

6.10 Landscape character and visual impacts

This section summarises the Landscape Character, Visual Impact Assessment and Urban Design report that was completed for the proposal. The detailed assessment is provided in Appendix B.

6.10.1 Methodology

The landscape character and visual impact assessment (LCVIA) was carried out in accordance with the Roads and Maritime Environmental Impacts Assessment Practice Note – Guidelines for Landscape Character and Visual Impact Assessment EIA-N04 (2018). The LCVIA was carried out as part of the design process to support the development of the concept design.

The report assesses the potential landscape character and visual impacts of the proposal. The assessment is based on the sensitivity of a number of individual Landscape character zones (LCZs) and views and magnitude of change at each one associated with the proposal.

For the assessment of landscape character, sensitivity is the degree to which the landscape is susceptible to a specific type of change. The magnitude of change is the combination of the scale, extent and duration of the change.

For the assessment of visual impacts, sensitivity is dependent on the location, number and expectations of receptors and the quality of the existing view. The magnitude of change is the scale, size and character of the proposal, the extent of visibility and the contrast with the existing view.

Definitions of sensitivity and magnitude are described in further detail in Appendix B. Sensitivity and magnitude are combined to give an impact rating of high, moderate, low or negligible.

6.10.2 Existing environment

The environment surrounding the proposal area includes cropping and pasture farmland, pockets of native vegetation and creek lines. The town of Singleton includes low density residential and low to medium density commercial premises with the New England Highway extending from south to north through the town.

Landscape character zones

The proposal area transitions through a number of LCZs as described in Table 6-47 and shown in Figure 6-29. An assessment of the sensitivity of each of these landscape zones and the magnitude of impacts has been completed and an overall landscape character impact rating assigned (refer to Table 6-48 and Appendix B).

Table 6-47: Landscape character zones

LCZ	Description
1 Enclosed Rural Landscape	Heavily vegetated remnant bushland of Ironbark-Spotted Gum-Grey Box Forest, creating a sense of an enclosed landscape with tall vertical scale.
2 Open Rural Landscape	A predominantly open rural setting with remnant and regrowth tree stands scattered throughout an undulating to rolling landform of pasture land. The character ranges from areas with no trees, to areas that have moderate stands of trees.

LCZ	Description
3 Industrial	Typical industrial character including large factory-style bulky buildings, wide streets and no structured landscape works or substantial street tree planting. Most of the industrial area is hidden from view from the existing highway.
4 Large Lot Residential	Small acreage lots varying from mostly cleared, to heavily-wooded with trees creating a rural / bushland residential setting. The rural setting is highlighted with a number of properties with rural style post, rail and wire fencing. Streets have open drains, degraded road edges and wide grass verges. The area is mostly screened from view from the existing highway.
5 New Residential Suburbs	Comprises mostly low to medium density residential development with standard amenities such as schools, parks, sporting facilities and local shops set within a curving street pattern influenced by the landform. The streetscape is characterised by front yard gardens of varying styles and plant species.
6 Agricultural Floodplain	The main features comprise the winding Hunter River with sections of tree-lined embankments and patchwork patterns of the agricultural alluvial floodplain. The valley floor contrasts the grasslands of rolling hills and the urban development. Houses are sporadically placed on elevated positions and the rural setting is further emphasised by rural roads, gravel driveways and agricultural fences.
7 Singleton Old Town	The Singleton town centre is broadly encompassed by the Main North railway line, Hunter River and the New England Highway. It comprises a vibrant 'high street' commercial and retail strip with recent streetscape upgrades. Formal parks and botanic gardens reminiscent of a Victorian era and the combination of urban patterns, dominant tree species and architectural styles of historic buildings are reminders of early European settlement.

LEGEND

PROPOSAL	WATERWAY	LCZ 3 - INDUSTRIAL	LCZ 6 - AGRICULTURAL FLOODPLAIN
TRAIN STATION	LCZ 1 - ENCLOSED RURAL LANDSCAPE	LCZ 4 - LARGE LOT RESIDENTIAL	LCZ 7 - OLD TOWN
RAILWAY LINE	LCZ 2 - OPEN RURAL LANDSCAPE	LCZ 5 - NEW RESIDENTIAL SUBURBS	



Figure 6-29: Landscape Character Zones Map, 1:35,000 at A3

6.10.3 Potential impacts

Construction

Landscape character impact

The construction of the proposal would not impact on the identified LCZs.

