

9 Landscape character and visual

This chapter provides a summary of the results of the Landscape and visual impact assessment (AECOM, 2020). A full copy of the assessment report is provided as **Technical report 1 – Landscape and visual**.

9.1 Introduction

The Place and Urban Design requirements in the SEARS relate to visual 'character' and 'quality' of the surrounding environment as well as visual impacts. These requirements are addressed in this chapter which incorporates all of these considerations and uses terminology which is consistent with the relevant industry assessment guidelines (refer to **Section 9.2**). This chapter also considers the construction and operational impact of the Project on the urban landscape and visual setting of the Project and identifies performance outcomes supported by mitigation measures to manage the potential impact.

As well as addressing the SEARs, this chapter also addresses the commitments made in the Scoping Report (TfNSW, 2019d) for the Project. The relevant SEARs and requirements from the Scoping Report, and where these are addressed, are outlined in **Table 9-1**.

Table 9-1 SEARs and Scoping Report requirements

SEARs	Where addressed in this EIS
Place and Urban Design	
1. identify how the Project contributes to a well-designed built environment and meets the objectives of Better Placed.	Section 8.4.2 in Chapter 8
2. identify accessibility elements and assess impacts on: <ul style="list-style-type: none"> a. cross corridor pedestrian and cyclist access, and the locations of public transport gate lines b. impacts on cyclists and pedestrian access, amenity and safety across and adjoining the Project c. opportunities to integrate cycling and pedestrian elements with the surrounding network. 	Section 8.4.3 in Chapter 8
3. identify the design process that has been used to inform the EIS design and will be used to refine the design, including, for example, the use of design review panels and consultation with community and other stakeholders.	Section 8.4.4 in Chapter 8
4. provide before and after visual representations of the Project from key receiver locations, state heritage items and conservation areas to illustrate the visual impacts.	Section 9.4
5. identify how the Project will achieve a net increase in tree canopy in the vicinity of the project.	Section 8.4.5 in Chapter 8 and Chapter 16
6. address the maintenance of the Project.	Section 8.4.6 in Chapter 8

Scoping report	Section addressed
Landscape and visual	Section 9.3
1. review topographic maps and aerial photography to identify features such as landform, elevation, land cover and distribution of residential properties and visual receptor locations.	
2. review available information on likely landscape sensitivities including zoning or other designations relevant to landscape and visual amenity.	Section 9.3
3. determine the potential extent and visibility of the Project.	Section 9.4
4. assess the landscape character impact and visual impact of the Project.	Section 9.4
5. identify mitigation measures to be integrated into the design development process to address the residual adverse impacts identified in the assessment.	Section 9.5

9.2 Method of assessment

The methodology for the assessment was undertaken following the *Guidelines for Landscape and Visual Impact Assessment*, Third Edition (Landscape Institute and Institute for Environmental Management (UK), 2013) (GLVIA3).

To identify elements and features relevant to the Project, a landscape character assessment was undertaken. Landscape Character Zones (LCZs) have been defined to provide a framework to more clearly describe the area and assess how the Project would affect the elements that make up the landscape.

9.2.1 Study area

The Project study area includes a 250 metre radius from the proposed station entry on Little Eveleigh Street. This study area extent is considered conservative given the low elevation of the station platforms and the visual screening provided by the nearby buildings. The study area is only relevant for the visual receptors who would receive views during operation, as the ancillary facilities have been assessed based on proximity.

9.2.2 Landscape character assessment

Assessment of landscape effects deals with the effect of change and development on landscape as a resource in its own right. Landscape effects are assessed at operation of the Project. Landscape effects are not assessed during construction as these effects are temporary and cease to have an impact on landscape character at the conclusion of construction. Impacts to landscape character are determined based on the sensitivity of the element of change and the magnitude of change that is likely to occur.

The consideration of potential impacts on landscape character is determined based on the existing landscape and its sensitivity to change, and the magnitude of change that is likely to occur. The sensitivity and magnitude of landscape effects address the following specific criteria:

- sensitivity of the landscape to proposed change, based on:
 - susceptibility to change – ability of the landscape receptors to accommodate the proposed development without undue consequences
 - value of the landscape, which may relate to the physical state of the landscape and its intactness from a physical, functional or ecological perspective, heritage or cultural values that may be associated with the landscape, or educational or recreational values
- magnitude of the landscape effect, based on:
 - size or scale of change

- geographical extent of effects
- duration and reversibility of effects.

The extent of sensitivity and magnitude are each assessed and graded as being High, Moderate, Low or Negligible. A matrix is then used to combine the ratings for sensitivity and magnitude to provide an overall ranking of impact on landscape character which is graded as being High, High to Moderate, Moderate, Moderate to Low, Low or Negligible in relation to the existing environment (refer **Table 9-2**). Where there is no effect on the magnitude of change for a receptor, a No Impact rating can be given.

Table 9-2 Landscape character impact grading matrix

		MAGNITUDE			
		HIGH CHANGE	MODERATE CHANGE	LOW CHANGE	NEGLIGIBLE CHANGE
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

9.2.3 Visual impact assessment

The evaluation of potential effects on visual amenity is based on the sensitivity of the viewpoint (and the visual receptors it represents) to change, and the magnitude of change arising from the Project that is likely to occur. The sensitivity and magnitude of visual effects address the following specific criteria:

- the sensitivity of each viewpoint is mainly a function of:
 - the occupation or activity of the people experiencing the view at particular locations
 - the extent to which their attention or interest may be focused on the views and the visual amenity
 - value attached to the view experienced
- the magnitude of change to views and visual amenity depends on:
 - size or scale of change in the view with regard to the:
 - loss or addition of features 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 Project 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 Project
 - 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.

The extent of sensitivity and magnitude are assessed and graded as being High, Moderate, Low or Negligible. A matrix is then used to combine the ratings for sensitivity and magnitude to provide a ranking of visual impact (refer **Table 9-3**). A qualitative assessment further assigns a rating of Adverse, Neutral or Positive to the change in the views seen by receptors.

In addition to assessing the visual impact at operation, a high-level commentary has been provided around likely construction effects of the Project. Visual receptors have been considered in terms of the views they are likely to obtain from locations within proximity of the Project. Viewpoint locations are shown in **Figure 9-1**.

