7.0 Environmental assessment

7.10 Landscape character, visual amenity and urban design

This section outlines the potential landscape character, visual amenity and urban design impacts associated with the construction and operation of the proposed modification, and recommends mitigation measures to address these impacts. An urban design, landscape character and visual impact assessment report (UD&LCVIA) has been prepared as part of the modification report, which is included in **Appendix K**.

7.10.1 Introduction

Table 7-73 sets out the SEARs relevant to landscape character, visual amenity and urban design and identifies where the requirements have been addressed in this section.

Table 7-73 SEARs – Landscape character, visual amenity and urban design

Desired Performance Outcome	SEAR	Where addressed within the Modification Report
Other Issues *[No performance outcome stated]*	1. An assessment of the following issues must be undertaken in accordance with the commitments in Attachment 2 of the M7 Motorway (SSI 663) – Project Modification letter submitted 09 May 2022 (via Major Projects Portal): - Landscape Character, Visual Impact and Urban Design (including green infrastructure designs, actions and outcomes for the project and how the project will achieve a net increase in tree numbers and canopy within proximity of the impacted area). *Extract from Attachment 2 of the M7 Motorway (SSI 663) – Project Modification letter submitted 9 May 2022:* Assessment of the impact of construction and operation of the modification on: a. views and vistas b. streetscapes, key sites and buildings c. heritage items including Aboriginal places and environmental heritage; and d. the local community.	**Section 7.10.5** and **7.10.6** Areas which would be appropriate for tree planting have been identified in Chapter 4 of **Appendix K** (Urban design, landscape character and visual impact assessment). Clearing and tree planting (and therefore final trees to be removed and those planted) would be finalised during detailed design.
Other Issues *[No performance outcome stated]*	The assessment will include: *a.* photomontages would be prepared from key viewpoints	**Section 7.10.5**

7.10.2 Method of assessment

Overview

The UD&LVIA report has been developed in accordance with *Beyond The Pavement – Urban Design Approach and Procedures for Road and Maritime Infrastructure Planning, Design and Construction* (Transport, 2020b) and the E*nvironmental Impacts Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment EIA-N04* (Transport, 2020c).

The development of the UD&LVIA included the following steps:

- Contextual analysis – an analysis of the regional and local context of the proposed modification and the strategic background of the approved project
- Urban design strategy – development of an updated set of urban design principles that considers the existing urban design strategy for the approved project and considers the future context
- Urban design concept – development and/or confirmation of the high-level urban design concept along the Westlink M7
- Landscape character impact assessment – evaluation of existing landscape character to inform the early stages of the urban design process and to assess the anticipated landscape impacts as a result of the final design outcome
- Visual impact assessment – evaluation of existing views and visual amenity to identify and assess potential impacts on the community by the proposed modification
- Mitigation – recommendation of design outcomes and mitigation measures to avoid, reduce or mitigate potential adverse impacts resulting from the proposed modification.

The urban design principles and urban design concept are described in Section 3 and Section 4 of the UD&LCVIA respectively (refer **Appendix K** ((Urban design, landscape character and visual impact assessment)).

Landscape character assessment

The landscape character assessment considers the potential impact of the proposed modification on the landscape. As the construction phase is temporary, the potential impact of the proposed modification on landscape character is assessed for the operational phase only.

Potential impact on landscape character as a result of the proposed modification is determined based on each Landscape Character Zone's (LCZs) (refer to **Section 7.10.4**) sensitivity to change, and the magnitude of change that is likely to occur.

Sensitivity

Sensitivity of a LCZ is based on:

- Susceptibility to change – the ability of the landscape to accommodate the change without undue consequences for the maintenance of the existing situation or the achievement of landscape planning policies and strategies
- Value of landscape.

Magnitude

Magnitude of an impact on a LCZ is based on:

- Size or scale of change
- Geographical extent of the potential impact
- Duration and reversibility of potential impacts.

Visual impact assessment

The assessment of potential impacts on visual amenity is based on the sensitivity of the viewpoints to change and the magnitude of change arising from the proposed modification.

The potential impact of the proposed modification on views has been assessed for the construction and operational phases.

Selection of viewpoints

A series of viewpoints were selected from which to assess the visual impact of the proposed modification.

Factors such as proximity to the proposed modification, number of visual receptors at each location and the type of visual receptors were taken into account when selecting viewpoints. Viewpoints were chosen to assess the changes due to the proposed modification from publicly accessible locations, although some viewpoints were used to approximate these changes when seen from private locations such as residences, areas of employment or community facilities.

Sensitivity

Sensitivity of a viewpoint is based on:

- Susceptibility to change, for example, the occupation or activity of people using a viewpoint and the extent to which their attention is focused on the viewpoint
- Value attached to the view experienced, for instance, e.g. appearing on tourist maps or providing facilities for their enjoyment (such as parking places, sign boards, and interpretative material).

More sensitive viewpoints may include:

- Residential areas with views
- Locations where people are engaged in outdoor recreation where the quality of the landscape or the views are intrinsic to their enjoyment of the activity
- Locations where there are views of heritage assets, where views are an important contributor to the experience
- Communities where views contribute to the landscape setting of the area.

Magnitude

Magnitude of change to views and visual amenity depends on:

- Size or scale of change in the view with regard to:
    - 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 proposed modification 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 impact with different viewpoints including:
    - Angle of view in relation to the main activity of the receptor
    - Distance of the viewpoint from the proposed modification
    - Extent of area over which the changes due to the proposed modification would be visible.
- Duration and reversibility of visual impacts, e.g. duration in terms of short term (0-5 years), medium term (6-15 years) or long term (16-30+ years).

Overall impact of change

For both the landscape character and visual assessments, the matrix shown in Table 7-74 is used to combine the ratings for sensitivity and magnitude to provide an overall rating of impact.

Table 7-74 Overall significance of landscape character and visual effects

	MAGNITUDE OF EFFECT				
SENSITIVITY		High	Moderate	Low	Negligible
	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

Qualitative assessment of change

For both the landscape character and visual assessments, a rating for the quality of the change is also provided, being Beneficial, Adverse or Neutral.

7.10.3 Study area

The study area comprises a one kilometre wide corridor of land, offset 500 metres either side of the centre line of the Westlink M7, between the northern and southern extent of the proposed modification. The study area includes the construction and operational footprint and the surrounding lands to allow the relevant LCZs and sensitive receivers to be identified.

The study area is shown on Figure 7-86.

