

PROPOSED PENRITH STATION UPGRADE



VISUAL IMPACT ASSESSMENT

Prepared by Envisage Consulting for Transport for NSW

DATE: 23 October 2015
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Executive summary

This report provides a visual impact assessment of Transport for NSW's (TfNSW) proposed Penrith Station Upgrade in western Sydney (referred to in this report as 'the Proposal'). The assessment forms part of the requirements for a Review of Environmental Factors under Part 5 of the *NSW Environmental Planning and Assessment Act, 1979*.

The assessment focusses on the effect to the existing visual character and key viewpoints that surround the station, including the main shopping area, surrounding streets, bus interchange and the station itself. The report incorporates an assessment methodology that has been tailored to address the particular characteristics of the Proposal and is based on widely accepted professional standards.

Proposal overview

The existing station is an above ground station, constructed in approximately 1890, which is listed on the NSW State Heritage Register, the RailCorp Heritage Register and Penrith City Council's Heritage Register.

The Penrith Station Precinct (the area that is the subject of this report) includes the railway station, associated interchange facilities and passenger access between those facilities.

A key objective for the Proposal is to improve the current station, bus interchange and public spaces by providing facilities that are more accessible, modern and secure, with a focus on improving the aesthetics and general amenity of the Penrith Station Precinct.

The main visual changes proposed are:

- Existing pedestrian footbridge retained for unpaid access across the railway and extended further south
- New stairs on both the northern and southern entrances of the pedestrian footbridge
- New paid concourse
- New canopies for the existing footbridge and new stairs, lift landings, paid concourse, in addition to replacing platform canopies affected by works
- A reconfigured interchange located close to the southern station entrance
- Upgraded plaza space south of the station providing the opportunity to create an attractive public space.

A detailed description of the proposed visual changes is provided in **Section 4.1**.

Visibility of Proposal

The Proposal has a relatively confined area of visibility due to the flat landform and surrounding tall buildings and trees which serve to obstruct many potential views. Although there are currently clear views from the developing area of Thornton on the northern side, the final visibility would be substantially reduced due to future tall buildings proposed for this side of the station.

The potential area of visibility includes the main shopping area along Station Street near Westfield Penrith, Belmore Street and areas to the east, the existing bus interchange, Jane Street and areas further west, the northern plaza (under construction), the nearest parts of the future Thornton and the railway station itself.

Main visual changes

The roof of the proposed upgraded bridge structure would be several metres lower than the existing station structure and designed as a contemporary, visually lightweight element that complements the surrounding Penrith city centre. At the southern end would be a new wide staircase connecting down to the new southern plaza and leading pedestrians to and from the main shopping centre and commuter car parks. This entry has been designed as a key focal point that would integrate the upgraded bridge structure into the surrounding public space and urban environment. It would both link the two sides of the rail corridor and draw together the urban uses on each side.

As is intended, the upgraded bridge structure, and its end staircases would be part of a modern station facility visually delineated from nearby heritage elements such as the old Station Master's Residence and heritage platform buildings. The attractiveness of the setting of the old Station Master's Residence would improve with planned high quality landscape improvements around the building and removal of the existing security fencing. The planned retention of the existing large Pepper Tree near the building (a likely remnant of the former garden) would also retain this important visual backdrop which gives both context and amenity to the building.

There would also be a substantial reduction in the extent of bus shelters, with the Proposal having shorter, separate structures which are far less visually dominant. The design and location of the shelters would allow for more open views across the southern plaza to both the bus interchange and station, which is particularly noteworthy in terms of allowing views of the platform 3 heritage building.

The upgraded bus interchange has been designed to reduce unnecessary structures and infrastructure, and open-up views of the platform 3 heritage building which greatly contributes to the visual character on the southern side of the station. The reconfiguring of the bus interchange allows for a more generous and consolidated public space to be created between the bus interchange and Jane/Belmore Street. This space would greatly improve the

attractiveness of the area around the station, transforming it to a far more pedestrian environment with pleasant pathways, planting, shade and seating.

On the northern side the new stairs would descend into the northern plaza (which is being constructed by Urban Growth). From this side the stairs and upgraded bridge structure would be less visually obvious as these built elements would sit within the setting of the planned tall commercial buildings on this side.

Conclusion

The Proposal would result in a noticeable improvement to the existing visual environment, particularly in regard to the public spaces on the southern or Penrith side. The identified level of potential impact is considered moderate overall, reflecting the proposed extent of visual change. Some minor mitigation measures to improve the overall visual amenity have been recommended.

As viewers become more familiar with the changes, it is suggested that the new features of the station and bus interchange would become an integral and compatible part of the overall character and one appreciated as a modern public facility. The new southern plaza would be particularly transformational, changing the station into a pedestrian gathering space and new focus for this part of Penrith.

1. Introduction

1.1 Purpose of this report

This report provides a visual impact assessment of Transport for NSW's (TfNSW) proposed Penrith Station Upgrade in Sydney (referred to in this report as 'the Proposal'). The assessment forms part of the requirements for a Review of Environmental Factors under Part 5 of the *NSW Environmental Planning and Assessment Act, 1979*.

It is to be noted that there are no specific parameters for a visual impact assessment under existing NSW legislation or government policy. In response, this report incorporates an assessment methodology that has been tailored to address the particular characteristics of the Proposal and based on widely accepted professional standards.

The assessment focusses on the visual changes that will be seen from key viewpoints that surround the station, including the main shopping area, surrounding streets and the station itself.

1.2 Existing Penrith Station Precinct

The existing station is an above ground station, constructed in approximately 1890, which is listed on the NSW State Heritage Register, the RailCorp Heritage Register and Penrith City Council's Heritage Register.

Penrith Station Precinct (the area the subject of this report) includes the railway station, associated interchange facilities and passenger access between those facilities.

The station consists of one island (Up) and one side (down) platform, with the platforms at – grade with the adjacent Belmore Street to the south. The platforms are accessible via a pedestrian footbridge and concourse over the rail corridor with lifts and stairs to each platform, as well as paid street level entry directly to platform 3. The existing concourse also provides unpaid cross corridor access.

1.3 Proposal overview

A key objective for the Proposal is to improve the current station, bus interchange and public spaces by providing facilities that are more accessible, modern and secure, with a focus on improving the aesthetics and general amenity of the Penrith Station Precinct.