Table 9-3 Visual impact grading matrix

		MAGNITUDE				EFFECT		
		HIGH CHANGE	MODERATE CHANGE	LOW CHANGE	NEGLIGIBLE CHANGE	ADVERSE	NEUTRAL	POSITIVE
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			

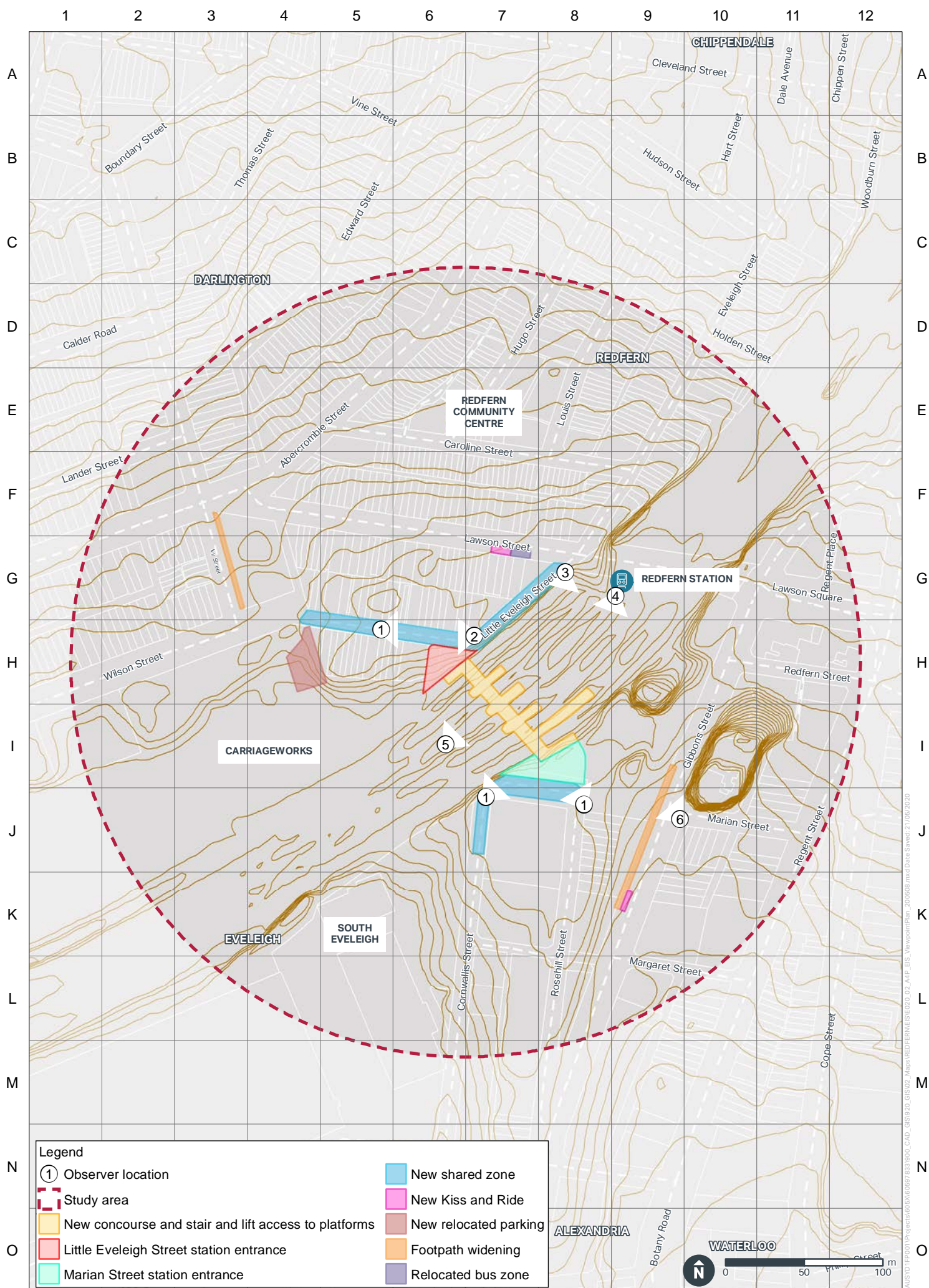


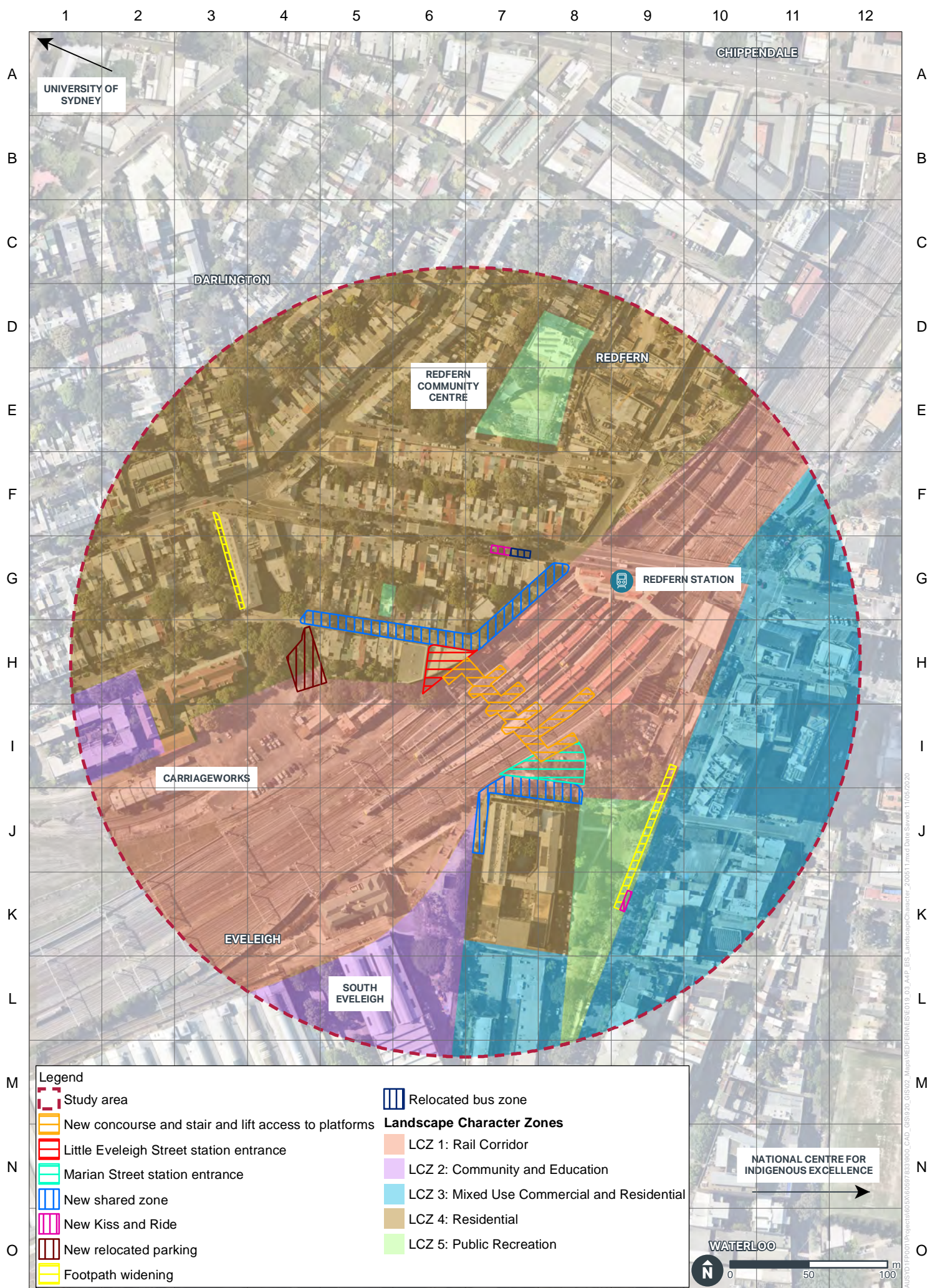
FIGURE 9-1: PLAN OF VIEWPOINTS

9.3 Existing environment

Five Landscape Character Zones (LCZs) have been identified within the broader landscape setting (refer to **Figure 9-2**):

- LCZ 1: Rail Corridor
- LCZ 2: Community and Education
- LCZ 3: Mixed Use Commercial and Residential
- LCZ 4: Residential
- LCZ 5: Public Recreation

Each landscape character zone is discussed below.



9.3.1 LCZ 1 – Rail Corridor

LCZ 1 includes Redfern Station and the rail corridor. This area is generally flat and comprises a wide, linear corridor which contains rail infrastructure such as tracks, gantries, overhead wiring, signals and operating trains. Small built form lies within the corridor, comprising of the existing station concourse and platform buildings, sheds and electrical infrastructure.

Redfern Station has multiple station entrances from which to enter the rail corridor. Each entrance has a different character, reflecting the different time at which each was constructed. The multiple entrances at Redfern station each reflect the character of the time in which they were constructed, such as the Lawson Street entrance, which was the original entry to the station constructed in the mid 19th Century. Other, more recent entries were constructed to spread the pedestrian load to the platforms. The Gibbons Street entrance is the newest entrance, with the more modern architecture characterising the entrance. The Marian Street entrance is a minor station entry which provides an entrance to and connectivity from the south to the rail network onto Platform 10 alone. It comprises a single gate entry with limited architectural features.

The platforms of Redfern Station lie below the surrounding landscape in a rail cutting. The platforms and rail corridor are visually contained by the retaining walls on either side of the corridor.

9.3.2 LCZ 2 - Community and Education

Community and education facilities within the area include South Eveleigh, Carriageworks, the University of Sydney and the National Centre of Indigenous Excellence. These facilities typically comprise of large buildings set within precincts. Precincts are often landscaped areas with well-planned pedestrian networks. Built form and landscaping within this LCZ interprets the change overtime of these areas and often retains the heritage elements within them.

9.3.3 LCZ 3 - Town Centre and Retail

