Harris Park Station Upgrade
Transport Access Program

Visual Impact Assessment

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Green Bean Design – Capability Statement

Green Bean Design (GBD) was established as a landscape architectural consultancy in 1999 and has specialised in landscape and visual impact assessment over the past 10 years. As an independent consultancy, GBD provide professional advice to a wide range of commercial and government clients involved in large infrastructure project development.

GBD owner, and principal landscape architect Andrew Homewood, is a registered landscape architect and member of the Australian Institute of Landscape Architects and the Environmental Institute of Australia and New Zealand. Andrew has over 21 years continuous employment in landscape consultancy and has completed numerous landscape and visual impact assessments for a variety of large scale and state significant infrastructure, including mines, transmission lines/substations, wind farms and solar power developments.

Prepared for	Prepared by
Transport for NSW	Green Bean Design - landscape architects
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Contents

Figures

Glossary

This Visual Impact Assessment has adopted and the following definitions from *Guidelines for Landscape and Visual Impact Assessment*[1] (2013) and the Roads and Maritime Services *Environmental Impact Assessment Practice Note Guideline for Landscape Character and Visual Impact Assessment EIA-N04*[2] (2013).

Table 1 Glossary

Term	Definition
Cumulative effects[1]	The summation of effects that result from changes caused by a development in conjunction with other past, present or reasonably foreseeable actions.
Element (urban landscape)[1]	Individual parts of the developed landscape which make up the urban environment (e.g. buildings, roads, bridges and parks).
Indirect Impacts[1]	Impacts on the environment, which are not a direct result of the development but are often produced away from it or as a result of a complex pathway.
Magnitude[2]	The measurement of scale, form and character of a development proposal when compared to the existing condition. In the case of visual assessment this relates to how far the proposal is from the viewer. Combined with sensitivity, magnitude provides a measurement of impact.
Mitigation[1]	Measures, including any processes, activity or design to avoid, reduce, remedy or compensate for adverse landscape and visual effects of a development project.
Photomontage (Visualisation)[1]	Computer simulation or other technique to illustrate the appearance of a development.
Sensitivity[2]	The sensitivity of a landscape character zone or view and its capacity to absorb change. In the case of visual impact this also relates to the type of viewer and number of viewers. Combined with magnitude, sensitivity provides a measure of impact.
Visibility[2]	The state or fact of being visible or seen
Visual Absorption Capacity[1]	The degree to which a particular landscape character type or area is able to accommodate change without unacceptable adverse effects on its character.
Visual amenity[1]	The value of a particular area or view in terms of what is seen.
Visual envelope[1]	Extent of potential visibility to or from a specific area or feature.
Visual impact[2]	The impacts on the views from residences, workplaces and public places.
Visual Impact Assessment[1]	A process of applied professional and methodical techniques to assess and determine the extent and nature of change to the composition of existing views that may result from a development.
View location[1]	A place or situation from which a proposed development may be visible.
Visual receiver[1]	Individual and/or defined groups of people who have the potential to be affected by a proposal.

Section 1 Introduction

1.1 Introduction

Green Bean Design (GBD) was commissioned by Transport for NSW (TfNSW) to prepare a Visual Impact Assessment (VIA) for proposed works to upgrade and introduce new infrastructure at Harris Park Railway Station (the Proposal) as part of the TfNSW Transport Access Program (TAP).

The VIA has been undertaken as part of the Review of Environmental Factors (REF) that is being prepared in accordance with the provisions of Part 5 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). This VIA provides an assessment of the potential effects of the Proposal on the existing urban landscape and visual environment surrounding the station precinct and site of the proposed works. This VIA has been prepared in accordance with consideration of the Clause 228 Guidelines of the NSW *Environmental and Planning and Assessment Regulations 2000*.

1.2 TAP Objectives

TfNSW initiated the TAP to improve and provide more accessible, modern and secure infrastructure. TAP has a number of objectives including to provide:

- modern interchanges that support an integrated network and allow seamless transfers between all modes for all customers
- modern buildings and facilities for all modes that meet the needs for a growing population
- stations that are accessible to those with a disability, ageing and parents with prams
- safety improvements including extra lighting, help points, fences and security measures for car parks and interchanges, including stations, bus stops and wharves
- signage improvements so customers can more easily use public transport and transfer between modes at interchanges
- other improvements and maintenance such as painting, new fencing and roof replacements.

Section 2 VIA objectives and methodology

2.1 VIA objectives

A key objective of this VIA is to determine the likely visual significance of the Proposal on people living and working in, or travelling through the urban landscape within and surrounding the station precinct. This VIA has also been undertaken to:

- assess the existing visual character of the station precinct as well as the surrounding urban landscape
- determine the extent and nature of the potential visual significance of the Proposal on surrounding receivers
- identify measures to mitigate and minimise any potential visual impacts.

2.2 VIA Guidance

This VIA has been prepared with regard to industry standards including:

- *Environmental Impact Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment EIA–N04* (Roads and Maritime Services March 2013)
- *Visual Landscape Planning in Western Australia* (Western Australian Planning Commission November 2007)
- *Guidelines for Landscape and Visual Impact Assessment* (Landscape Institute and Institute of Environmental Management & Assessment 2013).

2.3 VIA methodology

This VIA methodology included the following activities:

- desktop study addressing visual character and identification of view locations within the surrounding area
- fieldwork and photography
- assessment and determination of visual significance
- determination of potential mitigation measures.

2.3.1 Desktop study

A desktop study was carried out to identify an indicative viewshed for the Proposal. This was carried out by reference to topographic maps as well as aerial photographs of the station location and surrounding landscape.

Topographic maps and aerial photographs were also used to identify the locations and categories of potential view locations that could be verified during the fieldwork component of the assessment. The desktop study also outlined the visual character of the surrounding landscape including features such as landform, elevation, landuse and the distribution of residential dwellings.

2.3.2 Fieldwork and photography

The fieldwork involved:

- a site inspection to determine and confirm the potential extent of visibility of the Proposal and ancillary structures
- determination and confirmation of the various view location categories and locations from which the Proposal structures could potentially be visible.