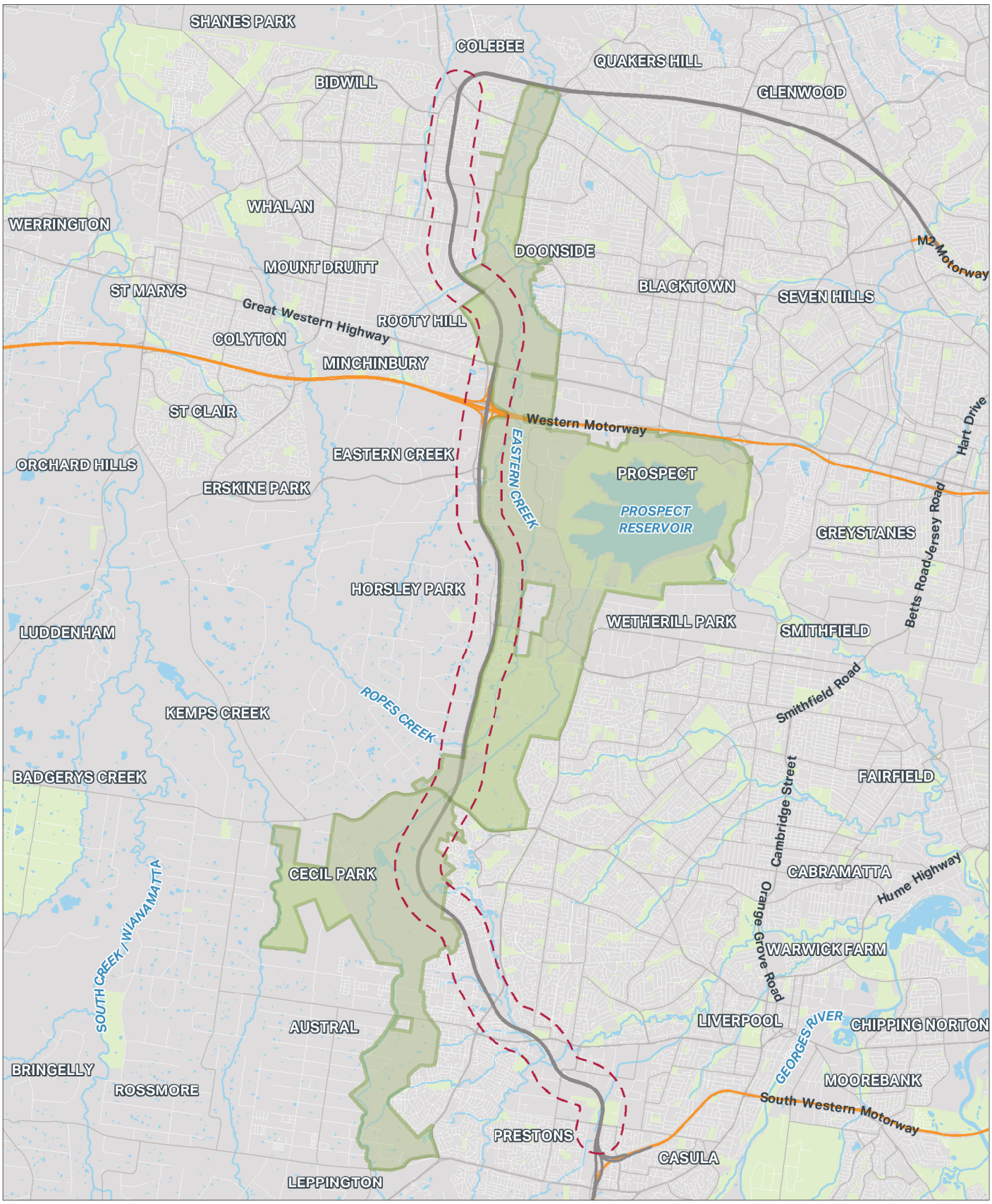

FIGURE 7-86: STUDY AREA FOR LANDSCAPE AND VISUAL ASSESSMENT

N

0 1 2 km

AECOM

Legend

- Study area
- Western Sydney Parklands
- Waterbody
- Open Space

Source: Imagery

7.10.4 Existing environment

The Westlink M7 is a dominant infrastructure landmark within the landscape. The visual prominence of the road corridor from the surrounding landscape changes along its length primarily due to the topography and vegetation cover of the surrounding land.

The Westlink M7 passes through a landscape typified by expanses of low density residential suburbs, industrial areas and parklands. Patches of Cumberland Plain bushland is still visible in the land adjacent to the Westlink M7, particularly within the Western Sydney Parkland landscape.

The Westlink M7 corridor is often visually contained by planting and noise walls, with views to the surrounding landscape seen from locations where the Westlink M7 crosses creeklines and lower lying areas via bridges.

Individual elements that contribute to overall landscape character are described in Section 2.3 of the UD&LVIA (refer **Appendix K**), and include:

- Geology and soils
- Topography and drainage
- Land use
- Flora and fauna
- Aboriginal and Non-Aboriginal heritage. Impacts to Aboriginal heritage and non-Aboriginal heritage is assessed in **Section 7.7** and **Section 7.8**, respectively.

Landscape character

Five LCZs were identified within the study area and are discussed below. The identified LCZs are shown on Figure 7-87 to Figure 7-91.

LCZ 1

LCZ 1 comprises major road infrastructure within the study area but has been split into two sub categories for assessment due to the landmark qualities of the Westlink M7/M4 Motorway (Light Horse) Interchange.

LCZ 1a: Transport Corridor

This LCZ includes the Westlink M7 but excludes the intersection with the M4 Motorway (M4 Motorway (Light Horse) Interchange). This LCZ is a linear corridor widening at major intersecting roads.

A brief description of the LCZ is provided in Table 7-75. The sensitivity of this LCZ is considered Moderate.

Table 7-75 Description of LCZ 1a: Transport Corridor

Component	Description
Land use zones	SP2 Infrastructure
Topography and drainage	Gently undulating, with a high point near Elizabeth Drive in the southern portion of the study area, and intersected by numerous creek corridors which pass under the Westlink M7
Vegetation	Typically turf or pasture grass with patches of trees on the verges, some shrubs in the medians, and thicker canopy vegetation surrounding creeks and drainage lines
Built form	Gantries, noise walls, lighting, signage, bridges, bunding, guard rails and safety fencing
Spatial form	Linear, spatially enclosed from the surrounding landscape by topography (e.g. batters and cuttings), bands of tree plantings, noise walls and bridges

LCZ 1b: M4 Motorway (Light Horse) Interchange

This LCZ comprises the Westlink M7/M4 Motorway (Light Horse) Interchange, where two major transport corridors (the Westlink M7 and the M4 Motorway) intersect to create a landmark moment within each motorway. The interchange is named in honour of Australia's mounted military units and features the Australian Light Horse Sculpture Parade.

A brief description of the LCZ is provided in Table 7-76. The sensitivity of this LCZ is considered High.

Table 7-76 Description of LCZ 1b: M4 Motorway (Light Horse) Interchange

Component	Description
Land use zones	SP2 Infrastructure
Topography and drainage	The M4 Motorway is typically flat, while the Westlink M7 rises gently to a bridge over the M4. Medians of both motorways act as drainage swales.
Vegetation	Typically turf medians and verges with shrubs and trees. Fig avenue leading to the intersection of the motorways.
Built form	Lighting, signage, bridges, bunding, guard rails and safety fencing and the Light Horse Sculpture Parade markers and mast.
Spatial form	Spatially enclosed from the surrounding landscape by topography (e.g. batters and cuttings) but with sweeping bridges projecting above the road corridors.

LCZ 2: Industrial

Three pockets of this LCZ occur within the study area: one in the northern portion of the study area in Glendenning, one area south of the Westlink M7/M4 Motorway (Light Horse) Interchange at Eastern Creek, and one in the southern portion of the study area at Prestons.

A brief description of the LCZ is provided in Table 7-77. The sensitivity of this LCZ is considered Low.

Table 7-77 Description of LCZ 2: Industrial

Component	Description
Land use zones	IN1 General Industrial, IN2 Light Industrial and IN3 Heavy Industrial
Topography and drainage	Typically flat to gently undulating, often adjacent to drainage corridors but drainage collected in pits and piped within the lots
Vegetation	Limited to some streetscape vegetation and very limited exotic landscaped areas in some lot frontages
Built form	Large warehouse or factory buildings with large amounts of hardstand for parking or vehicular movement
Spatial form	Large, rectangular blocks of land, course grained development

LCZ 3: Recreation and Bushland

This LCZ comprises areas used for public and private recreational purposes (e.g. sports facilities, parks and public reserves), and riparian corridors. The largest areas of this LCZ lie within the Western Sydney Parklands.

A brief description of the LCZ is provided in Table 7-78. The sensitivity of this LCZ is considered Moderate.

Table 7-78 Description of LCZ 3: Recreation and Bushland

Component	Description
Land use zones	RE1 Public Recreation, RE2 Private Recreation and unzoned land (within the Western Sydney Parklands boundary which is subject to the *State Environmental Planning Policy (Precincts – Western Parkland City) 2021*
Topography and drainage	Low and relatively flat to steeper hills and ridgelines. Drainage lines typically contained within this LCZ as heavily vegetated riparian corridors.
Vegetation	Managed / mown turf with taller periphery vegetation / trees, patches of remnant and regrowth bushland including threatened ecological communities (TECs).
Built form	Typically limited to amenities buildings, but some bridges and other scattered built forms
Spatial form	Open sporting facilities to heavily vegetated bushland patches and corridors

LCZ 4: Residential

Residential development within the study area typically comprises older residential areas of housing to the north of the Westlink M7/M4 Motorway (Light Horse) Interchange, with newer residential suburbs in the southern suburbs within the study area. The predominant development in this LCZ is low density housing, with single, detached houses on individual blocks.

A brief description of the LCZ is provided in Table 7-79. The sensitivity of this LCZ is considered Low.