This area comprises largely of commercial areas to the east of the Project along Redfern and Gibbons Streets, and to the south of the Project between Cornwallis and Rosehill Streets. The character of this area is defined by wide, busy streets, tall buildings with similar setbacks from the street, and built form typically fronting the footpath. The streetscape includes limited vegetation and typically signalised road intersections, with housing of varying density including tall residential developments along Gibbons Street as well as one to two storey shops.

Within the study area part of this LCZ is designated as Local Centre under the *Sydney Local Environmental Plan 2012* and forms part of the town centre of Redfern. This area (which lies to the east of the station) differs from the western side of the station (which contains some pockets of smaller scale retail and cafe) and contains a mix of hotels, strip retail shopping, a police station and ground floor commercial/retail under tall residential buildings.

9.3.4 LCZ 4 – Residential

This area primarily consists of residential areas with either single or double storey semi-detached housing or taller residential apartments. Lower density residential development is typically found to the west of Redfern Station, and medium to high density housing to the immediate east of the station. Residential terraces are punctuated by occasional small-scale retail and cafes on main roads.

To the east of Redfern Station lies a small area of this LCZ between Cornwallis and Rosehill Streets, bounded to the north by Marian Street and to the south by Margaret Street. This residential comprises two apartment blocks. These residential buildings are a slightly higher density than the residential development to the west of the rail corridor, but are similar in character, positioned on quiet, narrow streets and with tree, shrub and groundcover planting at the street interface.

The residential development to the west of the station is typically older and smaller in scale, comprising of single and double storey terrace housing, typically of the Victorian era, with balconies overlooking the road corridor and similar awning and fencing details. The area to the west of the station is listed in the Sydney LEP 2012 as a heritage conservation area.

9.3.5 LCZ 5 – Public Recreation

Three public spaces are located within the study area which include Gibbons Street Reserve, Little Eveleigh Street Reserve and the park outside of the Redfern Community Centre. These spaces are

well vegetated with mature trees and shrubbery and provide formal seating and in the case of the park outside the Redfern Community Centre, a formal playground. Spaces with significant community value include Little Eveleigh Reserve and the Redfern Community Centre which are located within the Darlington Heritage Conservation Area.

9.4 Impact assessment

9.4.1 Construction

Impacts on the landscape character was not assessed for the construction period of the Project as these effects are temporary and cease to have an impact on landscape character at the conclusion of construction. As such, only visual impacts were assessed, as provided in this section.