2.3.3 Assessment of visual significance

The visual significance of the Proposal on surrounding view locations will result primarily from a combination of the potential visibility of the Proposal infrastructure and the characteristics of the landscape between, and surrounding, the view locations and the Proposal. The potential degree of visibility and resultant visual significance will be partly determined by a combination of factors including:

- distance between view location and various elements within the Proposal location
- predicted impact of the Proposal on existing visual amenity
- nature of predicted visual impacts
- visual sensitivity of locations from which views toward the Proposal exist.

The determination of visual significance is also subject to a number of other factors which are considered in more detail in this VIA.

2.3.4 Mitigation measures

Mitigation measures have been determined to assist in the reduction and, where possible, remediation of any significant adverse effects on surrounding views locations that may arise from the Proposal.

Section 3 Harris Park Station location and description

3.1 Station location

The Harris Park Station is located on the Western and Cumberland Lines of the Sydney Trains network in the Greater Western suburb of Harris Park. The station is within the Parramatta Council Local Government Area and approximately 890 metres south from the Parramatta central business district. The station is positioned in a north to south alignment and is bounded by Station Street West to the west and a pedestrian footpath (between Cambridge Street and Marion Street) to the east. The Harris Park Station location is illustrated in Figure 1.

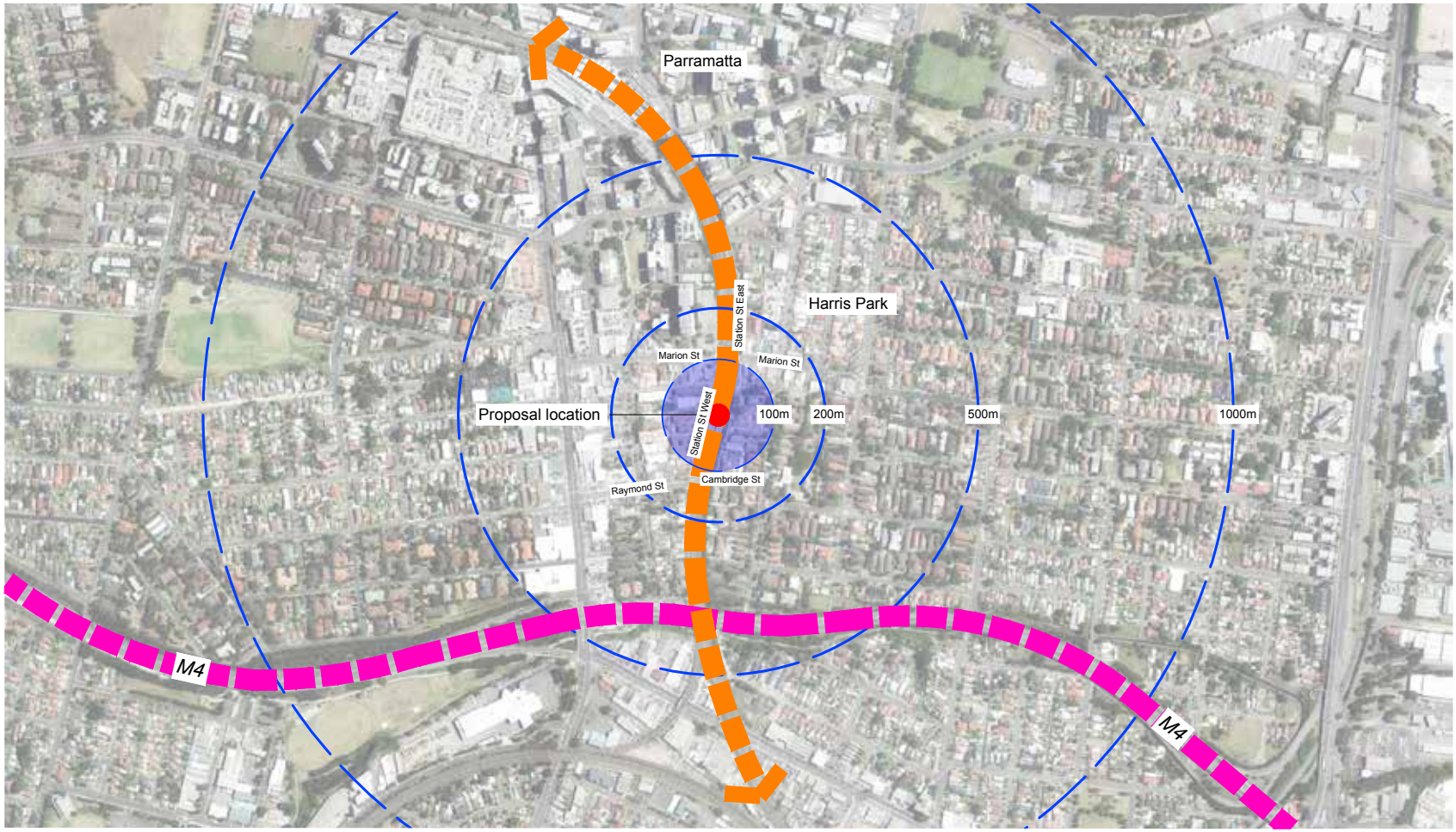
3.2 Existing station description

The existing station exhibits a number of key visual elements:

- east and west bound rail lines (main and suburban), electrical conductors and steel stanchions
- four platforms located on two islands
- footbridge with walkway and step access (west) with railings
- concourse building and ticket office
- station buildings and passenger shelters/amenities
- utility poles and wires
- various security and safety fencing
- directional and informative signage.

The station precinct is directly accessible by pedestrians from the adjoining Station Street West footpath and the pedestrian footpath running north to south along the east side of the rail corridor. The ticket office is located on the concourse above the station platforms. The platforms are accessed by steps located on the eastern and western side of the concourse building.

The station precinct and adjoining road corridors contain mature indigenous and non indigenous tree planting which provides some degree of screening within proximity to, and beyond the station. Tree planting continues along local residential street nature strips and throughout residential garden areas.