Table 7-79 Description of LCZ 4: Residential

Component	Description
Land use zones	Residential, mostly R1 General Residential
Topography and drainage	Typically flat to gently undulating, often adjacent to drainage corridors but drainage collected in pits and piped to the receiving waterways
Vegetation	Streetscape vegetation typically turf with street trees, exotic landscaped front and rear yards, patches of recreational open space with some bushland remnants
Built form	One and two storey residential housing with uniform setback from the streets
Spatial form	Fine grained development pattern, street network typically influenced by landform

LCZ 5: Rural

This LCZ is predominantly positioned on the western side of the Westlink M7 between the Upper Canal System and Elizabeth Drive in the central section of the study area in the suburbs of Horsley Park and Cecil Park. Some areas are more rural residential with residential housing on acreage but not associated with commercial pursuits on the land

A brief description of the LCZ is provided in Table 7-80. The sensitivity of this LCZ is considered Low.

Table 7-80 Description of LCZ 5: Rural

Component	Description
Land use zones	RU4 Primary Production Small Lots, RU5 Village and RU6 Transition
Topography and drainage	Typically flat to gently undulating, drainage lines are often intercepted by small dams
Vegetation	Typically large paddocks of cleared land with some bushland remnants. Exotic vegetation surrounding residences
Built form	Sparse residential homes, farm sheds and animal production sheds
Spatial form	Large lots, open landscape with fringing vegetation

Visual

Visual receptors

Visual receptors have been grouped into the following categories as it is expected that they would share similar sensitivity to changes to views:

- Passers-by in vehicles along the Westlink M7
- Residents in neighbouring suburbs and employees of surrounding businesses
- Recreational visitors to parks and sporting areas and users of the Westlink M7 shared path.

Representative viewpoints

As shown on Figure 7-92 to Figure 7-96, the following 19 representative viewpoints were chosen to assess the potential visual impacts of the proposed modification.

- Viewpoint 1: Westlink M7 Carriageways (northbound and southbound)
- Viewpoint 2: Florence Street Underpass
- Viewpoint 3: Eastern end of Plumpton Road, Plumpton
- Viewpoint 4: Rooty Hill Station
- Viewpoint 5: Blacktown Sportspark
- Viewpoint 6: Westlink M7 Shared Path near Old Wallgrove Road exit, Eastern Creek
- Viewpoint 7: Westlink M7 Shared Path north of Chandos Road, Horsley Park
- Viewpoint 8: Chandos Road Overpass
- Viewpoint 9: Westlink M7 Shared Path north of Redmayne Road, Horsely Park
- Viewpoint 10: Westlink M7 Shared Path north of Elizabeth Drive
- Viewpoint 11: Saxony Road, Horsley Park
- Viewpoint 12: Westlink M7 Shared Path near Hinchinbrook Creek
- Viewpoint 13: Dobroyd Drive, Cecil Park
- Viewpoint 14: Westlink M7 Shared Path near Middleton Drive
- Viewpoint 15: Cowpasture Road Underpass, Lens Water Estate
- Viewpoint 16: Westlink M7 Shared Path at Hinchinbrook Creek, Hoxton Park
- Viewpoint 17: Hoxton Park Reserve
- Viewpoint 18: Bernera Road Underpass, Prestons
- Viewpoint 19: Kurrajong Road Overpass, Prestons.

Due to the length of the Westlink M7, the experience of views while travelling along the road changes along its length due to the landscape through which the Westlink M7 passes. Views experienced along Viewpoint 1 were therefore further grouped in the following four view scenarios:

- Viewpoint 1a: When the carriageways are roughly at grade with the surrounding landscape
- Viewpoint 1b: When the carriageways travel over the surrounding landscape, typically over watercourses, via bridge
- Viewpoint 1c: When the carriageways sit below the grade of the surrounding landscape, i.e. the Westlink M7 is enclosed between cuttings
- Viewpoint 1d: When approaching the Westlink M7/M4 Motorway (Light Horse) Interchange from either direction.

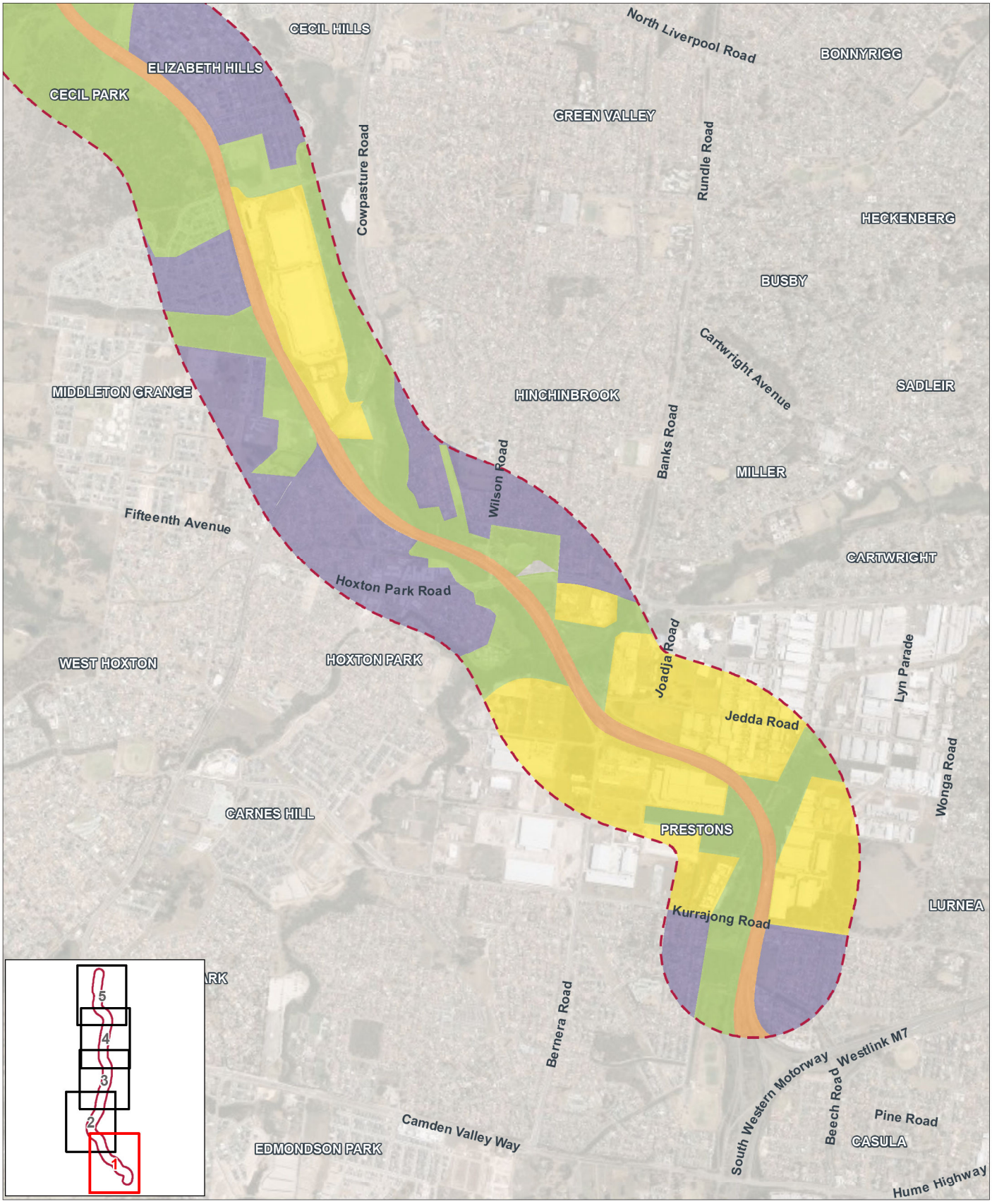

FIGURE 7-87: LANDSCAPE CHARACTER ZONES WITHIN THE STUDY AREA (SHEET 1 OF 5)

N 0 0.5 1 km

AECOM

Legend

Study area

Landscape Character Zones

- LCZ 1a: Transport Corridor
- LCZ 2: Industrial
- LCZ 3: Recreation and Bushland
- LCZ 4: Residential

Source: Imagery © Department of Customer Service 2020.