Visual

As described in **Chapter 5** of this EIS, construction activity due to the Project would occur in several locations, including:

- three ancillary facility areas and associated proposed traffic routes
- Redfern Station and surrounds with construction works comprising:
 - a six metre wide concourse between Little Eveleigh Street and Marian Street
 - new stair and lift access from the concourse to Platforms 1 to 10
 - an upgraded station entrance at Marian Street including station services and customer amenities
 - a new station entrance at Little Eveleigh Street including station services and customer amenities
 - formalisation of a shared zone on Little Eveleigh Street

upgrade of Marian Street/Cornwallis Street/Rosehill Street area. Vegetation removal would be required to facilitate this construction work, with a number of trees being removed within the Project area (refer to **Chapter 16** of this EIS. Construction elements would include site sheds, site hoarding and fencing, car parking facilities for construction vehicles, mobile construction equipment, lighting and elevated work platforms including cranes and scissor lifts.

Visual impacts associated with construction would be temporary in nature and are discussed in **Table 9-4**. Further detail on the influences of and sensitivity to change and magnitude of change are provided in **Technical report 1 – Landscape and visual**.

Table 9-4 Visual impacts from construction

Construction location	Anticipated change	Sensitivity of construction location	Magnitude of anticipated change	Significance of visual impact and summary of key points
Ancillary Facility 1 - Eveleigh Maintenance Centre	Eveleigh Maintenance Centre would be utilised as site offices and an administration centre for the Project. This would include the construction of several site sheds and car parking facilities.	Low	Low	Low (neutral) Visual receptors would include train passengers, rail workers and limited views by recreational users of a nearby park and a small number of residents. The scale and use of this site would be temporary and similar to the existing use of the site, and visually contained within the existing Eveleigh Maintenance Centre.
Ancillary Facility 2 - Sydney Trains	This area would be partly utilised as a construction laydown area. This laydown area would be accessed from either Carriageworks Way or Little Eveleigh Street and would provide construction parking facilities and rail corridor access. It is anticipated that some components of the concourse would be assembled here prior to installation within the rail corridor.	Low	Low	Low (neutral) Receptors would include train passengers, rail workers and a small number of residents. The scale and use of the site would be temporary and similar to the existing use of the site, and the changes would be seen from the immediate surrounding areas only.
Ancillary Facility 3 - Gibbons Street Reserve and Marian Street carpark	Part of Gibbons Street Reserve would be used as a laydown area. This would require the removal of approximately two trees. Due to the existing slope of the reserve, re-levelling of part of the Gibbons Street Reserve would be required to enable a safe work area. It is anticipated about 200 tonnes of spoil would be required to be cut and filled to establish a level safe work area. The existing car park on Marian Street would be utilised as site offices and an administration centre for the Project. This would include the erection of several site sheds and car parking facilities. The Project would also utilise a storage area under the existing car park on Marian Street	Moderate	Moderate	Moderate (adverse) Receptors would include a moderate number of residential receptors, workers/visitors in nearby commercial properties, passers-by (vehicles, pedestrians and cyclists) and rail workers, holding differing values of the view. The scale and use of the site would be dissimilar to the existing use of the site, would be seen from the surrounding area as well as tall residential apartments. The reserve would be reinstated post-construction.

Construction location	Anticipated change	Sensitivity of construction location	Magnitude of anticipated change	Significance of visual impact and summary of key points
	for the storage of construction equipment and materials.			
Construction surrounding - Redfern Station	<p>From the surrounding streetscape, site hoarding and fencing are anticipated to be visible surrounding rail corridor construction. Within the streets, visible construction elements would include:</p> <ul style="list-style-type: none"> • site sheds • site hoarding, noise attenuation fencing and fencing of work sites • car parking facilities • mobile construction equipment • lighting and elevated work platforms including cranes and scissor lifts. <p>Trees would also need to be removed to accommodate the Marian Street Entrance, the concourse, the roadworks on Little Eveleigh Street, and the new car park off Eveleigh Street. Road works and associated landscaping would be visible within the upgraded streets of Little Eveleigh Street and Marian Street.</p>	High	High	<p>High (adverse)</p> <p>Receptors include train passengers, residential receptors and rail workers, holding differing values of the view. The scale and use of the site would be temporary but would not be similar to the existing use and would contrast to the existing character of the area, and would be seen from several surrounding areas.</p>

Construction location	Anticipated change	Sensitivity of construction location	Magnitude of anticipated change	Significance of visual impact and summary of key points
Traffic Route	An increase in heavy vehicular traffic would occur within the access routes. This change would be temporary, occurring during the 18 month construction period, but would be seen as a change to traffic volume and vehicle type by receptors along these routes, which would include the more sensitive residential and commercial receptors, pedestrians, and recreational users of nearby public open space. While these receptors would potentially have high value associated with views from locations along these routes, the change would not result in a significant one as the magnitude of change would be low, considering the existing use and character of the roads would not change and the change would be temporary and highly reversible.	Negligible	Low	Negligible This change would be temporary and reversible, and although seen as a change to traffic volume and vehicle type by receptors along these routes, the existing use and character of the roads would not change.

9.4.2 Operation

Landscape character

Operation impacts to landscape character are discussed in **Table 9-5**. Landscape effects are not assessed during construction as they are temporary and cease to have an impact on landscape character at the conclusion of construction. As such, no construction impacts are outlined in **Table 9-5**.

Further detail on the influences of sensitive change and magnitude of change are provided in **Technical report 1 – Landscape and Visual**.

