

Appendix E – Landscape Character and Visual Assessment Report

Moss Vale Station and Stabling Yard Upgrade

Landscape Character and Visual Impact Assessment

02-Nov-2023
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Client: Transport for NSW

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Table of Contents

Abbreviations and definitions	i
Executive summary	iii
1.0 Introduction	1
1.1 Background	1
1.2 Purpose of Technical Report	1
2.0 Methodology	3
2.1 Study area	3
2.2 Existing environment	5
2.2.1 Desktop analysis of proposal landscape and visual resources	5
2.2.2 Site inspection	5
2.2.3 Landscape Character Zones	5
2.3 Impact assessment	5
2.3.1 Landscape effects	5
2.3.2 Visual effects	6
2.3.3 Photos and photomontage	8
2.4 Mitigation and management measures	8
3.0 Project description	9
3.1 Station and stabling yard upgrade	9
3.2 Tree removal	12
3.3 Urban design	15
3.3.1 Landscape design	15
3.3.2 Planting strategy	17
3.3.3 Aboriginal interpretation / public art	17
3.4 Materials and finishes	18
3.5 Construction and ancillary facilities	18
4.0 Existing environment	19
4.1 Site context	19
4.2 Topography and hydrology	21
4.3 Land use	22
4.4 Vegetation	23
4.5 Non-Indigenous heritage	24
4.6 Landscape Character Zones	26
4.6.1 LCZ 1: Rail Corridor	28
4.6.2 LCZ 2: Open Spaces	30
4.6.3 LCZ 3: Residential	31
4.6.4 LCZ 4: Town Centre	33
4.6.5 LCZ 5: General Industrial	34
4.6.6 LCZ 6: Education	35
5.0 Landscape character impact assessment	36
5.1 LCZ 1: Rail Corridor	36
5.2 LCZ 2: Open Spaces	39
5.3 LCZ 3: Residential	40
5.4 LCZ 4: Town Centre	42
5.5 LCZ 5: General Industrial	42
5.6 LCZ 6: Education	43
6.0 Visual impact assessment	44
6.1 Visibility of the proposal	44
6.2 Visual receivers	46
6.3 Assessment of construction activity	46
6.4 Assessment of proposal at operation	47
6.4.1 Representative viewpoints	47
6.4.2 Assessment of viewpoints	50
7.0 Summary	76
7.1 Summary of landscape character impact	76
7.2 Summary of visual impact	77

	7.2.1	Construction	77
	7.2.2	Operation	77
8.0		Mitigation of impact and conclusion	79
	8.1	Mitigation measures	79
		8.1.1 Design development	79
		8.1.2 Construction	80
		8.1.3 Operation	80
	8.2	Conclusion	81
	8.3	Reference list	81

Tables

Table 2.1	Landscape Character and Visual Impact Grading Matrix*	6
Table 5.1	LCZ 1: Rail Corridor - Landscape Character Impact Assessment	36
Table 5.2	LCZ 2: Open spaces - Landscape Character Impact Assessment	39
Table 5.3	LCZ 3: Residential - Landscape Character Impact Assessment	40
Table 5.4	LCZ 4 Town Centre - Landscape Character Impact Assessment	42
Table 5.5	LCZ 5: Light Industrial - Landscape Character Impact Assessment	42
Table 5.6	LCZ 6: Education - Landscape Character Impact Assessment	43
Table 6.1	Viewpoints chosen to assess visual impacts due to the proposal	47
Table 6.2	Viewpoint 1 - Visual Impact Assessment	50
Table 6.3	Viewpoint 2 - Visual Impact Assessment	52
Table 6.4	Viewpoint 3 - Visual Impact Assessment	54
Table 6.5	Viewpoint 4 - Visual Impact Assessment	57
Table 6.6	Viewpoint 5 - Visual Impact Assessment	59
Table 6.7	Viewpoint 6 - Visual Impact Assessment	61
Table 6.8	Viewpoint 7 - Visual Impact Assessment	63
Table 6.9	Viewpoint 8 - Visual Impact Assessment	65
Table 6.10	Viewpoint 9 - Visual Impact Assessment	68
Table 6.11	Viewpoint 10 - Visual Impact Assessment	70
Table 7.1	Summary of landscape character impact assessment ratings	76
Table 7.2	Summary of visual impact assessment ratings	78

Figures

Figure 1-1	Regional context of the Proposal (Source: AECOM)	1
Figure 2-1	Study area and Proposal area (Source: AECOM)	4
Figure 3-1	Key elements of the proposal	11
Figure 3-2	Trees to be removed or trimmed at the stabling yard and temporary stabling yard	13
Figure 3-3	Trees to be removed at Argyle Street entrance and proposed mobile train simulator compound	14
Figure 3-4	Proposed landscape plan for Station Forecourt (Source: Architectus, 2023).	15
Figure 3-5	Proposed landscape plan for courtyard within the station (Source: Architectus, 2023).	16
Figure 3-6	Proposed landscape plan for the Argyle Street access to the station (Source: Architectus, 2023).	16
Figure 3-7	Proposed landscape plan for the Lackey Road access to the station (Source: Architectus, 2023).	17
Figure 3-8	Possible public art locations (Source: Architectus, 2023).	18
Figure 4-1	The view from the ramp looking west along the tracks towards Moss Vale Station (Source: AECOM)	19
Figure 4-2	The view from the footbridge that links to Lackey Road looking south along the rail line towards Moss Vale Station (Source: AECOM)	20
Figure 4-3	Topography within the study area (Source: AECOM)	21
Figure 4-4	WLEP 2010 land zoning within the study area (Source: AECOM)	22
Figure 4-5	Vegetation within the study area (Source: AECOM)	23

Figure 4-6	Heritage listed items within the study area (Source: AECOM)	25
Figure 4-7	Landscape Character Zones within the study area (Source: AECOM)	27
Figure 4-8	A brick retaining wall mitigates the level change between the tracks and the adjoining road at Moss Vale Station (Source: AECOM)	28
Figure 4-9	The northern portion of the rail corridor is only partially screened by patchy vegetation on the eastern side of the tracks (Source: AECOM)	29
Figure 4-10	An internal garden at Moss Vale Station between the two platforms (Source: AECOM)	29
Figure 4-11	Commuter car parking in the forecourt area of Moss Vale Station (Source: AECOM)	30
Figure 4-12	Leighton Gardens (Source: AECOM)	31
Figure 4-13	Lackey Park (Source: AECOM)	31
Figure 4-14	Typical example of older red-brick detached house within the study area (Source: Google Earth)	32
Figure 4-15	Typical example of medium-density detached houses on southern portion of Lackey Road (Source: Google Earth)	32
Figure 4-16	Typical example of detached houses on northern portion of Proposal area along Lackey Road (Source: Google Earth)	33
Figure 4-17	Commercial properties are positioned on either side of Argyle Street, with built form positioned next to the footpath and with some off-street parking provided (Source: Google Street View)	33
Figure 4-18	Repurposed former Station Master's Residence including local shops and restaurant (Source: AECOM)	34
Figure 4-19	Moss Vale Court House on Argyle Street (Source: AECOM)	34
Figure 4-20	Industrial lots on Vale Road (Source: Google Earth)	35
Figure 6-1	Zone of Theoretical Visibility map (Source: AECOM)	45
Figure 6-2	Representative viewpoints for visual impact assessment (Source: AECOM)	49
Figure 6-3	Panorama showing the view from Viewpoint 1 looking north, with the rail corridor visible to the left of frame and Argyle Street visible to the right of frame (Source: AECOM)	52
Figure 6-4	Existing view from Viewpoint 2 looking west towards the entry to Moss Vale Station from Argyle Street (Source: AECOM)	54
Figure 6-5	Existing view from the park bench within Diamond Jubilee Park looking north west towards Moss Vale Station entry (Source: AECOM)	56
Figure 6-6	View after proposal from the park bench within Diamond Jubilee Park looking north west toward Moss Vale Station entry (Source: AECOM)	56
Figure 6-7	Existing view looking northeast from Platform 2 at Moss Vale Station (Source: AECOM)	59
Figure 6-8	View after proposal looking north east from Platform 2 at Moss Vale Station (Source: AECOM)	59
Figure 6-9	Existing view from Moss Vale Station looking north along Dalys Way (Source: AECOM)	61
Figure 6-10	View after proposal from Moss Vale Station looking north along Dalys Way (Source: AECOM)	61
Figure 6-11	The view from Moss Vale Station Platform 2 looking north (Source: AECOM)	63
Figure 6-12	The existing view from Dalys Way looking west (Source: AECOM)	65
Figure 6-13	The existing view from the intersection of Lackey Road and Garrett Street, looking north along Lackey Road towards the station entrance (Source: AECOM)	68
Figure 6-14	The view after proposal from the intersection of Lackey Road and Garrett Street, looking north along Lackey Road towards the station entrance (Source: AECOM)	68
Figure 6-15	The view from Lackey Road looking south east towards the station entrance and the fuelling station (Source: AECOM)	70
Figure 6-16	The existing view from Lackey Road looking south-east toward the southern portion of the stabling yard (Source: AECOM)	73
Figure 6-17	The view after proposal from Lackey Road looking south-east toward the southern portion of the stabling yard (Source: AECOM)	73
Figure 6-18	Shadows cast by the noise barrier along Lackey Road in Spring	73
Figure 6-19	Shadows cast by the noise barrier along Lackey Road in Summer	74

Figure 6-20	Shadows cast by the noise barrier along Lackey Road in Autumn	74
Figure 6-21	Shadows cast by the noise barrier along Lackey Road in Winter	74
Figure 6-22	Shadows cast by the proposed noise barrier during Winter at 9am	75
Figure 8-1	Example of articulation of the proposed noise barrier and planting along Lackey Road to reduce the visual prominence of the noise barrier and provide increased visual amenity within the residential streetscape	80

Abbreviations and definitions

Abbreviation	Meaning
CBD	Central Business District
CCTV	Closed Circuit TV
CSR	Combined Services Route
GLVIA3	<i>Guidelines for Landscape and Visual Impact Assessment, Third Edition</i> (Landscape Institute and Institute for Environmental Management (UK), 2013)
HCA	Heritage Conservation Area
WLEP 2010	Wingecarribee Local Environmental Plan 2010
LCVIA	Landscape Character and Visual Impact Assessment
LCZ	Landscape Character Zones
NSW	New South Wales
PA system	Public Address system
REF	Review of Environmental Factors
Tactiles	Tactile Ground Surface Indicators
TPZ	Tree Preservation Zone
ZTV	Zone of Theoretical Visibility

Term	Definition
Interchange	Transport interchange refers to the area/s where passengers transit between vehicles or between transport modes. It includes the pedestrian pathways and cycle facilities in and around an interchange.
Kiss and ride bay	A kiss and ride bays allow for quick entry and exit which helps minimise congestion and risk when used properly. These types of bays operate under the same conditions as no parking zones, which means a customer may stop to drop off or pick up others for a maximum of two minutes. They are required to remain in, or within three metres of their vehicle (Service NSW, 2016).
Magnitude (of effect)	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or not, and whether the change is short or long term in duration (GLVIA, 2013).
Photomontage	A computer simulation illustrating the predicted appearance of a development overlaid on a photo of the existing view.
Proposal area	The area within which all the proposal construction and operational elements will be contained within.
Receptors	(or 'visual receivers'). Individuals and/or defined groups of people who have the potential to be affected by a Proposal (GLVIA, 2013).
Sensitive receivers	Land uses which are sensitive to potential noise, air and visual impacts, such as residential dwellings, schools and hospitals.
Sensitivity	A term applied to specific receivers, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor (GLVIA, 2013).

Term	Definition
Study area	The area within which the impact of the proposal on landscape character, views and visual amenity is assessed in this report.
The proposal	Moss Vale Station and Stabling Yard upgrade
Viewpoint	The location from which an assessment is made of the impact the proposal has on the view.
Visual amenity	The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area (GLVIA, 2013).

Executive summary

Transport for NSW is the proponent for the proposed Moss Vale Station and Stabling Yard Upgrade (the 'proposal'). The proposal is designed to improve access to the station for passengers with a disability, limited mobility, carers with prams and customer with luggage, and improve stabling capacity to accommodate new Regional InterCity trains. AECOM has been engaged to prepare a Review of Environmental Factors (REF) for the proposal, including a Landscape Character and Visual Impact Assessment (LCVIA).

The proposal is located at Moss Vale Station on the NSW TrainLink Southern Highlands Line connecting to Campbelltown, Sydney Central and Goulburn. Moss Vale Station is also served by NSW TrainLink Xplorer and XPT long-distance services connecting Sydney to Canberra, Griffith and Melbourne. The station is approximately 50 kilometres south-west of Wollongong, and 130 kilometres south of Sydney Central Business District (CBD). Moss Vale Station is a heritage listed railway station, comprising an island platform positioned between the north and south bound tracks. The station holds historical, aesthetic, social and representative significance as an example of a typical suburban station with associated ornamental gardens, with relatively little change to the overall appearance and setting. The stabling yard is located on the western side of the railway corridor along Lackey Road, approximately 500 metres north from Moss Vale Station.

In the immediate proximity of the station and stabling yard, under the Wingecarribee Local Environmental Plan 2010 land is primarily zoned E1 Local Centre, MU1 Mixed use, and E3 Productive Support. A mix of R2 Low Density Residential and R3 Medium Density Residential land uses are located in the near proximity, with some pockets of RE1 Public Recreation near the station and along the creek corridor.

The key features of the proposal at Moss Vale Station considered in this assessment include:

- upgrading the station entrances from Argyle Street and Lackey Road including the installation of three new lifts, accessibility upgrades of the existing footbridges and access ramp, and upgrades to interchange facilities
- resurfacing Platform 2
- formalising the station forecourt including new accessible parking spaces, kiss and ride zone and designated coach parking
- upgrading unisex toilet to a new family-accessible bathroom
- adjusting other station rooms for accessibility.

Key features of the stabling yard upgrade considered in this assessment include:

- reconfiguring the train stabling area
- new pedestrian walkways
- upgrading vehicle entry and exit gates on Lackey Road
- new sealed car park within the stabling yard and relocating existing amenity blocks
- potentially installing a 250-metre-long, 5.5-metre-high noise barrier and retaining walls along the western side of the stabling yard
- installation of a new high voltage power supply and other services
- a new diesel exhaust fluid system including 10,000 Litre capacity self-bunded tank.

A mobile train simulator compound area would also be established adjacent to the existing commuter car park off Dalys Way.

Landscape character impact assessment

A landscape character assessment was undertaken in accordance with *Environmental Impacts Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment EIA-N04* (Transport for NSW, 2023), with more detailed guidance taken from the *Guidelines for Landscape*

and *Visual Impact Assessment, Third Edition* (Landscape Institute and Institute for Environmental Management UK, 2013) (GLVIA3). A summary of the assessment of the proposal on landscape character is shown in Table i.

Table i Summary of landscape character impact assessment ratings

LCZ	Sensitivity	Magnitude	Overall rating
LCZ 1: Rail Corridor	Moderate	Moderate	Moderate (adverse)
LCZ 2: Open Spaces	Moderate	Low	Moderate – Low (neutral)
LCZ 3: Residential	Moderate	Moderate	Moderate (adverse)
LCZ 4: Town Centre	No Change		
LCZ 5: General Industrial	Low	Low	Low (neutral)
LCZ 6: Education	No Change		

While the upgrade of existing rail infrastructure would not result in a change to the character of Landscape Character Zone (LCZ) 1, the addition of three larger structures (the lifts) would result in the modernisation of rail infrastructure within the rail corridor. This would result in a change in the existing suburban character of the station precinct, elements of which are heritage listed, and therefore result in a moderate (adverse) impact.

Changes within the landscape surrounding the station (predominantly LCZ 3: Residential and LCZ 4: Town Centre) vary between no changes to moderate, however, the sensitivity of both the LCZs lies predominantly in the heritage setting of the local suburb. Changes to the road verge and station entrance within this context are resulting in a moderate impact.

Visual impact assessment

A qualitative visual assessment was undertaken in accordance with GLVIA3 for the construction and operational phases of the proposal.

Construction

During construction, visible construction elements are expected to typically include traffic control (including a single lane closure along Lackey Road for about 40 weeks), construction vehicles and machinery, survey investigations, temporary fencing and hoarding, noise barriers, pedestrian diversions, tree/vegetation removal and trimming, signage and temporary ancillary facilities (e.g. temporary offices, toilets and laydown areas).

The majority of the receivers would have a low sensitivity to the changes (e.g. passers-by and rail commuters) and there would be a low number of receivers with a higher sensitivity to the changes (e.g. residents along Lackey Road).

Overall, views to the construction ancillary facilities and other construction activity due to the proposal are considered to be relatively minor. They would be consistent with similar temporary construction work sites and activities, and transitory over a period of about 19 months until completion of construction of the proposal.

Operation

The most visually prominent changes resulting from the proposal include installation of three lifts, changes to the footbridges, removal of vegetation and changes to the footpaths and station entrances, and stabling yard infrastructure. Other changes within the rail corridor would be difficult to see from the surrounding landscape due to the existing landform, surrounding built form and plantings.

The station precinct, while elevated above the sloping landscape to the west, is visually shielded with views to and from the station limited mostly by the buildings within the town centre. Views to the station

are predominantly seen by visual receivers directly surrounding the station, including receivers passing the station in vehicles and trains.

A summary of the assessment of the proposal on views is shown in Table ii.

Table ii Summary of visual impact assessment ratings

Viewpoint	Sensitivity	Magnitude	Overall rating
1: Leighton Gardens	Moderate	Low	Moderate – Low (neutral)
2: Moss Vale Hotel	Moderate	Low	Moderate – Low (neutral)
3: Diamond Jubilee Park	Moderate	Moderate	Moderate (neutral)
4: Moss Vale Station Platform 1	Moderate	Moderate	Moderate (adverse)
5: Moss Vale Station Dalys Way	Low	Moderate	Moderate – Low (neutral)
6: Moss Vale Station Platform 2	Low	Moderate	Moderate – Low (neutral)
7: Dalys Way	Low	Moderate	Moderate – Low (neutral)
8: Lackey Road at Garrett Street Intersection	Moderate	Moderate	Moderate (neutral)
9: Lackey Road at Commercial Car Park	Moderate	Moderate	Moderate (neutral)
10: Lackey Road North	Low	Moderate	Moderate – Low (neutral)

The visual impact to receivers during operation has been assessed between Low (neutral) to Moderate (adverse), with no viewpoints returning a significant change in views (i.e. overall ratings of High to Moderate, or High). The proposal includes an upgrade to an existing rail precinct with the changes (particularly the proposed lifts within the rail corridor) comprising modern additions to the rail corridor. These changes are considered appropriate given the benefit of the proposal in comparison to the low number of sensitive visual receivers that would see the changes.

The sensitivity of the visual receivers surrounding the station (particularly from the more sensitive residential receivers to the west of the rail corridor) is generally low given the presence of screening vegetation along the boundary of the rail corridor and/or within residential front yards.

The assessment resulted in a 'neutral' qualitative rating for nine out of the ten viewpoints assessed. This is due to:

- the visually recessive nature of most of the changes within the greater view from most viewpoints
- the addition or upgrade of rail infrastructure within an existing rail corridor.

One 'adverse' qualitative rating was due to the addition of the proposed lift structures which would raise the visual prominence of the station within its existing suburban setting. Overall, the design and materiality of the proposed elements would generally fit within the existing suite of architectural elements within the rail corridor.

Mitigation measures

Design Development

The following general mitigation measures are recommended to minimise visual impacts during the design development process:

- preparation of an Urban and Landscape Design Plan (ULDP) by the Contractor, in consultation with Council and other asset/land owners, and submitted to Transport for written approval by the Urban Design Public Transport and Precincts team, prior to finalisation of the detailed design

- implement planting in the streetscape along Lackey Road to reduce the visual prominence of the noise barriers along the residential street
- articulation of the noise barrier along Lackey Road to provide opportunities for planting to reduce the visual prominence of the noise barrier and increase the visual amenity along the street
- install landscaping within the road verges and along the rail corridor edges (including potential planting of street trees or shrubs)
- use heritage design elements to highlight the character of the station and surrounding landscape, however, maintain the visual quality of a 'new' piece of infrastructure rather than replicating heritage items
- limit disturbance of vegetation to the minimum amount necessary to construct the proposal, especially along the rail corridor boundaries to maintain visual screening to the surrounding landscape
- consider measures to limit or deter graffiti on proposed structures
- provide cut-off or directed lighting within the stabling yard, to ensure minimal light spill and no glare into neighbouring properties.

Construction

The following mitigation measures are recommended to minimise visual impacts as a result of construction:

- establish tree preservation zones (TPZs) around trees to be retained. Tree protection would be carried out in accordance with Australian Standard (AS) 4970-2009 *Protection of Trees on Development Sites* and would include exclusion fencing of TPZs
- provide well-presented and maintained construction hoarding and site fencing with shade cloth (or similar material) (where necessary) to minimise visual impacts during construction. Hoardings and site fencing would be removed once construction is complete
- provide cut-off or directed lighting within and outside of the construction site, with lighting location and direction considered to minimise glare and light spill
- keep construction areas clean and tidy and place waste in appropriate receptacles
- implement measures to avoid tracking dirt and mud onto public roads and other public spaces from construction activities and vehicle movements.

Operation

The following mitigation measures are recommended to minimise visual impacts during operation of the Proposal:

- maintain and repair constructed elements
- remove graffiti in accordance with Transport for NSW / Sydney Trains maintenance requirements.

Conclusion

The effects of the proposal on landscape character would range between No change and Moderate (adverse), and effects on views and visual amenity would range between Low (neutral) and Moderate (adverse). As such, this report finds that there would be no significant effect on either landscape character or on views and visual amenity as a result of the proposal (i.e. there were no ratings of High (adverse), or Moderate–High (adverse)).

1.0 Introduction

1.1 Background

Transport for NSW is the proponent for a proposal to upgrade aspects of Moss Vale Station and its adjacent stabling yard. The proposal involves an accessibility upgrade of Moss Vale Station to improve accessibility and amenities for passengers. The proposal also involves the installation of new track-side infrastructure at the Moss Vale Stabling Yard, part of the Regional Rail Project (RRP), which consists of replacing ageing NSW regional rail fleet of XPT, Xplorer and Endeavour trains. The proposal is located at Moss Vale Station on the NSW TrainLink Southern Highlands Line, approximately 50 kilometres south-west of Wollongong (refer Figure 1-1).

