

# Chapter 11

Landscape and visual amenity



# 11 Landscape and visual amenity

This chapter provides an assessment of the potential impact on landscape and visual amenity as a result of this proposal, and identifies mitigation measures to minimise these impacts. This chapter draws on information provided in Technical Paper 5 (Landscape and visual impact assessment).

## 11.1 Overview

The proposal would be located within highly modified urban environments of The Bays, Pyrmont and the Sydney CBD. The existing environment at the construction sites includes:

- The Bays tunnel launch and support site has a wide visual catchment and is in an area of neighbourhood sensitivity. The surrounding area is in transition, with several major projects under construction near the site
- The Pyrmont Station construction sites have a limited visual catchment, as they would be in a dense urban area with low and medium-rise character terrace buildings, modern commercial and residential buildings, medium and high density apartments and former warehouse buildings and local hotels at prominent corner sites. There are areas of local and regional visual sensitivity with the western site being within a heritage conservation area and the eastern site being visible from the State listed heritage item Pyrmont Bridge
- The Hunter Street Station (Sydney CBD) construction sites would be in the heart of Sydney's CBD, with a limited visual catchment due to the dense urban setting. The setting and views of this area are of local and regional sensitivity. The construction sites would be within view of some of the city's most visited streets and public domain, and would be a short walk from some of Sydney's most prominent and visible landmarks and attractions, including George Street, Martin Place, Hyde Park, and Circular Quay.

Construction mitigation measures to manage potential landscape and visual impacts of the proposal include addressing matters such as opportunities for tree retention or protection of street trees, appearance of acoustic sheds and site hoarding during construction, minimising lighting impacts and removal of graffiti.

The assessment of landscape considers the impacts of this proposal on the built, natural and cultural character or sense of place of the surrounding area. The proposal would have negligible to moderate landscape impacts during construction primarily due to the removal of buildings and trees, and establishment of site hoarding, acoustic sheds and construction activities.

Specifically, the following temporary landscape impacts are expected:

- The Bays tunnel launch and support site – Negligible impacts
- Pyrmont Station construction sites – Minor impacts
- Hunter Street Station (Sydney CBD) construction sites – Minor to moderate impacts.

The visual impact assessment considers the impacts of this proposal on views. The following temporary day time visual impacts are expected:

- The Bays tunnel launch and support site – Negligible to minor impacts
- Pyrmont Station construction sites – Minor to moderate impacts
- Hunter Street Station (Sydney CBD) construction sites – Minor to moderate impacts.

Temporary changes to visual amenity at night to the area surrounding the construction sites are as follows:

- The Bays tunnel launch and support site – Negligible impact
- Pyrmont Station construction sites – Minor impacts
- Hunter Street Station (Sydney CBD) construction sites – Negligible impacts.

## 11.2 Legislative and policy context

The Secretary's Environmental Assessment Requirements relating to landscape and visual amenity, and where these requirements are addressed in this Environmental Impact Statement, are outlined in Appendix A.

The landscape and visual amenity impact assessment was carried out with reference to the following guidelines, policies and standards:

- *A Metropolis of Three Cities – the Greater Sydney Region Plan* (2018)
- *Our Greater Sydney 2056 Eastern City District Plan - Connecting communities* (2018)
- *Around the Tracks: Urban Design for Heavy and Light Rail* (Transport for NSW, 2016)
- *Better Placed: A design led approach: developing an Architecture and Design Policy for New South Wales* (Office of the State Government Architect NSW, 2016)
- *Sydney Green Grid – Spatial Framework and Project Opportunities* (Office of the State Government Architect NSW, 2017)
- *Greener Places – An urban green infrastructure design framework for New South Wales* (Office of the State Government Architect NSW, 2020a)
- *Draft Greener Places Design Guide – Open Space for Recreation Urban Tree Canopy Bushland and Waterways* (Office of the State Government Architect NSW, 2020b)
- *Draft Bays West Place Strategy and associated documents including draft Urban Design Framework, Strategic Place Framework, and Sustainability and Connecting with Country Framework* (Department of Planning, Industry and Environment, 2021)
- *Blackwattle Bay State Significant Precinct Study* (Department of Planning, Industry and Environment (DPIE), 2021)
- *Pyrmont Peninsula Place Strategy* (Department of Planning, Industry and Environment, 2020).
- *Inner West Council Local Strategic Planning Statement* (Inner West Council, 2020)
- *City Plan 2036: Local Strategic Planning Statement* (City of Sydney, 2020a)
- *Central Sydney Planning Strategy* (City of Sydney, 2020b)
- *The National Urban Design Protocol* (Australian Sustainable Built Environment Council, 2011)
- *Evaluating Good Design* (Office of the State Government Architect NSW, 2018)
- *Environmental impact assessment practice note EIA-N04: Guideline for landscape character and visual impact assessment* (Transport for NSW, 2020).
- *White Bay Power Station Conservation Management Plan (Design 5 Architects. & Sydney Harbour Foreshore Authority, 2004).*

A range of legislation, policies and planning strategies from international, federal, State and local government agencies were also considered in the assessment of potential landscape and visual impacts as described in Chapter 3 of Technical Paper 5 (Landscape and visual impact assessment).

## 11.3 Assessment methodology

Landscape and visual amenity were assessed to identify the likely impacts arising from this proposal. The assessment methodology for landscape and visual impacts is outlined below and generally involved:

- A review of the relevant legislative and policy framework
- Identification of the existing environmental conditions
- Description of the components and character of this proposal
- An assessment of landscape impacts during construction (refer to Section 11.3.1)
- An assessment of the daytime visual impacts during construction (refer to Section 11.3.2)
- An assessment of night-time visual impacts during construction (refer to Section 11.3.3)
- Identification of mitigation measures.



The assessment of landscape considers the impacts of this proposal on the built, natural and cultural character or sense of place of the surrounding area, whereas the visual impact assessment considers the impacts of this proposal on views and public amenity. The surface construction sites and power supply route were assessed for potential landscape and visual amenity impacts and an assessment was not required of the underground tunnelling.

Photomontages from selected viewpoints are provided for most construction sites where acoustic sheds are proposed. Additional figures for all construction sites are provided in Technical Paper 5 (Landscape and visual impact assessment) showing the extent of each construction site from a range of viewpoints.

### 11.3.1 Landscape impact assessment

The *Environmental impact assessment practice note EIA-N04 Guideline for landscape character and visual impact assessment* (Transport for NSW, 2020) defines landscape as ‘all aspects of a tract of land, including landform, vegetation, buildings, villages, towns, cities and infrastructure’ and landscape character is defined as the ‘combined quality of built, natural and cultural aspects which make up an area and provide its unique sense of place’.

In an urban context, landscape refers not only to trees and areas of open space, but also the character and function of a place. This includes all elements within the public realm and the interrelationship between these elements and the people who use it.

Landscape sensitivity refers to the value placed on a landscape element or urban place and the level of service it provides to the community. The sensitivity of a landscape may reflect the frequency and volume of users in a location. It may also be valued for other characteristics such as tranquillity, visual relief and contribution to microclimate.

Considering the broadest context of possible landscapes, the degree of sensitivity of each landscape element to change was identified as either neighbourhood, local, regional, State or national (refer to Table 11-1).

There are no landscapes of Aboriginal cultural heritage value that would affect the landscape sensitivity levels. Non-Aboriginal heritage items and conservation areas have been considered in the landscape sensitivity ratings as they contribute to landscape character and community values. Complete assessments of the impacts of the proposal on non-Aboriginal heritage are presented in Technical Paper 3 (Non-Aboriginal heritage).

Table 11-1 Landscape sensitivity

Landscape sensitivity	Description
<b>National</b>	Landscape feature protected under national legislation or international policy, e.g. The Governors' Domain and Civic Precinct which is on the National Heritage List, and forecourt of the Sydney Opera House which is World Heritage listed.
<b>State</b>	Landscape feature that is heavily used and/or is iconic to the State, e.g. Martin Place, Hyde Park, Barangaroo Headland Park.
<b>Regional</b>	Landscape feature that is heavily used and valued by residents of a major portion of a city or a non-metropolitan region, e.g. Tumbalong Park in Darling Harbour.
<b>Local</b>	Landscape feature valued and experienced by concentrations of residents and/or local recreational users. Provides a considerable service to the community. For example, it provides a place for local gathering, recreation, sport, street use by cafes and/or shade and shelter in an exposed environment e.g. Pyrmont Bay Park.
<b>Neighbourhood</b>	Landscape feature valued and appreciated primarily by a small number of residents e.g. street trees in a local street. Provides a noticeable service to the community. For example, it provides a seat or resting place, passive recreation and/or some shade and shelter in a local street.

To assess the changes to the landscape as a result of the proposal, the proposed changes are assigned a ‘magnitude of change’ level (refer to Table 11-2). The magnitude assigned considers direct impacts on the landscape such as the removal of trees and tree canopy, open space and public realm areas, as well as indirect impacts such as changes to the function of an area of open space or the public realm.