Table 9-5 Landscape character impacts

LCZ	Anticipated change	Sensitivity of LCZ	Magnitude of anticipated change	Significance of landscape character effect and summary of key points
1 – Rail Corridor	<ul style="list-style-type: none"> • Introduction of a six metre wide concourse bridging the rail corridor between Little Eveleigh Street and Marian Street • New stair and lift access from the concourse down to Platforms 1 to 10 • A new station entrance on Little Eveleigh Street would be accessed via the upgraded/repurposed building next to the rail corridor. 	Moderate	High	High (Positive) The Project would have a high refinement of architectural design, with the new station entrances integrated into the surrounding setting with landscaping and the adaptive reuse of an existing building. The proposed concourse would comprise a new elevated element within the rail corridor.
2 – Community and education	No impact	Negligible	Negligible	Negligible (Neutral) There would be negligible changes to landscape character arising from the Project on this LCZ.
3 – Mixed use commercial and residential	No impact	Negligible	Negligible	Negligible (Neutral) There would be negligible changes to landscape character arising from the Project on this LCZ

LCZ	Anticipated change	Sensitivity of LCZ	Magnitude of anticipated change	Significance of landscape character effect and summary of key points
4 – Residential	<ul style="list-style-type: none"> Upgrade of Little Eveleigh Street, including creation of a new station entrance and shared zone, removal and relocation of approximately 20 restricted residential parking spaces, vegetation trimming and removal, re-planting of vegetation, landscaping and street lighting adjustments Pavement re-surfacing and footpath widening works within Ivy Street Kiss and ride on Lawson Street, with associated footpath upgrade Relocation of shuttle bus zone from Little Eveleigh Street to Lawson Street Upgrade of Marian Street/Cornwallis Street/Rosehill Street would include the creation of an upgraded station entrance (at Marian Street) and shared zone, removal of approximately 16 parking spaces, trimming and removal of some trees, and adjustments to footpaths and street lights. 	High	Low	Moderate (Positive) The Project would have a high quality of architectural design and would be integrated into the surrounding setting with landscaping.
5 – Public recreation	<ul style="list-style-type: none"> Changes would be limited to Gibbons Street Reserve. These changes include: <ul style="list-style-type: none"> A new footpath upgrade located along the edge of the Reserve Removal of approximately two trees Little Eveleigh Street Reserve is adjacent to the street upgrades of Little Eveleigh Street. No works would occur in this reserve. 	High	Low	Moderate (Neutral) While the Project would have a high quality of architectural and landscape design, trees would be removed within and adjacent to the reserves, therefore the Project would result in both positive and negative changes. It is therefore considered to be an overall Moderate (neutral) change. Landscaping and replacement of trees would assist in mitigating impacts of the Project on landscape character.

Visual

Visual effects of the Project are assessed for the following key visual receptors:

- rail and bus commuters and motorists passing through or around Redfern Station
- workers in the nearby retail and hospitality sectors
- local residents surrounding the Station.

'Before' and 'after' photomontages were prepared for each of the above listed viewpoints.

Visual impacts associated with operation are discussed in

Table 9-6. Further detail on the influences of sensitive change and magnitude of change are provided in **Technical report 1 – Landscape and visual.**

Table 9-6 Operational visual impacts



Viewpoint	Anticipated change	Sensitivity of viewpoint	Magnitude of anticipated change	Significance of visual impact and summary of key points
Viewpoint 1 - Little Eveleigh Street (West)	<ul style="list-style-type: none"> A shared zone on Little Eveleigh Street, which would include: <ul style="list-style-type: none"> the relocation of approximately 20 restricted car parking spaces. shared zone including cars, cyclists and pedestrians sharing the new pavement on Little Eveleigh Street and new station entrance traffic signage and traffic calming devices vegetation trimming or removal landscaping and street lighting adjustments A new entrance to Redfern Station at the re-purposed warehouse building at 125-127 Little Eveleigh Street. 	High	Moderate	High to Moderate (Positive) The high quality of the proposed streetscape design, coupled with additional landscaping, would be a positive visual influence. The proposed concourse and new entrance would improve passive surveillance however would increase the number of pedestrians.



Figure 9-3 Viewpoint 1- Little Eveleigh Street West facing east (Source: Novo Rail)



Figure 9-4 Photomontage of Viewpoint 1 - Little Eveleigh Street West facing east with the Project in Place (Source: Novo Rail)

Viewpoint	Anticipated change	Sensitivity of viewpoint	Magnitude of anticipated change	Significance of visual impact and summary of key points
Viewpoint 2 - Little Eveleigh Street (East)	<ul style="list-style-type: none"> A shared zone on Little Eveleigh Street, which would include: <ul style="list-style-type: none"> the relocation of approximately 20 restricted car parking spaces shared zone including cars, cyclists and pedestrians sharing the new pavement on Little Eveleigh Street and new station entrance potential traffic signage and traffic calming devices potential vegetation trimming or removal landscaping and street lighting adjustments. It is worth noting that a system of co-design is underway which aims to ensure that the visual outcome of the streetscapes are in keeping with local residents requirements, as well as the preservation of the visual identity of the area. A new entrance to Redfern Station at the re-purposed warehouse building at 125-127 Little Eveleigh Street. The new entrance would include a new canopy, station signage, lighting and openings in the warehouse façade. 	High	Moderate	High to Moderate (Positive) The high quality of the streetscape design, coupled with additional landscaping, would be a positive visual influence to views along the streetscape, however, the addition of substantially more pedestrians within the road corridor could be viewed as positive or negative depending on the visual receptor.
				
Figure 9-5 Viewpoint 2- Little Eveleigh Street East facing west (Source: Novo Rail)		Figure 9-6 Photomontage of Viewpoint 2 - Little Eveleigh Street East facing west with the proposed street upgrade in place (Source: Novo Rail)		

Viewpoint	Anticipated change	Sensitivity of viewpoint	Magnitude of anticipated change	Significance of visual impact and summary of key points
Viewpoint 3 - Lawson Street	<ul style="list-style-type: none"> A shared zone would be created on Little Eveleigh Street, which would include: <ul style="list-style-type: none"> the relocation of approximately 20 restricted car parking spaces shared zone including cars, cyclists and pedestrians sharing the new pavement on Little Eveleigh Street and new station entrance potential traffic signage and traffic calming devices potential vegetation trimming or removal landscaping and street lighting adjustments new bicycle spaces adjacent to the fencing to the left of frame The proposed pedestrian concourse spanning the rail corridor, seen in the middle ground to background of the view. 	High	Moderate	High to Moderate (Positive) The change would be positive, particularly given the road resurfacing and addition of landscaping.



Figure 9-7 Viewpoint 3- Lawson Street facing south (Source: Novo Rail)



Figure 9-8 Existing view of Viewpoint 3- Lawson Street facing south with the Project in Place (Source: Novo Rail)

Viewpoint	Anticipated change	Sensitivity of viewpoint	Magnitude of anticipated change	Significance of visual impact and summary of key points
Viewpoint 4 - Lawson Street Concourse	<ul style="list-style-type: none"> The pedestrian concourse in the middle ground and background of view Covered stairways would be seen joining the pedestrian concourse with the existing platforms 1-10 New entrance at Marian Street Vegetation removal to the left of frame in the middle to background where the proposed pedestrian concourse joins Marian Street. 	Moderate	High	High to moderate (Positive) The addition of a large piece of infrastructure within a rail corridor is considered appropriate given the function-driven design of rail infrastructure. The high quality of design results in a positive change to the view from this location.