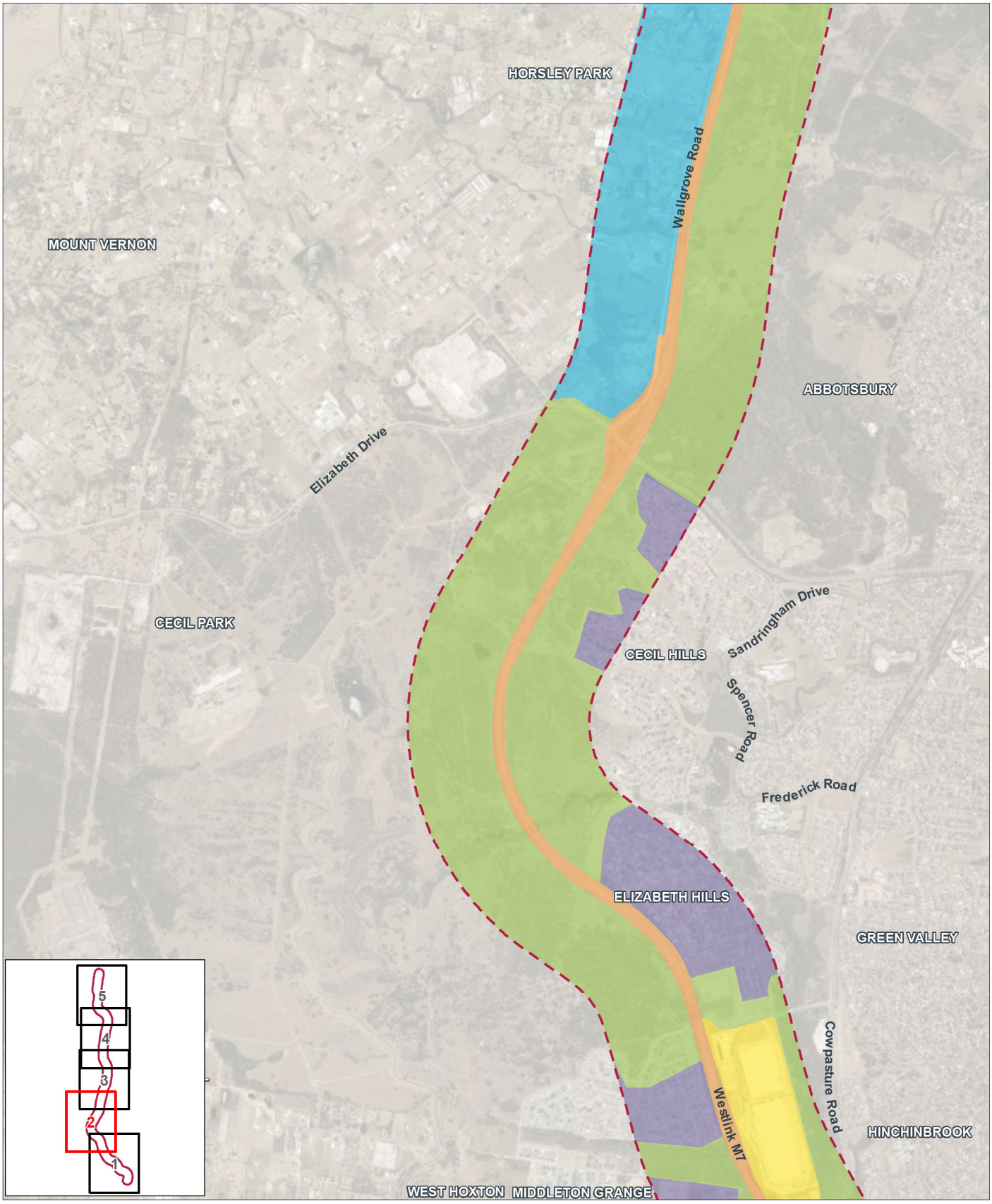

FIGURE 7-88: LANDSCAPE CHARACTER ZONES WITHIN THE STUDY AREA (SHEET 2 OF 5)

N 0 0.5 1 km

AECOM

Legend

Study area

Landscape Character Zones

- LCZ 1a: Transport Corridor
- LCZ 2: Industrial
- LCZ 3: Recreation and Bushland
- LCZ 4: Residential
- LCZ 5: Rural

Source: Imagery © Department of Customer Service 2020.

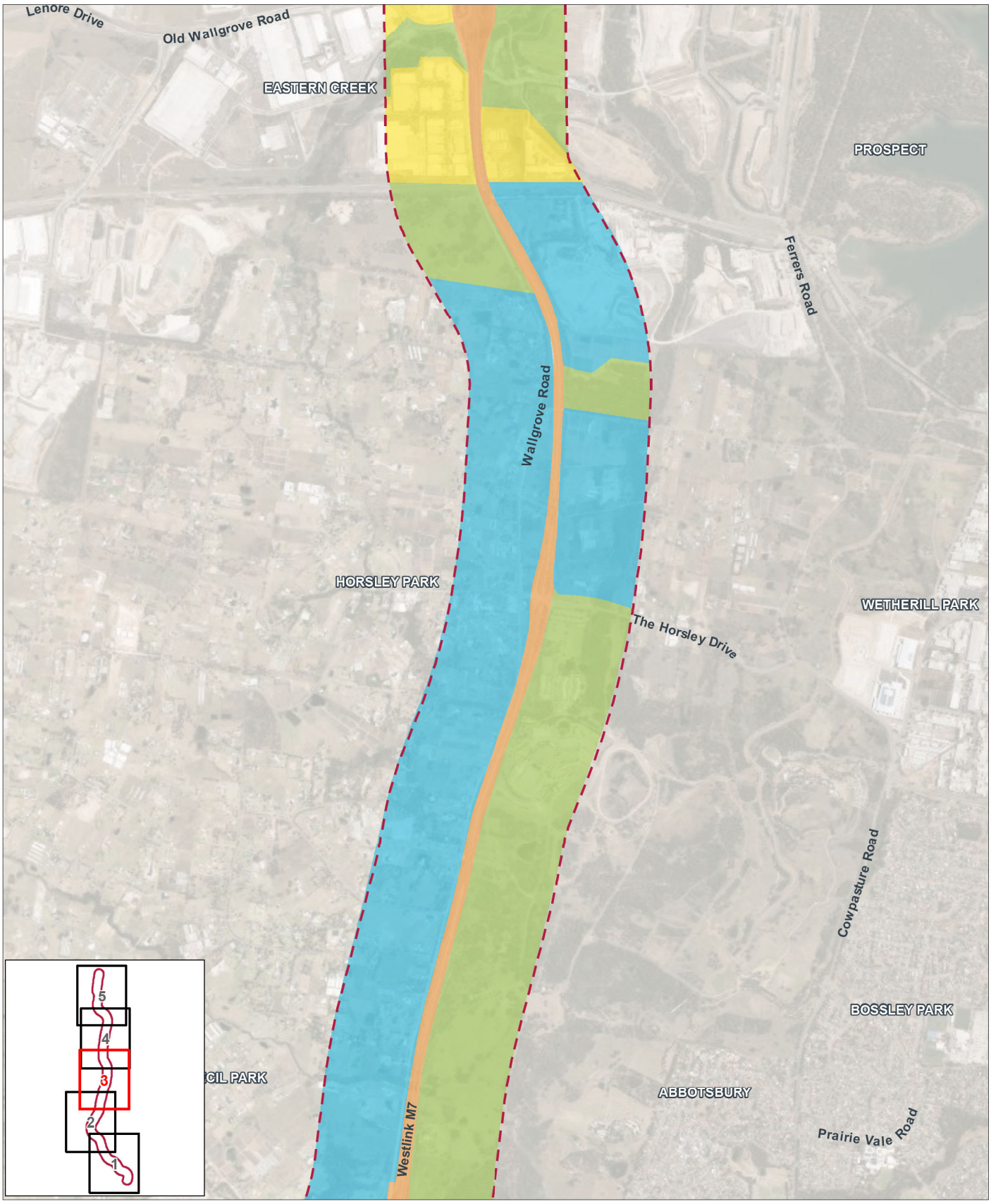

FIGURE 7-89: LANDSCAPE CHARACTER ZONES WITHIN THE STUDY AREA

N 0 0.5 1 km

AECOM

Legend

Study area

Landscape Character Zones

- LCZ 1a: Transport Corridor
- LCZ 2: Industrial
- LCZ 3: Recreation and Bushland
- LCZ 5: Rural

Source: Imagery © Department of Customer Service 2020.