Table 11-2 Landscape magnitude of change

Landscape magnitude of change	Description
<b>Considerable reduction or improvement</b>	<b>Substantial portion of the landscape is changed.</b> This may include substantial changes to vegetation cover (trees and canopy), the area of open space or public realm area, accessibility, permeability, legibility and wayfinding, comfort and amenity, activation and safety, overshadowing, and diversity of the public realm.
<b>Noticeable reduction or improvement</b>	<b>A portion of the landscape is changed.</b> This may include some alteration to vegetation cover (trees and canopy), the area of open space or public realm area, accessibility, permeability, legibility and wayfinding, comfort and amenity, activation and safety, overshadowing, and diversity of the public realm.
<b>No perceived reduction or improvement</b>	<b>Either the landscape quality is unchanged or if it is, it is largely mitigated by public realm improvements.</b> Does not alter or not noticeably alter the vegetation cover (trees and canopy), the area of open space or public realm area, accessibility, permeability, legibility and wayfinding, comfort and amenity, activation and safety, overshadowing, and diversity of the public realm.

To assess the landscape impact, the sensitivity of the landscape (refer to Table 11-1) and the likely landscape magnitude of change (refer to Table 11-2) are combined (refer to Table 11-3).

Table 11-3 Landscape impact levels

Landscape magnitude of change	Landscape sensitivity				
	National	State	Regional	Local	Neighbourhood
<b>Considerable reduction</b>	Very high adverse	Very high adverse	High adverse	Moderate adverse	Minor adverse
<b>Noticeable reduction</b>	Very high adverse	High adverse	Moderate adverse	Minor adverse	Negligible
<b>No perceived change</b>	Negligible	Negligible	Negligible	Negligible	Negligible
<b>Noticeable improvement</b>	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial	Negligible
<b>Considerable improvement</b>	Very high beneficial	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial

### 11.3.2 Daytime visual impact assessment

This visual impact assessment considers visual amenity as experienced by various receivers and aims to identify the range of views to the proposal which may be impacted, including views from residential areas, offices, parks and streets.

To address potential visual amenity impacts, assessments were carried out by identifying the:

- Existing visual conditions
- Views that are representative of these conditions
- Sensitivity of the view
- Magnitude of change expected as a result of this proposal
- Overall assessment of the level of impact.

The proposal would occur for a temporary period and the level of visual magnitude of change assessed would only apply for the duration of proposal and does not consider the subsequent stages of construction or operation. The sensitivity of a viewpoint is considered in the broadest context of possible views, ranging from national to neighbourhood importance (refer to Table 11-4). The magnitude of change describes the extent of change expected from the proposal (refer to Table 11-5). To assess the overall impact on daytime visual amenity, the visual sensitivity and magnitude of change assessments are combined (refer to Table 11-6).

Table 11-4 Visual sensitivity levels – Daytime

Visual sensitivity	Description
<b>National</b>	Heavily experienced view to a national icon e.g. view to the Sydney Opera House from Circular Quay or the Domain, including assets such as Lady Macquarie's Chair. There are no nationally sensitive views within this proposal.
<b>State</b>	Heavily experienced view to a feature or landscape that is iconic to the State, e.g. view along the main avenue in Hyde Park, or a view to Sydney Harbour from Observatory Hill.
<b>Regional</b>	Heavily experienced view to a feature or landscape that is iconic to a major portion of a city or a non-metropolitan region, or an important view from an area of regional open space, e.g. Views to Pyrmont Bridge, a Sydney CBD skyline view from Centennial Park.
<b>Local</b>	High quality view experienced by concentrations of residents and/or local recreational users, local commercial areas and/or large numbers of road or rail users. Views with local visual features and/or landmarks. For example, a view to Chifley Square.
<b>Neighbourhood</b>	Viewers whose interest is not specifically focused on views e.g. workers. Views where visual amenity is appreciated by a small number of isolated residents, not particularly valued by the wider community.

Table 11-5 Visual magnitude of change – Daytime

Visual magnitude of change	Description
<b>Considerable reduction or improvement</b>	A substantial part of the view is altered. This proposal contrasts substantially with the surrounding landscape.
<b>Noticeable reduction or improvement</b>	A small to moderate part of the view is altered. This proposal contrasts with the surrounding landscape.
<b>No perceived reduction or improvement</b>	Either the view is unchanged or if it is, the change in the view is unlikely to result in a change in the amenity of the view. This proposal does not contrast with the surrounding landscape.

Table 11-6 Visual impact levels – Daytime

Landscape magnitude of change	Visual sensitivity (daytime)				
	National	State	Regional	Local	Neighbourhood
<b>Considerable reduction</b>	Very high adverse	Very high adverse	High adverse	Moderate adverse	Minor adverse
<b>Noticeable reduction</b>	Very high adverse	High adverse	Moderate adverse	Minor adverse	Negligible
<b>No perceived change</b>	Negligible	Negligible	Negligible	Negligible	Negligible
<b>Noticeable improvement</b>	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial	Negligible
<b>Considerable improvement</b>	Very high beneficial	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial

### 11.3.3 Night-time visual impact assessment

The assessment of night-time impacts has been carried out with a similar methodology to the daytime assessment. However, the assessment also draws upon the guidance contained within *Australian Standard 4282 Control of the obtrusive effects of outdoor lighting (AS4282) (2019)*.

AS4282 identifies environmental zones to categorise night-time landscape settings (intrinsically dark, dark, low district brightness, medium district brightness and high district brightness). The magnitude of change associated with the proposal is then determined based on whether the additional lighting would result in no perceived reduction or improvement, a noticeable reduction or improvement, or a considerable reduction or improvement.

Assessment of night-time visual impact has been made by combining the visual sensitivity of the environmental zone (refer to Table 11-7) with the night-time visual magnitude of change (refer to Table 11-8) for each area generally and assigning an impact level (refer to Table 11-9).

Table 11-7 Visual sensitivity levels - Night-time

Environmental zone	Environmental Zones (AS4282:2019)	
	Description	Examples
Very high	A0: Intrinsically dark	UNESCO Starlight Reserve IDA Dark Sky Parks Major optical observatories No road lighting - unless specifically required by the road controlling authority
High	A1: Dark	Relatively uninhabited rural areas No road lighting - unless specifically required by the road controlling authority
Moderate	A2: Low district brightness	Sparsely inhabited rural and semi-rural areas
Low	A3: Medium district brightness	Suburban areas in towns and cities
Very low	A4: High district brightness areas	Town and city centres and other commercial areas Residential areas abutting commercial areas

Table 11-8 Visual magnitude of change - Night-time

Magnitude of change	Description
Considerable reduction or improvement	Substantial change to the level of skyglow, glare or light intrusion would be expected. The lighting of this proposal contrasts substantially with the surrounding landscape at night.
Noticeable reduction or improvement	Alteration to the level of skyglow, glare or light intrusion would be clearly visible. The lighting of this proposal contrasts with the surrounding landscape at night.
No perceived reduction or improvement	Either the level of skyglow, glare and light intrusion is unchanged or if it is altered, the change is generally unlikely to be perceived by viewers. The lighting of proposal does not contrast with the surrounding landscape at night.

Table 11-9 Visual impact levels - Night-time

Visual magnitude of change	Visual sensitivity (night-time)				
	Very High / A0: Intrinsically dark	High / A1: Dark	Moderate / A2: Low district brightness	Low / A3: Medium district brightness	Very low / A4: High district brightness
Considerable reduction	Very high adverse	Very high adverse	High adverse	Moderate adverse	Minor adverse
Noticeable reduction	Very high adverse	High adverse	Moderate adverse	Minor adverse	Negligible
No perceived change	Negligible	Negligible	Negligible	Negligible	Negligible
Noticeable improvement	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial	Negligible
Considerable improvement	Very high beneficial	Very high beneficial	High beneficial	Moderate beneficial	Minor beneficial

## 11.4 Avoidance and minimisation of impacts

The design development of the proposal has included a focus on avoiding or minimising potential landscape and visual amenity impacts. This has included:

- Ensuring construction footprints are largely contained within the area that would be required for the future operational footprint where feasible and reasonable, which reduces the associated landscape and visual impacts by minimising the disturbance of additional land to establish construction sites
- Selection of tunnel boring machines to excavate the twin tunnels because they operate faster than other excavation machinery, resulting in a reduced construction timeframe and less disruption for the local community
- Restriction of construction vehicle timing and relevant haulage routes at the Pyrmont Station construction sites to minimise impacts to local amenity
- Identification of measures to further mitigate potential impacts, including opportunities for mitigation to address daytime and night-time impacts.

## 11.5 The Bays tunnel launch and support site

### 11.5.1 Existing environment

The *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a) assessed the impacts of The Bays Station construction site to:

- Carry out the excavation of The Bays Station
- Launch and support two tunnel boring machines for the drive west to the Sydney Olympic Park metro station construction site.

The Bays Station construction site is being established under the Sydney Metro West Concept and Stage 1 planning approval.

The Bays tunnel launch and support site would be located within a part of The Bays Station construction site. The impacts of the proposed use of The Bays tunnel launch and support site are assessed below.

The Bays tunnel launch and support site would be located mainly on the south-eastern foreshore of White Bay, to the east of the former White Bay Power Station. The foreshore land surrounding the power station is not publicly accessible and The Bays tunnel launch and support site would be located within The Bays Station construction site.