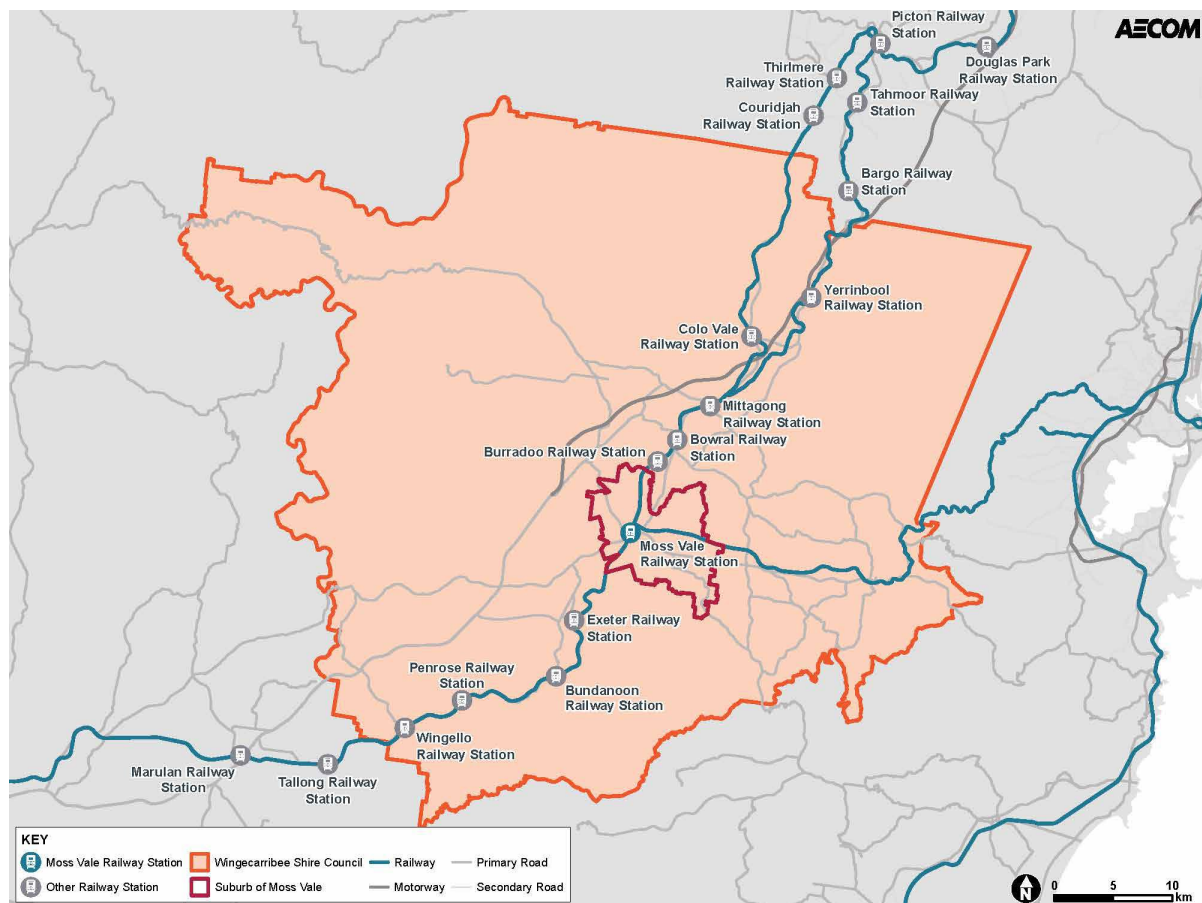


Figure 1-1 Regional context of the Proposal (Source: AECOM)

1.2 Purpose of Technical Report

AECOM has been engaged to prepare a Review of Environmental Factors (REF) for the proposal, including a Landscape Character and Visual Impact Assessment (LCVIA). The purpose of this LCVIA is to:

- describe the existing landscape character of the proposal study area and the visibility of the proposed works from the surrounding landscape
- describe the site context and relevant aspects of the proposal
- identify and describe key existing landscape receivers and representative viewpoints from which the proposal would be visible

- assess landscape character effects of the proposal
- assess visual effects of the proposal
- recommend management and mitigation strategies to minimise any impacts from the proposal.

Potential changes to landscape character generated by the proposal at operation have been assessed in detail. Changes to views from the surrounding landscape during construction have been assessed at a high level (i.e. no detailed analysis).

For the purposes of this assessment the study area is defined in Section 2.1.

A description of the proposal is provided in Section 3.0.

2.0 Methodology

LCVIA is a tool used to identify and assess the significance of and the effects of change resulting from development on both the landscape as an environmental resource in its own right, and on people's views and visual amenity.

This LCVIA has been undertaken in accordance with the *Environmental Impacts Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment EIA-N04* (Transport for NSW, 2023), with more detailed guidance taken from *Guidelines for Landscape and Visual Impact Assessment, Third Edition* (2013), developed by the Landscape Institute and Institute for Environmental Management, UK (GLVIA3). GLVIA3 is widely recognised as comprising an example of 'best practice' in this field. This report has undertaken an assessment of the proposal at operation using the methodology described below.

A high level assessment of changes during construction has also been provided.

In accordance with these guidelines, key steps in the assessment of landscape character and visual impact include:

1. **Contextual analysis** (refer Section 2.2) - analysis of the regional and local context in which the Proposal is located. This includes a desktop assessment to inform a site visit and a description of the existing environment, including the identification of Landscape Character Zones (LCZs)
2. **Landscape character impact assessment** (refer Section 2.3.1) - evaluation of the impact of the proposal on the LCZs within the study area
3. **Visual impact assessment** (refer Section 6.0) - evaluation of the existing views and visual amenity surrounding the proposal to identify and assess possible impacts placed on the community by the proposal
4. **Mitigation of impact** – development of mitigation measures to reduce adverse impacts that the proposal may impose within the study area.

The following sections outline the detailed methodology undertaken for the preparation of this LCVIA report.

2.1 Study area

The study area is determined based on several factors, including:

- topography of the surrounding landscape
- the number and complexity of LCZs surrounding the proposal
- the visual containment of the Proposal due to the scale of the proposal in comparison to surrounding built form, landform and vegetation.

A study area comprising a 750 metre radius from the centre of the proposal area was selected (refer Figure 2-1). This was considered conservative given the gently sloping topography, the modest built form of the station and the visual screening provided by vegetation within the rail corridor and adjacent built form.



Figure 2-1 Landscape Character and Visual Impact Grading Matrix



LEGEND

- | | | | | | |
|---|------------|---|-----------|---|---------------|
|  | PROPOSAL |  | WATERBODY |  | RAILWAY |
|  | STUDY AREA |  | ROAD |  | TRAIN STATION |

2.2 Existing environment

The existing environment section includes a broad description of the landscape within which the proposal is located which is used for identification of elements and features relevant to assessment of the proposal, including site setting, topography, land use, landscape and heritage values. This section was compiled using the methodology below.

2.2.1 Desktop analysis of proposal landscape and visual resources

Existing data was gathered and reviewed, including:

- available information on sensitive visual receivers, proposal design, and photos of similar examples of key infrastructure elements proposed
- GIS mapping, including visual envelope mapping, zoning and land use, topography and heritage information (zoning and heritage mapping sourced from *Wingecarribee Local Environmental Plan, 2010* (WLEP 2010), mapping produced using ArcMap version 10.8)
- heritage information, including *Regional Rail Enabling Works – Moss Vale Stabling Upgrade statement of Heritage Impact* (TfNSW, 2021) and *Moss Vale Station and Stabling Yard Upgrade, Heritage Impact Assessment* (AECOM, 2023)
- Google Earth and Google Street View.

Using this data, a preliminary assessment of the existing landscape and visual environment was undertaken and used to inform a subsequent site inspection.

2.2.2 Site inspection

A site inspection was undertaken by AECOM on Thursday 20 July 2023. The purpose of the inspection was to:

- identify views from sensitive visual receivers within publicly accessible locations
- assess landscape character
- site photography to record key views and landscape character.

2.2.3 Landscape Character Zones

Based on the identification of the existing environment, a landscape character assessment was undertaken. This identifies what makes a place distinctive, without necessarily assigning a value to it. It considers the way different components of the environment - both natural (the influences of topography, geology, soils, climate, flora and fauna), and cultural (the historical and current impact of land use, settlement, enclosure and other human interventions) - interact together and are perceived to form a distinct pattern, which gives its particular sense of place.

To provide a framework for more clearly describing the area, and assessing how the proposal would affect the elements that make up the landscape (including the aesthetic and perceptual aspects of the landscape and its distinctive character), distinct parts of the overall landscape have been separately defined and mapped as LCZs.

2.3 Impact assessment

2.3.1 Landscape effects

The assessment of landscape effects considers the effect of change and development on landscape as a resource in its own right. Landscape effects are assessed at operation of the proposal (excluding construction).

The consideration of potential effects on landscape character has been determined based on the existing landscape's sensitivity to change, and the magnitude of change that is likely to occur. The sensitivity of a landscape is judged on the extent to which it can accept change of a particular type and scale without adverse effects on existing landscape character. The magnitude of change to landscape character depends on the nature, scale and duration of the change that is expected to occur.

The sensitivity and magnitude of landscape effects addressed the following specific criteria:

- sensitivity of landscape to proposed change, based on:
 - susceptibility to change - this means the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular LCZ, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposal without undue consequences for the maintenance of the existing situation, and/or the achievement of landscape planning policies and strategies
 - value of landscape
- magnitude of landscape effect, based on:
 - type/nature of change
 - geographical extent
 - duration and reversibility of effects.

Using the criteria listed above, the sensitivity and magnitude have been assessed and graded as being High, Moderate, Low or Negligible. The Landscape Character and Visual Impact Grading Matrix has then been used to combine the ratings for sensitivity and magnitude (refer Table 2.1) to determine an overall 'Significance of Landscape Effects' finding of High, High to Moderate, Moderate, Moderate to Low, Low or Negligible in relation to the existing environment. Overall impact ratings of High and High to Moderate are considered to be significant.

Table 2.1 Landscape Character and Visual Impact Grading Matrix*

		Magnitude			
		High	Moderate	Low	Negligible
Sensitivity	High	High	High to Moderate	Moderate	Negligible
	Moderate	High to Moderate	Moderate	Moderate to Low	Negligible
	Low	Moderate	Moderate to Low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

*Source: GLVIA3 and Environmental Impacts Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment EIA-N04 (Transport for NSW, 2020)

2.3.2 Visual effects

2.3.2.1 Zone of Theoretical Visibility

The likely visibility of the proposal, once operational, from surrounding areas has been broadly mapped to define a visual envelope or Zone of Theoretical Visibility (ZTV). This provided an indication of the area from which the proposal may be viewed taking into account topography only (i.e. the mapping does not consider vegetation and built form which may screen the proposal). The mapping typically shows 'worst case', i.e. some receivers may only see a small portion of the proposal, while other receivers may view a more substantial part of the proposal. Mapping was produced using the 'viewshed' function in ArcMap version 10.8.

2.3.2.2 Representative visual receivers and viewpoints

Potential visual receivers were identified within the ZTV. These were then used to identify a series of viewpoints from which to assess the visual effects due to the proposal. Factors such as proximity to the changes, number of visual receivers at each location, and the type of visual receivers were taken into account to select the viewpoints. Viewpoints were chosen to assess the changes from publicly accessible locations, although some viewpoints were used to approximate the changes seen from private locations such as residences or community facilities.

2.3.2.3 Visual impact assessment

The assessment of visual impacts addressed the effects of change on the views available to people and their visual amenity. It assessed how the surroundings of individuals or groups of people may be specifically affected by changes, in the context and character of views as a result of the change or loss of existing elements of the landscape and/or the introduction of new elements. Visual effects of the proposal have been assessed at operation using the method described below.

The evaluation of potential effects on visual amenity has been based on the sensitivity to change of the viewpoint (and the visual receivers it represents), and the magnitude of change from the proposal that is likely to occur.

The sensitivity of each viewpoint is mainly a function of:

- the occupation or activity of the people experiencing the view
- the extent to which their attention or interest may therefore be focused on the view and the visual amenity they experience, for example:
 - people who are engaged in outdoor recreation where their attention or interest is likely to be focused on views and the visual amenity they experience are likely to be more sensitive to a proposed change in that view, rather than land use zoning
 - indicators of value attached to views, e.g. through appearing on tourist maps, or provision of facilities for their enjoyment (such as parking places, sign boards and interpretative material).

The magnitude of change to views and visual amenity takes into account:

- type/nature of change in the view with regard to the:
 - loss or addition of features in the view and changes in its composition
 - degree of contrast or integration of any new features with the existing landscape in terms of form, scale and mass, line, height, colour and texture
 - nature of the view of the proposal in terms of amount of time it would be experienced, and whether the views would be full, partial or glimpses
- geographical extent of the visual effect with different viewpoints including the:
 - angle of view in relation to the main activity of the receptor
 - distance of the viewpoint from the proposal
 - extent of area over which the changes would be visible
- duration and reversibility of visual effects, for example:
 - duration in terms of short term (0-5 years), medium term (6-15 years) or long term (16-30+ years)
 - reversibility with regard to the prospects and practicality of a proposed change being reversed in a generation, e.g. housing can be considered permanent, but wind energy developments for example are often argued to be reversible since they have a limited life, and could eventually be removed and the land reinstated (GLVIA3, 2013).

Using the criteria listed above, the extent of sensitivity and magnitude for visual effects are measured, with each assessed and graded as being High, Moderate, Low or Negligible. The Landscape and Visual Impact Grading Matrix has then been used to combine the ratings for sensitivity and magnitude (refer Table 2.1) to determine an overall 'Significance of Visual Effects'. Overall impact ratings of High and High to Moderate have been considered to be significant.

A qualitative assessment rating further assigned a rating to the change in the views seen by receivers. This qualitative assessment has been a professional judgement as to whether the visual effects are deemed 'Adverse', 'Neutral' or 'Beneficial' from each viewpoint. This judgement has been based on whether the changes would affect the quality of the visual experience of visual receivers, given the nature of the existing views. Importantly, the qualitative assessment rating was secondary to the overall

impact rating, thereby a low change in views from a viewpoint with an adverse rating, for example, still remained a minor change but with a slightly adverse outcome.

In addition to assessing the visual impact of the proposal at operation, a high-level commentary has been provided around likely construction effects of the proposal. Visual receivers have been considered in terms of the views they are likely to obtain from locations within proximity of the proposal, including consideration of any key vantage points, e.g. lookouts where there is particular interest in the view.

An additional shadow analysis has been undertaken to assess the potential visual impact of the up to 5.5-metre-tall noise barrier within the stabling yard on Lackey Road. This assessment is included within the discussion of visual impact at representative viewpoint on Lackey Road (Viewpoint 10) and includes a series of diagrams showing the shadows that would be generated by the noise barrier during Spring, Summer, Autumn and Winter at 9am, 12pm and 3pm. These diagrams were generated by overlaying a 3D model of the noise barrier over a contour model of the surrounding landscape, then capturing the shadows cast and depicting where they would fall on an aerial photograph.

2.3.3 Photos and photomontage

Photographs of the view from each viewpoint were used to assist in providing a baseline from which to assess changes arising from the proposal.

A photomontage was produced to illustrate the proposed changes from key viewpoints, selected during the desktop assessment as viewpoints from which the largest visual effects would potentially be seen. These were prepared by overlaying a 3D model of the proposal over an existing photograph, removing any structures to be replaced using graphic software.

2.4 Mitigation and management measures

Following on from the assessment of impact on the landscape and visual resource, a set of mitigation measures have been developed aimed at reducing or avoiding adverse impacts of the proposal on identified sensitive receivers. Mitigation measures typically comprise a range of techniques including, but not limited to, appropriate lighting design, staging or construction method, material and colour selection, and landscape planting.

3.0 Project description

3.1 Station and stabling yard upgrade

The proposal would involve an accessibility upgrade of Moss Vale Station, which would improve accessibility and amenities for customers. The proposal would also include an upgrade to the Moss Vale stabling yard as part of the Regional Rail Project, in order to accommodate a new fleet of trains and associated stabling and maintenance requirements.

The proposal would include the following key elements:

Moss Vale Station upgrade:

- upgrading the station's eastern access from Argyle Street, including:
 - installing two new lifts, one at each end of the existing footbridge
 - upgrading existing footbridge, stairs and walkway
 - upgrading accessibility to the existing bus stop and taxi drop-off near Diamond Jubilee Park
 - upgrading Argyle Street entrance including seating and signage, and improved accessible pedestrian pathway at the forecourt
- formalising parking within the station forecourt, including new accessible parking spaces, kiss-and-ride zone and bus/coach drop off
- adjusting some station doors, and ground levels at the station including resurfacing at Platform 2
- replacing existing unisex toilet with a family accessible bathroom
- installing tactile markers and boarding assistance zones on both platforms
- improving communications equipment, public address (PA) system, and security features/systems
- upgrading station power services, communications room, lighting and CCTV, line marking, landscaping, and adjustment to station ticketing facilities
- upgrading the station's western access from Lackey Road, including:
 - installing a new lift to provide access to the existing footbridge
 - upgrading existing footbridge and stairs including new handrails and decking
 - upgrading footpath and installing new seating at the new lift entrance near Lackey Road
 - installing a pedestrian crossing at Lackey Road and Dalys Way
 - upgrading footpath accessibility at Dalys Way towards the station, including fencing, drainage, car parking and retaining wall.

Moss Vale Stabling Yard upgrade:

- upgrading the train stabling area to accommodate the new regional intercity trains, including track lengthening at the stabling yard and providing train clearances and buffer stops
- installing new walkways within the stabling yard and a dedicated access driveway for ARTC
- upgrading the existing Lackey Road staff vehicle access area including entry and exit gates, and a new sealed car park
- building retaining walls
- installing noise treatments. Based on the recommendations of the noise assessment, operational noise treatment may include the installation of a noise barrier approximately 250 metres in length and 5.5 metres in height, along the western side of the stabling yard. The noise barrier is subject to further assessment and the final operational noise solution may include at-property treatments. Further discussion is provided in Section 6.6

- installing CSR along the western side of the station and both sides of stabling yard
- installing provisioning services
- upgrading low voltage and shore power supply for existing and new equipment, including communications equipment
- relocating existing amenity blocks and storage container about 60 metres north to the new stabling yard access area
- carrying out ancillary work including utilities/services relocations, lighting, fencing and gates, and drainage
- building a temporary stabling yard for use during construction of the upgrades to the existing stabling yard
- installing a new diesel exhaust fluid system including 10,000-litre capacity self-bunded tank, to service the train fleet
- building elevated safety access platforms, new hose reels and water supply points for each set of trains.

Mobile train simulator compound

- building a permanent hardstand compound area with amenities to accommodate a MTS that would periodically park in the area.

Figure 3-1 shows the general layout of key elements for the proposal. A full description of the proposal is provided in Chapter 3 of the REF.

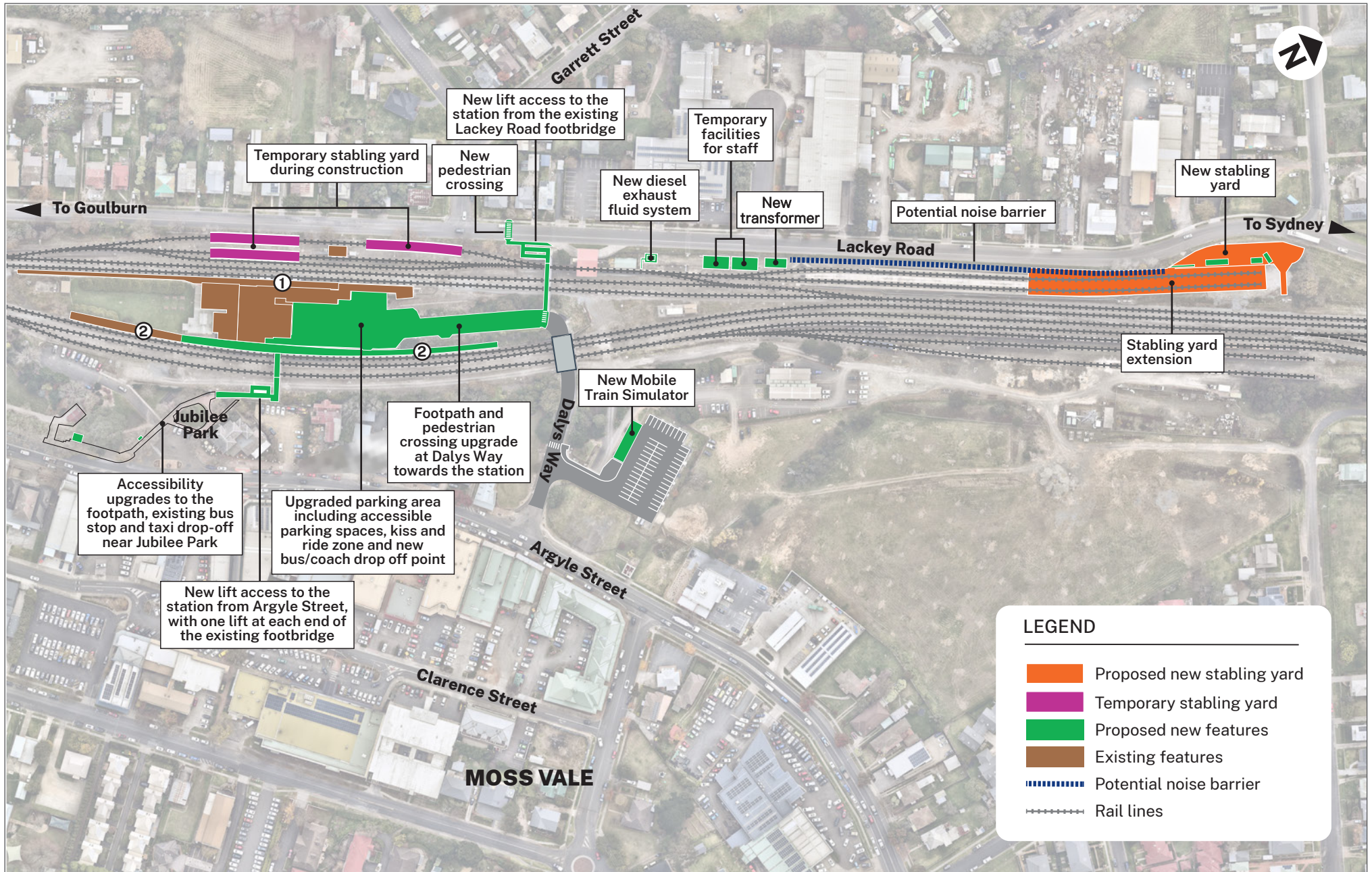


Figure 3-1 Key elements of the proposal

3.2 Tree removal

The proposal would require the removal of about 47 trees (16 trees initially identified by Eco Logical Australia, 25 trees updated by Urban Tree Management Australia and another six trees identified by Urban Tree Management Australia). The proposal would also require the retainment and protection within a Tree Protection Zone fence or trunk protection of 19 trees and the pruning of 19 trees.

The trees to be removed are:

- 9-11, 19, 21-28, 31-32, 35 and 46 (identified by Eco Logical Australia)
- 1-8, 14, 15-18, 20, 29-30, 33-34 and 36-42 (updated by Urban Tree Management Australia)
- 49-51 and 61-63 (identified by Urban Tree Management Australia).

The trees to be retained and protected are 47, 48, 52-60 and 64-71.

The trees to be pruned are 47, 48, 52-60 and 64-71.

The trees impacted by the proposal are shown in Figure 3-2 and Figure 3-3.