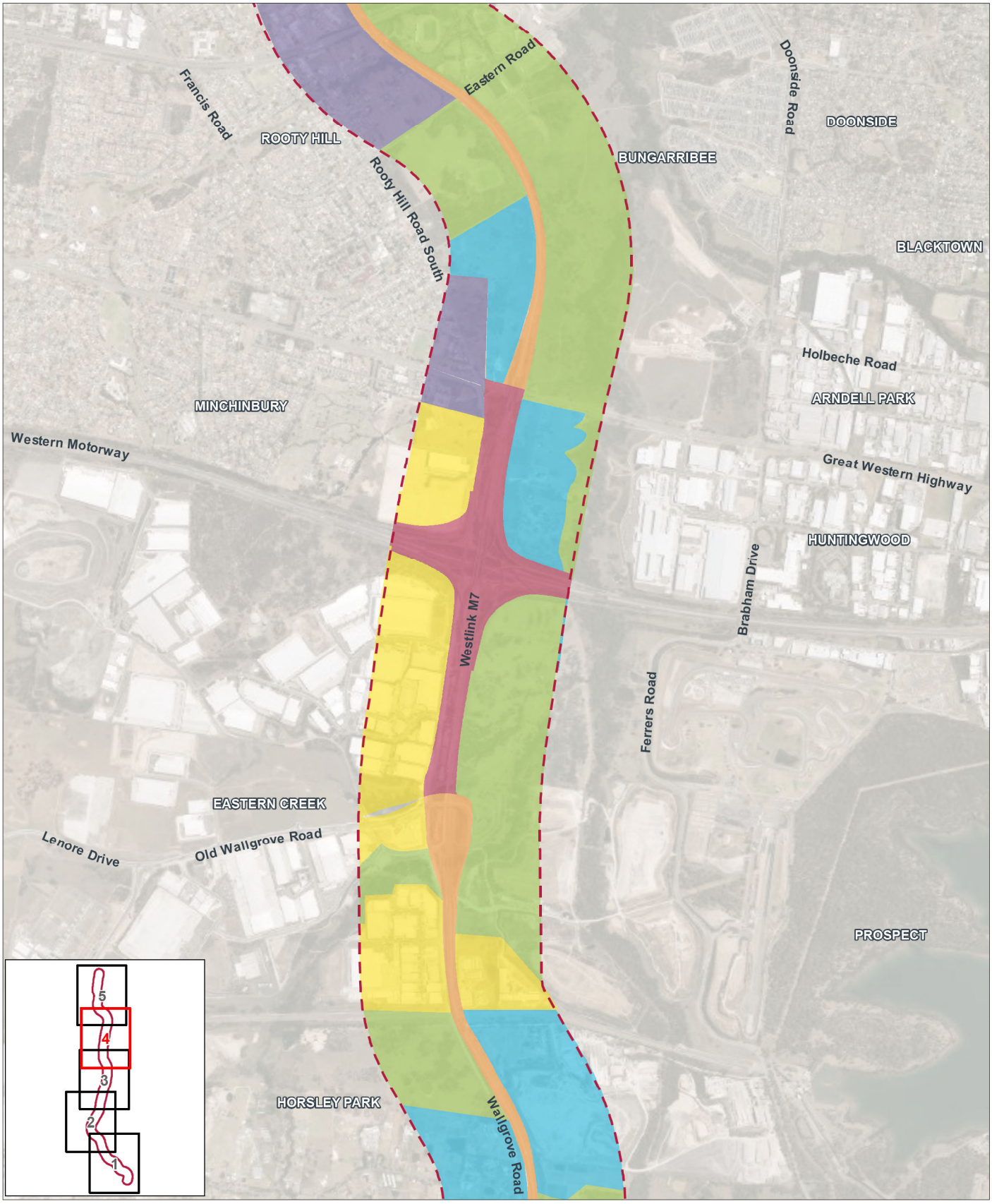

FIGURE 7-90 LANDSCAPE CHARACTER ZONES WITHIN THE STUDY AREA (SHEET 4 OF 5)

N 0 0.5 1 km

AECOM

Legend

Study area

Landscape Character Zones

- LCZ 1a: Transport Corridor
- LCZ 1b: M4 (Light Horse) Interchange
- LCZ 2: Industrial
- LCZ 3: Recreation and Bushland
- LCZ 4: Residential
- LCZ 5: Rural

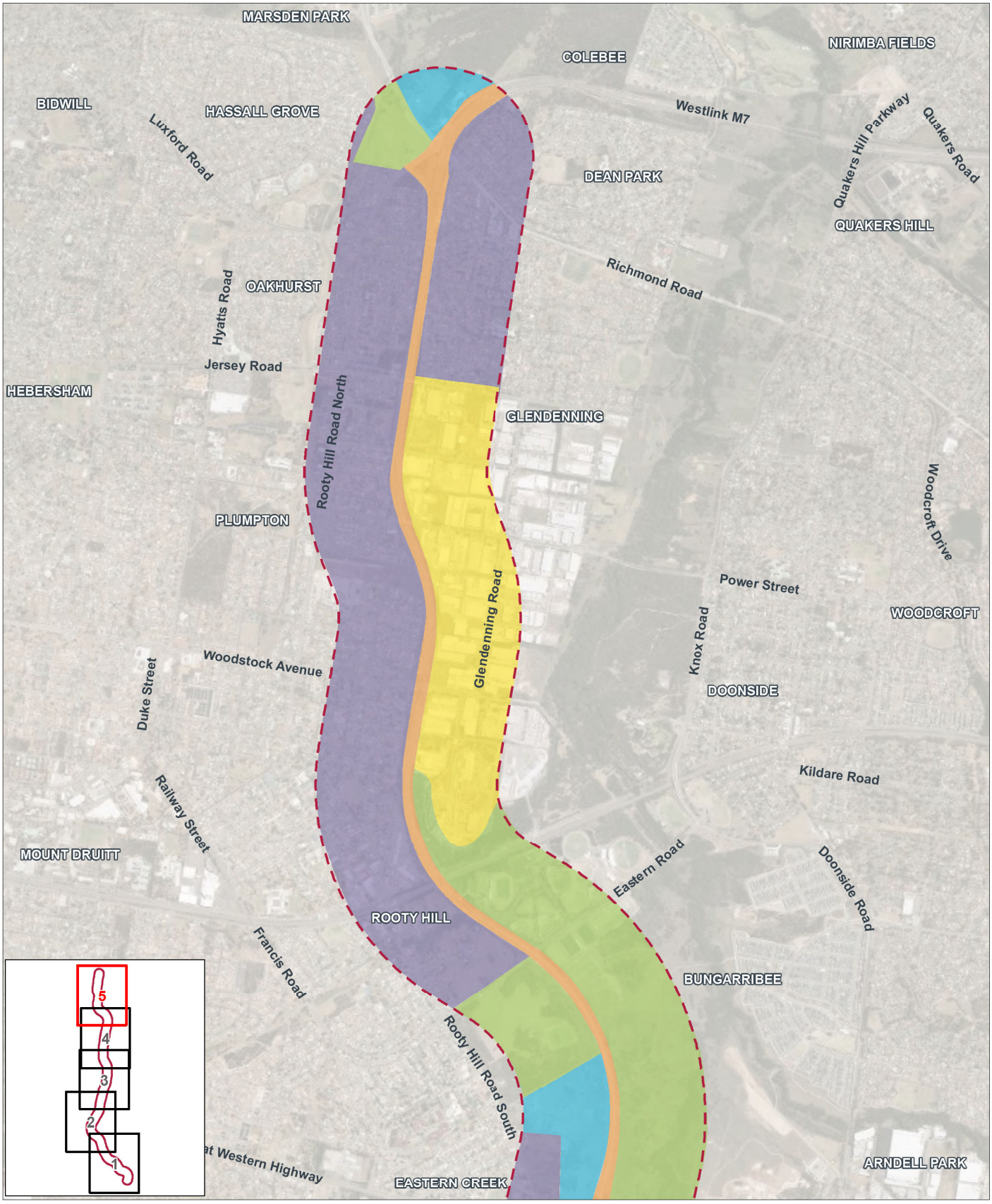

FIGURE 7-91 LANDSCAPE CHARACTER ZONES WITHIN THE STUDY AREA (SHEET 5 OF 5)

N 0 0.5 1 km

AECOM

Legend

Study area

Landscape Character Zones

- LCZ 1a: Transport Corridor
- LCZ 2: Industrial
- LCZ 3: Recreation and Bushland
- LCZ 4: Residential
- LCZ 5: Rural

FIGURE 7-92: REPRESENTATIVE VIEWPOINTS FOR VISUAL IMPACT ASSESSMENT (SHEET 1 OF 5)

N

0 0.5 1 km

AECOM

Legend

- Study area
- Photomontage with direction of view
- Viewpoint with direction of view
- Indicative location of Viewpoint 1