The Bays has a rich history of maritime, industrial and infrastructure uses with current uses including port freight and logistics services, commercial activities, and the White Bay Cruise Terminal. In White Bay there are several important features, including the former White Bay Power Station, which was opened in 1913; the Glebe Island grain silos, which were constructed in 1975; and the White Bay Cruise Terminal, which was opened in 2013. The State listed heritage item, the former White Bay Power Station, and the Glebe Island Silos (of local heritage significance) provide dominant visual landmarks and physical reminders of the site's industrial history.

The area is predominantly a working landscape, where the landform is highly modified and largely cleared for the purposes of portside industrial activity. This landscape is undergoing a transformation, with tunnel launch and support activities on The Bays Station construction site as part of major civil construction for Sydney Metro West between Westmead and The Bays, and several projects under construction in the vicinity of the site. The site and surrounding area have been largely cleared of vegetation, with some trees remaining along the boundary with Robert Street and adjacent to the Anzac Bridge. These trees are located behind fences so that they provide little contribution to the shade and amenity of the adjacent portside industrial and commercial areas.

The Bays landscape provides a setting for the industrial activities and are used mainly by workers from this area. The landscape is also currently used for The Bays Station construction site for Sydney Metro West. While this area contains several landmark buildings, including the former White Bay Power Station and Glebe Island grain silos, the landscape is not a highly valued feature of this environment, which primarily has a working function.

The Bays tunnel launch and support site would be visible from a wide visual catchment which extends from nearby industrial, commercial and portside areas in Rozelle and Glebe Island, residential areas to the north and west in Rozelle, and residential areas along the lower slopes of Balmain and Balmain East. There are distant views from Barangaroo Reserve and elevated areas of Millers Point including from the Sydney Observatory about 2.2 kilometres away.

There would also be elevated views from the south-west facing windows of the high density residential and commercial developments within Barangaroo and Pyrmont. Water based views to the site can be seen from public ferries travelling between Barangaroo, Pyrmont Bay and Balmain East, and from other watercraft using this part of Sydney Harbour.

From the west and south, views to the site are mostly obstructed by Victoria Road which is on elevated land as it rises to the Anzac Bridge and includes some areas of dense roadside vegetation.

The landscape and visual sensitivity of the area are summarised in Table 11-10.

Table 11-10 The Bays tunnel launch and support site - Landscape and visual sensitivity

Location	Sensitivity level
White Bay (including the site) and Glebe Island portside industrial and commercial areas	Neighbourhood
Views from Hornsey Street, Rozelle	Neighbourhood
Views from the Anzac Bridge Access Road shared use pathway	Local
Views south from Mansfield Street open space, Rozelle	Local
Views from Peacock Point Reserve, Balmain East	Local
Views from Barangaroo Reserve and across the harbour	Regional
Views at night	Low

### 11.5.2 Potential impacts

The key elements of the proposal at this construction site include:

- Removal of one commercial building
- Tunnel boring machine support services including high voltage power supply, spoil storage and removal, fresh air ventilation, work train, grout batching plant, water supply, water treatment and disposal, material storage as well as office facilities, worker amenities and parking, and storage of precast concrete lining elements
- An acoustic shed at the south-eastern part of the construction site
- The use of machinery and equipment such as mobile cranes, excavators, articulated dump trucks, concrete pumps etc.
- Noise barriers and hoardings surrounding the construction site.

#### Landscape impacts

As the foreshore land surrounding the power station is not publicly accessible, there would be no change in public access or permeability within this landscape. There would be no additional vegetation removed as a part of the proposal. Overall, impacts from the proposal would be contained and localised, and result in no perceived change in the landscape quality of the White Bay and Glebe Island portside industrial and commercial area.

Potential landscape impacts of the proposal are summarised in Table 11-11.

Table 11-11 The Bays tunnel launch and support site - Landscape impacts

Location	Sensitivity rating	Magnitude of change	Impact rating
White Bay (including the site) and Glebe Island portside industrial and commercial areas	Neighbourhood	No perceived change	Negligible

#### Daytime visual amenity impacts

Five representative viewpoints were used to assess potential visual amenity impacts of The Bays tunnel launch and support site as shown in Figure 11-1.



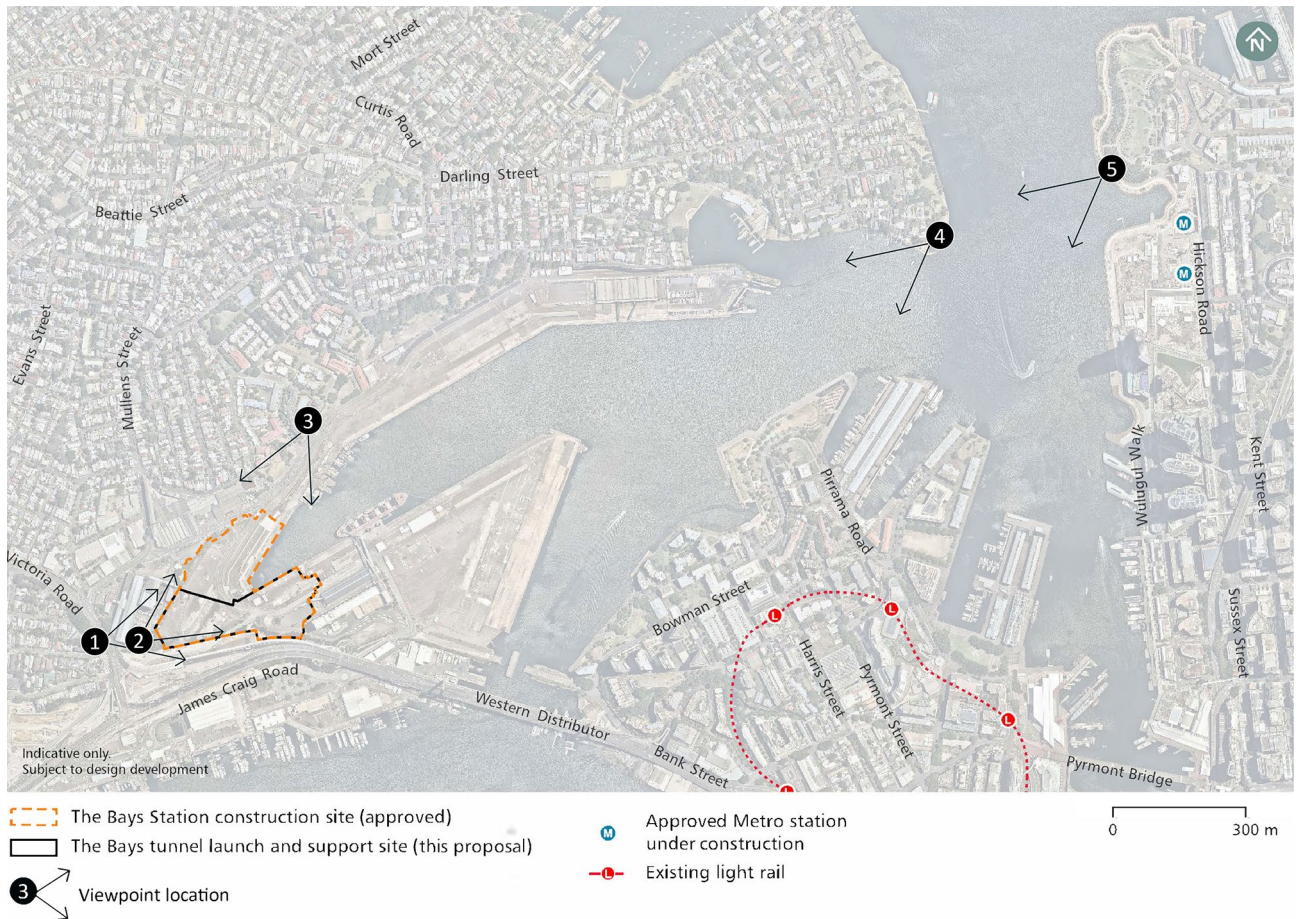


Figure 11-1 The Bays tunnel launch and support site – Representative viewpoints

The Bays tunnel launch and support site would occupy the southern and south-eastern part of The Bays Station construction site and would include an acoustic shed rising several stories above the site. This temporary structure would obstruct views to the harbour and northern foreshore area of White Bay, views to Balmain East, the suburbs of Rozelle, Annandale and Glebe, and distant views to the Harbour Bridge and North Sydney CBD. While The Bays tunnel launch and support site would extend across the middle ground of this view, intensifying the construction character of this view, and obstructing the view to the bay and wider Sydney landscape, it would be consistent in character and somewhat absorbed into the surrounding industrial and infrastructure dominated landscape.

There would be negligible and minor visual impacts due to the proposal on key viewpoints as described in Table 11-12. A comparison of the existing view with indicative views resulting from the proposal for viewpoints with an impact rating of minor adverse are provided in Figure 11-2 to Figure 11-5.