The main visual changes proposed are:

- Existing pedestrian footbridge retained for unpaid access across the railway and extended further south
- New stairs on both the northern and southern entrances of the pedestrian footbridge
- New paid concourse to the east of the pedestrian footbridge

- New canopies for the existing footbridge and new stairs, lift landings, paid concourse, in addition to replacing platform canopies affected by works
- A reconfigured interchange located close to the southern station entrance
- Upgraded plaza space south of the station providing the opportunity to create an attractive public space.

A detailed description of proposed visual changes is provided in **Section 4.1**.

1.4 Report format

The principal tasks of the visual impact assessment process are set-out in the report's format:

- Task 1: Define the methodology for the assessment (**Section 2.0**)
- Task 2: Establish baseline conditions and describe the context of the site, including the visual environment and site visibility (**Section 3.0**)
- Task 3: Describe the main visual changes associated with the Proposal (**Section 4.0**)
- Task 4: Assess the likely landscape and visual effects to character and surrounding key viewpoints (**Section 5.0**)
- Task 5: Describe design and mitigation measures that have been, and could be, incorporated into the design to improve the visual outcome (**Section 6.0**).

2. Assessment methodology

2.1 General

The applied methodology has been developed based on professional experience with similar Proposals, and existing guidelines used by government authorities in Australia such as the *Environmental Impact Assessment Guidance Note – Guidelines for Landscape Character and Visual Impact Assessment* (NSW Roads and Maritime Services, 2013), *Visual Landscape Planning in Western Australia* (Western Australian Planning Commission, 2007) and the United Kingdom's well-regarded *Guidelines for Landscape and Visual Impact Assessment* (The Landscape Institute and Institute of Environmental Management and Assessment, 2013).

Visual impact assessments generally focus on two main types of visual effects (or impacts) as detailed further below:

- effect on the visual character
- effect on key viewpoints.

2.2 Assessment of effect on visual character

This the main changes to the visual character of the general area surrounding the Proposal, taking into account the magnitude of visual change and aspects such as the difference in scale of new structures, compatibility with the existing visual character, contrast in colour and materials, heritage considerations, vegetation loss and change to any views to landmarks or vistas.

2.3 Assessment of effect on key viewpoints

Two main factors are identified for each key viewpoint during the assessment process:

- the visual sensitivity (of the viewpoint)
- the magnitude of visual change.

Consideration of both of these factors is necessary to arrive at an overall level of effect or impact to the viewpoint, which is effectively the combination of visual sensitivity and magnitude of visual change.

The four steps in the visual impact assessment process on viewpoints are as follows:

Step 1: Identification of key viewpoints

Key viewpoints usually include those from locations such as public roads, parks, shopping areas, schools and residential areas. The key viewpoints for Penrith Station were identified via a site inspection to determine potential visibility of the Proposal from surrounding locations, with an emphasis on those with the highest 'visual sensitivity'.

Step 2: Determine visual sensitivity of key viewpoints

Visual sensitivity is related to the type of viewpoint (whether it is public, private, permanent or transient), the distance away and the number of viewers. Generally the closer the viewpoint, the more sensitive the viewpoint is to change. Viewpoints within 300m are generally considered to be 'close foreground' views and normally the most sensitive.

Taking into account the context of the site and the scale and type of the Proposal, for this assessment the following definitions have been used:

- Very high – a public viewpoint with a very high number of viewers (note that this category was not used in this assessment)
- High – a public viewpoint with a high number of viewers (e.g. Station Street)
- Moderate – a public viewpoint with a medium number of viewers (e.g. the eastern end of Belmore Street)
- Low – a public viewpoint with low number of viewers (note that this category was not used in this assessment).

Step 3: Determine 'magnitude of visual change'

Once the level of visual sensitivity of the key viewpoints is determined, then the 'magnitude of visual change' needs to be described. Magnitude of visual change relates to aspects such as the difference in scale of new structures to the surrounding area, compatibility with the existing visual character, contrast in colour and materials and any vegetation loss.

- Very high – large change that overwhelms existing context
- High – large change that is substantially larger in scale and contrast
- Moderate – moderate change that is somewhat larger in scale and contrast
- Low – low change that is similar, or of less scale and contrast.

Step 4: Assess overall effect on key viewpoints

The relationship of 'visual sensitivity' and the 'magnitude of visual change' together determine the likely effect, or 'level of impact' on the existing key viewpoints, as shown in the matrix in **Table 2.1**.

It is to be noted that the table provides a general understanding of the level of impact, with further commentary then included in the assessment to describe any predicted impacts. Where relevant the effect of time is also considered.

Table 2-1: Matrix illustrating relationship between 'visual sensitivity' and 'magnitude of visual change'					
Potential impact level		Magnitude of change			
		Very High	High	Moderate	Low or Insignificant
Visual sensitivity	Very High	Very high impact	High impact	High impact	Moderate impact
	High	High impact	High impact	Moderate impact	Low impact
	Moderate	Moderate impact	Moderate impact	Moderate impact	Low impact
	Low	Moderate impact	Low impact	Low impact	Low or insignificant impact

2.4 Proposal illustration

Photomontages

Photomontages have been prepared to illustrate the likely visual changes from a number of key viewpoints and are included in **Section 5.0**. These images focus on viewing the Proposal in its wider setting, at a pedestrian view-level, which is particularly relevant to visual impact assessment.

To achieve this, a 3D model of Penrith Station was developed using 3DStudioMax software and supplied 2D plans, elevations and sections. Survey plans prepared by others was then used as a reference and the 3D model was aligned to the survey model. Viewpoint locations were selected and photography was undertaken by Envisage Consulting. Photographs were supplied and corrected for distortion using specific camera and lens profiles in Adobe Photoshop and camera co-ordinates were then merged with the 3D model and virtual cameras were setup using these co-ordinates. Camera matching was then undertaken using reference points common to the 3D model and physical features in the photographs. The model was then rendered with the photograph and edits to foreground elements were made in Photoshop.

Architect's visualisations or 'artist's impressions'

The Proposal architects (Laing O'Rourke/GHD, 2015) also prepared a number of visualisations or 'artist's impressions' to illustrate the Proposal, with the main purpose of evaluating the design. These images are generally less accurate than the photomontages in terms of the relationship to the surrounding area, are useful to generally illustrate the Proposal and support the visual assessment, and have been included in **Section 5.0**.

