Lithgow CITY COUNCIL

11 October 2017

The Hon Gladys Berejiklian
Premier of New South Wales
GPO Box 5341
Sydney NSW 2001

Dear Premier

Thank you for your Assistance

On behalf of Lithgow City Council and its community I wish to extend our heartfelt thanks for the assistance your Government has provided in achieving the certainty required for the Springvale mine project and the continuing employment of Lithgow's mining workforce.

This issue as you know has been ongoing for some time and the uncertainty surrounding the mine and its employees has had a profound impact on our entire community.

We hope that the Government's legislation will receive timely approval through the parliamentary processes and provide the degree of long term certainty the Lithgow mining employees, their families and the general community have been desiring.

Lithgow Council is deeply grateful for the efforts undertaken by your Government and Local Member Paul Toole to resolve this issue.

Yours sincerely

Stephen Lesslie
MAYOR

PO Box 19, LITHGOW NSW 2790
Tel: (02) 6354 9999 Fax: (02) 63514259
Web: www.lithgow.nsw.gov.au Email: council@lithgow.nsw.gov.au

Lithgow CITY COUNCIL

11 October 2017

Mr Luke Foley, MP
Opposition Leader
Parliament House
Macquarie Street
SYDNEY NSW 2000

leader.opposition@parliament.nsw.gov.au

Dear Luke

Thank you for your Assistance

On behalf of Lithgow City Council and its community I wish to extend our heartfelt thanks for the assistance you have provided in achieving the certainty required for the Springvale mine project and the continuing employment of Lithgow's mining workforce.

Your willingness to meet with Council and CFMEU representatives in Sydney last week and your attendance at Lithgow to speak to the employees and their families and other community members was extremely well received.

This issue as you know has been ongoing for some time and the uncertainty surrounding the mine and its employees has had a profound impact on our entire community.

Lithgow Council is deeply grateful for the efforts undertaken by you in assisting to resolve this issue.

Yours sincerely

Stephen Lesslie
MAYOR

PO Box 19, LITHGOW NSW 2790
Tel: (02) 6354 9999 Fax: (02) 63514259
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11 October 2017

Mr Paul Toole MP
Member for Bathurst
PO Box 2237
Bathurst NSW 2795

paul.toole@parliament.nsw.gov.au
bathurst@parliament.nsw.gov.au

Dear Paul

Thank you for your Assistance

On behalf of Lithgow City Council and its community I wish to extend our thanks for the assistance you have provided in achieving the certainty required for the Springvale mine project and the continuing employment of Lithgow's Mining workforce.

This issue as you know has been ongoing for some time and the uncertainty surrounding the mine and its employees has had a profound impact on our entire community.

We are hopeful that you will be able to meet with the Council informally in the near future and again extend our invitation accordingly to discuss a range of issues that we believe important to Lithgow and indeed any others you may wish to raise yourself.

If you are able to advise of convenient dates and times to meet with the Council, we will endeavour to accommodate where possible.

We are very grateful for the efforts undertaken by you in assisting to resolve this issue.

Yours sincerely

Stephen Lesslie
MAYOR

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Tel: (02) 6354 9999 Fax: (02) 63514259
Web: www.lithgow.nsw.gov.au Email: council@lithgow.nsw.gov.au

11 October 2017

Philip Donato, MP.
Member for Orange
123 Byng Street
Orange NSW

cc: rebecca.hawkins@parliament.nsw.gov.au

Dear Philip,

Thank you for your Assistance

On behalf of Lithgow City Council and its community I wish to extend our thanks for the assistance you have provided in achieving the certainty required for the Springvale mine project and the continuing employment of Lithgow's Mining workforce.

This issue as you know has been ongoing for some time and the uncertainty surrounding the mine and its employees has had a profound impact on our entire community.

We are deeply grateful for the support provided by you in assisting to resolve this issue and in particular for attending our meeting earlier this week at such short notice.

Yours sincerely

Stephen Lesslie
MAYOR

PO Box 19, LITHGOW NSW 2790
Tel: (02) 6354 9999 Fax: (02) 63514259
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Disclosures by Councillors and Designated Person 2017/18 Returns			
TITLE	**FIRST NAME**	**LAST NAME**	**DATE RECEIVED**
Mayor Councillor	Stephen	Lesslie	5/09/2017
Councillor	Wayne	McAndrew	4/09/2017
Councillor	Ray	Thompson	9/08/2017
Councillor	Cassandra	Coleman	27/07/2017
Councillor	Maree	Statham	25/09/2017
Councillor	Joe	Smith	2/08/2017
Councillor	Steve	Ring	22/08/2017
Councillor	Darryl	Goodwin	6/09/2017
Councillor	Deanna	Goodsell	25/09/2017
Mr	Graeme	Faulkner	24/07/2017
Mr	Andrew	Muir	28/09/2017
Mr	Iain	Stewart	29/09/2017
Miss	Rhys	Brownlow	11/09/2017
Mr	Jim	Nichols	25/07/2017
Mr	Jim	Sheehan	Extended Leave
Mr	Paul	Cashel	14/08/2017
Mr	Damon	Cupitt	7/08/2017
Mr	Matthew	Johnson	7/08/2017
Mrs	Ally	Shelton	25/09/2017
Ms	Kellie	Barrow	4/09/2017
Mr	Neil	Derwent	4/09/2017
Mrs	Sherilyn	Hanrahan	25/09/2017
Mrs	Karen	Luka	27/07/2017
Mr	Jonathon	Edgecombe	26/07/2017

Transport for NSW

New Intercity Fleet Springwood to Lithgow Rail Corridor Modifications

Review of Environmental Factors Volume 1

August 2017

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Abbreviations

Term	Meaning
AHIMS	Aboriginal Heritage Information Management System
ASA	Asset Standards Authority (refer to Definitions)
BoM	Bureau of Meteorology
CEMP	Construction Environmental Management Plan
CNS	*Construction Noise Strategy* (TfNSW, 2017)
CNVMP	Construction Noise and Vibration Management Plan
dB	Decibel
DBYD	Dial Before You Dig
DoEE	Commonwealth Department of the Environment and Energy
DP&E	NSW Department of Planning and Environment
ECM	Environmental Controls Map
EMS	Environmental Management System
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000* (NSW)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cwlth)
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development (refer to Definitions)
GHG	Greenhouse Gas
Heritage Act	*Heritage Act 1977* (NSW)
IAQM	The Institute of Air Quality Management
ICNG	*Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2000)
Infrastructure SEPP	*State Environmental Planning Policy (Infrastructure) 2007* (NSW)
INP	*NSW Industrial Noise Policy* (EPA, 2000)
IRSAD	Index of Relative Socio-economic Advantage and Disadvantage
ISCA	Infrastructure Sustainability Council of Australia

Term	Meaning
L_{Aeq}	The energy average noise level
L_{A90}	Noise level exceeded for 90 per cent of sample period
LEP	Local Environmental Plan
LGA	Local Government Area
NCA	Noise Catchment Area
NML	Noise Management Levels
NorBE	Neutral or Beneficial Effect
NPW Act	*National Parks and Wildlife Act 1974* (NSW)
OEH	NSW Office of the Environment and Heritage
POEO Act	*Protection of the Environment Operations Act 1997* (NSW)
RBL	Rating Background Level
REF	Review of Environmental Factors (this document)
Roads and Maritime	NSW Roads and Maritime Services (formerly Roads and Traffic Authority)
SEPP	State Environmental Planning Policy
SHR	State Heritage Register
SoHI	Statement of Heritage Impact
TEC	Threatened Ecological Communities
TfNSW	Transport for New South Wales
TMP	Traffic Management Plan
TSC Act	*Threatened Species Conservation Act 1995* (NSW)
UNESCO	The United Nations Educational, Scientific and Cultural Organization
WARR Act	*Waste Avoidance and Resource Recovery Act 2001* (NSW)

Definitions

Term	Meaning
Asset Standards Authority	The ASA is an independent body within TfNSW, responsible for engineering governance, assurance of design safety, and ensuring the integrity of transport and infrastructure assets. Design Authority functions formerly performed by RailCorp are now exercised by ASA.
Carriages/cars	Individual pieces of rolling stock designed to carry passengers.
Concept design	The concept design is the preliminary design presented in this REF, which would be refined by the Contractor (should the Project proceed) to a design suitable for construction (subject to TfNSW acceptance).
Crossover	A crossover is a section of track that allows trains to pass from one track to another for the purposes of accessing a siding, passing trains and other operational services (maintenance).
Detailed design	Detailed design broadly refers to the process that the Contractor undertakes (should the Project proceed) to refine the concept design to a design suitable for construction (subject to TfNSW acceptance).
Determination	TfNSW is a determining authority for projects which require assessment under Part 5 of the EP&A Act and must undertake this role in accordance with Section 111. To make a determination, TfNSW will prepare a report to document the consideration of the relevant legislative requirements and the potential environmental impacts of the project and determine whether these impacts are likely to be significant. TfNSW may also impose conditions of approval, as part of the determination.
Ecologically Sustainable Development	As defined by clause 7(4) Schedule 2 of the EP&A Regulation. Development that uses, conserves and enhances the resources of the community so that ecological processes on which life depends are maintained, and the total quality of life, now and in the future, can be increased.
Feasible	A work practice or abatement measure is feasible if it is capable of being put into practice or of being engineered and is practical to build given project constraints such as safety and maintenance requirements.
Interchange	Transport interchange refers to the area/s where passengers transit between vehicles or between transport modes. It includes the pedestrian pathways and cycle facilities in and around an interchange.
New Intercity Fleet	The New Intercity Fleet is a new fleet of trains that will replace the existing intercity fleet and is intended to service the Central Coast and Newcastle, the Blue Mountains and the South Coast Lines.
Noise sensitive receiver	In addition to residential dwellings, noise sensitive receivers include, but are not limited to, hotels, entertainment venues, pre-schools and day care facilities, educational institutions (e.g. schools, TAFE colleges), health care facilities (e.g. nursing homes, hospitals), recording studios and places of worship/religious facilities (e.g. churches).
NSW TrainLink	From 1 July 2013, NSW TrainLink became the new rail provider of services for regional rail customers.

Term	Meaning
Out of hours works	Defined as works *outside* standard construction hours (i.e. outside of 7am to 6pm Monday to Friday, 8am to 1pm Saturday and no work on Sundays/public holidays).
Platform coping	Refers to the capping/covering of station platform edges, typically with a concrete top layer.
Project	The construction and operation of the New Intercity Fleet – Springwood to Lithgow Rail Corridor Modifications.
Project site	The Rail corridor between Springwood and Lithgow railway stations, including ancillary facilities and temporary construction compounds both within and outside the existing rail corridor.
Proponent	A person or body proposing to carry out an activity under Part 5 of the EP&A Act - in this instance, TfNSW.
Rail possession	Possession is the term used by railway building/maintenance contractors to indicate that they have taken possession of the track (usually a block of track) for a specified period, so that no trains operate for a specified time. This is necessary to ensure the safety of workers and rail users.
Reasonable	Selecting reasonable measures from those that are feasible involves making a judgment to determine whether the overall benefits outweigh the overall adverse social, economic and environmental effects, including the cost of the measure.
Sensitive receivers	Land uses which are sensitive to potential noise, air and visual impacts, such as residential dwellings, schools and hospitals.
Sydney Trains	From 1 July 2013, Sydney Trains replaced CityRail as the provider of metropolitan train services for Sydney.
Track slewing	Re-positioning of rail tracks.
Train sets	A series of train carriages/cars that are linked together for a particular service.
Vegetation Offset Guide	The TfNSW guide that applies where there is vegetation clearing proposed, and where the impact of the proposed clearing is not deemed 'significant' for the purposes of section 111 of the EP&A Act. The Guide provides for planting of a minimum of eight trees for each large tree with a diameter at breast height (DBH) of more than 60 cm, four trees where the DBH is 15-60 cm, or two trees where DBH is less than 15 cm.

Executive summary

Overview

Transport for NSW (TfNSW) was established in 2011 as the lead agency for integrated delivery of public transport services across all modes of transport in NSW. TfNSW is the proponent for the Springwood to Lithgow Rail Corridor Modifications (the Project).

This Review of Environmental Factors (REF) has been prepared to assess the environmental impacts associated with the construction and operation of the Project under the provisions of Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

New Intercity Fleet Program

In May 2014, the NSW Government announced it is delivering the New Intercity Fleet to replace trains carrying customers from Sydney to the Central Coast, Newcastle, Blue Mountains and the South Coast. The introduction of the New Intercity Fleet would allow for the replacement of the older electric trains currently used to provide intercity services. These ageing electric trains are experiencing a number of adverse operational impacts relating to a decline in their reliability and availability on the network, increasing maintenance costs and reducing customer amenity.

The New Intercity Fleet would:

- provide a more consistent and improved level of customer service for intercity customers
- facilitate the replacement of two electric train sets currently in operation
- reduce the costs of intercity operations
- increase capacity for intercity customers.

The Project

The Project comprises modifications to stations and other rail corridor upgrades extending from between Springwood Station and Faulconbridge Station up to and including Lithgow Station to facilitate the introduction of the new trains which are marginally wider and longer than the existing trains. The Project would also allow the Blue Mountains Line to be consistent with the existing electrified rail network.

The key features of the Project are summarised as follows:

- extension of platforms at Katoomba Station and Lithgow Station
- modifications to station platform edges (also known as platform coping)
- re-positioning of rail tracks (track slewing) along the length of the rail corridor
- modification of the existing platform canopy at Faulconbridge Station
- survey and geotechnical investigations
- signalling works to accommodate the new track position and platform modifications
- adjustment of the overhead wiring system and supporting structures as required.

The modifications are needed to accommodate the new and existing trains and will bring the Blue Mountains Line up to the standard of the rest of the electrified rail network.

Subject to approval, construction is expected to commence in 2018 and take around two years to complete. A detailed description of the Project is provided in Chapter 3 of this REF.

Design options considered

TfNSW commissioned the development of a series of design reports which provided assessments that determined the preferred design for the Project. These reports evaluated the potential for clearance infringements of Asset Standards Authority (ASA) standards resulting from the introduction of new trains which would be wider and longer than the existing trains that travel along the Blue Mountains Line to Lithgow. This included an assessment of infringements to the station platforms, canopies, trackside structures and train passing clearances.

Various design options were considered to achieve the required width clearances and platform lengths within the Project site.

The preferred option for meeting the required width clearances is an optimised combination of track slewing and platform coping modifications. Options involving track slewing or coping modifications only would either result in greater impacts to heritage listed platform buildings and building canopies (under coping modifications only), or would require additional changes in the corridor such as relocating overhead wiring supports along much of the corridor (under track slewing only).

The preferred option of meeting the required platform lengths involves the extension of Katoomba and Lithgow on one end of the platforms only, in areas where the platforms have previously been modified and would best suit operational requirements.

Statutory considerations

The EP&A Act provides for the environmental impact assessment of development in NSW. Part 5 of the EP&A Act generally specifies the environmental impact assessment requirements for activities undertaken by public authorities, such as TfNSW, which do not require development consent under the EP&A Act.

The *State Environmental Planning Policy (Infrastructure) 2007* (the Infrastructure SEPP) is the primary environmental planning instrument relevant to the Project and is the key environmental planning instrument which determines that this Project is permissible without consent and therefore is to be assessed under Part 5 of the EP&A Act.

Clause 79 of the Infrastructure SEPP allows for the development of ‘rail infrastructure facilities’ by or on behalf of a public authority without consent on any land. Clause 78 defines ‘rail infrastructure facilities’ as including elements such as ‘railway stations, station platforms and areas in a station complex that commuters use to get access to the platforms’, ‘public amenities for commuters’ and ‘associated public transport facilities for railway stations’.

As TfNSW is a public authority and the proposed activity falls within the definition of rail infrastructure facilities under the Infrastructure SEPP, the Project is permissible without consent. Consequently the environmental impacts of the Project have been assessed by TfNSW under Part 5 of the EP&A Act.

This REF has been prepared to assess the construction and operational environmental impacts of the Project. The REF has been prepared in accordance with section 111 of the EP&A Act and clause 228 of the *Environment Planning and Assessment Regulation 2000* (the EP&A Regulation).

In accordance with section 111 of the EP&A Act, TfNSW, as the proponent and determining authority, must examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity.

Chapter 6 of this REF presents the environmental impact assessment for the Project, in accordance with these requirements.

Community and stakeholder consultation

The REF would be displayed for a period of approximately three weeks at the following locations:

- Blue Mountains City Council, 2-6 Civic Place, Katoomba
- Katoomba Library, Blue Mountains Cultural Centre, 30 Parkes Street, Katoomba
- Blue Mountains City Council, 104 Macquarie Rd, Springwood
- Lithgow City Council, 180 Mort Street, Lithgow
- Lithgow Library and Learning Centre, 157 Main Street, Lithgow
- Wentworth Falls Library, School of Arts Building 217 Great Western Highway, Wentworth Falls
- TfNSW Reception, Level 5, Tower A, Zenith Centre, 821 Pacific Highway, Chatswood.

Community consultation activities for the Project would be undertaken during the public display period of the REF.

The REF would also be available to download from the TfNSW website[1] and haveyoursay website[2]. A Project Infoline (1800 684 490) would be available for members of the public to make enquiries.

TfNSW would review and assess all feedback received during the public display period, prior to determining whether or not to proceed with the Project.

Should the Project proceed to construction, the community would be kept informed for the duration of the construction period. Figure 1 presents an overview of the consultation and planning process and the current status of the Project.

[1] http://www.transport.nsw.gov.au/projects/intercity-fleet
[2] https://www.nsw.gov.au/improving-nsw/have-your-say/

Figure 1 Planning approval and consultation process for the Project

Environmental impact assessment

This REF identifies the potential environmental benefits and impacts of the Project and outlines the mitigation measures to reduce the identified impacts.

The key impacts of the Project are as follows:

- potential impacts to State heritage listed and locally listed heritage items from platform extensions, platform coping modifications and other upgrades
- temporary noise and vibration impacts during construction
- potential temporary access changes for vehicles, cyclists and pedestrians in and around the station areas during construction
- temporary reduction in the visual environment of heritage listed stations and Blue Mountains National Park vistas from the presence of construction sites.

Further information regarding these impacts is provided in Chapter 6 of the REF.

Conclusion

This REF has been prepared in accordance with the provisions of section 111 of the EP&A Act, taking into account to the fullest extent possible, all matters affecting or likely to affect the environment as a result of the Project.

This REF has considered and assessed potential impacts in accordance with clause 228 of the EP&A Regulation and the requirements of the EPBC Act (refer to Chapter 6, Appendix A and Appendix B). Based on the assessment contained in this REF, the Project is unlikely to have a significant impact on the environment or any threatened species, populations or communities. Accordingly an EIS is not required, nor is the approval of the Minister for Planning.

The Project has also taken into account the principles of Ecologically Sustainable Development (ESD) (refer to Section 3.1.3 and Section 4.6). These principles would be further considered during the detailed design, construction and operational phases of the Project. This would ensure the Project is delivered to maximise the benefits to the community, is cost effective and minimises any adverse impacts on the environment.

1 Introduction

Transport for NSW (TfNSW) was established in 2011 as the lead agency for integrated delivery of public transport services across all modes of transport in NSW. TfNSW is the proponent for the Springwood to Lithgow Rail Corridor Modifications (the Project).

1.1 Overview of the Project

1.1.1 New Intercity Fleet Program

The existing intercity train fleet currently operated by TfNSW provides services on three main routes, comprising:

- Sydney to Central Coast/Newcastle (North Line)
- Sydney to Blue Mountains (Western Line)
- Sydney to Wollongong/Nowra (South Coast Line).

The *NSW Long-term Transport Master Plan* (TfNSW, 2012a) and its supporting document, *Sydney's Rail Future: Modernising Sydney's Trains* (TfNSW, 2012b), identifies the need to enhance rail passenger services, in particular for longer distance travel outside of the Sydney suburban network.

In May 2014, the NSW Government announced it is delivering the New Intercity Fleet, to replace trains carrying customers from Sydney to the Central Coast, Newcastle, Blue Mountains including Lithgow and the South Coast. The introduction of the New Intercity Fleet would allow for the replacement of the older electric trains currently used to provide intercity services. These ageing electric trains are experiencing a number of adverse operational impacts relating to a decline in their reliability and availability on the network, increasing maintenance costs and reducing customer amenity.

The New Intercity Fleet would:

- provide a more consistent and improved level of customer service for intercity customers
- facilitate the replacement of two electric train sets currently in operation
- reduce the costs of intercity operations
- increase capacity for intercity customers.

The New Intercity Fleet comprises approximately 512 cars (carriages) which would progressively come into service from 2019.

Modifications are needed along the rail corridor from west of Springwood Station to Lithgow Station to accommodate the new and existing trains. These modifications will bring the Blue Mountains Line up to the standard of the rest of the electrified rail network.

1.1.2 Key features of the Project

The Project is located on a section of the Blue Mountains Line (also known as the Main Western Line). The Project comprises modifications to stations and other corridor upgrades along a stretch of around 75 kilometres of rail corridor from between Springwood Station and Faulconbridge Station up to and including Lithgow Station. Springwood Station is located around 70 kilometres west of the Sydney Central Business District (CBD).

The Project would facilitate the introduction of the new trains which are marginally wider and longer than the existing trains.

The key features of the Project are summarised as follows:

- extension of platforms at Katoomba Station and Lithgow Station
- modifications to station platform edges (also known as platform coping)
- re-positioning of rail tracks (track slewing) along the length of the rail corridor
- modification of the existing platform canopy at Faulconbridge Station
- survey and geotechnical investigations
- signalling works to accommodate the new track position and platform modifications
- adjustment of the overhead wiring system and supporting structures as required.

Subject to approval, construction is expected to commence in early 2018 and take approximately two years to complete. A detailed description of the Project is provided in Chapter 3 of this Review of Environmental Factors (REF).

1.2 Location of the Project

The Project involves modification works at, and between, the following stations:

- Faulconbridge
- Linden
- Woodford
- Hazelbrook
- Lawson
- Bullaburra
- Wentworth Falls
- Leura
- Katoomba
- Medlow Bath
- Blackheath
- Bell
- Newnes Junction (not in use)
- Eskbank (not in use)
- Lithgow.

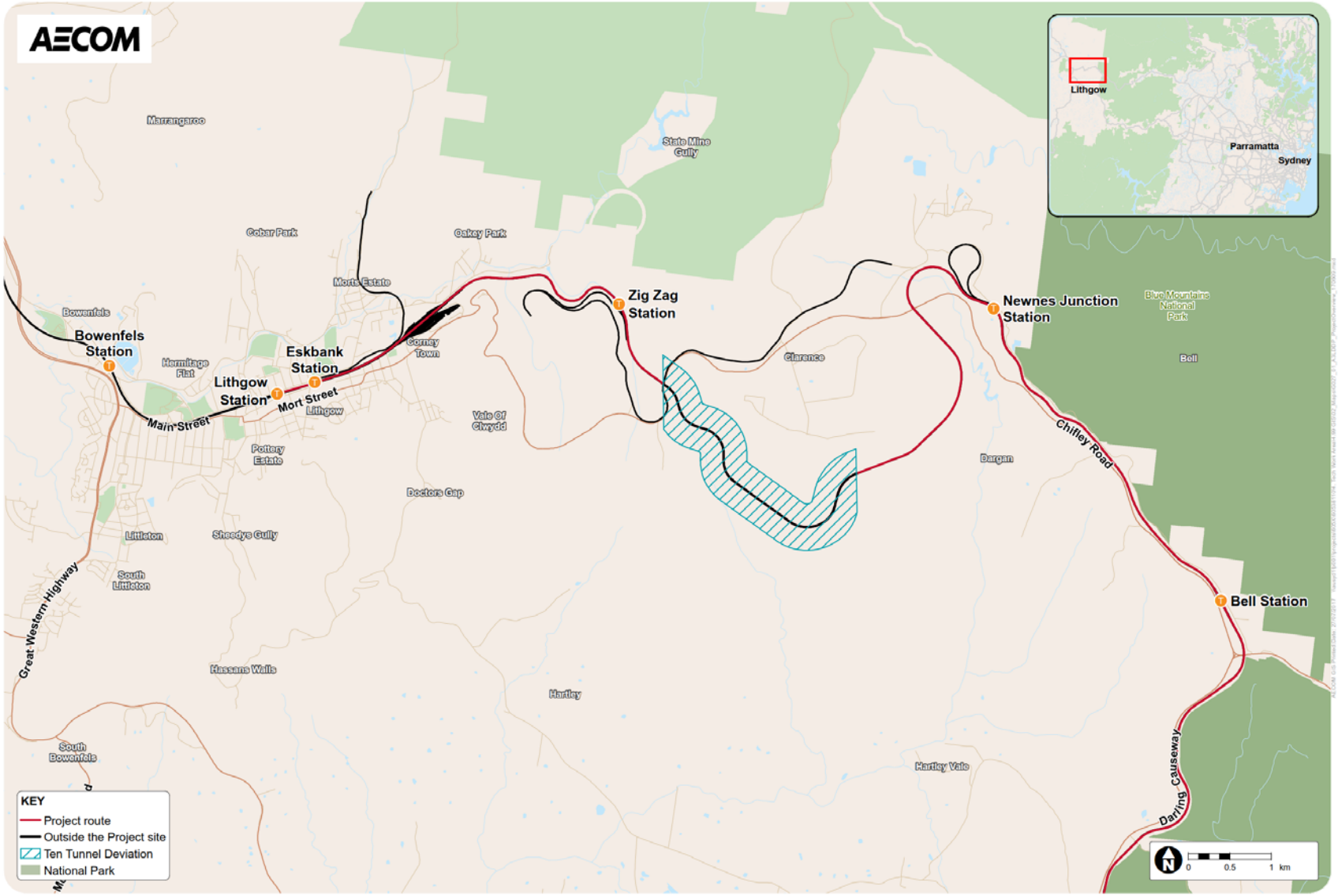
All of the stations within the Project site are listed on the RailCorp Section 170 Heritage and Conservation Register, with six stations also listed on the State Heritage Register (including Lawson, Katoomba, Medlow Bath, Blackheath, Eskbank and Lithgow stations). The regional context of the Project and locations of stations listed above is shown in Figure 2 and Figure 3. Zig Zag Station and Mount Victoria Station do not form part of the Project.

The Project is located in the local government areas of the Blue Mountains and Lithgow. The works would take place alongside the existing operational railway infrastructure and within the existing delineated rail corridor. A number of ancillary facilities are required inside and outside the rail corridor to accommodate site office(s), amenities, lay down and storage areas for materials during construction.