Table 11-12 The Bays tunnel launch and support site – Daytime visual amenity impacts

Viewpoint	Sensitivity rating	Magnitude of change	Impact rating
<b>Viewpoint 1: View east from Hornsey Street, Rozelle</b>	Neighbourhood	Noticeable reduction	Negligible
<b>Viewpoint 2: View north-east from Anzac Bridge Access Road shared use pathway</b>	Local	Noticeable reduction	Minor adverse
<b>Viewpoint 3: View south from Mansfield Street open space, Rozelle</b>	Local	Noticeable reduction	Minor adverse
<b>Viewpoint 4: View south-west from Peacock Point Reserve, Balmain East</b>	Local	No perceived change	Negligible
<b>Viewpoint 5: View south-west from Barangaroo Reserve, Barangaroo</b>	Regional	No perceived change	Negligible





Figure 11-2 The Bays tunnel launch and support site - Existing view from Viewpoint 2, from Anzac Bridge Access Road shared use pathway



Figure 11-3 The Bays tunnel launch and support site - View from Viewpoint 2, from Anzac Bridge Access Road shared use pathway, indicative extent of The Bays tunnel launch and support site (shown by blue shading)





Figure 11-4 The Bays tunnel launch and support site - Existing view from Viewpoint 3, south from Mansfield Street open space, Rozelle



Figure 11-5 The Bays tunnel launch and support site - View from Viewpoint 3, south from Mansfield Street open space, Rozelle, indicative extent of The Bays tunnel launch and support site (shown by blue shading)

### Night-time visual amenity impacts

The setting of The Bays tunnel launch and support site would be in an area of very low visual sensitivity (medium district brightness) as the area is already subject to existing night light sources including security lighting and vehicle headlights from the nearby Anzac Bridge and Victoria Road. Night work would be required within The Bays tunnel launch and support site. However, this would be mostly contained within the acoustic shed in the south-eastern part of the construction site and further screened by site hoarding, the elevated Anzac Bridge Access Road, and adjacent buildings and structures. The additional light sources and sky glow that would be seen from The Bays tunnel launch and support site would be absorbed into the existing moderately lit night scene.

Overall, there would be a no perceived change in visual amenity at night to the area surrounding the construction site, which is of low visual sensitivity, resulting in negligible visual impacts at night.

## 11.6 Pyrmont Station construction sites

### 11.6.1 Existing environment

The urban form in this part of Pyrmont is varied and includes low and medium-rise character terrace buildings, modern commercial and residential buildings, medium and high density apartments, former warehouse buildings and local hotels at prominent corner sites. The area contains some remnant buildings which exhibit a traditional village character, such as the locally listed heritage item Quarryman's Hotel on the corner of Pyrmont Bridge Road and Harris Street. The curved façade of the five-storey former wool store building (former 'Waite & Bull' building) is one of several historic commercial warehouse buildings in this part of Pyrmont. This building is located opposite Pyrmont Station western construction site, at the corner of Pyrmont Street and Pyrmont Bridge Road. These buildings, and the Pyrmont Station western construction site, form part of the Pyrmont Heritage Conservation Area, which is further described in Chapter 8 (Non-Aboriginal heritage).

As Pyrmont is predominantly an urban landscape, the small areas of public open space, including corner parks and plazas, provide visual relief and attract use by local residents and workers from adjacent commercial buildings. The Elizabeth Healy Reserve at the corner of Pyrmont Bridge Road and Harris Street, includes an open lawn area, terraced gardens, seating and several mature trees. Several mature fig trees in this reserve together with the large fig trees in the Samuel Hordern Fountain plaza, at the corner of Pyrmont Street and Pyrmont Bridge Road, and mature London Plane trees along Pyrmont Street, Edward and along Union Streets contribute to the character of the area.

Numerous listed heritage buildings, including the character terrace buildings on Pyrmont Street, former warehouses on Pyrmont Bridge Road, and several hotels located on surrounding streets add to the streetscape character, providing visual interest and reinforcing the heritage character of the area. There is a dedicated cycle lane along the northern side of Union Street, and awnings, mature street trees and gardens provide pedestrian scale and amenity to these streetscapes. The streets are activated, particularly in corner locations, with retail frontages, hotels, street cafes and alfresco dining. To the east of the eastern site is the State listed heritage item Pyrmont Bridge and Darling Harbour precinct.

The Pyrmont Station construction sites would each have a limited visual catchment, being located within a densely urban setting. The western construction site would be visible from the residential and commercial areas along Paternoster Row, Pyrmont Street and Pyrmont Bridge Road. This would include views from the rooftop terraces of the Quarryman's Hotel and properties along Paternoster Row, the Elizabeth Healey Reserve, the Samuel Hordern Fountain square at the corner of Pyrmont Bridge Road and Pyrmont Street, and the elevated residential and commercial properties on properties opposite.

The eastern construction site would similarly be seen from adjacent residential and commercial properties, including from Pyrmont Bridge Road, Edward Street, Union Street and along Little Edward and Harwood Street. This would include elevated views from commercial and residential properties opposite the site and views from several listed heritage buildings including the Pyrmont Bridge Hotel, Pyrmont Bridge Road Hotel, York Hotel and corner shop and residence 'Charmelu'. The eastern corner of the eastern construction site would be prominently located at the intersection of Pyrmont Bridge Road and Union Street, seen in westward views from the State listed heritage item Pyrmont Bridge.

Landscape and visual sensitivity levels are summarised in Table 11-13.

Table 11-13 Pyrmont Station construction sites – Landscape and visual sensitivity

Location	Landscape sensitivity level
<b>Pyrmont Station western construction site</b>	
Pyrmont Street and Pyrmont Bridge Road streetscapes	Local
Paternoster Row laneway	Local
Views from Paternoster Row, Pyrmont Bridge Road and Pyrmont Street	Local
<b>Pyrmont Station eastern construction site</b>	
Union Street, Edward Street and Pyrmont Bridge Road streetscapes	Local
Views from Union Street, Edward Street, Pyrmont Bridge Road and Union Street	Local
Views from Pyrmont Bridge	Regional
Views at night	Low

### 11.6.2 Potential impacts

The construction of Pyrmont Station would require two construction sites to be established including:

- The Pyrmont Station western construction site, which would cover about 1,250 square metres, located between Paternoster Row and Pyrmont Street, north of Pyrmont Bridge Road
- The Pyrmont Station eastern construction site, which would cover about 2,600 square metres, located between Edward Street, Union Street and Pyrmont Bridge Road.

The key activities and components of construction that would be seen at the Pyrmont Station construction sites include:

- Demolition of commercial buildings, structures and car parks
- Removal of vegetation within the site and potential removal of some street trees
- Possible trimming of some street trees may be required to provide appropriate clearance for trucks or large equipment
- Station shaft and cavern excavation activities and support, including spoil storage and removal, water supply, water treatment and disposal, temporary ventilation plant, material storage and office facilities, worker amenities and parking
- Acoustic sheds at both the western and eastern construction sites
- Adjustments to parking, public transport and pedestrian access, where required
- Hoarding surrounding the construction site including NSW Government branding
- Trenching works in streets to lay conduits for the power supply to the sites.

#### Landscape impacts

The Pyrmont Station western and eastern construction sites would require the demolition of all buildings within the construction sites, including the demolition of a somewhat prominent corner building at the western construction site and contemporary buildings at the eastern construction site, which contributes to the visual character of the adjacent streets.

The loss of these buildings would create a break in the continuity of the built form along both streets that would be filled by the acoustic shed which would provide a blank façade to Pyrmont Street and a blank façade with vehicle access on Pyrmont Bridge Road.

Construction vehicles accessing the sites would cross the footpath, which would detract from the character and pedestrian comfort along Pyrmont Bridge Road. London Plane street trees along Union Street would potentially be removed, reducing the continuity of the planting and reducing canopy coverage and the amenity of the street.

Potential landscape impacts are summarised in Table 11-14.



Table 11-14 Pyrmont Station construction sites – Landscape impacts

Location	Sensitivity rating	Magnitude of change	Impact rating
<b>Pyrmont Station western construction site</b>			
Pyrmont Street and Pyrmont Bridge Road streetscapes	Local	Noticeable reduction	Minor adverse
Paternoster Row laneway	Local	Noticeable reduction	Minor adverse
<b>Pyrmont Station eastern construction site</b>			
Union Street, Edward Street and Pyrmont Bridge Road streetscapes	Local	Noticeable reduction	Minor adverse

**Daytime visual amenity impacts**

Nine representative viewpoints were used to assess potential visual amenity impacts of the Pyrmont Station construction sites as shown in Figure 11-6.