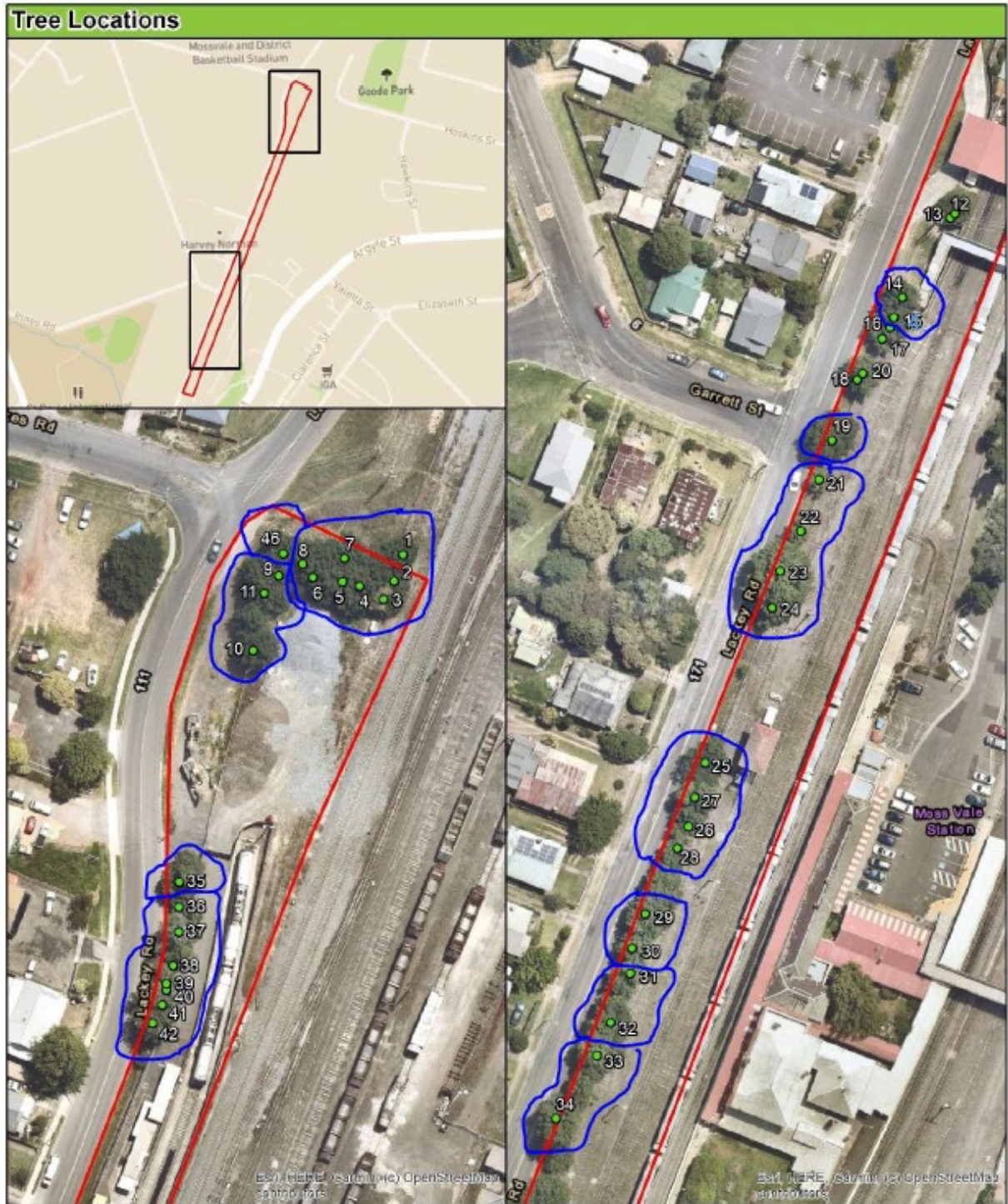


Figure 3-2 Trees to be removed or trimmed at the stabling yard and temporary stabling yard

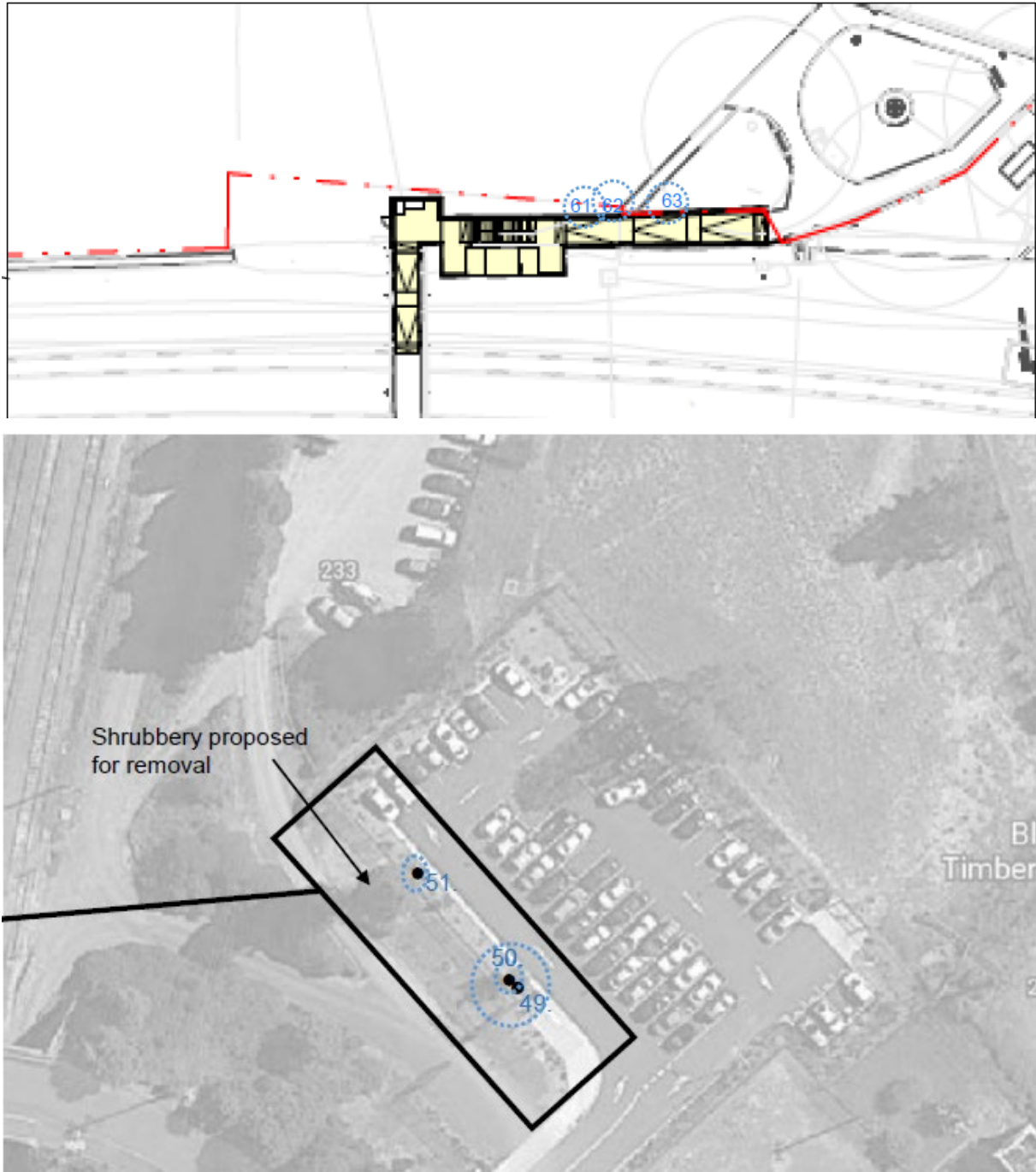


Figure 3-3 Trees to be removed at Argyle Street entrance and proposed mobile train simulator compound

3.3 Urban design

The following is an overview of proposed urban design and landscaping for the proposal, taken from the *Moss Vale TAP SP1 Station Upgrade Urban Design, Landscaping and Public Domain Report* (Architectus, 2023).

The report was developed using the following urban design principles:

- draw on a comprehensive site and context analysis to inform the design direction.
- provide value for money design solutions that achieve high quality low maintenance architectural and urban design outcomes that have longevity.
- provide connectivity and permeability for pedestrians.
- integrate the proposal into the surrounding area.
- maximise the amenity of the public domain.
- protect and enhance heritage feature sand significant trees.
- maximise positive view opportunities.
- design an efficient and functional transport solution which enhances and contributes to local amenity and prosperity.

3.3.1 Landscape design

The following plans show the proposed landscape design within and around the station.

Station Forecourt

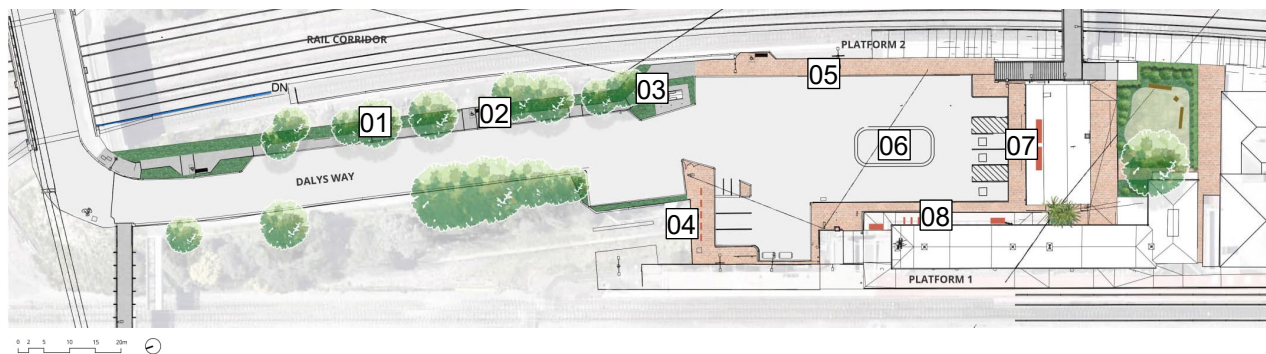


Figure 3-4 Proposed landscape plan for Station Forecourt (Source: Architectus, 2023).

Figure notes:

1. existing mature vegetation on Dalys Way to be retained and protected
2. concrete footpath provided with accessible grades to modern standards in accordance with the *Disability Discrimination Act 1992*
3. substation
4. five additional bicycle racks
5. generous brick pathways to edge of forecourt to provide ease of circulation and clear pedestrian wayfinding
6. at-grade paved 'island' to provide an opportunity for interpretation or public art within the paved surface
7. existing heritage furniture seating elements to be retained and more seating amenity to station forecourt to be added
8. existing bicycle racks on heritage stone flagging to be retained.

Courtyard Garden



Figure 3-5 Proposed landscape plan for courtyard within the station (Source: Architectus, 2023).

Figure notes:

1. plaques and benches to be retained and protected
2. existing tree to be retained
3. existing lawn and garden bed to be retained / reinstated
4. garden bed to be extended around lift, vertical greening system to be located at the base of the lift shaft to support climber planting.

Argyle Street Access

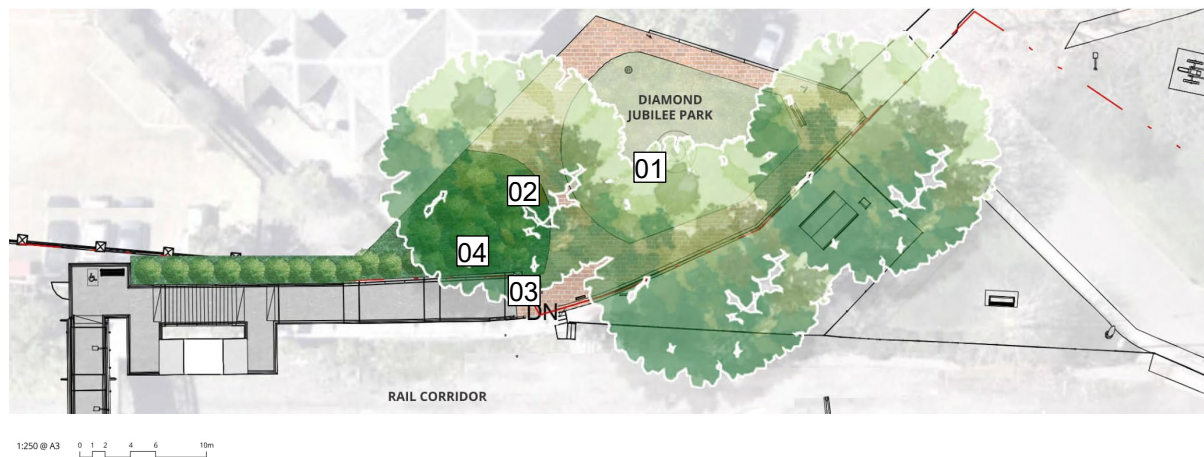


Figure 3-6 Proposed landscape plan for the Argyle Street access to the station (Source: Architectus, 2023).

Figure notes:

1. fountain and lawn to be retained

2. existing mature trees, planting, and bench seat to be retained
3. existing brick pillars to be retained
4. include supplementary shrub planting to edge of new ramp works, to match existing planting.

Lackey Road Access

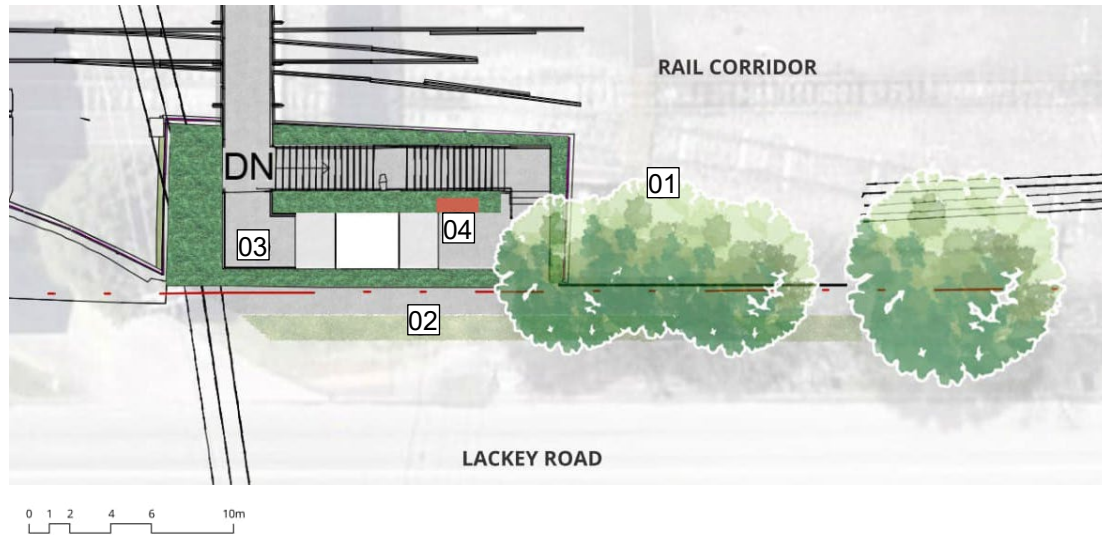


Figure 3-7 Proposed landscape plan for the Lackey Road access to the station (Source: Architectus, 2023).

Figure notes:

1. existing trees to be retained or replaced
2. Council footpath and turfed verge to be reinstated
3. new garden bed with massed shrubs and groundcovers to maximum height of 1.2 metres
4. new bench.

3.3.2 Planting strategy

The proposed planting strategy is based on the idea of contemporary heritage interpretation. There is a desire to preserve the heritage landscape elements of the Moss Vale Station, whilst providing subtle additions which complement this existing heritage character and integrate the works into the established setting of Moss Vale town centre, nearby Leighton Gardens, and the wider community.

Key planting principles include:

- mixed native and exotic planting, consistent with existing planting within the Station
- mixed evergreen and deciduous planting, consistent with existing planting within the Station
- use of strong border planting with layered infill species prioritising seasonal colour
- retention of mature trees on site where possible
- species to be derived from those found on site in established landscaped settings, to ensure continuity of character between the station and adjacent public realm.

3.3.3 Aboriginal interpretation / public art

A consultant has been engaged to connect with the Gundangara people to develop an integrated approach to public art that connects to the land and reflects the culture of the Gundangara people. Sites have been identified for potential locations of artwork which are shown in Figure 3-8.

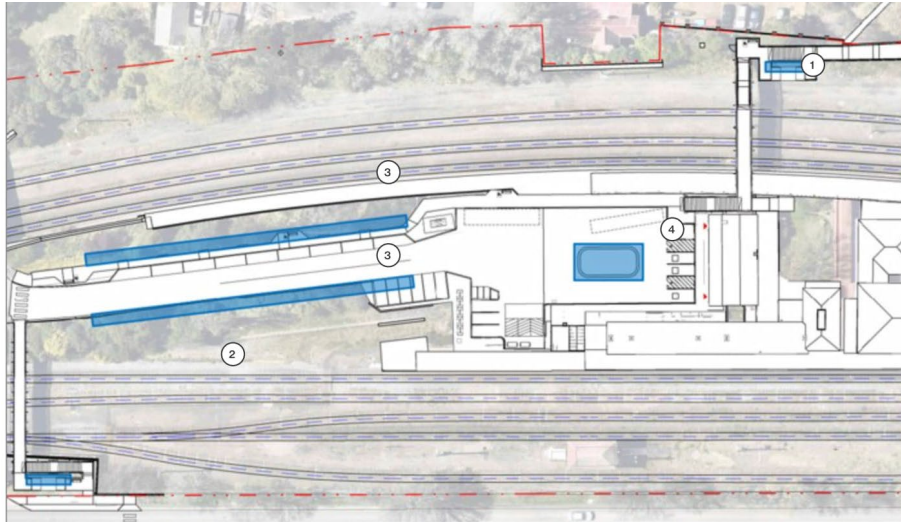


Figure 3-8 Possible public art locations (Source: Architectus, 2023).

3.4 Materials and finishes

Each of the upgraded or new facilities would be constructed from a range of different materials, with a different palette for each architectural element. Subject to detailed design, the proposal would include the following:

- lift shafts – concrete/brick lift shaft and steel frame
- lift doors – stainless steel
- lift sides – clear glass and steel
- lift roof and canopies – consistent or complementary with station roofing
- platform re-surfacing – concrete
- footbridge decking and footpaths – concrete
- station doors – timber and steel/glass
- noise barrier – concrete and structural steel
- car park / forecourt - asphalt.

3.5 Construction and ancillary facilities

Subject to approval, construction is expected to commence in early 2024 and take around 19 months to complete. The construction methodology would be further developed during the detailed design of the proposal by the nominated Contractor in consultation with Transport for NSW.

Ancillary works at Moss Vale station and stabling yard include utilities/services work, installation and upgrades to closed circuit TV (CCTV) cameras, signage, lighting, road and pavement line marking, landscaping, drainage upgrades, and adjustment to station ticketing facilities as well as fencing and gates at the stabling yard.

Temporary construction ancillary facilities would be required to accommodate a site office, amenities, laydown and storage area for materials. These areas would be reinstated following completion of their use for construction. An area for a construction compound has been proposed adjacent to the commuter car park off Dalys Way, and also within the existing car park south of the Diamond Jubilee Park. Other minor compound areas have been identified within the rail corridor including one north of the stabling yard.

Other areas within the rail corridor will also be used for short term temporary laydown in accordance with Sydney Trains and ARTC requirements.

4.0 Existing environment

4.1 Site context

The proposal is located at Moss Vale Station on the NSW TrainLink Southern Highlands Line, approximately 50 kms south-west of Wollongong. Moss Vale Station lies between Burradoo Station to the north and Bundanoon Station to the south.

Moss Vale Station is a small suburban station, comprising one island platform positioned between the north and south bound tracks (refer Figure 4-1 and Figure 4-2). The platform has one station building positioned roughly in the middle of the platform adjacent to the footbridge above the southbound tracks and south to the footbridge above the northbound tracks. Access to the station platform is via:

- Dalys Way, which links with the streets to the east (Argyle Street) of the rail corridor
- the footbridge which links with the streets to the east (Argyle Street and Illawarra Highway) of the rail corridor
- the footbridge which links with the streets to the west (Lackey Road) of the rail corridor.

A steep, shotcrete-lined batter mitigates the level change between Lackey Road and the tracks.

The 750 metre radial study area (refer Figure 2-1) from the proposal was considered conservative given the topography, surrounding built form and tall vegetation within the streetscapes and private properties in the study area.



Figure 4-1 The view from the ramp looking west along the tracks towards Moss Vale Station (Source: AECOM)



Figure 4-2 The view from the footbridge that links to Lackey Road looking south along the rail line towards Moss Vale Station (Source: AECOM)

4.2 Topography and hydrology

The topography and hydrology within the study area is shown in Figure 4-3.

The topography within the study area is mostly flat with gentle slopes approaching Illawarra Highway from east. Whites Creek is located just south of Moss Vale Station, crossing the site area from south east to west.

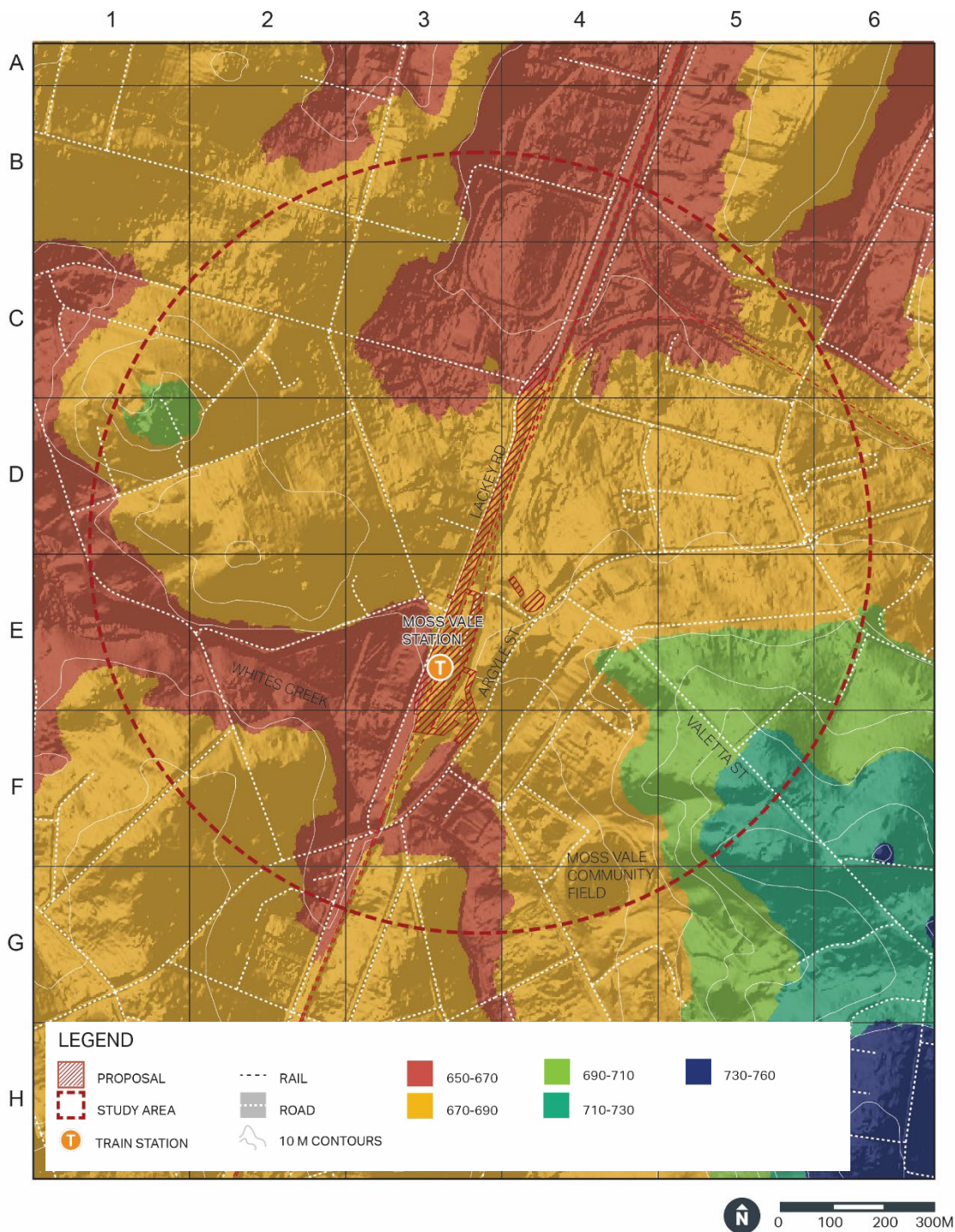


Figure 4-3 Topography within the study area (Source: AECOM)

4.3 Land use

Figure 4-4 shows the land zoning within the study area under WLEP 2010.

To the east of the rail corridor, land is primarily zoned E3 Productive Support next to the stabling yard and E1 Local Centre next to the station, with one pocket of RE1 Public Recreation (Leighton Gardens) south the station.

To the west of the rail corridor there is a mix of R2 Low Density Residential and E4 General Industrial near to the stabling yard, and E3 Productive Support and MU1 Mixed Use near to the station, with a band of RE1 Public Recreation fringing the Whites Creek and crossing the rail corridor.

Remaining portions of the study area are R2 Low and R3 Medium Residential developments with a major RE1 Public Recreation area at the Moss Vale Community Field toward the south east of the study area and the Illawarra Highway and the rail corridor zoned as SP2 Infrastructure.