The area surrounding the Project is a mountainous sandstone region characterised by varying, often steep topographical features including plateaux and escarpments extending off the Great Dividing Range. For around 40 kilometres, the Project would be located adjacent to the Blue Mountains National Park which is a UNESCO declared World Heritage Area. No works would be undertaken within the boundary of the National Park.

* Works at Mount Victoria Station and Zig Zag Station do not form part of the Project

Figure 2 Project site overview (part 1 of 2)



* Works at Mount Victoria Station and Zig Zag Station do not form part of the Project

Figure 3 Project site overview (part 2 of 2)

1.3 Existing infrastructure and land uses

The majority of the works would take place within the existing delineated rail corridor zoned as SP2 Infrastructure (Rail) under the *Blue Mountains Local Environmental Plan 2015* (Blue Mountains LEP) and *Lithgow Local Environmental Plan 2014* (Lithgow LEP). The existing Blue Mountains Line between Springwood and Lithgow originally opened in 1868 as an electrified railway consisting of twin lines running in each direction. There are a number of sidings (branch lines) in both directions at Lawson Station, Katoomba Station and Wentworth Falls Station. The rail corridor consists of a modified environment characterised by rail infrastructure including stations, track and an overhead wiring system.

The land uses surrounding the Project site predominately consists of bushland associated with the Blue Mountains National Park. Residential centres of various sizes are located at Hazelbrook, Lawson, Wentworth Falls, Leura, Katoomba, Blackheath, Eskbank and Lithgow stations, where the rail corridor is adjacent to residential and commercial land uses.

1.3.1 Rail line

The Blue Mountains Line is defined by the underlying topography of the Greater Blue Mountains area, characterised by tight and winding curves. Many sections of the rail line are at relatively steep grades and some sections of track have been constructed in cuttings, on embankments, bridges and other structures.

The majority of the existing track is generally rail that has been laid on concrete sleepers and ballast. Other track forms can be observed, such as the horizontal beam (known as transom) supports over the pedestrian subway at Lawson Station.

The rail line is electrified and powered by an overhead wiring system. The overhead wiring system is generally mounted on non-galvanised and unpainted structures (remnants of the original electrification works undertaken in the 1950s) though in some instances the original structures have been replaced by newer galvanised structures.

1.3.2 Stations

There are 15 stations within the Project site, two of which (Newnes Junction Station and Eskbank Station) are no longer operational for public use. All of the stations are listed on the RailCorp Section 170 Heritage and Conservation Register, with six stations also listed on the State Heritage Register (see Table 7 for heritage listings). Table 1 provides further details of the stations within the Project site. Figure 2 and Figure 3 show the existing features of the Project site and surrounding area. Enabling works required at Mount Victoria Station and Zig Zag Station to accommodate the new intercity fleet are not part of the Project.

Table 1 Stations with the Project site

Station	Details
Faulconbridge	• island platform with a single track in each direction • platforms 1 and 2 are about 186 metres long • surrounding area is mostly low density residential
Linden	• island platform with a single track in each direction • platforms 1 and 2 are between 121 and 125 metres long • surrounding area is mostly vegetated
Woodford	• island platform with a single track in each direction • platforms 1 and 2 are between 183 and 187 metres long • surrounding area is mostly low density residential

Station	Details
Hazelbrook	• island platform with a single track in each direction • platforms 1 and 2 are between 183 and 186 metres long • surrounding area is mostly low density residential with some commercial development
Lawson	• island platform with a single track in each direction • platforms 1 and 2 are between 182 and 184 metres long • surrounding area is mostly low density residential with some commercial development
Bullaburra	• island platform with a single track in each direction • platforms 1 and 2 are 183 metres long • surrounding area is mostly low density residential.
Wentworth Falls	• island platform with a single track in each direction • platforms 1 and 2 are between 183 and 184 metres long • surrounding area is mostly low density residential with some commercial development • the station is currently being upgraded as part of the Transport Access Program
Leura	• island platform with a single track in each direction • platforms 1 and 2 are between 183 and 186 metres long • surrounding area is a combination of low density residential and commercial development • the station is currently being upgraded as part of the Transport Access Program
Katoomba	• island platform with a single track in each direction • platforms 1 and 2 are between 197 and 198 metres long • surrounding area is mostly commercial development with low to medium density residential further out from the station
Medlow Bath	• island platform with a single track in each direction • platforms 1 and 2 are 183 metres long • surrounding area is mostly vegetated with low density residential
Blackheath	• island platform with a single track in each direction • platforms 1 and 2 are between 197 and 198 metres long • surrounding area is a combination of low density residential and commercial development
Bell	• island platform with a single track in each direction • platforms 1 and 2 are between 197 and 198 metres long • surrounding area is mostly vegetated, with a small number of low density or rural residences
Newnes Junction	• one facing side and one island platform (total of three platforms) with three tracks • platforms 1 and 2 are between 124 and 130 metres long. Platform 3 is about 122 metres long • currently not in use by the public • surrounding area is mostly vegetated, with a small number of low density or rural residences
Eskbank	• facing side platforms with a single track in each direction • platforms 1 and 2 are between 24 and 50 metres long • currently not in use by the public • surrounding area consists of commercial development and medium density residential
Lithgow	• island platform with a single track in each direction • platforms 1 and 2 are between 190 and 192 metres long • surrounding area is a combination of medium density residential and commercial development

1.4 Purpose of this Review of Environmental Factors

This REF has been prepared by AECOM on behalf of TfNSW to assess the potential impacts of the Project. TfNSW is the proponent and a determining authority under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The purpose of this REF is to describe the Project, to assess the likely impacts of the Project having regard to the provisions of section 111 of the EP&A Act, and to identify mitigation measures to reduce the likely impacts of the Project. This REF has been prepared in accordance with clause 228 of the *Environment Planning and Assessment Regulation 2000* (the EP&A Regulation).

This assessment has also considered the relevant provisions of other relevant environmental legislation, including the *Threatened Species Conservation Act 1995* (TSC Act), the *Heritage Act 1977* (Heritage Act) (NSW) and the *Roads Act 1993* (Roads Act).

Having regard to the provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), this REF considers the potential for the Project to have a significant impact on matters of National Environmental Significance (NES) or Commonwealth land, and the need to make a referral to the Commonwealth Department of Environment for any necessary approvals under the EPBC Act. Refer to Chapter 4 for more information on statutory considerations.

2 Need for the Project

Chapter 2 discusses the need and the objectives of the Project (in the context of the wider objectives of the New Intercity Fleet Program). This chapter also provides a summary of the options that have been considered during development of the Project and why the preferred option has been chosen.

2.1 Strategic justification

2.1.1 Overview of the New Intercity Fleet Program

Improving transport customer experience is a focus of the NSW Government's transport initiatives. Trains are an important component of the transport system and, as such, play a critical role in shaping the customer's experience and perception of public transport.

In May 2014, the NSW Government announced it is delivering a New Intercity Fleet to replace two existing train sets. The new fleet will service stations on the intercity train network, connecting customers travelling to and from Sydney to the Central Coast, Newcastle, the South Coast, Blue Mountains and Lithgow.

The New Intercity Fleet has been developed to drive a stronger customer experience outcome by increasing the safety, comfort and accessibility of the fleet and create a more consistent, improved experience for intercity customers. It is anticipated that this will encourage greater public transport use, provide improved transport links between intercity locations and metropolitan Sydney, reduce the operating and maintenance costs and provide a more reliable service and increased capacity to support a growing population.

The introduction of the New Intercity Fleet will allow for the replacement of the existing intercity trains which are experiencing a number of adverse operational impacts including:

- declining reliability – higher average peak period breakdown rates in comparison to the rest of the fleet
- lower availability – as a result of the declining reliability, the existing intercity fleet are experiencing increases in failures requiring repair and increased routine maintenance levels. This results in a decreased availability of trains on the network
- higher maintenance costs – they require maintenance every 15, 45 and 90 days whereas newer fleet would generally require maintenance every 90 days
- lower customer amenity – older trains do not include the modern amenities that would be provided by the New Intercity Fleet.

The New Intercity Fleet would provide a better experience for public transport customers by delivering an accessible, modern, safe and comfortable travel experience. The New Intercity Fleet Program aims to provide:

- a more consistent, improved experience for intercity customers which is comparable to that experienced by customers on other rail lines particularly in terms of reliability and capacity improvements to support the growing train network
- reduced operating and maintenance costs
- increased availability of trains on the network
- generally lower energy consumption
- improved amenities including wider seats with arm rests and more space, charging stations for mobile electronic devices, dedicated space for luggage, prams, bicycles and wheelchairs

- a less greenhouse gas intensive mode of travel per passenger.

The New Intercity Fleet Program has been divided into the following key elements:

- acquisition of trains for the new fleet
- construction of a new maintenance facility (subject to separate approval)
- upgrades of existing stabling facilities (subject to separate approvals)
- modifications to the Ten Tunnels Deviation (subject to a separate approval)
- enabling works across the network will facilitate the operation of the New Intercity Fleet, including modifications on the Blue Mountains Line (the subject of this assessment).

2.2 Need for the Project

The NSW Government's decision to introduce the New Intercity Fleet would result in a number of changes from the existing fleet including an increase in the total length of the trains up to 205 metres and an increased train width to cater for growing customer patronage and improved customer comfort.

Modifications are needed along the rail corridor from west of Springwood Station to Lithgow Station to accommodate the new and existing trains. These modifications will bring the Blue Mountains Line up to the standard of the rest of the electrified rail network.

The Project includes essential enabling works that will facilitate the safe and reliable operation of New Intercity Fleet between Springwood and Lithgow on the Blue Mountains Line.

2.3 Design development

TfNSW undertook a series of design assessments for the early development of the Project. The outcomes of these assessments informed the scope of works needed to allow for the safe operation of the New Intercity Fleet along the Blue Mountains Line.

The assessments also determined the track design alignment for the rail and the potential for clearance infringements of Asset Standards Authority (ASA) standards resulting from the introduction of new trains which would be longer and wider than the existing trains that travel along the Blue Mountains Line to Lithgow. These investigations identified potential infringements to the station platforms, canopies, trackside structures and train passing clearances.

The design development also took into consideration existing platform lengths and identified stations where the platforms would need to be extended to allow customers and staff to access the new longer trains.

2.4 Project options

Options for enabling the safe and efficient operation of the New Intercity Fleet on the Blue Mountains Line were developed following a succession of workshops with TfNSW, relevant stakeholders (including Sydney Trains and NSW TrainLink) and the project team. Options considered for the Project are described in the following sections.

2.4.1 Options to achieve necessary width clearances

The following options were considered to obtain the required width clearances, therefore removing potential infringements between the New Intercity Fleet trains and existing infrastructure:

- track slewing only
- platform coping modifications only
- combination of both slewing and platform coping modifications
- do nothing.

Under a 'do-nothing' option, the platform copings and canopies, tracks, overhead wiring systems and signalling utilities between Springwood and Lithgow would not undergo any upgrade works and would remain the same. This option was not supported as the Blue Mountains Line would then not meet standard ASA clearance requirements and the New Intercity Fleet would not be able to operate on the line. This would be inconsistent with NSW Government objectives of enhancing rail passenger services for longer distance travel outside of the Sydney suburban areas, would not improve public transport comfort from Sydney to the Blue Mountains and would not meet the needs of the Blue Mountains community.

Options to meet the necessary width clearances that involved a track slewing only option would result in additional changes to other infrastructure in the corridor and was not considered feasible. For example, in order to slew the track to the necessary design requirements it would be necessary to relocate the supports of the overhead wiring system and other structures along much of the rail corridor.

Achieving the necessary width clearances through platform coping modifications only was also not considered a feasible option as it would result in greater impacts to the platforms and building canopies which are of heritage value. The preferred option nominates an optimised combination of both track slewing and platform coping modifications to achieve the necessary width clearances while reducing the level of impact to heritage fabric and the need to relocate other structures along the rail corridor.

2.4.2 Options to achieve necessary platform lengths

Platform extensions are required at Katoomba Station and Lithgow Station to accommodate the longer trains. As services terminate at these stations, all doors of the train (including the driver's door) would need to be able to open to a platform to allow customers and train operators to egress where services terminate. As such, the 'do nothing' option would not be feasible as it would be inconsistent with NSW Government objectives of enhancing rail passenger services for longer distance travel outside of the Sydney suburban areas. As services would not terminate at the other stations, platform extensions were not identified as being needed. At shorter platforms, trains would allow egress from specific carriages, similar to what is currently experienced along the rail network. This would minimise unnecessary alterations to heritage stations.

The preferred option for extending the platforms at Katoomba Station and Lithgow Station was to extend in a location which has previously been modified to minimise heritage impacts while meeting operational requirements. The eastern end of Platform 1 at Katoomba Station and the western end of the island platform at Lithgow Station have previously been modified and extending at these locations would also best suit operational requirements. Extending the platforms at each end was considered however this would have greater heritage impacts than the preferred option and was therefore not progressed.

3 Description of the Project

Chapter 3 describes the Project including key design parameters, construction method, and associated infrastructure and modifications required.

3.1 The Project

The proposed scope of works to be carried out along the Blue Mountains Line is outlined below and shown in Figure 4.

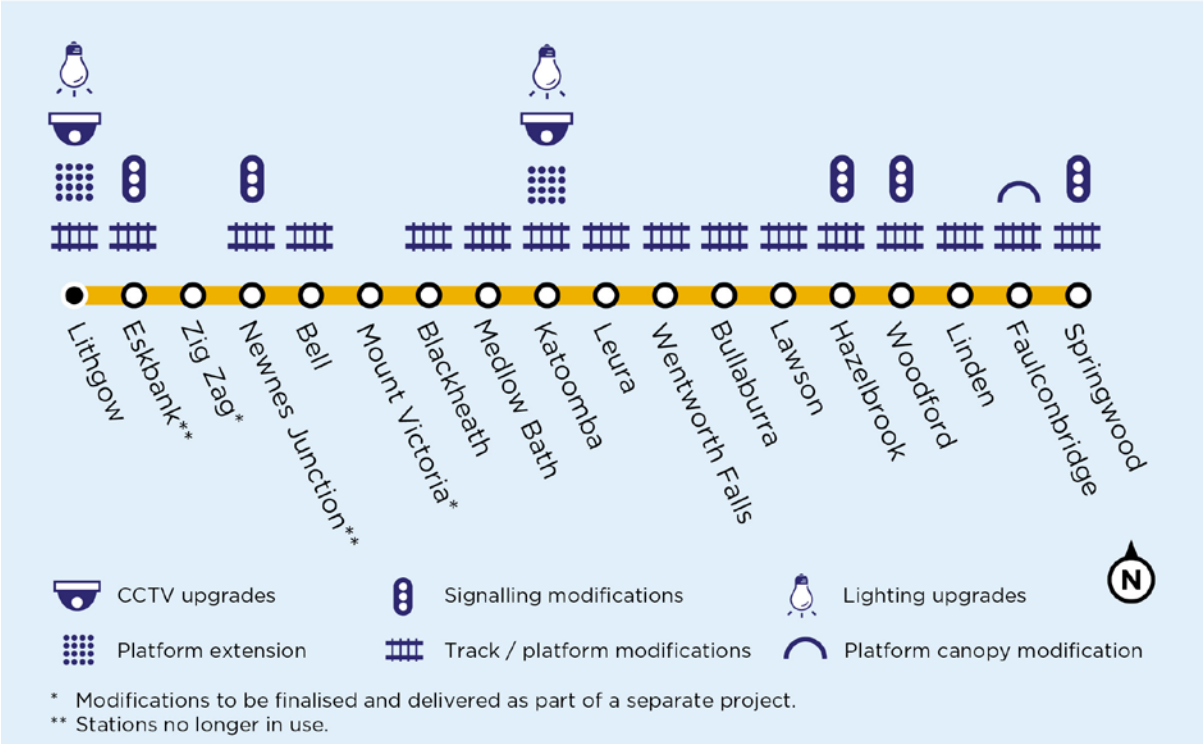


Figure 4 Scope of works for the project

3.1.1 Modifications to stations

The following platform modifications would be required as part of the Project:

- extension of Platform 1 at Katoomba Station by around four metres towards the east. This would involve:
  - relocation of an overhead structure and other infrastructure including steel stairs in the location of the proposed extension
  - installation of foundations for the platform extension
  - construction of the platform extension
  - relocation of fencing and access gates at the edge of the extended platform as required
  - extension of CCTV, public announcement systems and lighting to the platform extension

- extension of Platforms 1 and 2 (island platform) at Lithgow Station by around 12 metres towards the west. This would involve:
    - removal of the existing rail corridor access ramp
    - construction of the platform extension
    - installation of new steel stairs for rail corridor access at the end of the extended platform
    - relocation of fencing and access gates at the edge of the extended platform
    - extension of CCTV, public announcement systems and lighting to the platform extension
- horizontal platform coping modifications by up to 25 centimetres (including a +/- 20 millimetre variance) on Platforms 1 and 2 at all stations in the Project site between Faulconbridge Station and Lithgow Station (note: these changes are universal to all platforms and are therefore have not been indicated on Figure 5 and Figure 6)
- reduction in the width of the existing platform canopy at Faulconbridge Station on platform 2 by around 11 centimetres
- relocation of services where required, and installing additional support where cables are removed from the platform coping overhang
- reinstate finishes such as tactile pavers and/or yellow and white line markers as required at all stations.

Materials proposed for the platform extensions at Katoomba Station and Lithgow Station have been selected to minimise visual impact and to blend with the existing brick face of the heritage platforms. The platform extensions would comprise brick faces of similar colour to the adjacent materials on existing platforms. New gates and fences (where required) would also be designed to match the existing design and colour.

Key elements of the platform extensions at Katoomba Station and Lithgow Station are shown in Figure 5 and Figure 6.

3.1.2 Corridor works

Track slewing

Track slewing would be undertaken at certain sections along the length of the rail corridor between west of Springwood Station and Lithgow Station to ensure adequate passing distances between trains, and adequate clearance between the trains and platforms. This would generally include:

- temporary disconnection of signalling and communications infrastructure
- horizontal slewing of the track by up to 25 centimetres as required
- replacement of crossovers at Bell Station, Eskbank Station and Newnes Junction Station, involving:
    - cutting and removal of sections of existing track
    - removal of ballast and existing foundations
    - widening of the section to accommodate wider track
    - placement of new foundations, footings and constructing new ballast, sleepers and rail
- reconnection of signalling and communications infrastructure.

Electrical and signalling modifications

Other minor modifications within the rail corridor would include:

- relocation of electrical equipment at Eskbank Station and replacement of electrical equipment at Bell Station
- minor signal infrastructure adjustments along the rail corridor at Hazelbrook Station, Woodford Station and Lawson Station to accommodate new track positions as a result of the slewing
- relocating and replacing of overhead wire structures at Katoomba Station and Eskbank Station.

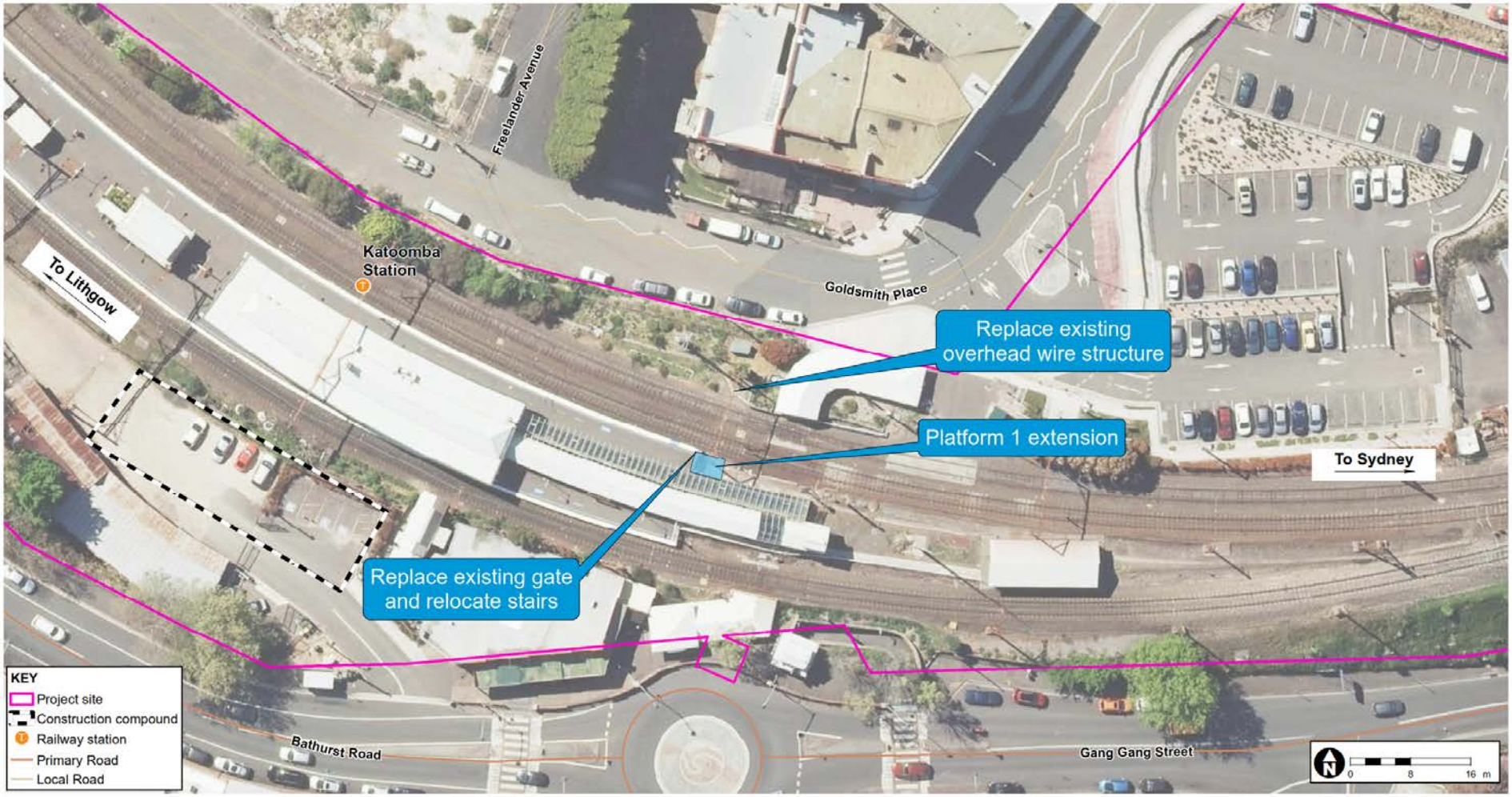


Figure 5 Proposed work at Katoomba Station

Figure 6 Proposed work at Lithgow Station

3.1.3 Sustainability in design

The development of the concept design for the Project has been undertaken in accordance with the requirements of the TfNSW Environmental Management System (EMS) and the *NSW Sustainable Design Guidelines - Version 3.0* (TfNSW, 2013) which groups sustainability into seven themes:

- energy and greenhouse gases
- climate resilience
- materials and waste
- biodiversity and heritage
- water
- pollution control
- community benefit.

Within each theme, potential initiatives are prioritised into two categories of requirements:

- **Compulsory** – the initiative is required to be implemented when applicable to the Project as they refer to a corporate target, or are fundamental to the delivery of sustainable assets).
- **Discretionary** – the initiative has benefits to be implemented, however may not be the most appropriate.

A shortlist of compulsory initiatives has been developed by TfNSW for the Project. These compulsory initiatives have been reviewed and incorporated into the reference design (unless otherwise justified) and documented in a Sustainable Design Guidelines checklist prepared by TfNSW. The checklist and the initiatives would be reviewed again at the detailed design and construction phases.

3.2 Construction activities

3.2.1 Work methodology

Subject to approval, construction is expected to commence in 2018 and take around two years to complete. The construction methodology would be further developed during the detailed design of the Project by the construction contractor in consultation with TfNSW.

The proposed construction activities for the Project are identified in Table 2. This staging is indicative and is based on the current reference design and may change once the detailed design methodology is finalised. The staging is also dependent on the Contractor's preferred methodology, program and sequencing of work.

Table 2 Indicative construction staging for key activities

Stage	Activities
Site establishment	• establishment of site compounds (e.g. erect fencing/hoarding, tree protection zones, site offices, amenities and plant/material storage areas) • establishment of temporary facilities as required (e.g. temporary toilets etc.) • site surveys of all track, platform, overhead wiring, signalling infrastructure, tunnels and structures adjacent to the tracks • utility locating • delivery of materials • construction of hi-rail access pads on the tracks
Station platform modifications	• disconnection of utility services and installation of protection measures for cable routes as required • relocation of services where required • platform coping modifications on Platforms 1 and 2 at all 15 stations • modification of the existing platform canopy at Faulconbridge station • treatment of new coping edge and reinstatement of finishes such as tactile pavers and/or yellow and white line markers • reinstate utility services where required
Station platform extensions (Katoomba Station and Lithgow Station)	• temporary removal fencing for reinstatement (if possible) • removal of the existing rail corridor access ramp at Lithgow Station • construction of foundations for platform extensions at Katoomba Station and Lithgow Station • extension of Platform 1 at Katoomba Station • extension of Platforms 1 and 2 at Lithgow Station • installation of CCTV, lighting, public announcement systems etc. to service platform extensions • installation/extension of existing cables to platform extensions • relocation of fencing and access gates at the edge of the extended platforms as required (towards the east at Katoomba Station and towards west at Lithgow Station) • installation of new steel stairs for access to the rail corridor at the end of the extended platforms a Lithgow Station • relocation of existing stairs on Platform 1 at Katoomba Station • installation of finishes such as tactile pavers and/or yellow and white line markers to platform extensions
Track slewing works	• temporary disconnection of signalling infrastructure and rail utilities as required • removal of existing tracks, ballast and foundation, and widening of track area to accommodate new crossovers at Bell Station and Eskbank Station • re-position/replacement of rail track • replacement of ballast/sleepers/footings/foundations and other items where required • reinstate signalling infrastructure and rail utilities at the completion of works
Signalling	• disconnection of signalling and communications infrastructure where required • relocation of electrical equipment at Eskbank Station and Bell Station • adjustment of signalling infrastructure along the rail corridor at Hazelbrook Station, Woodford Station and Lawson Station to accommodate track slewing • installation additional signage where required
Overhead wiring systems	• relocation and replacement of overhead wire structures at Katoomba Station / Eskbank Station • Replacement of supporting structures where required
Testing	• test and commission signalling and overhead wiring system, new/modifications to station services and platforms, communications and security systems

3.2.2 Plant and equipment

The plant and equipment likely to be used during construction includes:

- trucks
- bobcat
- jack hammer
- excavator
- demolition saw
- concrete pump
- pilling rig
- concrete truck
- franna/mobile cranes
- lighting tower
- hi-rail plant (elevated work platform / flatbed / hiab etc.)
- coring machine
- water cart
- hi-rail dump truck
- generator
- suction trucks
- rail mounted trolley
- rail mounted elevated work platform
- road rail concrete truck
- vibrating roller / compaction plate
- road rail excavator
- elevated work platform
- hand tools.