Figure 9-9 Viewpoint 4 - Lawson Street concourse facing south (Source: Novo Rail)

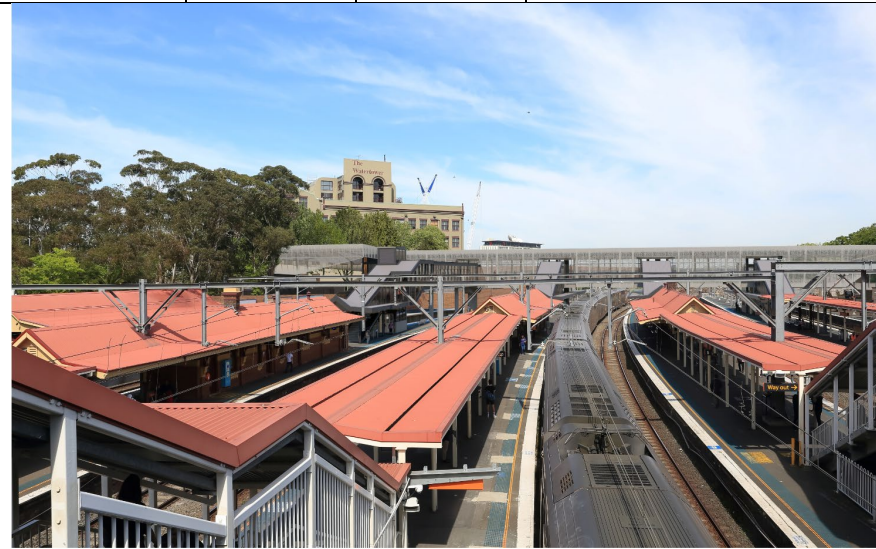


Figure 9-10 Photomontage of Viewpoint 4 - Lawson Street concourse facing south with the Project in Place (Source: Novo Rail)

Viewpoint	Anticipated change	Sensitivity of viewpoint	Magnitude of anticipated change	Significance of visual impact and summary of key points
Viewpoint 5 - Redfern Station platform	<ul style="list-style-type: none"> The proposed pedestrian concourse would be seen. The concourse would comprise of: <ul style="list-style-type: none"> six new steel and glass lifts and covered stairways connecting the concourse to Platforms 1 to 10 the concourse would be about six metres wide and span about 80 metres between Little Eveleigh Street and Marian Street Vegetation removal to the right of frame in the middle to background where the proposed pedestrian concourse joins Marian Street. 	Low	High	Moderate (Positive) The addition of a large piece of infrastructure within a rail corridor is considered appropriate given the function-driven design of rail infrastructure. The lower sensitivity of the visual receptor at this location decreases the visual impact rating from this viewpoint.



Figure 9-11 Viewpoint 5 - Redfern Station Platform facing north (Source: Novo Rail)



Figure 9-12 Photomontage of Viewpoint 5 - Redfern Station Platform facing north with the Project in Place (Source: Novo Rail)

Viewpoint	Anticipated change	Sensitivity of viewpoint	Magnitude of anticipated change	Significance of visual impact and summary of key points
Viewpoint 6 - Gibbons Street	<ul style="list-style-type: none"> At street level: <ul style="list-style-type: none"> a new kiss and ride on Gibbons Street upgrades and adjustments to footpaths and street lighting on Gibbons Street and Marian Street some vegetation removal or trimming From elevated residence and businesses: <ul style="list-style-type: none"> a new kiss and ride on Gibbons Street upgrades and adjustments to footpaths and street lighting on Gibbons Street and Marian Street the new Marian Street station entrance, shared zone and associated landscaping the new concourse spanning the rail corridor some vegetation trimming or removal. 	Moderate	Low	Moderate to low (neutral) The viewing distance and screening from existing vegetation from ground level rather than the sensitivity of the visual receptor at this location decreases the visual impact rating from this viewpoint.



Figure 9-13 Viewpoint 6 - Gibbons Street facing east (Source: Novo Rail)



Figure 9-14 Photomontage of Viewpoint 6 - Gibbons Street facing east with the Project in Place (Source: Novo Rail)

Viewpoint	Anticipated change	Sensitivity of viewpoint	Magnitude of anticipated change	Significance of visual impact and summary of key points
Viewpoint 7 - Marian Street	<ul style="list-style-type: none"> Road pavement and footpath upgrades to the existing shared zone used by cyclists and pedestrians on Marian Street and the retention of existing paving treatments on Cornwallis Street. Removal of 16 parking spaces including five unrestricted parking spaces, and eleven restricted parking spaces (signed two-hour restricted/permit holders unrestricted) Removal of vegetation The upgraded Marian Street station entrance, including: <ul style="list-style-type: none"> the new concourse to the left of the view about 20 additional bicycle spaces services building, station forecourt and seating areas station operational components including wayfinding and signage, gate lines, station signage and top up machines, CCTV and heritage interpretation and/or public art The proposed pedestrian concourse spanning the rail corridor. 	High	High	High (positive) The high quality of the design of the streetscape and station entrance would result in a positive visual influence to views within the streetscape. The proposed new entrance would increase pedestrians, and improve passive surveillance within the street, with improved visual amenity provided by the design.