Source: Google Earth Pro 2015 Aerometrex

Legend

- Harris Park Station location
- Rail corridor (Western and Cumberland Line)
- Distance from proposal works
- M4 Motorway corridor

Figure 1
Proposal location

0m 200m

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Section 4 Proposal description

4.1 Proposal description

The Proposal is designed to improve pedestrian access to and from the station, increase Harris Park Stations ability to cope with the predicted future patronage demands, and improve pedestrian flow, passenger information services and wayfinding between transport modes. The Proposal will include a range of works to existing infrastructure as well as the construction of new facilities. The Proposal would include the following key elements:

- retention of the existing station concourse
- conversion of ticket window to new customer service window
- two new platform lifts
- new ramps and stairs at the western entrance with canopy coverage, requiring the demolition of existing stairs
- new lift and stairs at the eastern entrance with canopy coverage, requiring the demolition of existing ramps
- new canopy coverage on both platform stairs with extended coverage to all assisted boarding points
- area under first flight of platform stairs blocked off to remove entrapment/ambush points
- refresh of the existing station building
- provision of kiss & ride zones at:
  - Station Street East requiring the conversion of the no parking zone to kiss and ride during peak hours
  - Station Street West and Cambridge Street requiring the conversion of the two hour parking restriction to kiss and ride during peak hours
- provision of taxi zones at Station Street East and Station Street West (shared with kiss and ride spaces) with shelters
- provision of 10 undercover bicycle racks near the western and eastern station entrances
- provision of a shared zone along Station Street West.

Supporting these major features of the preferred concept design are a number of interchange and accessibility upgrade works that would improve access, convenience, and interchange between modes.

Tree removal and pruning may be required to facilitate the upgrade works on the east station boundary including for the construction of proposed operational areas. The location of the Proposal is illustrated in Figure 2.

Source: Google Earth Pro 2015 Aerometrex

Legend

- Indicative proposal extent relevant to visual impact assessment
- Existing structure removed
- Proposed works
- Rail corridor
- Proposed pavement works
- Temporary construction compound
- Existing vegetation to be removed (indicative extent)

Figure 2
Proposal area

Note: This figure is indicative only and based on a concept design

0m 50m

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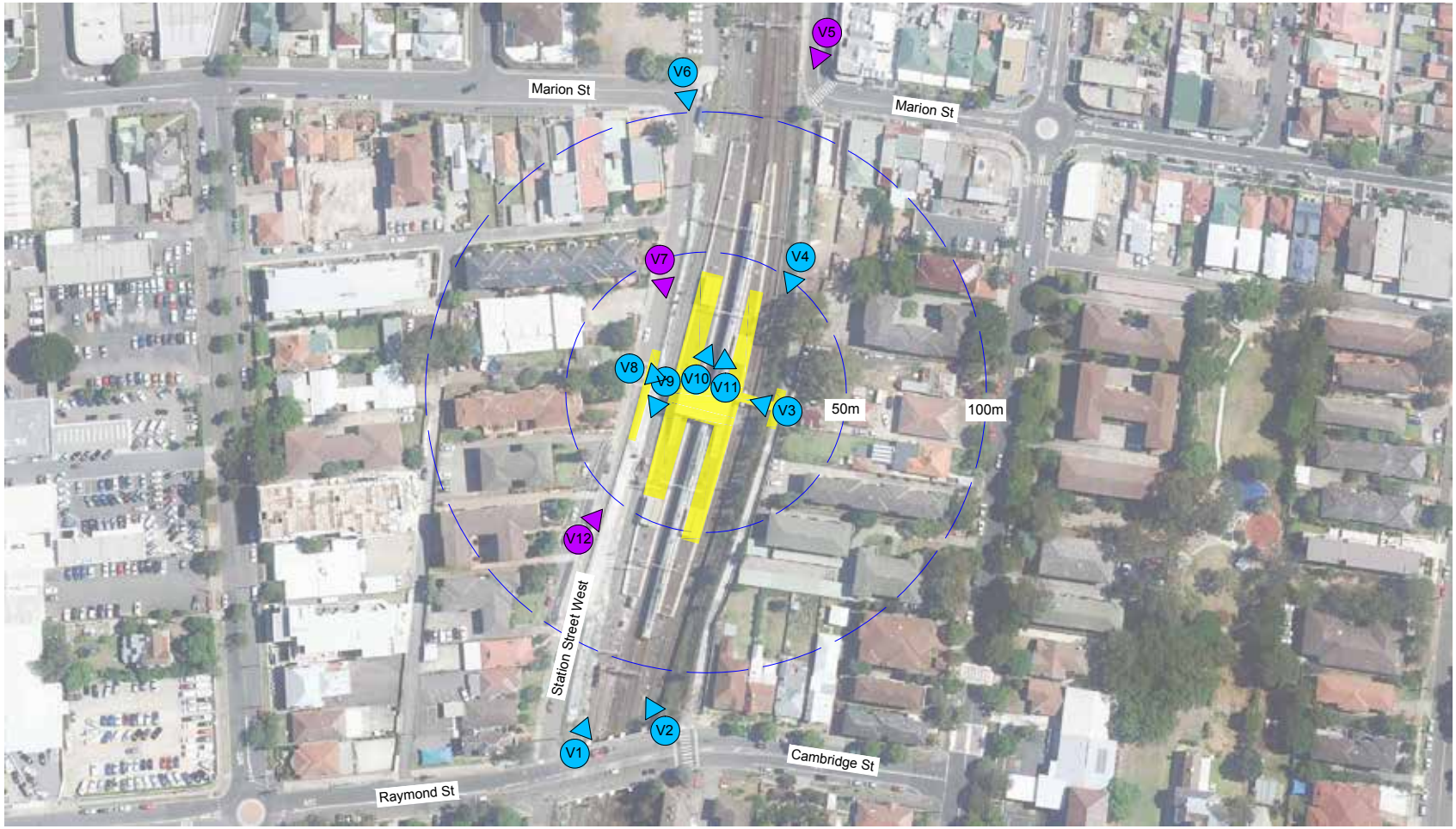
Section 5 Panoramic photographs

5.1 Panoramic photographs

Digital photographs were taken during the course of the fieldwork to illustrate existing views in the vicinity of view locations inspected as part of this VIA. The panoramic photographs were digitally stitched together to form a segmented panorama image which provides a visual illustration of the existing view from each photo location.

The panoramic photographs presented in this VIA have been annotated to identify existing built elements located within the existing view as well as the Proposal where relevant. The panoramic photograph locations are illustrated in Figure 3, and the panoramic photographs illustrated in Figures 4 to 7.