3.2.3 Working hours

Where possible, construction work would be undertaken during standard construction hours, which are as follows:

- 7am to 6pm Monday to Friday
- 8am to 1pm Saturdays
- no work on Sundays or public holidays.

Works undertaken during these hours may include minor civil works and modifications such as the installation of public announcement systems, CCTV and lighting to platform extensions at Katoomba Station and Lithgow Station.

However, a large portion of the works would need to occur outside standard hours, which would be undertaken during routine rail possessions. Routine rail possessions are scheduled closures that would occur regardless of the Project when part of the rail network is temporarily closed and trains are not operating.

It is anticipated that this Project would utilise approximately 10 pre-existing, routine rail possessions over the two-year construction period. This would typically include shutdown periods of 48 hours over a weekend period; however, five of the 10 rail possession periods may extend for 12 days in the area between Newnes Junction Station and Lithgow Station. This would involve five day closures of one line on both sides of a weekend possession period.

Approval from TfNSW would be required for any out of hours work and the affected community would be notified as outlined in TfNSW's *Construction Noise Strategy* (TfNSW, 2017) (refer to Section 6.3 for further details).

3.2.4 Earthworks

The Project would require the following minor earthworks:

- excavation for the extensions to the Katoomba Station and Lithgow Station platforms
- replacement of supporting structures for the overhead wiring system
- replacement of crossovers at up to six locations at Bell Station and Eskbank Station

- minor signal infrastructure relocations along the rail corridor at Hazelbrook Station, Woodford Station and Lawson Station to accommodate new track positions as a result of the slewing
- other minor civil works including ground levelling for platform modifications and track slewing.

Tracks, sleepers and ballast may also need to be removed / replaced to accommodate track slewing, particularly to allow for the replacement of crossovers at Eskbank Station and Bell Station. Excavated material would be reused onsite where possible or disposed of in accordance with relevant legislative requirements.

3.2.5 Source and quantity of materials

The source and quantity of materials would be determined during the detailed design phase of the Project, and would consider the requirements of the *NSW Sustainable Design Guidelines – Version 3.0* (TfNSW, 2013). Materials would be sourced from local suppliers where practicable. Reuse of existing and recycled materials would be undertaken where practicable.

3.2.6 Traffic, access and vehicle movements

The anticipated vehicle movements during construction depends on the scope of works, with numerous stages of construction being undertaken at the same time.

The works would require about 10 to 20 medium / heavy vehicle movements (5 to 10 vehicles) for each individual work site. A small number of light / medium vehicles would also be required to service personnel and transport small equipment and other materials as needed to the work sites.

The number of vehicle movements expected during construction would be finalised during the development of the detailed design. Existing access routes would be used to access the rail corridor.

Traffic and transport impacts associated with the Project are assessed in Section 6.4. The potential traffic and access impacts expected during the construction of the Project include:

- minor disruptions due to increased truck and construction machinery movements, particularly along Great Western Highway and local roads providing access to the compound sites
- increased demand for on-street parking within the local network in the short-term, particularly where compound sites have been identified adjacent to existing off-street commuter parking facilities including at Blackheath Station, Katoomba Station and Lithgow Station.

3.2.7 Temporary facilities

It is expected that a number of temporary construction compounds would be required to accommodate a site office(s), amenities, laydown and storage areas for materials. Several options have been identified for the possible locations of these compounds, as shown in Appendix C. The locations of the compounds would be finalised during detailed design and not all of the identified locations are likely to be required.

Sites would be selected to avoid sensitive areas and would be determined in consultation with relevant landowners. Generally compounds would be selected to:

- limit proximity to sensitive receivers where practicable
- minimise noise impacts to residents
- avoid disruption to property access

- avoid impacts to known items of heritage (both non-Aboriginal and Aboriginal)
- use existing cleared areas and access tracks where practicable
- avoid remnant native vegetation or key habitat features
- avoid disturbance to waterways
- provide safe access to the local road network
- where the land is relatively level.

Areas used for site compounds would be rehabilitated at the end of construction.

The majority of areas nominated for the compounds are on land owned by RailCorp in order to minimise disturbance to neighbouring properties. It is also anticipated that laydown areas would be located on station platforms.

Impacts associated with utilising the compounds shown in Appendix C have been considered in the environmental impact assessment including requirements for rehabilitation.

3.2.8 Public utility adjustments

During the concept design stage, a desktop review was conducted and third party utility information was obtained from Dial Before You Dig. The results of the DBYD search were considered in the reference design report (GHD, 2017).

The Project has been designed to avoid relocation of services where feasible. It is not anticipated that any public utility adjustments are required other than changes to RailCorp utilities and the overhead wiring system associated with the railway.

In the event that additional utility relocations are required outside of the Project site, further assessment would be undertaken. The relevant utility providers would be consulted during the detailed design phase of the Project.

A detailed underground services search and investigation (non-invasive) for overhead wire footings would be conducted to locate services in the Project site prior to any detailed design development or excavation.

3.3 Property acquisition

The works would take place within the existing rail corridor. No property acquisition is required for the Project.

3.4 Operation management and maintenance

It is anticipated that the New Intercity Fleet and existing intercity trains would run jointly on the Blue Mountains Line until all of the New Intercity Fleet trains are in service. The modification of the station platforms would result in a larger gap being experienced by customers boarding or alighting between the different train sets at certain points along the platform. Impacts would be temporary, lasting until the complete replacement of the existing fleet. Measures including additional signage, additional station staff, physical platform gap filling solutions and communication strategies would be identified during detailed design to minimise disruptions to customers. Impacts resulting from a larger platform gap are discussed further in Section 6.4.2.

4 Statutory considerations

Chapter 4 provides a summary of the statutory considerations relating to the Project including a consideration of NSW Government polices/strategies, NSW legislation (particularly the *Environmental Planning and Assessment Act 1979* (EP&A Act)), environmental planning instruments, and Commonwealth legislation.

4.1 Commonwealth legislation

4.1.1 Environment Protection and Biodiversity Conservation Act 1999

The (Commonwealth) *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places - defined in the EPBC Act as 'matters of National Environmental Significance (NES)'. The EPBC Act requires the assessment of whether the Project is likely to significantly impact on matters of NES or Commonwealth land. These matters are considered in full in Appendix A.

The Project would not impact on any matters of NES or on Commonwealth land. Therefore a referral to the Commonwealth Minister for the Environment is not required.

4.2 NSW legislation and regulations

4.2.1 Environmental Planning and Assessment Act 1979

The EP&A Act establishes the system of environmental planning and assessment in NSW. This Project is subject to the environmental impact assessment and planning approval requirements of Part 5 of the EP&A Act. Part 5 of the EP&A Act specifies the environmental impact assessment requirements for activities undertaken by public authorities, such as TfNSW, which do not require development consent under Part 4 of the Act.

In accordance with section 111 of the EP&A Act, TfNSW, as the proponent and determining authority, must examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the Project.

Clause 228 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) defines the factors which must be considered when determining if an activity assessed under Part 5 of the EP&A Act has a significant impact on the environment. Chapter 6 of this REF provides an environmental impact assessment of the Project in accordance with section 111 and clause 228 and Appendix B specifically responds to the factors for consideration under clause 228.

4.2.2 Other NSW legislation and regulations

The Project has been assessed against other relevant State legislation and regulations. Table 3 provides a list of other relevant legislation applicable to the Project.

Table 3 Other legislation applicable to the Project

Applicable legislation	Considerations
Contaminated Land Management Act 1997 (CLM Act) (NSW)	Section 60 of the CLM Act imposes a duty on landowners to notify the NSW EPA, and potentially investigate and remediate land if contamination is above EPA guideline levels. Contaminants of potential concern are likely to be limited in extent and are unlikely to be present at concentrations above the relevant assessment criteria. No parts of the Project site or identified ancillary facilities have been declared under the CLM Act as being significantly contaminated (refer to Section 6.6).
Crown Lands Act 1987 (NSW)	The Project does not involve any works on Crown land.
Heritage Act 1977 (Heritage Act) (NSW)	The Heritage Act provides for the protection and conservation of non-Indigenous cultural heritage items and establishes the Heritage Council of NSW. Relevant sections of the Heritage Act to the Project include the following: • Section 32, where places, buildings, works, relics, moveable objects or precincts of heritage significance are protected by means of either Interim Heritage Orders or by listing on the NSW State Heritage Register. • Sections 57 and 60 require approval from the Heritage Council of NSW) where activities that may alter, damage, move or destroy items listed on the State Heritage Register are to be impacted • Under Section 140 of the Heritage Act, a permit is required to disturb or expose land that may contain relics. Where the impacts would the minimal, an exception under Section 139 may be applied for • Section 170 where items listed on a government agency Heritage and Conservation Register are to be impacted. Section 170 also requires that NSW Government agencies, including TfNSW maintain a register of heritage assets. Heritage assessments and archaeological reviews have been undertaken for the Project and are summarised in Section 6.1. Section 60 permits would be required to be obtained under the Heritage Act from the Heritage Council for impacts to stations listed on the State Heritage Register. An exception under Section 139 (1b) would also be required for works at Lawson where there is potential for minor or no impact on archaeological relics.
Mine Subsidence Compensation Act 1961(MSC Act) (NSW)	The MSC Act provides for compensation or repair services where improvements are damaged by mine subsidence resulting from the extraction of coal. The MSC Act also prevents damage by ensuring that new developments are compatible with the risk of mine subsidence. Subsidence Advisory NSW (formerly the Mine Subsidence Board) is responsible for administering the MSC Act. The Project site is located in the Lithgow Mine Subsidence District. As per Section 15 of the MSC Act, TfNSW would require approval from Subsidence Advisory NSW for the Project. A Building Application Form would be submitted to Subsidence Advisory NSW which once approved provides approval to construct.
National Parks and Wildlife Act 1974 (NPW Act) (NSW)	The NPW Act oversees the preservation, conservation and management of reserved parks. Portions of the Project are located adjacent to the Blue Mountains National Park. Consideration through design has ensured that the Project does not impact on land designated as National Park. Sections 86, 87 and 90 of the NPW Act require consent from OEH for the destruction or damage of Indigenous objects. The Project is unlikely to disturb any Indigenous objects (refer to Section 6.1). If unexpected archaeological items or items of indigenous heritage significance are discovered during the construction of the Project, all works would cease and TfNSW's *Unexpected Finds Procedure* would be implemented.

Applicable legislation	Considerations
Noxious Weeds Act 1993 (NSW)	Under the *Noxious Weeds Act 1993*, public authorities are required to control noxious weeds which are likely to spread to adjoining land. Four Weeds of National Significance were recorded in the Project site. Appropriate management methods would be implemented during construction (refer to Section 6.6 and Section 7.2).
Protection of the Environment Operations Act 1997 (PoEO Act) (NSW)	The PoEO Act establishes a regulatory framework for the protection of the environment. It provides a mechanism for licensing certain activities, listed in Schedule 1 of the PoEO Act. Part 3.2 of the PoEO Act requires an Environment Protection Licence (EPL) for scheduled development work and the carrying out of scheduled activities. Track works are listed as scheduled activities (Schedule 1, Part 33 'Railway systems activities') under the PoEO Act and would require an EPL. In accordance with Part 5.7 of the PoEO Act, TfNSW would notify the EPA of any pollution incidents that occur onsite. This would be managed in the Construction Environmental Management Plan (CEMP) to be prepared and implemented by the Contractor.
Roads Act 1993 (Roads Act) (NSW)	Section 138 of the Roads Act requires consent from the relevant road authority for the carrying out of work in, on or over a public road. However, clause 5(1) in Schedule 2 of the Roads Act states that public authorities do not require consent for works on unclassified roads. Should any classified road require temporary diversions or closures during the construction of the Project (particularly, the Great Western Highway), a Road Occupancy Licence would need to be obtained (refer to Section 7.2).
Threatened Species Conservation Act 1995 (TSC Act) (NSW)	The TSC Act protects threatened flora and fauna species, endangered populations and ecological communities and their habitats within NSW. A number of threatened flora and fauna species and TSC Act listed communities have been identified as known to exist or likely to exist within or near the Project site (refer to Section 6.6). Appropriate management methods would be implemented during construction and operation (refer Section 7.2).
Waste Avoidance and Resource Recovery Act 2001 (WARR Act) (NSW)	TfNSW would carry out the Project having regard to the requirements of the WARR Act. A project-specific Waste Management Plan would be prepared and would form part of the Construction Environmental Management Plan.
Water Management Act 2000 and *Water Act 1912*	The *Water Management Act 2000* (WM Act) provides for the sustainable and integrated management of water resources. Aquifer interference approval requirements under the WM Act have not yet commenced, and regulation is managed under Part 5 of the *Water Act 1912*. The Project would not involve any water use (from a natural source e.g. aquifer, river), water management works, drainage or flood works, controlled activities or aquifer interference. While some earthworks are required for the Project, shallow groundwater within the Project site is located between, 0.6 and 2 metres below ground level. Groundwater is unlikely to be encountered during the works, and the works are therefore unlikely to impact upon water resources (refer to Section 6.6). No approvals or consideration is likely required under the Act.

4.3 State Environmental Planning Policies

4.3.1 State Environmental Planning Policy (Infrastructure) 2007

The Infrastructure SEPP is the key environmental planning instrument which determines the permissibility of the Project.

Clause 79 of the Infrastructure SEPP allows for the development of 'rail infrastructure facilities' by or on behalf of a public authority without consent on any land (i.e. assessable under Part 5 of the EP&A Act). Clause 78 defines '*rail infrastructure facilities' as including elements such as 'railway stations, station platforms and areas in a station complex that commuters use to get access to the platforms', public amenities for commuters' and 'associated public transport facilities for railway stations'.*

Consequently, development consent is not required for the Project which is classified as rail infrastructure. The potential environmental impacts of the Project have been assessed under the provisions of Part 5 of the EP&A Act.

Part 2 of the Infrastructure SEPP contains provisions for public authorities to consult with local councils and other agencies prior to the commencement of certain types of development. Section 5 of this REF discusses the consultation undertaken under the requirements of the Infrastructure SEPP.

It is noted that the Infrastructure SEPP prevails over other environmental planning instruments to the extent of an inconsistency, except in some cases including where *State Environmental Planning Policy (Major Development) 2005*, *State Environmental Planning Policy No 14 – Coastal Wetlands* or *State Environmental Planning Policy No 26 – Littoral Rainforest* applies. The Project does not require consideration under these SEPPs and therefore does not require further consideration as part this REF.

4.3.2 State Environmental Planning Policy 55 – Remediation of Land

SEPP 55 provides a State-wide approach to the remediation of contaminated land for the purpose of minimising the risk of harm to the health of humans and the environment. While consent for the Project is not required, the provisions of SEPP 55 have still been considered in the preparation of this REF.

Section 6.8 of this REF contains an assessment of the potential contamination impacts of the Project. It is unlikely that any significant remediation work would be required as part of the Project. The proposed land use does not differ to the existing use and is, therefore, unlikely to be affected by any potential contaminants that exist within the rail corridor.

4.3.3 State Environmental Planning Policy (State and Regional Development) 2011

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP) identifies State significant development and State significant infrastructure. Projects that are characterised as either of these require approval by the Minister for Planning.

The Project is not listed in the SRD SEPP and has not been declared State Significant Infrastructure or State Significant Development.

4.3.4 State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011

The Sydney Drinking Water Catchment SEPP has three main aims:

- to support healthy water catchments that deliver high quality water and permit development that supports that goal
- to ensure that consent authorities only allow proposed developments that have a neutral or beneficial effect on water quality

- to support water quality objectives in the drinking water catchment.

The majority of the Project would be located within the boundary of the Sydney Drinking Water Catchment. As per clause 12 of the Sydney Drinking Water Catchment SEPP, public authorities undertaking works on land regulated by the SEPP are required to consider the effect on water quality before undertaking the activity and consider whether the activity would have a neutral or beneficial effect (NorBE) on water quality. The NorBE assessment concluded that the Project would have a neutral effect on water quality. The NorBE assessment is included in Appendix D.

4.4 Local environmental planning instrument and development controls

The Project is located in the local government areas of the Blue Mountains and Lithgow. The provisions of the Infrastructure SEPP mean that Local Environmental Plans (LEPs), prepared by councils for a local government area, do not apply. However, during the preparation of this REF, the provisions of the following LEPs were considered:

- *Blue Mountains Local Environmental Plan 2015* (Blue Mountains LEP)
- *Lithgow Local Environmental Plan 2014* (Lithgow LEP).

4.4.1 Blue Mountains Local Environmental Plan 2015

The Blue Mountains LEP is the governing plan for the Blue Mountains local government area. The Project extends across the Blue Mountains local government area at the following stations:

- Faulconbridge
- Linden
- Woodford
- Hazelbrook
- Lawson
- Bullaburra
- Wentworth Falls
- Leura
- Katoomba
- Medlow Bath
- Blackheath
- Bell.

The majority of the Project would be conducted within the Blue Mountains local government area and would be mostly located within a SP2 Infrastructure land use zone. The aims of the SP2 Infrastructure zone are to provide for infrastructure and related uses, and to prevent development that is not compatible with, or that may detract from the provisions of infrastructure. The Project meets the objectives of the SP2 Infrastructure zone through the provision of rail infrastructure and recognising existing railway land to enable future development for railway and associated purposes.

The Project may require the use of a small portion of land zoned RE1 Public recreation at Faulconbridge for the establishment of construction compounds. Construction compound locations would be selected to avoid vegetated areas. The use of land for construction compounds would be temporary (during the construction stage of the Project), would be restored following the completion of construction and would be unlikely to result in a long-term land use change.

Irrespective of the provisions of the Blue Mountains LEP, the Project is permissible without consent under the provisions of the Infrastructure SEPP.

4.4.2 Lithgow Local Environmental Plan 2014

The Lithgow LEP is the governing plan for the Lithgow local government area. Newnes Junction Station, Eskbank Station and Lithgow Station are located in the Lithgow local government area.

The aims and objectives of the Lithgow LEP have been considered, however, the operation of the Infrastructure SEPP means that LEPs do not apply to the extent that they impose controls that are inconsistent with the provisions of the Infrastructure SEPP.

The majority of the Project located within the Lithgow local government area would take place within the SP2 Infrastructure land use zone. As discussed above, the Project meets the objectives of the SP2 Infrastructure zone.

Irrespective of the provisions of the Lithgow LEP, the Project is permissible without consent under the provisions of the Infrastructure SEPP. Table 4 summarises the relevant aspects of the LEPs applicable to the Project.

Table 4 Relevant provisions of the Blue Mountains LEP and Lithgow LEP

Provision description	Relevance to the Project
Clause 2.3 - Zone objectives and Land Use Table	The Project site is listed as SP2 Infrastructure – Railway under the Blue Mountains LEP and the Lithgow LEP. A small portion of land zoned RE1 Public recreation at Faulconbridge may be required for the establishment of a construction compound. The Project is consistent with the objectives of the SP2 Infrastructure.
Clause 5.10 - Heritage conservation	Clause 5.10 of the Blue Mountains LEP and Lithgow LEP aims to conserve the heritage significance of heritage items within the respective local government areas. A number of items located in the Project site are listed on the heritage schedule of the Blue Mountains LEP and the Lithgow LEP in addition to the State Heritage Register and the RailCorp Section 170 Heritage and Conservation Register. A discussion of potential impacts to local heritage is discussed in Section 6.1.
Clause 5.9 - Preservation of trees or vegetation	Clause 5.9 of the Blue Mountains LEP and the Lithgow LEP is aimed at the preservation of trees and development consent is required for tree removal in most instances. However by virtue of clause 5(3) and 79 of the Infrastructure SEPP, the clearing of vegetation for the Project is permissible without development consent and would be assessed under Part 5 of the EP&A Act. A discussion of potential impacts to vegetation is discussed in Section 6.6.
Blue Mountains LEP Clause 6.14 – Earthworks Lithgow LEP Clause 7.1 - Earthworks	Clause 6.14 of the Blue Mountains LEP and Clause 7.1 of the Lithgow LEP aims to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, waterways and riparian land, neighbouring uses, cultural or heritage items or features of the surrounding land. By virtue of clause 5(3) and 79 of the Infrastructure SEPP, the Project is permissible without development consent and would be assessed under Part 5 of the EP&A Act. The description and consideration of earthworks for the Project is outlined in Section 3.2 and Section 6.6 and respectively.

4.5 NSW Government policies and strategies

The Project has been assessed against other key relevant State Government policies and strategies. Table 5 provides an overview of additional NSW Government policies and strategies relevant to the Project.

Table 5 NSW Government policies and strategies applicable to the Project

Policy/Strategy	Commitment	Comment
NSW: Making It Happen (NSW Government, 2015)	In September 2015, the NSW Government announced a series of State Priorities as part of *NSW: Making It Happen* (NSW Government, 2015). The State Priorities are intended to guide the ongoing actions of the NSW Government across the State, and guide resource allocation and investment in conjunction with the NSW Budget. *NSW: Making it Happen* focuses on 12 key 'priorities' to achieve the NSW Government's commitments. These priorities range across a number of issues including infrastructure, the environment, education, health, wellbeing and safety in addition to Government services.	Two key Priorities identified in Making It Happen are supported by the Project. One such priority is an increased investment in building infrastructure, including transport infrastructure. This priority is directly reflected by the Project. Making it Happen also seeks to improve the reliability of public transport services, a priority that the delivery of the Project would support.
Rebuilding NSW – State Infrastructure Strategy 2014 (NSW Government, 2014)	*Rebuilding NSW* is a plan to deliver $20 billion in new productive infrastructure to sustain productivity growth in our major centres and regional communities. Rebuilding NSW will support overall population growth in Sydney and NSW. Public transport is viewed as critical to urban productivity, expanding employment opportunities by connecting people to jobs, reducing congestion, and supporting delivery of urban renewal.	The Project supports investment in rail infrastructure, and aligns with the reservation of $8.9 billion for urban public transport to support Sydney's population, that is expected to reach almost six million by 2031.
NSW Long-term Transport Master Plan (TfNSW, 2012a)	The *NSW Long-term Transport Master Plan* identifies a planned and co-ordinated set of actions to address transport challenges and will guide the NSW Government's transport funding priorities over the next 20 years. The Master Plan would meet a number of challenges to building an integrated transport system for Sydney and NSW, including: • customer-focused integrated transport planning • integrated modes to meet customer needs • getting Sydney Moving Again • sustaining Growth in Greater Sydney.	The Project implements the following key themes in the Master Plan: • improving customers' journey experience • making better use of existing assets • improve regional passenger rail travel, with access to and across the Blue Mountains as a priority.
Sydney's Rail Future: Modernising Sydney's Trains (TfNSW, 2012)	*Sydney's Rail Future: Modernising Sydney's Trains* (TfNSW, 2012b) is the NSW Government's long-term plan to increase the capacity of Sydney's rail network and to meet rail customer needs by investing in new services and upgrading existing infrastructure. It aims to improve the customer's experience, improve reliability and increase services across the rail network. Sydney's Rail Future forms an integral part of the *NSW Long-term Transport Master Plan.*	The Project has been developed with consideration of the objectives of Sydney's Rail Future, including: • creating a more reliable service • maintain a safe, clean and comfortable commuting environment, and; • transform and modernise Sydney's rail network by introducing timetabled services with double-deck trains and on-board amenities for long-distance journeys.

Policy/Strategy	Commitment	Comment
Sustainable Blue Mountains 2025 (Blue Mountains Council, 2010)	The aim of *Sustainable Blue Mountains 2025* is to provide a framework of action for all stakeholders, to help the area in realising its vision for a more sustainable Blue Mountains. The key direction outlined in the plan re relevant to the Project includes: • moving around – the community values safe and accessible travel options that improve connections, including reliable and accessible public transport.	The Project would be consistent with the public transport values and future visions of the Blue Mountains community. The Project would deliver an improved, safe and accessible public transport option to the region.
Lithgow City Council Community Strategic Plan 2013-2026 – Our Place…Our Future (Lithgow City Council, 2013)	*Our Place…Our Future Community Strategic Plan 2013-2025* sets out the community's vision for the strategic direction of the Lithgow local government area. The plan sets a vision for the future growth and sustainability of the Lithgow local government area. Vision statements in the plan relevant to the Project include: • transport - providing a choice of effective transport options for those who live, work and visit our community • growth - providing for sustainable and planned growth.	The Project would deliver an improved public transport option to the region, providing transport to those residing in and visiting the area. Through the provision of sustainable public transport the Project would also support the planned growth in the region.

4.6 Ecologically sustainable development

TfNSW is committed to ensuring that its projects are implemented in a manner that is consistent with the principles of ecologically sustainable development (ESD). The principles of ESD are defined under the provisions of clause 7(4) of Schedule 2 to the EP&A Regulation as:

- the precautionary principle – If there are threats of serious or irreversible damage, a lack of full scientific uncertainty should not be used as a reason for postponing measures to prevent environmental degradation
- intergenerational equity – the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations
- conservation of biological diversity and ecological integrity – the diversity of genes, species, populations and their communities, as well as the ecosystems and habitats they belong to, should be maintained or improved to ensure their survival
- improved valuation, pricing and incentive mechanisms – environmental factors should be included in the valuation of assets and services.

The principles of ESD have been adopted by TfNSW during the development and assessment of the Project. Section 3.1.3 summarises how ESD would be incorporated in the design development of the Project. Section 6.12 includes an assessment on climate change and sustainability and Section 7.2 lists mitigation measures to ensure ESD principles are incorporated during the construction phase of the Project.

5 Community and stakeholder consultation

Chapter 5 discusses the community and stakeholder consultation undertaken to date for the Project and the consultation proposed during the public display of the REF. This chapter discusses the consultation strategy adopted for the Project and summarises consultation with the community, relevant government agencies and stakeholders undertaken so far.

5.1 Stakeholder consultation during concept design

During the development of concept design options, TfNSW held a number of workshops with stakeholders including Sydney Trains and NSW TrainLink. Meetings held with Sydney Trains were primarily to discuss requirements for rail possessions to undertake the proposed works. Meetings held with NSW TrainLink were primarily held to discuss requirements to ensure compliance with the existing trains as well as future fleet.