3. Context of existing visual environment

3.1 General context and land use

Penrith Station acts as a focal point to the main commercial centre of Penrith. The pedestrian connection over the railway draws together the opposite sides of the railway corridor, with this role set to increase with the establishment of the new area of Thornton on the northern side.

The station sits within the 'commercial core' character area of the Penrith City Centre 'key precinct', under the *Penrith Development Control Plan (DCP) 2014*. In that local planning document this 'commercial core' around the station is described as:

"the 'gateway' to Penrith on arrival by rail, and given this status, needs to be a focus for the highest quality developments.

The Commercial Core precinct is dominated by the Westfield Penrith (or the Penrith Plaza) shopping centre. The interface of the shopping centre with the city and the 'street life' activity along High and Station Streets needs to be strengthened."

The building heights proposed for the area along Jane Street and the western end of Belmore Street are between 16-20m along the street frontage, stepping up to a maximum of 24m (or approximately 8 storeys) further back from the immediate frontage. The area of the southern side of the station is dominated by Westfield Penrith indoor shopping centre which occupies the large area between the western side of Station Street and the Penrith Council offices to the west. On the eastern side of Station Street there are commercial office buildings, with the Nepean TAFE further east. To the east and west of the bus interchange area are several large commuter car parks at ground level.

On the northern side of the station is the developing area of Thornton which when complete will provide approximately 1,000 dwellings, recreational open space and commercial areas. Closest to the station will be a civic space referred to here as the 'northern plaza' which is currently under construction, with a local business centre linking with this plaza to the north, and medium to high density residential buildings to the south.

Penrith City Public Domain Master Plan

The *Penrith City Public Domain Master Plan (2013)* identifies the view along Station Street to the railway station plaza, platform building and beyond to North Penrith as being important to the urban experience of the town centre. The Master Plan also articulates the important historical relationship between Station Street and High Street in the urban composition of Penrith – that being Station Street as a

civic axis terminating at the railway station. The visual context of the Proposal is shown in **Figure 3-1**.



Figure 3-1: Visual context of Proposal

3.2 Heritage

A description of heritage impact is contained in the Design Statement (GHD, 2015), where the following heritage information is included:

Penrith Railway Station opened in 1863 and was for a number of years the terminus of the Western Main Line during the extension of the railway line over the Blue Mountains. The 1860s and 1890s station buildings are relatively intact examples of Victorian second-class and thirdclass station buildings and remain as important landmarks in the townscape of Penrith.

The station curtilage is on the local State and State Rail Section 170 heritage registers and requires careful consideration in terms of future works in relation to the heritage structures and values of the place.

The heritage features that have the most influence on the visual environment:

- Station Building, 1863, Second Class (along southern station and bus interchange side (i.e. the platform 3 heritage building)
- Station Building, 1890, third class also with a range of changes (in centre, island platform 1/2)
- old Station Master's Residence, 1878 (Belmore Street)
- Signal Box, 1956, (in centre, island platform 1/2).

3.3 Ecological values

A detailed biodiversity assessment is provided in the Proposal's Ecological Impact Assessment (Biosis). There are no areas of native vegetation within the study area, with existing vegetation having been planted and consisting of a mix of exotic and native species. Trees of particular note include the many native Tallowwoods around the southern side of the station and bus interchange, and a large Fig and Pepper Tree near the old Station Master's Residence.

A summary of the main changes to vegetation relevant to this visual impact component is provided in **Section 4.4**.

3.4 Visual environment

Visual impact assessments usually classify locations in terms of factors such as visual character (the main 'look' of the area) and visibility (how often and easily a site is seen).

3.4.1 Visual character

The dominant character of the surrounding area is highly urban on the southern side, consisting of the main commercial area of Penrith city centre dominated by the large Westfield Penrith closest to the station. This shopping centre has one of its main entrances along Station Street, creating strong pedestrian movement from here to the station.

The side of Westfield Penrith that faces toward the station and bus interchange, along Jane Street, is dominated by blank walls and driveways to the centre's car

parks, with some softening provided by existing trees. The bus interchange on the opposite side is separated by a visually strong row of native Tallowwoods which have a natural character that improves the look of this facility and the streetscape.

The station itself displays a mix of heritage buildings and the more contemporary structure which houses the concourses and station access. This structure is rectangular and mostly grey in colour, comprised of materials such as steel, concrete and glass.

Overall the character of the southern side of the station is diminished by the rather haphazard format of the area immediately around the station entrance. This area suffers from a dominance of road and transport infrastructure which dissects the zone between the station and Belmore/Jane Streets, with pedestrian movement and public space secondary. The area around the old Station Master's Residence is physically separated from the station by roadways and is quite hidden by the existing vegetation which has an important role in the building's setting and is likely linked to its heritage. The platform 3 heritage building along the southern station side is partially obscured by the existing bus interchange.

The developing area of Thornton on the northern side has a character which is currently changing as the new housing, parklands and commercial areas are established. The northern plaza was almost complete at the time of the site visit for this report, showing a generous paved area and landscape planting.

The effect of the Proposal on visual character is described in **Section 5.1**.

3.4.2 General visibility

The Proposal has a relatively confined area of visibility due to the flat landform and surrounding tall buildings and trees which serve to obstruct many potential views. Although there are currently clear views from the developing area of Thornton on the northern side, the final visibility would be substantially reduced due to future tall buildings proposed for this side of the station.

The potential area of visibility includes the main shopping area along Station Street near Westfield Penrith, Belmore Street and areas to the east, the existing bus interchange, Jane Street and areas further west, the northern plaza (under construction), the nearest parts of the future Thornton and the railway station itself.

The key potential viewpoints to the Proposal are identified and assessed in detail in **Section 5.2**.

3.4.3 Landmarks and wider views

From the existing station concourse there are opportunities for views to the west toward the Blue Mountains. These views are particularly noteworthy as the mountains represent a local natural landmark that both orientates viewers and is valued for its scenic nature.

4. Proposal description

This section describes the main components of the Proposal that have the potential for visual impact during establishment and operation. A Proposal plan of the general arrangement is shown in **Figure 4.1**, with photomontages and architect visualisations in **Section 5.0**. A more detailed Proposal description is provided in the proposal's Review of Environmental Factors (REF).