Source: Google Earth Pro 2015 Aerometrex

Legend

V1 Panorama photo location

V5 Panorama photomontage location

Proposed works

Figure 3
Photo and photomontage locations

0m 50m

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Photo location V1 - View looking north-east from Cambridge Street

Photo location V2 - View looking north-west from Cambridge Street

Photo location V3 - View looking west from Cambridge and Marion Street pedestrian footbridge

Figure 4 Photo sheet 1

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Photo location V4 - View looking south toward and beyond pedestrian footpath from Marion Street

Photo location V5 - View looking south-west from Railway Street East

Photo location V6 - View looking south-east from Railway Street West

Figure 5 Photo sheet 2

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Photo location V7 - View looking south along Railway Street West

Photo location V8 - View looking east from Railway Street West toward the Harris Park Station pedestrian entry

Photo location V9 - View looking south from Harris Park Station concourse toward Railway Street West

Figure 6 Photo sheet 3

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Photo location V10 - View looking north from the Harris Park Station pedestrian footbridge

Photo location V11 - View looking north-west from the Harris Park Station pedestrian footbridge

Photo location V12 - View looking north-east along Railway Street West

Figure 7 Photo sheet 4

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Section 6 Urban landscape effects

6.1 Existing landscape and urban character

The urban landscape character surrounding Harris Park Station is typical of both residential suburban settings and that of a main line rail corridor with mixed development within a local commercial centre. Residential areas to the west of Harris Park Station extending along Railway Street West are defined by a mix of single storey detached dwellings with front and rear gardens and medium to high residential developments. Dwellings are set back from street frontages with tree planting along nature strips. Land adjoining the rail corridor and administered by Parramatta City Council is within Zones R4 High Density Residential, B1 Neighbourhood Centre and B4 Mixed Use.

Councils' objectives for Zone R4 include to:

- provide for the housing needs of the community within a high density residential environment
- provide a variety of housing types within a high density residential environment
- enable other land uses that provide facilities or services to meet the day to day needs of residents
- provide opportunities for high density residential development close to major transport nodes, services and employment opportunities
- provide opportunities for people to carry out a reasonable range of activities from their home if such activities will not adversely affect the amenity of the neighbourhood.

Councils' objective for Zone B1 include to:

- provide a range of small-scale retail, business and community uses that serve the needs of people who live or work in the surrounding neighbourhood.

Councils' objectives for Zone B4 include to:

- provide a mixture of compatible land uses
- integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling
- to encourage development that contributes to an active, vibrant and sustainable neighbourhood.

6.2 Visual Absorption Capability

Visual Absorption Capability (VAC) is a classification system used to describe the relative ability of the urban landscape to accept modifications and alterations without the loss of character or deterioration of visual amenity. VAC relates to the physical characteristics of the urban landscape that are often inherent and quite static in the long term. In essence the VAC indicates the ability of an urban landscape setting to 'hide' development.

The VAC of an urban landscape is largely determined by inherent physical factors which include:

- the degree of visual penetration (view distance without obstruction) through surrounding buildings and tree cover
- the complexity of the urban landscape through bulk, scale, form and line.

Urban landscapes with a low visual penetration will have higher visual absorption capability values. Complex urban landscapes which include a mix of scale, form and line (together with some degree of vegetative screening) will also have high visual absorption capability values. The VAC of the urban landscape surrounding the Harris Park Station and the area of proposed works exhibits a relatively high VAC.

6.3 Urban landscape character impacts

The Proposal and its associated infrastructure will have an overall low (and predominantly beneficial) impact upon the urban landscape character of the station precinct and surrounding environment. The bulk and scale of constructed elements will be visually contained by existing mature tree planting within and beyond the station precinct. The Proposal design incorporates various architectural and engineered outcomes that visually minimise the bulk and scale of constructed elements through modulation and articulation of structures.

Tree planting adjoining the eastern side of the station precinct provides a backdrop to views of the Proposal which will be visible below tree canopies from receiver locations to the west of the station. The Proposal works are unlikely to form any significant skyline view from surrounding receiver locations.

The Proposal, which includes an upgrade of the existing station, would result in a seamless integration to the existing station precinct and retain the existing function and purpose of the station in relation to surrounding land use. The Proposal would integrate a contemporary level of urban design and presents a rational approach to pedestrian movements toward the station precinct and connectivity to adjoining areas.

The Proposal is considered to result in an overall beneficial visual outcome where the application of a considered design, modern materials and sympathetic colours to the existing station precinct will combine to create a legible and high visual amenity asset within the surrounding urban landscape.

Section 7 Viewshed

7.1 Viewshed

The *Environmental Impact Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment EIA–N04* (practice note EIA-N04) notes that the area from which the Proposal will be visible should be defined, and for the purpose of this VIA the viewshed is defined as the area of land surrounding the Proposal area from which views toward the Proposal could be gained.

In essence, the viewshed defines this VIA study area. The viewshed for the Proposal has been divided into a series of concentric bands (between 50 metres and 100 metres distance offsets) extending across the landscape from the Harris Park Station. The viewshed is illustrated in Figure 8.

The primary viewshed extends in a north to south orientation following the main parallel view corridors of both the rail line and the Station Street West corridor. In addition, view corridors extend perpendicular to the rail corridor from Marion Street to the north and Cambridge Street to the south.

The viewshed beyond the station precinct is responsive to both mature tree planting and built development to the east and west of the rail corridor and results in a restricted extent of visual penetration. The residential interface to the rail corridor is generally setback and partially visually separated by mature tree planting.

Source: Google Earth Pro 2015 Aerometrex

Legend

- Proposed works
- Tree cover with screening potential
- Rail corridor/view
- Road corridor view
- Building line blocking view beyond
- Residential interface
- Primary view shed
- Pedestrian access

Figure 8
Viewshed

0m 25m

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Section 8 Visual impact assessment

8.1 Introduction

In accordance with practice note EIA-N04, the significance of visual impact that would result from the construction and operation of the Proposal will be a composite of the sensitivity of the view and magnitude of the proposal in that view.

8.2 Quantifying impacts

Practice note EIA-N04 notes that:

'Sensitivity refers to the qualities of an area, the type number and type of receivers and how sensitive the existing character of the setting is to the proposed change. For example a pristine natural environment will be more sensitive to change that a built up industrial area'.

'Magnitude refers to the nature of the project. For example a large interchange would have a very different impact on landscape character than a localised road widening in the same area'.