Numerous meetings were also held with the ASA throughout the design development to discuss and determine an agreed approach to the number and type of concessions required as well as train parameters, clearance gap requirements and the consideration of other projects occurring along the Blue Mountains Line.

5.2 Consultation requirements under the Infrastructure SEPP

Part 2, Division 1 of the Infrastructure SEPP contains provisions for public authorities to consult with local councils and other public authorities prior to the commencement of certain types of development. Clauses 13, 14, 15 and 16 of the Infrastructure SEPP require that public authorities undertake consultation with councils and other agencies, when proposing to carry out development without consent. Table 6 provides details of consultation requirements under the Infrastructure SEPP for the Project.

Table 6 Infrastructure SEPP consultation requirements

Clause	Clause particulars	Relevance to the Project
Clause 13 | Consultation with Councils – development with impacts on council related infrastructure and services	Consultation is required where the Project would result in: • substantial impact on stormwater management services • generating traffic that would place a local road system under strain • involve connection to or impact on a council owned sewerage system • involve connection to and substantial use of council owned water supply • significantly disrupt pedestrian or vehicle movement • involve significant excavation to a road surface or footpath for which Council has responsibility.	The Project is unlikely to substantially impact stormwater services, nor significantly disrupt pedestrian or vehicles movements. Accordingly, consultation with Council is not required in regard to this aspect.

Clause	Clause particulars	Relevance to the Project
Clause 14 | Consultation with Councils – development with impacts on local heritage	Where railway station works: • substantially impact on local heritage item (if not also a State heritage item) • substantially impact on a heritage conservation area.	The Project requires platform extensions, platform canopy modifications (Faulconbridge Station only) and reconfiguring of associated rail infrastructure at stations listed on the Blue Mountains LEP. Consultation with the Blue Mountains City Council would be undertaken in accordance with clause 14 of the Infrastructure SEPP and would continue throughout the detailed design and construction phases. Refer to Section 6.1 for a summary of impacts to locally-listed heritage items.
Clause 15 | Consultation with Councils – development with impacts on flood liable land	Where railway station works: • impact on land that is susceptible to flooding – reference would be made to *Floodplain Development Manual: the management of flood liable land.*	The Project is not located on land that is susceptible to flooding. Accordingly, consultation with Council is not required in regard to this aspect. Refer to Section 6.6.
Clause 16 | Consultation with public authorities other than Councils	For *specified development* which includes consultation with the OEH for development that is undertaken adjacent to land reserved under the *National Parks and Wildlife Act 1974*, and other agencies specified by the Infrastructure SEPP where relevant.	The Project is located adjacent to land reserved under the *National Parks and Wildlife Act 1974*. Accordingly, TfNSW would give written notice to OEH of the intention to carry out the development, and take into consideration any response to the notice received within 21 days after the notice is given.

5.3 Consultation strategy

The consultation strategy for the Project has been developed to encourage stakeholder and community involvement and foster interaction between stakeholders, the community and the project team. The consultation strategy that has been developed, having regard to the requirements of the planning process and ensure that stakeholders, customers and the community are informed of the Project and have the opportunity to provide input.

The objectives of the consultation strategy are to:

- provide accurate and timely information about the Project and REF process to relevant stakeholders
- raise awareness of the various components of the Project and the specialist environmental investigations
- ensure that the directly impacted community is aware of the REF and consulted where appropriate
- provide opportunities for stakeholders and the community to express their views about the Project
- understand and access local knowledge from the community and stakeholders
- record the details and input from community engagement activities
- build positive relations with identified community stakeholders
- ensure a comprehensive and transparent approach.

5.4 Public display

The REF display includes:

- public display of the REF at various locations
- distribution of a project update up to a radius of up to 500 metres around major work areas, and to local community and rail customers, outlining the Project and inviting feedback on the REF
- advertisement of the REF public display in local newspapers with a link to the TfNSW website that includes a summary of the Project and information on how to provide feedback
- briefings to Blue Mountains City Council, Lithgow City Council, Sydney Trains, business user groups and other stakeholders.

Additional community consultation activities for the Project, such as information sessions, would also be undertaken during the public display of this REF. The REF will be placed on public display for a period of approximately three weeks at the following locations:

- Blue Mountains City Council, 2-6 Civic Place, Katoomba
- Katoomba Library, Blue Mountains Cultural Centre, 30 Parkes Street, Katoomba
- Blue Mountains City Council, 104 Macquarie Road, Springwood
- Lithgow City Council, 180 Mort Street, Lithgow
- Lithgow Library and Learning Centre, 157 Main Street, Lithgow
- Wentworth Falls Library, School of Arts Building 217 Great Western Highway, Wentworth Falls
- TfNSW Reception, Level 5, Tower A, Zenith Centre, 821 Pacific Highway, Chatswood.

The REF would also be available to download from the TfNSW website[3] and haveyoursay website[4]. Additionally, information on the Project will be available through the Project Infoline (1800 684 490) or by email (projects@transport.nsw.gov.au).

During this time feedback is invited. Following consideration of feedback received during the public display period, TfNSW will determine whether to proceed with the Project and what conditions would be imposed on the Project should it be determined to proceed.

5.5 Aboriginal community involvement

An assessment of the Aboriginal heritage potential of the Project site was undertaken and can be found in Section 6.1. The results of this assessment did not identify any registered items of Aboriginal heritage significance within the Project site and found that the archaeological potential of the area is low. Therefore it was not considered necessary to undertake specific consultation with the Aboriginal community.

5.6 Ongoing consultation

At the conclusion of the public display period for this REF, TfNSW would acknowledge receipt of feedback from each respondent. The issues raised by the respondents would be considered by TfNSW before determining whether to proceed with the Project.

[3] http://www.transport.nsw.gov.au/projects/intercity-fleet
[4] https://www.nsw.gov.au/improving-nsw/have-your-say/

Should TfNSW determine to proceed with the Project, the Determination Report would be made available on the TfNSW website and would summarise the key impacts identified in this REF, demonstrate how TfNSW considered issues raised during the public display period, and include conditions of approval proposed to minimise the impacts of the Project.

Should TfNSW determine to proceed with the Project, the project team would keep the community, councils and other key stakeholders informed of the process, identify any further issues as they arise, and develop additional mitigation measures to minimise the impacts of the Project. The interaction with the community would be undertaken in accordance with a Community Liaison Plan to be developed prior to the commencement of construction.

6 Environmental impact assessment

Chapter 3 of the REF provides a detailed description of the likely environmental impacts associated with the construction and operation of the Project.

This environmental impact assessment has been undertaken in accordance with clause 228 of the EP&A Regulation. A checklist of clause 228 factors and how they have been specifically addressed in this REF is included in Appendix B.

6.1 Non Indigenous heritage

A number of Statements of Heritage Impact (SoHI) reports have been prepared by AECOM and Artefact Heritage to assess potential impacts associated with construction and operation of the Project and to accompany applications for approval under Section 60 and Section 170 of the Heritage Act. The SoHIs were prepared in accordance with the following guidelines:

- *Heritage Manual* (NSW Heritage Office & NSW Department of Urban Affairs and Planning, 1996)
- *Statements of Heritage Impact* (NSW Heritage Office, 2002).

Visual inspections were undertaken by heritage specialists in April 2017 to assess the heritage significance of each station within the Project site.

A summary of the assessments provided in the SoHIs is discussed in this section.

6.1.1 Existing environment

Historical background

During the mid-nineteenth century, the extension of the railway westward was viewed as a priority by the Government in order to capitalise on the rich natural resources of the Bathurst Plains. In 1848, the Sydney Railway Company announced proposals to establish a rail line to Bathurst. In 1855, the first railway in the State was opened between Sydney and present-day Granville, and extended to Parramatta Station in 1860. By 1863, the Main Western Line had reached Penrith, which was the terminus of the line for the next four years. Meanwhile, railway engineers sought to develop a solution to the geographical obstacle posed by the Blue Mountains. An extension of the Main Western Line was opened from Penrith to Wentworth Falls on 11 July 1867, and later extended through Leura in 1868 (also known as the Blue Mountains Line).

In 1868, Patrick Higgins brought the rail line down the Great Zig Zag and into the Lithgow Valley and in 1869 the single track main line through Bowenfels was opened. In October 1869, the Bowenfels Station was opened following selection of Bowenfels as the terminus for the Main Western Line (which includes the Blue Mountains Line). Bowenfels Station was the earliest railway station beyond the Blue Mountains and for five years was the only station for Lithgow Valley. Establishment of the Main Western Line influenced the patterns of settlement at Lithgow and provided the stimulus for the rapid industrial and economic growth of the region in the decades that followed.

An additional section of the line between Wentworth Falls and Mount Victoria opened in 1868, as the Main Western Line progressed towards Bathurst (NSW Heritage Branch, 2010). The establishment of the railway in this location continued the expansion of European settlement in the region.

There have been a number of alterations to many of the stations within the Project site since their original construction. Full details of the alterations and further historical background are provided within the relevant heritage assessments. Details of the existing infrastructure at the stations within the Project site is summarised in Section 1.3.2.

Database results

Desktop searches of historic registers including the World Heritage List, National Heritage List, Commonwealth Heritage List, NSW State Heritage Register, RailCorp's Section 170 Heritage and Conservation Register and the heritage schedules of the Blue Mountains LEP and Lithgow LEP were undertaken on 7 June and 14 June 2017 for the Project site and a surrounding area of 200 metres.

No items listed on the Commonwealth or National Heritage registers were identified within the Project site. The Greater Blue Mountains Area, which is listed on both the National and Commonwealth Heritage Registers, is located adjacent to, but not within the Project site.

Heritage items identified within the Project site include:

- 14 State Heritage Register listed items (including six stations)
- 14 items listed under Blue Mountains LEP or Lithgow LEP as being State significant
- 24 items listed on the RailCorp Section 170 Heritage and Conservation Register
- 77 locally listed heritage items under Blue Mountains LEP and Lithgow LEP
- four local heritage conservation areas.

Details of the heritage listed items identified from desktop searches within the Project site is provided in Appendix E including maps showing their locations in relation to the Project.

The Ten Tunnels Deviation which is listed on the State Heritage Register would not be impacted by this Project. Proposed modifications to accommodate the New Intercity Fleet through the Ten Tunnels Deviation are currently being developed and will be subject to a separate environmental impact assessment process.

Statement of significance

All 15 stations within the Project site are listed on the RailCorp Section 170 Heritage and Conservation Register, with six of these stations also listed on the State Heritage Register. Listings and significant elements of individual stations are provided in Table 7.

Heritage statements of significance for the 15 stations within the Project site have been assessed against the criteria set out in the guideline *Assessing Heritage Significance* (NSW Heritage Office, 2001) which is part of the *NSW Heritage Manual* (Heritage Branch, Department of Planning and Environment). The *Assessing Heritage Significance* guideline establishes seven evaluation criteria which reflect four categories of significance and whether a place is rare or representative.

As per the *NSW Heritage Manual* criteria, the statement of significance for the stations within the Project site have been prepared with consideration of historical significance, associative significance, aesthetic/technical significance, social significance, research potentials, rarity and representativeness. Detailed statements of significance are provided in the Project heritage assessments (AECOM and Artefact Heritage, 2017).

Table 7 Listings and significant elements for stations

Station	Heritage listings	Level of significance	Significant elements
Faulconbridge	• RailCorp Section 170 Heritage and Conservation Register (Item #4801064) • heritage schedule of the Blue Mountains LEP (Item #FB005)	Local	• station building (brick) • island platform
Linden	• RailCorp Section 170 Heritage and Conservation Register (Item #4801918) • heritage schedule of the Blue Mountains LEP (Item #LD007)	Local	• station building • island platform • landscape features (mature tree, garden beds) • potential archaeological relics (including sidings, a water tank and a Station Master's residence)
Woodford	• RailCorp Section 170 Heritage and Conservation Register (Item #4801041) • heritage schedule of the Blue Mountains LEP (Item #WD002)	Local	• station building (brick) • island platform • landscape features
Hazelbrook	• RailCorp Section 170 Heritage and Conservation Register (Item #4801914) • heritage schedule of the Blue Mountains LEP (Item #H007)	Local	• station building (brick) • island platform
Lawson	• State Heritage Register (Item #01177) • RailCorp Section 170 Heritage and Conservation Register (Item #4801023) • heritage schedule of the Blue Mountains LEP (Item #LN010)	State	• station building (brick) • island platform (brick framed) and side platform • landscape features • potential archaeological features
Bullaburra	• RailCorp Section 170 Heritage and Conservation Register (Item #4800202) • heritage schedule of the Blue Mountains LEP (Item #BL002)	Local	• station building • island form • landscape features
Wentworth Falls	• RailCorp Section 170 Heritage and Conservation Register (Item #4801039) • heritage schedule of the Blue Mountains LEP (Item #WF002)	Local	• station building • island platform (brick faced)
Leura	• RailCorp Section 170 Heritage and Conservation Register (Item #4801024) • heritage schedule of the Blue Mountains LEP (Item #LA016)	Local	• station building (brick) • island platform (brick faced) • landscape features (the mature tree at the eastern end of the platform)

Station	Heritage listings	Level of significance	Significant elements
Katoomba	• State Heritage Register (SHR #01174) • RailCorp Section 170 Heritage and Conservation Register (Item #4801008) • heritage schedule of the Blue Mountains LEP (Item Number #K044)	State	• station building • out-of-shed (timber on platform) • island platform • subway and canopy including brick walls • crane • landscape features (garden beds, hanging plants) • potential archaeological features
Medlow Bath	• State Heritage Register (SHR#01190) • RailCorp's Section 170 Heritage and Conservation Register (Item # 4081011) • heritage schedule of the Blue Mountains LEP (Item Number #MB003)	State	• station building (brick) • island platform (brick faced)
Blackheath	• State Heritage Register (SHR#01088) • RailCorp's Section 170 Heritage and Conservation Register (Item #4801010) • heritage schedule of the Blue Mountains LEP (Item #MB003)	State	• station building • island platform (brick faced)
Bell	• RailCorp Section 170 Heritage and Conservation Register (Item #4801013) • heritage schedule of the Blue Mountains LEP (Item #BELL007)	Local	• station building including signal box • island platform
Newnes Junction	• RailCorp Section 170 Heritage and Conservation Register (Item #4807638)	Local	• signal box • platform (brick face)
Eskbank (including Lithgow Signal Box)	• State Heritage Register (SHR#01138) • RailCorp Section 170 Heritage and Conservation Register (Item #4801018) • heritage schedule of the Lithgow LEP (Item #I434)	State	• main station building • down platform shelter • yard signal box • station platforms • landscape features (overgrown garden, trees) • potential archaeological features
Lithgow	• State Heritage Register (SHR#01833) • RailCorp Section 170 Heritage and Conservation Register (Item #4801025) • heritage schedule of the Lithgow LEP (Item #I435)	State	• station building (brick) • Hayley Street footbridge and overhead booking office • canopy • island platform (brick faced) • potential archaeological features (former 1877 railway platform

Existing platforms at Katoomba Station and Lithgow Station

Katoomba Station

Katoomba Station has a single island platform, accessed via lifts and a pedestrian subway. The pedestrian subway and lifts service Platform 1 on the northern side, facing the Great Western Highway and platform 2, fronting Bathurst Road. Platforms 1 and 2 are between 197 and 198 metres long and 13.5 metres wide. The platform is curved so that the orientation of the platform alters from an east-west alignment at the eastern end to a more north-south alignment at the western end.

In 2009, easy access upgrades were undertaken at Katoomba Station which included an extension of the platform on the eastern end to allow the lifts to be located away from the historic platform station building (Figure 7). The platform extension is narrower than the historic platform, being around eight metres wide. It is constructed of a concrete deck on recessed concrete piers.

Katoomba Station was originally constructed as a curved timber platform in 1881. In 1891, the 1881 station building was relocated to become a goods shed and the building was replaced with the present island platform and station building. The 1891 works included the construction of a pedestrian subway. The platform was extended in 1898 and again in 1901 (eastern end).

In 1902, the line was duplicated and an “out of shed” built on the platform. The western end of the platform was extended in 1907, and in 1909 a two-roomed timber building was constructed on the western end of the platform for the use of the inspector and electrician.

Katoomba Station underwent a number of modifications during the 1920s, including the erection of a canopy between the station building and steps. The platform was again extended in 1946, with at least three additional courses of bricks added to raise the platform. The original bullnose coping appears to have been removed during these works. Sometime between 1946 and 1990, a concrete lip has been added to the platform coping of the station, although this is not consistent along the length of the platform.

Figure 7 Junction between heritage platform and 2009 extension

Lithgow Station

Lithgow Station is an island platform between 190 and192 metres in length, which extends from the Eskbank Street overbridge in the east to roughly in line with Hayley Street in the west. The island platform is straight along its southern edge and is slightly curved on its northern end. The platform pavement consists of concrete capping with portions of overlying asphalt paving throughout most of the station. The island platform retaining wall (coping), below the layer of concrete capping, consists of grey-black and brown-grey machine pressed brick. The courses of brick are of varying colour, size and orientation which indicate the station's ongoing development.

Tactile points and safety markings are present along the edge of the platforms. Concrete service pits, platform lighting, garbage bins, platform seating and small landscaped shrubs are also located on the platform.

Extension of the railway to Bowenfels Station through the site of the first and present Lithgow Station was undertaken in 1869. It wasn't until 1877 however that the first railway station for Lithgow was established. The original location of the station was about 300 metres to the west of the present station at what is now the southern foundation of the Sandford Avenue overbridge. The former 1877 platform is still in existence.

During the 1920s, pressure from the community resulted in a new site being selected for the development of a new passenger station, which was officially opened in March 1925 and remains the current location.

Between the station opening in the 1920s to present, a number of modifications and upgrades have been made to Lithgow Station. Over this time, two brick courses have been added as well as the overlying concrete and asphalt for the platform. In 1993/1994, the Hayley Street footbridge and overhead booking office were constructed. This development relocated access to the western end of the station, with access to the rail platform provided by an elevator, stairs and a lift from the Hayley Street pedestrian footbridge.

A modern canopy extension at the western end of the station building was constructed in 2015. This new platform canopy extends from the footbridge stairs to the station platform building (Figure 8).

Figure 8 Station platform lifts, pedestrian ramp and proposed platform extension area

Platform copings

Platform copings, which refers to the capping/covering of station platform edges, run along the length of each platform at every station in the Project site, and are usually constructed of concrete and/or brick. Many of the stations within the Project site have previously undergone platform modifications involving alterations or replacement of the platform coping. Details of the historical context and heritage significance of platform copings at each of the State heritage listed stations, including previous alterations, is outlined below. See above for details on Katoomba Station and Lithgow Station.

Lawson Station

The current Lawson Station island platform was constructed in 1902 as a reinforced concrete cast *in-situ* platform and concrete platform deck. The cast *in-situ* reinforced concrete coping had a vertical profile, and stepped or flared foot and in most cases a projecting moulded coping. The platform was extended in 1946 to its current length, with the extension built out of brick with a brick coping. The height of the deck was raised by adding two courses of brick on top of the original concrete coping. The new brick coping added a sight corbelling (overhang) to the platform deck to the same width as the original concrete coping design.

Medlow Bath Station

The existing Medlow Bath Station island platform was constructed in 1902 at the time of the duplication of the Blue Mountains Line. The platform is a brick design with a concrete and asphalt deck. The original platform had what appeared to be a concrete cap that overhung the vertical brick wall of the platform to create the overhang (corbelling). The platform was extended between 1942 and 1946 that also raised the height of the platform by three course of brick, and created the corbelling that is present today. Sections of the original vertical brick work on the platform coping have also been repaired by applying concrete render.

Blackheath Station

The current island platform at Blackheath Station was constructed in 1898 when the rail line between Blackheath and Mount Victoria was duplicated. The platform was originally a brick and asphalt design, with a straight vertical brick coping with no overhang. The station was extended in 1946 when significant changes were made to the platform design. An extension of the platform was completed in brick, with a brick corbelling at the top that merged into the original width of the platform. The height of the original section of the platform was also raised by adding two courses of bricks to the existing platform.

Eskbank Station

The island platform at Eskbank Station was constructed in 1882 as a single platform and was duplicated later in 1890. The two platforms were originally constructed as vertical brick coping with a protruding brick footing and no corbelling at the top. Later modifications to the down track included raising the height of the platform by adding three courses of brick that added a brick corbel to the platform edge. Later works added a new concrete deck that extended the corbel overhang. Modifications were also undertaken to the up track in the 1940s where the platform height was raised by adding two courses of brick to the original platform but no coping was added.

Heritage platforms conservation management strategy

Project construction activities have been assessed against the *Heritage Platforms Conservation Management Strategy* (Australian Museum Business Services, 2015). This document is considered to replace the *Conservation Guide: Railway Station Platforms* (Office of Rail Heritage, 2013). The strategy was developed in order to protect heritage

platforms from incremental changes and works associated with large scale renewals. Of relevance to the Project are strategies 1, 2, 3, 5, 7, 8, 9, 11 and 12, specifically:

- **Strategy 1**: Manage and operate heritage platforms in a way that recognises the heritage values of each place. This includes the heritage value of each platform, its associated elements, and the overall heritage value of its station or place.
- **Strategy 2**: Conserve a representative sample of principal platform types, and other key aspects of heritage platform design and arrangement in use within the Sydney Trains managed railway network.
- **Strategy 3**: Where there are numerous, good representative examples of a type, more significant heritage platforms with good integrity should be prioritised for proactive conservation.
- **Strategy 5**: Conserve and manage the fabric of heritage platforms in accordance with statutory requirements and heritage best practice.
- **Strategy 7**: Retain and conserve original or other historic platform detailing and surface features where these contribute to the heritage significance of the platform and the station precinct.
- **Strategy 8**: Major change should be managed through an integrated planning process, which considers measures to avoid, minimise, or mitigate adverse impacts on the heritage significance of the platform and the broader place at each stage of the process.
- **Strategy 9**: Where a new platform or platform addition is required, the new design, form, fabric and surface treatments should be compatible with the existing heritage character of the place, but still be readily identifiable as new work.
- **Strategy 11**: Heritage opportunities and constraints should be carefully considered throughout the options analysis and design process.
- **Strategy 12**: Make a record of existing structural designs, fabric, and uses before changes are made.

Archaeological heritage potential

A review was undertaken of the historical land uses and previous upgrades of the Project site through the use of aerial imagery, relevant heritage listings, site visits and drawings held in the Sydney Trains Plan Room.

High levels of previous disturbance have occurred around most of the stations in the Project site due to the ongoing development and maintenance of the Blue Mountains Line generally resulting in a low archaeological potential and it being unlikely that archaeological remains are present. Archaeological resources were however, identified at the following stations:

- Linden Station – low archaeological potential associated with sidings, a water tank and a Station Master's Residence
- Lawson Station – archaeological potential including:
    - moderate archaeological potential associated with the first Station Master's residence (1879)
    - second Station Master's residence (c.1880s to c.1896)
    - third Station Master's residence (1896 – still present)
    - railway worker's cottage (1920-25 to 1970s), and low archaeological potential associated with the area of the former railway siding

- Katoomba Station – low archaeological potential associated with the former Ways and Works Office
- Eskbank Station – moderate to high in the State Heritage Register curtilage
- Lithgow Station - moderate to high in the State Heritage Register curtilage.

6.1.2 Potential impacts

Heritage impacts have been assessed in terms of potential impacts to the fabric of the heritage item(s), archaeological remains, visual impact and potential for impacts to adjacent heritage items. The works have been assessed against the *Heritage Platforms Conservation Management Strategy* (Australian Museum Business Services, 2015).

Given the proposed work between stations involves only minor alterations to existing track infrastructure, it is not anticipated that there would be any major impacts on listed heritage items or conservation areas located within and outside the broader rail corridor. Therefore, the assessment focuses on impacts resulting from construction activities in close proximity to stations within the Project site.

Construction

Modifications to existing platforms at Katoomba Station and Lithgow Station

Platform extensions would be undertaken at the eastern end of Katoomba Station and western end of Lithgow Station in areas where the platforms have been recently modified. This would allow the opposite ends of the platforms to retain their heritage character. In addition, the impact has been minimised by extending the platform only by the length necessary to allow customers to access the New Intercity Fleet.

Materials proposed for the platform extensions have been selected to minimise visual impact and to blend with the existing brick face of the heritage platforms. The extensions would comprise brick faces of similar colour to the adjacent materials on existing platforms, but would demarcate the existing platform from the new extension. New gates and fences (where required) would also be designed to match the existing design and colour.

Katoomba Station

The platform extension works at Katoomba Station includes the installation of a brick retaining wall into which concrete would be infilled. The concrete cast *in-situ* would form the platform deck with coping tiles being laid over the top and treated with tactiles and painted as necessary. The new brickwork would be laid in a stretcher bond (refers to the orientation of the brick) in similar colour to the existing platform face. The new mortar would be struck with a flush profile.

The proposed extension of Platform 1 would result in a minor alteration to the visual appearance of Katoomba Station when viewed from the eastern end, Goldsmith Place and possibly certain vantage points from the Hotel Gearin.

The visual impacts have been limited by selecting a brick facing to cover the concrete mass of the platform extension. The brickwork would be in a colour similar to the adjacent heritage brickwork and it is anticipated that with time the two phases of construction would only be visible upon close inspection.

Lithgow Station

The platform extension works at the western end of Lithgow Station would involve ground excavation to install a suitable sub-grade for the new concrete platform. To accommodate the platform extension, the removal of the existing platform-to-rail corridor pedestrian ramp is

required. This pedestrian ramp consists of original 1920s brickwork as well as later brick courses and would be entirely removed during works.

While the removal of this brickwork would result in an irreversible impact, the majority of the platform brickwork would not be impacted as the majority of the brick retaining wall would be preserved. These works would result in a minor impact to the heritage significance of Lithgow Station.

Service relocations required for the platform extension would be undertaken outside of the heritage fabric areas so no impact is expected.

The removal of the existing barrier fencing at the western end of the island platform would involve removing metal fence posts from the asphalt surface of the platform-to-rail corridor pedestrian ramp. These works would not impact brick fabric in these locations. The re-installation of the fencing would be affixed to the surface of the new concrete and asphalt platform extension area and would not impact heritage fabric.

Coping modifications

To enable the passage of the New Intercity Fleet through stations and maintain a safe gap, modifications to the coping (the edge of the platform) are necessary. These works include the removal of material from the face of the coping in sections and the addition of concrete in others. All stations within the Project site would be subject to coping modifications ranging from a cutting back of up to 25 centimetres to an addition of up to 1.7 centimetres.