4.1 Design Statement

The Architecture & Urban Design Report Concept Design Stage (Laing ORourke/GHD, 2015) includes the following as part of the 'design statement':

The scheme looks at improving the visual connectivity between the town centre and the station by removing the unnecessary clutter in front of the station to reveal back its heritage features as well as reopening views through the station platforms and beyond. The heavily traffic dominated space that is currently the station forecourt is to become a fully pedestrianised plaza. New seating areas and soft landscaping are proposed to provide the area a more welcoming atmosphere while improving the setting of the existing heritage buildings. Interchange facilities are proposed all along the plaza edges allowing good intermodal connectivity between trains, buses, taxis, cars and bicycles.

Set sympathetically within this landscape, the entrance to the footbridge takes a prominent place on the plaza to give it a civic presence and ensure that it will be at once recognised as the access to the station. The scale and external appearance of the station footbridge has been carefully considered to compliment the façade of the heritage buildings rather than distract from it. As the journey takes you up the stairs and the views of the Blue Mountains are revealed, the space opens up to the West drawing from the mountain its geometry and materiality. The textured wood soffit and careful detailing bring interest and richness to the journey and the wide open passageway gives ample space for pause and contemplation of the mountains and heritage features of the station (page 17).

4.2 The Proposal

The Proposal would deliver a number of improved features to provide an accessible station and improved interchange facilities. The Proposal would include the following key elements (related to the main visual changes):

- existing pedestrian footbridge retained for unpaid access across the railway and extended further south
-

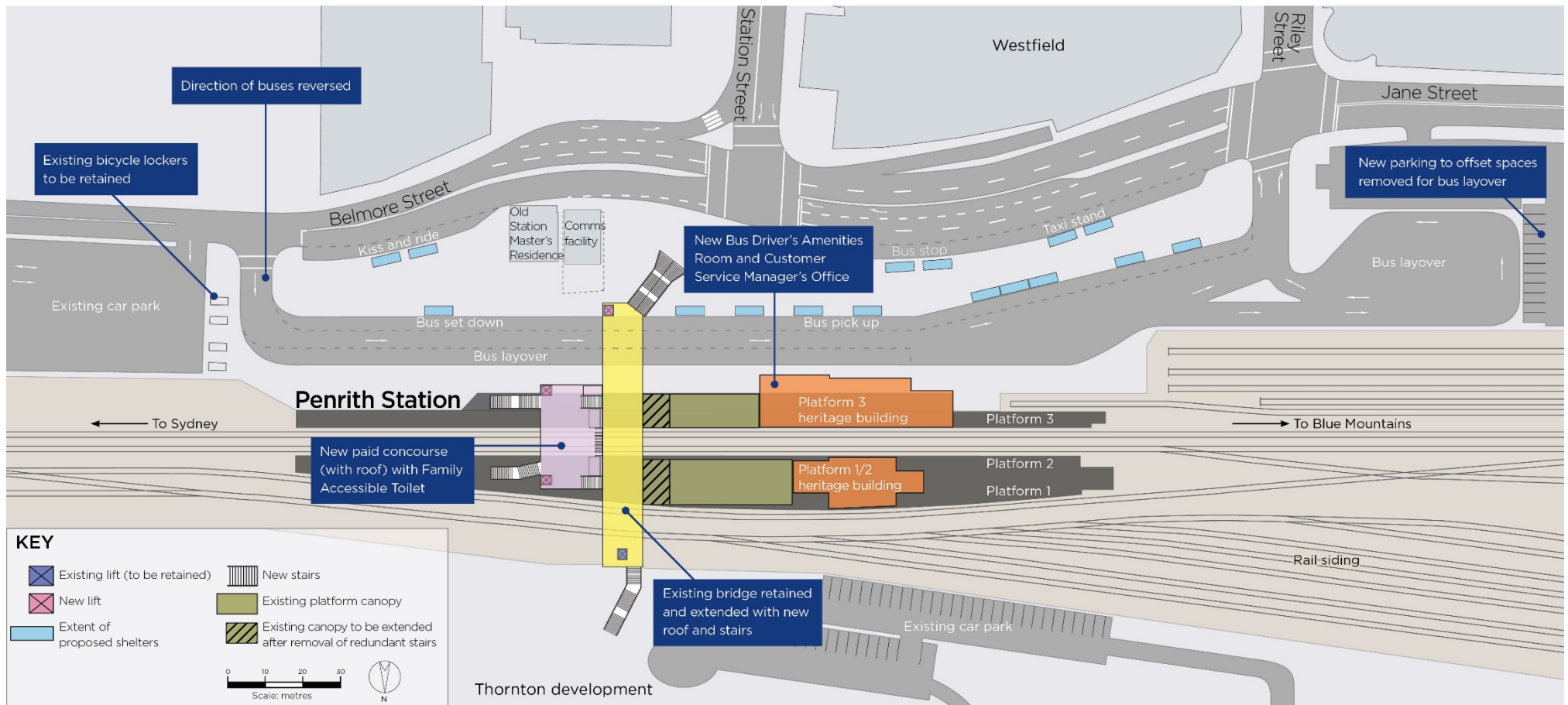


Figure 4-1: Plan of general arrangement of Proposal

- new stairs on both the northern and southern entrances of the pedestrian footbridge
- new paid concourse accessible from the pedestrian footbridge with relocated ticket gates, new Customer Information Window, Family Accessible Toilet, store room and stairs to platforms
- three replacement lifts to provide access to the platforms/interchange
- new canopies for the existing footbridge and new stairs, lift landings, paid concourse, in addition to replacing platform canopies affected by works
- reconfiguration of the southern transport interchange which would involve:
 - upgraded bus interchange with reversed traffic flow to include set down, pick up and layover spaces for buses, and shelters for weather protection for customers
 - relocated kiss and ride and taxi rank (with shelters) on Belmore Street
 - landscaping, paving and lighting for the interchange and forecourt area
- extension of the south-western car park with approximately 25 spaces (to offset some of the commuter parking removed for the long-term bus layover)

ancillary works including services diversion and/or relocation, alterations to traffic signals, station power supply upgrade, minor drainage works, adjustments to fencing, lighting and seating, improvements to station communication systems with new infrastructure (including lighting, CCTV cameras, Passenger Information Display boards and Opal card readers) and wayfinding signage.