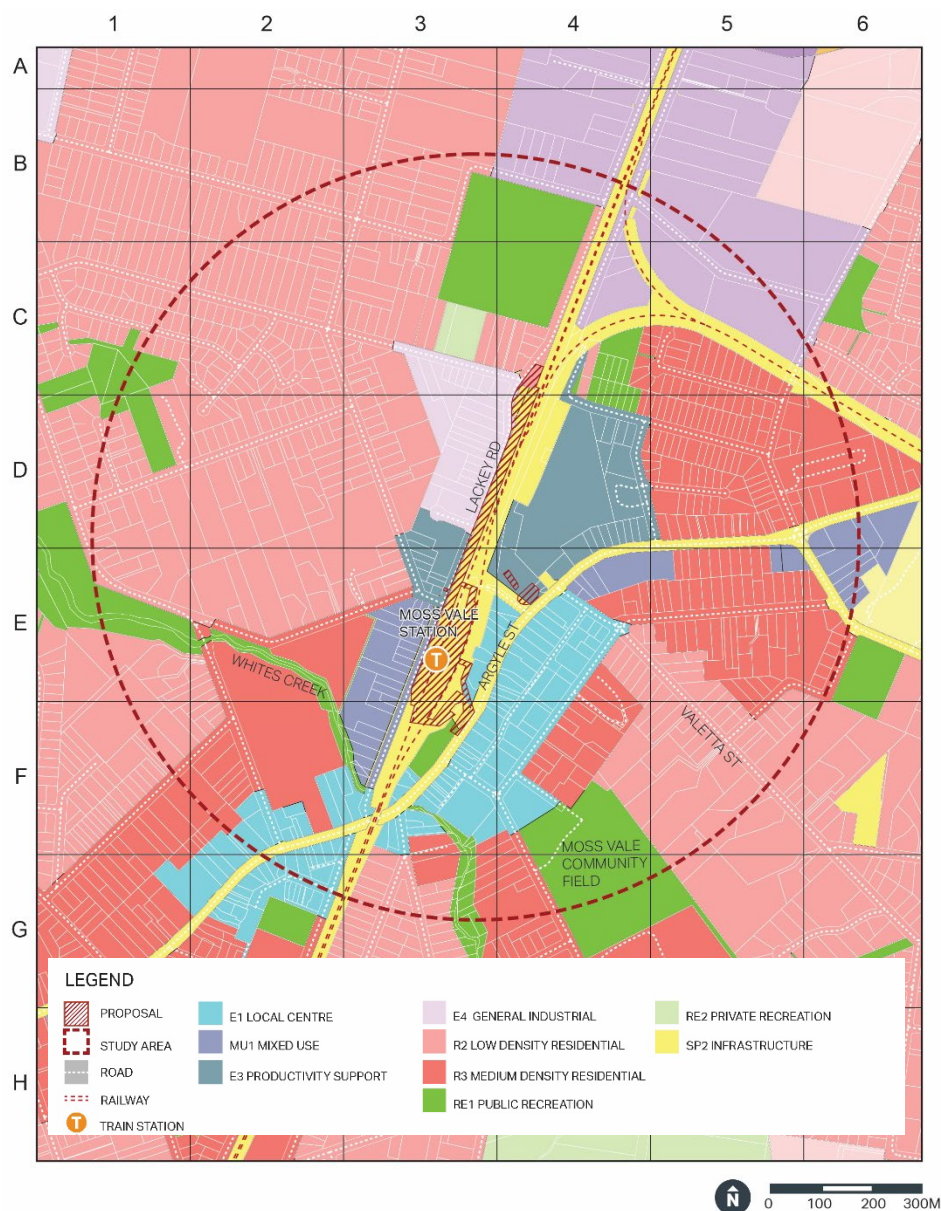


Figure 4-4 WLEP 2010 land zoning within the study area (Source: AECOM)

4.4 Vegetation

Vegetation cover within the study area is shown in Figure 4-5 and predominantly comprises Non-native vegetation (NSW State Vegetation Type Map, 2023). Small patches of Southern Highlands Shale-Basalt Dry Forest are scattered at the base of the gentle slope toward the eastern part of the study area. Characteristic vegetation within the township of Moss Vale comprises of exotic, cold climate deciduous trees and shrubs in garden settings.

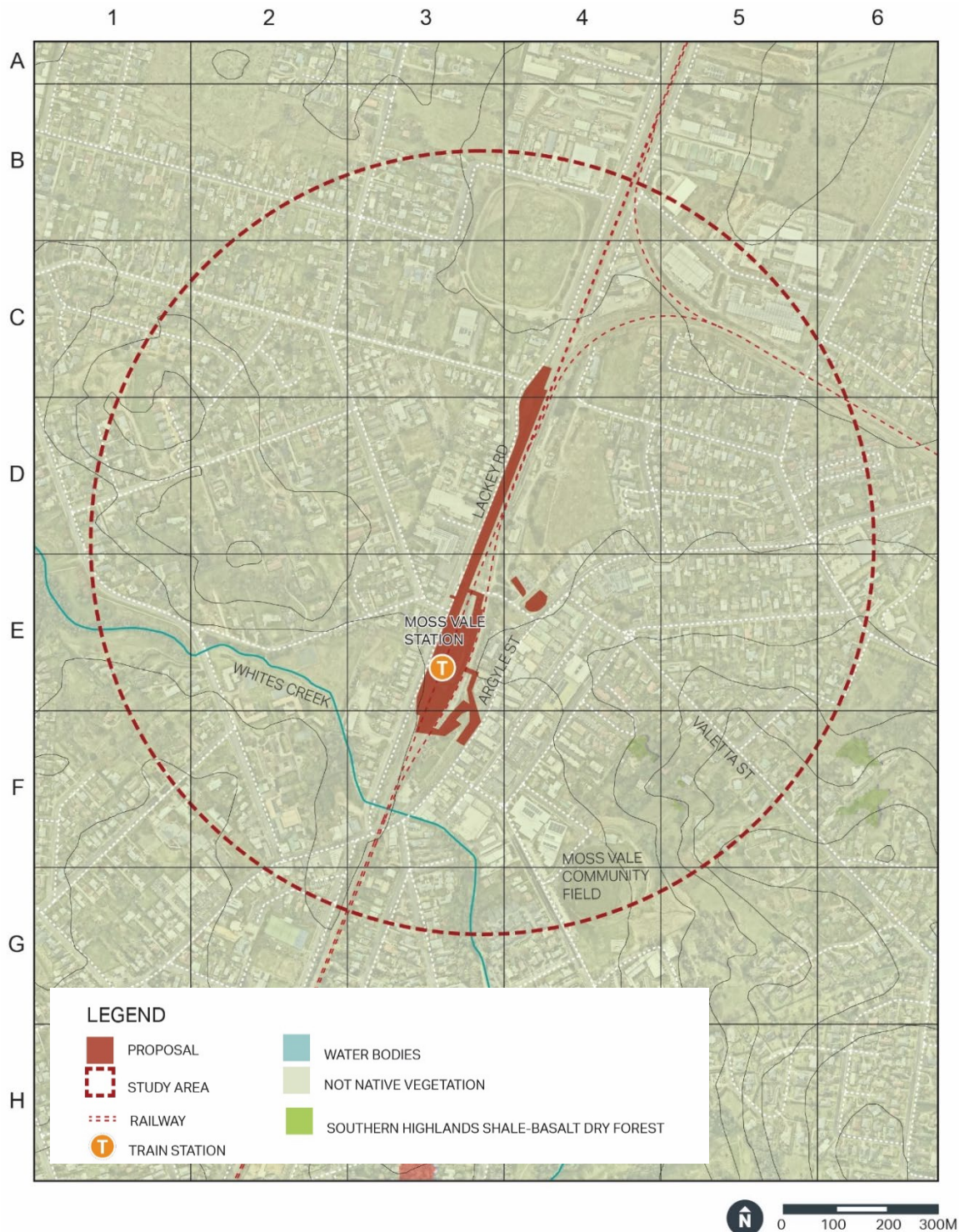


Figure 4-5 Vegetation within the study area (Source: AECOM)

4.5 Non-Indigenous heritage

Within the proposal area, Moss Vale Station is a State heritage listed railway station. The 'Moss Vale Railway and Yard Group' is listed on the NSW State Heritage Register (SHR) (SHR no. #01200). The statement of significance in the SHR inventory states that:

The station contains examples of early buildings, various later structures, vice-regal buildings, unique entry arrangement, very high-quality buildings and the remains of a working yard seen in the signal box and embankments. The early elements of the site are significant buildings in their own right. The site has excellent interiors along with the outstanding architecture and gives many opportunities to demonstrate the wealth and range of railway structures and the importance of rail travel in the past. The site has a strong social historical connection through use by the Governors and is an important focal point of the town of Moss Vale.

Additionally, the Moss Vale Rail Underbridge over Argyle Street to the station's south is also listed on the SHR (SHR no. #1049).

Moss Vale Station is also subject to three listings on the Section 170 Register maintained by NSW Government agencies under the NSW *Heritage Act 1977*:

- Moss Vale Railway Precinct – Transport Asser Holding Entity (TAHE)
- Moss Vale Railway Precinct – Australian Rail Track Corporation (ARTC)
- Moss Vale Rail Underbridge (Argyle Street) – ARTC.

Other locally heritage listed items within the study area include:

- 'Former Station Master's Residence' at 249 Argyle Street, Moss Vale (refer Figure 4-6). This property lies adjacent to the east of the footbridge of Moss Vale.
- 'Moss Vale Court House' at 356 Argyle Street, Moss Vale (refer Figure 4-6). This building lies approximately 100 metres south east of Moss Vale.
- 'St Paul's International College' at 463 Argyle Street, Moss Vale (refer Figure 4-6). This complex of buildings lies approximately 400 metres south west of Moss Vale Station.

On the eastern side of the rail corridor there are also other locally listed heritage items, such as Leighton Gardens, Throsby Manor, which was the former Council Chamber, and Whytes shop.

On the western side of the rail corridor there are other locally listed heritage items, such as St Paul's Roman Catholic Church, former St John's Anglican Rectory, Moss Vale Public School, and St Andrew's Presbyterian Church.

Several Heritage Conservation Areas (HCAs) lie within the study area (refer Figure 4-6), each containing many locally significant heritage items. HCAs surrounding the station include:

- Argyle Street North Conservation Area – C1836 (WLEP 2010) – Moss Vale Station and part of its rail corridor are included within this HCA which extends east up to Clarence Street, covering approximately half of Moss Vale Local Centre.
- Throsby / Arthur Street Conservation Area – C1838 (WLEP 2010) – Located on the eastern side of the rail corridor and south of Argyle Street North HCA, covering residential developments.
- Valletta Street Conservation Area – C1840 (WLEP 2010) – Located on the eastern outskirts of the study area, covering low density residential areas.
- Argyle / Browley Street Conservation Area – C1837 (WLEP 2010) – Located on the western side of the rail corridor, south of Whites Creek, and covering a mix of Moss Vale Local Centre and medium density residential areas.

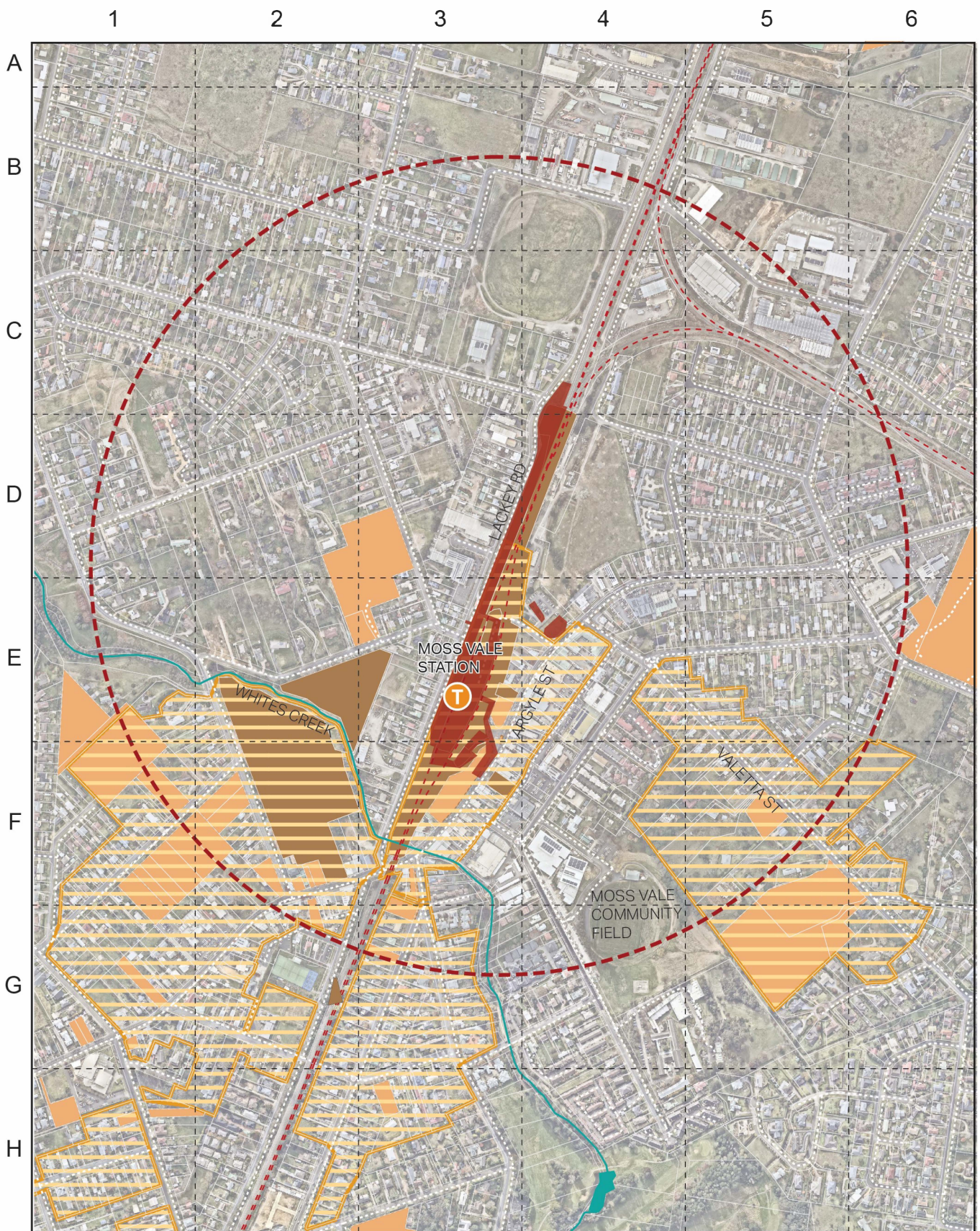
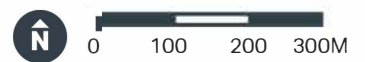










Figure 4-6 Heritage listed items within the study area (Source: AECOM)



LEGEND

- | | | |
|--|--|---|
|  PROPOSAL |  WATER BODIES |  RAILWAY |
|  STUDY AREA |  CONSERVATION AREA |  TRAIN STATION |
|  HERITAGE ITEM - STATE SIGNIFICANCE |  HERITAGE ITEM - LOCAL SIGNIFICANCE | |

4.6 Landscape Character Zones

Six (6) LCZs have been identified within the study area (refer Figure 4-7):

- LCZ 1: Rail Corridor
- LCZ 2: Open Space
- LCZ 3: Residential
- LCZ 4: Town Centre
- LCZ 5: General Industrial
- LCZ 6: Education.

The proposal lies within LCZ 1: Rail Corridor and next to LCZ 2: Open Space, LCZ 3: Residential, LCZ 4: Town Centre and LCZ 5: General Industrial. Due to the physical separation of LCZ 6: Education from the proposal, the relatively flat topography and considerable vegetative screening around the station precinct, LCZ 6 would not be affected by the proposal and therefore a full assessment has not been undertaken for this LCZ.

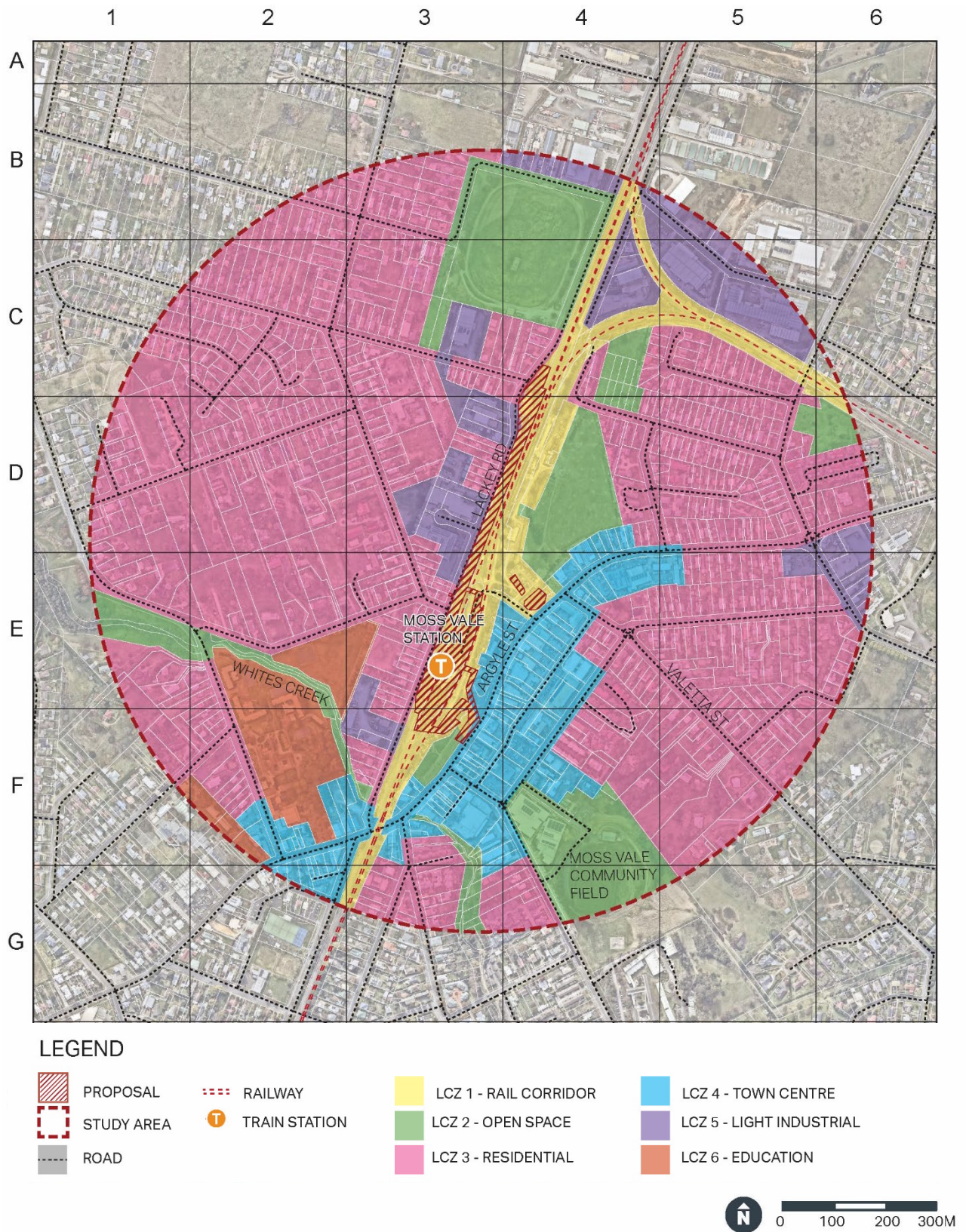


Figure 4-7 Landscape Character Zones within the study area (Source: AECOM)

4.6.1 LCZ 1: Rail Corridor

LCZ 1 comprises a linear, functional rail corridor, widening in proximity of the station and the stabling yard. Other than the station and the stabling yard, the corridor effectively contains only essential infrastructure such as the rail lines, electrical infrastructure (including overhead wires, gantries, substations and switching sheds), intermittent sheds and limited storage of materials such as stockpiles of rail ballast. The rail corridor is fenced along its entirety.

In terms of topography, the train tracks are relatively flat. The land on either side of the corridor varies in level, either at grade with the surrounding environment, or lying above or below the level of the tracks with the edges of the rail corridor steeply battered to mitigate the level difference (refer Figure 4-8).



Figure 4-8 A brick retaining wall mitigates the level change between the tracks and the adjoining road at Moss Vale Station (Source: AECOM)

From Moss Vale Station to the south, the tracks are screened from the surrounding landscape by dense vegetation. While the tracks are often screened, rail infrastructure such as overhead wiring and gantries can often be seen above fencing and vegetation. From Moss Vale Station extending north, there is little to no screening along the western rail corridor edge, where the vegetation is low, the rail corridor is too narrow to support screening vegetation or the tracks are at a similar level to the surrounding environment (refer Figure 4-9).

Near the station platforms, the landscape adjoining the tracks is typically more formal in design and often well maintained, as seen in the garden between the two platforms at Moss Vale Station (refer Figure 4-10).

This LCZ contains a number of items and conservation areas of heritage importance, including Moss Vale Station, Moss Vale Rail Underbridge, the entire area of the corridor up north to the stabling yard which is titled as both State General Heritage Item and as the Argyle Street North Conservation Area.



Figure 4-9 The northern portion of the rail corridor is only partially screened by patchy vegetation on the eastern side of the tracks (Source: AECOM)



Figure 4-10 An internal garden at Moss Vale Station between the two platforms (Source: AECOM)

The rail corridor widens in proximity of the station to include support infrastructure such as commuter car parking (refer Figure 4-11). Off street parking and other rail infrastructure are typically surrounded by screening vegetation.



Figure 4-11 Commuter car parking in the forecourt area of Moss Vale Station (Source: AECOM)

4.6.2 LCZ 2: Open Spaces

This LCZ comprises areas of open space which are predominantly used for recreational purposes, but also includes riparian corridors, undeveloped and rural land. Within the study area the most sensitive areas of this LCZ are the park spaces near the town centre (Leighton Gardens and Diamond Jubilee Park) which feature areas of lawn surrounded by ornamental garden beds. Cold-climate exotic species (such as *Camellia*, *Rhododendron*, deciduous trees and flowering understory vegetation including bulbs) characterise these parks (refer Figure 4-12). Leighton Gardens provides a green buffer to the town centre on Argyle Street, screening the rail corridor from view. Leighton Gardens, a local heritage item, is particularly important to the character of Moss Vale Town Centre. Lackey Park is a large oval in the northern part of the study area, comprising a turf oval surrounded by a track for horse riding use (refer Figure 4-13).



Figure 4-12 Leighton Gardens (Source: AECOM)



Figure 4-13 Lackey Park (Source: AECOM)

4.6.3 LCZ 3: Residential

This LCZ comprises areas of low and medium-density residential buildings typically zoned R2 Low Density Residential and R3 Medium Density Residential, but with some areas zoned MU1 Mixed Use and E4 General Industrial. This LCZ, located on both sides of the rail corridor, defines most of the study area.

Low density detached houses typically sit within large single lots featuring extensive backyards and front yards. Older houses are often red brick featuring one or two storeys, or weatherboard cottages.

Houses are typically simple in architectural style and are set back from the road by landscaped gardens, including lawns surrounded by tall hedges and mature trees (refer Figure 4-14).

Medium density residential areas generally feature detached or semi-detached houses, single storey building and smaller front yards.

The closest houses to the proposal are located on the western side of the rail corridor, along Lackey Road. The houses located on the southern portion of Lackey Road are visually separated from the rail corridor thanks to the rail corridor vegetation and change in level between the road and the train tracks (refer Figure 4-15). At the northern end of the proposal area, the houses located along Lackey Road have full visibility of the rail tracks and the stabling yard, sharing similar grade levels, as shown in Figure 4-16.