The combination of sensitivity and magnitude will provide the rating of visual impact for viewpoints. Table 2 sets out the practice note EIA-N04 relative visual impact grading values which combine sensitivity and magnitude.

Table 2 Visual impact grading matrix

		Magnitude			
		High	Moderate	Low	Negligible
Sensitivity	High	High impact	High-Moderate	Moderate	Negligible
	Moderate	High-Moderate	Moderate	Moderate-Low	Negligible
	Low	Moderate	Moderate-Low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Practice note EIA-N04 determines that *'a judgement must be made as to the quality and extent of the design solution in assessing magnitude and impact. Determining a low impact based on the assumption that the very highest quality design outcome will be achieved could be unrealistic and misleading. However it is equally misleading to determine impacts based on the very worst outcomes. A balance must be found but it is usually better to err on the side of caution'.*

To be in line with practice note EIA-N04, this VIA has erred on the side of caution.

8.3 Key existing viewpoints and their sensitivity

In accordance with practice note EIA-N04, this VIA has developed a schedule of representative viewpoints which are within a reasonable distance of the Proposal and within the view catchment. The representative viewpoints include residential dwellings, commercial properties, road corridors and pedestrian footpaths. The representative viewpoints are illustrated in Figure 9. The viewpoints have been rated as to their sensitivity to change by the Proposal.

Source: Google Earth Pro 2015 Aerometrex

Legend

- Proposed works
- Tree cover with screening potential
- Rail corridor
- Residential dwelling
- Commercial or workplace
- Road corridor
- R2 Receiver location

Figure 9
Receiver locations

0m 25m

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8.4 Visual sensitivity

Following selection, the viewpoints have been rated as to their sensitivity to change by the Proposal works. Practice note EIA-N04 notes that *'visual sensitivity refers to the quality of the existing view and how sensitive the view is to the proposed change. Visual sensitivity is related to the direction of view and the composition of the view'.*

Table 3 identifies:

- receiver viewpoints and receiver types
- the view direction and approximate distance to the Proposal works
- the existing view from the receiver viewpoint
- a determination of visual sensitivity grading (erring on the side of caution).

Table 3 – Visual sensitivity matrix

Receiver viewpoint (Refer Figure 9)	View direction and distance	Existing view description	Visual sensitivity grading
R1 Cambridge Street from road bridge	Looking north towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	Pedestrian and motorist ground level views are directed along the road corridor; however, elevated and indirect views from the road bridge extend along the rail corridor toward the station. Views toward the station are contained by built development either side of the rail corridor, including retaining walls, fences and buildings. Distant views extend toward high rise residential development which forms sky line views to the north of the station.	Low
R2 Multi storey residential dwellings	Looking north towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 150 metres .	Ground level and upper storey views extend toward and across the rail corridor; however, views toward the station are restricted to units with a northerly aspect. Existing mature tree planting will also screen and filter views toward the station.	Low
R3 Cambridge Street corridor	Looking north towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	Street level views toward the station from the Cambridge Street road corridor are contained and screened by buildings to the north of Cambridge Street.	Negligible
R4 Single storey residential dwellings	Looking north towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	Ground level views (from single storey buildings) extend toward and across the Cambridge Street road corridor; however, views toward the station are restricted by property fencing, screen planting and other surrounding buildings. Existing mature tree planting within the rail corridor (to be retained) also screen and filter views toward the station.	Low
R5 Multi storey residential dwellings	Looking north-west towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	Ground level and upper storey views extend toward and across the rail corridor; however, views toward the station are restricted to units with a northerly or westerly aspect. Some existing mature tree planting within the rail corridor (to be retained) also screen and filter views toward the station.	Moderate

Receiver viewpoint (Refer Figure 9)	View direction and distance	Existing view description	Visual sensitivity grading
R6 Single storey residential dwellings	Looking west towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	Ground level views (from single storey buildings) extend toward and across the Wigram Street road corridor; however, views west toward the station are partially restricted by property fencing and screen planting and other surrounding buildings. Existing mature tree planting within the rail corridor also screen and filter views toward the station.	Moderate
R7 Multi storey residential dwellings	Looking west towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	Ground level and upper storey views extend toward and across the rail corridor; however, views toward the station are restricted to units with a northerly or westerly aspect. Some existing mature tree planting within the rail corridor (to be retained) also screen and filter views toward the station.	Low
R8 Commercial properties (Marion Street south)	Looking south-west towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	Street level views toward the station from commercial buildings along the Marion Street road corridor are partially contained and screened by buildings to the south of Marion Street.	Negligible
R9 Station Street East	Looking south towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	Street level views from the Station Street East road corridor extend across the rail corridor and toward multi storey residential and commercial buildings. Views toward the station are partially contained and screened by tree planting and fencing along the rail corridor boundary.	Negligible
R10 Commercial properties (Station Street East and Marion Street north)	Looking south towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	Street level and upper storey views from commercial properties are directed west across the Station Street East road corridor and the rail corridor toward multi storey residential and commercial development. Street level and upper storey views south toward the station are screened by commercial development to the south of Marion Street.	Negligible
R11 Commercial property (Marion Street north)	Looking south towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	Ground level and upper storey views toward the station are screened by multi storey residential and commercial buildings to the south of Marion Street.	Negligible
R12 Marion Street	Looking south-east towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	Street level views toward the station are screened by multi storey residential and commercial buildings to the south of Marion Street.	Negligible
R13 Commercial property (Station Street West)	Looking south towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	Ground level and upper storey views from the building extend east across the rail corridor and the north portion of the station platforms. Views toward the station buildings are screened by multi storey residential to the south.	Negligible