Visual Impacts

During construction, positioning of plant and equipment within the view of surrounding properties and existing road users would result in minor, temporary visual impacts. The proposal would require earthworks which would expose subsoil and the removal of vegetation within the proposal area. Vegetation removal would include trimming and/or clearing of some planted and remnant native trees. Some of this vegetation contributes to the amenity and character of the proposal area. This would lead to temporary visual impacts during construction until the works are complete and disturbed areas rehabilitated.

Operation

The proposal is likely to be visually prominent from several key viewpoints around Singleton. The proposal features a number of elements that would be obvious within the predominantly rural landscape including embankments/batters, bridges and noise walls. Change resulting from the proposal would mainly affect residents and businesses adjoining the proposal area, and road users.

Landscape character impact

A summary of the landscape character impact is provided in Table 6-48 and described in further detail below. Overall the impacts of the proposal on landscape character is rated as negligible for zone 3, 4 and 5, moderate too low for zone 1 and high to moderate for zone 2, 6 and 7.

Table 6-48: Summary of impacts on landscape character

LCZ	Sensitivity	Magnitude	Significance of impact rating
1 Enclosed Rural Landscape	Low	Moderate	Moderate to Low
2 Open Rural Landscape	Moderate	High	High to Moderate
3 Industrial	Low	Negligible	Negligible
4 Large Lot Residential	Moderate	Negligible	Negligible
5 New Residential Suburbs	Moderate	Negligible	Negligible
6 Agricultural Floodplain	High	Moderate	High to Moderate
7 Singleton Old Town	High	Moderate	High to Moderate

The LCZs with the highest impact ratings are all considered to have a long-term duration of the landscape effects. LCZ 2 would be impacted by the large northern connection landform, involving substantial cuttings and a raised embankment across the eastern side slopes of McDougalls Hill and associated watercourses.

The proposal would provide about 2.3 kilometres of 11 metre high embankment and a 1.7 kilometre long bridge over the floodplain, both topped in locations with noise walls up to 3.5 metres in height. The proximity of the bridge over the floodplain to Glenridding would adversely affect the character of this area, impacting LCZ 6 and LCZ 7.

Singleton old town (LCZ 7) would indirectly be affected by the placement of embankments and subsequent loss of extensive floodplain context and backdrop views of the Greater Blue Mountains World Heritage Area, with these elements being important to the landscape character.

Visual Impacts

A visual impact assessment was completed for seven viewpoints within the proposal area. Details of this assessment are provided in Appendix B and a summary of the results are provided in Table 6-49. The viewpoints used in the analysis are shown on Figure 6-30.

To assist with the visual impact assessment, visualizations of the proposal from each of the assessed viewpoints were developed and are provided in full in Appendix B. The current and indicative views for the viewpoints which were assessed as having the highest impacts are shown on Figure 6-32 to Figure 6-36.

Table 6-49: Summary of visual impacts across the proposal area

Viewpoint	Sensitivity	Magnitude	Significance of impact rating
1 - New England Highway - South	Low	Moderate	Moderate to Low
2 - Ellen Avenue	High	Moderate	High to Moderate
3 - Army Camp Road	Moderate	Moderate	Moderate
4 - New England Highway - North	Low	Low	Low
5 - New England Highway - Bunnings	Low	Low	Low
6 – Maison Dieu Road	Low	Low	Low
7 - Mitchell Avenue	High	High	High

Elements of the proposal that are likely to be the most visually intrusive include the earth embankments, bridges and vehicle movements. Vehicle headlights may also cause visual impacts at night.

The greatest visual impacts would be at Ellen Avenue (viewpoint 2, looking south towards the bridge over the floodplain), Army Camp Road (viewpoint 3, looking north towards the bridge over the floodplain) and Mitchell Avenue (viewpoint 7, looking west towards a hill crest where vegetation removal would be carried out for the proposal). The visual impact rating for these viewpoints is primarily influenced by:

- Ellen Avenue (viewpoint 2): The view is within a residential area with a large number of sensitive visual receptors with high quality existing views across the floodplain. The proposal would remove the middle ground and background of the existing view
- Army Camp Road (viewpoint 3): There are high quality views of the floodplain and the peaks of Mount Royal National Park. The proposal would comprise a large scale visual element contrasting with the existing view
- Mitchell Avenue (viewpoint 7): The view is within a residential area with views of a vegetated hillside. While the proposal would not be visible above the hillside crest, the proposal would involve the removal of mature trees on the crest of the hill which would form a moderate to high degree of contrast with the existing view.