Where coping removal is proposed, the coping would be shaved or cutback with a diamond saw. Where it is necessary to extend the coping, concrete would be applied using hand tools. It may be necessary to install temporary formwork and pour concrete into sections where greater additions are required.

The proposed coping modifications on Platform 1 at Eskbank Station would result in the removal of the entire bottom course of stretcher-oriented bricks as well as the incision of over half of the second lowest course of header-oriented bricks. Where platform cutbacks are less severe (a minimum of 95 millimetres), this would also result in the incision of the lowest course of stretcher-oriented bricks. The platform is of moderate heritage value to the overall significance of Eskbank Station, and the lowest courses of brick are the only remaining exterior facing bricks of the original battered wall profile of the station platform (the original bricks above the bottom course have been previously removed due to trimming works over the years).

The cutting of original fabric, as opposed to the removal of whole bricks, would be non-reversible, and would be considered a moderate impact to the heritage significance of the Eskbank Railway Station Group. The visual setting of the station is expected to remain unchanged.

At Lithgow Station, the modifications would require bricks to be cut through their centre. The differing pattern of brick overhang along the side of the platform is indicative of the development of Lithgow Station over time, and these bricks would be cut in half, as opposed to having courses removed which would also have an adverse visual impact. The treatment of the cut bricks would show the original arrangement and give a clean outer appearance however, making the option to cut the brick preferable.

Minor to negligible impacts to the platform copings are expected at all the other stations as the copings have undergone previous modifications and therefore would result in minor impacts to original heritage fabric and no overall impact to the heritage setting. Given the materials and finishes would match to the existing coping, visual impacts at the stations as a result of coping modifications are not likely and are considered negligible.

Canopy modifications

Based on an assessment of the required clearances to accommodate the newer wider trains, the canopy on Platform 1 at Faulconbridge Station would need to be reduced by around 11 centimetres. Modifications to the canopy would occur along the section attached to the station building, thereby minimising impacts to the elements of the canopy that contribute to its heritage significance. As the main heritage features would remain unchanged, minimal impacts to the heritage significance of the station are anticipated as a result of the canopy modifications.

Track slewing

Minor to negligible impacts are expected along the length of the rail line including at stations and crossovers as a result of track slewing. The works would largely be unnoticeable, particularly between stations, and it is considered likely that the tracks have been slewed or sections replaced during previous modifications and routine track maintenance activities.

Electrical and signalling modifications

Electrical and signalling modifications are anticipated at Hazelbrook, Woodford, Lawson, Bell and Eskbank stations. Existing infrastructure would need to be relocated as a result of track slewing activities and would not introduce any new elements to the heritage curtilages. While some ground disturbance would be required, impacts to heritage items and/or areas of archaeological potential are not anticipated. Further electrical and signalling modifications may be identified during detailed design. The impacts of these changes would be assessed during detailed design if required.

Overhead wire system adjustments

Overhead wiring system adjustments are anticipated at Katoomba Station and Eskbank Station. Negligible heritage impacts are anticipated as a result of upgrades and replacement of overhead wiring systems as none have been identified as being of significant heritage fabric.

Construction compounds

Previously disturbed areas have been selected as locations for the construction compounds within the Project site. In some instances these are located either within or adjacent to heritage curtilages (such as at Katoomba Station). Given most of the compounds would be established and dismantled within the 48 hour possession period and would not involve any ground disturbance, impacts to heritage items as a result of the compounds are not anticipated.

Archaeological heritage

Archaeological remains of State significance have been identified in the north-eastern section of Eskbank Station, however these remains are located in excess of 150 metres away from any proposed ground disturbing works (including earthworks) associated with the Project. No archaeological remains would therefore be impacted during construction of Eskbank Station.

Ground disturbing works at Lithgow Station associated with the proposed platform extension would be undertaken in areas that are likely to have been previously disturbed. As a result, any archaeological remains in these areas are likely to have been heavily impacted.

Archaeological potential has been identified at Katoomba Station (former Ways and Works Office) however works would not impact upon these areas.

Ground disturbance at Lawson Station associated with the installation of new impedance bonds and associated enabling works would be located outside of the State Heritage Register curtilage, however the excavations would be located in an area identified in *the*

Lawson Railway Station and Yard Conservation Management Plan (AMBS, 2013) as holding moderate archaeological potential to contain relics or deposits of local significance relating to the second Station Master's residence. The archaeological assessment identified that, while the excavation of the impedance bonds pit would occur directly above relics, due to the depth of the relics (approximately 1.4 metres) and the maximum depth of the proposed excavation (one metre) there would be a minor or no impact on any preserved archaeological relics.

Ground disturbance required for track slewing would be undertaken within the rail corridor that consists largely of rail ballast overlying natural bedrock. In addition, no ground disturbing works have been proposed within the footprint of the first Lithgow Station near the Sandford Avenue overbridge. No archaeological remains would be impacted by the works.

For the remaining stations in the Project site, it is unlikely that archaeological remains are present. The archaeological potential in these instances has been assessed as low.

Overall, significant impacts to heritage values are not anticipated during construction provided the measures outlined in Section 7.2 are implemented effectively.

Adjacent heritage items

Based on the nature of the works and proximity to adjacent heritage items, no direct impacts would occur to any adjacent heritage items.

Heritage conservation areas

Two conservation areas (Central Katoomba Urban Conservation Area and the Lithgow Main Street Conservation Area) overlap with the station areas and could potentially be impacted by the Project. As the works would largely be located within the rail corridor and are consistent with existing land uses, impacts to the conservation areas would be minimal as a result of the Project. Materials would be selected to minimise visual changes in the character of the stations.

Summary of impacts

Table 8 presents a summary of each station / item, the proposed works to be undertaken and an impact rating for the individual criteria.

Table 8 Impacts on heritage listed stations and items

Station / item	Proposed works	Impact rating
Faulconbridge	• coping modifications • track slewing • modification of existing platform canopy	• minor impact to fabric from coping modifications • minor impact to fabric from canopy modifications • negligible visual impact • no impact to archaeological remains
Linden	• coping modifications • track slewing	• minor impact to fabric from coping modifications • negligible visual impact • no impact to archaeological remains
Woodford	• coping modifications • track slewing • signalling modifications	• minor impact to fabric from coping modifications • negligible visual impact • no impact to archaeological remains for signal relocations
Hazelbrook	• coping modifications • track slewing • signalling modifications	• minor impact to fabric from coping modifications • negligible visual impact • no impact to archaeological remains for signal relocations

Station / item	Proposed works	Impact rating
Lawson	• coping modifications • track slewing • electrical modifications	• minor impact to fabric from coping modifications • negligible impact to fabric from other works • negligible visual impact • there is archaeological potential associated with the second Station Master's residence to be present greater than 1.4 metres below the current track level. However as the excavation required for the impedance bonds is no greater than 1 metre there would be no impact to any potential archaeological remains in this area
Bullaburra	• coping modifications • track slewing	• minor impact to fabric from coping modifications • negligible visual impact • no impact to archaeological remains
Wentworth Falls	• coping modifications • track slewing	• minor impact to fabric for coping modifications • negligible visual impact • no impact to archaeological remains
Leura	• coping modifications • track slewing	• minor impact to fabric from coping modifications • negligible visual impact • no impact to archaeological remains
Katoomba	• extension of Platform 1 • coping modifications • track slewing • Installation of security, communications and lighting equipment • overhead wiring system modification	• minor impact to fabric from the extension of Platform 1 (confined to the junction between the existing platform and the proposed extension) and from coping modifications • negligible impact to fabric from other works • minor visual impact from the extension of Platform 1 and coping modifications • negligible visual impact from other works • negligible impact to archaeological remains from the extension of Platform 1 • neutral impact to archaeological remains from other works
Central Katoomba Urban Conservation Area	• coping modifications • track slewing • platform extension • overhead wiring system modification	• negligible to neutral visual impacts
Medlow Bath	• platform coping • track slewing	• minor impact to fabric from coping modifications • negligible impact to fabric from other works • negligible visual impact • no impact to archaeological remains
Blackheath	• coping modifications • track slewing	• minor impact to fabric from coping modifications • negligible impact to fabric from other works • negligible visual impact • no impact to archaeological remains
Bell	• coping modifications • track slewing	• minor impact to fabric from coping modifications • negligible visual impact • no impact to archaeological remains

Station / item	Proposed works	Impact rating
Newnes Junction	• coping modifications • track slewing • crossover replacement	• minor impact to fabric from coping modifications • negligible visual impact • no impact to archaeological remains
Eskbank	• coping modifications • track slewing • crossover replacement • electrical modifications • overhead wiring system modification	• moderate impact to fabric from platform modifications • negligible to neutral impacts to fabric from other proposed works • minor visual impacts to fabric for coping modifications • neutral impact to archaeological remains for all works
Lithgow	• extension of island platform • coping modifications • track slewing • Installation of security, communications and lighting equipment • crossover replacement	• minor impact to fabric from the platform extension and coping modifications • negligible impacts to fabric from other proposed works • negligible to minor to visual impacts • neutral impact to archaeological remains
Lithgow Main Street Heritage Conservation Area	• coping modifications • track slewing • platform extension	• negligible impact to fabric from track slewing • neutral impacts to fabric from other works • negligible visual impacts • neutral impact to archaeological remains

Operation

The operation of the Project would not impact non-Indigenous or archaeological heritage.

6.1.3 Mitigation measures

The detailed design and construction of the Project would be undertaken with consideration of the heritage values of each station within the Project site. In order to minimise impacts to fabric and the heritage settings, the following mitigation measures would be implemented:

- Works at stations listed on the State Heritage Register (Lawson, Katoomba, Medlow Bath, Blackheath, Eskbank and Lithgow stations) require approval under Section 60 of the *Heritage Act 1977* which would be sought from Heritage Division. Works would be undertaken in accordance with the requirements of the Section 60 approvals.
- Works at Lawson Station require an exception under Section 139(1b) of the *Heritage Act 1977* be obtained prior to works commencing.
- A suitably qualified and experienced heritage conservation architect would be engaged to provide ongoing heritage and conservation advice throughout detailed design and any subsequent relevant design modifications. The nominated heritage conservation architect would provide specialist advice throughout the detailed design phase to ensure that the final design adheres to the Sydney Trains Heritage *Platforms Conservation Management Strategy* (Australian Museum Business Services, 2015).
- A physical membrane should be installed between the heritage listed platforms and the proposed extensions at Katoomba and Lithgow Station to ensure the protection of heritage brickwork during construction in accordance with Strategy 9 of the *Heritage Platforms Conservation Management Strategy.*

- The concrete coping of the proposed platform extensions and the mortar associated with the brick facade used in the works should adhere to Strategy 7 of the *Heritage Platforms Conservation Management Strategy*.
- It is recommended that investigations into the rendering of the length of the corbeled brickwork be undertaken to create a consistent presentation following platform coping modifications and justification be provided (if not feasible).
- For canopy modifications at Faulconbridge Station, it is recommended that the bolt heads used to attach the splice plates to the canopy rafters match those evident on the remainder of the canopy. They would be altered in diameter to ensure the new work is distinguishable from the original.
- Archival recording would be undertaken at the State Heritage Register listed stations (Lawson, Katoomba, Medlow Bath, Blackheath, Eskbank and Lithgow stations) as described in the heritage assessments in accordance with the relevant NSW Heritage Council guidelines. These archival records and design plans for the proposed works should be lodged with Sydney Trains for their records.
- The CEMP would include procedures in accordance with Transport for NSW's (TfNSW's) *Unexpected Heritage Finds Guideline* (Transport for NSW, 2015) to manage activities in the unlikely event that intact archaeological relics or deposits are encountered during ground disturbing activities and construction works.
- A heritage induction would be provided to all on-site staff and contractors involved in the Project. The induction should clearly describe the heritage constraints of the Project site.

Refer to Section 7.2 for a full list of mitigation measures.

6.2 Indigenous heritage

This section provides the Aboriginal archaeological due diligence assessment that was undertaken for the Project in accordance with *the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, 2010a).

6.2.1 Existing environment

An Aboriginal Heritage Information Management System (AHIMS) search was undertaken on 10 March 2017 for a 10 kilometre radius centred on the Project site. A total of 213 AHIMS sites were identified within the search area, with 21 sites identified within 200 metres. Two sites were identified within 50 metres (considered higher likelihood of occurrence) of the Project site, including:

- stone arrangement 'Hazelbrook' (#45-4-0042), located near Hazelbrook Station
- stone arrangement 'Caley's Repulse' (#45-4-0047), located near Linden Station.

A site inspection of the Project site was undertaken on 24 April 2017. The inspection included a visual inspection of the areas of the Project site accessible to the public and AHIMS sites within 50 metres of the Project site. The purpose of this inspection was to determine whether the proposed works would, or are likely to, harm any Aboriginal objects. Impact risk was determined on the basis of archaeological sensitivity, as well as the nature of proposed Project activities.

The visual inspection of the Project site indicated that it has undergone high levels of disturbance through historical and contemporary land use activities. Key landscape disturbances identified during the inspection included vegetation clearance, paving of hardstand areas and bulk earthworks associated with the original construction of the rail

corridor and associated infrastructure (stations, sectioning huts, car parks, etc.). As such, the entire Project site was assessed as retaining a low degree of integrity.

Attempts were made to locate stone arrangement sites 'Hazelbrook' (#45-4-0042) and 'Caley's Repulse' (#45-4-0047), however they were unable to be located during the inspection. The site cards indicate that these items are not located within the Project site.

No evidence of past Aboriginal occupation was observed during the visual inspection, including an inspection of land immediately surrounding the Project site. Taking into account the nature of extent of past ground disturbance activities across the area the Aboriginal archaeological sensitivity of land within and directly adjacent to the Project site was assessed in the field as low.

Within the Project site, the corridor crosses around 25 small waterways. The floral and faunal resources of the Project site would have supported a diverse range of edible resources sufficient to support repeated occupation of Indigenous people. However, considering the Project site has been heavily disturbed as a result of the construction of the existing rail line (including earthworks, landscaped areas and structures including stations, sectioning huts, car parks, etc.), the presence of culturally sensitive buried items is unlikely within the boundaries of the Project site.

6.2.2 Potential impacts

Construction

Construction of the Project would involve some excavation and other ground disturbing activities for the works, particularly for the replacement of crossovers at Eskbank Station and Bell Station, and station platform extensions at Katoomba Station and Lithgow Station. Some excavation may also be required for the replacement of one overhead wiring structure at Katoomba and Eskbank, and relocating track circuit equipment at Woodford, Hazelbrook and Lawson. Ground disturbing activities have the potential to impact Indigenous sites, if present.

The site card for AHIMS site #45-4-0042 indicates the site comprises 30 mounds of stone, however it is unclear whether the AHIMS coordinate represents the description within the site card. No further information is provided within the site card. Nonetheless, it is understood there are no proposed works within proximity and as such it does not represent an impact risk.

The site card for AHIMS site #45-4-0047 indicates the site comprises a stone mound located at Linden. The site is also listed on the Blue Mountains LEP as a historic heritage item. This listing indicates the site is located around 50 metres north of the Project site. It is understood there are no proposed works within proximity to site #45-5-0047 and as such it does not represent an impact risk.

As no further known Indigenous heritage items have been identified within the Project site, Aboriginal heritage is not likely to be impacted by the Project. In addition, given the high level of previous disturbance as a result of the construction of the existing rail line, the potential for unknown items to be present is considered to be low. As such, the Project is unlikely to affect Indigenous heritage during construction.

Operation

There would be no risks to Indigenous heritage during the operation of the Project.

6.2.3 Mitigation measures

If previously unidentified Indigenous objects are uncovered during construction, work would cease in the vicinity of the find and the TfNSW Project Manager and TfNSW Environment and Planning Manager would be notified immediately to assist in co-ordinating next steps

which are likely to involve consultation with an archaeologist, OEH and the Local Aboriginal Land Council(s). If human remains are found, work would cease, the site would be secured and the NSW Police and OEH would be notified.

Refer to Section 7.2 for a full list of mitigation measures.

6.3 Noise and vibration

A Noise and Vibration Impact Assessment was undertaken for the Project (AECOM, 2017f). The assessment included establishing the existing background noise levels, construction noise management levels and vibration limits in the vicinity of Project site. Surrounding sensitive receivers that may be impacted by construction noise and vibration have been identified and mitigation measures have been recommended, where necessary, to reduce and manage noise and vibration impacts from the Project.

As operational noise levels are expected to remain largely unchanged, no quantitative modelling of operational noise impacts was undertaken. The findings of the assessment are summarised in this section.

6.3.1 Existing environment

Noise catchment areas

To assist in determining noise criteria for the receivers surrounding the Project, four noise catchment areas (NCA) were identified as described in Table 9. The noise environment at each of the residential receivers within each NCA is considered to be comparable and these definitions can be used to develop assessment / management criteria for similar existing environments. The NCAs are shown in Figure 9.

Table 9 Noise catchment areas

NCA	Description
1	Residences in suburban locations near the rail line and Great Western Highway
2	Residences in Katoomba
3	Rural residences in remote locations between Mount Victoria and Lithgow
4	Residences in Lithgow

Representative receivers

Fifty three representative residential receivers were selected to describe the noise impacts within areas considered likely to have similar background noise levels. Impacts were also assessed at 24 representative non-residential receivers (e.g. schools, churches etc.).

The locations of the residential and non-residential receivers identified for use in the assessment are presented in the Noise and Vibration Impact Assessment (AECOM, 2017b) and summarised in Appendix I. It is noted that other residential and non-residential receiver which could potentially be affected are scattered around the vicinity of the Project.

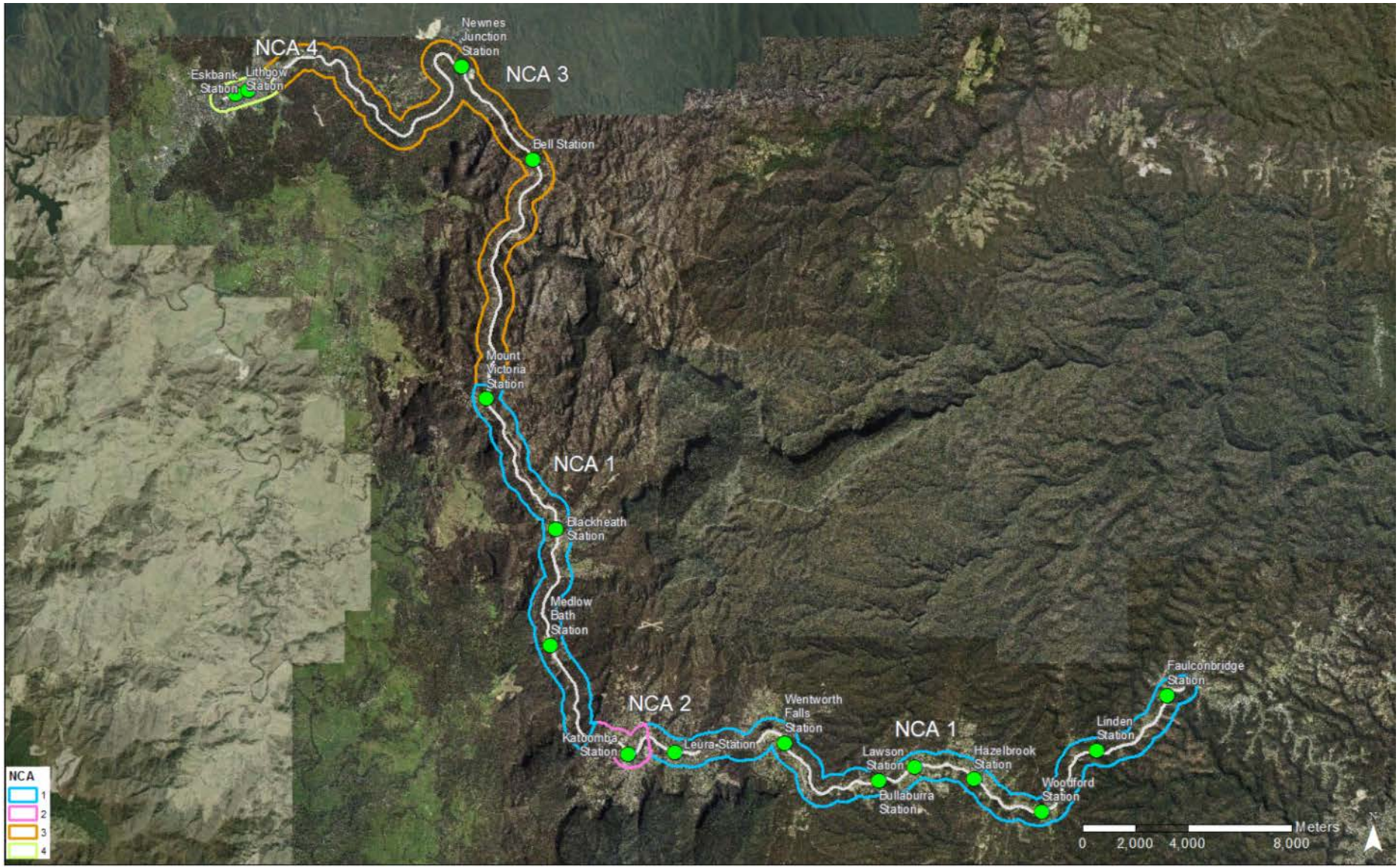


Figure 9 Regional context and NCA locations

Background noise levels

Long-term unattended measurements were undertaken to establish the existing ambient and background noise environment at potentially affected receivers in the vicinity of the Project.

Long-term unattended noise monitoring was conducted at six locations between 31 March 2017 and 11 April 2017. Noise loggers were placed at representative locations with at least one in each NCA. Noise loggers were calibrated prior to and after the monitoring period with a drift in calibration not exceeding ± 0.5 db(A). The results of the unattended noise monitoring is presented in Table 10.

All the acoustic instrumentation employed during the noise measurements comply with the requirements of *AS IEC 61672.1-2004 Electroacoustics - Sound level meters - Specifications* and were within their current National Association of Testing Authorities, Australia (NATA) certified in-calibration period (i.e. calibration in the last two years).

Table 10 Unattended noise monitoring details

NCA[1]	Rating Background Level[3]			Ambient noise levels[4]		
	Day[2]	Evening[1]	Night[1]	Day[2]	Evening[2]	Night[2]
NCA1	50 dB(A)	48 dB(A)	30 dB(A)	60 dB(A)	59 dB(A)	56 dB(A)
NCA2	41 dB(A)	39 dB(A)	31 dB(A)	54 dB(A)	53 dB(A)	43 dB(A)
NCA3	31 dB(A)	30 dB(A)	30 dB(A)	45 dB(A)	44dB(A)	43 dB(A)
NCA4	42 dB(A)	40 dB(A)	30 dB(A)	59 dB(A)	58 dB(A)	52 dB(A)

Notes:
1. Results for NCA1 is based on noise logging at three locations which were consistent.
2. Day is defined as 7am to 6pm, Monday to Saturday and 8am to 6pm Sundays and Public Holidays. Evening is defined as 6pm to 10pm, Monday to Sunday & Public Holidays. Night is defined as 10pm to 7am, Monday to Saturday and 10pm to 8am Sundays and Public Holidays.
3. Rating Background Level (RBL) (L_{A90}) represents the noise level exceeded for 90 per cent of the monitoring period.
4. Ambient noise level represents the average noise level over the monitoring period.

The noise environment at each of the residential receivers within a NCA is considered to have a similar noise environment to the unattended monitoring location within that NCA. As such each of these residential receivers is assigned the same background noise level.

In accordance with the *NSW Industrial Noise Policy* (INP) (EPA, 2000), noise monitoring affected by adverse weather conditions or extraneous noise events was excluded from the monitoring data. The INP advises that data may be affected where adverse weather, such as wind speeds higher than five metres per second or rain, occurs. Weather data was acquired from the Bureau of Meteorology's Mount Boyce and Penrith weather stations (station ID 063292 and ID 067113).

Existing noise environment summary

The acoustic environment of NCA 1 is characterised by a mixture of local and highway traffic (The Great Western Highway). Trains were operating during the installation of the noise monitoring equipment and contribute to the acoustic environment. Noise monitoring results indicated lower noise levels during the night, compared to day and evening periods. This is typical of a suburban environment.

The acoustic environment of NCA 2 is characterised by a mixture of natural sounds and local traffic. Similarly to NCA 1 the noise monitoring results indicated lower noise levels during the night, compared to day and evening periods. This is typical of a suburban environment.

The acoustic environment of NCA 3 is characterised mainly by natural sounds with some distant highway noise. Trains were also operating during the installation of the noise

monitoring equipment and contribute to the acoustic environment. Night-time noise levels are very quiet, typical of a rural environment.

The acoustic environment of NCA 4 is characterised by local traffic, particularly from Railway Parade. Trains were also operating during the installation of the noise monitoring equipment and contribute to the acoustic environment. The noise monitoring results indicated lower noise levels during the night, compared to day and evening periods. This is typical of a suburban environment.

Construction noise criteria

The *Interim Construction Noise Guideline* (ICNG) (Department of Environment and Climate Change, 2009) is the principal guideline for the assessment and management of construction noise in NSW. The ICNG recommends standard hours of construction as:

- Monday to Friday: 7am to 6pm
- Saturday: 8am to 1pm
- Sundays and public holidays: no works.

Noise management levels (NMLs) have been determined for receivers in each of the NCAs in accordance with the ICNG. The ICNG outlines NMLs for non-residential receivers such as commercial properties, schools and places of worship. NMLs for residential receivers are calculated based on the rating background level (RBL) + 10 dB(A) (for daytime periods) or the RBL + 5 dB(A) (for evening and night time periods). A 'highly noise affected' level of 75 dB(A) for residential receivers represents the point above which there may be strong community reaction to noise.

Where works exceed the NMLs, all reasonable and feasible measures (such as equipment selection and location, construction scheduling and respite periods) should be implemented to reduce noise levels as far as practicable.

The construction NMLs developed for the Project for residential and non-residential sensitive receivers are listed in Table 11 and Table 12 respectively.