Receiver viewpoint (Refer Figure 9)	View direction and distance	Existing view description	Visual sensitivity grading
R14 Detached and Multi unit residential dwellings	Looking south-east towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	Ground level and upper storey views toward the station are screened by multi storey residential buildings to the south.	Negligible
R15 Multi unit residential dwellings	Looking south-east towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	Ground level and upper storey views extend toward and across the rail corridor; however, views toward the station are restricted to units with a south-east aspect. Some limited existing mature tree planting also screen and filter views toward the station.	Moderate
R16 Commercial building	Looking east towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	Ground level and upper storey views extend toward and across the rail corridor from the commercial property. Existing mature tree planting within the south east portion of the commercial property screens and filters views toward the station from ground and upper level views.	Low
R17 Multi unit residential dwellings	Looking east and north-east towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	Ground level and upper storey views extend toward and across the rail corridor; however, views toward the station are partially restricted to units or vantage points with an east to north-east aspect. Existing mature tree planting adjoining the residential buildings also filters views toward the station from ground and upper level views.	Moderate
R18 Commercial and offices (Station Street West)	Looking north-east towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	Ground level and upper storey views extend toward and across the rail corridor. Existing tree planting to property road frontage also filters views toward the station from ground and upper level views.	Low
R19 Raymond Street	Looking north towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	Street level views toward the station from the Raymond Street road corridor are largely contained and screened by buildings to the north of Raymond Street.	Negligible
R20 Station Street West	Looking north towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately within 50 metres and up to 100 metres	Street level views extend north along the road corridor and toward the station concourse. Street level views are contained by built development to the west of the station, although views toward buildings are softened by tree planting along and within property boundaries. Distant views from the street extend north toward high rise development on the skyline. Street level views to the east of the road corridor are partially screened and filtered by fencing alongside the rail corridor, but extend above and beyond the rail corridor toward residential buildings along Cambridge Road and Wigram Street. The skyline to the east is also defined by mature tree planting both within and beyond the rail corridor.	Moderate

Receiver viewpoint (Refer Figure 9)	View direction and distance	Existing view description	Visual sensitivity grading
R21 Station Street West	Looking south towards the Proposal site. The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	Street level views extend south along the road corridor and toward the station concourse. Street level views are contained by multi storey commercial and residential development to the west of the station, although views toward buildings are softened by tree planting along and within property boundaries. Street level views to the east of the road corridor are partially screened and filtered by fencing alongside the rail corridor, but extend above and beyond the rail corridor toward residential buildings along Wigram Street. The skyline to the east is also defined by mature tree planting both within and beyond the rail corridor.	Moderate

8.5 Visual magnitude

Magnitude, in accordance with practice note EIA-N04, is *'the measurement of scale, form and character of a development proposal when compared with the existing condition. In the case of visual assessment this also relates to how far the proposal is from the viewer'.*

Table 4 identifies:

- receiver viewpoints
- the approximate distance to the Proposal works
- a judgement on comparable scale, form and character between existing and proposed conditions
- a determination of visual magnitude grading (erring on the side of caution).

Table 4 – Visual magnitude matrix

Receiver viewpoint (Refer Figure 9)	Approximate distance	Comparable judgement between the existing and proposed condition	Visual magnitude grading
R1 Cambridge Street	The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	The Proposal will form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding landscape and will not create a noticeable deterioration in the existing view.	Low
R2 Multi storey residential dwellings	The distance between the receiver viewpoint and the Proposal is approximately 150 metres .	The Proposal will result in no discernible deterioration in the existing view.	Negligible
R3 Cambridge Street corridor	The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	The Proposal will result in no discernible deterioration in the existing view.	Negligible
R4 Single storey residential dwellings	The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	The Proposal may form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding landscape and will not create a noticeable deterioration in the existing view.	Low

Receiver viewpoint (Refer Figure 9)	Approximate distance	Comparable judgement between the existing and proposed condition	Visual magnitude grading
R5 Multi storey residential dwellings	The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	The Proposal will form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding landscape and will not create a noticeable deterioration in the existing view.	Low
R6 Single storey residential dwellings	The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	The Proposal will form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding landscape and will not create a noticeable deterioration in the existing view.	Low
R7 Multi storey residential dwellings	The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	The Proposal will form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding landscape and will not create a noticeable deterioration in the existing view.	Low
R8 Commercial properties (Marion Street south)	The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	The Proposal will result in no discernible deterioration in the existing view.	Negligible
R9 Station Street East	The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	The Proposal will result in no discernible deterioration in the existing view.	Negligible
R10 Commercial properties	The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	The Proposal will result in no discernible deterioration in the existing view.	Negligible
R11 Commercial property	The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	The Proposal will result in no discernible deterioration in the existing view.	Negligible
R12 Marion Street	The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	The Proposal will result in no discernible deterioration in the existing view.	Negligible
R13 Commercial property (Station Street West)	The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	The Proposal will result in no discernible deterioration in the existing view.	Negligible
R14 Detached and Multi unit residential dwellings	The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	The Proposal will result in no discernible deterioration in the existing view.	Negligible

Receiver viewpoint (Refer Figure 9)	Approximate distance	Comparable judgement between the existing and proposed condition	Visual magnitude grading
R15 Multi unit residential dwellings	The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	The Proposal will form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding landscape and will not create a noticeable deterioration in the existing view.	Low
R16 Commercial building	The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	The Proposal will form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding landscape and will not create a noticeable deterioration in the existing view.	Low
R17 Multi unit residential dwellings	The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	The Proposal will form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding landscape and will not create a noticeable deterioration in the existing view.	Low
R18 Commercial and offices	The distance between the receiver viewpoint and the Proposal is approximately 100 metres and 150 metres.	The Proposal will form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding landscape and will not create a noticeable deterioration in the existing view.	Low
R19 Raymond Street	The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	The Proposal will result in no discernible deterioration in the existing view.	Negligible
R20 Station Street West	The distance between the receiver viewpoint and the Proposal is approximately within 50 metres and up to 100 metres.	The Proposal will form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding landscape and will not create a noticeable deterioration in the existing view.	Low
R21 Station Street West	The distance between the receiver viewpoint and the Proposal is approximately 50 metres and 100 metres.	The Proposal will form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding landscape and will not create a noticeable deterioration in the existing view.	Low

8.6 Assessment of visual impacts

Practice note EIA-N04 requires that the impact of the proposal on each viewpoint be assessed and that the visual impact should be based on a composite of the sensitivity of the view and magnitude of the proposal in that view. A composite visual impact grading has been determined for each view location by reference to the visual impact grading matrix set out in Table 2.

Table 5 identifies:

- receiver viewpoints
- the visual sensitivity grading for each receiver location
- the visual magnitude grading for each receiver location
- a determination of visual impact grading (erring on the side of caution).