4.3 Design features

4.3.1 Station structures, building works and services provision

Details of the proposed works to take place at the station to improve accessibility and customer experience (related to the main visual changes) are provided below:

- demolition of structures including:
 - existing pedestrian footbridge elements such as the roof, façade and two lifts
 - note: the suspended concrete deck (floor) would be retained for use as an unpaid cross-corridor access
 - existing stairs from the pedestrian footbridge to platforms and associated canopies (some to be replaced) and the existing shelter on the eastern end of Platform 1/2
 - existing two retail shops on Platform 3 (to be replaced by two new retail kiosks on pedestrian footbridge, subject to separate planning approval)
 - existing male and female toilets on Platform 3
 - Family Accessible Toilet on Platform 3 (to be replaced in new building on Platform 3)
 - customer luggage room on Platform 3 (to be replaced in new building on Platform 3)

- existing Gate Access Control office (to be replaced with new Customer Information Window on paid concourse)
- extension of the pedestrian footbridge to the south across the bus lanes of the interchange, and installation of new entrance stairs to the north and south along with a glass façade to the west to allow for views of the Blue Mountains and station heritage buildings
- construction of a new paid concourse (with glass façade) to the east of the pedestrian footbridge that would comprise relocated ticket barriers (from southern entrance) and ticketing machines, Customer Information Window, Family Accessible Toilet, store room and four new stairs down to the platforms
- construction of three replacement lifts (one lift to provide access from the southern plaza to the pedestrian footbridge, two lifts at the paid concourse to provide access to the station platforms, while the existing northern lift would be retained to provide access from the pedestrian bridge to the northern plaza)
- new canopies for weather protection installed above the existing pedestrian footbridge, new paid concourse and both station entrance stairs (it is envisaged that the canopies would comprise steel columns and roofs, would not be fully enclosed and would be designed so as to be sympathetic to the station surrounds with unobtrusive, modern, light materials)
- additional infill canopy for the uncovered area adjacent to the Platform 1 heritage building (to match the existing)
- new anti-throw/protective screens installed on the pedestrian footbridge/stairs
- new solar photovoltaic (PV) cells installed on the new roof of the pedestrian footbridge (subject to feasibility)
- closure of the existing street level entrance (to Platform 3) which would include the removal of the canopy covering the existing ticket barriers on Platform 3 and would result in access to all platforms via the new paid concourse and stairs
- establishment of an emergency egress from Platform 3 (with small platform extension on eastern end of Platform 3, new emergency door/stairs etc.)
- construction of the small building on Platform 3 (underneath the existing footbridge) to accommodate the relocated Family Accessible Toilet and customer luggage room
- establishment of a new Bus Driver's Amenities Room and Customer Service Manager's Office in the existing Platform 3 heritage building
- platform modifications including removing pinch points and crowding points, new/upgraded tactiles and relocation/replacement of seats etc to ensure a compliant accessible path of travel and to enhance sight-lines to the heritage platform buildings (i.e. relocation of vending machines, seats, ATMs)

- services adjustments including for drainage, lighting and communications systems (e.g. Passenger Information Display boards and CCTV)
- new wayfinding signage and provision of other signage including statutory/regulatory signage.

4.3.2 Interchange facilities

Details of the proposed works to take place at the interchange to improve safety and customer experience (related to the main visual changes) are provided below:

- modified bus interchange on the southern side of the station entrance within the footprint of the existing interchange and involving the following:
 - the direction of traffic would be reversed and the entry/exit points would switch
 - new interchange would comprise three lanes (a bus stand lane for set down/pick-ups, a through movement lane and a layover lane)
- kiss and ride (with approximately seven spaces) relocated to the eastern end of Belmore Street
- taxi zone (with approximately eight spaces) relocated to the western side of Belmore Street along with an additional bus stand
- provision of a long-term bus layover west of the station and establishment of additional parking spaces in the south-western car park to offset some of the parking to be impacted by the works
- new shelters for weather protection for bus, taxi and kiss and ride areas along with lighting and CCTV coverage (and removal/salvage of the existing shelters)
- removal of existing bicycle racks in the southern plaza (to be salvaged and provided to Penrith City Council – in addition a bike shed with capacity for 30 bicycles is proposed, subject to a separate planning approval, as part of the Bike and Ride Initiative)
- landscaping, paving, street furniture and lighting in the southern plaza to complement Penrith City Council areas
- adjustment to boundary fencing and landscaping works for areas affected by the works.
- new wayfinding signage and provision of other signage including statutory/regulatory signage.

4.3.3 Materials and finishes

Each of the upgraded or new station facilities would be constructed from a range of different materials, with a different palette for each architectural element. Subject to detailed design, the Proposal would include the following:

- the existing pedestrian footbridge would be extended to bridge the bus interchange using a concrete deck, steel frame structure, Colorbond roof, natural timber-like soffit and glazed facades
- the new paid concourse is being constructed adjacent to the existing pedestrian footbridge and would be constructed in materials to match, for an integrated and cohesive aesthetic

- the new entrance stairs to the pedestrian footbridge, and those from the paid concourse to the platforms, would be concrete with steel frame construction, Colorbond roofing and steel balustrades and handrails
- lift shafts would be constructed from concrete at platform level with steel framed and glazing to the upper area and integrated into the surrounding structures for aesthetic consistency.

The design would be submitted to TfNSW's Urban and Design and Sustainability Review Panel at various stages for comment before being accepted by TfNSW.

4.4 Pedestrian/cyclist facilities and landscape works

The Architecture & Urban Design Report Concept Design Stage (Laing O'Rourke/GHD, 2015) includes the following description of proposed public domain improvements:

Our design maintains the historical vista along Station Street. The revitalised Southern Plaza is set within the new Station Park, which provides a cohesive urban and landscape setting for the reconfigured interchange. The design of the new station forecourt and park aims to facilitate passenger connections between the railway station and the associated interchange facilities, the immediate activity centres (Station Street, Westfield Penrith Plaza, Penrith TAFE and the NSW Government Offices) and the wider Penrith City Centre.

The design expression of the new station forecourt and park endeavours to create an urban landscape setting that is respectful of the heritage values of the station precinct, while also creating a significant new 'green' public space in the heart of Penrith City. The extensive use of brick paving in the new forecourt and park unifies the station precinct with a robust material that is sympathetic to the heritage values of the site...Extensive use of seating facilities across the whole park and plaza allows the use of the precinct as a meeting area, reactivating the place and ... includes significant new planting of trees, shrubs and groundcovers to create a new civic park.

The design would be submitted to TfNSW's Urban and Design and Sustainability Review Panel at various stages for comment before being accepted by TfNSW. An Urban Design and Landscaping Plan (UDLP) would also be prepared by the Contractor, prior to construction and approved by TfNSW.