Table 11 Construction NMLs for residential receivers

NCA	Period	RBL, L_{A90} dB(A)	Standard hours noise management levels, $L_{Aeq,15min}$, dB(A)	Out-of-hours noise management levels, $L_{Aeq,15min}$, dB(A)
1	Day	50	60	55
	Evening	48	-	53
	Night	30	-	35
2	Day	41	51	46
	Evening	39	-	44
	Night	31	-	36
3	Day	31	41	36
	Evening	30	-	35
	Night	30	-	35
4	Day	42	52	47
	Evening	40	-	45
	Night	30	-	35

Table 12 Construction noise management levels – non-residential receivers

Land use	Noise management levels, $L_{Aeq,15min}$, dB(A) (applies when properties are in use)
Classrooms at schools and other educational institutions	55 dB(A)[1]
Places of worship	55 dB(A)[1]
Childcare centres	55 dB(A)[1]
Medical	55 dB(A)[1]
Active recreation	65 dB(A)
Library	55 dB(A)[1]
Commercial premises (including offices, retail outlets)	70 dB(A)
Industrial premises	75 dB(A)

Notes:
1. These external management levels are based upon a 45 dB(A) internal noise management level and a 10 dB reduction from outside to inside through an open window.

Sleep disturbance noise goals have also been established for residential receivers which are based on the *NSW Road Noise Policy* (Department of Environment, Climate Change and Water, 2011). Based on the Policy, the sleep disturbance criteria for each NCA is a screening level of 45 dB(A) $L_{A1(1\ minute)}$ and an awakening reaction at 60-65 dB(A) $L_{A1(1\ minute)}$.

For traffic noise, the criterion applied on public roads generated during the construction phase of a project is an increase in existing road traffic noise of no more than 2 dB(A).

Construction vibration criteria

When assessing vibration there are two categories of vibration criteria: one related to the impact of vibration to human comfort and one relating to the impact on building structures (cosmetic damage).

Human comfort

The assessment of intermittent vibration outlined in the NSW EPA guideline *Assessing Vibration: A Technical Guideline 2006* (AVTG) is based on Vibration Dose Values (VDVs). Maximum and preferred VDVs for intermittent vibration arising from construction activities are listed in Table 13. The VDV criteria are based on the likelihood that a person would be annoyed by the level of vibration over the entire assessment period.

Table 13 Preferred and maximum vibration dose values for intermittent vibration ($m/s^{1.75}$)

Location	Period	Preferred	Maximum
Critical areas[1]	Day or night time	0.1	0.2
Residences	Daytime[3]	0.2	0.4
	Night time[4]	0.13	0.26
Offices, schools, educational institutions and places of worship	Day or night time	0.4	0.8
Workshops[2]	Day or night time	0.8	1.6

Notes:

1. Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring. Places where sensitive equipment is stored or delicate tasks are undertaken require more stringent criteria than the residential criteria specified above.
2. Examples include automotive repair shops, manufacturing or recycling facilities. This includes places where manufacturing, recycling or repair activities are undertaken but do not require sensitive or delicate tasks.
3. Daytime period is defined as 7am – 10pm under BS 6472-1992 Guide to Evaluation of Human Exposure to Vibration in Buildings (1 Hz to 80 Hz).
4. Night period is defined as 10pm – 7am under BS 6472-1992.

Structural damage to buildings

There is currently no Australian Standard that provides guidance for assessing cosmetic building damage caused by vibration. However, the German standard (DIN 4150-3) *Structural Vibration in Buildings - Effects on structures (1999-02)* provides recommended maximum levels of vibration that reduce the likelihood of building damage caused by vibration and are presented in Table 14. DIN 4150 states that buildings exposed to higher levels of vibration than recommended limits would not necessarily result in damage. The vibration criteria provided below in Table 14 would be adopted for the management of vibration impacts on structures, and include more conservative values for heritage structures.

Table 14 DIN 4150: Structural damage safe limits for building vibration velocity

Ref	Type of Structure	At foundation – less than 10 Hz	At foundation – 10 Hz to 50 Hz	At foundation – less than 10 Hz	At the horizontal plane of the highest floor – all frequencies
1	Buildings used for commercial purposes, industrial buildings and buildings of similar design	20 mm/s	20 to 40 mm/s	40 to 50 mm/s	40 mm/s
2	Dwellings and buildings of similar design and/or use	5 mm/s	5 to 15 mm/s	15 to 20 mm/s	15 mm/s
3	Structures that because of their particular sensitivity to vibration, do not correspond to those listed in Lines 1 or 2 and have intrinsic value (e.g. heritage listed buildings)	3 mm/s	3 to 8 mm/s	8 to 10 mm/s	8 mm/s

Note:

1. At frequencies above 100 Hz, the values given in this column may be used as minimum values.

Operational noise criteria

The *Industrial Noise Policy* (EPA, 2000) provides guidance in relation to acceptable noise limits for industrial noise emissions, which includes but is not limited to, noise emissions from mechanical plant.

6.3.2 Potential impacts

Construction noise

To assess the potential noise impacts from the proposed construction works, the construction phases have been divided into 10 distinct construction stages consisting of a number of construction activities. These would be confirmed by the construction contractor prior to construction commencing and further assessment would be undertaken if required. Proposed construction stages for the works are described in Table 15 with the construction stages that have been modelled (i.e. those that represent worst case for noise impacts) highlighted in blue along with the proposed timing of the works.

It is anticipated that this Project would use up to 10 pre-existing, routine rail possessions over the two-year construction period. This would typically include shutdown periods of 48 hours over a weekend period; however, 5 of the 10 possession periods may extend for 12 days in the area between Newnes Junction Station and Lithgow Station. This would involve five day closures of one line on both sides of a weekend possession period.

For construction stages 1 – site establishment, 3 – platform coping modifications and 5 – platform extension, any works outside of standard hours are likely to be low impact site establishment works. As a result the noise impacts from these works, outside standard hours, are expected to be minimal.

The assessment of construction stage 9 – overhead wiring has been completed at known locations of upgrades at Katoomba Station and Eskbank Station. The overhead wiring structure at Katoomba Station would be completely replaced.

A summary of the predicted construction noise levels for each stage during standard working hours for residential receivers is shown in Table 16 to Table 19 and for non-residential receivers in Table 20.

Table 15 Construction assessment stages and scheduling

Work Stage	Description	Location[1]	Timing
1 Site establishment	Establishment of site compounds, establishment of temporary facilities, site surveys of all track, platform, overhead wiring and signalling infrastructure, utility location.	All Stations – Faulconbridge to Lithgow	Standard hours or during possession / shutdown
2 Utilities disconnection	Disconnection of utility services and installation of protection measures for cable routes as required	All Stations – Faulconbridge to Lithgow	Standard hours
3 Platform coping modifications	Removal or widening the platform edges (coping) of platforms 1 and 2 at all stations, modification of the existing platform canopy at Faulconbridge Station, reinstate finishes such as tactile pavers and/or yellow and white line markers	All Stations – Faulconbridge to Lithgow	Standard hours or during possession / shutdown
4 Reinstate utilities	Reinstate utility services where required	All Stations – Faulconbridge to Lithgow	Standard hours
5 Platform extension	Construction of platform extensions at Katoomba Station and Lithgow station	Katoomba and Lithgow	Standard hours or during possession / shutdown
6 Communications installation	Installation of CCTV, lighting, public announcement systems, and spark gaps to service platform extensions	Katoomba and Lithgow	Standard hours or during possession / shutdown
7 Track slewing	Track slewing	All Track – Springwood to Lithgow	48 hour possession
8 Signalling	Relocation of electrical equipment at Eskbank Station and replacement of electrical equipment at Bell Station. Minor signal infrastructure adjustments along the rail corridor at Hazelbrook Station, Woodford Station and Lawson Station to accommodate new track positions as a result of the slewing.	Eskbank, Bell, Hazelbrook, Woodford and Lawson	48 hour possession
9 Overhead wiring	Relocating and replacing of overhead wire structures at Katoomba Station and Eskbank Station	Katoomba and Eskbank	48 hour possession
10 Testing and commissioning	Testing and commissioning	All Track	Standard hours or during possession / shutdown

Notes:
1. Mount Victoria Station and Zig Zag Station are excluded from the works.
2. Modelled work packages are highlighted in blue.

Noise impacts at residential receivers (construction stages 1, 3, 7, 8 and 9)

Standard working hours

The predicted construction noise levels at residential receivers during standard hours are presented in Table 16.

Table 16 Predicted noise impacts at representative residential receivers – standard hours in dB(A)

Receiver ID	Nearest distance to rail alignment (metres)	NML	Site establish-ment	Platform coping modifica-tions	Track slewing	Signalling	Overhead wiring system
R1	26	60	55	64	73	< 30	64
R2	43	60	50	59	67	< 30	60
R3	32	60	46	55	68	< 30	57
R4	47	60	45	54	64	< 30	53
R5	74	60	40	49	58	< 30	48
R6	46	60	35	44	64	< 30	44
R7	26	60	34	43	74	< 30	42
R8	65	60	19	28	57	< 30	28
R9	41	60	57	66	69	64	65
R10	43	60	52	61	68	58	59
R11	107	60	50	59	60	62	63
R12	61	60	50	59	65	60	61
R13	27	60	54	63	68	67	68
R14	73	60	53	62	60	51	52
R15	84	60	44	53	58	53	54
R16	44	60	52	61	66	61	62
R17	66	60	42	51	62	49	50
R18	70	60	51	60	62	63	64
R19	56	60	47	56	57	< 30	58
R20	36	60	48	57	69	< 30	67
R21	39	60	37	46	63	< 30	54
R22	51	60	48	57	60	< 30	62
R23	44	60	48	57	67	< 30	56
R24	35	60	47	56	65	< 30	55
R25	38	60	43	52	68	< 30	59
R26	41	60	44	53	64	< 30	55
R27	29	60	41	50	73	< 30	52
R28	91	51	39	48	63	< 30	43
R29	144	51	30	39	50	< 30	39
R30	31	51	37	46	70	< 30	33

Receiver ID	Nearest distance to rail alignment (metres)	NML	Site establish-ment	Platform coping modifica-tions	Track slewing	Signalling	Overhead wiring system
R31	54	51	42	51	57	< 30	38
R32	73	60	52	61	61	< 30	63
R33	42	60	56	65	67	< 30	65
R34	37	60	43	52	69	< 30	51
R35	49	60	41	50	66	< 30	50
R36	12	60	57	66	**80**	< 30	63
R37	123	60	46	55	56	< 30	58
R38	38	60	48	57	69	< 30	60
R39	208	41	39	48	50	< 30	49
R40	171	41	44	53	52	< 30	55
R41	52	41	55	64	65	< 30	66
R42	124	41	35	44	55	< 30	50
R43	227	41	40	49	50	< 30	51
R44	492	41	49	58	65	< 30	68
R45	536	41	51	60	61	< 30	61
R46	150	41	46	55	56	< 30	55
R47	40	52	52	61	69	38	57
R48	43	52	43	52	68	37	45
R49	170	52	32	41	41	30	38
R50	82	52	36	45	58	39	42
R51	133	52	44	53	52	48	49
R52	245	52	37	46	51	35	37
R53	290	52	41	50	50	38	39

Notes:
1. Items shaded in GREY indicate predicted noise impact at this receiver during this work stage is above NML.
2. Items in **BOLD RED** indicate a 'highly affected' residential receiver with a level of 75 dB(A) or higher.

Results show that noise levels at 44 of the representative receivers are predicted to exceed NMLs during some stage of construction during standard construction hours. Exceedances of up to 20 dB(A) are predicted, with the largest exceedances predicted during track slewing activities. Noise levels during track slewing works are controlled by the use of jackhammers. High noise levels during signalling works are attributed to the use of a coring machine.

One representative receiver, R36 (141A Station Street, Blackheath) is predicted to be 'highly affected', experiencing noise levels higher than the 75 dB(A) threshold, due predominantly to the operation of machinery associated with track slewing activities (construction stage 7) and its location in close proximity to the rail line (around 12 metres). However, while this is a major noise source, the duration of operation of this equipment is likely to be short and the resulting impacts, though high, will be short-term only as the works would be conducted during a rail possession. Furthermore, noise levels during track slewing works are mostly due to the use of jackhammers. The noise of high noise emitting equipment would be managed to mitigate impacts as described in Section 6.3.3.

Outside of standard hours

The predicted construction noise levels at residential receivers outside of standard hours are presented for the daytime, evening and night-time periods in Table 17, Table 18 and Table 19 respectively.

Table 17 Predicted noise impacts at representative residential receivers – daytime outside of standard hours in dB(A)

Receiver ID	Nearest distance to rail alignment (metres)	NML	Site establish-ment	Platform coping modifica-tions	Track slewing	Signalling	Overhead wiring system
R1	26	55	55	64	73	< 30	64
R2	43	55	50	59	67	< 30	60
R3	32	55	46	55	68	< 30	57
R4	47	55	45	54	64	< 30	53
R5	74	55	40	49	58	< 30	48
R6	46	55	35	44	64	< 30	44
R7	26	55	34	43	74	< 30	42
R8	65	55	19	28	57	< 30	28
R9	41	55	57	66	69	64	65
R10	43	55	52	61	68	58	59
R11	107	55	50	59	60	62	63
R12	61	55	50	59	65	60	61
R13	27	55	54	63	68	67	68
R14	73	55	53	62	60	51	52
R15	84	55	44	53	58	53	54
R16	44	55	52	61	66	61	62
R17	66	55	42	51	62	49	50
R18	70	55	51	60	62	63	64
R19	56	55	47	56	57	< 30	58
R20	36	55	48	57	69	< 30	67
R21	39	55	37	46	63	< 30	54
R22	51	55	48	57	60	< 30	62
R23	44	55	48	57	67	< 30	56
R24	35	55	47	56	65	< 30	55
R25	38	55	43	52	68	< 30	59
R26	41	55	44	53	64	< 30	55
R27	29	55	41	50	73	< 30	52
R28	91	46	39	48	63	< 30	43
R29	144	46	30	39	50	< 30	39
R30	31	46	37	46	70	< 30	33
R31	54	46	42	51	57	< 30	38

Receiver ID	Nearest distance to rail alignment (metres)	NML	Site establish-ment	Platform coping modifica-tions	Track slewing	Signalling	Overhead wiring system
R32	73	55	52	61	61	< 30	63
R33	42	55	56	65	67	< 30	65
R34	37	55	43	52	69	< 30	51
R35	49	55	41	50	66	< 30	50
R36	12	55	57	66	**80**	< 30	63
R37	123	55	46	55	56	< 30	58
R38	38	55	48	57	69	< 30	60
R39	208	36	39	48	50	< 30	49
R40	171	36	44	53	52	< 30	55
R41	52	36	55	64	65	< 30	66
R42	124	36	35	44	55	< 30	50
R43	227	36	40	49	50	< 30	51
R44	492	36	49	58	65	< 30	68
R45	536	36	51	60	61	< 30	61
R46	150	36	46	55	56	< 30	55
R47	40	47	52	61	69	38	57
R48	43	47	43	52	68	37	45
R49	170	47	32	41	41	30	38
R50	82	47	36	45	58	39	42
R51	133	47	44	53	52	48	49
R52	245	47	37	46	51	35	37
R53	290	47	41	50	50	38	39

Notes:
1. Items shaded in GREY indicate predicted noise impact at this receiver during this work stage is above NML.
2. Items in **BOLD RED** indicate a 'highly affected' residential receiver with a level of 75 dB(A) or higher.

Table 18 Predicted noise impacts at representative residential receivers – evening outside of standard hours in dB(A)

Receiver ID	Nearest distance to rail alignment (metres)	NML	Track slewing	Signalling	Overhead wiring
R1	26	53	73	< 30	64
R2	43	53	67	< 30	60
R3	32	53	68	< 30	57
R4	47	53	64	< 30	53
R5	74	53	58	< 30	48
R6	46	53	64	< 30	44
R7	26	53	74	< 30	42
R8	65	53	57	< 30	28
R9	41	53	69	64	65
R10	43	53	68	58	59
R11	107	53	60	62	63
R12	61	53	65	60	61
R13	27	53	68	67	68
R14	73	53	60	51	52
R15	84	53	58	53	54
R16	44	53	66	61	62
R17	66	53	62	49	50
R18	70	53	62	63	64
R19	56	53	57	< 30	58
R20	36	53	69	< 30	67
R21	39	53	63	< 30	54
R22	51	53	60	< 30	62
R23	44	53	67	< 30	56
R24	35	53	65	< 30	55
R25	38	53	68	< 30	59
R26	41	53	64	< 30	55
R27	29	53	73	< 30	52
R28	91	44	63	< 30	43
R29	144	44	50	< 30	39
R30	31	44	70	< 30	33
R31	54	44	57	< 30	38
R32	73	53	61	< 30	63
R33	42	53	67	< 30	65
R34	37	53	69	< 30	51
R35	49	53	66	< 30	50

Receiver ID	Nearest distance to rail alignment (metres)	NML	Track slewing	Signalling	Overhead wiring
R36	12	53	80	< 30	63
R37	123	53	56	< 30	58
R38	38	53	69	< 30	60
R39	208	35	50	< 30	49
R40	171	35	52	< 30	55
R41	52	35	65	< 30	66
R42	124	35	55	< 30	50
R43	227	35	50	< 30	51
R44	492	35	65	< 30	68
R45	536	35	61	< 30	61
R46	150	35	56	< 30	55
R47	40	45	69	38	57
R48	43	45	68	37	45
R49	170	45	41	30	38
R50	82	45	58	39	42
R51	133	45	52	48	49
R52	245	45	51	35	37
R53	290	45	50	38	39

Notes:
1. Items shaded in GREY indicate predicted noise impact at this receiver during this work stage is above NML.
2. Items in **BOLD RED** indicate a 'highly affected' residential receiver with a level of 75 dB(A) or higher.

Table 19 Predicted noise impacts at representative residential receivers – night-time outside of standard hours in dB(A)

Receiver ID	Nearest distance to rail alignment (metres)	NML	Track slewing	Signalling	Overhead wiring
R1	26	35	73	< 30	64
R2	43	35	67	< 30	60
R3	32	35	68	< 30	57
R4	47	35	64	< 30	53
R5	74	35	58	< 30	48
R6	46	35	64	< 30	44
R7	26	35	74	< 30	42
R8	65	35	57	< 30	28
R9	41	35	69	64	65
R10	43	35	68	58	59
R11	107	35	60	62	63
R12	61	35	65	60	61
R13	27	35	68	67	68
R14	73	35	60	51	52
R15	84	35	58	53	54
R16	44	35	66	61	62
R17	66	35	62	49	50
R18	70	35	62	63	64
R19	56	35	57	< 30	58
R20	36	35	69	< 30	67
R21	39	35	63	< 30	54
R22	51	35	60	< 30	62
R23	44	35	67	< 30	56
R24	35	35	65	< 30	55
R25	38	35	68	< 30	59
R26	41	35	64	< 30	55
R27	29	35	73	< 30	52
R28	91	36	63	< 30	43
R29	144	36	50	< 30	39
R30	31	36	70	< 30	33
R31	54	36	57	< 30	38
R32	73	35	61	< 30	63
R33	42	35	67	< 30	65
R34	37	35	69	< 30	51
R35	49	35	66	< 30	50

Receiver ID	Nearest distance to rail alignment (metres)	NML	Track slewing	Signalling	Overhead wiring
R36	12	35	80	< 30	63
R37	123	35	56	< 30	58
R38	38	35	69	< 30	60
R39	208	35	50	< 30	49
R40	171	35	52	< 30	55
R41	52	35	65	< 30	66
R42	124	35	55	< 30	50
R43	227	35	50	< 30	51
R44	492	35	65	< 30	68
R45	536	35	61	< 30	61
R46	150	35	56	< 30	55
R47	40	35	69	38	57
R48	43	35	68	37	45
R49	170	35	41	30	38
R50	82	35	58	39	42
R51	133	35	52	48	49
R52	245	35	51	35	37
R53	290	35	50	38	39

Notes:

1. Items shaded in GREY indicate predicted noise impact at this receiver during this work stage is above NML
2. Items in **BOLD RED** indicate a 'highly affected' residential receiver with a level of 75 dB(A) or higher

Results show that noise levels at all but one representative receiver are predicted to exceed NMLs during some stage of construction during the daytime and evening outside of standard construction hours. Noise levels at all representative receivers are predicted to exceed NMLs during the evening and night-time periods.

Exceedances of up to 25, 27 and 45 dB(A) are predicted during the day, evening and night-time respectively, with the largest exceedances predicted during track slewing activities.

One receiver, R36 (141A Station Street, Blackheath), is predicted to be 'highly affected', experiencing noise levels higher than the 75 dB(A) threshold, due predominantly to the operation machinery associated with track slewing activities and the receivers location in close proximity to the rail line (around 12 metres).

However, as outlined in Section 3.2.3, works would be undertaken during standard workings hours where possible, with night works being restricted to rail possessions. As a result, receivers would only be impacted by night works during the 10 rail possessions throughout the construction phase. The construction works would be managed in accordance with the mitigation measures described in Section 6.3.3.

Noise impacts at non-residential receivers

Construction noise levels at representative non-residential receivers are shown in Table 20. It should be noted that NMLs for non-residential receivers apply whenever the premises are in use therefore no separate assessment for daytime, evening and night-time periods is required.

Table 20 Predicted noise impacts at representative non-residential receivers in dB(A)

Receiver ID	Use	Nearest distance to rail alignment (metres)	NML	Site establishment	Platform coping modifications	Track slewing	Signalling	Overhead wiring
N1	School	44	55	44	53	67	< 30	53
N2	Commercial	66	70	42	51	63	51	52
N3	Commercial	26	70	57	66	70	70	71
N4	Commercial	35	70	47	56	65	54	55
N5	Active Recreation	18	65	54	63	77	68	69
N6	Commercial	38	70	53	62	68	67	68
N7	Library	80	55	47	56	59	59	60
N8	Place of Worship	117	55	45	54	55	56	57
N9	Active Recreation	16	65	55	64	77	62	63
N10	School / Childcare	76	55	44	53	60	53	54
N11	Commercial	55	70	49	58	59	< 30	58
N12	Commercial	46	70	52	61	66	< 30	66
N13	Commercial	59	70	50	59	63	< 30	58
N14	Commercial	34	70	62	71	68	< 30	68
N15	Commercial	61	70	50	59	63	< 30	63
N16	Commercial	29	70	58	67	73	< 30	51
N17	Commercial	34	70	59	68	71	< 30	58
N18	Commercial	33	70	55	64	71	< 30	65
N19	Library	46	55	54	63	66	< 30	67
N20	Commercial	35	70	50	59	68	< 30	63
N21	Place of Worship	43	55	62	71	71	48	57
N22	Commercial	20	70	48	57	76	33	57
N23	Commercial	52	70	55	64	65	58	58
N24	Commercial	115	70	50	59	61	48	49

Note: Items shaded in GREY indicate predicted noise impact at this receiver during this work stage is above NML.

Noise levels at receiver N21 (Lithgow Anglican Church, 2 Roy St, Lithgow) are predicted to exceed NMLs by 16 dB(A) during track slewing works, which represents the greatest impact to non-residential receivers. This is on the basis that all identified construction activities would occur along the nearest location on the rail line which is likely to be a conservative estimate, as the actual activities may not include all items of equipment assumed in the calculations.

Predicted noise levels at school receivers, N1 (Children's House Montessori, 585 Great Western Hwy, Faulconbridge) and N10 (Mid Mountains Neighbourhood Centre, 2 Lowden Lane, Lawson) are predicted to exceed NMLs during track slewing works, with the largest exceedances of up to 12 dB(A) predicted at N1.

Recommended mitigation measures are presented in Section 7.2.

Sleep disturbance assessment

As there are several construction stages which are proposed to incorporate out-of-hours works, consideration has been given to the potential for sleep disturbance to residential receivers during night-time works.

Sleep disturbance results are based on the predicted night time $L_{A1(1\ minute)}$ dB(A) noise levels for construction equipment, assumed to be 8 dB(A) higher than L_{eq} noise levels.

Results show the majority of representative receivers are predicted to exceed both sleep disturbance screening criteria and sleep awakening criteria during three stages (stage 7 – track slewing, stage – 8 signalling and stage 9 – overhead wiring system) of night-time works. Significant exceedances of sleep awakening criteria are predicted, with highest predicted impacts of 88 dB(A) predicted at receiver R36 (141A Station Street, Blackheath), representing an exceedance of 23 dB(A) above awakening criteria.

Night-time works are anticipated to take place during 10 rail possessions, which would be spread over a two year period. This would provide respite periods between rail possessions, with the longest period of consecutive night-works being limited to two nights.

Construction stage 5 – platform extension – Katoomba and Lithgow Station works

Platform extension works are proposed at Katoomba Station and Lithgow Station. A more comprehensive assessment of constructing the stage 5 - platform extension works at these stations has been conducted in order to assess construction noise impacts in more detail. A total of 404 receivers, including both residential and non-residential receivers, were modelled around Katoomba Station and 586 receivers were modelled around Lithgow Station specifically for the platform extension works.

A summary of modelling results at both stations is presented in Table 21 and Table 22. It is noted that NMLs as well as NMLs +10 have been included to provide context to the number of affected receivers versus the number of highly affected receivers given the larger sample size of modelled receivers.

Table 21 Predicted noise impacts during construction stage 5 (platform extension) at Katoomba Station and Lithgow Station – residential receivers

Station	Total no. of receivers	Number of receivers exceeding				Highly affected >75 dB(A)
		Standard hours		Daytime standard	Outside of hours	
		NML	NML+10	NML	NML +10	
Katoomba Station	342	17	0	80	1	0
Lithgow Station	444	57	12	116	24	1

Table 22 Predicted noise impacts during construction stage 5 (platform extension) at Katoomba Station and Lithgow Station – non-residential receivers

Station	Total no. of receivers	Number of receivers exceeding	
		Standard hours	
		NML	NML+10
Katoomba Station	62	1 - Commercial	0
Lithgow Station	142	6 - Commercial	1 - Commercial

Results show that during standard construction hours noise levels at up to 17 residential receivers are predicted to exceed NMLs at Katoomba Station and 57 receivers at Lithgow Station. Noise levels are not expected to exceed NMLs by more than 10 dB(A) at any residential receivers around Katoomba Station. Noise levels at 12 residential receivers are however predicted to exceed the NML by more than 10 dB(A) at Lithgow Station.

Outside of standard construction hours, noise levels at up to 80 residential receivers are predicted to exceed NMLs at Katoomba Station and 116 at Lithgow Station. One receiver is predicted to experience exceedances by more than 10 dB(A) at Katoomba Station, and 24 at Lithgow Station with one residence being highly affected (>75 dB(A)).

During stage 5 – platform extension works at Katoomba Station and Lithgow Station, up to six commercial receivers are predicted to exceed NMLs at any time, with noise levels at one receiver predicted to exceed NMLs by more than 10 dB(A). All other non-residential receivers are predicted to comply with NMLs. It should be noted, the 'highly affected' descriptor does not apply to non-residential receivers.