Figure 4-14 Typical example of older red-brick detached house within the study area (Source: Google Earth)



Figure 4-15 Typical example of medium-density detached houses on southern portion of Lackey Road (Source: Google Earth)



Figure 4-16 Typical example of detached houses on northern portion of Proposal area along Lackey Road (Source: Google Earth)

The street network within low and medium density residential areas comprises a rough grid, often responding to the topography of the landscape, particularly in relation to Argyle Street and Illawarra Highway.

Low and medium density residential developments are not typically heritage items, although parts of this LCZ lie within Heritage Conservation Areas of Valletta Street and Throsby and Arthur Street. The residential dwellings generally do not contribute to the heritage characteristics of these areas.

4.6.4 LCZ 4: Town Centre

Within the study area this LCZ comprises a strip of shops along Argyle Street and Illawarra Highway and more commercial developments located on the roads adjacent to Argyle Street linked to the town centre activities and uses.

On Argyle Street this LCZ is represented by a strip of commercial properties on either side of the road (refer Figure 4-17) including restaurants and shops or services such as a service station. Shops are typically positioned close to the road corridor adjacent to the footpath. Some off-street parking is provided in blocks, with some timed on-street parallel parking outside the properties.



Figure 4-17 Commercial properties are positioned on either side of Argyle Street, with built form positioned next to the footpath and with some off-street parking provided (Source: Google Street View)

Built form is typically rows of attached terrace-style shops with main parking areas accessible from the nearby Clarence Street. Other built form comprises detached buildings, some of which are repurposed residential housing and others, such as the former Station Master's Residence converted into local shop and restaurant (refer Figure 4-18). Detached buildings are often set back further from the road by simply landscaped front courtyards. Parking is sometimes provided onsite, often at the rear of the properties.



Figure 4-18 Repurposed former Station Master's Residence including local shops and restaurant (Source: AECOM)

Within the study area, this LCZ contains heritage items, including the former Station Master's Residence and the Moss Vale Court House (refer Figure 4-19), which are both State heritage listed items. Parts of the LCZ also lie within a Heritage Conservation Area on Argyle Street and Browley Street.



Figure 4-19 Moss Vale Court House on Argyle Street (Source: AECOM)

4.6.5 LCZ 5: General Industrial

This LCZ is characterised by larger lots featuring one to two storey bulky industrial sheds. Built form are generally set back from the road through off-road parking or loading and unloading areas. Most of this LCZ is located in the northern portion of the study area and along the western side of the rail corridor (refer Figure 4-20). Within the study area this LCZ does not contain any listed heritage items or Heritage Conservation Areas.



Figure 4-20 Industrial lots on Vale Road (Source: Google Earth)

4.6.6 LCZ 6: Education

LCZ 6 comprises educational facilities, which typically include groupings of buildings within large, open campuses. Built forms vary but include two and three storey school blocks and other facilities buildings such as halls and toilet blocks. The landscape is spatially open with perimeter planting and more detailed gathering spaces closer to the buildings. Sports facilities, such as ovals, are positioned near the eastern perimeter.

5.0 Landscape character impact assessment

This section provides an assessment of landscape character impacts for each LCZ during operation of the proposal.

5.1 LCZ 1: Rail Corridor

The potential effects of change on LCZ 1 are described in Table 5.1.

Table 5.1 LCZ 1: Rail Corridor - Landscape Character Impact Assessment

LCZ 1 – Rail Corridor
<p>Anticipated change</p> <p>Key visible changes due to the proposal within this LCZ would include the following.</p> <p>Within the station precinct:</p> <ul style="list-style-type: none"> • upgrades to the station's eastern access (from Argyle Street) including: <ul style="list-style-type: none"> ○ two new lifts at each end of the existing footbridge ○ upgrade to the existing footbridge including replacement of stairs, re-grading to adjust the deck height and gradient, and new lighting ○ upgrades to the existing bus stop and taxi drop-off near Jubilee Park ○ upgrades to Argyle Street entrance including landscaping, seating and signage, and footpath upgrade. • formalisation of parking within the station forecourt, including provision of accessible parking spaces, drop-and-go zone and bus/coach drop off point • adjustments to some station doors, and ground levels at the station including resurfacing at Platform 2 to comply with accessibility requirements • replacing the existing unisex toilet with a family accessible bathroom • improvements to communications equipment, public address (PA) system, and security features/systems • upgrading station power services, communications room, lighting and closed-circuit television (CCTV), line marking, landscaping, and adjustment to station ticketing facilities. • upgrades to the station's western access (from Lackey Road) including: <ul style="list-style-type: none"> ○ new lift to provide access to the existing footbridge ○ upgrade to the existing footbridge including new handrails and decking ○ landscaping, footpath upgrade, new seating and signage at the entrance near Lackey Road ○ pedestrian crossing at Lackey Road and Dalys Way ○ footpath accessibility upgrade at Dalys Way towards the station, including fencing, drainage car parking and retaining wall. <p>Within the stabling yard:</p> <ul style="list-style-type: none"> • upgrade of the train stabling area to accommodate the new regional intercity trains, including track lengthening at the stabling yard and providing train clearances and buffer stops. • new pedestrian walkways within the stabling yard and next to the existing signal box and fuelling station and a dedicated ARTC rail access driveway

LCZ 1 – Rail Corridor

- upgrade to the existing Lackey Road vehicle access area including entry and exit gates, and a new sealed car park
- retaining walls and a noise barrier about 250 metres in length along the western side of the stabling yard.
- relocation of the existing amenity blocks and storage container about 60 metres north to the new stabling yard access area
- ancillary work including utilities/services relocations, lighting, fencing and gates, and drainage
- a temporary stabling yard for use during construction of the existing stabling yard
- a new diesel exhaust fluid system including 10,000 Litre capacity self-bunded tank, to service the train fleet
- stabling of the new train fleet (when delivered) during operation.

Sensitivity to change

The susceptibility to change of LCZ 1 is influenced by the following:

- the utilitarian character of the rail corridor, where function is a key driver of design, and which accommodates similar changes or new rail elements within the rail corridor
- the station is partially surrounded by vegetation, which assists in visual screening and softening.

The value of landscape is influenced by the following:

- the heritage importance of items within the LCZ
- vegetation within the rail corridor, which is typically valued in urban areas, and unusually at Moss Vale is included within the station platforms
- the apparent level of care with which the station precinct is maintained.

Given the above, the sensitivity of LCZ 1 is considered to be Moderate.

Magnitude of change

The magnitude of change for LCZ 1 is influenced by:

- the most visible elements of the changes to the station precinct would be the three lifts and changes to the footbridges. The lifts would comprise considerably larger pieces of infrastructure at the entrance to the station on either side (Lackeys Road and Argyle Street). Other upgrade elements within the station would be of a more modest scale, similar in size and visual prominence to existing elements. Within the stabling yard, the addition of built structures and subject to detailed design, a 5.5 metre high noise barrier along Lackey Road would be of a larger scale than existing.
- tree removal and trimming along the rail corridor would comprise a considerable change to the rail corridor, considering that fringing vegetation is characteristic of the LCZ.
- the materials proposed would differ from those existing within the station and would visually appear as new elements. However, upgrade of lifts at stations along the rail corridor (i.e. at different stations) as part of the Transport Access Program are similar in materiality, which would visually tie these stations together as part of a unified rail character and integrate them into the greater visual character of rail corridor LCZs.
- the larger elements of the proposal would have an influence over a substantial area within the LCZ.
- while a substantial proportion of the overall LCZ would be affected by the proposal, most of the changes are of a small scale (e.g. upgrades to pavement, tactiles, internal changes to

LCZ 1 – Rail Corridor

toilets), are visually recessive within the LCZ or are characteristic of the LCZ, such as new tracks within the stabling yards.

- the proposed changes (particularly the proposed lifts) would differ from the established predominant architectural style within the station, however, modernisation of station facilities is a common and ongoing process.
- the duration of the proposal would be long-term, with low potential for reversibility.

Given the above, the magnitude of anticipated change is considered to be Moderate.

Significance of landscape character effect

Using the landscape character grading matrix (refer Table 2.1), the rating of the impact on landscape character is Moderate (adverse). The proposed changes predominantly include the upgrade of existing rail infrastructure, with the addition of three larger structures (the lifts) and noise barrier. The upgrade of existing rail infrastructure would not result in a change to the character of the LCZ, while the addition of the more modern lifts would result in a minor change in station character.

The 'adverse' qualitative outcome relates to the addition of noise barrier and removal and trimming of trees within the LCZ, particularly vegetation positioned at the perimeter of the LCZ between the rail corridor and the surrounding landscape.

It is recommended that design elements reference the heritage character of the LCZ, however, maintain the visual quality of a 'new' piece of infrastructure rather than replicating heritage items. The replanting of trees, where removed, is also recommended.

5.2 LCZ 2: Open Spaces

The potential effects of change on LCZ 2: Open Spaces are described in Table 5.2.

Table 5.2 LCZ 2: Open spaces - Landscape Character Impact Assessment

LCZ 2: Open Spaces
<p>Anticipated change</p> <p>Key visible changes due to the proposal within or adjacent to Leighton Gardens and Diamond Jubilee Park would include the following:</p> <ul style="list-style-type: none"> • installation of two new lifts, one at each end of the existing footbridge connecting the station to Argyle Street • upgrades to the existing footbridge stairs and walkway • accessibility upgrades to the existing bus stop and taxi drop-off near Jubilee Park • modification of existing infrastructure and relocation of existing utilities to allow for installation of these works. • landscaping, installation of seating and signage, re-grading of pavement and footpath upgrade at the Argyle Street entrance Street.
<p>Sensitivity to change</p> <p>The sensitivity to change of this LCZ is influenced by the existing characteristics of this LCZ and the distance and nature of the proposed changes. In particular:</p> <ul style="list-style-type: none"> • key visible changes from the proposal would lie east of the station in Diamond Jubilee Park and Leighton Gardens which are located between the rail corridor and Argyle Street to the east. • Diamond Jubilee Park comprises an entry point into the station, and therefore has adopted characteristic station elements, including brick entry piers on either side of the pedestrian ramp and existing benches used as meeting points or waiting points near the station entry. These are characteristically similar to many of the proposed changes and lower the overall susceptibility of the LCZ to the proposal. <p>The value of landscape is influenced by the following:</p> <ul style="list-style-type: none"> • open recreation and environmental value typically held by open spaces and provision of 'green relief' within an urban area. • the parks to the east of the station contain heritage items or are a heritage item themselves. • the open space to the north adjacent to the stabling yard is undeveloped land which is also used as a provision of access to the stabling yard and has a more utilitarian aesthetic. <p>Given the above, the sensitivity of LCZ 2 is considered to be Moderate.</p>
<p>Magnitude of change</p> <p>The magnitude of change for this LCZ is influenced by the following:</p> <ul style="list-style-type: none"> • proposal elements introduced directly within this LCZ would be minor and characteristically 'fit' within their landscape setting, e.g. the provision of seating, signage or lighting within a park used as an entry point for the station. • proposal elements introduced adjacent to this LCZ, while substantial in scale in some instances, would also be characteristic of the LCZ they occur within (LCZ 1: Rail Corridor) and as such, would not affect LCZ 2. • the geographical extent of effects of the visible changes would be very small considering the size of the overall LCZ.

LCZ 2: Open Spaces

- the duration of the visible change would be long term, with little chance of reversibility. However, the changes would 'bed down' into the LCZ as the landscape matures around the new elements providing further screening and reducing visibility to the changes.

Given the above, the magnitude of anticipated change in the LCZ 2 – Open Spaces is considered to be Low.

Significance of landscape character effect

Using the landscape character grading matrix (refer Table 2.1), the rating of the impact on landscape character is Moderate to Low (neutral). The proposed changes within the LCZ would predominantly comprise the addition of seating, lighting and signage, and upgrade of pavement. The addition of rail infrastructure within the adjacent rail corridor (LCZ 1) would not affect the character of LCZ 2.

While the changes within this LCZ are minimal, the sensitivity of the LCZ lies predominantly in the heritage and recreational value of the parks next to the station.

The changes would not alter the quality of the LCZ, neither within these more sensitive parks nor within the undeveloped lots adjacent to the stabling yard.

5.3 LCZ 3: Residential

The potential effects of change on LCZ 3: Residential are described in Table 5.2.

Table 5.3 LCZ 3: Residential - Landscape Character Impact Assessment

LCZ 3: Residential**Anticipated change**

Key visible changes due to the proposal within residential areas adjacent to Lackey Road would include the following:

- upgrades to the interchange facilities on the western side of the station (Lackey Road) including:
 - installation of a new lift to provide access to the existing footbridge connecting Lackey Road to Dalys Way
 - upgrade to the existing footbridge and stairs including new handrails and decking
 - installation of a pedestrian crossing at Lackey Road.
- provision of a 5.5 metre high noise barrier within the stabling yard along the boundary with Lackey Road (height and length subject to detailed design)
- removal or trimming of trees along the boundary of this LCZ and LCZ 1: Rail Corridor.

Sensitivity to change

The sensitivity to change of LCZ 3 is influenced by the following:

- its proximity to the adjacent rail corridor. Few proposal elements would be introduced directly within this LCZ, the most visible being the installation of the raised pedestrian crossing and landscaping around the station entrance on Lackey Road. However, the installation of a new lift at the station entrance, removal of vegetation along the rail corridor and installation of a 5.5 metre high noise barrier within the stabling yard would occur adjacent to this LCZ and have the capacity to change the character of this LCZ, due to the scale of these changes.

Other elements of the proposal would be either contained within the rail corridor and station or considered visually minor as they would comprise the upgrade or replacement of existing infrastructure or are positioned away from the boundary between these two LCZs.

LCZ 3: Residential

- the topography, built form and existing vegetation within the road verges and within private properties lowers the susceptibility of the overall LCZ to change by limiting the visual prominence of the changes.

The value of landscape is influenced by the following:

- the heritage importance of items within and adjacent to the LCZ and in the vicinity of the station, including HCAs and heritage items with State and local importance.
- vegetation along the edge of the rail corridor, which is typically valued in urban areas, but especially when the vegetation provides a visual buffer between the more utilitarian rail corridor and the residential landscape.
- permanent outlooks of residents from their houses.

Given the above, the sensitivity of LCZ 3 is considered to be Moderate.

Magnitude of change

The magnitude of change for LCZ 3 is influenced by:

- the size and scale of the proposal within the LCZ (i.e. footpath and pedestrian crossing) would be similar to that of the existing road infrastructure, noting that the proposed lifts and noise barrier would be positioned in the adjacent LCZ1: Rail Corridor. The quality of the design of the lifts would be in keeping with that of a station entrance at the boundary of a residential neighbourhood, however, the utilitarian character of a noise barrier, designed for function rather than aesthetics, would be at odds with the adjacent character of the residential street.
- removal and trimming of vegetation at the boundary between the rail corridor and the residential street would visually expose the station slightly to the street.
- the proposed pedestrian footpath and crossing would be in keeping with the existing character of the footpath and road corridor within the LCZ.
- the geographical extent of the changes would be small, limited to the boundary of the rail corridor directly adjacent to the station and stabling yards. A majority of the LCZ would be unaffected by the changes.

Given the above, the magnitude of anticipated change is considered to be Moderate.

Significance of landscape character effect

Using the landscape character grading matrix (refer Table 2.1), the rating of the impact on landscape character is Moderate (adverse). The proposed changes predominantly include the addition of larger pieces of rail infrastructure within an adjacent rail corridor but are confined to a small edge of the greater LCZ.

The 'adverse' qualitative outcome relate to the removal and trimming of trees and vegetation and to the addition of the noise barrier along a residential street. However, it is noted that while the noise barrier is larger in scale than existing infrastructure along Lackey Road, the industrial character of the rail corridor would remain similar between the existing and proposed.

5.4 LCZ 4: Town Centre

The potential effects of change on LCZ 4: Town Centre are described in Table 5.2.

Table 5.4 LCZ 4 Town Centre - Landscape Character Impact Assessment

LCZ 4: Town Centre
<p>Anticipated change</p> <p>As the key visible changes from the town centre would include the upgrade of a bus shelter and potential pavement upgrades, a full assessment of impact within this LCZ has not been undertaken. These outcomes are considered routine maintenance within a commercial setting in a central main road.</p>
<p>Significance of landscape character effect</p> <p>There would be no change to the character of the LCZ due to the proposal.</p>

5.5 LCZ 5: General Industrial

The potential effects of change on LCZ 5: Light Industrial are described in Table 5.2.

Table 5.5 LCZ 5: Light Industrial - Landscape Character Impact Assessment

LCZ 5: Light Industrial
<p>Anticipated change</p> <p>There would be no proposal elements introduced within this LCZ. Key visible changes from the proposal to this LCZ would include the following:</p> <ul style="list-style-type: none"> • upgrade to the existing footbridge between Lackey Road and Dalys Way, including replacement of stairs, handrail and decking • upgrades to the interchange facilities on the western side of the station (Lackey Road) including: <ul style="list-style-type: none"> ○ installation of a new lift to provide access to the existing footbridge ○ installation of a raised pedestrian crossing across Lackey Road ○ landscaping, footpath upgrade, new seating and signage at the entrance near Lackey Road • within the stabling yard; <ul style="list-style-type: none"> ○ extension of around 130 metres of stabling track ○ upgrade around 280 metres of Combined Services Route (CSR) (above ground infrastructure only) ○ installation of a new asphalt pathway along the stabling siding on the western side of the signal box ○ provision of new amenities and structures within the northern stabling yard ○ provision of a 5.5 metre high noise barrier within the stabling yard along the boundary with Lackey Road.
<p>Sensitivity to change</p> <p>The sensitivity to visible change of this LCZ is influenced by the following:</p> <ul style="list-style-type: none"> • its proximity to the rail corridor and the proposed changes. There would be no changes within this LCZ due to the proposal. There would be changes within LCZ 1 that lie adjacent to a small portion of LCZ 5. However, the changes would characteristically 'match' the utilitarian character within the rail corridor, where function is a key driver of design.

LCZ 5: Light Industrial

- within the study area LCZ 5 comprises small pockets of light industrial development, rather than larger areas of land. This would make changes to the perimeter of the LCZ more likely to be experienced throughout each small parcel of the LCZ.
- LCZ 5 is similar to LCZ 1 in that both are utilitarian in character, with function a key driver of design over aesthetic appeal. The LCZ is industrial in character.

The value of landscape is low, it has no heritage value, minimal recreational or ecological value, and comprises industrial lots with limited landscaping surrounding each block.

Given the above, the sensitivity of LCZ 5 is considered to be Low.

Magnitude of change

The magnitude of change for this LCZ is influenced by the following:

- the scale of the changes would be predominantly on par with existing infrastructure within the rail corridor, with the exception of the noise barrier and lifts, which would be large additional elements within LCZ 1. These changes would be characteristic of infrastructure within a rail corridor.
- the geographical extent of effects would be very small, with the changes proposed to occur near the boundary of the western side of the rail corridor along Lackey Road.
- the duration of the effects would be long term.

Given the above, the magnitude of anticipated change is considered to be Low.

Significance of landscape character effect

Using the landscape character grading matrix (refer Table 2.1), the rating of the impact on landscape character is Low (neutral). Proposal elements would not be introduced directly within this LCZ and would not change the overall character nor quality of LCZ 5: General Industrial.

5.6 LCZ 6: Education

The potential effects of change on LCZ 6: Education are described in Table 5.6.

Table 5.6 LCZ 6: Education - Landscape Character Impact Assessment

LCZ 6: Education**Anticipated change**

Due to the relative distance of this LCZ from the proposal, combined with the relatively flat topography and abundant tree canopy and surrounding built forms, there would be no visible changes from this LCZ. A full assessment of impact within this LCZ has therefore not been undertaken.

Significance of landscape character effect

There would be no change to the character of the LCZ due to the proposal.

6.0 Visual impact assessment

6.1 Visibility of the proposal

Visible changes resulting from the proposal would include:

- installation of three new lifts between the eastern and the western station accesses
- upgrade of the existing footbridge, stairs and walkway
- upgrade of interchange facilities (including upgrades to the existing bus stop and taxi drop-off near Jubilee Park, upgrades to Argyle Street and Lackey Road entrance including seating and signage, and improved accessible pedestrian pathway at the forecourt and pedestrian crossings at Lackey Road and Dalys Way)
- upgrade to the existing stabling yard vehicle access off Lackey Road including entry and exit gates, and a new sealed car park, and provision of new pedestrian walkways within the stabling yard and next to the signal box and fuelling station
- a noise barrier about 5.5 metres in height and 250 metres in length along the western side of the stabling yard, and retaining walls
- installation of the new diesel exhaust fluid system (including 10,000 litre containerised self-bunded tank)
- installation of a permanent hardstand compound area with amenities to accommodate the mobile train simulator compound.

The Zone of Theoretical Visibility (ZTV) map (refer Figure 6-1) shows the theoretical areas that would have views to the proposal due to the landform alone, i.e. if no built form or vegetation are present. While this map shows extensive theoretical views to the proposal, the extent of views would be greatly reduced in reality. The parts of the proposal that would potentially be seen from the surrounding landscape would include the top of the lifts, due to their height, and the noise barrier due to its position along the boundary of the rail corridor and its height. The relatively flat topography built form and tree canopy in the surrounding landscape would limit the places where these changes could be seen from.

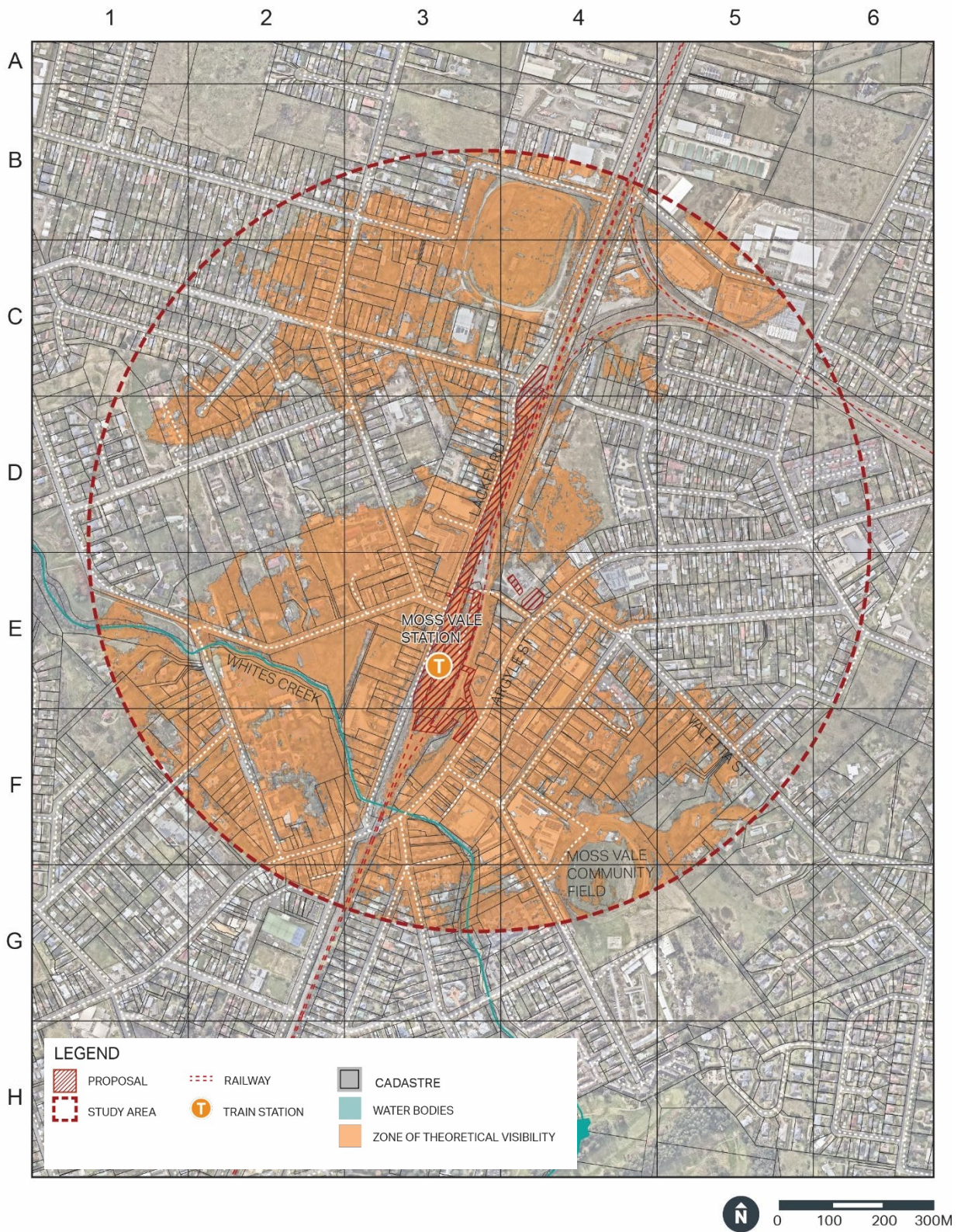


Figure 6-1 Zone of Theoretical Visibility map (Source: AECOM)

6.2 Visual receivers

Visual effects of the proposal are assessed for the following key visual receivers:

- rail commuters accessing or passing through the station
- commuters and passers-by on nearby roads (pedestrians, cyclists, motorists)
- workers or visitors to the nearby business enterprises and community facilities
- residents in adjacent streets to the station to the east and west.