Table 5 – Visual impact assessment matrix

Receiver viewpoint (Refer Figure 9)	Visual sensitivity grading	Visual magnitude grading	Visual impact
R1 Cambridge Street	Low	Low	Low
R2 Multi storey residential dwellings	Low	Negligible	Negligible
R3 Cambridge Street corridor	Negligible	Negligible	Negligible
R4 Residential dwellings (Cambridge Street north)	Low	Low	Low
R5 Multi storey residential dwellings	Moderate	Low	Moderate-Low
R6 Multi storey residential dwellings	Moderate	Low	Moderate-Low
R7 Multi storey residential dwellings	Low	Low	Low
R8 Commercial properties (Marion Street south)	Negligible	Negligible	Negligible
R9 Station Street East	Negligible	Negligible	Negligible
R10 Commercial properties (Station Street East and Marion Street north)	Negligible	Negligible	Negligible
R11 Commercial property (Marion Street north)	Negligible	Negligible	Negligible
R12 Marion Street	Negligible	Negligible	Negligible
R13 Commercial property (Station Street West)	Negligible	Negligible	Negligible
R14 Detached and Multi unit residential dwellings	Negligible	Negligible	Negligible

Receiver viewpoint (Refer Figure 9)	Visual sensitivity grading	Visual magnitude grading	Visual impact
R15 Multi unit residential dwellings	Moderate	Low	Moderate-Low
R16 Commercial building	Low	Low	Low
R17 Multi unit residential dwellings	Moderate	Low	Moderate-Low
R18 Commercial and offices	Low	Low	Low
R19 Raymond Street	Negligible	Negligible	Negligible
R20 Station Street West (view north)	Moderate	Low	Moderate-Low
R21 Station Street West (view south)	Moderate	Low	Moderate-Low

8.7 Summary of visual impact

This VIA has determined that:

- Six of the twenty one receiver viewpoints will have a Moderate-Low visual impact
- Five of the twenty one receiver viewpoints will have a Low visual impact
- Ten of the twenty one receiver viewpoints will have a negligible visual impact.

The majority of receiver viewpoints (around 48 per cent) , including single storey and multi storey residential dwellings, commercial buildings and road corridors have been determined to have an overall negligible visual impact with regard to the Proposal works. The majority negligible visual impact results from the screening effect of buildings and some existing tree planting between the receiver viewpoints and the Proposal works. Negligible impacts will also occur from dwellings within multi storey residential buildings where the unit is located opposite to the Proposal works.

Over one quarter of the receiver viewpoints (around 28 per cent) have been determined to have an overall moderate-low visual impact with regard to the Proposal works. The moderate-low visual impacts result from a moderate visual sensitivity and a low visual magnitude and includes views dwellings that are proximate and with direct views toward the Proposal.

Less than one quarter of the receiver viewpoints (around 24 per cent) have been determined to have an overall low visual impact with regard to the Proposal works. The low visual impact results from both a low visual sensitivity and low magnitude and generally represents views that will be subject to some partial screening and/or where the Proposal will create no significant change in scale or form to the existing visual environment.

Whilst some visible built elements associated with the station will be subject to change, including form and colour, the overall visible scale of the station within the context of the surrounding urban environment will remain relatively unchanged.

8.8 Construction activities

Whilst construction activities would tend to be more visible than the operational stage of the Proposal, the construction activities would be temporary and transient in nature. Views toward construction activities would be partially restricted by existing tree cover surrounding the station precinct.

Typical construction impacts include:

- temporary fencing and hoardings
- road barriers and signage
- scaffolding
- pedestrian fencing
- temporary site office and amenities.

The temporary site office and amenities, located within the car park to the north of Marion Street, will potentially be visible from dwellings to the south side of Marion Street as well as units on the south corner of the adjoining high rise residential development. The overall scale of the temporary site office and amenities is unlikely to result in significant visual impacts and is likely to be readily visually absorbed by surrounding buildings and rail infrastructure.

8.9 Night time lighting

Some Proposal infrastructure will require lighting installation for operational, safety, security and maintenance purposes. Night lighting will include building and pole mounted directional spot lighting and pole mounted pedestrian lighting. The Proposal will avoid broad area or floodlighting where possible. Light installations will be installed in accordance with the Australian Standard Control of the obtrusive effects of outdoor lighting (AS 4282-1997), and avoid light spill to adjoining road corridors and residential areas.

8.10 Overshadowing

The location of proposed works in relation to the offset distance to public domain, road corridors and residential areas, will result in shadows cast by the Proposal infrastructure being largely contained within the station precinct boundary. The Proposal is unlikely to create any significant cumulative shadowing in addition to existing shadowing from mature tree plantings adjoining the station precinct.

Section 9 Photomontages

9.1 Photomontages

The photomontages locations were selected by GBD, and approved by TfNSW, to illustrate a range of viewpoints toward the Proposal. The three photomontages locations are illustrated in Figure 3 and the photomontages are presented in Figures 10, 11 and 12.

The photomontage locations were selected from accessible sections of surrounding road corridors and from within the station precinct. They represent typical viewpoint locations and illustrate the potential influence of existing tree cover on visibility. The locations include:

- Photomontage 1 from photo location V5 looking from Station Street West adjacent to commercial and multi storey residential properties. The photomontage illustrates proposed and potential direct views toward the Proposal from the Station Street West road corridor
- Photomontage 2 from photo location V7 looking from Station Street West adjacent to multi storey residential properties. The photomontage illustrates proposed and potential direct views toward the Proposal from the Station Street West road corridor
- Photomontage 3 from photo location V12 looking from Marion Street and Station Street East footpath toward the station upgrade works. The photomontage illustrates proposed and potential direct views toward the Proposal from the Station Street East road corridor.

The photomontages demonstrate that the overall visual bulk and scale of the existing station will not be significantly altered following completion of the Proposal works.

Some individual built elements associated with the Proposal, such as the lift shafts and the canopy structure over Railway Street West, will be visually legible as additional structures when compared to the existing view. Whilst the lift shafts and canopy structure may be regarded as distinct visual elements, their scale and height are considered to be in proportion to the overall Proposal and are unlikely to form dominant skyline features from surrounding receiver locations.