Potential visual impacts at the other viewpoints are generally low given the low quality of existing views and that the scale and character of the proposal would generally be consistent with existing setting with a low to moderate degree of contrast.

The proposal would result in reduced traffic volumes through Singleton town centre which is likely to have positive impacts on visual amenity along the existing New England Highway.

LEGEND

	PROPOSAL
T	TRAIN STATION
—	RAILWAY LINE
	CADASTRE
	ROAD
—	1M CONTOURS
	WATERWAY
	WATERBODY
	OBSERVER LOCATIONS

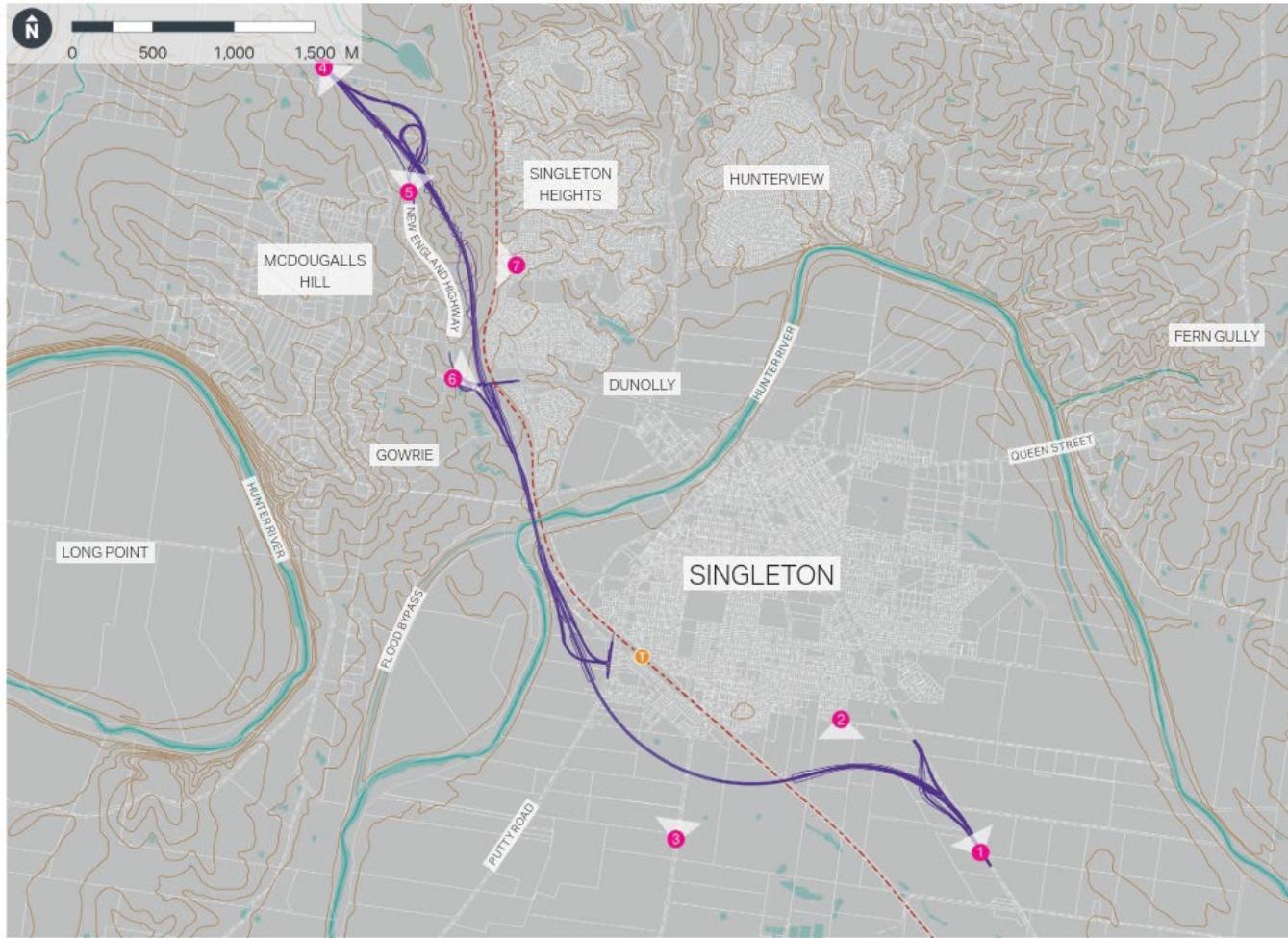


Figure 6-30: Visual Receptor Location Map, 1:35,000 at A3



Figure 6-31: Current view of Ellen Avenue (viewpoint 2)