During works at Katoomba Station, receivers to the north of the works are predicted to be most affected largely due to ground topography and shielding from surrounding buildings. At Lithgow Station, receivers along Railway Parade and Main Street are predicted to be the most affected.

Noise levels during the stage 5 - platform extension works are controlled generally by demolition equipment, e.g. demolition (concrete) saw and jackhammers. These are expected to only operate sporadically and during rail possessions for short periods of time, therefore predicted noise levels are only expected to occur for short durations.

It should also be noted that predicted noise levels assume all plant is operating simultaneously, which provides a conservative assessment. Noise levels experienced by the community are likely to be lower than those predicted for significant periods of time.

Construction traffic assessment

Construction traffic volumes are anticipated to be between 5 to 10 medium/heavy vehicles supplying plant and equipment at the beginning and end of each possession and shutdown, plus a number of light / medium vehicle movements during the duration of the possessions and shutdowns to service personnel and small equipment / material requirements.

During platform works less than five medium / heavy vehicle movements are anticipated per site per possession, with a small number of light vehicle movements to access both during possessions and during normal hours.

In order for construction traffic to generate an increase in noise levels of greater than 2 dB(A), existing traffic levels along construction traffic routes would need to increase by around 60 per cent. From on-site observations the existing traffic flow is substantially greater than the proposed construction traffic numbers. Therefore, the construction vehicles would have a negligible impact on existing road traffic noise in the area. The traffic generated by the Project is considered to comply with the NSW *Road Noise Policy (*DECCW, 2011*)* criteria.

Vibration

Vibration-intensive works may include the use of a bored piling rig and jackhammer(s) as well as rail tamping. Tamping equipment used during track slewing works are not expected to impact upon any vibration-sensitive receptors.

The safe working distances of these items of equipment from off-site receivers are shown in Table 23 which is based on recommendations of the *Construction Noise Strategy* (CNS) (TfNSW 2012b). If these safe working distances are complied with, no adverse impacts from vibration intensive works are likely in terms of human response or cosmetic damage.

Based on the indicative construction activities assessed for the Project, it is unlikely that works would occur within the safe working distances for offsite receivers. If vibration-intensive works are required within these safe working distances, mitigation measures to control excessive vibration would be implemented as outlined in Section 7.2.

In addition, all of the stations within the Project site contain heritage structures and have modification works scheduled. It is likely however that works would be undertaken within the safe working distances to the station buildings and platforms. The safe working distances for cosmetic damage are generally considered to be conservative and working within them would not necessarily result in damage.

Table 23 Safe working distances of vibration intensive equipment to be used during the Project

Plant	Rating/ description	Cosmetic damage – residential/commercial	Cosmetic damage - heritage	Human response
Bored piling	≤ 800 mm	2 m (nominal)	2 m (nominal)	2 m (nominal)
Jack hammer	Hand held	1 m (nominal)	1 m (nominal)	Avoid contact with structure
Rail tamping	-	5 m (nominal)	5 m (nominal)	5 m (nominal)

There are no residential receivers for which the cosmetic damage or human response safe working distances are encroached by proposed construction activities for the Project. Although some works may be undertaken during standard hours when the stations are open to the public, those affected by intermittent construction vibrations would be in transit and only subject to vibration effects temporarily. No significant issues to the public are considered likely as a result.

The Project would be undertaken in the close vicinity of the heritage-listed station platforms, platform buildings and other station infrastructure, particularly at Katoomba Station and Lithgow Station where the platforms are being extended. Works may potentially be required within the safe working distances and human response thresholds of these structures. Mitigation measures, as described in Section 7.2, would be implemented to protect against damage.

It is also noted that piling is proposed within construction stage 5. However, as this is proposed to be bored piling (rather than impact piling), vibration generated by this process is very low, and is not expected to cause cosmetic damage or human response issues for any receiver location other than potentially the station building itself. As identified above, it is recommended that attended vibration measurements are undertaken when piling commences, to determine site-specific safe working distances. Piling work would not proceed within the safe working distances unless a permanent vibration monitoring system is installed.

Operation

Changes to environmental noise emissions from the operation of the stations are expected to be negligible as a result of the Project. As such, an assessment under the *Industrial Noise Policy* (EPA, 2000) is not required.

The New Intercity Fleet is expected to be quieter than the existing intercity trains, in particular wheel squeal and engine noise is likely to be lower. Track slewing would only modify the horizontal rail alignment by a maximum of 25 centimetres, therefore operational noise from rail movements is expected to remain the same or be reduced from the current situation. Therefore an assessment under the *Rail Infrastructure Noise Guideline* (EPA, 2013) is not required.

No vibration impacts associated with the operation of the Project are anticipated.

6.3.3 Mitigation measures

It has been identified that potential construction noise impacts at residences within the vicinity of the Project may exceed the 75 dB(A) highly affected construction noise threshold. Prior to commencement of works, a Construction Noise and Vibration Management Plan (CNVMP) would be prepared and implemented in accordance with the requirements of the *Construction Noise Strategy* (TfNSW, 2012b) and the Noise and Vibration Impact Assessment (AECOM, 2017f).

The CNVMP would be the key management document to prescribe mitigation measures to minimise construction noise and vibration. The measures would focus on contractor inductions, selection and operation of plant and equipment, work scheduling (including respite periods), prescribing safe working distances for vibration intensive equipment, procedures for noise and vibration monitoring and obtaining approvals for out of hours works.

The CNVMP would be supported by the Community Liaison Plan to be prepared for the Project, which would detail community notification requirements including letter box drops and phone calls. In accordance with TfNSW's *Construction Noise Strategy,* and in consultation with impacted receivers, feasible and reasonable mitigation measures would be implemented to minimise impacts during construction.

In addition to the standard mitigation measures identified in the *Construction Noise Strategy*, a number of additional mitigation measures have been developed as a result of the predicted impacts associated with the Project.

Refer to Section 7.2 for a full list of mitigation measures.

6.4 Traffic and transport

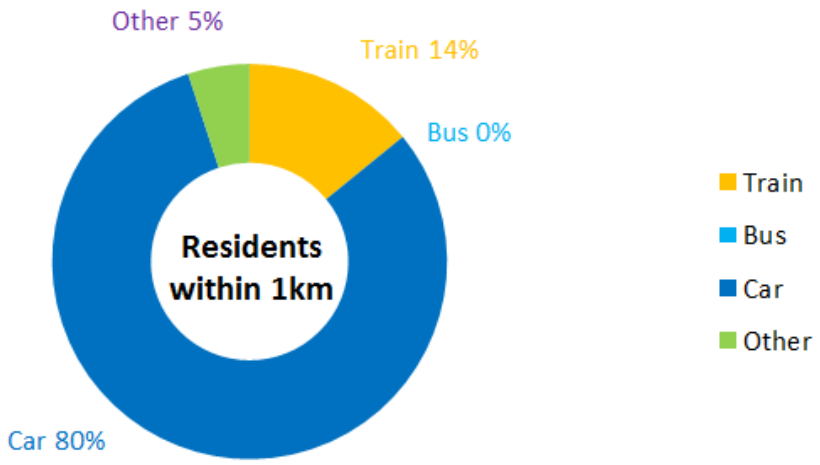
A Traffic, Transport and Access Impact Assessment was prepared for the Project (AECOM, 2017g). The assessment included a desktop review of the existing traffic environment surrounding the Project site. Detailed traffic counts and modelling were not considered necessary as the Project is focused on the rail corridor and is unlikely to have a significant impact on the surrounding road network. The findings of the assessment are summarised in this section.

6.4.1 Existing environment

Travel mode

Travel data obtained from the TfNSW Transport Performance and Analytics unit (2017) provides an insight into the Journey to Work characteristics of residents and workers. The mode of travel to work for people living within one kilometre of the Blue Mountains Line is presented in Figure 10.

The data suggests that travel by car is the predominate mode of travel to work (80 per cent) for people living within one kilometre of the Blue Mountains Line. Train travel is the second most utilised form of transport (14 per cent) with other modes making up the remaining forms (five per cent). Bus use is limited (zero per cent) as a mode of transport.



Source: TfNSW, 2017

Figure 10 Blue Mountains Line – mode of travel

The Blue Mountains National Park region is a popular attraction for tourists and other recreational users of the park. The Blue Mountains Line is a key access route for visitors to the region.

Blue Mountains Line

The Blue Mountains Line is an intercity rail service operated by NSW TrainLink serving the Blue Mountains and Lithgow region of NSW with train services between Bathurst and Central.. As shown in Figure 2 and Figure 3 there are 15 stations within the Project site, including:

- Faulconbridge Station
- Linden Station
- Woodford Station
- Hazelbrook Station
- Lawson Station
- Bullaburra Station
- Wentworth Falls Station
- Leura Station
- Katoomba Station
- Medlow Bath Station
- Blackheath Station
- Bell Station
- Newnes Junction Station
- Eskbank Station
- Lithgow Station.

NSW TrainLink also operates regional train and coach services along the Blue Mountains Line.

Eskbank Station and Newnes Junction Station are located within the Project site, however are not open to the public. Mount Victoria Station and Zig Zag Station are located within the Project site, however do not form part of this Project.

Train services

Train services on the Blue Mountains Line vary in stopping patterns with trains commencing and terminating from Bathurst, Lithgow, Katoomba, Mount Victoria and Springwood stations. Limited stops services are provided during the morning and evening peak periods. Table 24 provides a summary of services during the weekday.

Table 24 Blue Mountains Line weekday services

Service	Total[1]	Service	Total[1]
Bathurst to Central (all services)	34	Central to Bathurst (all services)	34
commencing at Bathurst	2	terminating at Bathurst	2
commencing at Lithgow	13	terminating at Lithgow	13
commencing at Mount Victoria	11	terminating at Mount Victoria	10
commencing at Katoomba	5	terminating at Katoomba	6
commencing at Springwood	3	terminating at Springwood	3

Note:
1. Rail customer demand.

Source: Sydney Trains, 2017

A review of station barrier counts for stations between Faulconbridge Station and Lithgow Station for 2014 indicated Katoomba Station is the most used station and reflective of the stopping patterns of train services on the Blue Mountains Line with 60 services provided at Katoomba Station during the weekday.

Interchange facilities

All stations, with the exception of Medlow Bath Station and Eskbank Station, provide a number of interchange facilities giving customers the opportunity to transfer between transport modes. These include bus stops, taxi ranks, bicycle storage, kiss and ride zones and car parking facilities.

Bus services

Blue Mountains Transit operates the 600 series bus routes, which provides 12 bus routes that operate near to the stations providing customers the opportunity to transfer onto rail services. These bus routes connect residential areas to local transport interchanges, as well as employment and retail areas throughout the Blue Mountains region.

Lithgow Station is not served by Blue Mountains Transit, however Lithgow Buslines operate bus services to and from Lithgow Station.

Additional regional coach services are provided at Lithgow Station and Mount Victoria Station providing bus links to the other regional destinations. Bell Station is currently not served by bus services.

Traffic and road network

Key roads

The road network in the vicinity of the Project is shown in Figure 2 and Figure 3. The key existing roads in the vicinity of the Project site include:

- ***Great Western Highway*** – a major arterial road that carries around 24,000 vehicles a day through the Blue Mountains area. It is a state road that was upgraded to four lanes between Emu Plains and Katoomba (completed in mid-2015) as part of Roads and Maritime Services' Great Western Sydney Upgrade. The road is a key route providing access between Sydney and Central and Western NSW and a key freight route with heavy vehicles making up 12 per cent of traffic. A permanent classifier located on Great Western Highway, 260 metres west of Victoria Street, Mount Victoria indicates that during 2017, around 18 per cent of traffic along the road consisted of heavy vehicles. The road is generally adjacent to the rail corridor between Mount Victoria Station and Faulconbridge Station. The road forms part of the A32 and A44 road corridor, both of which are routes of national significance.
- ***Bells Line of Road / Chiefly Road*** – a State road providing access between Sydney and Central and Western NSW that also plays an important role in providing access through the Blue Mountains area. The road performs a secondary role for cross-mountain traffic after the Great Western Highway. It is generally a two-way, two-lane road with opportunities intermittently provided to overtake. The road forms part of the B59 road corridor, which is a route of State significance.
- ***Darling Causeway / Station Street*** – a State road providing connections between Great Western Highway and Bells Line of Road / Chifley Road. It is a generally a two-way, two-lane road with opportunities intermittently provided to overtake and runs in a north-south direction west of the rail corridor.
- ***Main Street / Mort Street*** – a State road that forms part of the B59 road corridor. The road is generally a two-way, two-lane road providing access through Lithgow.

Local streets providing access to stations within the Project site are summarised in Table 25.

Table 25 Local road access

Station	Local road	Station	Local road
Faulconbridge	Sir Henry Parade	Katoomba	Bathurst Road and Goldsmith Place
Linden	Burke Road	Medlow Bath	Railway Parade
Woodford	Railway Parade	Blackheath	Station Street
Hazelbrook	Railway Parade	Bell	Sandham Road
Lawson	Loftus Street	Newnes Junction	Sandham Road
Bullaburra	Railway Parade	Eskbank	Inch Street
Wentworth Falls	Railway Parade and Station Street	Lithgow	Railway Parade and Main Street
Leura	Railway Parade		

B-double routes

Approved B-double routes in the vicinity of the Project site include:

- Great Western Highway (A32)
- Chifley Road (B59)
- Darling Causeway
- Main Street (B59)
- Mort Street (B59).

Traffic volumes

The Annual Average Daily Traffic (AADT) volumes over the past five years indicate traffic volumes along the section of the Great Western Highway between Springwood and Lithgow have mainly experienced minimal growth and in some instances have declined in volume.

Table 26 Historical AADT data

Station ID	2012	2013	2014	2015	2016	2017
6188	-	-	-	11,174	-	10,916
6189 (eastbound)	-	-	-	5,519	5,856	5,440
6190 (westbound)	-	-	-	4,902	4,754	4,633
6191	-	-	-	4,334	4,237	4,043
6193 (eastbound)	-	-	-	5,613	5,939	5,383
99043	22,141	21,240	-	-	-	-
99914	27,333	27,683	28,549	-	31,075	28,201

Source: Roads and Maritime Services, 2017

6.4.2 Potential impacts

Construction

It is anticipated that up to 10 pre-existing rail possessions would be utilised over the two-year construction period. This would typically include shutdown periods of 48 hours over a weekend period; however, 5 of the 10 possession periods may extend for 12 days in the area between Newnes Junction Station and Lithgow Station. This would involve five day closures of one line on both sides of a weekend possession period.

Customer and public access impacts

Platform extension works at Katoomba Station and Lithgow Station are expected to impact pedestrian movements on the station platforms. The reduced space on the platforms may increase pedestrian congestion and reduce the amount of standing area for customers. Although Katoomba Station is the most frequented station on the Blue Mountains line, the likelihood of this occurring is low given the relatively low patronage in comparison to high patronage stations in the Sydney Metropolitan area. In addition, at both stations, the location of the platform extension works is away from main boarding points. Appropriate signage would be provided to mitigate any potential impacts to pedestrian movements on the platforms.

Construction work during rail possessions is not expected to impact pedestrians and customers given the restricted area in which construction works are to be carried out. This would largely be associated with the works undertaken at stations (e.g. platform extensions at Katoomba Station and Lithgow Station). Track slewing works and upgrades to overhead wiring works would be undertaken away from publicly accessible areas.

Replacement bus services would be provided at affected stations during any scheduled rail possessions utilised by the Project. These replacement bus services would provide rail customers a connection to a station that would continue to be served by a Blue Mountains Line / Main Western Line service during the weekend rail possession.

Outside of the rail possessions, access on and to the stations would be maintained during construction and any works to be undertaken within these areas would be managed and controlled at all times to ensure that there is no impact to public safety.

Interchange facilities

The Project would not result in impacts to interchange facilities during construction. Pedestrian and cycling access to and through the station precincts would be maintained during construction.

Works that cause temporary disruptions to pedestrian facilities surrounding stations have the potential for increased safety risks for pedestrians, due to potential interactions with construction plant and vehicles. There may be minor diversions in these locations which would be appropriately signposted to notify pedestrians of the temporary arrangements. Any interaction between construction vehicles and pedestrians would be managed and controlled by traffic controllers as appropriate. Impacts to pedestrians during construction would be managed through the construction Traffic Management Plan (TMP).

Traffic

Impacts on traffic during construction would be temporary with predominate activity undertaken around the periods of rail possessions (when the majority of construction activities are undertaken). Traffic impacts would occur as a result of the movement of construction and service vehicles, particularly along Great Western Highway and local roads providing access to the compound sites.

Potential impacts caused by construction vehicle traffic would include:

- increased travel time due to reduced speed limits around construction sites
- increased travel time due to increased truck and construction machinery movements
- temporary partial or complete closure of roads and altered property accesses during construction.

Traffic generated by construction vehicles, including staff vehicles is likely to be minimal. Between five to 10 heavy vehicles and a number of light vehicles would be generated during each scheduled possession at each works site.

The additional vehicle movements, particularly along the Great Western Highway and local routes are unlikely to have more than minor impacts on traffic conditions given that the additional vehicle movements would be less than ten per cent of the existing total daily movements along the road corridors. The most appropriate local access route to the temporary compounds, especially for large construction vehicles, would be determined during detailed design. There may be localised impacts at construction access points. Heavy vehicles would be restricted to non-peak periods and rail possessions where possible to minimise disruptions to traffic.

Parking

The operation of commuter car parks at Woodford Station, Blackheath Station, Katoomba Station and Lithgow Station may be temporarily affected during the construction of the Project, with compound locations identified adjacent to and within existing off-street commuter parking facilities. The following commuter parking spaces would be temporarily affected during construction:

- about 14 commuter spaces at Woodford Station (making up about a third of the total number of commuter spaces available)
- about seven commuter spaces and three accessible spaces at Katoomba Station (making up about a fifth of the total number of commuter spaces available)
- about 11 commuter spaces at Blackheath Station (making up about half of the total number of commuter spaces available)
- about nine commuter spaces at Lithgow Station (making up a small portion of the total number of commuter spaces available).

This would in turn increase the demand for on-street parking within the local network in the short-term. While the stations would be closed during the possession, passengers may still use surrounding parking to catch the replacement bus service.

Property access

Access to individual properties could be temporarily affected by construction activities, either through the loss of existing access arrangements, or the alteration of access arrangements. However, property access would be maintained at all times, and any impacts would be short-term. Access to all properties would be maintained during construction unless agreed with the property owner in advance.

Operation

Once complete, the Project would not impact on the operation of public transport, interchange facilities, property access or parking in the vicinity of the stations. The platform extensions at Katoomba Station and Lithgow Station would allow customers' access to the longer trains, which are being provided to cater for patronage growth.

The procurement of the new trains would result in a period of time where the older trains and new wider trains would be running concurrently along the Blue Mountains Line while the fleet is being progressively replaced. Modification of the platform coping at stations to accommodate the new trains would result in a larger gap experienced by customers boarding or alighting from the older trains at certain points along the platform. Impacts would be temporary in duration, until the full replacement of the older fleet has been completed.

The Project would not result in operational traffic or access impacts.

6.4.3 Mitigation measures

A construction Traffic Management Plan (TMP) would be prepared by the Contractor in consultation with TfNSW, and provided to the relevant roads authority. The construction TMP would be the primary management tool to manage potential traffic and pedestrian impacts associated with construction.

Temporary measures informing customers of the extra gap between the train and station platforms would be determined during detailed design and implemented during operations to minimise disruptions to customers while both the existing and new fleet are operating on the Blue Mountains Line. These may include a combination of additional signage, additional station staff, physical platform gap filling solutions and communication strategies.

Refer to Section 7.2 for a full list of mitigation measures.

6.5 Urban design, landscape and visual amenity

A Landscape and Visual Impact Assessment (LVIA) has been undertaken by AECOM using the Roads and Maritime Services *Environmental Impact Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment* (Reference number EIA-N04, 2013) as a reference document, as it is widely accepted by NSW Government authorities. The assessment methodology is described in Appendix F and the findings summarised in this section.

6.5.1 Existing environment

Land use adjacent to the Project site predominantly comprises one of the following:

- bushland, including trees, shrub cover and conservation areas
- small pockets of land used for grazing and horticulture
- urban, including low density residential and commercial town centre
- infrastructure corridor.

Refer to Section 1.3 for further detail on the existing land uses surrounding the Project site.

Landscape character zones

The Project site and the surrounding area has been assessed in distinct landscape character zones (LCZ) which comprise similar landscape features and land uses, including:

- LCZ 1: Infrastructure corridor (rail)
- LCZ 2: Infrastructure corridor (roads running parallel to the rail corridor)
- LCZ 3: Residential
- LCZ 4: Bushland
- LCZ 5: Commercial centre.

Visual receivers

Visual receivers likely to be impacted by the Project can be broadly categorised as:

- road users
- residential neighbours
- commercial neighbours
- rail customers.

6.5.2 Potential impacts

A landscape character and visual impact assessment was undertaken to determine the impacts of the Project to each of the landscape character zones and visual receptors during construction and operation phases. The results of this assessment are presented in Table 27.

While four of the five landscape character zones have been classified as moderate or high sensitivity, given the magnitude of impacts as a result of the Project is negligible, the overall assessment rating for both construction and operation for all landscape character zones was negligible.

Most of the visual receiver groups would be expected to experience a low impact during construction, and a low to negligible impact as a result of operation of the Project.

Table 27 Landscape character and visual impacts during construction and operation

Land Zone	Sensitivity	Magnitude of change - construction	Magnitude of change - operation	Overall rating
Landscape character impact assessment				
LCZ 1: Infrastructure Corridor (rail) landscape character impact assessment	Low	Negligible: The changes would be temporary and would be typical of what is already experienced at the Project site.	Negligible: Changes would largely involve a replacement like for like or minor relocation of infrastructure, and would be accommodated by the landscape.	**Construction:** Negligible **Operation:** Negligible
LCZ 2: Infrastructure Corridor (roads running parallel to the rail corridor)	Moderate	Negligible: The changes would be temporary and would be typical with what is already experienced within the rail corridor LCZ.	Negligible: During operation, the Project would not cause any change to the character of this LCZ.	**Construction:** Negligible **Operation:** Negligible
LCZ 3: Residential	Moderate	Negligible: The changes would be temporary and would be similar to the maintenance routine within a rail infrastructure corridor. It would cause no change to the overall landscape character of the rail corridor LCZ, nor to the residential LCZ even where the two lie adjacent to one another.	Negligible: No changes within this LCZ are anticipated, and the changes within LCZ 1 do not alter the character of this LCZ.	**Construction:** Negligible **Operation:** Negligible
LCZ 4: Bushland	High	Negligible: The changes would be temporary, and typical with what is already experienced within the rail corridor LCZ. This would not affect the character of the adjacent landscape (i.e. LCZ 4).	Negligible: No changes would occur within this LCZ, and changes within the adjacent LCZ 1 would not change the overall character of either area.	**Construction:** Negligible **Operation:** Negligible
LCZ 5: Commercial centre	High	Negligible: No construction activity would result in a change in overall character of this LCZ, although construction activity, while conducted during off-peak times, may be apparent from the commercial centres.	Negligible: No changes would occur within this LCZ, and changes within the adjacent LCZ 1 would not change the overall character of either area.	**Construction:** Negligible **Operation:** Negligible

Land Zone	Sensitivity	Magnitude of change - construction	Magnitude of change - operation	Overall rating
Visual impact assessment				
Road user receiver group	Moderate	Low: The changes would only be seen for short periods of time as the vehicle, cyclist or pedestrian passed the site of construction activity. The changes (construction activity) would only be viewed as a small portion of the overall view at any one time, and one view amongst many that make up the greater overall journey. The changes would only be temporary.	Negligible: Replacement of existing rail infrastructure, with only few new elements being introduced to the corridor. If these replaced or additional elements were visible from the road corridor, they are typical of rail infrastructure and would not stand out as a change in the view from the road. Changes to the stations, including the increase or decrease of platform widths or lengths, or the reduction of canopy over the platform at Faulconbridge Station, would not be noticeable from the road as the change in platform length or depth are not large enough to be seen as a 'new' element within the view. Changes to placement of objects, such as track position and other rail infrastructure, would not be visible from the road.	**Construction:** Low **Operation:** Negligible
Residential neighbour receiver group	Moderate	Low: The temporary construction activity associated with the Project seen from these homes would only vary from track work regularly seen from these properties in frequency.	Negligible: Rail infrastructure would be modified rather than be new elements within views. Changes to track placement would not be visible from the homes, and any new elements within the rail corridor would not be a noticeable.	**Construction:** Low **Operation:** Negligible
Commercial neighbour receiver group	Low	Low: The temporary construction activity associated with this project seen from these businesses would only vary from track work regularly seen from these properties in frequency.	Negligible: The changes within the rail corridor (including changes to the stations) would either not be visible, or not be discernible as a change in the view as most 'changes' would be a like for like replacement or the minor moving of an element, or a minor change in the size of an element.	**Construction:** Low **Operation:** Negligible

Land Zone	Sensitivity	Magnitude of change - construction	Magnitude of change - operation	Overall rating
Rail customer receiver group	Low	Low: Buses would replace trains when construction activity occurs on the tracks and within the rail corridor so no views of works would be seen from the stations or trains. Any temporary construction activity that does not stop train activity would be seen by rail customers however these views would not be out of character.	Low: No changes to the rail corridor elements would be visible to rail customers while on the trains. Some minor changes to stations, particularly the lengthening and shortening of platforms, would be visible to station visitors, but the changes would be visibly in keeping with the station characters and would not substantially impact any heritage items as viewed form the platforms by rail customers.	**Construction:** Low **Operation:** Low Visual impact on heritage items is Minor to Negligible for all items

6.5.3 Mitigation measures

Most of the visual receiver groups would be expected to experience a low to moderate impact however several mitigation measures would be implemented during construction and operation to minimise any impacts to these receptor groups. Mitigation measures would be considered during design development and construction planning to minimise the level of visual impact of the construction and operation phases of the Project. Areas used for site compounds would be selected using the criteria outlined in Section 3.2.7 and would be rehabilitated at the end of construction.

Refer to Section 7.2 for a full list of mitigation measures.

6.6 Socio-economic impacts

This section describes the existing socio-economic profile of the local and regional areas surrounding the Project site and identifies potential impacts resulting from the Project. The data has primarily been sourced from Australian Bureau of Statistics data (ABS, 2011),

The local study area (i.e. within one kilometre of the Project site) includes neighbouring properties of the Project site that may be impacted directly or indirectly as a result of amenity related impacts such as dust, noise, and visual amenity.