6.3 Assessment of construction activity

During construction, visible construction elements would be expected to typically include traffic control (including a single lane closure along Lackey Road for about 40 weeks), construction vehicles and machinery, survey investigations, temporary fencing and hoarding, noise barriers, pedestrian diversions, tree/vegetation removal and trimming, signage and ancillary facilities (e.g. temporary offices, toilets and laydown areas). Two temporary ancillary facilities are proposed outside of the rail corridor, including an area proposed adjacent to the commuter car park on Dalys Way, and an area adjacent to the Diamond Jubilee Park off Argyle Street. Other temporary ancillary facilities would be located within the SP2 zone, including an area north of the stabling yard. Other construction activity visible within the surrounding landscape would include an increase in traffic on the local road network associated with construction vehicle movements.

The most visually prominent construction activity would be associated with the construction of the three lifts, changes to the footbridges, removal of trees, upgrade work to the footpath and kerbs / parking areas on streets near the station entrance and the temporary ancillary facilities. Construction on the platform and within the station buildings would be difficult to see outside of the rail corridor and would therefore impact users of the rail facilities rather than the general (non-rail user) public.

The most sensitive visual receivers would be residential receivers viewing the changes from their homes on Lackey Road. These receivers would be seeing the changes for extended periods from close proximity, potentially from within living areas of their homes.

Other receptor groups who would be viewing the construction activity include:

- rail commuters accessing the station on foot or passing through the station on trains
- passers-by on Lackey Road, Dalys Way and Argyle Street (pedestrians, cyclists, motorists)
- workers or visitors to the nearby businesses and community facilities on Argyle Street, including those visiting nearby restaurants adjacent to the station.

Of these receptor groups, a high number of rail commuters and passers-by would potentially receive the most detailed views to the activity but would be seeing the changes as a small part of a greater journey and only for a brief period of time as they moved towards and past the station. These receivers would have a low sensitivity to these changes due to the short distance of time they would see the activity.

Workers and visitors to the nearby shops and restaurants in Argyle Street would predominantly not have views directly to the construction activity, and would only glimpse views of construction areas from the street, and may view increased traffic on the road. Workers and visitors at the adjacent post office café and the solicitors office adjacent to Diamond Jubilee Park may have more visibility to the construction areas due to the proximity.

A majority of the receivers would have a low sensitivity to the changes (being passers-by and rail commuters) and there would be a low number of receivers with a higher sensitivity to the changes (residents along Lackey Road). Overall, views to the construction ancillary facilities including temporary stabling yard and other construction activity due to the proposal are considered to be relatively minor. They would be consistent with similar temporary construction work sites and activities, and transitory over a period of about 19 months until completion of construction of the Proposal.

6.4 Assessment of proposal at operation

6.4.1 Representative viewpoints

Ten (10) viewpoints have been selected to represent the change in views from publicly accessible areas due to the proposal. The viewpoints were chosen to adequately assess the larger elements of the proposal, where:

- the proposed lifts are adjacent to the southbound tracks are (viewpoints 1, 2, 3 and 4)
- changes to Dalys Way (viewpoint 5)
- the proposed lift adjacent to the northbound tracks (viewpoints 6, 7, 8 and 9)
- changes within the stabling yard (viewpoint 10).

The rationale for choice of viewpoints is described in Table 6.1 and their location is shown in Figure 6-2.

Table 6.1 Viewpoints chosen to assess visual impacts due to the proposal

Viewpoint	Viewpoint rationale	Distance*
1: Leighton Gardens	Viewpoint selected to assess changes to the view from the upper portion within Leighton Gardens, adjacent to Diamond Jubilee Park. It is taken from the picnic bench within the park, looking north towards the proposal.	25 m
2: Moss Vale Hotel	Viewpoint selected to assess changes to the view from the Moss Vale Hotel, which is positioned across the road from the proposal on Argyle Street and approximately 90 metres from the lifts over the tracks on the eastern edge of Moss Vale Station.	15 m
3: Diamond Jubilee Park	Viewpoint selected to assess changes to the view from the Moss Vale Station entrance at a bench within Diamond Jubilee Park. This park is a small pocket park with a water fountain, positioned near a small parking area to the south of the Former Station Masters Residence.	0 m
4: Moss Vale Station Platform 2	Viewpoint selected to assess changes to the view from the station platform at Moss Vale Station, looking north east towards the pedestrian overpass.	25 m
5: Moss Vale Station Dalys Way	Viewpoint selected to assess changes to the view from the station entry at Moss Vale Station, looking north towards the station forecourt.	5 m
6: Moss Vale Station Platform 1	Viewpoint selected to assess changes to the view from the station platform at Moss Vale Station, looking north west towards Lackey Road and the western pedestrian overpass.	85 m
7: Dalys Way	Viewpoint selected to assess changes to the view from Dalys Way, looking west toward the western existing footbridge and to Lackey Road.	5 m
8: Lackey Road at Garrett Street Intersection	Viewpoint selected to assess changes to the view at the intersection between Lackey Road and Garrett Street looking toward north-north east.	10 m
9: Lackey Road at Commercial Car Park	Viewpoint selected to assess changes to the view on Lackey Road from the entrance to a commercial car park, looking toward south east.	25 m

Viewpoint	Viewpoint rationale	Distance*
10: Lackey Road North	Viewpoint selected to assess changes to the view at Lackey Road, looking south-east toward the southern portion of the stabling yard.	10 m

*Distance is measured between the viewpoint to the nearest proposed lift, noise barrier or landscaping change (e.g. pedestrian crossing or ramp) as these are considered to be the most visually prominent proposed changes at operation.

Other locations that were considered but not assessed were:

- Baker Road: not assessed due to the distance and screening vegetation between the road and the stabling yard
- Lackey Road near Parkes Road: not assessed due to the distance from the proposal and screening vegetation at the rail corridor edge
- Lackey Park: not assessed due to distance to the proposal and screening vegetation around the park
- other locations on Argyle Street: not assessed due to screening vegetation limiting views to the proposal
- other locations on Lackey Road to the south of Garrett Street: not assessed due to level change and trees fringing the road corridor limiting most views into the rail corridor
- Leighton Gardens: not assessed due to the lower topography of the park and extensive tree and shrub screening at its boundaries which screens views to the landscape outside the park towards the rail corridor.

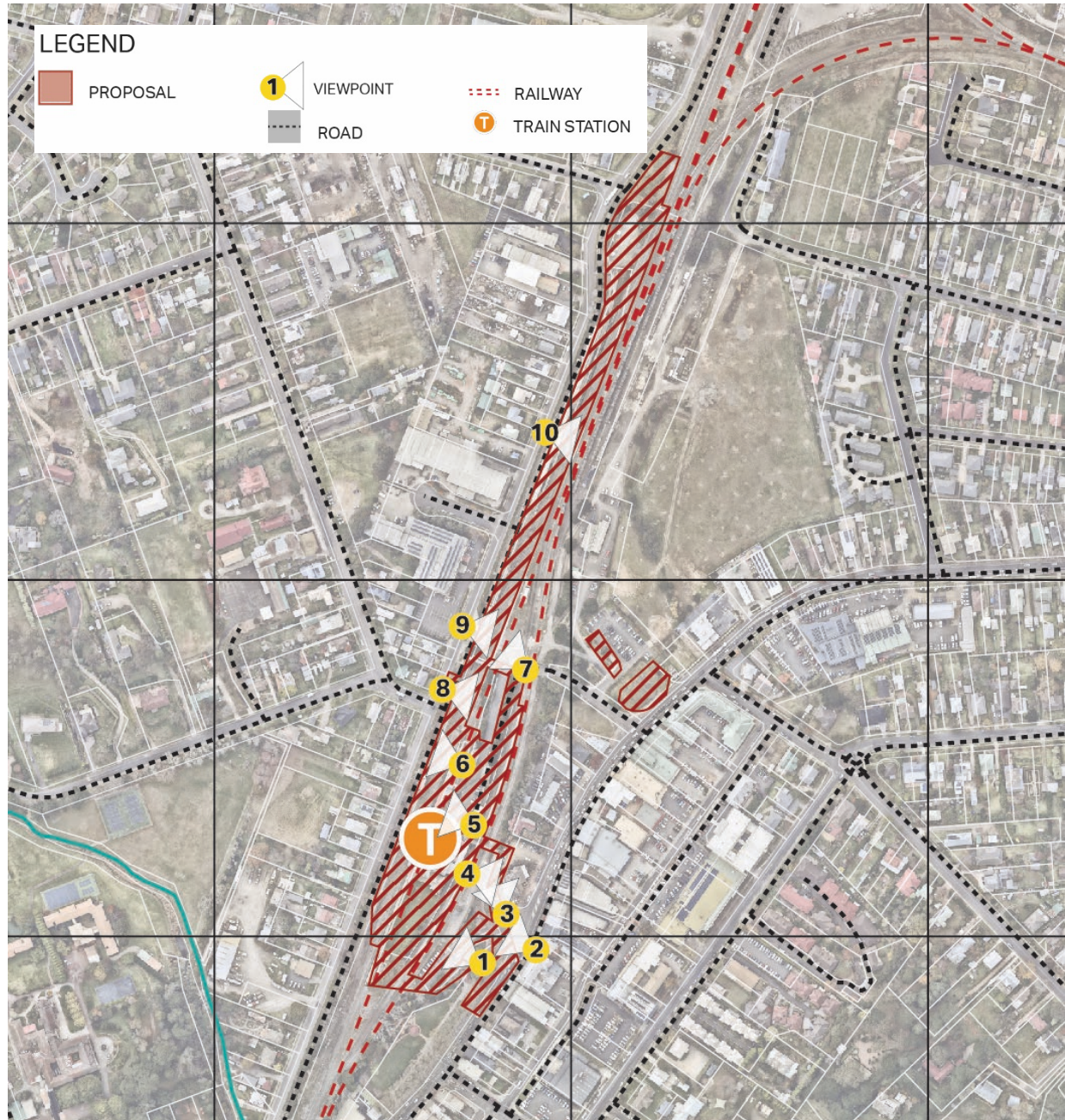


Figure 6-2 Representative viewpoints for visual impact assessment (Source: AECOM)

6.4.2 Assessment of viewpoints

6.4.2.1 Viewpoint 1: Leighton Gardens

The visual impact assessment of this viewpoint is in Table 6.2.

Table 6.2 Viewpoint 1 - Visual Impact Assessment

Viewpoint 1: Leighton Gardens
<p>Receptors</p> <p>Receptors at this location include those seated at the picnic tables within the park, pedestrians and those using the park for recreation.</p>
<p>Existing view</p> <p>Refer to Figure 6-3 for the existing view north from this viewpoint. The existing view comprises a view from within a park to a rail corridor and station next to a commercial centre and includes the following:</p> <ul style="list-style-type: none"> • an expanse of turf framed by tall, deciduous trees are seen in the foreground, along with a refurbished Howitzer Gun mounted on a concrete pad to the right of frame, which was captured by Australian troops in the First World War. The entry driveway to a small car park bisects the turf within the park. • the rail corridor frames the view to the west (left of frame), with the tracks, the platform and station buildings seen in a good amount of detail. A tall conifer hedge and the station buildings are seen against the sky and screen the view beyond the station to the west. • Argyle Street is visible in the middle ground to the east (right of frame), with fringing commercial terraces screening the view beyond them to the east. The Moss Vale Clock tower is seen between two trees and behind a small bus shelter. • the central focal point of the view includes the Former Station Masters Residence visible behind the bare branches of deciduous trees, a small parking area and the northern area of Diamond Jubilee Park.
<p>Anticipated change to view</p> <p>The key changes to the view due to the proposal would comprise:</p> <ul style="list-style-type: none"> • the top of the eastern lift is likely to be seen during winter, when the deciduous trees are bare, however, when in leaf in the warmer months this is likely to be screened from view. • the proposed lift and stairs on the western side of the pedestrian bridge within the station would be partially visible during winter, as above, but would be predominantly screened from view during summer when the trees in the fore and middle ground are in leaf. • the seating for the taxi waiting zone would be visible within the park, as would changes to lighting. <p>Changes within the station platform and rail corridor at ground level would not be seen from this location. All changes on Dalys Way and the lift on Lackey Road would be screened from view. It is unlikely the bus stop on Argyle Street would be visible due to screening from vegetation at the park boundaries.</p>

Viewpoint 1: Leighton Gardens

Sensitivity

Factors contributing to the sensitivity of receivers from this location would include:

- visual receptors at this viewpoint would comprise passers-by and those sitting at the picnic table within the park. A moderate number of passers-by are anticipated and a low number of people using the picnic tables at any one time.
- some visual receptors would have an interest in the view within and from the park, given some would be using the space for recreation, however, those passing through the park on their way to or from the station would only have a casual interest in the views as they pass by.
- the view to the station entry includes items of interest (the Howitzer gun and the Moss Vale Clock Tower, as well as a series of attractive buildings such as the Former Station Masters Residence and the Moss Vale Station buildings), which create an appealing view from this location.

The value of the view as seen by receivers is influenced by:

- the view contains multiple heritage items and is from within a park with heritage value.
- views to greenery are typically valued within city areas; however:
 - the rail corridor has visually utilitarian elements associated with public transport infrastructure, such as ramps and lifts.
 - most passers-by would only see views for short periods of time on their journey.

For the reasons outlined above the sensitivity of visual receivers to the proposed change in this view are assessed to be Moderate.

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the proposal include:

- the small scale of the change visible within the view from this location, comprising the addition of the top of lifts and an additional bench within the park.
- the changes amount to the addition of elements within the view with similar visual characteristics in terms of size, colour, height, mass, etc.
- the largest element potentially seen within the view are parts of the lifts (on either side of the pedestrian bridge near the station entry) both of which would be at least partially screened by vegetation and would be seen from about 85 metres. Smaller changes within the view (seating at taxi waiting point and bus stop) would be closer to the viewpoint (25 metres) but would be visually characteristic within a park and roadside setting and therefore would be visually recessive within the view, particularly given the other, more interesting elements (such as the Howitzer and clock tower) seen within the view.
- changes would be seen within a small proportion of the view and for short periods of time while the visual receiver approached and passed the viewpoint, but for longer periods of time for those sitting at the picnic table.
- the changes would be seen predominantly in the middle of the view but with the larger elements in the background, at least partially screened by vegetation.
- the duration of the change would be long term with no chance of reversibility.

Due to the above, the magnitude of change for this viewpoint has been assessed as Low.

Viewpoint 1: Leighton Gardens

Overall rating

Overall, the change in the view seen by receivers from this viewpoint has been assessed as Moderate to Low (neutral). The partial screening of the lifts in winter and close to full screening during summer when deciduous trees are in leaf substantially reduce any visual impact of the proposal when seen from this viewpoint. The addition of seating within and adjacent to the park would comprise minor additional elements within the view, but elements that are characteristically ‘belong’ within the park and street setting.

The ‘neutral’ qualitative rating is due to the visually recessive nature of the changes within the greater view and the addition of rail infrastructure within an existing rail corridor. The changes neither add nor subtract from the quality of the existing view from this viewpoint.



Figure 6-3 Panorama showing the view from Viewpoint 1 looking north, with the rail corridor visible to the left of frame and Argyle Street visible to the right of frame (Source: AECOM)

6.4.2.2 Viewpoint 2: Moss Vale Hotel

The visual impact assessment of this viewpoint is in Table 6.3.

Table 6.3 Viewpoint 2 - Visual Impact Assessment

Viewpoint 2: Moss Vale Hotel
<p>Receptors</p> <p>Receptors at this location include passers-by on Argyle Street (pedestrians, cyclists, motorists) and those visiting the Moss Vale Hotel.</p>
<p>Existing view</p> <p>Refer to Figure 6-4 for the existing view west from this viewpoint. The existing view comprises the following:</p> <ul style="list-style-type: none"> the foreground of the view comprises the road pavement and western verge of Argyle Street. The Moss Vale Clock Tower is positioned in the middle ground of the view in a traffic island on the western edge of Argyle Street. the western verge of the road includes the footpath with station precinct infrastructure including a bus shelter and signage. Large deciduous trees are positioned on the western verge and within the park on the opposite side of the road. on-street parking is seen on both sides of the road on Argyle Street to the north of this viewpoint. the middle ground of the view includes the Moss Vale Clock Tower, as mentioned above, as well as a small part of the Leighton Gardens park. The Former Station Master’s Residence

Viewpoint 2: Moss Vale Hotel

is prominent within the view, positioned to the north west (right of frame) of the Moss Vale Clock Tower.

- Moss Vale Station is visible in the background, visually comprising white fencing associated with the station platform seen against the dark background of coniferous hedging surrounding a turf courtyard between the station platforms. The station buildings are seen extending from behind the Moss Vale Clock Tower and Former Station Master's Residence, but are partly screened by a deciduous tree canopy.

Anticipated change to view

The key changes to the view due to the proposal would comprise:

- the regrading of the ramp from the existing footbridge to Argyle Street would be just visible beyond cars parked adjacent to Diamond Jubilee Park
- minor accessibility upgrades to the existing bus stop and taxi drop-off near Diamond Jubilee Park would be visible on the other side of the road
- landscaping near the ramp on Argyle Street would just be visible behind the Moss Vale Clock Tower.

Changes within the station platform and rail corridor at ground level (such as resurfacing of pavements) would not be seen from this location. Changes on Dalys Way and near Lackey Road and within the stabling yards would not be visible from this viewpoint.

Sensitivity

Factors contributing to the sensitivity of receivers from this location would include:

- The nature of the visual receivers who that experience this view, primarily comprising passers-by (pedestrians, cyclists and motorists) who would have a casual interest in the views as they travel along the street. Visitors within the Moss Vale Hotel would also see views from inside the hotel, however, only those seated by the windows overlooking Argyle Street.
- The extent to which the attention or interest of receivers would be focused on the view, in this case those travelling along the road would be focussed on their view within the road corridor and its immediate surrounds at street level as they travelled past. Although visitors to the Moss Vale Hotel would have a view out the window to the station entry, it is unlikely they would have an interest in the view outside as they would be more likely to be focussed on activities within the hotel during their visit.
- However, the view to the station entry includes pocket parks with items of interest (the Howitzer gun in Leighton Gardens and the Moss Vale Clock Tower, as well as a series of attractive buildings such as the Former Station Masters Residence and the Moss Vale Station buildings), which create an attractive view moment along Argyle Street.

The value of the view as seen by receivers is influenced by:

- the view contains multiple heritage items which feature prominently, including the Moss Vale Clock Tower and the Former Station Master's Residence.
- views to parks and greenery, which are typically valued within city areas.

For the reasons outlined above the sensitivity of visual receivers to the proposed change in this view are assessed to be Moderate.

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the proposal include:

- while changes to the ramp leading from Diamond Jubilee Park to the new lift may be visible, it would visually comprise replacement of an existing ramp, and replanting of shrubs in adjoining flower beds.

Viewpoint 2: Moss Vale Hotel
<ul style="list-style-type: none"> • upgrades to the taxi wait area and bus shelter would likewise result in the replacement of existing or similar elements and would not result in the addition or removal of new elements within the view. • the changes would be seen over a small proportion of the overall view would be visually recessive. • the duration of the change would be long term with no chance of reversibility. <p>Due to the above, the magnitude of change for this viewpoint has been assessed as Low.</p>
<p>Overall rating</p> <p>Overall, the change in the view seen by receivers from this viewpoint has been assessed as Moderate to Low (neutral). The proposed changes comprise the minor upgrade of elements within the streetscape and near a station entry.</p> <p>The ‘neutral’ qualitative rating is due to the visually recessive nature of the changes within the view. The changes neither add nor subtract from the quality of the existing view from this viewpoint.</p>



Figure 6-4 Existing view from Viewpoint 2 looking west towards the entry to Moss Vale Station from Argyle Street (Source: AECOM)

6.4.2.3 Viewpoint 3: Diamond Jubilee Park

The visual impact assessment of this viewpoint is in Table 6.4.

Table 6.4 Viewpoint 3 - Visual Impact Assessment

Viewpoint 3: Diamond Jubilee Park
<p>Receptors</p> <p>Receptors at this location include train commuters accessing Moss Vale Station from Argyle Street or people parked in their cars or sitting in the park.</p>
<p>Existing view</p> <p>Refer Figure 6-5 for the existing view east from this viewpoint. The existing view comprises the following:</p> <ul style="list-style-type: none"> • a visually contained view within Diamond Jubilee Park, framed to the south (left of frame) by a small wooden hut and to the north (right of frame) by the Former Station Master’s Residence. A small area of turf with a central fountain features in the foreground of the view

Viewpoint 3: Diamond Jubilee Park

- a black metal fence draws the eye towards the entry to the ramp leading to the Moss Vale Station entry in the middle ground of the view, with deciduous trees and shrubs on either side within garden beds
- the background of the view includes the pedestrian bridge spanning the tracks extending over the station entry ramp, linking to the station buildings seen partially screened by the canopy of deciduous trees.

Anticipated change to view

The key changes to the view due to the proposal would comprise (refer Figure 6-6):

- changes to the ramp in the middle ground and the garden bed to the right of the ramp, including replacement of shrubs within the garden bed
- the top of the lift on the eastern side of the tracks would partially screen the eastern end of the pedestrian bridge but would be partially screened by the branches of a deciduous tree
- the lift and stairs on the western end of the pedestrian bridge would be visible in the background, with the top of the lift seen in relief against the sky.

Changes within the station and rail corridor at ground level would not be seen from this location, nor would changes on Dalys Way or Lackey Road.

Sensitivity

Factors contributing to the sensitivity of receivers from this location would include:

- the nature of the visual receivers who would experience this view of the proposal, comprising commuters, who would have a casual interest in the view as they approached the station, as well as people resting in their cars or at the park
- the extent to which the attention or interest of receivers would be focused on the view. Commuters would typically have a low interest in the view as they enter or leave a station, however, this view is quite attractive and contains elements with heritage importance. The unusual pedestrian bridge seen against the sky, the ornate brickwork of the surrounding buildings and the commemorative fountain within the park make the station entry attractive.

The value of the view as seen by receivers is influenced by:

- heritage or commemorative items within the view
- views to greenery, which are typically valued within city areas
- passers-by, particularly pedestrians, would only see views for short periods of time on their journey.

For the reasons outlined above the sensitivity of visual receivers to the proposed change in this view are assessed to be Moderate.

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the proposal include:

- the size and scale of the proposed lifts (which comprise new elements within the view) are larger than existing pieces of station infrastructure seen within the view. These additional items would increase the visual presence of the station within the view.
- the change to the ramp (which may include changes to lighting, fencing and shrubs within the garden bed adjacent to the ramp) would comprise a replacement of existing elements within the view.
- the changes would be seen from a moderate proximity and in a moderate amount of detail.
- the lifts and changes to the footbridge would be viewed from straight on and within the central portion of the background of the view so that two lifts would be seen in relief against the sky.