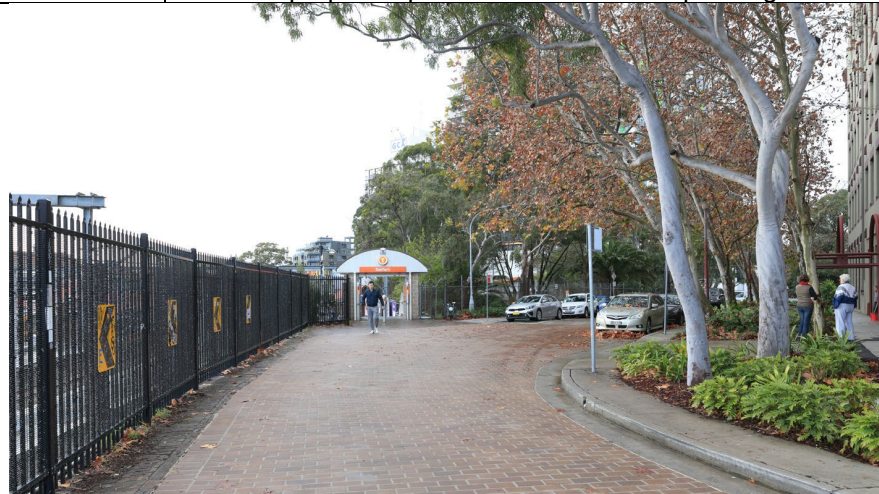


Figure 9-15 Viewpoint 7- Marion Street facing north-east (Source: Novo Rail)

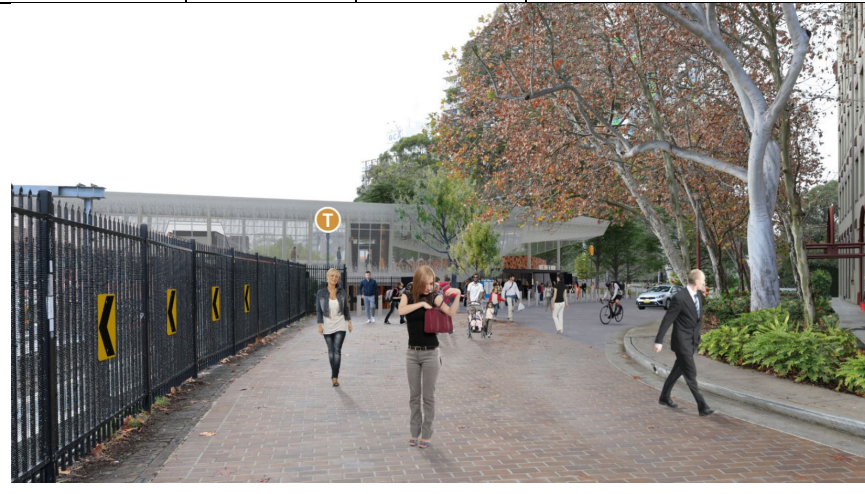


Figure 9-16 Photomontage of Viewpoint 7- Marion Street facing north-east with the Project in Place (Source: Novo Rail)

Viewpoint	Anticipated change	Sensitivity of viewpoint	Magnitude of anticipated change	Significance of visual impact and summary of key points
Viewpoint 8 - Rosehill Street	<ul style="list-style-type: none"> Road pavement and footpath upgrades to extend the existing shared zone on Marian Street and retention of existing paving treatments on Rosehill Street Removal of parking spaces Removal of vegetation The new Marian Street station entrance, including: <ul style="list-style-type: none"> about 20 new bicycle spaces services building station operational components including wayfinding and signage, Opal card readers and top up machines, ticket gates, CCTV, and heritage interpretation and/or public art Direct views along the proposed pedestrian concourse and the station precinct. 	Moderate	High	High (Positive) The high quality of the streetscape and station entrance design would result in a positive visual influence on views within the streetscape. The proposed station entrance would increase pedestrians, and improve passive surveillance within the street and within Gibbons Street Reserve, with improved visual amenity provided by the design.



Figure 9-17 Viewpoint 8 - Rosehill Street facing west (Source: Novo Rail)



Figure 9-18 Photomontage of Viewpoint 8 - Rosehill Street facing west with the Project in Place (Source: Novo Rail)

9.4.3 Summary of outcomes

Construction

During the construction period, the Project would result in a concentration of construction works at and around Redfern Station, reducing in intensity with distance from the Station. The construction activity at and immediately surrounding Redfern Station would be a significant visual change, however, these changes would be temporary and predominantly contained within the rail corridor, which is reasonably visually contained.

The construction activity would also include increased traffic, including heavy vehicles, using the access routes to and from the Project area. During the construction period at the ancillary facility areas, works were considered to have a Moderate and Low adverse or neutral effect. This result is primarily due to the existing use of most of the ancillary facility areas, which are typically industrial and rail-related, meaning that the change in use to ancillary facilities would not be a significant one, and would result in a similar view to these sites from their surrounds.

A summary of the Project on visual amenity during construction is shown in **Table 9-7**.

Table 9-7 Summary of effects on views and visual amenity

VIEWPOINT	SENSITIVITY	MAGNITUDE	SIGNIFICANCE OF VISUAL EFFECTS	ADVERSE	NEUTRAL	POSITIVE
ANCILLARY FACILITY 1 - EVELEIGH MAINTENANCE CENTRE	LOW	LOW	LOW		✓	
ANCILLARY FACILITY 2 - SYDNEY TRAINS	LOW	LOW	LOW		✓	
ANCILLARY FACILITY 3 - GIBBONS STREET RESERVE AND MARIAN STREET CAR PARK	MODERATE	MODERATE	MODERATE	✓		
REDFERN STATION	HIGH	HIGH	HIGH	✓		

Operation

Landscape character

Two of the five LCZs were subject to negligible change from the Project. LCZ (LCZ 1 - Rail Corridor) returned a high to moderate impact on landscape character. The Project is largely located within this LCZ which contains a number of items of State heritage significance and the addition of a large piece of infrastructure, has increased sensitivity to change. Heritage values within an area also increase the landscape value associated with this LCZ. While the changes are rated as high within this LCZ, they are considered acceptable due to the placement of the infrastructure within a working rail corridor. The reuse of an existing building on Little Eveleigh Street and the low profile station entry with landscaping at Marian Street assists in integrating the Project into the surrounding areas beyond the rail corridor, while the design of the pedestrian concourse is consistent in character with other existing infrastructure within the LCZ.

The other two LCZs affected were LCZ 4 - Residential and LCZ 5 - Public Recreation. The Project would lie next to these LCZs and affect only small proportions of each. The overall Moderate ratings for each of these LCZs were due to the high sensitivity of these LCZs rather than the magnitude of change, which was low in both cases. A summary of the Project on landscape character is shown in **Table 9-8**.