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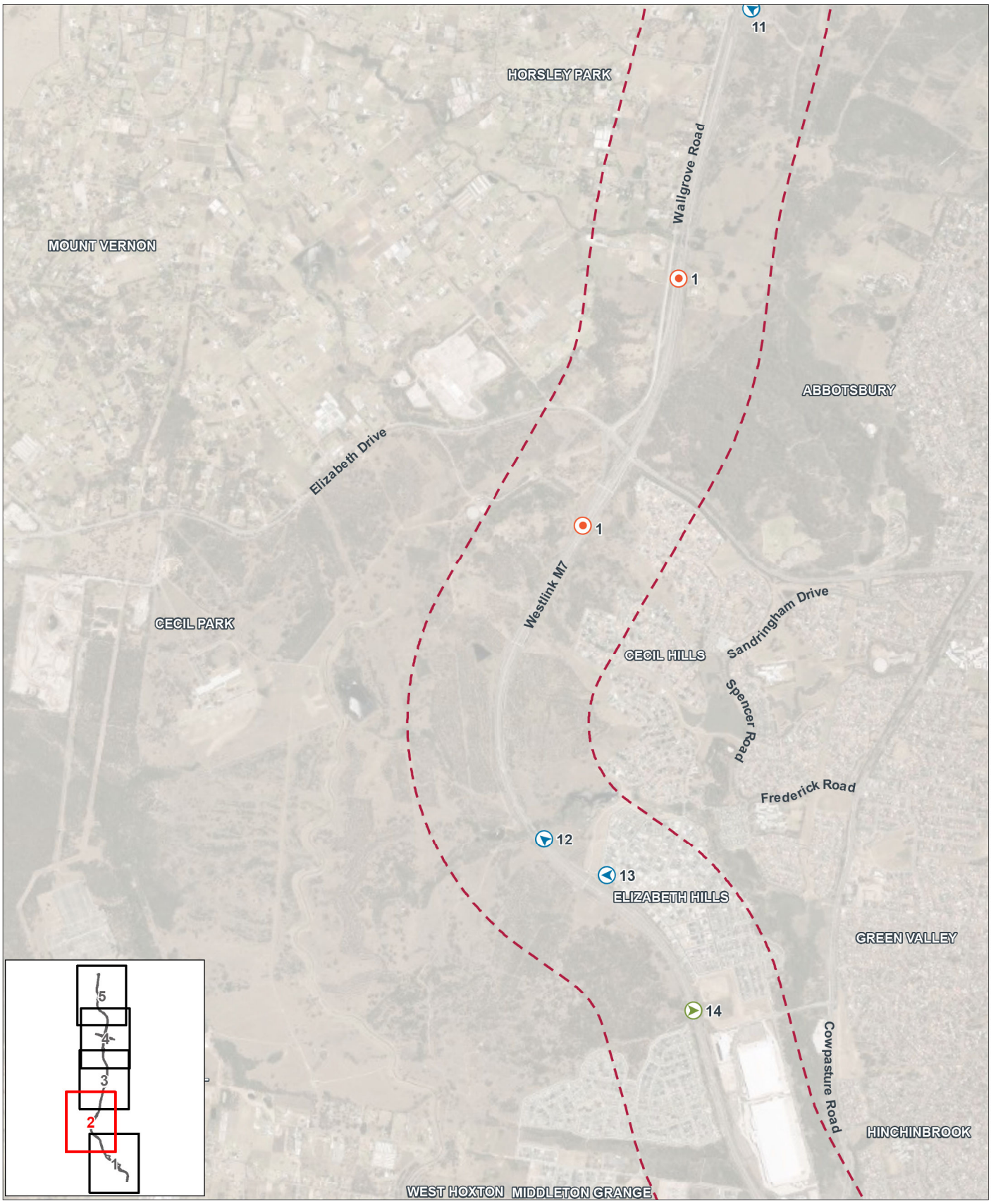

FIGURE 7-93: REPRESENTATIVE VIEWPOINTS FOR VISUAL IMPACT ASSESSMENT (SHEET 2 OF 5)

N

0 0.5 1 km

AECOM

Legend

- Study area
- Photomontage with direction of view
- Viewpoint with direction of view
- Indicative location of Viewpoint 1

FIGURE 7-94: REPRESENTATIVE VIEWPOINTS FOR VISUAL IMPACT ASSESSMENT (SHEET 3 OF 5)

N 0 0.5 1 km

AECOM

Legend

- Study area
- Photomontage with direction of view
- Viewpoint with direction of view
- Indicative location of Viewpoint 1

Source: Imagery © Department of Customer Service 2020.

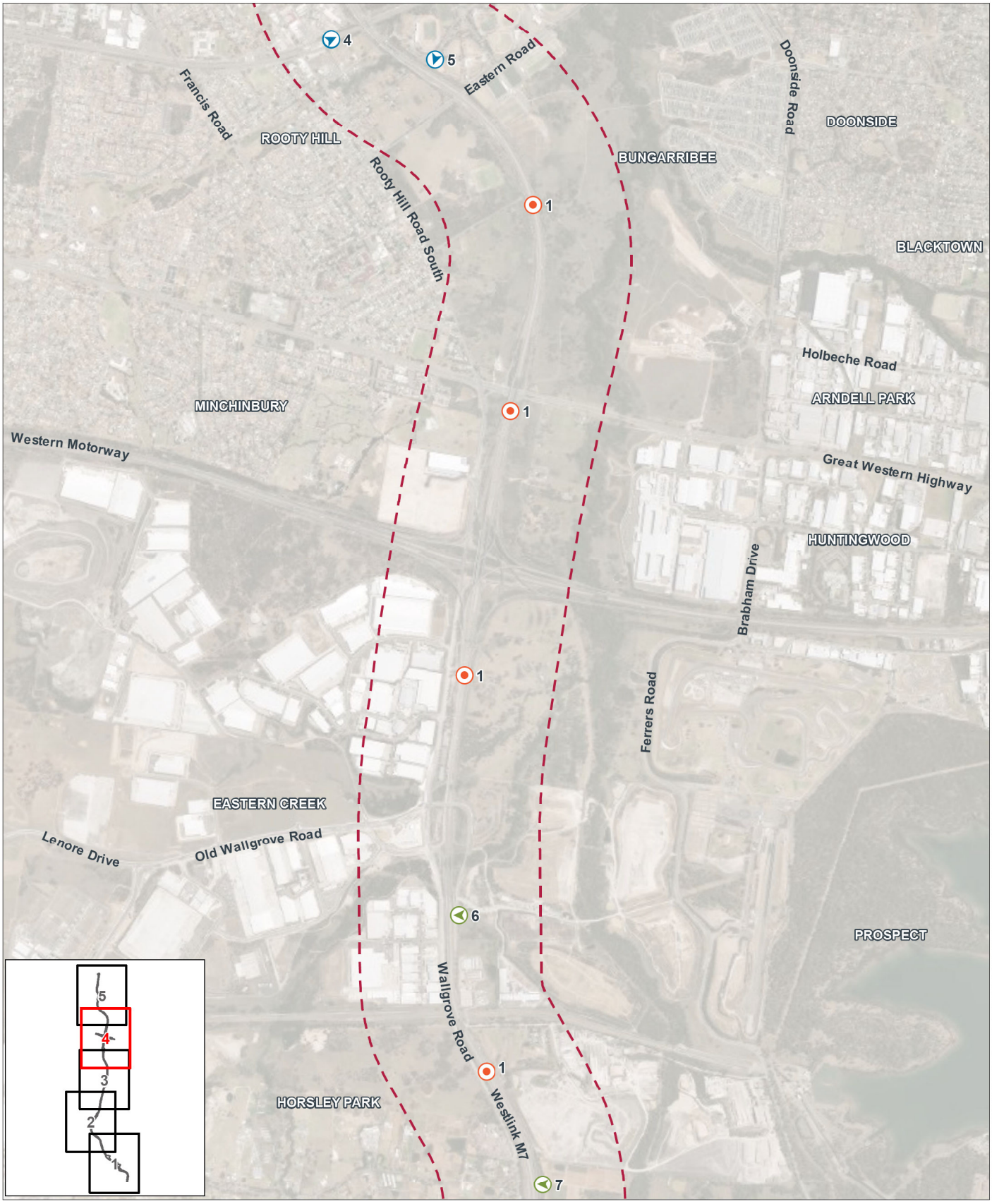

FIGURE 7-95: REPRESENTATIVE VIEWPOINTS FOR VISUAL IMPACT ASSESSMENT (SHEET 4 OF 5)

N

0 0.5 1 km

AECOM

Legend

- Study area
- Photomontage with direction of view
- Viewpoint with direction of view
- Indicative location of Viewpoint 1

Source: Imagery © Department of Customer Service 2020.