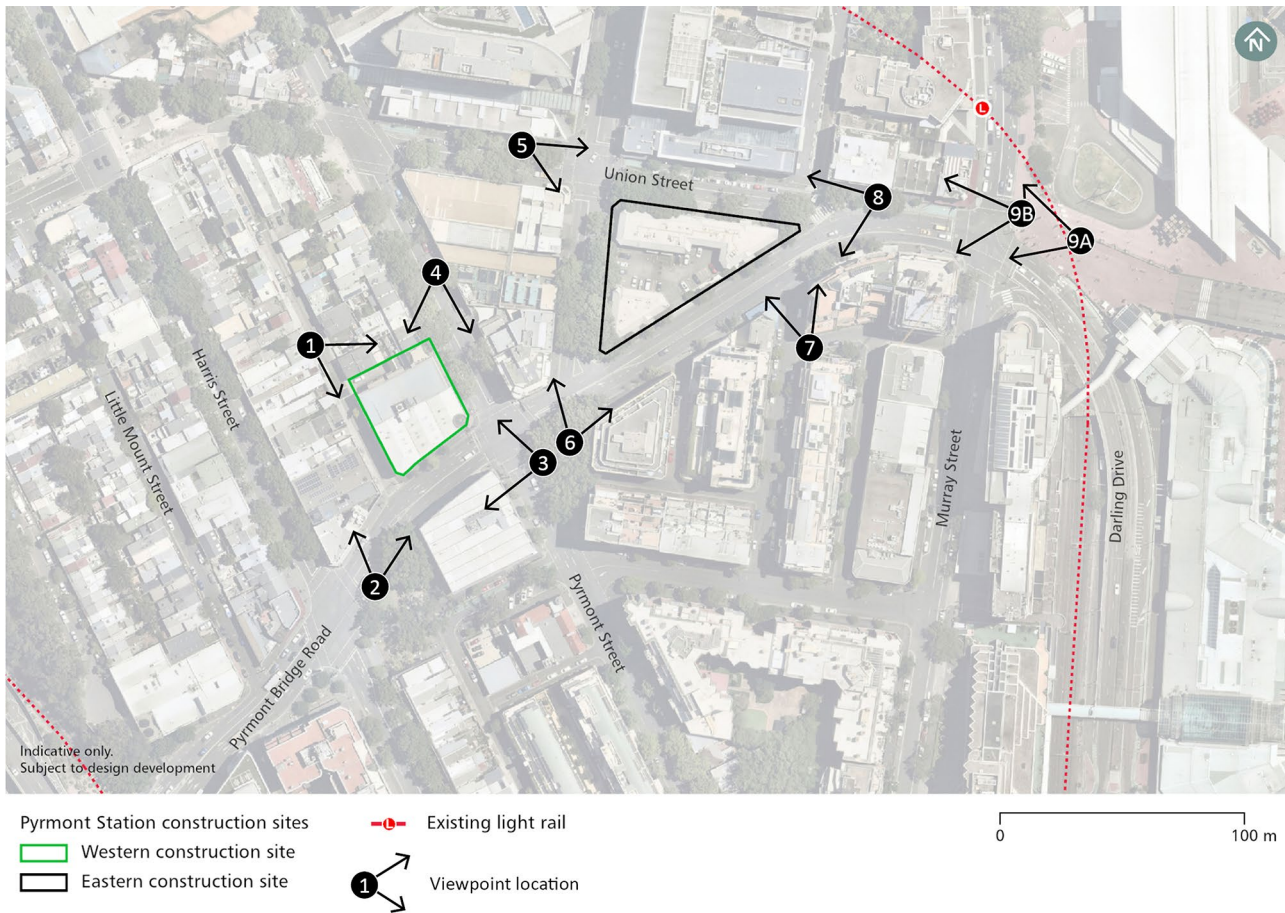


Figure 11-6 Pyrmont Station construction sites – Representative viewpoints

The main impacts to views associated with construction would result from the demolition of existing buildings, establishment of acoustic sheds and removal of mature existing street trees. During future detailed construction planning, further investigations will be undertaken to determine whether some of the street trees identified for removal could be retained (refer to Table 11-21). These impacts would be particularly noticeable from Viewpoint 5, Viewpoint 8 and Viewpoint 9 which would experience moderate adverse impacts.

Potential construction impacts on key viewpoints are summarised in Table 11-15.

A comparison of the existing view with the indicative views resulting from the proposal from viewpoints that have an impact rating of moderate adverse or above are provided in Figure 11-7 to Figure 11-12. The indicative extent of the acoustic sheds at the construction sites are also shown in Figure 11-13 to Figure 11-15.

Table 11-15 Pyrmont Station construction sites – Daytime visual amenity impacts

Viewpoint	Sensitivity rating	Magnitude of change	Impact rating
<b>Pyrmont Station western construction site</b>			
<b>Viewpoint 1: View south along Paternoster Row</b>	Local	Noticeable reduction	Minor adverse
<b>Viewpoint 2: View north east along Pyrmont Bridge Road</b>	Local	Noticeable reduction	Minor adverse
<b>Viewpoint 3: View west across the Pyrmont Bridge Road and Pyrmont Street Intersection</b>	Local	Noticeable reduction	Minor adverse
<b>Viewpoint 4: View south along Pyrmont Street</b>	Local	Noticeable reduction	Minor adverse
<b>Pyrmont Station eastern construction site</b>			
<b>Viewpoint 5: View east along Union Street</b>	Local	Considerable reduction	Moderate adverse
<b>Viewpoint 6: View north east to Edward Street and Pyrmont Bridge Road</b>	Local	Noticeable reduction	Minor adverse
<b>Viewpoint 7: View north along Harwood Street</b>	Local	Noticeable reduction	Minor adverse
<b>Viewpoint 8: View west from the corner of Union Street and Pyrmont Bridge Road</b>	Local	Considerable reduction	Moderate adverse
<b>Viewpoint 9: View west from Pyrmont Bridge</b>	Regional	Noticeable reduction	Moderate adverse
<b>Views along the Pyrmont power supply route</b>	Local	Noticeable reduction	Minor adverse



Figure 11-7 Pyrmont Station construction sites – Existing view from Viewpoint 5, east along Union Street



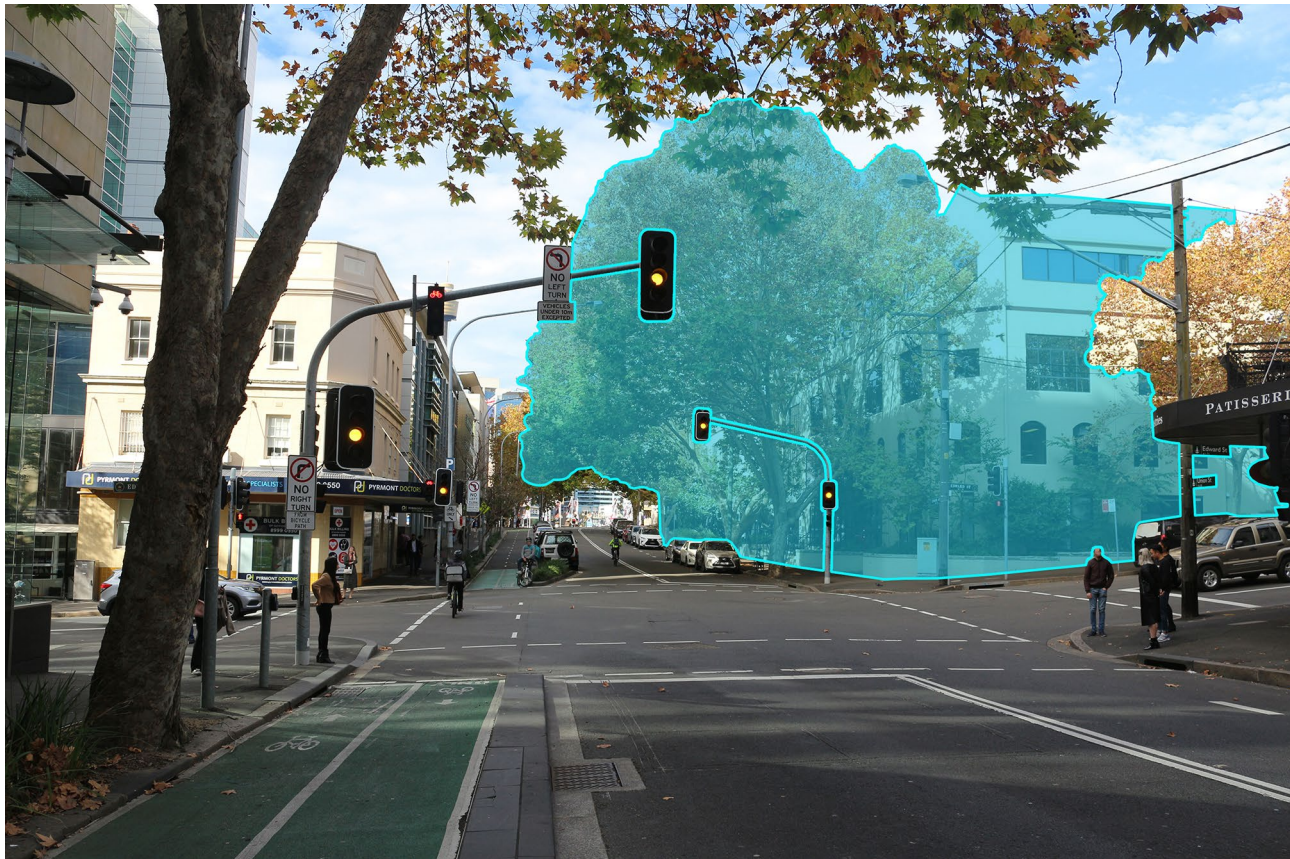


Figure 11-8 Pyrmont Station construction sites - View from Viewpoint 5, east along Union Street, indicative extent of demolition at Pyrmont Station eastern construction site (shown by blue shading)