Table 9-8 Summary of effects on landscape character

LANDSCAPE CHARACTER ZONE	SENSITIVITY	MAGNITUDE	SIGNIFICANCE OF LANDSCAPE EFFECTS	ADVERSE	NEUTRAL	POSITIVE
LCZ 1 - RAIL CORRIDOR	HIGH	HIGH	HIGH			✓
LCZ 2: COMMUNITY AND EDUCATION	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE		✓	
LCZ 3 - TOWN CENTRE AND RETAIL	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE		✓	
LCZ 4 - RESIDENTIAL	HIGH	LOW	MODERATE			✓
LCZ 5 - PUBLIC RECREATION	HIGH	LOW	MODERATE		1	✓

1. Trees would be removed adjacent to one of the reserves (Gibbons Street Reserve), therefore the Project would result in both positive and negative overall changes and a neutral impact.

Visual amenity during operation

The effect of the Project on key views and visual amenity was considered a High (positive) effect (i.e. returned an overall rating of either High or High to Moderate) from seven out of the eight viewpoints. This was due to a combination of sensitive receptors at these locations, including residential receptors or recreational users of public open space, and a highly visible new structure (the proposed concourse), two new station entries bringing substantial pedestrian movement into residential streets, and road upgrades to the east and west of the rail corridor. The change was considered positive from all but one location, where it was deemed neutral due to the viewing distance to the Project and screening vegetation. The positive result was due to the upgrade of the streetscapes in Little Eveleigh Street and Marian Street/Cornwallis Street/Rosehill Street to include shared zones, and the high quality of design of the new/upgraded station entrances and pedestrian concourse. A summary of the Project on visual amenity during operation is shown in **Table 9-9**.

Table 9-9 Summary of effects on views and visual amenity during operation

VIEWPOINT	SENSITIVITY	MAGNITUDE	SIGNIFICANCE OF VISUAL EFFECTS	ADVERSE	NEUTRAL	POSITIVE
VIEWPOINT 1 - LITTLE EVELEIGH STREET WEST	HIGH	MODERATE	HIGH TO MODERATE			✓
VIEWPOINT 2 - LITTLE EVELEIGH STREET EAST	HIGH	MODERATE	HIGH TO MODERATE			✓
VIEWPOINT 3 - LAWSON STREET	HIGH	MODERATE	HIGH TO MODERATE			✓
VIEWPOINT 4 - LAWSON STREET OVERBRIDGE	MODERATE	HIGH	HIGH TO MODERATE			✓
VIEWPOINT 5 - REDFERN STATION PLATFORM	MODERATE	HIGH	HIGH TO MODERATE			✓
VIEWPOINT 6 - GIBBONS STREET	MODERATE	LOW	MODERATE TO LOW		✓	
VIEWPOINT 7 - MARIAN STREET	HIGH	HIGH	HIGH			✓
VIEWPOINT 8 - ROSEHILL STREET	MODERATE	HIGH	HIGH TO MODERATE			✓

9.5 Management and mitigation measures

9.5.1 Overview

A CEMF (**Appendix D** of the EIS) describes the approach to environmental management, monitoring and reporting during construction. Specifically, it lists the requirements to be addressed by the construction contractor in developing the CEMP, sub-plans, and other supporting documentation for each specific environmental aspect.

A Visual Amenity Management Sub-Plan would be developed for the Project as identified by Section 6.4 of the CEMF.

The chapter includes a compilation of the performance outcomes and mitigation measures, including those that would be included in the Visual Amenity Management Sub-Plan of the CEMP.

9.5.2 Performance outcomes

Landscape character and visual impacts from construction and operation of the Project can be mitigated through the use of a range of measures, with the objective that the Project meets a range of performance outcomes. The landscape character and visual performance outcomes for the Project are as follows:

- construction sites and compounds are planned and managed to minimise adverse visual effects
- the obtrusive effects of lighting are minimised during construction
- the obtrusive effect of lighting are minimised during operation
- materials and finishes for the concourse are selected with consideration of minimising visual impacts
- additional tree removal and trimming of vegetation is avoided where possible to minimise changes in landscape character
- there is a net increase in trees within the vicinity of the Project area to minimise adverse landscape impacts
- community artwork investigated and included as appropriate
- graffiti avoidance measures are incorporated into the design.

9.5.3 Mitigation measures

A list of mitigation measures which would be implemented during the Project are provided in **Table 9-10**.

Table 9-10 Mitigation measures

ID	Mitigation measure	Applicable location(s)
Construction		
LV1	Provide well-presented and maintained construction hoarding and site fencing with shade cloth (or similar material) (where necessary) to minimise visual impacts on key viewpoints during construction. The construction ancillary facilities would be designed to limit or deter graffiti. Hoardings, site and acoustic fencing would be removed following construction completion.	Project area
LV2	Provide cut-off or directed lighting within the construction areas, with lighting location and direction considered to ensure glare and light spill is minimised.	Project area
LV3	Construction personnel to keep the construction areas clean and tidy, including refuse placed in appropriate waste bins.	Project area
LV4	Implement measures to minimise tracking of dirt and mud into public roads and other public spaces.	Project area
LV5	Limit disturbance of vegetation to the minimum amount necessary to construct the Project, particularly within the streetscapes affected by the Project.	Project area

ID	Mitigation measure	Applicable location(s)
LV6	Consider measures to limit or deter graffiti within ancillary facilities.	Ancillary facilities
Operation		
LV7	Community artwork opportunities would be investigated in keeping with existing cultural artwork in Redfern surrounding the station.	Pedestrian concourse
LV8	Street trees would be planted on Little Eveleigh Street and Marian Street at the new station entrances. Tall shrub plantings would also be considered along the rail corridor boundary at Marian Street to assist in preserving privacy of residents within the Watertower residential building.	Little Eveleigh Street and Marian Street
LV9	Lighting would be designed to minimise upward spread of light, and to minimise light spill and glare.	Project area
LV10	Proposed structures/fencing would be designed to limit or deter graffiti.	Project area
LV11	The ongoing maintenance and repair of the concourse and station entrances would be in accordance with Sydney Trains maintenance requirements.	Project area

The construction activity at and immediately surrounding Redfern Station would be a significant visual change, however, these changes would be temporary and predominantly contained within the rail corridor. Despite the proposed mitigation, there would be a residual construction visual amenity impact.

Overall, the effects of the Project on landscape character and visual amenity during operation were considered largely positive, especially within LCZ 1 - Rail Corridor.

These residual impacts of the Project, post mitigation, is discussed in **Chapter 23** of this EIS.