Viewpoint 3: Diamond Jubilee Park

- the changes would be seen over a small proportion of the overall view, with the closer changes to the ramp and garden bed visually recessive.
- the most visually prominent elements seen from a distance of approximately 40 and 60 meters would only take up a small proportion of the view and comprise the modernisation of rail infrastructure within an existing rail corridor.
- the duration of the change would be long term with no chance of reversibility.

Due to the above, the magnitude of change for this viewpoint has been assessed as Moderate.

Overall rating

Overall, the change in the view seen by receivers from this viewpoint has been assessed as Moderate (neutral). The proposed changes are an upgrade to an existing rail precinct with the changes (particularly the proposed lifts within the rail corridor) comprising a modern addition to the station.

Overall, the view would remain similar to the existing, with the most prominent visual elements (the park in the foreground, the Former Station Master's Residence and wooden hut) unchanged.

The 'neutral' qualitative rating is due to the visually recessive nature of the change within the greater view and the addition of rail infrastructure within an existing rail corridor. The changes neither add nor subtract from the quality of the existing view from this viewpoint.



Figure 6-5 Existing view from the park bench within Diamond Jubilee Park looking north west towards Moss Vale Station entry (Source: AECOM)



Figure 6-6 View after proposal from the park bench within Diamond Jubilee Park looking north west toward Moss Vale Station entry (Source: AECOM)

6.4.2.4 Viewpoint 4: Moss Vale Station Platform 2

The visual impact assessment of this viewpoint is in Table 6.5.

Table 6.5 Viewpoint 4 - Visual Impact Assessment

Viewpoint 4: Moss Vale Station Platform 2
<p>Receptors</p> <p>Receptors at this location include commuters and staff on Platform 2 at Moss Vale Station.</p>
<p>Existing view</p> <p>Refer to Figure 6-7 for the existing view north from this viewpoint. The existing view comprises the following:</p> <ul style="list-style-type: none"> • the foreground of the view is framed by the station building, Platform 2 and its awning structure. • the middle ground of the view includes the south bounding rail track corridor, together with the footbridge and the ramp providing the eastern access to the station from Argyle Street. Both footbridge and ramp, stand out in the middle ground with their white metal fence and current grading laying over the existing retaining walls. • Moss Vale town centre is visible in the background, visually comprising the Former Station Masters Residence, the clock tower and some of the shops directly facing Argyle Street. All of these items are mostly visible during winter, but mostly masked during summer due to the existing vegetation along the eastern side of the rail corridor.
<p>Anticipated change to view</p> <p>The key changes to the view due to the proposal would comprise (refer Figure 6-8):</p> <ul style="list-style-type: none"> • installation of two new lifts at each end of the existing Argyle Street footbridge • regrading and change of the footbridge height and ramp gradient • ancillary works along the platform such as upgrades to lighting and CCTV cameras, together with possible installation of updated signage including safety and wayfinding signage • in the background some upgrades of the station interchange facilities might be visible during winter. <p>Changes within the station Platform 1 and internal station building reconfiguration would not be seen from this location.</p>
<p>Sensitivity</p> <p>Factors contributing to the sensitivity of the viewpoint would include:</p> <ul style="list-style-type: none"> • visual receptors would include commuters who would have a moderate to low sensitivity as they wait within the space and rail workers who would pass through on their way inside the station building. • the extent to which the attention or interest of receivers would be focused on the view: <ul style="list-style-type: none"> ○ commuters would only observe the view as they wait for a train. Their attention would likely be toward oncoming trains (most visual receptors waiting for the train on platform one would be looking north, towards oncoming trains). It is noted that there are several other places where commuters can wait for a train, including a heated indoor waiting room, a large grass space between the platforms and a courtyard garden. ○ rail workers would likely have a casual interest when on the platforms while they work, but their attention would more likely be focussed on their daily tasks.

Viewpoint 4: Moss Vale Station Platform 2

- the value attached to the view experienced, for example:
 - the views to greenery, which are typically valued within urban areas
 - the view contains heritage items, including the Former Station Master's Residence and Moss Vale Station itself
 - views to rail infrastructure within the rail corridor would be anticipated and accepted within views from the platforms
 - commuters would only see the view for the period of time associated with waiting for a train.

For the reasons outlined above the sensitivity of the viewpoint is considered to be Moderate.

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the proposal include:

- the size and scale of the proposed lifts (which comprise new elements within the view) are larger and more modern in architectural character than existing pieces of station infrastructure seen within the view.
- vegetation would be removed from near the footbridge, resulting in the removal of an element from within the view.
- the change to the footpath, ramp, and smaller pieces of station infrastructure would result in the replacement of existing elements within the view and would not result in the addition or removal of elements within the view.
- the changes would be seen from close proximity and in a high amount of detail.
- the changes would be seen over a large proportion of the overall view, however, many of the upgrades would be visually recessive, while the most visually prominent element (the lifts) would only take up a small proportion of the view.
- this change would comprise the modernisation of rail infrastructure within an existing rail corridor.
- the duration of the change would be long term with no chance of reversibility.

Due to the above, the magnitude of change for this viewpoint has been assessed as Moderate.

Overall rating

Overall, the change in the view seen by receivers from this viewpoint has been assessed as Moderate (adverse). The proposed changes are an upgrade to an existing rail precinct with the changes (particularly the proposed lifts within the rail corridor) comprising a modern addition to the station precinct. These changes are considered appropriate given the proportional scale of the proposed lift in relation to the surrounding vegetation, much of which would be retained and protected. The sensitivity of the visual receivers at this location is mitigated by this surrounding vegetation along the rail corridor edge.

The 'adverse' qualitative rating is due to the high quality of the view due to the heritage listed station, the pedestrian footbridge and Former Station Master's Residence being important elements within the view. The quaint station setting would change with the addition of the more modern proposed lift structures, which would raise the visual prominence of station infrastructure within the setting. However, the design and materiality of the proposed elements would fit within the greater suite of architectural elements within the wider rail corridor.



Figure 6-7 Existing view looking northeast from Platform 2 at Moss Vale Station (Source: AECOM)



Figure 6-8 View after proposal looking north east from Platform 2 at Moss Vale Station (Source: AECOM)

6.4.2.5 Viewpoint 5: Moss Vale Station Dalys Way

The visual impact assessment of this viewpoint is in Table 6.6.

Table 6.6 Viewpoint 5 - Visual Impact Assessment

Viewpoint 5: Moss Vale Station Dalys Way
<p>Receptors</p> <p>Receptors at this location include commuters and staff passing by Moss Vale Station entry.</p>
<p>Existing view</p> <p>Refer Figure 6-9 for the existing view north from this viewpoint. The existing view comprises the following:</p> <ul style="list-style-type: none"> the foreground of the view comprises the station forecourt and commuter car parking area. the middle ground of the views framed by the station building on the western side and the pedestrian footpath, together with the landing steps from the eastern footbridge and a long wall masking and fencing Platform 1 on the eastern side of the viewpoint. Dalys Way is visible in the background, visually comprising side parking and vegetation on both sides of the street.
<p>Anticipated change to view</p> <p>The key changes to the view due to the proposal would comprise (refer Figure 6-10):</p> <ul style="list-style-type: none"> replacement of stairs to adjust the eastern footbridge height

Viewpoint 5: Moss Vale Station Dalys Way

- upgrade to the footpath and new crossing on Dalys Way
- reconfiguration of the forecourt traffic circulation and parking layout including bus turnaround area, provision of accessible parking spaces, drop-and-go zone and coach drop off point
- minor visible changes related to ancillary work will include upgrades to lighting and CCTV cameras, installation of signage and line marking to suit changed configurations of road and pedestrian access to the station.

Sensitivity

Factors contributing to the sensitivity of receivers from this location would include:

- visual receptors would include commuters and rail workers who would pass through on their way inside the station building
- the extent to which the attention or interest of receivers would be focused on the view:
 - commuters would typically have a low interest in the view as they enter or leave the station
 - workers, working within the station building looking toward the station forecourt would likely have a casual interest, but their attention would more likely be focussed on their daily tasks.

The value of the view as seen by receivers is influenced by:

- passers-by, particularly pedestrians, would only see this view for short periods of time on their journey
- every user of the station, coming from both eastern or western side of the rail corridor will have to pass by this point to access to or exit from the station.

For the reasons outlined above the sensitivity of visual receivers to the proposed change in this view are assessed to be Low.

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the proposal include:

- the proposed changes within the station forecourt are not defining changes to the architectural character of the existing pieces of station infrastructure seen within the view
- vegetation would not be removed, however several trees would be trimmed back along the eastern side of Dalys Way
- the change to the footpath, stairs, car parking area and layout and smaller pieces of station infrastructure would result in the replacement of existing elements within the view and would not result in the addition or removal of elements within the view
- the changes would be seen from close proximity and in a high amount of detail
- the changes would be seen over a large proportion of the overall view, however, many of the upgrades would be visually recessive
- this change would comprise the modernisation of interchange facilities within an existing rail corridor
- the duration of the change would be long term with no chance of reversibility.

Due to the above, the magnitude of change for this viewpoint has been assessed as Moderate.

Overall rating

Viewpoint 5: Moss Vale Station Dalys Way

Overall, the change in the view seen by receivers from this viewpoint has been assessed as Moderate to Low (neutral). The proposed changes comprise the minor upgrade of elements within the streetscape and near a station entry.

The ‘neutral’ qualitative rating is due to the visually recessive nature of the changes within the view. The changes neither add nor subtract from the quality of the existing view from this viewpoint.



Figure 6-9 Existing view from Moss Vale Station looking north along Dalys Way (Source: AECOM)



Figure 6-10 View after proposal from Moss Vale Station looking north along Dalys Way (Source: AECOM)

6.4.2.6 Viewpoint 6: Moss Vale Station Platform 1

The visual impact assessment of this viewpoint is in Table 6.7.

Table 6.7 Viewpoint 6 - Visual Impact Assessment

Viewpoint 6: Moss Vale Station Platform 1
<p>Receptors</p> <p>Receptors at this location include commuters and staff on Platform 1 at Moss Vale Station</p>
<p>Refer Figure 6-11 for the existing view looking north from this viewpoint. The existing view comprises the following:</p> <ul style="list-style-type: none"> the foreground of the view includes the station Platform 1 the middle ground of the view includes the north bounding rail track corridor, together with some vegetation and metal fencing on both the western side adjacent to Lackey Road and on the eastern side, adjacent to the station forecourt

Viewpoint 6: Moss Vale Station Platform 1

- the western footbridge is visible in the background, visually comprising the stairs landing on Lackey Road and some of the houses facing Lackey Road, which are partially visible during winter, but mostly masked during summer due to the existing vegetation along the western side of the rail corridor.

Anticipated change to view

The key changes to the view due to the proposal would comprise:

- installation of the new lift at the end of the existing western footbridge on the background
- replacement of stairs, handrail and decking at the western footbridge
- resurfacing of Platform 1 and installation of tactile ground surface indicators
- along the platform ancillary works such as upgrades of lighting and CCTV cameras will be visible, together with possible installation of updated signage including safety and wayfinding signage.

Changes within the station Platform 2 and internal station building reconfiguration would not be seen from this location.

Sensitivity

Factors contributing to the sensitivity of the viewpoint would include:

- visual receptors would include commuters who would have a moderate to low sensitivity as they wait within the space and rail workers who would pass through on their way inside the station building.
- the extent to which the attention or interest of receivers would be focused on the view:
 - commuters would only observe the view as they wait for a train. Their attention would likely be toward oncoming trains (most visual receptors waiting for the train on platform one would be looking south, towards oncoming trains). It is noted that there are several other places where commuters can wait for a train, including a heated indoor waiting room, a large grass space between the platforms and a courtyard garden.
 - rail workers would likely have a casual interest when on the platforms while they work, but their attention would more likely be focussed on their daily tasks.
- the value attached to the view experienced, for example:
 - the views to greenery, which are typically valued within urban areas.
 - views to rail infrastructure within the rail corridor would be anticipated and accepted within views from the platforms
 - commuters would only see the view for the period of time associated with waiting for a train.

For the reasons outlined above the sensitivity of the viewpoint is considered to be Low.

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the proposal include:

- the distance of the proposed lift (which comprise new elements within the view) is quite significant, but it defines a more modern architectural character than the existing pieces of station infrastructure seen within the view
- vegetation would be removed along the western edge of the rail corridor, resulting in the removal of an element from within the view

Viewpoint 6: Moss Vale Station Platform 1

- the change to the bridge handrail and decking, and smaller pieces of station infrastructure would result in the replacement of existing elements within the view and would not result in the addition or removal of elements within the view
- the changes would be seen from different degrees of distance
- the changes would be seen over a large proportion of the overall view, however, many of the upgrades would be visually recessive, while the most visually prominent element (removed trees) would take up a significant proportion of the view
- this change would comprise the modernisation of rail infrastructure within an existing rail corridor
- the duration of the change would be long term with no chance of reversibility.

Due to the above, the magnitude of change for this viewpoint has been assessed as Moderate.

Overall rating

Overall, the change in the view seen by receivers from this viewpoint has been assessed as Moderate to Low (neutral). The proposed changes are an upgrade to an existing rail precinct with the changes (particularly the proposed lift within the rail corridor) comprising a modern addition to the station precinct. These changes are considered appropriate given the proportional scale of the proposed lift in relation to the surrounding environment.

The quaint station setting would change with the addition of the more modern proposed lift structure, which would raise the visual prominence of station infrastructure within the setting. However, the design and materiality of the proposed elements would fit within the greater suite of architectural elements within the wider rail corridor.



Figure 6-11 The view from Moss Vale Station Platform 2 looking north (Source: AECOM)

6.4.2.7 Viewpoint 7: Dalys Way

The visual impact assessment of this viewpoint is in Table 6.8.

Table 6.8 Viewpoint 7 - Visual Impact Assessment

Viewpoint 7: Dalys Way

Receptors

Receptors at this location include:

- commuters and workers going to Moss Vale Station
- pedestrians and cyclists moving across the rail corridor to and from the Moss Vale Town Centre.

Viewpoint 7: Dalys Way

Existing view

Refer Figure 6-12 for the existing view looking west from this viewpoint. The existing view comprises the following:

- the foreground of the view comprises Dalys Way overpass turning south toward Moss Vale station. The two ways road is framed by a narrow footpath on the eastern side, and vegetated verge without kerb on the western side
- the middle ground of the view includes the existing western footbridge, the vegetation along the north bound rail corridor and the signal box and fuelling station
- Harvey Norman and other shops and industrial sheds on Lackey Road are visible in the background.

Anticipated change to view

The key changes to the view due to the Proposal would comprise:

- installation of a new lift to provide access to the existing footbridge
- replacement of handrail and decking over the existing footbridge
- installation of a pedestrian crossing across Dalys Way, and upgrade of the footpath along Dalys Way leading to the Station to provide compliant access, including modifications to fencing, drainage and installation of a retaining wall
- provision of new pedestrian walkways adjacent to the existing signal box and fuelling station
- possible public art along both sides of Dalys Way.

Sensitivity

Factors contributing to the sensitivity of receivers from this location would include:

- visual receptors would include commuters and rail workers who would pass through on their way to the station if coming via car or from the station if walking and cycling toward the western side of the rail corridor
- the extent to which the attention or interest of receivers would be focused on the view:
 - commuters and workers would typically have a low interest in the view as they approach or leave the station or simply cross the rail corridor to move between the west and the town centre.

The value of the view as seen by receivers is influenced by:

- passers-by, both pedestrians, cyclists and drivers, would only see this view for short periods of time on their journey.

For the reasons outlined above the sensitivity of visual receivers to the proposed change in this view are assessed to be Low.

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the proposal include:

- the size and scale of the proposed lift (which comprise new elements within the view) are larger than existing pieces of station infrastructure seen within the view. These additional items would increase the visual presence of the station within the view.
- the change to existing footbridge would comprise a replacement of existing elements within the view.
- the changes would be seen from a moderate proximity and in a moderate amount of detail.

Viewpoint 7: Dalys Way

- the lift and changes to the footbridge would be viewed from straight on and within the central portion of the background of the view so that the lift would be seen in relief against the sky.
- the changes would be seen over a small proportion of the overall view, with the closer changes to the footbridge and fencing along Lackey Road to be visually recessive.
- the most visually prominent elements seen from a distance of approximately 40 and 60 meters would only take up a small proportion of the view and comprise the modernisation of rail infrastructure within an existing rail corridor.
- the duration of the change would be long term with no chance of reversibility.

Due to the above, the magnitude of change for this viewpoint has been assessed as Moderate.

Overall rating

Overall, the change in the view seen by receivers from this viewpoint has been assessed as Moderate to Low (neutral). A possible screening of the lift during summer when deciduous trees are in leaf substantially reduce any visual impact of the proposal when seen from this viewpoint.

The 'neutral' qualitative rating is due to the visually recessive nature of the changes within the greater view and the addition of rail infrastructure within an existing rail corridor. The changes neither add nor subtract from the quality of the existing view from this viewpoint.



Figure 6-12 The existing view from Dalys Way looking west (Source: AECOM)

6.4.2.8 Viewpoint 8: Lackey Road at Garrett Street Intersection

The visual impact assessment of this viewpoint is in Table 6.9.

Table 6.9 Viewpoint 8 - Visual Impact Assessment

Viewpoint 8: Lackey Road at Garrett Street Intersection

Receptors

Receptors at this location include:

- residents living in the houses along Lackey Road
- commuters going to Moss Vale station crossing the rail corridor through the western footbridge
- passers-by on Lackey Road, working or living in the area.

Viewpoint 8: Lackey Road at Garrett Street Intersection

Existing view

Refer Figure 6-13 for the existing view north from this viewpoint. The existing view comprises the following:

- the foreground of the view comprises a footpath on the western side of Lackey Road adjacent to residential private properties, and a vegetated verge with deciduous trees rising up to the level of the rail corridor on the eastern side of the road.
- the middle ground of the view includes residential private front yards partially screened by low to medium height vegetation on the western side of Lackey Road and the existing western footbridge with its staircase and the fuelling building on the eastern side of Lackey Road.
- a portion of the stabling yard and north bound rail corridor is visible in the background, visually comprising fencing, lighting and vegetation along the corridor.

Anticipated change to view

The key changes to the view due to the proposal would comprise (refer Figure 6-14):

- installation of a new lift to provide access to the existing footbridge
- replacement of stairs and handrail of the existing footbridge
- provision of new pedestrian walkways adjacent to the existing signal box and fuelling station
- installation of a raised pedestrian crossing across Lackey Road
- footpath upgrade and new seating at the entrance near Lackey Road
- removal or major trim of the trees on the western edge of the rail corridor, and partial replacement in the proximity of the footbridge
- marginal views in the background of the noise barrier along the western side of the rail corridor.

Sensitivity

Factors contributing to the sensitivity of receivers from this location would include:

- the nature of the visual receivers who would experience this view of the proposal, including:
 - residents, who are typically considered to be sensitive visual receivers given their proprietary interest in views seen from their homes
 - passers-by (pedestrians, cyclists and motorists) who would have a casual interest in the views as they move along the street.
- the extent to which the attention or interest of receivers would be focused on the view, including:
 - residents, who would be moderately focused on the view as they enter and leave their premises but are more focussed on views seen from living areas within their homes. The residence at 1 Garrett Street is positioned at the same level as Lackey Road, but the western windows potentially receiving views to the proposal are currently masked by the vegetation within the residential private side yard.
 - receivers travelling on the road would be focussed on their view within the road corridor at street level.
- the value of the view as seen by receivers is influenced by:
 - views to greenery, which are typically valued within town areas. The vegetation along both sides of the rail corridor provides a landscape edge to the station precinct when viewed from this location.

Viewpoint 8: Lackey Road at Garrett Street Intersection

- this viewpoint includes partial visibility to the fuelling station and the broader Moss Vale railway corridor which is a locally listed heritage item.
- passers-by, particularly pedestrians, would only see views for short periods of time on their journey.

For the reasons outlined above the sensitivity of visual receivers to the proposed change in this view are assessed to be Moderate.

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the proposal include:

- the size and scale of the change seen from this viewpoint is likely to be substantial, considering the most visible elements would be the installation of the new lift, changes to the staircase, footpath and pedestrian crossing on Lackey Road, which would comprise addition of new items and replacement of similar ones
- the removal or major trim of majority of the trees within the western verge of the rail corridor would result in the loss of an element within the view, making the infrastructural corridor more visible to the receptors, including the new lift and upgraded footbridge
- the changes would occur to a moderate proportion of the overall view
- the duration of the changes would be long term with no chance of reversibility, however, any landscaping that would be reinstated on the eastern verge of Lackey Road near the upgraded lift and footpath would reduce the visual prominence of the changes to this area over time.

Due to the above, the magnitude of change for this viewpoint has been assessed as Moderate.

Overall rating

Overall, the change in the view seen by receivers from this viewpoint has been assessed as Moderate (neutral). The proposed changes are an upgrade to an existing rail precinct with the changes (particularly the proposed lift within the rail corridor and the pedestrian crossing over Lackey Road) comprising a modern addition to the station precinct. These changes are considered appropriate given the proportional scale of the proposed lift in relation to the surrounding environment. The sensitivity of the visual receivers at this location is mitigated by surrounding vegetation along the residential edge and replacement of the existing trees in proximity of the staircase and footpath leading to the pedestrian crossing.

The 'neutral' qualitative rating is due to the visually recessive nature of the change within the greater view and the addition of rail infrastructure within an existing rail corridor. The changes neither add nor subtract from the quality of the existing view from this viewpoint.



Figure 6-13 The existing view from the intersection of Lackey Road and Garrett Street, looking north along Lackey Road towards the station entrance (Source: AECOM)



Figure 6-14 The view after proposal from the intersection of Lackey Road and Garrett Street, looking north along Lackey Road towards the station entrance (Source: AECOM)

6.4.2.9 Viewpoint 9: Lackey Road at Commercial Car Park

The visual impact assessment of this viewpoint is in Table 6.10.

Table 6.10 Viewpoint 9 - Visual Impact Assessment

Viewpoint 9: Lackey Road at Commercial Car Park
<p>Receptors</p> <p>Receptors at this location include:</p> <ul style="list-style-type: none"> workers accessing the commercial precinct commuters coming from north and going to Moss Vale station crossing the rail corridor via the western footbridge.
<p>Existing view</p> <p>Refer Figure 6-15 for the existing view looking south-east from this viewpoint. The existing view comprises the following:</p> <ul style="list-style-type: none"> the foreground of the view comprises Lackey Road’s footpath on its western side adject to a commercial car park and a generous verge rising up to the level of the rail corridor on the eastern side of Lackey Road, including vehicular accessibility to the fuelling station the middle ground of the view includes the existing western footbridge with its staircase and the fuelling station on the eastern side of Lackey Road

Viewpoint 9: Lackey Road at Commercial Car Park

- portion of Moss Vale station and north bound rail corridor is visible in the background, visually comprising fencing and lighting. Deciduous trees are currently masking the background and make the station visible only during winter.

Anticipated change to view

The key changes to the view due to the proposal would comprise:

- installation of a new lift to provide access to the existing footbridge
- replacement of stairs and handrail of the existing footbridge
- provision of new pedestrian walkways adjacent to the existing signal box and fuelling station
- installation of a raised pedestrian crossing across Lackey Road
- footpath upgrade and new seating at the entrance near Lackey Road
- removal or major trim of the trees on the western edge of the rail corridor, and partial replacement in the proximity of the footbridge.