Figure 11-9 Pyrmont Station construction sites - Existing view from Viewpoint 8, west from the corner of Union Street and Pyrmont Bridge Road





Figure 11-10 Pyrmont Station construction sites - View from Viewpoint 8, west from the corner of Union Street and Pyrmont Bridge Road, indicative extent of demolition at Pyrmont Station eastern construction site (shown by blue shading)



Figure 11-11 Pyrmont Station construction sites - Existing view from Viewpoint 9, west from Pyrmont Bridge





Figure 11-12 Pyrmont Station construction sites - View from Viewpoint 9, west from Pyrmont Bridge, indicative extent of demolition at Pyrmont Station eastern construction site (shown by blue shading)



Figure 11-13 Pyrmont Station construction sites - Photomontage from viewpoint 9, west from Pyrmont Bridge, indicative extent of acoustic shed at eastern construction site





Figure 11-14 Pyrmont Station construction sites - Photomontage from Viewpoint 3, west across the Pyrmont Bridge Road and Pyrmont Street Intersection, indicative extent of acoustic shed at western construction site



Figure 11-15 Pyrmont Station construction sites - Photomontage from Viewpoint 6, north east along Edward Street and Pyrmont Bridge Road, indicative extent of acoustic shed at eastern construction site

### Night-time visual amenity impacts

The Pyrmont Station construction sites would be in an area of low visual sensitivity (medium district brightness). This lighting level is due to the low and medium rise residential and commercial buildings. Night work would be required within the Pyrmont Station construction sites. However, this would be mostly contained within the acoustic sheds that would cover the construction sites. Lighting would be further screened and contained by adjacent buildings and retained street trees. Elevated hotels and residential towers would be able to see construction vehicle movements.

Overall, there would be a noticeable reduction in visual amenity at night to the area surrounding the Pyrmont Station construction sites, which is a very low visual sensitivity, resulting in negligible visual impacts at night.

## 11.7 Hunter Street Station (Sydney CBD) construction sites

### 11.7.1 Existing environment

The Hunter Street Station (Sydney CBD) construction sites would be located in the heart of the Sydney CBD, near the financial district and one of the busiest precincts of the city for vehicular and pedestrian movement. The construction sites would be a short walk from some of Sydney's most prominent landmarks and attractions including Martin Place, Hyde Park, and Circular Quay.

Hunter Street Station (Sydney CBD) western construction site would be located on George Street, which has recently been pedestrianised as part of the Sydney Light Rail project. The Wynyard light rail stop is located to the south of Hunter Street, on George Street and adjacent to the western construction site. The light rail includes north and southbound tracks, set within a wide pedestrian boulevard, with new paving, street trees and street furniture. The eastern entry to Wynyard Station is located opposite the construction site, on George Street. This entry to Wynyard Station has recently been upgraded and is a major entry point to the CBD. The Brookfield Place has recently been completed on the northern side of Wynyard Station, and includes 27 storeys. The listed heritage item former Skinners Family Hotel building has a painted façade punctuated by large windows. It is relatively small and not prominent in views within this setting, but provides visual interest to the corner, marking the beginning of the pedestrianised section of George Street.

Hunter Street Station (Sydney CBD) eastern construction site would be located adjacent to Richard Johnson Square, at the corner of Bligh and Hunter streets. This public space is a historically and culturally important example of 20th century civic planning (local heritage value, Sydney LEP 2012 item no. I1673). A number of other heritage sites are located in the vicinity of the construction site including Richard Johnson Square, former "NSW Club" building, former "Bank of NSW", former Wales House and former "Perpetual Trustee" commercial building. Further discussion on non-Aboriginal heritage items are provided in Chapter 8 (Non-Aboriginal heritage).

Several street trees line Hunter, O'Connell and Bligh streets, providing canopy coverage and amenity to the streetscape and softening views within this intensely urban environment.

Landscape and visual sensitivity levels are summarised in Table 11-16.

Table 11-16 Hunter Street Station (Sydney CBD) construction sites - Landscape and visual sensitivity

Location	Landscape and visual sensitivity level
<b>Hunter Street Station (Sydney CBD) western construction site</b>	
George Street and Hunter Street streetscapes	Regional
Views from George Street and the Wynyard light rail stop	Local
Views from Hunter Street	Local
<b>Hunter Street Station (Sydney CBD) eastern construction site</b>	
Richard Johnson Square	Local
Bligh, Hunter and O'Connell streets streetscapes	Local
Views from Hunter Street, Bligh, Pitt and Castlereagh Streets	Local
Views at night	Very low



## 11.7.2 Potential impacts

The proposed construction sites for the excavation of Hunter Street Station (Sydney CBD) are:

- The Hunter Street Station (Sydney CBD) western construction site, which would cover about 3,700 square metres and would be located on the south east corner of Hunter Street and George Street
- The Hunter Street Station (Sydney CBD) eastern construction site, which would cover about 3,700 square metres and would be bounded by O'Connell Street, Hunter Street and Bligh Street. The site currently contains the existing Sydney Metro City & Southwest Bligh Street construction site with an existing acoustic shed.

The key activities and components of construction that would be seen at the Hunter Street Station (Sydney CBD) construction sites include:

- Demolition of commercial and retail buildings, structures and basements
- Potential removal of exotic street trees
- Possible trimming of some trees may also be required to establish hoardings along construction sites
- Station shaft and cavern excavation activities and support, including spoil storage and removal, water supply, water treatment and disposal, temporary ventilation plant, material storage as well as office facilities, worker amenities and parking, and storage
- Retrieval of the tunnel boring machine
- At the eastern construction site, an existing acoustic shed on the Sydney Metro City & Southwest Bligh Street construction site would be maintained during mined cavern excavation work, and then removed to facilitate excavation of the shaft
- Adjustments to parking, public transport and pedestrian access, where required
- Hoarding surrounding the construction site including NSW Government branding.

### Landscape impacts

The proposal would require the demolition of the majority of buildings within the Hunter Street Station (Sydney CBD) construction sites (with the exception of the listed heritage item Skinners Family Hotel which would be retained). The removal of the buildings facing George and Hunter streets would create a large break in the continuity of the built form and reduce street level activation.

The site access and haulage along Hunter Street would detract from the amenity and comfort experienced by pedestrians along this street. The appeal of Richard Johnson Square as a meeting place and as a breakout space within this densely urban area of the CBD would be reduced by the proximity to major construction activity. However, the Square currently faces the existing Sydney Metro City & Southwest Bligh Street construction site. A small number of exotic street trees would potentially be removed to enable access to the sites.

Potential landscape impacts are summarised in Table 11-17.

Table 11-17 Hunter Street Station (Sydney CBD) - Landscape impacts

Location	Sensitivity rating	Magnitude of change	Impact rating
<b>Hunter Street Station (Sydney CBD) western construction site</b>			
<b>George Street and Hunter Street streetscapes</b>	Regional	Noticeable reduction	Moderate adverse
<b>Hunter Street Station (Sydney CBD) eastern construction site</b>			
<b>Richard Johnson Square</b>	Local	Noticeable reduction	Minor adverse
<b>Bligh, Hunter and O'Connell Street streetscapes</b>	Local	Noticeable reduction	Minor adverse

### Daytime visual impacts

Six representative viewpoints were used to assess potential visual amenity impacts of the Hunter Street Station (Sydney CBD) construction sites as shown in Figure 11-16.