4.5 Effect on existing vegetation

A detailed biodiversity assessment is provided in the Proposal's Ecological Impact Assessment (Biosis, 2015). The following information is from that report.

There are no areas of native vegetation within the study area. The proposed works will not impact any of the remnant elements of native vegetation identified within the Penrith Station Upgrade study area. Nor will the works impact on any vegetation or trees on the north side of the rail corridor.

The impacts on vegetation and trees are all outside and to the south of the rail corridor. The vegetation to be impacted comprises planted exotic tree species only. Eight trees are impacted by the Proposal:

- Tree 11 is the smaller of two old Pepper Trees immediately to the east of the old Station Master's Residence
- the prominent large Pine tree (tree 15) north of the old Station Master's Residence is also proposed for removal
- six Jacaranda trees (trees 20-25) located to the west of the old Station Master's Residence, are also proposed for removal
- the trimming of the large Rubber Tree (tree 16) to the west of the old Station Master's Residence is also proposed.

4.6 Temporary Construction works

There would be temporary works (as required) during construction to maintain a similar 'level of service', such as temporary stairs, customer information and ticketing facilities, shelters, alternative bus/taxi and kiss and ride arrangements (including signage).

4.7 Lighting

The Proposal would include the installation of lighting for operational, safety, security and maintenance purposes. Night lighting would include building and pole mounted directional spot lighting and pole mounted pedestrian lighting. The majority of infrastructure areas associated with the Proposal would be unlikely to require additional lighting, or lighting that would result in a direct line of sight from surrounding view locations. Light installations would be installed in accordance with the *AS 4282:1997 Controlling the Obtrusive Effects of Outdoor Lighting*, and avoid light spill to adjoining road corridors and residential areas.

5. Visual impact assessment

5.1 Effect on existing visual character

The roof of the upgraded bridge structure would be several metres lower than the existing station structure and designed as a contemporary, visually lightweight element that complements the surrounding Penrith city centre. At the southern end would be a new wide staircase connecting down to the new southern plaza and leading pedestrians to and from the main shopping centre and commuter car parks. This entry has been designed as a key focal point that would integrate the upgraded bridge structure into the surrounding public space and urban environment. It would both link the two sides of the rail corridor and draw together the urban uses on each side.

As is intended, the upgraded bridge structure, and its end staircases would be part of a modern station facility visually delineated from nearby heritage elements such as the old Station Master's Residence and heritage platform buildings. The attractiveness of the setting of the old Station Master's Residence would improve with planned high quality landscape improvements around the building and removal of the existing security fencing. The planned retention of the existing large Pepper Tree near the building (a likely remnant of the former garden) would also retain this important visual backdrop which gives both context and amenity to the building.

The upgraded bus interchange has been designed to reduce unnecessary structures and infrastructure and open-up views of the platform 3 heritage building which greatly contributes to the visual character on the southern side of the station. The reconfiguring of the existing bus interchange has allowed for a more generous and consolidated public space to be created between the bus interchange and Jane/Belmore Street. This space would greatly improve the attractiveness of the area around the station, transforming it to a far more pedestrian environment with pleasant pathways, planting, shade and seating.

There would also be a substantial reduction in the extent of bus shelters, with the Proposal having shorter, separate structures which are far less visually dominant. The design and location of the shelters would allow for more open views across the southern plaza to both the bus interchange and station, which is particularly noteworthy in terms of allowing views of the platform 3 heritage building.

On the northern side the new stairs would descend into the northern plaza (which is being constructed by Urban Growth). From this side the stairs and upgraded bridge structure would be less visually obvious as these built elements would sit within the setting of the planned tall commercial buildings on this side.

As viewers become more familiar with the changes, it is suggested that the new features of the station and bus interchange would become an integral and compatible part of the overall character and one appreciated as a modern public facility. The new public space on the southern side would be particularly

transformational, changing the station into a pedestrian gathering space and new focus for this part of Penrith, and having a positive effect on the visual character.

5.2 Effect on key viewpoints

The assessed viewpoints are identified in **Figure 5-1**.



Figure 5-1: Key viewpoints and photomontage locations

The assessment describes the predicted changes in views that would occur during the life of the Proposal to particular viewpoints, based on the methodology described previously, that is:

- identification of the visual sensitivity of each viewpoint
- an assessment of the likely magnitude of visual change
- an overall assessment of the potential visual impact.

5.2.1 Public viewpoint A: Station Street

An existing view from this viewpoint, and a photomontage of that same view showing the likely visual changes, is provided as **Figure 5-2**.

Visual sensitivity

This viewpoint is arguably the most important public one as there is a high amount of pedestrian traffic from Station Street, back and forth to Penrith Station, including from one of the main entrances to Westfield Penrith.

Due to the high number of users the visual sensitivity of the viewpoint is high.

Magnitude of change

The Proposal specifically acknowledges the importance of this public viewpoint by orientating the new stairs from the upgrade bridge structure in the direction of Station Street.

The main visual changes seen from this viewpoint would include:

- Removal of much of the existing clutter around the station, such as the 'Penrith Station' entrance shelter, some vegetation and numerous signs and other infrastructure
- Opening up of views toward the platform 3 heritage building (largely through the removal of the existing ground-level entrance, associated canopy and the platform 3 building (that is not part of the heritage building))
- With clear glazing specifically selected between the platform 3 heritage building and the upgraded bridge structure to allow for mostly unimpeded views through to platform 3 at the street level The establishment of a new public space to form the southern plaza which would create a continuous pedestrian environment from Station Street to the new stairs that link to the station
- A more visually-lightweight, and lower, structure over the station.

Magnitude of visual change: moderate.

Overall visual impact level

The magnitude of visual change ranking, combined with the visual sensitivity ranking of high, leads to a visual impact level to this viewpoint of moderate.



Figure 5-2: Public viewpoint A - existing and likely future view from Station Street

5.2.2 Public viewpoint B: Belmore Street (opposite station)

Figure 5-3 shows an existing view from Belmore Street, with old Station Master's Residence in foreground blocking views toward existing station bridge structure.



Figure 5-3: Existing view from Belmore Street with old Station Master's Residence in foreground

Visual sensitivity

This viewpoint takes in the area of Belmore Street from Station Street to the east of the old Station Master's Residence, an area busy with both traffic and pedestrians.

Due to the high number of users the visual sensitivity of the viewpoint is high.

