8 Urban design

An Urban Design and Public Domain Plan (DesignInc, 2020) has been prepared for the Project and is included in **Appendix C** of this EIS. This chapter summarises the key aspects of that plan, and how the Project has been designed to address the SEARs.

8.1 Introduction

This chapter considers the potential urban design benefits and constraints arising from the Project. The scope of this urban design assessment is to:

- describe how the document: Urban Design and Public Domain Plan informs the detailed design of the Project
- assess the Urban Design and Public Domain Plan against the SEARs and outline how those requirements have been addressed
- provide recommendations on measures to be implemented in further detailed design planning in order to meet the relevant urban design objectives and requirements of the SEARs.

The relevant urban design SEARs are outlined in **Table 8-1**.

Table 8-1 SEARs

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**
2. identify accessibility elements and assess impacts on: 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**
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**
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** in **Chapter 9**
5. identify how the Project will achieve a net increase in tree canopy in the vicinity of the project.	**Section 8.4.5** and **Section 9.5.1** in **Chapter 9**
6. address the maintenance of the Project.	**Section 8.4.6**

8.2 Method of assessment

The methodology used to address the urban design considerations and public domain implications for the Project involved:

- review of the Urban Design and Public Domain Plan (**Appendix C** of this EIS) to understand the study area identified for this assessment

- a site inspection of the station and public domain to identify urban design constraints and opportunities
- review the urban design objectives of the Project to confirm whether they enhance the station amenity and integration with the surrounding area. The Project objectives were developed based on the NSW Government's '*Better Placed*' guidelines and TfNSW's policy document '*Around the Tracks – urban design for heavy and light rail*'
- review of existing urban design studies and strategies for areas affected by the Project. These include:
  - Central to Eveleigh Urban Transformation Strategy, Urban Growth NSW, 2016
  - North Eveleigh Concept Plan, for Redfern-Waterloo Authority, URBIS, 2008
  - Heritage Interpretation Plan Redfern Train Station, Interim Final Report, Curio Projects, 2018
  - Eveleigh Works Interpretation Plan, prepared for State Rail Authority NSW, Paul Davies Pty Ltd, Architects Heritage Consultants, 2000
- assessment of the temporary impact of construction of the Project on the public domain and setting of the study area
- assessment of whether measures to create, promote and enhance connectivity across the rail corridor, as identified in the Urban Design and Public Domain Plan are effective
- assessment of whether there are impacts to connectivity associated with the Project
- demonstration of how the proposed urban design and public domain elements would be consistent with the existing and desired future character of the area.

8.3 Existing environment

8.3.1 Study area

The study area for this assessment is delineated by Lawson Street to the north, Gibbons Street to the east, Marian Street and South Eveleigh to the south, and Little Eveleigh Street and the North Eveleigh Carriageworks site to the west.

The existing northern concourse at Redfern Station is located at the high point of the surrounding neighbourhood of Redfern with expansive views of the city skyline to the north. The existing station is open and located within a cutting. There are views over the existing heritage platform buildings from the northern concourse across to Marian Street, Little Eveleigh Street to the rail corridor and South Eveleigh.

The southern end of Redfern Station is characterised by more public open space within the sloping Gibbons Street Reserve and South Eveleigh. It also borders residential areas, such as the Watertower building, residences on Little Eveleigh Street, and the North Eveleigh Precinct lands.

Land use in the area primarily comprises low density residential, commercial and mixed-use and includes South Eveleigh and Carriageworks. The built form character of Redfern Station is defined by the heritage of its mid-Victorian architecture of the station and surrounding suburbs.

Redfern was originally a working-class suburb inhabited by railway and factory workers. Redfern and the surrounding suburbs played a large role in the social network of railway workers throughout Sydney's history. During the late nineteenth and twentieth centuries, many Aboriginal people found employment in factories in Redfern (as well as Chippendale, Waterloo and Alexandria), though Aboriginal associations with Redfern became more pronounced in the 1970s when the Aboriginal Housing Company purchased properties there. To the present date Redfern Station has important ties to the local Redfern Aboriginal community.

In recent years, Redfern's location in close proximity to the city, has led to gentrification of the suburb giving rise to rising housing prices. However, there are still areas within Redfern-Chippendale and Waterloo-Beaconsfield experiencing high levels of unemployment, as well as a large number of social housing residences in these areas (ABS, 2016).

New high-rise residential developments have recently been completed between Regent and Gibbons Streets, with restaurants and shops activating these street fronts. A new residential conversion of the TNT buildings between Lawson and Redfern Street is being undertaken. A 24-storey student tower has been proposed for the former 'Block' site owned by the Aboriginal Housing Company (the Pemulwuy Project) and is currently under construction.