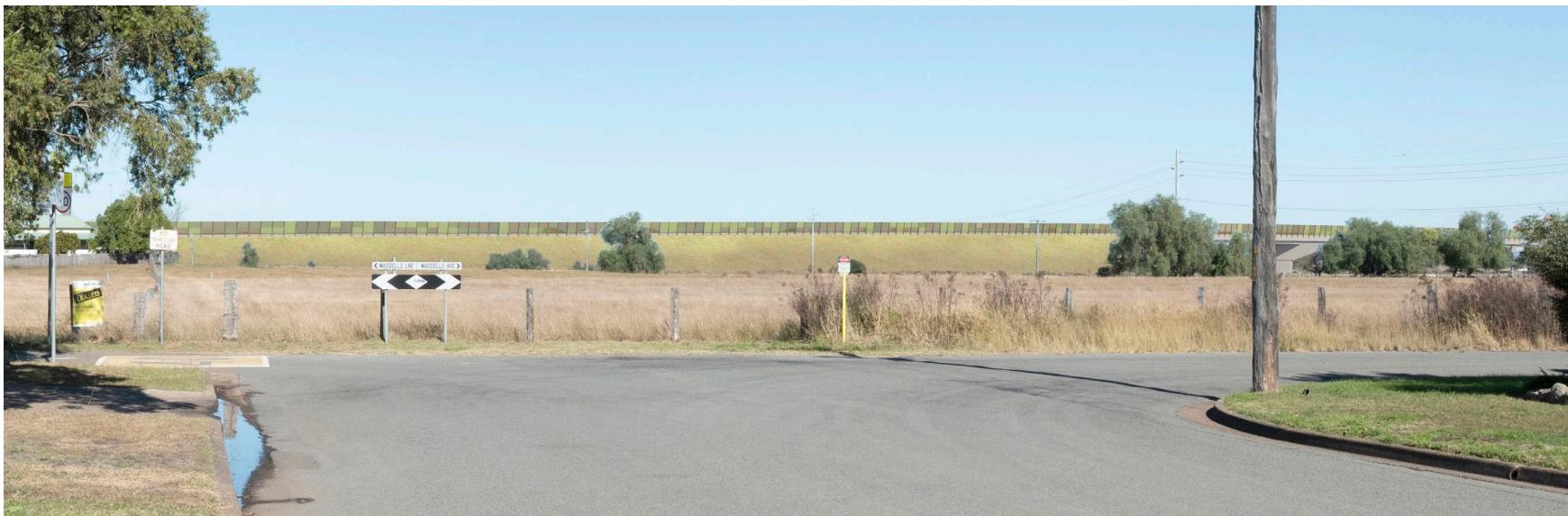


Figure 6-32: Indicative view of proposal at Ellen Avenue (viewpoint 2)



Figure 6-33: Current view of Army Camp Road (viewpoint 3)



Figure 6-34: Indicative view of proposal at Army Camp Road (viewpoint 3)



Figure 6-35: Current view of Mitchell Avenue (viewpoint 7)



Figure 6-36: Indicative view of proposal at Mitchell Avenue (viewpoint 7)

6.10.4 Safeguards and management measures

Table 6-50: Summary of landscape and visual mitigation measures

Impact	Environmental safeguards	Responsibility	Timing
Landscape and visual	All plant material to be locally sourced (seed collection preferred), with any seed collection to commence within three months of construction contract award, where possible.	Roads and Maritime	Detailed design
Landscape and visual	An Urban Design Plan will be prepared as part of the CEMP. The Plan will include: <ul style="list-style-type: none"> • Location and identification of vegetation in the proposal area to be retained and proposed landscaped areas • Details of the staging of built elements including retaining walls, bridges and noise walls • Details of the staging of landscape works • Maintenance measures for landscaped or rehabilitated areas, including timings • A landscape monitoring program including an inspection program with frequency. 	Construction contractor	Pre-construction