Magnitude of change

The area of Belmore Street closest to Station Street would involve visual changes similar to Viewpoint A. However, when the viewers are immediately opposite the existing Communications Facility and old Station Master's Residence, and to the east of these buildings, the existing buildings and most of the existing trees would continue to block views to the lower areas of the station and the southern plaza. The extent of structure seen would depend on the viewer location, with views increasing from further east.

Views would be improved by the replacement of the car park east of the old Station Master's Residence with new landscaped public space. The extent of views toward the upgraded bridge structure would change over time as planned tree planting matures, with new trees eventually obscuring the ground and lower areas, and only the very upper part of the structure potentially seen from Belmore Street. The visual changes from this viewpoint are considered positive, particularly in regard to less structures and car parking, increased public space and more attractive tree establishment in the longer term.

Magnitude of visual change: moderate.

Overall visual impact level

The magnitude of visual change ranking, combined with the visual sensitivity ranking of high, leads to a visual impact level to this viewpoint of moderate.

5.2.3 Public viewpoint C: Belmore Street (east of station)

Visual sensitivity

This viewpoint comprises views from the car park area to the east of the station (refer **Figure 5-4**). This viewpoint would be mostly available to users of the commuter car park and eastern Belmore Street, and has a visual sensitivity of moderate.



Figure 5-4: Public viewpoint C - existing view from Belmore Street east of station

Magnitude of change

There would be a number of visual changes seen from this direction, including:

- the removal of the smaller of the two existing Pepper Trees near the old Station Master's Residence, and also a large Pine Tree to the north of that building
- removal of the existing extensive bus shelters at this eastern end
- replacement of the existing car park east of the old Station Master's Residence with landscaped public space.

These changes would substantially reduce the extent of visual elements and hard surfaces in this eastern area and open-up views toward the upgraded bridge structure in the short term. In the longer term, the proposed new tree planting would screen many of the views of the upgraded bridge structure except for the higher parts, as well as increase trees immediately alongside the rail corridor at the eastern end.

Magnitude of visual change: moderate.

Overall visual impact level

The magnitude of visual change ranking, combined with the visual sensitivity ranking of high, leads to a visual impact level to this viewpoint of moderate.

5.2.4 Public viewpoint D: Jane Street (opposite existing bus interchange)

An existing view from this viewpoint (near the existing Jane Street car park entrance), and a photomontage showing likely visual changes, is provided as **Figure 5-5**.

Visual sensitivity

This viewpoint is from Jane Street alongside the existing bus interchange. Currently where close to Station Street there are clear views of the main station structures, with some partial screening provided by the tall Tallowwoods that are a dominant element. Further west views of the higher parts of the station are almost totally prevented by the trees.

The visual sensitivity of the viewpoint is moderate.

Magnitude of change

There would be substantial visual change seen from viewpoints along Jane Street, including:

- Removal of much of the existing clutter around the station, such as the 'Penrith Station' shelter, some vegetation and numerous signs and other infrastructure
- The new southern plaza and new stairs that link to the station
- A more visually-lightweight, and lower, structure over the station (except where views would be blocked by trees as viewers move further west)
- A new area of public space alongside Jane Street which would substantially replace the hard surface area of the existing bus interchange with landscape planting and be a more pedestrian environment.

The magnitude of visual change would be moderate.

Overall visual impact level

The magnitude of visual change ranking, combined with the visual sensitivity ranking of moderate, leads to a visual impact level to this viewpoint of moderate.



Figure 5-5: Public viewpoint D - existing & likely future view, Jane Street (near car park entrance)

5.2.5 Public viewpoint E: Jane Street (western end)

An existing view from this viewpoint, and a photomontage showing likely visual changes, is provided as **Figure 5-6**.

Visual sensitivity

This viewpoint comprises views from the western end of Jane Street near the commuter car park and west of the bus interchange. This viewpoint is mostly available to users of the car park and western end of the bus interchange, and has a visual sensitivity of moderate.

Magnitude of change

The new public space and landscape planting proposed to occur between the bus interchange and Jane Street, and the reconfigured bus interchange, would be the main visual changes to this view. There would be a visual improvement in terms of new tree planting, a greatly reduced area of hard surface given over to the bus interchange, and a more pleasant pedestrian environment.

Views to the upgraded bridge structure would be partly obscured by the existing trees and the new planned tree planting, with this increasing as new trees mature. The exception would be the southern stairs which would be seen when approaching along Jane Street, aiding in wayfinding for pedestrians and visually linking this transport hub to locations further west such as the Penrith City Council building.

A positive change would be the opening up of views toward the platform 3 heritage building (largely through the removal of the existing ground-level entrance, associated canopy, the platform 3 building (that is not part of the heritage building) and existing bus shelters. Clear glazing between the platform 3 heritage building and the upgraded bridge structure would also allow for mostly unimpeded views through to platform 3 at the street level.

There would be little noticeable change associated with the reconfigured car park and bus layover space.

Magnitude of visual change: low.

Overall visual impact level

The magnitude of visual change ranking, combined with the visual sensitivity ranking of moderate, leads to a visual impact level to this viewpoint of low.



Figure 5-6: Public viewpoint E – existing & likely future view, corner of Jane & Riley Streets (zoomed)

5.2.6 Public viewpoint F: Station

Figures 5-7, 5-8 and 5-9 are architect's visualisations of the likely look of proposed changes to Penrith Station, prepared by Laing O'Rourke/GHD (2015).

Visual sensitivity

There is a high usage of Penrith Station, and therefore the visual sensitivity of viewpoints within the station are considered to be high.

Magnitude of change

Users of Penrith Station and the pedestrian footbridge would experience a moderate level of change associated with the Proposal, these changes would include:

- From the pedestrian footbridge – this would be a far more open structure, with a quality timber-like ceiling and large glass panels to allow views over the western side of the station, wider Penrith and to the Blue Mountains. Views of the platform heritage buildings and heritage signal box would also be visible from parts of the pedestrian footbridge (refer Figure 5-7).



Figure 5-7: Architect's visualisation of view from proposed pedestrian footbridge

- From the paid concourse -- the new paid concourse would be east of the pedestrian footbridge (with a canopy), and would be open and allow for views of the heritage-listed water column/pump at the eastern end of the platform and also of the old Station Master's Residence.
- From the platforms on western side - the existing heritage buildings on the platforms of the western side would be a key element in any views from

this side, with a more defined separation between the old and new components enhancing the visual importance of these attractive buildings.