There are no commuter car parks near the station. Car parking to the west within North Eveleigh, and the car park to the east, accessed from Marian Street are currently used by Sydney Trains staff. Both timed and untimed public street parking in nearby streets including Cornwallis Street are available to the public.

The suburb of Darlington is located west of the station, and the suburb of Eveleigh to the south and west and includes Redfern Station. The areas west of the station, towards the University of Sydney, are characterised by two storey brick terraces, three storey warehouse conversions, and some heritage items related to the history of the railway yards, with a large portion of the area being designated as a Heritage Conservation Area or within the NSW State Heritage Listed Redfern Railway Workshops.

The main pedestrian pathways between the University of Sydney and Redfern Station are located along Little Eveleigh Street and Lawson Street.

The western side of the station around Little Eveleigh Street is characterised by street trees and small residential front porches and gardens, typical of the terrace housing typologies which frame the street. A small, paved plaza at the end of Little Eveleigh Street prevents vehicle movements accessing Wilson Street. There is also a small single-lot 'pocket' park in the middle of Little Eveleigh Street.

The street is narrow with street parking on one side and a narrow contraflow bike lane. The width of the footpaths is variable, between less than a metre to 1.8 metres wide. Such disparity occurs due to the number and diversity of elements which protrude or interfere with the footpaths along the edges of the street including street trees, entry steps to residences and planter beds.

The residential setbacks vary along the street frontage. In some cases, access to the residences occur directly off the footpath or with steps protruding onto the footpath, further reducing the footpath widths. There are several large gum trees near Ivy Lane to the northern end.

To the east of Redfern Station, tall residential apartments are typically newer developments, with ground floor commercial and retail uses with apartments above. Medium density residential apartment blocks are typically older buildings, with some comprising re-purposed industrial buildings fringing the rail corridor.

8.3.2 Urban design opportunities and constraints

Existing urban design constraints identified for the study area include:

- narrow footpaths along Little Eveleigh Street with vehicular/cyclist/pedestrian conflicts
- narrow platforms, in particular Platform 8/9, which limits the stair and lift landing locations
- the tunnel and vent stacks on and below Platform 1 limit the positioning of the concourse
- a narrow Marian Street shared zone route and stair access entry/exit point from Platform 10 to South Eveleigh resulting in a conflict between pedestrian and cars
- Redfern Station is listed on the NSW State Heritage Register
- the majority of the wider study area is within a Heritage Conservation Area
- the need to cater for the future developments within the precinct
- the level difference between Rosehill and Marian Streets, and Gibbons Street
- existing residential driveways on Little Eveleigh, Marian and Cornwallis Streets.

Urban design opportunities within the study area include:

- new pedestrian concourse providing east-west corridor access
- new lifts and stair access to all above ground platforms

- heritage interpretation opportunities provided by the heritage context of the Station and wider study area
- improved accessibility at Marian Street and Little Eveleigh Street through a new shared zone
- new station entries with an activated and enhanced public domain along Little Eveleigh and Marian Streets
- potential to maximise street trees, tree canopy and landscaped areas in the study area, with new paving treatments where possible
- additional bicycle parking
- new kiss and ride and community bus zone on Lawson Street and Gibbons Street.

8.4 Impact assessment

This section addresses each of the Place and Urban Design SEARs for the Project and provides commentary on how the urban design elements of the Project meet the SEARs. It considers:

- the 'Better Placed' guidelines
- how the Project addresses the accessibility elements of the Project
- how the Project has been designed, and the process for ongoing design development
- how the Project would result in a net increase in tree canopy
- how maintenance of the Project, including public domain, would be managed.

8.4.1 Urban design during construction

Construction of the Project would require the temporary use of barriers, hoardings and fences which have the potential to impact upon existing pedestrian and cyclist connectivity in the Project area. This could potentially increase the walking distances of customers while also potentially adding extra obstacles on already narrow footpaths.

While these impacts have a high potential to occur, they would be temporary and readily manageable through measures outlined throughout this EIS. Potential urban design impacts during construction are therefore considered minimal.

8.4.2 The objectives of 'Better Placed' guidelines

The Project design has been developed based on the built environment design policy of the NSW's Government Architect 'Better Placed' document and TfNSW's policy document *'Around the Tracks – urban design for heavy and light rail'*. The objectives of the '*Better Placed'*, as well as an assessment of the Project against these guidelines is provided below.

Objective 1 – Better Fit, contextual local and of its place

The Project would provide a clear alternative and direct route to cross Redfern Station. The Project would also re-establish the previous east-west link across the rail corridor that was once provided by the 1914 footbridge.