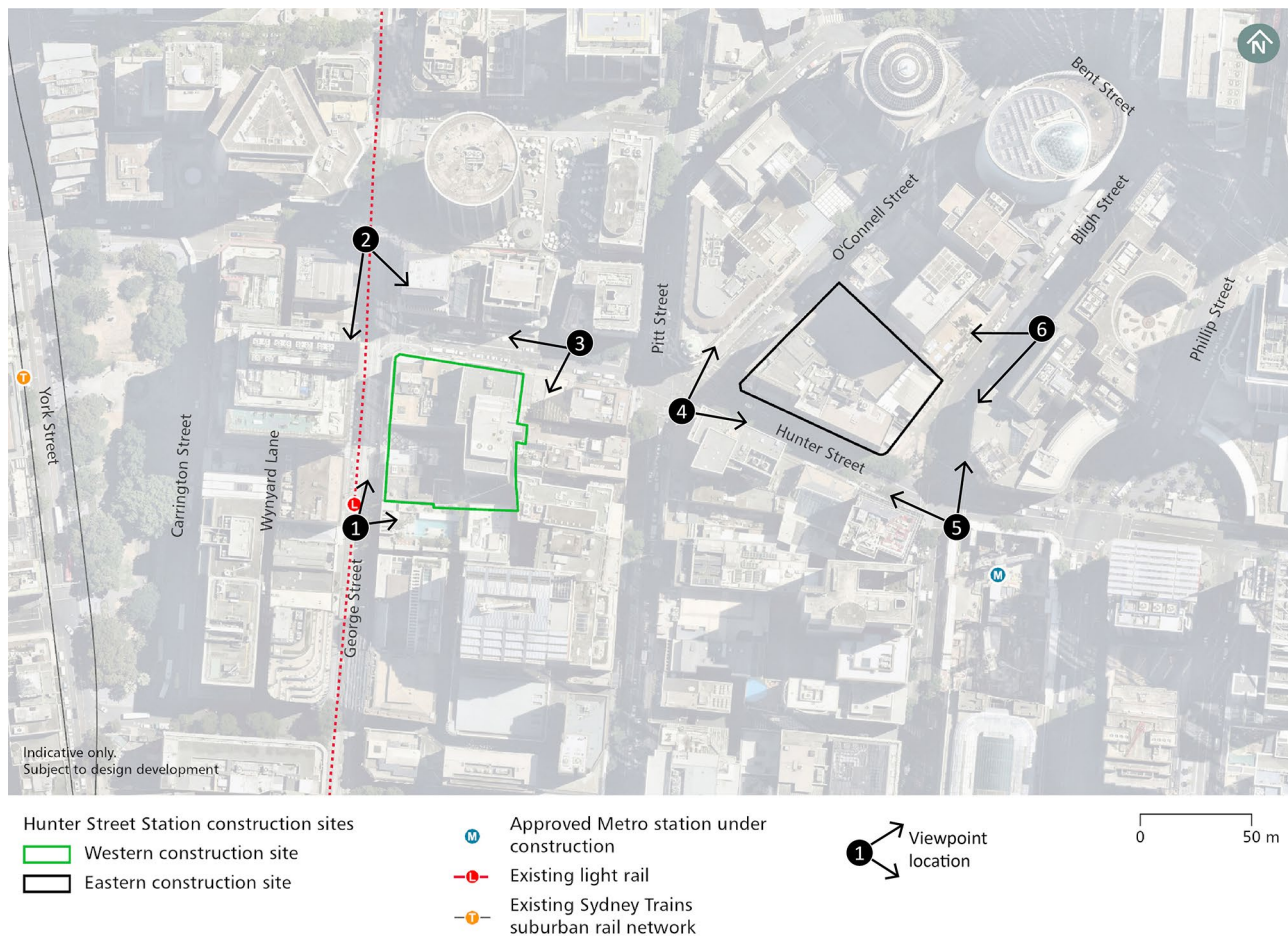


Figure 11-16 Hunter Street Station construction sites – Representative viewpoints

The demolition of existing buildings, establishment of site hoarding, removal of existing street trees, introduction of general construction activities and ongoing use of the Bligh Street acoustic shed would detract from existing views. This would be particularly noticeable at Viewpoint 1 which would experience a considerable reduction resulting in moderate adverse impacts.

Construction impacts on key viewpoints are summarised in Table 11-18. A comparison of the existing view with indicative views from the proposal that have an impact rating of moderate adverse or above is provided in Figure 11-17 and Figure 11-18.

Table 11-18 Hunter Street Station (Sydney CBD) construction sites - Daytime visual amenity impacts

Viewpoint	Sensitivity rating	Magnitude of change	Impact rating
<b>Hunter Street Station (Sydney CBD) western construction site</b>			
<b>Viewpoint 1: View north east along George Street from the Wynyard light rail stop</b>	Local	Considerable reduction	Moderate adverse
<b>Viewpoint 2: View south along George Street from corner of Margaret Street</b>	Local	Noticeable reduction	Minor adverse
<b>Viewpoint 3: View southwest from corner of Hunter Street and Hamilton Street</b>	Local	Noticeable reduction	Minor adverse
<b>Hunter Street Station (Sydney CBD) eastern construction site</b>			
<b>Viewpoint 4: View north east from the corner of Hunter Street and Pitt Street</b>	Local	Noticeable reduction	Minor adverse
<b>Viewpoint 5: View north west from the corner of Hunter Street and Castlereagh Street</b>	Local	Noticeable reduction	Minor adverse
<b>Viewpoint 6: View south along Bligh Street</b>	Local	Noticeable reduction	Minor adverse





Figure 11-17 Hunter Street Station (Sydney CBD) construction sites - Existing view from Viewpoint 1, north east along George Street from the Wynyard light rail stop



Figure 11-18 Hunter Street Station (Sydney CBD) construction sites - View from Viewpoint 1, north east along George Street from the Wynyard light rail stop, indicative extent of demolition at Hunter Street Station western construction site (shown by blue shading)

### Night-time visual impacts

The Hunter Street Station (Sydney CBD) construction sites are located in an area of very low visual sensitivity at night (high distinct brightness). This is due to the concentration of medium and high rise commercial, retail, hotel buildings and residential within this location as well as streetlights and lights from traffic and public transport.

There would be night work required within the Hunter Street Station (Sydney CBD) eastern and western construction sites. The lighting from any night work would be screened and contained by site hoarding surrounding the site, adjacent buildings and street trees (where retained) or be within the acoustic shed within the eastern construction site. Adjacent elevated hotel, apartment and office towers which overlook the site would be able to view night-time work and construction vehicle movement along Hunter Street.

Overall, there would be a noticeable reduction in visual amenity at night to the area surrounding the Hunter Street Station (Sydney CBD) construction sites, which are of very low visual sensitivity, resulting in negligible visual impacts at night.

## 11.8 Cumulative impacts

Potential cumulative impacts were considered for assessment based on the likely interactions of the proposal with other projects. The approach to assessment and the other projects considered are described further in Appendix G (Cumulative impacts assessment methodology).

Table 11-19 provides a summary of the potential cumulative landscape and visual impacts of the proposal in conjunction with other developments. This assessment considers projects that would be in the vicinity of the proposal construction sites and are likely to have a landscape impact or be in view of activities associated with the proposal.

Table 11-19: Potential cumulative landscape and visual amenity impacts

Construction site	Projects considered	Potential landscape impact	Potential visual impact
<b>The Bays tunnel launch and support site</b>	<ol style="list-style-type: none"> <li>1. Sydney Metro West Major civil construction work between Westmead and The Bays</li> <li>2. Sydney Metro City &amp; Southwest (Chatswood to Sydenham)</li> <li>3. The WestConnex Rozelle Interchange, specifically the WestConnex Rozelle Interchange surface upgrade work at Victoria Road including a bridge upgrade, widening and realignment of Victoria Road</li> <li>4. Western Harbour Tunnel, including construction activities at Rozelle Rail Yards and White Bay</li> <li>5. Sydney Metro West Rail infrastructure, stations, precincts and operations, The Bays Station (subject to subsequent planning approvals process)</li> <li>6. Glebe Island Concrete Batching Plant</li> <li>7. Glebe Island Multi User Facility</li> </ol>	<p>The proposal would not require the removal of additional trees, or alteration to the permeability, and accessibility of the public realm in this area, as there is no public access at the site. However, there would be extended duration of existing impacts. During construction there would be a potential cumulative landscape impact, of which this proposal would have a relatively small contribution as part of a wider transformation of the precinct. This cumulative impact would reduce over time with the completion of adjacent infrastructure projects.</p> <p>There would be infrastructure and placemaking improvements over time as these infrastructure projects are completed.</p>	<p>There would be a potential cumulative visual impact to views. Cumulative impacts would extend the duration of the identified adverse visual impacts from what has been experienced to date, and into the future as a part of the transformation of The Bays Precinct as a whole. Adverse visual impacts would be managed as far as practicable as part of the future redevelopment of The Bays Precinct to provide appropriate consideration of key view corridors as identified in the Draft Bays West Urban Design Framework (based on the White Bay Power Station Conservation Management Plan).</p> <p>Night work carried out for this proposal would be seen as a continuation of the night work currently visible on and surrounding the site. This setting is an area of high district brightness and therefore has a high capacity to absorb additional light sources at night. There is a substantial separation between this site and the surrounding residences, further reducing the potential for a cumulative visual impact at night from these locations.</p>



Construction site	Projects considered	Potential landscape impact	Potential visual impact
<b>Pymont Station construction sites</b>	<ol style="list-style-type: none"> <li>1. The new Sydney Fish Market</li> <li>2. Cockle Bay Wharf mixed use development</li> <li>3. Sydney Metro West - Rail infrastructure, stations, precincts and operations, Pymont Station (subject to subsequent planning approvals process)</li> </ol>	<p>Due to the separation of the proposed developments at the new Sydney Fish Market and Cockle Bay Wharf from this proposal, there are not predicted to be any cumulative landscape impacts.</p> <p>There would be a cumulative landscape impact expected with the proposed future construction of the Sydney Metro West Pymont Station. This would include the potential for a continued impact on the amenity, level of comfort and accessibility of adjacent streetscapes during construction and fit-out of the station (which is subject to a separate staged planning approval). However, during the operation of this proposed station and precinct (if approved) it is expected that these construction impacts would be eliminated as public realm and placemaking improvements are realised.</p>	<p>The Sydney Fish Market and Cockle Bay Wharf would be located beyond the visual catchment of this proposal and therefore would not have a cumulative visual impact during the day or at night.</p> <p>There would be a cumulative visual impact expected with the construction of the future Pymont Station as part of Sydney Metro West - Rail infrastructure, stations, precincts and operations, as these proposals would be experienced in succession. This would include the potential for an increase in the duration of impacts to surrounding views, however construction impacts would be eliminated as Pymont Station progresses and the station becomes operational.</p> <p>Multiple sites with construction activity at Pymont would be somewhat absorbed into the densely urban environment and a part of the character of this area as it undergoes an intended transformation.</p>