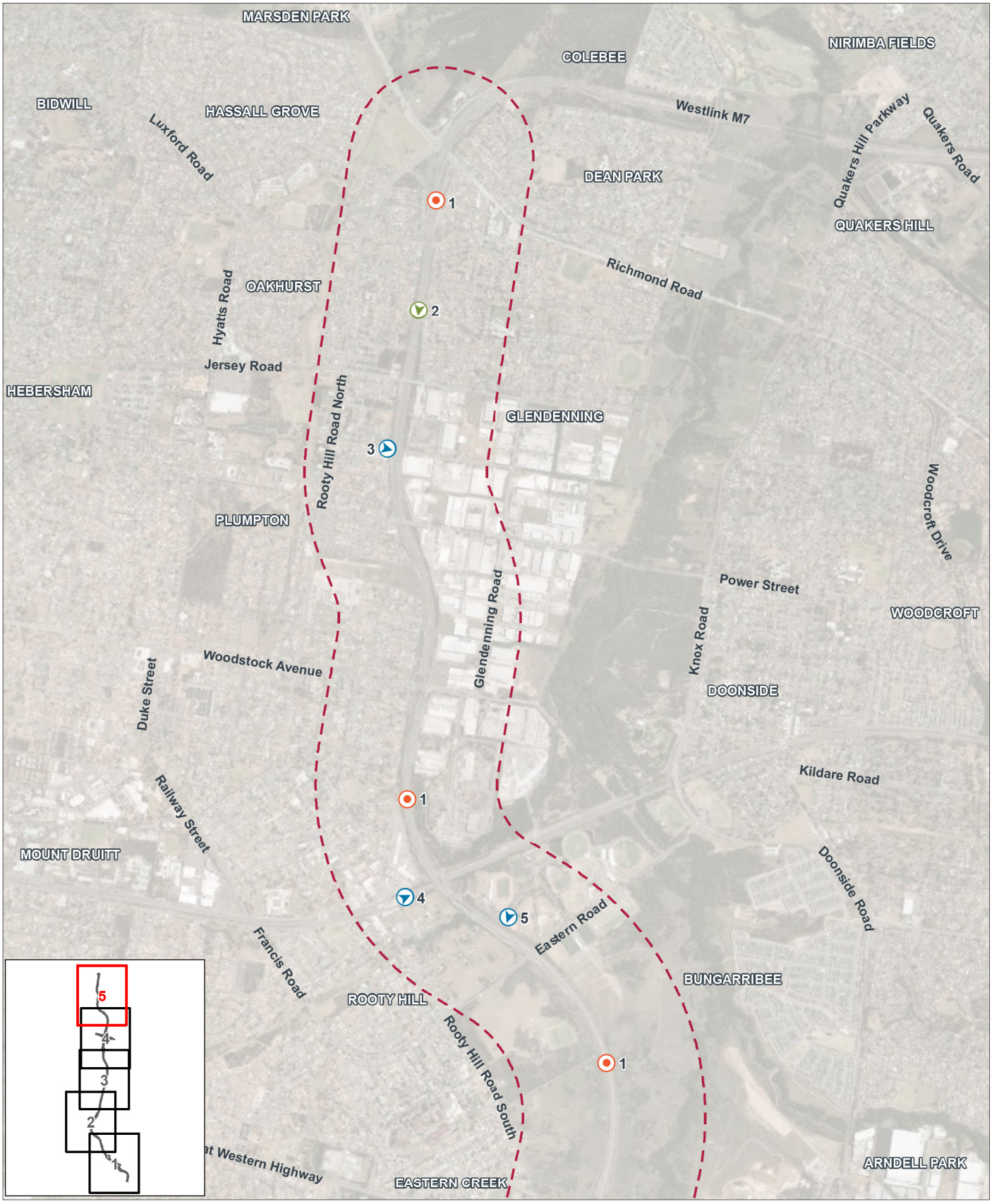

FIGURE 7-96: REPRESENTATIVE VIEWPOINTS FOR VISUAL IMPACT ASSESSMENT (SHEET 5 OF 5)

N

0 0.5 1 km

AECOM

Legend

- Study area
- Photomontage with direction of view
- Viewpoint with direction of view
- Indicative location of Viewpoint 1

Source: Imagery © Department of Customer Service 2020.

7.10.5 Impact assessment

The following section provides a summary of the assessment of impacts associated with construction and operation of the proposed modification.

Construction

Visual

During construction, the visual impact is considered to be High to Moderate. This rating is predominantly due to:

- Sensitivity of viewpoints was averaged at Moderate, as views from within the road corridor would be more sensitive due to proximity to the works or from recreational activities being undertaken (e.g. from the shared path), however there are limited views to the changes from outside the road corridor
- Magnitude of change was averaged as High, as the scale of construction equipment and activity are larger than elements within the existing view
- For many locations, changes would be seen at close proximity and within a large proportion of the existing views (including within the Westlink M7, either by passing traffic or recreational users of the Westlink M7 shared path)
- Changes would be uncharacteristic compared to existing views.

The qualitative rating of the change is considered to be Adverse due to the nature of the changes seen during construction, particularly the removal of vegetation and the presence of construction activity and equipment within the views. Mitigation measures have been recommended in **Section 7.10.6** to minimise these impacts.

Overall, the visual impact of the proposed modification during construction is considered to be High to Moderate (Adverse).

Operation

Landscape character

Table 7-81 summarises the overall ratings for the impact of the proposed modification on landscape character of each LCZ.

The highest rating of impact due to the proposed modification was found within LCZ 1b: M4 Motorway (Light Horse) Interchange, where changes to the Light Horse Sculpture Parade and memorial fig planting would comprise a High impact due to the importance of these memorial elements within a relatively small LCZ.

During the preparation of the modification report, Transport and WSO Co. engaged the NSW Office of Veterans Affairs and NSW Returned Services League State branch to involve them in defining the final design response for the reinstatement of the artwork at the Light Horse Interchange. Further consultation will include any RSL sub-branches that were involved in the installation of the sculpture parade. Following finalisation of the design, the design will be available to view. Refer also to **Chapter 6** (Consultation).

The impact in LCZ 1a: Transport corridor was found to be Moderate, as even though the proposed modification would result in changes along the entire length of the LCZ and be experienced from a majority of the width in some way, the changes themselves were the widening and upgrade of an existing high speed transport corridor with similar elements. Therefore, the overall character of the LCZ was not affected to a high degree.

Two LCZs returned ratings of Moderate to Low, and Low:

- LCZ 3: Recreation and Bushland returned a Moderate to Low rating due to potential effects on bushland from clearing vegetation that would break up patches of TECs, predominantly along riparian corridors that intersect with the Westlink M7
- LCZ 4: Residential returned a Low rating due to changes to noise walls at the Westlink M7 boundaries, some of which would be raised to eight metres in height, however noise walls are

characteristic elements along the boundary between residential development and high speed transport corridors.

Two LCZs returned a Negligible rating as the proposed modification would not affect the landscape character within them.

The remaining LCZs that returned a rating of Low or above returned an Adverse qualitative rating in response to proposed additional noise walls, increases in existing noise wall height, changes to the Light Horse Sculpture Parade and memorial fig planting and vegetation removal in the riparian corridors (the tree canopy of which would not be replaced within the operational footprint).

Table 7-81 Landscape character assessment summary

LCZ	Sensitivity	Magnitude	Overall rating	Qualitative rating
LCZ 1a: Infrastructure Corridor	Moderate	Moderate	Moderate	Adverse
LCZ 1b: M4 Motorway (Light Horse) Interchange	High	High	High	Adverse
LCZ 2: Industrial	Low	Negligible	Negligible	Neutral
LCZ 3: Recreation and Bushland	Moderate	Low	Moderate to Low	Adverse
LCZ 4: Residential	Low	Low	Low	Adverse
LCZ 5: Rural	Low	Negligible	Negligible	Neutral

Visual

Table 7-82 summarises the conclusions of the visual impact assessment for the proposed modification for each viewpoint.