Figure 5-8: Architect's visualisation of likely view from eastern platform



Figure 5-9: Architect's visualisation of likely view from western platform

- From the platforms on eastern side - in contrast to the view from the western side platforms, views from the eastern side would be dominated by the upgraded bridge structure and platform stairs, displaying a modern, relatively lightweight structure.
- From the southern and northern stairs – the stairs at each end of the upgraded bridge structure would act as a threshold to the station for commuters and others traversing the rail corridor. The proposed stairs are designed with a high roof and generous width, with the southern stairs in particular of a scale that sets the tone of an important entry point. When descending the southern stairs pedestrians would have elevated views over the southern plaza and toward the commercial area around Station Street. From the northern stairs pedestrians would descend to the northern plaza, which when surrounded by planned commercial buildings, would focus views along the plaza set within a casement of buildings.
- Elements which currently contribute to visual clutter on the platforms would also be removed and/or rationalised, including the relocation of seating and vending machines, which would open-up views along and across the platforms.

Magnitude of visual change: moderate.

Overall visual impact level

The magnitude of visual change ranking, combined with the visual sensitivity ranking of high, leads to a visual impact level to this viewpoint of moderate.

5.2.7 Public viewpoint G: Northern Plaza

Visual sensitivity

This viewpoint takes in the area of the northern plaza on the northern side of the station (which is being constructed by Urban Growth), which will eventually connect with the commercial area of Thornton and through to the wider Thornton development.

Due to the high number of future users the visual sensitivity of the viewpoint is high.

Magnitude of change

There is already a significant extent of visual change currently planned to occur around the northern plaza. From the plaza there would be views of the proposed stairs which would lead pedestrians to the main station and/or over the footbridge. The stairs would form a focal point to this side of the rail corridor and be seen as an integral part of the plaza. Behind the stairs the upgraded footbridge structure would be seen. There would also be open palisade style fencing along the rail corridor boundary which would create an 'open-like' feeling by allowing views into the station from the northern plaza edge.

Magnitude of visual change: moderate.



Figure 5-10: Architect's visualisation of likely view from plaza on northern side

Overall visual impact level

The magnitude of visual change ranking, combined with the visual sensitivity ranking of high, leads to a visual impact level to this viewpoint of moderate.

5.3 Construction impacts

To allow for construction to occur there would be temporary works required in order to maintain a similar 'level of service', such as temporary stairs, customer information and ticketing facilities, shelters, alternative bus/taxi and kiss and ride arrangements (including signage).

These changes would be temporary and therefore not have a long term visual impact.

5.4 Summary of visual impact to surrounding viewpoints

Table 5-1 summarises the likely visual impact level to surrounding viewpoints from where parts of the Proposal would be seen. Overall, there is no viewpoint that would have an impact level higher than moderate.

It is to be noted that the level of impact reflects the proposed extent of visual change, which is considered moderate overall, yet one that would result in a noticeable improvement to the existing visual environment.

Some minor mitigation measures to improve the overall visual amenity are described further in **Section 6.2**.

Table 5-1: Summary of visual impacts to key viewpoints

Public viewpoint	Visual sensitivity	Magnitude of visual change	Overall visual impact
A – Station Street	high	moderate	moderate
B – Belmore Street (opposite station)	high	moderate	moderate
C – Belmore Street (eastern)	moderate	low	low
D – Jane Street (opposite station)	moderate	moderate	moderate
E – Jane Street (western)	moderate	low	low
F - Station	high	moderate	moderate
G – Northern plaza	high	moderate	moderate

6. Design outcome and further recommended measures

6.1 Positive visual attributes of Proposal

The Proposal incorporates a number of key measures designed to mitigate potential visual impacts:

- The Proposal would have a lower roof over the existing pedestrian footbridge
- There would be a new glass façade on the western side so that customers and pedestrians would have views of the regionally significant Blue Mountains
- The Proposal would also declutter the station and views to it, especially from the main shopping area of Station Street, through the removal of some existing vegetation, and hard surface areas and structures, which would be replaced with a more attractive public space to mark the precinct
- A new linear public space with landscaping would replace part of the existing bus interchange alongside Jane Street, with the new interchange more easily accessed and interpreted
- Special attention has been given to the design of shelters/canopies (and reducing the extent of such elements compared to the existing situation) required for the bus interchange to allow for views toward the heritage station buildings
- Retention of the heritage station buildings on each of the platforms, with those buildings contributing to the aesthetics and pedestrian-like scale of the station
- Clear glazing specifically selected between the platform 3 heritage building and the upgraded bridge structure to allow for mostly unimpeded views through to platform 3 at the street level.

6.2 Recommendations to further improve visual outcome

A number of further mitigation measures are recommended to ensure the best possible visual outcome can be achieved, with these defined further below.

6.2.1 Southern plaza

The southern plaza would create a new public space which would become an integral part of the Penrith town centre and the station precinct.

Any seating should be designed to be both aesthetically-pleasing and functional, providing for a range of users and seating configurations. Both formal and informal seating (such as grassed areas, steps and low walls) could be used to activate this public space and encourage people to linger. Other furniture could also increase the amenity for users, such as the placement of bubblers near bicycle racks.

Adequate shade and weather protection should also be provided through a range of suitable tree species and shelters, placed to allow for views of the existing heritage buildings and the station stairs. There may be an opportunity to include public art in the southern plaza (in association with Council) to create interest and a greater sense of place. The area under the southern stairs could potentially be an area that could be improved with some sort of appropriate treatment such as an artwork.

It is recommended that particular attention be given to minimising visual clutter by coordinating and streamlining station-related signage and advertising material.

6.2.2 Lighting

Lighting would be designed in accordance with relevant standards and be as minimal and unobtrusive as possible and directed away from any nearby receivers. It would be appropriate to consider some well-placed feature lighting around the main station staircases and upgraded bridge structure, as well as the key pedestrian connections and the southern plaza. Lighting could also help to activate the southern plaza, increasing the vibrancy at night and passive surveillance.

6.3 Construction phase

Mitigation measures during the construction period should include:

- installation of screen hoarding and/or shade cloth screens
- retention and protection of existing trees to be retained
- consultation with a qualified Arborist to minimise impact on the long term health of any affected trees
- 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.

6.4 Operation phase

Mitigation measures during ongoing operations should include:

- ongoing maintenance, repair and replacement of any damaged built elements
- long term maintenance of landscape planting and replacement of any failed plants.

7. References

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