	It is not anticipated that the duplication would be visible from within the Great Western Bushland Reserve and would receive an insignificant visual change.
LV2G	Construction and operation of the duplication will visually impact upon Best's Winery (Ch. 15800).	The duplication would be visible from Best's Winery and receive a minor visual change.
LV2H	Construction and operation of the duplication will visually impact upon Seppelt Winery (Ch. 12200).	The duplication would be visible from Seppelt Winery and receive an insignificant visual change.
LV2I	Construction and operation of the duplication will visually impact upon Sisters Rocks (Ch. 22000-22400).	The duplication would be visible from Sisters Rocks and receive a moderate visual change.
LV2J	Construction and operation of the duplication will visually impact upon the Sisters Rocks Bushland Reserve (Ch. 22800-23000).	It is not anticipated that the duplication would be visible from the Sisters Rocks Bushland Reserve and would receive an insignificant visual change.
LV2K	Construction and operation of the duplication will visually impact upon the Grange Golf Course (Ch. 22000).	It is not anticipated that the duplication would be visible from the Grange Golf Course and would receive an insignificant visual change.
LV2L	Construction and operation of the duplication will visually impact upon the Stawell Resort Caravan and Camping Park (Ch. 22000-22400).	The duplication would be visible from the Stawell Park Caravan Park and receive a minor visual change.
LV3A	Construction and operation of the duplication will visually impact upon landscape character types of high landscape sensitivity (Ch. 14000-14800).	The duplication would result in a minor visual change upon the Bushland landscape character type through the removal of existing tree vegetation.
LV3B	Construction and operation of the duplication will visually impact upon landscape character types of medium-high landscape sensitivity (Ch. 5600-6400, 11600-12900, 14700- 16400).	The duplication would result in a major visual change upon the Vegetated Rural landscape character type through the construction of the duplication, overpasses and removal of existing tree vegetation.
LV3C	Construction and operation of the duplication will visually impact upon landscape character types of medium-high landscape sensitivity (Ch. 20200-21000).	The duplication would result in a moderate visual change upon the Vegetated Rural landscape character type through the construction of the duplication, overpasses and removal of existing tree vegetation.
LV3D	Construction and operation of the duplication will visually impact upon landscape character types of medium landscape sensitivity (Ch. 23000-24000).	The duplication would result in a major visual change upon the Rural landscape character type through the construction of the duplication, overpasses and removal of existing tree vegetation.

Risk No.	Impact Pathway	Consequence Description
LV3E	Construction and operation of the duplication will visually impact upon landscape character types of low landscape sensitivity (Ch. 0-5500, 8300-11200, 16600-24500).	The duplication would result in a major visual change upon the Vegetated Highway landscape character type through the removal of existing tree vegetation.
LV3F	Construction and operation of the duplication will visually impact upon landscape character types of low landscape sensitivity (Ch. 16600-21000)	The duplication would result in a moderate visual change upon the Vegetated Highway landscape character type through the removal of existing tree vegetation.

17.8 Environmental Management Measures

VicRoads has a standard set of environmental management measures which are typically incorporated into construction contracts for road works and bridge works. These measures have been used as the starting point for the assessment of construction related risks and described in detail in Chapter 21 (Environmental Management Framework). In some instances, additional Project specific environmental management measures have been recommended to reduce risks.

Management measures specific to each identified landscape and visual risk, and the residual risk rating after these environmental management measures have been applied, are outlined in Table 17-10.

17.8.1 Residual Risks

Following implementation of the recommended mitigation measures there are not expected to be any significant impacts. The overall average risk to visual and landscape is low.

Table 17-10 Visual and Landscape Environmental Management Measures and Residual Risk

Risk No.	Environmental Management Measures	Residual Risk
LV1A	Treatments to reduce impact: ▪ Retention of existing roadside vegetation where possible (protective fencing treatments may be required); ▪ Establishment of tree and shrub planting of similar character to existing roadside vegetation in close proximity to the road edge (protective fencing treatments may be required); ▪ Establishment of screening vegetation within the ROW for views from affected dwellings; and ▪ Use of grasses upon fill embankments consistent with surrounding rural land.	Negligible
LV1B	Treatments to reduce impact: ▪ Retention of existing roadside vegetation where possible (protective fencing treatments may be required); ▪ Establishment of tree and shrub planting of similar character to existing roadside vegetation in close proximity to the road edge (protective fencing treatments may be required). ▪ Establishment of screening vegetation within the ROW for views from affected dwellings; and ▪ Sensitively designed fill embankments.	Medium
LV1C	Treatments to reduce impact: ▪ Establishment of tree and shrub screening planting to effectively screen the duplication and maintain a vegetated edge to the township. Vegetation should be established in clumps and not in linear banding that contrasts with the existing landscape character. ▪ Tree planting along the base and shrub planting along embankments to screen the overpass. ▪ Possible screen planting within private properties along the interface of the overpass; ▪ Design of embankments to be complimentary to the surrounding topography; and ▪ Enhance existing roadside vegetation and develop strong gateway planting upon the entrances to Great Western.	Low
LV1D	Treatments to reduce impact: ▪ Establishment of tree and shrub screening planting to effectively screen the duplication and maintain a vegetated edge to the township. Vegetation should be established in clumps and not in linear banding that contrasts with the existing landscape character. ▪ Tree planting along the base and shrub planting along embankments to screen the overpass. ▪ Possible screen planting within private properties along the interface of the overpass; ▪ Design of embankments to be complimentary to the surrounding topography; and ▪ Enhance existing roadside vegetation and develop strong gateway planting upon the entrances to Great Western.	Low
LV1E	Treatments to reduce impact include: ▪ Retention of existing roadside vegetation where possible (protective fencing treatments may be required); ▪ Establishment of screening vegetation against views for the affected dwellings; ▪ Sensitively designed fill embankments; and ▪ Roadside avenue tree planting opposite retained roadside vegetation.	Low
LV1F	Treatments to reduce impact include: ▪ Retention of existing roadside vegetation where possible (protective fencing treatments may be required); ▪ Establishment of tree and shrub planting of similar character to existing roadside vegetation in close proximity to the road edge (protective fencing treatments may be required). ▪ Establishment of screening vegetation against eastern views for the affected dwelling; and ▪ Sensitively designed fill embankment	Medium
LV2A	None required.	Negligible
LV2B	None required.	Low