Sensitivity

Factors contributing to the sensitivity of receivers from this location would include:

- the nature of the visual receivers who would experience this view of the proposal, including:
 - workers, who would pass through this viewpoint on their way to the commercial precinct or when looking in this direction from the shops
 - passers-by (pedestrians, cyclists and motorists) who would have a casual interest in the views as they move along the street.
- the extent to which the attention or interest of receivers would be focused on the view, including:
 - workers, would likely have a casual interest when passing by, and their attention would more likely be focussed on their daily tasks when looking at this viewpoint from the shops
 - receivers travelling on the road would be focussed on their view within the road corridor at street level.
- the value of the view as seen by receivers is influenced by:
 - views to greenery, which are typically valued within town areas. The vegetation along both sides of the rail corridor provides a landscape edge to the station precinct when viewed from this location.
 - this viewpoint includes visibility to the fuelling station and the broader Moss Vale railway corridor which is a locally listed heritage item.
 - passers-by, particularly pedestrians, would only see views for short periods of time on their journey.

For the reasons outlined above the sensitivity of visual receivers to the proposed change in this view are assessed to be Moderate.

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the proposal include:

- the size and scale of the change seen from this viewpoint is likely to be substantial, considering the most visible elements would be the installation of the new lift, changes to the staircase, footpath and pedestrian crossing on Lackey Road, which would comprise addition of new items and replacement of similar ones

Viewpoint 9: Lackey Road at Commercial Car Park

- the removal or major trim of majority of the trees within the western verge of the rail corridor would result in the loss of an element within the view, making the infrastructural corridor more visible to the receptors, including the new lift and upgraded footbridge
- the changes would occur to a moderate proportion of the overall view
- the duration of the changes would be long term with no chance of reversibility, however, any landscaping that would be reinstated on the eastern verge of Lackey Road near the upgraded lift and footpath would reduce the visual prominence of the changes to this area over time.

Due to the above, the magnitude of change for this viewpoint has been assessed as Moderate.

Overall rating

Overall, the change in the view seen by receivers from this viewpoint has been assessed as Moderate (neutral). The proposed changes are an upgrade to an existing rail precinct with the changes (particularly the proposed lift within the rail corridor and the pedestrian crossing over Lackey Road) comprising a modern addition to the station precinct. These changes are considered appropriate given the proportional scale of the proposed lift in relation to the surrounding environment. The sensitivity of the visual receivers at this location is mitigated by the replacement of the existing trees with new ones in proximity of the staircase and footpath leading to the pedestrian crossing.

The 'neutral' qualitative rating is due to the visually recessive nature of the change within the greater view and the addition of rail infrastructure within an existing rail corridor. The changes neither add nor subtract from the quality of the existing view from this viewpoint.



Figure 6-15 The view from Lackey Road looking south east towards the station entrance and the fuelling station (Source: AECOM)

6.4.2.10 Viewpoint 10: Lackey Road North

The visual impact assessment of this viewpoint is in Table 6.11. An additional analysis of overshadowing has been conducted from this viewpoint given the proximity of the proposed noise barrier along the boundary of the stabling yard to residential visual receptors on Lackey Road.

Table 6.11 Viewpoint 10 - Visual Impact Assessment

Viewpoint 10: Lackey Road North

Receptors

Receptors at this location include:

- residents living in the houses along Lackey Road

Viewpoint 10: Lackey Road North

- workers traveling between Moss Vale station and the stabling yard.

Existing view

Refer Figure 6-16 for the existing view looking south east from this viewpoint. The existing view comprises the following:

- the foreground of the view comprises Lackey Road's footpath on its western side adjacent to residential private properties and a vegetated verge without trees with a metal fencing sharing the same ground level of the rail corridor on the eastern side of Lackey Road.
- the middle ground of the view includes residential private front yards fully screened by medium height vegetation on the western side of Lackey Road and the existing noise barriers with the southern portion of the stabling yard on the eastern side of Lackey Road.
- the fuelling station is visible in the background, visually comprising further fencing, lighting and vegetation along the corridor.

Anticipated change to view

The key changes to the view due to the proposal would comprise:

- lengthening of track at the stabling yard
- provision of new pedestrian walkways at the stabling yard and adjacent to the existing fuelling station
- installation of new fencing, retaining walls, and of a noise barrier 5.5 metres in height (subject to detailed design) along the western side of the stabling yard
- removal/major trimming and replacement of trees along the western side of the stabling yard.

Sensitivity

Factors contributing to the sensitivity of receivers from this location would include:

- the nature of the visual receivers who would experience this view of the proposal, including:
 - residents, who are typically considered to be sensitive visual receivers given their proprietary interest in views seen from their homes
 - passers-by (pedestrians, cyclists and motorists) who would have a casual interest in the views as they move along the street
- the extent to which the attention or interest of receivers would be focused on the view, including:
 - residents, who would be moderately focused on the view as they entered and left their premises but more focussed on views seen from living areas within their homes. The residences in proximity to this viewpoint are positioned at same level to Lackey Road, but the western windows potentially receiving views to the proposal are currently masked by the vegetation within the residential private front yards.
 - receivers travelling on the road would be focussed on their view within the road corridor at street level
- the value of the view as seen by receivers is influenced by:
 - views to the stabling yard are typically more industrial in nature.
 - this viewpoint includes partial visibility to the fuelling station and the broader Moss Vale railway corridor which is a locally listed heritage item
 - passers-by, particularly pedestrians, would only see views for short periods of time on their journey.

Viewpoint 10: Lackey Road North

For the reasons outlined above the sensitivity of visual receivers to the proposed change in this view are assessed to be Low.

Magnitude of change

From this viewpoint, contributing factors to the magnitude of change arising from the proposal include:

- the size and scale of the change seen from this viewpoint is likely to be substantial, considering the most visible elements would be the installation of the noise barrier, fencing and footpath on Lackey Road, which would comprise addition of new items and replacement of similar ones
- the removal or major trim of majority of the trees within the western verge of the rail corridor would result in the loss of an element within the background of this view, making the infrastructural corridor more visible to the receptors
- the changes would occur to a moderate proportion of the overall view
- the duration of the changes would be long term with no chance of reversibility.

Due to the above, the magnitude of change for this viewpoint has been assessed as Moderate.

Overall rating

Overall, the change in the view seen by receivers from this viewpoint has been assessed as Moderate to Low (neutral). The proposed changes visually comprise the upgrade of a footpath and new noise barrier within an existing station precinct.

The sensitivity of the visual receivers at this location is mitigated by vegetation along the rail corridor edge, and (for residents), vegetation within front yards that would partially or fully screen much of the proposed works from this viewpoint. As discussed below, there would be no substantial overshadowing of residential properties at this viewpoint due to the proposal that would affect the visual impact rating.

The 'neutral' qualitative rating is due to the change comprising the addition of rail infrastructure (the noise barrier) within an existing rail corridor. The noise barrier would visually 'neaten' the view to rail infrastructure. The changes neither add nor subtract from the quality of the existing view from this viewpoint.



Figure 6-16 The existing view from Lackey Road looking south-east toward the southern portion of the stabling yard (Source: AECOM)



Figure 6-17 The view after proposal from Lackey Road looking south-east toward the southern portion of the stabling yard (Source: AECOM)

Shadow Study

The proposed 5.5 metre-high noise barrier would be positioned on the western side of the stabling yard, extending roughly in a north-south orientation along the eastern verge of Lackey Road.

As shown in Figure 6-18, Figure 6-19, Figure 6-20 and Figure 6-21, shadows cast by the proposed noise barrier would fall within the stabling yard from 12pm onwards during all seasons. During most of the year, shadows cast by the noise barrier between 9am and 12pm would fall within the Lackey Road corridor, however, during winter, the noise barrier would cast a shadow within the residential properties on Lackey Road for a short period of time (refer to Figure 6-21).



Figure 6-18 Shadows cast by the noise barrier along Lackey Road in Spring



Figure 6-19 Shadows cast by the noise barrier along Lackey Road in Summer



Figure 6-20 Shadows cast by the noise barrier along Lackey Road in Autumn



Figure 6-21 Shadows cast by the noise barrier along Lackey Road in Winter

While the morning shade cast within the winter months would be experienced within private properties, Figure 6-22 illustrates that this shading would only impact up to approximately four metres of the front gardens of each residential property. Most residential properties along this stretch of Lackey Road have fencing, hedging or some screening vegetation along their front boundaries, which would reduce the amount of morning shade within these properties which could be attributed to the proposed noise barrier (i.e.. the front gardens would already experience some shading due to existing hedges and fencing).

Therefore, the proposed noise barrier along Lackey Road is considered to have minimal overshadowing effects on residential houses in its vicinity, and as such, the magnitude of change due to the proposal at Viewpoint 10 would not be affected by potential overshadowing impacts.

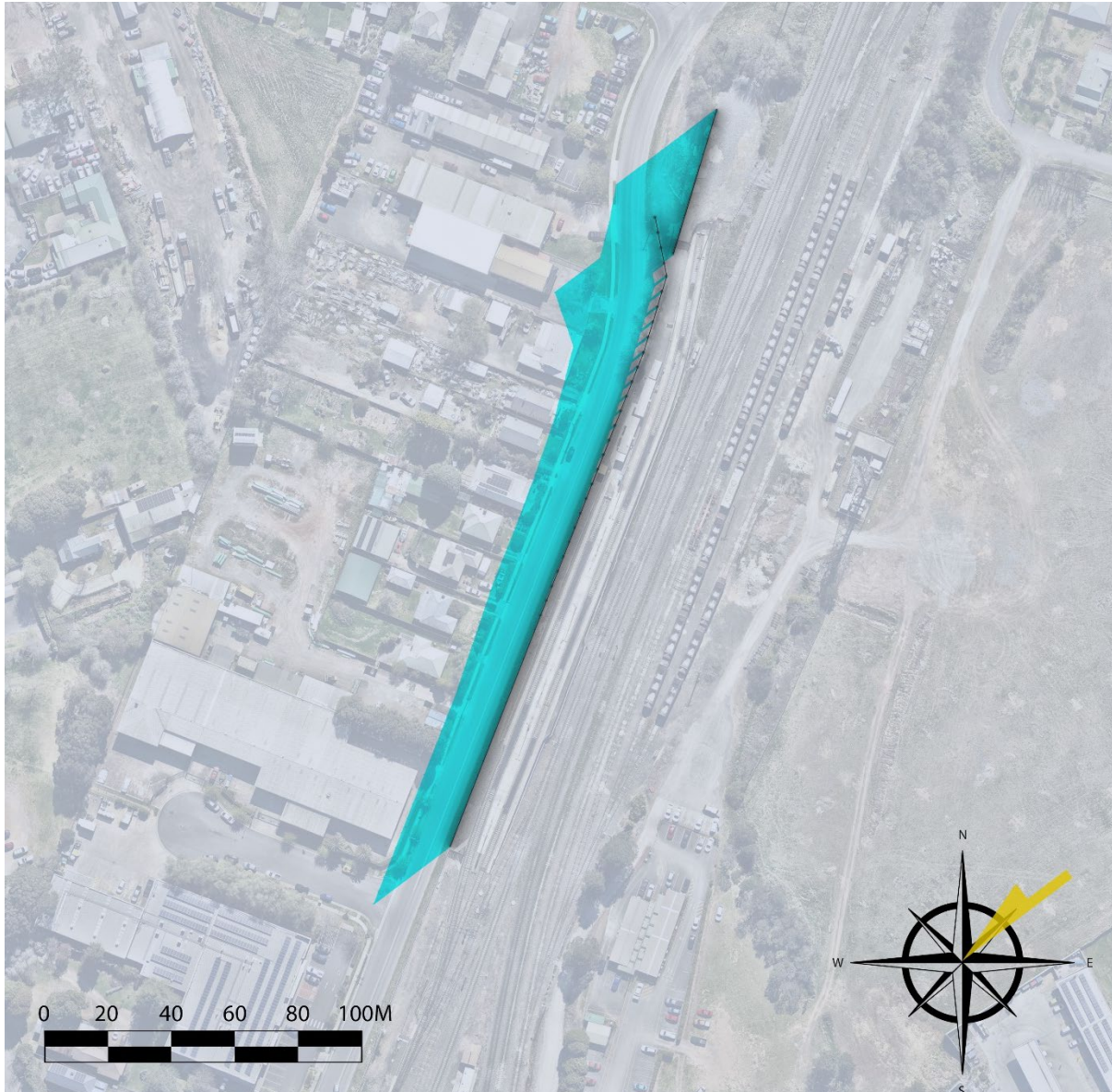


Figure 6-22 Shadows cast by the proposed noise barrier during Winter at 9am

7.0 Summary

7.1 Summary of landscape character impact

The proposal lies within LCZ 1: Rail Corridor and adjacent to LCZ 2: Open Space, LCZ 3: Residential, LCZ 4: Town Centre and LCZ 5: General Industrial. Due to the physical separation of LCZ 6: Education from the proposal, the relatively flat topography and considerable vegetative screening around the station precinct, LCZ 6 would not be affected by the proposal and has therefore not been assessed in detail.

A summary of the assessment of the proposal on landscape character is shown in Table 7.1.

Table 7.1 Summary of landscape character impact assessment ratings

LCZ	Sensitivity	Magnitude	Overall rating
LCZ 1: Rail Corridor	Moderate	Moderate	Moderate (adverse)
LCZ 2: Open Spaces	Moderate	Low	Moderate – Low (neutral)
LCZ 3: Residential	Moderate	Moderate	Moderate (adverse)
LCZ 4: Town Centre	No Change		
LCZ 5: General Industrial	Low	Low	Low (neutral)
LCZ 6: Education	No Change		

The proposal would result in a moderate change to landscape character for three LCZs, and Low or no change to two LCZs. No LCZ was considered to have a significant level of change to landscape character (i.e. a rating of High to Moderate or High). The heritage items and conservation areas associated with the stations and its surrounds have resulted in raised sensitivity within LCZs 1, 2 and 3.

While the upgrade of existing rail infrastructure would not result in a change to the character of the greater LCZ 3: Residential, the addition of three larger structures (the lifts) would result in the modernisation of rail infrastructure within the rail corridor. This would result in a change in the existing suburban character of the station precinct, elements of which are heritage listed.

Visual changes within the landscape surrounding the station (predominantly LCZ 3: Residential and LCZ 4: Town Centre) vary between no changes to moderate, however, the sensitivity of both the LCZs lies predominantly in the heritage setting of the local suburb. Changes to the road verge and station entrance within this context are resulting in a moderate impact.

In relation to the potential changes to landscape character it is recommended that:

- landscaping (including potential planting of street trees or shrubs, if possible) is considered in the detailed design phase of the proposal
- design elements reference the heritage character of the LCZ, however, maintain the visual quality of a 'new' piece of infrastructure rather than replicating heritage items
- vegetation is protected, particularly trees, which provide screening between the station and surrounding landscapes, and visually soften the character of the rail corridor.

7.2 Summary of visual impact

7.2.1 Construction

During construction, visible construction elements would be expected to typically include traffic control (including a single lane closure along Lackey Road for about 40 weeks), construction vehicles and machinery, survey investigations, temporary fencing and hoarding, noise barriers, pedestrian diversions, tree/vegetation removal and trimming, signage and temporary ancillary facilities (e.g. temporary offices, toilets and laydown areas). A temporary construction ancillary facility within the commuter car park off Dalys Way, at the forecourt and another adjacent to the Diamond Jubilee Park on Argyle Street would be required to accommodate a site office, amenities, laydown and storage area for materials. An additional two temporary ancillary facilities would be required along the railway corridor for laydown and storage area for materials. Other areas within the rail corridor may also be used for short term temporary laydown during rail shutdown periods. These areas would not be used outside of rail shutdown periods.

The most visually prominent construction activity would be associated with the construction of the three lifts, widening of the footbridge, upgrade work to the footpath and kerbs / parking areas on Dalys Way and Lackey Road near the station entrance and the noise barrier along the western edge of the stabling yard. Construction on the platform and station buildings would be difficult to see from outside of the rail corridor and would therefore impact users of the station/rail facilities rather than the general (non-rail user) public.

The most sensitive visual receivers viewing the construction activity are residential receivers viewing the changes from their homes. These receivers would see the changes from close proximity and potentially from within living areas of their homes, particularly residents on Lackey Road, noting that vegetation screening and/or fencing would provide screening for several residents. Other receptor groups who would view the construction activity include rail commuters, passers-by on Argyle Street and Lackey Road and workers or visitors to the nearby industrial and commercial precincts.

Overall, views to the construction activity and ancillary facilities would be relatively minor. They would be consistent with similar temporary construction work sites and activities, and transitory over a period of about 19 months until completion of construction of the proposal. A majority of the receivers would have a low sensitivity to the changes (being passers-by and rail commuters) and there would be a low number of receivers with a higher sensitivity to the changes (e.g. residents along Lackey Road).

7.2.2 Operation

The most visually prominent changes resulting from the proposal would include operation of three lifts, changes to the footbridges, removal of vegetation, built noise barrier and changes to the footpaths. Changes to the platform and immediate surrounds within the rail corridor would be difficult to see from the surrounding landscape due to changes in landform, surrounding built form and planting.

At Moss Vale Station the surrounding landscape is mostly residential development, including areas of low and medium density residential suburbs. The area has a high proportion of tall trees, both exotic (street trees and trees in private properties associated with older housing within the surrounding HCAs) and native. Native trees in the surrounding landscape include individual and patches of remnant vegetation.

The station precinct, while elevated above the sloping landscape to the west, is also therefore visually insulated, with views to and from limited by these factors. Views to the station are predominantly seen by visual receivers directly surrounding the station, including receivers passing the station in vehicles.

Ten (10) viewpoints were chosen to represent the change in views from publicly accessible areas due to the proposal. The assessment of change in views from these locations are summarised in Table 7.2.

Table 7.2 Summary of visual impact assessment ratings

Viewpoint	Sensitivity	Magnitude	Overall rating
1: Leighton Gardens	Moderate	Low	Moderate – Low (neutral)
2: Moss Vale Hotel	Moderate	Low	Moderate – Low (neutral)
3: Diamond Jubilee Park	Moderate	Moderate	Moderate (neutral)
4: Moss Vale Station Platform 1	Moderate	Moderate	Moderate (adverse)
5: Moss Vale Station Dalys Way	Low	Moderate	Moderate – Low (neutral)
6: Moss Vale Station Platform 2	Low	Moderate	Moderate – Low (neutral)
7: Dalys Way	Low	Moderate	Moderate – Low (neutral)
8: Lackey Road at Garrett Street Intersection	Moderate	Moderate	Moderate (neutral)
9: Lackey Road at Commercial Car Park	Moderate	Moderate	Moderate (neutral)
10: Lackey Road North	Low	Moderate	Moderate – Low (neutral)

Overall, the visual impact to receivers has been assessed between Low (neutral) to Moderate (adverse), with no viewpoints returning a significant change in views (i.e. overall ratings of High to Moderate or High). The proposed changes include an upgrade to an existing rail precinct with the changes (particularly the proposed lifts within the rail corridor) comprising modern additions to the rail concourse. These changes are considered appropriate given the benefit of the proposal in comparison to the low number of sensitive visual receivers that would see the changes.

The sensitivity of the visual receivers surrounding the station (particularly from the more sensitive residential receivers to the west of the rail corridor) is generally low given the presence of screening vegetation along the rail corridor edge and private residences.

The assessment resulted in a 'neutral' qualitative rating from nine out of the ten viewpoints. This is due to:

- the visually recessive nature of a majority of the changes within the greater view from most viewpoints
- the addition or upgrade of rail infrastructure within an existing rail corridor.

One 'adverse' qualitative rating was due to the change to the suburban station setting with the addition of the proposed lift structures, which would raise the visual prominence of the station within the suburban setting. Overall, the design and materiality of the proposed elements would fit within the greater suite of architectural elements within the wider rail corridor.

8.0 Mitigation of impact and conclusion

8.1 Mitigation measures

This section outlines the mitigation measures that would be implemented to minimise the level of visual impact during the design development, construction and operation phases of the proposal.

8.1.1 Design development

An Urban and Landscape Design Plan (ULDP) would be prepared by the Contractor, in consultation with Council and other asset/land owners, and submitted to Transport for written approval by the Urban Design Public Transport and Precincts team, prior to finalisation of the detailed design. The ULDP shall:

- demonstrate a robust understanding of the precinct through a comprehensive site analysis, including connectivity with street networks, mode change locations, active transport, and pedestrian movement
- identify opportunities and constraints
- establish precinct specific principles to guide and test design options
- consider Crime Prevention Through Environmental Design (CPTED) principles, including night-time safety of customers and the community, and the safety of Station staff
- be aligned with the “TAP Urban Design Plan Guidelines (Draft 2018)” and “Around the Tracks - urban design for heavy and light rail (Dec 2016 Interim Issue)”
- consider opportunities for:
 - a) Connecting with Country
 - b) community engagement
 - c) integrated heritage interpretation and adaptive reuse
 - d) public art
- address Transport Sustainable Design Guideline evidence requirements
- be prepared by a suitably qualified and experienced urban design professional.

The UDLP is to include a Public Domain Plan for the preferred design option and will provide analysis of the:

- landscape design approach including design of pedestrian and bicycle pathways, street furniture, interchange facilities, new planting and integration of any artwork
- Materials Schedule including materials and finishes for proposed built works, colour schemes, paving and lighting types for public domain, fencing and landscaping
- an Artist’s Impression or Photomontage to communicate the proposed changes to the precinct

The following design guidelines are available to assist and inform the UDLP:

- TAP Urban Design Plan, Guidelines, TfNSW, Draft 2018
- Commuter Car Parks, Urban Design Guidelines, TfNSW, Interim 2017
- Managing Heritage Issues in Rail Projects Guidelines, TfNSW, Interim 2016
- Creativity Guidelines for Transport Systems, TfNSW, Interim 2016
- Water Sensitive Urban Design Guidelines for TfNSW Projects, 2016.

The UDLP is to be submitted to Transport and written approval by the Urban Design Public Transport and Precincts team.

In addition to the preparation of the UDLP, the following general mitigation measures are recommended to minimise visual impacts during the design development process:

- implement planting in the streetscape along Lackey Road to reduce the visual prominence of the noise barrier along the residential street (an example of which is shown in Figure 8-1)
- articulation of the noise barrier along Lackey Road to provide opportunities for planting (as shown in Figure 8-1)
- install landscaping within the road verges and along the rail corridor edges (including potential planting of street trees or shrubs, if possible)
- use design elements which would reference the heritage character of the station and surrounding landscape, however, maintain the visual quality of a 'new' piece of infrastructure rather than replicating heritage items
- limit disturbance of vegetation to the minimum amount necessary to construct the proposal, especially along the rail corridor boundaries to maintain visual screening to the surrounding landscape
- consider measures to limit or deter graffiti on proposed structures.



Figure 8-1 Example of articulation of the proposed noise barrier and planting along Lackey Road to reduce the visual prominence of the noise barrier and provide increased visual amenity within the residential streetscape

8.1.2 Construction

The following mitigation measures are recommended to minimise visual impacts as a result of construction:

- establish TPZs around trees to be retained. Tree protection would be undertaken in keeping with AS 4970-2009 Protection of Trees on Development Sites and would include exclusion fencing of TPZs
- provide well-presented and maintained construction hoarding and site fencing with shade cloth (or similar material) (where necessary) to minimise visual impacts during construction. Hoardings and site fencing would be removed following construction completion
- provide cut-off or directed lighting within and outside of the construction site, with lighting location and direction considered to minimise glare and light spill
- keep construction areas clean and tidy and place refuse in appropriate receptacles.

8.1.3 Operation

The following mitigation measures are recommended to minimise visual impacts during operation:

- ongoing maintenance and repair of constructed elements
- removal of graffiti in accordance with Transport for NSW / Sydney Trains maintenance requirements.

9.0 Conclusion

The effects of the proposal on landscape character would range between No change and Moderate, and on views and visual amenity would range between Low (neutral) and Moderate (adverse). As such, this report finds that would be no significant effect on either landscape character or on views and visual amenity as a result of the proposal (i.e. there were no ratings of High (adverse), or Moderate–High (adverse)).

10.0 Reference list

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