The Project would integrate with the surrounding neighbourhood by retaining the building at 125-127 Little Eveleigh Street, as it is a Contributory Item in the surrounding Darlington Conservation Area. The building is proposed to be adaptively re-used as a station entry with the interior of the station portion of the building to be transformed into a forecourt, exposing the heritage fabric of the building. Much of the exterior of the building would be retained, with a canopy opening to the ticket gate-line. The remainder of the building would be designed so as to not preclude other uses (e.g. retail and office space) in the future.

The existing station is State heritage listed and buildings within the station precinct would be retained. One station building on Platform 1 would be relocated further south along the platform to accommodate the new concourse. The design of the concourse is simple in form and colour, to both complement and be sympathetic to the existing heritage buildings.

The Marian Street entrance would be an open, shaded plaza area. The plaza would include seating, and pedestrian priority shared zones would provide an improved public amenity for the neighbourhood.

The proposed shared zone on Little Eveleigh Street and the extension to the existing shared zone on Marian Street would improve the public domain conditions, as well as, pedestrian accessibility to the surrounding neighbourhoods by reduced traffic speeds, improved pedestrian safety and enhanced walkability.

Objective 2 – Better Performance, sustainable adaptable and durable

The Project would establish a durable and sustainable station concourse and station entrance that would be resilient to changing climates. The materials chosen for the footbridge and stairs are durable and would provide weather protection to customers while allowing natural air flow. Rainwater harvesting would be used for toilets, cleaning and irrigation and would further improve the stations resilience and sustainability. The replacement of an asphalt footpath with paving treatments, as well as planting beds for new trees on Little Eveleigh Street would promote a more amenable public domain. The Project would therefore integrate water sensitive urban design (WSUD) into the public domain, resulting in overall sustainable outcomes.

Objective 3 – Better for Community, inclusive connected and diverse

The Project would provide connectivity and permeability across the rail corridor and into the station that is accessible to all using Platforms 1-10. The alignment of the bridge and location of new station entries allows for a direct, connection across the rail corridor.

A draft Heritage Interpretation Strategy (Tonkin Zulaikha Greer Architects, 2019) has been prepared for the Project. It highlights the way in which the Project seeks to engage with the local artists and Aboriginal community to use the station as an opportunity to tell their story through multiple heritage interpretation, landscape design and public artworks. Section 6.5 of **Chapter 5** of this EIS outlines the process for the engagement with the Aboriginal community during the next stages of the Project.

Objective 4 – Better for people, safe, comfortable and liveable

The Project would maximise the amenity of the public domain and multi-modal transportation connections through the development of a new public space at Marian Street and Marian Street shared zone. The proposed entry plaza at Marian Street would provide an inviting new station entry, with improved amenity, seating and shading, which would enliven the space, enabling activation and improved safety and security.

Positive public space outcomes would also be realised through a new shared zone on Little Eveleigh Street including improved planting areas in front of houses paving treatments along the entire length of the street and lighting upgrades providing improved amenity, safety and security.

The Project would enable access to the aboveground areas of the station with lift access being provided to and from Platforms 1-10. Unisex ambulant toilets and a family accessible toilet are provided in the re-purposed 125-127 Little Eveleigh Street building. A family accessible toilet would also be provided at the Marian Street entrance. The proposed concourse landings at platform level would extend to the existing station platform buildings and provide additional covered and shaded area on the station platforms.

The short, straight alignment of the Project also allows for clear sightlines that support better perceptions of safety. Crime Prevention Through Environmental Design (CPTED) techniques have also been incorporated into the design both within the concourse and externally of the Station.

Objective 5 – Better working, functional efficient and fit for purpose

The Project would allow for an easily navigable station that is designed for current and future growth of the neighbourhood and city. The concourse layout would be simple, clear, and consistent for improved wayfinding. The glazed viewing windows intermittently placed along the concourse would provide corridor views to the existing heritage station and platform buildings as well as landmarks such as South Eveleigh and the Eveleigh Railway Workshops assisting with customer orientation and appreciation of the heritage items within the precinct.

Objective 6 – Better value, creating and adding value

The Project would improve public amenity and allow for future growth and activation of spaces by providing new public space at Marian Street.

The shared zone upgrade to Little Eveleigh Street would transform the existing street which consisted of street parking into a pedestrian focussed public domain, with visual separation and privacy for residents using planted edge treatments and soft lighting. The new shared zone on Little Eveleigh Street would provide improved landscape and urban design outcomes.

The Project would offer the opportunity of expanding the walking catchment of Redfern Station and the local community. These changes would enhance the customer experience. The improved station precinct is expected to encourage more pedestrian activity and passive surveillance, which may discourage antisocial behaviour such as graffiti and vandalism. Furthermore, possible abatement measures, such as garden buffers and landscaping to separate properties from pedestrians would be considered during detailed design.