Photo location V7 - Existing view looking south along Railway Street West

Photomontage 1 from photo location V7 - Proposed view looking south along Railway Street West

Figure 10
Photomontage 1

TRANSPORT ACCESS PROGRAM

Harris Park Station Upgrade

Photo location V12 - Existing view looking north-east along Railway Street West

Photomontage 2 from photo location V12- Proposed view looking north-east along Station Street West

Figure 11
Photomontage 2

TRANSPORT ACCESS PROGRAM

Harris Park Station Upgrade

Photo location V5 - Existing view looking south-west from Railway Street East

Photomontage 3 from photo location V5 - Proposed view looking south-west from Railway Street East

Figure 12
Photomontage 3

TRANSPORT ACCESS PROGRAM

GREEN BEAN DESIGN
landscape architects

NSW Transport for NSW

Harris Park Station Upgrade

Section 10 Cumulative impact assessment

10.1 Cumulative Impact Assessment

A cumulative visual impact could result from elements of the Proposal being constructed in conjunction with other existing or proposed developments which could be either associated or separate to it. Separate developments could occur or be located within a local context where visibility is dependent on a journey between each site or within the Proposal viewshed.

The Proposal will be located within the visual envelope of the existing station which contains rail infrastructure, station buildings, associated utility infrastructure and car parking facilities. Constructed elements associated with the Proposal will be similar in scale, line and form to existing infrastructure within the existing station precinct. The potential for an associated cumulative impact between the Proposal and existing infrastructure will be minimised by the visual relationship between the proposed and existing works, with the Proposal forming an enhancement and extension to existing infrastructure rather than being viewed and recognised as a standalone development.

The Proposal is considered to have limited potential to increase the significance of cumulative visual impact with regard to existing large scale visual elements located beyond the Harris Park Station precinct. This is largely due to visual screening surrounding the Proposal for the majority of view locations and the location of proposed constructed elements relative to existing infrastructure.

Section 11 Mitigation measures

11.1 Mitigation measures

While the overall visual impact of the Proposal has been determined as low to moderate-low for surrounding receiver locations, mitigation measures should be considered to minimise the level of residual visual impacts during construction and operation.

The mitigation measures generally involve reducing the extent of visual contrast between the visible portions of the Proposal structures and the surrounding landscape, and/or screening direct views toward the Proposal where possible.

11.2 Detail design

Mitigation measures during the detail design process should consider:

- further refinement in the design of the lift structures to articulate and form a profile which may assist in the mitigation of bulk and height
- consideration in selection and location for replacement tree planting which may provide partial screening or backdrop setting for constructed elements
- a review of materials and colour finishes for selected components including the use of non reflective finishes to surfaces and roof structures.

11.3 Construction

Mitigation measures during the construction period should consider:

- installation of screen hoarding and/or shade cloth screens
- minimise tree removal
- avoidance of temporary light spill beyond the construction site where temporary lighting is required
- rehabilitation of disturbed areas
- removal of graffiti in accordance with TfNSW standard requirements
- protection of mature trees within the station precinct
- traffic management and parking arrangements including potential for cars to park along residential streets due to reduced construction capacity.

11.4 Operation

Mitigation measures during the operational period should consider:

- light installation to be designed and placed in accordance with AS 4282-1997, to minimise obtrusive effects for surrounding receivers
- ongoing maintenance and repair of constructed elements
- replacement of damaged or missing constructed elements
- long term maintenance (and replacement as necessary) of tree planting within the station precinct to maintain visual filtering and screening of external views
- soft and hard landscape works maintenance.

Section 12 Conclusion

12.1 Summary

This VIA concludes that overall the Proposal upgrade, activities and operations will have a low to moderate –low visual impact on the majority of people living in or travelling through the urban landscape surrounding the Harris Park Station.

The Proposal will form a visible element within the surrounding landscape but is unlikely to constitute a marked effect on existing views. The Proposal will complement the scale, landform and pattern of the surrounding urban landscape and will not create a noticeable deterioration in the existing view. The Proposal's visual effect will be positively mitigated through a range of appropriate measures at detailed design, construction and operational stages.

The overall magnitude of the Proposal will result in a minor loss and alteration to pre-development views and the introduction of new constructed elements will not be uncharacteristic with existing urban landscape features.

The existing station viewshed is not expected to increase to any significant measure as a result of the Proposal and will continue to be defined and contained by surrounding built development.

The character of the existing urban landscape surrounding the station results in a relatively high VAC and will tend to readily absorb the expected changes to the visual environment associated with the station upgrade works.

Views toward the station will continue to be visually filtered and partially screened by existing tree planting adjoining the station precinct as well as by trees within adjoining private property. Additional tree planting should be considered at the detailed design stage to compensate for proposed tree removal to accommodate the Proposal works, including to the east boundary of the rail corridor either side of the upgraded pedestrian entry.

The majority of surrounding receivers will not be significantly impacted by the Proposal including sensitive residential receivers along Station Street West and to the west of Wigram Street. Less sensitive receivers within surrounding commercial developments and pedestrians/motorists travelling along local road corridors will not experience any significant change with regard to the Proposal.

The Proposal works would enhance the station presentation to Station Street West and create a greater degree of visual clarity around pedestrian entries to the east and west of the station precinct. Pedestrians and motorists travelling along local roads, as well as commuters walking through the station precinct, will experience an overall positive impact through the enhancement of layout, materials and design features within the station.

References

Guidelines for Landscape and Visual Impact Assessment Landscape Institute and Institute of Environmental Management & Assessment (3rd Edition), 2013

Environmental Impact Assessment Practice Note, Guideline for Landscape Character and Visual Impact Assessment EIA-N04 Roads and Maritime Services, March 2013

Transport Access Program Services Brief Visual Impact Assessment for Jannali and Harris Park Station Accessibility Upgrades Transport for NSW, May 2015, (Document reference 3788560)

Limitations

GBD has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Transport for NSW and authorised third parties. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined in the GBD Proposal dated 20 May 2015.

The methodology adopted and sources of information used are outlined in this report. GBD has made no independent verification of this information beyond the agreed scope of works and GBD assumes no responsibility for any inaccuracies or omissions. No indications were found during our investigations that information contained in this report as provided to GBD was false.

This report was prepared between June 2015 and January 2016 and is based on the conditions encountered and information reviewed at the time of preparation. GBD disclaims responsibility for any changes that may have occurred after this time.

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