Risk No.	Environmental Management Measures	Residual Risk
LV2C	None required.	Negligible
LV2D	Treatments to reduce impact: ▪ Establishment of tree and shrub screening planting to effectively screen the duplication and maintain a vegetated edge to the township. Vegetation should be established in clumps and not in linear banding that contrasts with the existing landscape character. ▪ Tree planting along the base and shrub planting along embankments to screen the overpass. ▪ Possible screen planting within private properties along the interface of the overpass; ▪ Design of embankments to be complimentary to the surrounding topography; and ▪ Enhance existing roadside vegetation and develop strong gateway planting upon the entrances to Great Western.	Low
LV2E	None required.	Negligible
LV2F	None required.	Negligible
LV2G	None required.	Low
LV2H	None required.	Low
LV2I	Treatments to reduce impact: ▪ Retention of existing roadside vegetation where possible (protective fencing treatments may be required); ▪ Establishment of tree and shrub planting of similar character to existing roadside vegetation in close proximity to the road edge (protective fencing treatments may be required); and ▪ Establish dense screening vegetation along the interface of the duplication to Sisters Rocks, within the ROW and within the informal Sisters Rocks car park.	Medium
LV2J	None required.	Negligible
LV2K	None required.	Negligible
LV2L	Treatments to reduce impact: ▪ Retention of existing roadside vegetation where possible (protective fencing treatments may be required); and ▪ Establishment of tree and shrub planting of similar character to existing roadside vegetation in close proximity to the road edge (protective fencing treatments may be required).	Low
LV3A	None feasible.	Medium
LV3B	Treatments to reduce impact: ▪ Establishment of tree and shrub screening planting to effectively screen the duplication and maintain a vegetated edge to the township. Vegetation should be established in clumps and not in linear banding that contrasts with the existing landscape character. ▪ Tree planting along the base and shrub planting along embankments to screen the overpass. ▪ Possible screen planting within private properties along the interface of the overpass; and ▪ Design of embankments to be complimentary to the surrounding topography.	Medium
LV3C	Treatments to reduce impact: ▪ Establishment of tree and shrub screening planting to effectively screen the duplication and maintain a vegetated edge to the township. Vegetation should be established in clumps and not in linear banding that contrasts with the existing landscape character. ▪ Tree planting along the base and shrub planting along embankments to screen the overpass. ▪ Possible screen planting within private properties along the interface of the overpass; and ▪ Design of embankments to be complimentary to the surrounding topography.	Medium

Risk No.	Environmental Management Measures	Residual Risk
LV3D	Treatments to reduce impact include: ▪ Retention of existing roadside vegetation where possible (protective fencing treatments may be required); ▪ Establishment of tree and shrub planting of similar character to existing roadside vegetation in close proximity to the road edge (protective fencing treatments may be required). ▪ Sensitively designed fill embankment.	Low
LV3E	Treatments to reduce impact include: ▪ Retention of existing roadside vegetation where possible (protective fencing treatments may be required); and ▪ Establishment of tree and shrub planting of similar character to existing roadside vegetation in close proximity to the road edge (protective fencing treatments may be required)	Low
LV3F	Treatments to reduce impact include: ▪ Retention of existing roadside vegetation where possible (protective fencing treatments may be required); and Establishment of tree and shrub planting of similar character to existing roadside vegetation in close proximity to the road edge (protective fencing treatments may be required)	

17.9 Conclusion

The proposed alignment generally utilises the existing highway carriageway with a new carriageway adjacent to the existing highway. The dwellings located adjacent to the proposed Garden Gully Road and London Road overpasses and the Great Western Bypass receive a higher visual impact and risk rating as the duplication inserts new carriageways and large scale road infrastructure upon visual outlooks that do not typically contain such elements. Whilst the alignment does not generally impact upon the areas of natural and cultural values, there would be potential impacts upon outer Great Western and Sisters Rocks. However, with landscape mitigation as described in Table 17-10, these impacts would be reduced.

The majority of the alignment is within the 'Vegetated Highway' landscape character area. It has been established that this landscape character area has a high capacity to accommodate change and the Project would not significantly diminish the landscape character of this area with the incorporation of non-standard mitigation, including roadside tree planting and the retention of existing roadside vegetation wherever possible.

Key areas where the landscape character is likely to be diminished include the Great Western Bypass, where the alignment deviates from the existing Western Highway corridor and where new road elements such as overpasses and ramps are inserted upon 'Vegetated Rural' or 'Rural' landscape character types. In addition, the proposed duplication of the existing Western Highway adjacent to Sisters Rocks would result in a moderate visual impact upon this area, which is of high landscape sensitivity.

However, with careful non-standard mitigation, including the sensitive design of road infrastructure and planting characteristic of the character types, the visual impact and risk ratings upon these character types are reduced.

By utilising the existing Western Highway alignment through the majority of its length, the proposed alignment reduces its visual impact upon dwellings, landscape character, townships and natural and cultural visual values. In areas where impacts are unavoidable, suitable mitigation measures can be incorporated to reduce the impacts and risks to acceptable levels. Therefore, the Project is considered to have an overall average impact of minor on visual and landscape values.