Five viewpoints returned a High or High to Moderate adverse impact rating, two of these were from the Westlink M7 shared path and three from within the carriageways. These ratings were predominantly related to:

- Higher sensitivity of viewpoints where visual receptors are undertaking recreational activities such as walking, cycling or using playgrounds or picnic facilities or at picturesque points along the motorway, such as the Westlink M7/M4 Motorway (Light Horse) Interchange
- Close proximity of the changes
- Increase in visual prominence of architectural elements of the Westlink M7, including the width of the carriageways and bridges
- Removal of vegetation, particularly trees, within riparian corridors, noting that low lying shrubs would be planted where trees are being removed at bridge widening locations.

Of the remaining 17 viewpoints:

- Three were assessed as having a Moderate adverse impact
- Four were assessed as having a Moderate to Low adverse impact
- Four were assessed as having a Low impact
- Six were assessed as having a Negligible impact.

Most viewpoints would experience Adverse changes, typically due to tree removal within the Westlink M7 corridor, particularly at riparian crossings, and these trees not being replaced. Neutral ratings for viewpoints include where changes would be negligible or comprise the replacement of elements within the view with visually similar ones.

Overall, the visual impact of the proposed modification at operation is considered to be Moderate to Low (Adverse).

Table 7-82 Visual impact assessment summary

Viewpoint	Sensitivity	Magnitude	Overall rating	Qualitative rating
Viewpoint 1a: Carriageways at grade with the surrounding landscape	Moderate	Low	Moderate to Low	Adverse
Viewpoint 1b: Carriageways above the surrounding landscape, bridge over creek crossings	Moderate	High	High to moderate	Adverse
Viewpoint 1c: Carriageways below the level of the surrounding landscape	Moderate	Low	Moderate to Low	Adverse
Viewpoint 1d: Approaching the M4 Motorway (Light Horse) Interchange	High	Moderate	High to moderate	Adverse
Viewpoint 2: Florence Street Underpass	Moderate	Low	Moderate to Low	Adverse
Viewpoint 3: Eastern end of Plumpton Road, Plumpton	Moderate	Negligible	Negligible	Neutral
Viewpoint 4: Rooty Hill Station	Low	Negligible	Negligible	Neutral
Viewpoint 5: Blacktown Sports park	Low	Negligible	Negligible	Neutral
Viewpoint 6: Westlink M7 Shared Path near Old Wallgrove Road exit, Eastern Creek	Low	Low	Low	Adverse
Viewpoint 7: Westlink M7 Shared Path north of Chandos Road, Horsley Park	Moderate	Low	Moderate to Low	Adverse
Viewpoint 8: Chandos Road Overpass	Low	Low	Low	Adverse
Viewpoint 9: Westlink M7 Shared Path north of Redmayne Road, Horsley Park	Moderate	Moderate	Moderate	Adverse
Viewpoint 10: Westlink M7 Shared Path north of Elizabeth Drive	Moderate	Low	Moderate to Low	Adverse
Viewpoint 11: Saxony Road, Horsley Park	Low	Negligible	Negligible	Neutral
Viewpoint 12: Westlink M7 Shared Path near Hinchinbrook Creek	Moderate	Moderate	Moderate	Adverse
Viewpoint 13: Dobroyd Drive, Cecil Park	Moderate	Negligible	Negligible	Neutral
Viewpoint 14: Westlink M7 Shared Path near Middleton Drive	Moderate	High	High to Moderate	Adverse
Viewpoint 15: Cowpasture Road Underpass, Lens Water Estate	Low	Low	Low	Neutral
Viewpoint 16: Westlink M7 Shared Path at Hinchinbrook Creek, Hoxton Park	High	High	High	Adverse
Viewpoint 17: Hoxton Park Reserve	Moderate	Moderate	Moderate	Adverse

Viewpoint	Sensitivity	Magnitude	Overall rating	Qualitative rating
Viewpoint 18: Bernera Road Underpass, Prestons	Low	Low	Low	Neutral
Viewpoint 19: Kurrajong Road Overpass, Prestons	Low	Moderate	Low	Neutral

Photomontages were prepared to illustrate the seen elements of the proposed modification from representative viewpoints. These photomontages are shown in Plate 7-1 to Plate 7-16.

Plate 7-1 Existing view from the shared path, Viewpoint 2, between the Westlink M7 bridges, looking north

Plate 7-2 Photomontage showing proposed view at operation from the shared path at Viewpoint 2

Plate 7-3 Existing viewpoint from Viewpoint 6, looking north west from the shared path over the Westlink M7 and the entry ramp from Old Wallgrove Road

Plate 7-4 Photomontage showing the proposed view at operation from Viewpoint 6

Plate 7-5 Existing view from Viewpoint 7, looking south along the Westlink M7 shared path and carriageways to the Chandos Road overpass

Plate 7-6 Photomontage showing proposed view at operation from Viewpoint 7

Plate 7-7 Existing view from Viewpoint 9 looking south along the Westlink M7 from the shared path north of Redmayne Road

Plate 7-8 Photomontage showing view at operation from Viewpoint 9

Plate 7-9 Existing view from Viewpoint 10

Plate 7-10 Photomontage showing proposed view at operation from Viewpoint 10

Plate 7-11 Existing view from Viewpoint 14, looking east along the shared path beneath the Westlink M7

Plate 7-12 Photomontage showing proposed view at operation from Viewpoint 14

Plate 7-13 Existing view from Viewpoint 15, looking west towards the Westlink M7 overpass and Cowpasture Road

Plate 7-14 Photomontage showing proposed view at operation from Viewpoint 15

Plate 7-15 Existing view from Viewpoint 17, looking south along the Westlink M7

Plate 7-16 Photomontage showing proposed view at operation from Viewpoint 17

7.10.6 Management and mitigation

The mitigation measures listed in Table 7-83 are recommended to minimise visual impacts as a result of the proposed modification.

Table 7-83 Mitigation measures

Impact	ID	Mitigation measure	Responsibility	Timing
Unintentional impacts to trees to be retained	LV1	Establish tree protection zones (TPZs) around trees to be retained. Tree protection will be undertaken in accordance with *AS 4970-2009 Protection of Trees on Development Sites* and will include exclusion fencing of TPZs	Construction contractor	Construction
Visual impact from presence of construction	LV2	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 will be removed following construction completion.	Construction contractor	Construction
	LV3	Provide cut-off or directed lighting within and outside of the construction site, with lighting location and direction considered to ensure glare and light spill is minimised	Construction contractor	Construction
	LV4	Keep construction areas clean and tidy and place refuse in appropriate receptacles	Construction contractor	Construction
Visual impacts to Light Horse Sculpture Parade	LV5	The original intent surrounding the Light Horse Sculpture Parade should be safeguarded, with the design development process for the reinstatement of the artwork to be carried out in consultation with stakeholders including the Office of Veterans Affairs, the RSL and the original artists (where appropriate). Potential hardening of the landscape and the memorial character of the fig planting should be mitigated by replacing trees to be removed, for example, in consultation with stakeholders, as above.	Transport	Prior to operation
Visual impact from removal of trees	LV6	While the replacement of trees within the Westlink M7 operational footprint may not be possible due to maintenance requirements, it is recommended to reinstate the visual markers of the creek corridors within the Westlink M7, by: • Planting of riparian tree species (such as Melaleuca and Casuarina) on the batters within the central	Transport	Prior to operation

Impact	ID	Mitigation measure	Responsibility	Timing
		median as they fall towards the lower area at either end of bridges • Planting of areas under bridges within riparian corridors with indigenous species within the Cumberland Plain Riverflat Forest community, including tall shrubs, grasses and groundcovers. Investigate opportunities for additional tree plantings.		
Visual impacts	LV7	Undertake seed collection prior to construction (e.g. within three months of construction contract award, where possible), to source seeds to be used in post-construction rehabilitation. Use native and endemic plant species in post-construction rehabilitation otherwise.	Construction contractor	Prior to construction
	LV8	Opportunity to enhance green infrastructure and tree planting through the areas adjacent to noise walls and other areas along the edges of the corridor to mitigate impacts from tree removal along the Westlink M7 median. This will be subject to detailed design and also the identification of existing verges / batters within the Westlink M7 corridor that would be appropriate for tree planting completed as part of the works.	Transport	Detailed design
	LV9	Opportunity for Water Sensitive Urban Design to be considered when local drainage conditions are altered throughout the corridor where the gradient and widening conditions require further detail.	Transport	Detailed design