Objective 7 – Better look and feel, engaging, inviting and attractive

The Project would provide a design that is inviting, engaging, and visually attractive. It would integrate views, vistas, and heritage interpretation to engage users. It is visually interesting on its own while providing a backdrop to the existing station precinct to the north.

8.4.3 Accessibility

The following key features of the Project demonstrate how pedestrian and cyclist access, amenity and safety would be maintained or improved by the design of the Project:

- the alignment of the bridge and location of new station entries provide a direct cross corridor connection between Little Eveleigh Street and Marian Street
- transport gate lines are proposed at the entrance to the concourse off Marian Street and at the repurposed 125-127 Eveleigh Street, with the footbridge to have a straight alignment across the corridor. From the top of stair at Marian Street concourse there is a clear sightline to Little Eveleigh Street
- the Project layout is simple, clear, and consistent
- improved cyclist amenities including new bike hoops on the north end of Little Eveleigh Street, with new landscaped areas to provide a visual and physical buffer to residences, and new bike hoops adjacent to the Marian Street entrance
- restricted speeds for traffic improving safety for cyclists and pedestrians in both directions.

8.4.4 The design process

The design process for the Project has included the following stages:

- precinct and site context analysis and familiarisation
- opportunities and constraints analysis
- design optioneering
- multi-criteria analysis
- four design review panel sessions with the independent TfNSW Design Review Panel between September 2018 and November 2019
- public and stakeholder consultation throughout 2019 and 2020
- customer centred design.

The concept design development has been developed through an iterative and collaborative approach. Further details on this process is provided in **Chapter 4** of this EIS.

The detailed design process will continue to be informed by stakeholder consultation, and will be subject to review by the independent TfNSW Design Review Panel.

8.4.5 Tree canopy

Removal of several street trees is required for the construction of the Project. The design has and would continue to be informed by the TfNSW *Tree Offset Guide* (TfNSW, 2019), and a positive balance in tree planting would be achieved through new tree planting in the areas surrounding the Station, including along Little Eveleigh Street and Marian Street.

Tree removal would be mitigated using the following principles outlined in the *Tree Offset Guide*:

- offset 100 per cent of any vegetation cleared
- achieve an 'improved or maintained' ecological outcome when offsetting impacts on native vegetation
- offset the heritage, public amenity and/or visual landscape value of any trees removed where they may not have ecological value.

Project commitments regarding an increase in tree canopy are provided in **Chapter 9** of this EIS and the potential biodiversity impacts of the Project are discussed in **Chapter 16** of this EIS.

8.4.6 Maintenance

The Project has been designed to consider the cost of maintenance. The Project would include perforated metal screens as part of the design of the concourse would better conceal dirt and graffiti that is difficult to remove compared to other materials such as glass.

Maintenance of public domain elements along Little Eveleigh Street and Marian Street would be the responsibility of City of Sydney.

Maintenance of the train station facilities and concourse would be the responsibility of Sydney Trains.

Where there would be maintenance requirements, cladding and external material choices have been chosen in consultation with City of Sydney and Sydney Trains and informed by their feedback.

8.5 Management and mitigation

8.5.1 Overview

A CEMF (**Appendix D** of this 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.

Urban design of the temporary construction works is a key consideration of the CEMP. The management of these works would be developed for the Project as identified by Section 6.4 of the CEMF. Further, an Urban Design and Public Domain Plan has been prepared early in the design process to ensure that urban design is a key consideration in the design (refer to **Appendix C** of the EIS).

The section includes a compilation of the performance outcomes and mitigation measures, including those that would be included in the CEMP.

8.5.2 Performance outcomes

The performance outcomes for the Project in relation to Urban Design include:

- minimal impacts to existing structures during construction
- a public domain that is accessible, legible and safe during construction
- a public domain that is accessible, legible and safe during operation
- public domain finishes reference the City of Sydney Public Domain Manual
- selection of materials that are durable and easy to maintain during operation
- clear pedestrian circulation space inside and outside the station, at station entries and adjoining streets during operation

- landscaping with street trees selected for canopy and shade.

The Project would be designed, constructed and operated to achieve these performance outcomes.

8.5.3 Mitigation

A list of mitigation measures which would be implemented during the construction and operation of the Project are provided in **Table 8-2**.

Table 8-2 Mitigation measures

ID	Mitigation Measure	Applicable location (s)
Construction		
UD1	Tree retention and planting would continue to be a key priority in informing design decisions throughout detailed design.	Project area
Operation		
UD2	A maintenance plan would be prepared in consultation with City of Sydney and TfNSW outlining the maintenance responsibilities of each entity with a particular focus on the transition areas between the public domain and the Station.	Project area