Construction site	Projects considered	Potential landscape impact	Potential visual impact
<b>Hunter Street Station (Sydney CBD) construction sites</b>	<ol style="list-style-type: none"> <li>1. Sydney Metro City &amp; Southwest (Chatswood to Sydenham) - Martin Place metro station</li> <li>2. Sydney Metro - Martin Place Over Station Development</li> <li>3. 50-52 Phillip Street New Hotel</li> <li>4. One Sydney Harbour</li> <li>5. 111 &amp; 112 Castlereagh / 65-77 Market Street</li> <li>6. 317 and 319-321 George Street</li> <li>7. 180 George Street</li> <li>8. 194-204 Pitt Street, Sydney</li> <li>9. 301 and 305 Kent Street Concept Hotel development</li> <li>10. Sydney Metro West - Rail infrastructure, stations, precincts and operations, Hunter Street Station (Sydney CBD) (subject to subsequent planning approvals process)</li> </ol>	<p>Due to the separation of the western construction site from the Sydney Metro City &amp; Southwest, Sydney Metro Martin Place - Over Station Development, the new hotels, residential and commercial buildings on Phillip Street, One Sydney Harbour, George, Pitt, Castlereagh, Market and Kent Streets, there are not predicted to be any adverse cumulative landscape impacts associated with these projects.</p> <p>There would, however, be a cumulative landscape impact expected with the proposed future construction and operation of Hunter Street Station (Sydney CBD) as part of Sydney Metro West - Rail infrastructure, stations, precincts and operations at the western construction site, as these proposals would be experienced in succession. However, during the operation of this proposed station and precinct (if approved) it is expected that these construction impacts would be eliminated as public realm and placemaking improvements are realised.</p>	<p>Some work would be visible at street level and extending into the skyline at various distances. Richard Johnson Square would be further surrounded by construction activity and would experience a cumulative visual impact for the duration of this proposal.</p> <p>There would also be a cumulative visual impact expected between this proposal and the proposed future construction and operation of Hunter Street Station (Sydney CBD) as part of Sydney Metro West - Rail infrastructure, stations, precincts and operations, as these proposals would be experienced in succession. However, construction impacts would be eliminated as Hunter Street Station (Sydney CBD) progresses</p> <p>There would be a potential for construction activity for the 317 and 319-321 George Street developments to be seen together in views from George Street and a cumulative visual impact.</p> <p>Other projects would be located beyond the visual catchment of the Hunter Street Station (Sydney CBD) western construction site would not have a cumulative visual impact associated with the proposal.</p> <p>Any night work carried out at the construction sites would be either contained by acoustic sheds or hoarding and would be a continuation of the night work currently visible on sites seen in locations surrounding the sites. The CBD setting is an area of high district brightness and therefore has a high capacity to absorb additional light sources at night. The potential for any residential property or hotel to view multiple sites is limited.</p> <p>Construction activity at multiple construction sites would be somewhat absorbed into the densely urban environment and a part of the character of the CBD as it continues to accommodate development, renewal and refurbishment work.</p>

## 11.9 Mitigation and management measures

A Construction Environmental Management Framework (Appendix C) 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 Construction Environmental Management Plans, sub-plans, and other supporting documentation for each specific environmental aspect.



The environmental management approach for the project is detailed in Chapter 23 (Synthesis of the Environmental Impact Statement). Under these broad frameworks, a series of performance outcomes have been developed to define the minimum environmental standards that would be achieved during construction of the proposal (refer to Section 11.9.2), and mitigation measures that would be implemented during construction to manage potential identified impacts (refer to Section 11.9.3).

The environmental management approach for this proposal has also considered the relevant Conditions of Approval for the Sydney Metro West Concept, to ensure this proposal would be carried out in accordance with these conditions.

### 11.9.1 Concept Conditions of Approval

The Conditions of Approval for the Sydney Metro West Concept were received on 11 March 2021. The Concept Conditions of Approval that relate to landscape and visual amenity are presented in Table 11-20, along with consideration of their relevance to this proposal.

Table 11-20 Concept Conditions of Approval – Landscape and visual amenity

Reference	Condition	Relevance to this proposal
C-B1	To ensure that a high-quality urban design response is achieved, the CSSI must have regard to, and be generally consistent with, the place and design principles for each location outlined in the documents listed in Condition C-A1 of this schedule, unless expressly specified in the conditions of this approval.	Not relevant – This proposal does not include place making or station design. Rail infrastructure, stations, precincts and operations form Stage 3 of the planning approvals process for Sydney Metro West.
C-B8	As many mature trees as practicable must be retained. In addition, within ten (10) years of the date of this approval or no later than the commencement of operation of the CSSI (whichever is earlier) there must be a net increase in the number of mature trees provided at a ratio of 2:1.	Yes, relevant – This proposal includes the removal of mature trees. Trees removed by the major civil construction work between The Bays and Sydney CBD would be replaced to provide a net increase in the number of mature trees provided at a ratio of 2:1 across the entire Sydney Metro West project, as part of future stages of the planning approval.  Further discussion on tree replacement for the project would be included in future planning applications for Sydney Metro West.
C-B9	The CSSI must result in an increase in tree canopy coverage.	Yes, relevant – response as per above.

### 11.9.2 Performance outcomes

Construction performance outcomes were developed for the proposal as part of the Concept approval. Performance outcomes for the proposal identify measurable, performance-based standards for environmental management. Identified performance outcomes for landscape and visual amenity for construction include:

- The design reflects the Sydney Metro Design Objectives and the place and design principles
- The Sydney Metro Design Quality Framework is implemented
- Metro stations contribute positively to the surrounding urban environment and provide a sense of place
- No net loss of tree numbers and tree canopy.

Chapter 23 (Synthesis of the Environmental Impact Statement) describes how the proposal addresses these performance outcomes. The design of the proposal reflects the Sydney Metro Design Objectives and the place and design principles and the Sydney Metro Design Quality Framework is implemented. Once constructed, Metro stations contribute positively to the surrounding urban environment and provide a sense of place. The Concept Approval conditions for Sydney Metro include requirements for the project to replace trees at a 2:1 ratio which would be implemented and achieve a higher outcome than the stated performance outcome in the Concept of no net loss of tree numbers.

### 11.9.3 Mitigation measures

Specific mitigation measures that would be implemented to address potential landscape and visual amenity impacts are listed in Table 11-21.

Table 11-21 Mitigation and management measures – Landscape and visual amenity

Reference	Impact	Mitigation measure	Applicable location(s)
LV1	Visual impacts	Where feasible and reasonable, the elements within construction sites would be located to minimise visual impacts, for example materials and machinery would be stored behind fencing.	All
LV2	Trees	Opportunities for the retention and protection of existing street trees would be identified during detailed construction planning.	All
LV3	Trees	Existing trees to be retained would be protected prior to the commencement of construction in accordance with Australian Standard AS4970 the Australian Standard for Protection of Trees on Development Sites and Adjoining Properties.	All
LV4	Lighting impacts	Lighting of construction sites would be oriented to minimise glare and light spill impacts on adjacent receivers.	All
LV5	Visual impacts	The design and maintenance of construction site hoardings would aim to minimise visual amenity and landscape impacts.	All
LV6	Visual impacts	Construction site hoardings would be designed in accordance with Sydney Metro Brand Design Guidelines and opportunities for public art on hoardings would be considered in high pedestrian locations.	All
LV7	Visual impacts	Graffiti would be removed promptly from hoardings and any other aspects of construction sites.	All
LV8	Visual impacts	All structures (including acoustic sheds or other acoustic measures, site offices and workshop sheds) would be finished in a colour which aims to minimise their visual impacts, if visible from areas external to the construction site. This finish is to be applied to all visible fixtures and fittings (including exposed downpipes).	All
LV9	Trees	Trees removed by the major civil construction work between The Bays and Sydney CBD would be replaced to provide a net increase in the number of mature trees at a ratio of 2:1 across the entire Sydney Metro West project (as part of future approval stages of Sydney Metro West).	All
LV10	Visual impacts	Any new temporary structures on the construction site boundary facing Richard Johnson Square would consider urban design or landscape treatment (in consultation with City of Sydney) to minimise visual amenity and landscape impact where feasible and reasonable.	Hunter Street Station (Sydney CBD) eastern construction site

### 11.9.4 Interactions between mitigation measures

Mitigation measures in other chapters that are relevant to the management of potential landscape and visual amenity impacts include:

- Chapter 8 (Non-Aboriginal heritage) – Specifically measures which address management of potential non-Aboriginal heritage impacts during construction
- Chapter 10 (Property and land use) – Specifically measures which address management of potential property and land use impacts during construction
- Chapter 18 (Biodiversity) – Specifically measures which address management of potential biodiversity impacts during construction.

Together, these measures would minimise the potential landscape and visual amenity impacts of this proposal. A full list mitigation measures is presented in Chapter 23 (Synthesis of the Environmental Impact Statement).