6.6.1 Existing environment

Regionally, settlement along the Project route largely centres on the townships and residential centres at Faulconbridge, Linden, Woodford, Hazelbrook, Lawson, Bullaburra, Wentworth Falls, Leura, Katoomba, Medlow Bath, Blackheath, Lithgow, and smaller settlements between Bell Station and Lithgow Station.

Based on the estimated resident population for 2016 (ABS, 2016a and ABS, 2016b), the population of the Blue Mountains and Lithgow local government areas is estimated to be 80,072 and 21,474 respectively. Both local government areas have experienced moderate population growth between 2012 and 2016 which is expected to continue to steadily over the next 20 years.

Community infrastructure

The closest residential properties are located around 20 metres from the Project site in proximity to Hazelbrook Station, Lithgow Station and Bullaburra Station.

Social infrastructure surrounding the Project site includes a range of education, health and other community facilities. Infrastructure surrounding the Project site is listed in Table 28 and presented in maps in Appendix G.

Table 28 Community facilities in the vicinity of the Project site

Station	Community infrastructure
Faulconbridge	• Children's House Montessori, about 250 metres north of the station
Woodford	• Woodford Presbyterian Church, about 200 metres west of the station
Hazelbrook	• Mid Mountains Out of School Hours Service, about 170 metres south east of the station and the Clever Ducks Family Day care, about 445 metres south east of the station. • Hazelbrook Public School, about 500 metres south east of the station • Hazelbrook General Practice, about 225 metres north of the station

Station	Community infrastructure
Lawson	• two day care/preschool facilities including the Mountains Mobile Minders, about 120 metres north of the station and Lawson Community preschool, about 230 metres south east of the station • two primary schools including Lawson Public School, about 290 metres south of the station • Lawson Medical Practice, about 370 metres east of the station • three sporting and recreational facilities including the Lawson Bowling Club, about 30 metres north of the station, and Mid Mountains Neighbourhood Centre, about 195 metres south of the station • two places of worship, including Emmanuel Anglican Church, about 100 metres south of the station
Wentworth Falls	• four healthcare facilities, including Barratt & Smith Pathology, about 80 metres north west of the station, and The Village Surgery, about 130 metres north west of the station • Wentworth Falls Bowling Club, about 250 metres west of the station
Leura	• four day care/preschool facilities including Cherry Blossom Early Learning Centre, about 200 metres south east of the station • Leura Public School, about 480 metres east of the station • Magic in Motion Studios Dance Drama Music, about 310 metres north east of the station • two places of worship, including Leura-Wentworth Falls Baptist Church, about 160 metres north of the station
Katoomba	• four day care/preschool facilities including Katoomba Out of School Hours & Vacation Care, about 270 metres north of the station • St Canices Primary School, about 415 metres south of the station • TAFE NSW Blue Mountains, Katoomba, about 150 metres south west of the station • seven health care facilities including Upper Mountains Medical Centre, about 40 metres west of the station • St Hilda's Anglican Church, about 200 metres south of the station
Medlow Bath	• Medlow Park and tennis court, about 25 metres east of the station
Blackheath	• two day care/preschool facilities including Kookaburra Kindergarten, about 350 metres south east of the station • Blackheath Family Medical Centre, about 350 metres south of the station • Blackheath Library, about 50 metres north of the station • Sacred Heart Catholic Church Blackheath, about 320 metres north of the station
Eskbank	• two day care/preschool facilities including Galloping Gumnut Mobile Childrens Services, about 285 metres south east of the station • Lithgow Public School, about 250 metres south west of the station • Tablelands Sports and Spinal Physiotherapy, about 465 metres south west of the station • three sporting and recreational facilities including a soccer field on Bennet Street 150 metres north east of the station, and Kiddle Park about 200 metres south of the station • Uniting church, 190 metres south of the station
Lithgow	• two day care/preschool facilities including First Grammar Lithgow, about 450 metres south east of the station • Lithgow Public School, about 270 metres south east of the station • two health care facilities including Tablelands Sports & Spinal Physiotherapy, about 130 metres south of the station • St Patrick's Catholic Presbytery, about 360 metres south west of the station

No non-residential receivers were identified within proximity to Linden Station, Bell Station or Newnes Junction Station.

The area surrounding the remainder of the Project Site contains a number of recreational and community infrastructure. There is also a significant number of places of worship.

Three quarters of the Blue Mountains local government area is comprised of the World Heritage Blue Mountains National Park. The National Park attracts residents to live in the area and a large number of tourists, with more than two million visitors every year (Blue Mountains Economic Enterprise, 2015).

6.6.2 Potential impacts

Construction

Construction of the Project has the potential to temporarily impact customers, pedestrians, motorists, local businesses, residents, and other local receivers as a result of:

- construction noise, vibration, dust and visual impacts
- temporary changes to vehicular and pedestrian access to and movements around the stations
- temporary impacts to local traffic movements
- temporary loss of parking around the station at Katoomba Station and Blackheath Station
- small increase in truck movements delivering materials and equipment, and transporting waste.

Each of these issues has been assessed separately in sections 6.3, 6.4 and 0.

Increased noise, dust, and reduced visual amenity have the potential to result in amenity impacts on local residents in those areas affected. For example nuisance dust may impact the wellbeing of customers utilising the commercial precincts directly outside of Lawson Station, Wentworth Falls Station, Leura Station, Katoomba Station and Lithgow Station.

It is not anticipated that local businesses would experience more than a minor disruption during construction as the works would largely be concentrated in already scheduled rail possessions across a two year Period. Replacement bus services would continue to service the local communities, tourists and other rail customers. In addition, the construction works would be undertaken entirely within the existing rail corridor (aside from one optional compound at Faulconbridge Station which may be located outside the rail corridor), minimising direct impacts to the surrounding commercial areas.

Operation

Once operational, the Project would not result in any major impacts on social and economic values. Customers may experience access impacts as a result of the increased gap between the narrow gauge trains and the platforms while both types of trains are operating on the Blue Mountains Line.

6.6.3 Mitigation measures

Measures to address amenity impacts relating to specific aspects have been identified in the relevant sections of this REF. In addition to these measures, a number of safeguards would be implemented to minimise potential impacts on the community with a particular focus on keeping the community informed.

Refer to sections 6.3, 6.4 and 6.5 for discussion on the potential noise, traffic/access and visual amenity impacts arising from construction of the Project and the proposed management strategies. Refer to Section 7.2 for a full list of mitigation measures.

6.7 Biodiversity

A flora and fauna impact assessment was undertaken for the Project which included a desktop review and site inspection of the Project site and surrounds by two qualified ecologists on 12 and 13 April 2017 and a further inspection by an ecologist on 23 April 2017.

6.7.1 Existing environment

The Project site is characterised by a winding alignment traversing a surrounding area of steeply graded terrain typical of the Greater Blue Mountains topography. However, the Project site is a modified, highly disturbed environment, including the existing rail infrastructure as well as associated access tracks and stations. The Project site undergoes routine maintenance and clearance works to ensure the safe passage of freight and passenger trains as well as maintain clearance distances for associated infrastructure (signals, overhead wiring systems, etc.). The area surrounding the Project is a mountainous sandstone region characterised by varying, often steep topographical features including plateau and escarpments extending off the Great Dividing Range. For around 40 kilometres, the Project would be located adjacent to the Blue Mountains National Park; however no works would be undertaken within the boundary of the National Park.

Vegetation communities

The desktop assessment identified seven threatened ecological communities (TECs) listed under the EPBC Act within a 30 kilometre search radius. Six of these TECs are also listed under the TSC Act. TECs located with the Project site are shown in Figure 11, Figure 12, Figure 13 and Figure 14. A detailed list of the identified threatened communities is provided in Appendix H.

Threatened flora

The desktop assessment identified 60 threatened plants that potentially occur within or near the Project site. Of these, one was considered to have a high likelihood of occurrence within the Project site (*Acacia flocktoniae*, Flockton Wattle), with 20 threatened species having a moderate likelihood of occurrence within the Project site. A detailed list of the identified threatened flora is provided in Appendix H.

There are 11 known records of *Acacia flocktoniae* within the vicinity of the Project site. A substantial proportion of the Blue Mountains population of this species is actively protected in Blue Mountains National Park.

Fauna habitat

The vegetation that lies adjacent to the Project site generally consists of native forest over a moderately dense understorey and is in variable condition. Fauna habitats recorded within this zone during the field survey include:

- riparian vegetation comprising natural and constructed drainage channels where surface-water dependent vegetation occurs
- woodland and forest
- heathland.

Fauna habitat also exists within both constructed and natural landscape features of the Project site. Such features include constructed features such as culverts and drainage lines, but also natural rock overhangs, rocky outcrops and caves.

Fauna

The desktop assessment identified 67 threatened fauna species that have the potential to occur within or near the Project site. This includes five amphibians, 39 birds, two insects, 19 mammals, and two reptiles.

Of these species, 14 were deemed as having a moderate likelihood of occurrence in the Project site, with seven determined as having a high likelihood of occurrence within the fauna habitats present in the Project site. A detailed list of the identified threatened fauna is provided in Appendix H.

Threatened fauna species considered likely to occur in the Project site are the Glossy Black-Cockatoo and the Eastern Pygmy-possum listed as Vulnerable under the TSC Act, as well as the Blue Mountains Water Skink, listed as Endangered under both the TSC Act and EPBC Act (refer to Table 29). Four bat species also have a high likelihood of occurrence in the Project area including; Large-eared Pied Bat, Little Bentwing-bat, Eastern Bentwing-bat and the Southern Myotis.

Migratory species

Twelve migratory species were identified as having the potential to occur within the Project site.

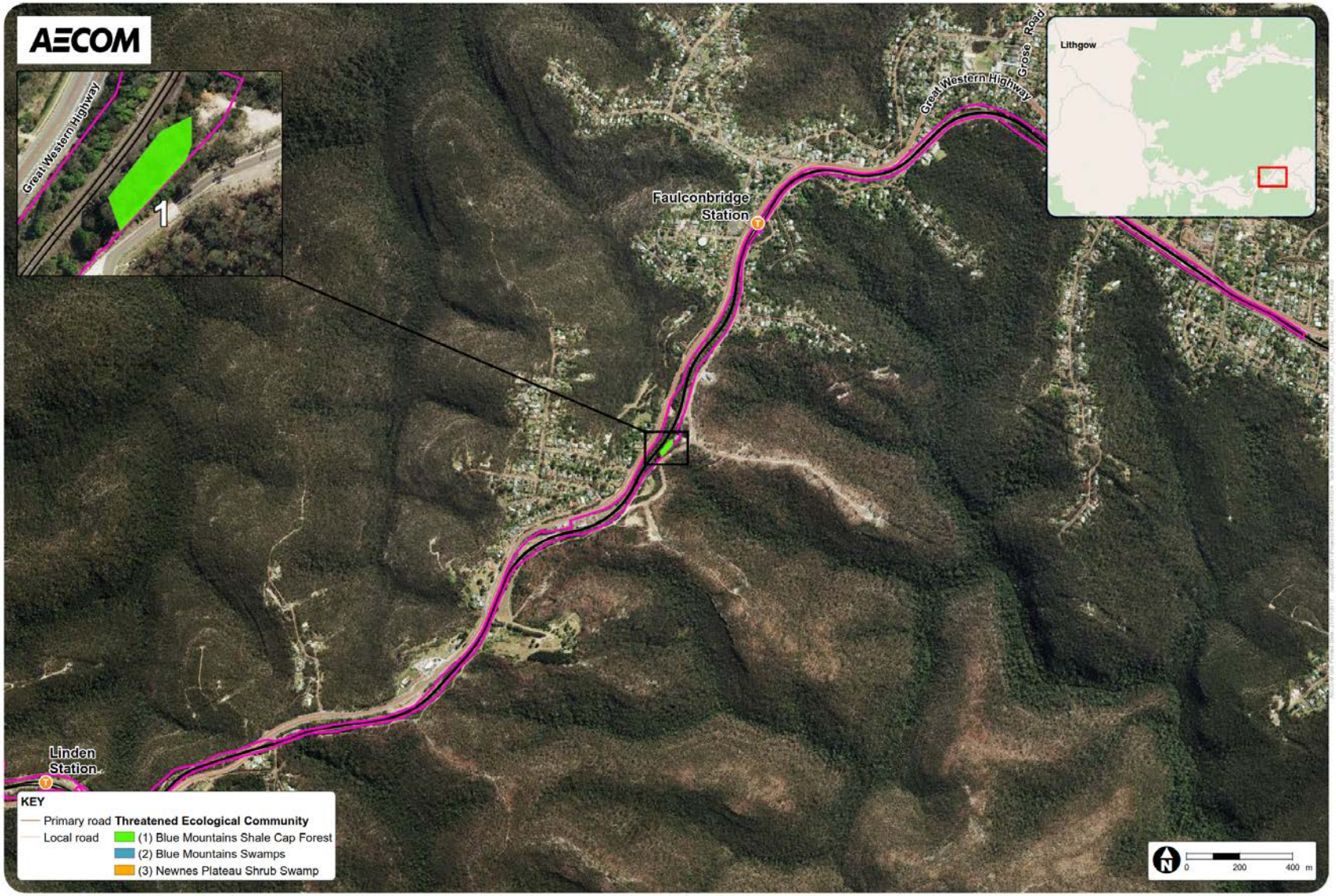
Noxious weeds

There are numerous common environmental and noxious weeds present within the Project site. Areas in close proximity to urbanised areas are prone to an overspill of non-native species from adjacent residential gardens.

Four weeds of national significance were recorded in the Project site, including:

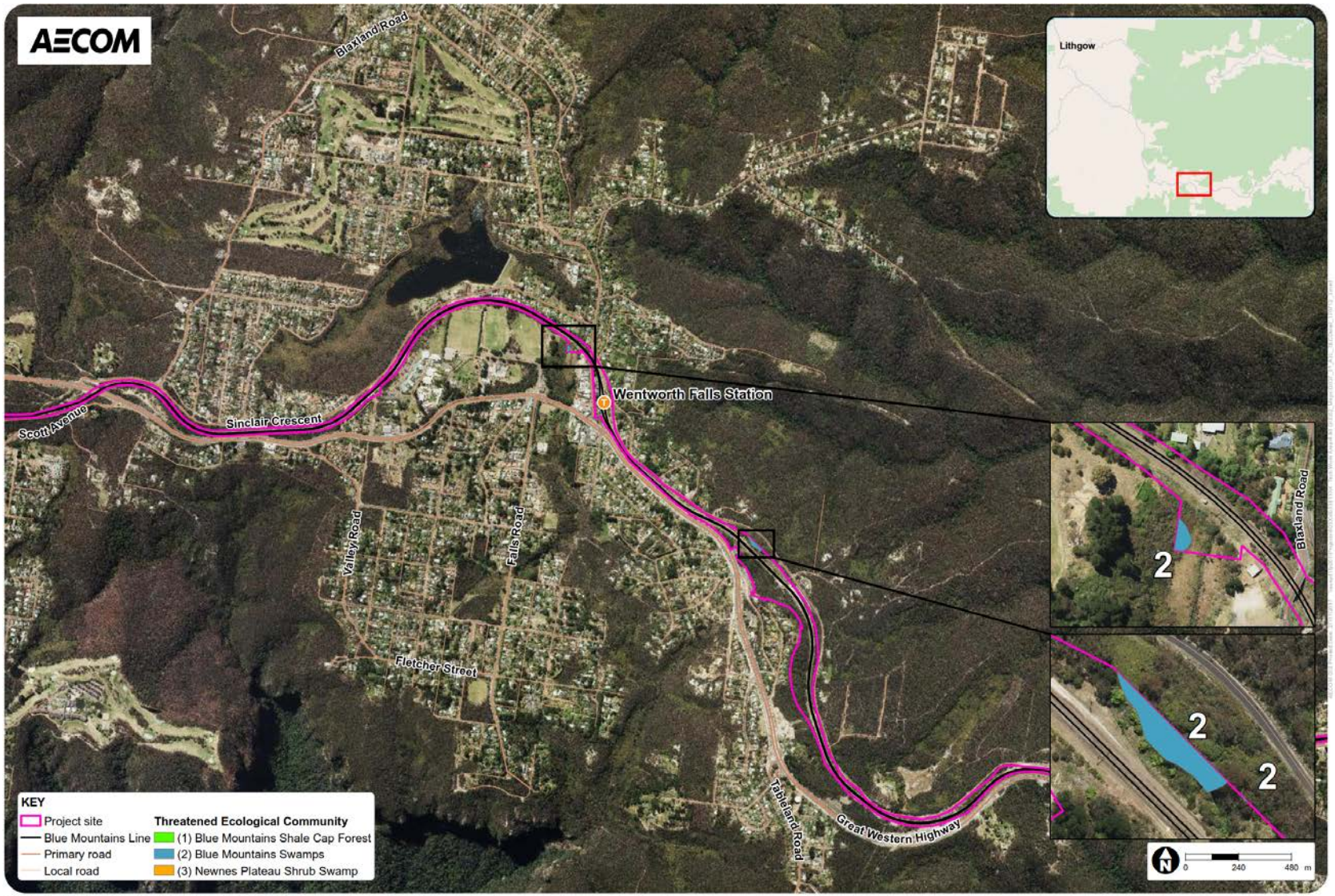
- *Lantana camara* (Lantana)
- *Asparagus scandens* (Asparagus fern)
- *Senecio madagascariensis* (Fireweed)
- *Rubus fruticosus aggregate* (Blackberry).

Lantana is designated as a Class 3 noxious weed, while the other three are designated as Class 4 noxious weeds.



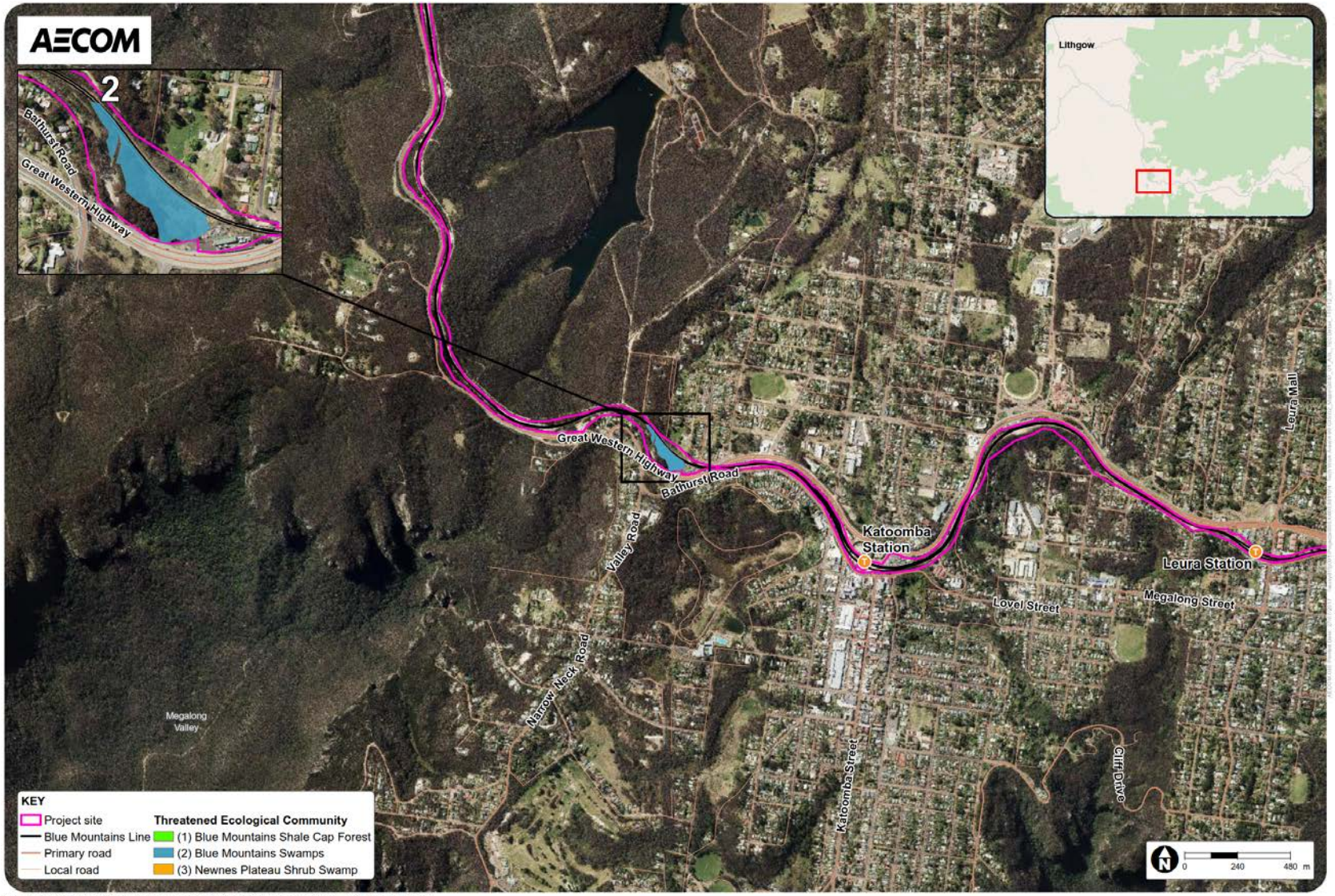
*Works at Mount Victoria Station and Zig Zag Station do not form part of the Project

Figure 11 TECs within the Project site (part 1 of 4)



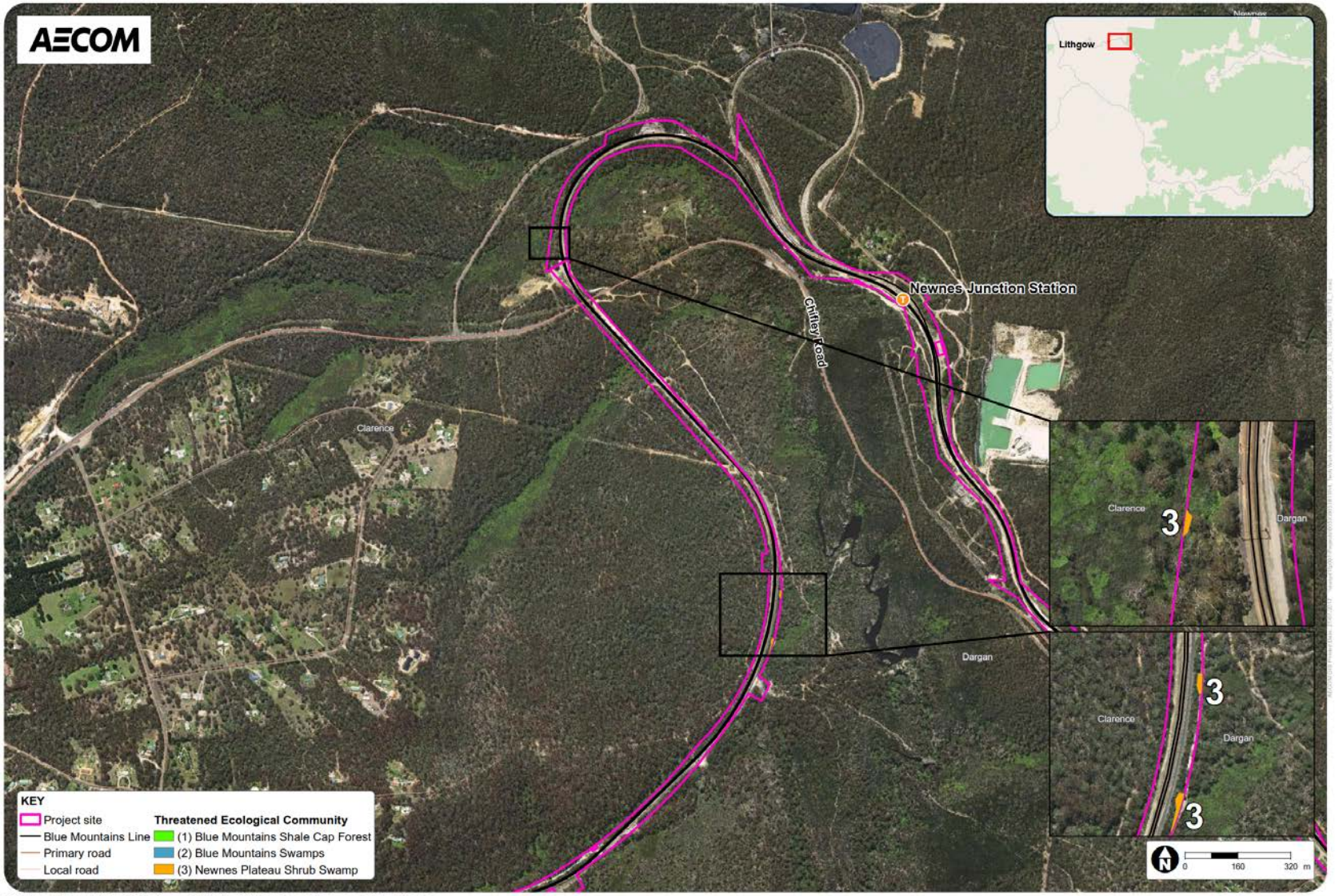
*Works at Mount Victoria Station and Zig Zag Station do not form part of the Project

Figure 12 TECs within the Project site (part 2 of 4)



*Works at Mount Victoria Station and Zig Zag Station do not form part of the Project

Figure 13 TECs within the Project site (part 3 of 4)



*Works at Mount Victoria Station and Zig Zag Station do not form part of the Project

Figure 14 TECs within the Project site (part 4 of 4)

6.7.2 Potential impacts

Construction

Clearing of native vegetation

No clearing of native vegetation is required for the Project. Some earthworks are likely to occur around Hazelbrook, Lawson, Woodford, Katoomba, Bell, Eskbank and Lithgow stations but this will be largely restricted to the middle of the track alignment and would not interfere with any existing vegetation.

As such the impacts likely from Project construction activities are limited to:

- spread of weeds, pests and pathogens
- introduction of additional source of disturbance through noise, vibration and light
- contaminant pollution from stored fuels and hazardous materials
- injury and mortality of fauna species from vehicle strikes.

These impacts are discussed in further detail below.

Threatened ecological communities

Assessments of significance (seven part tests) were conducted for the known TECs present within the Project site. No significant impacts are considered likely to occur to the TECs present within the Project site because no clearing of native vegetation is proposed. Track slewing would be undertaken in close proximity to the known TEC locations however these works include upgrades to the track within the centre of the rail corridor and the known TEC locations are located at the edges of the rail corridor.

Threatened flora

No threatened flora species were identified during the site inspections.

One flora species, *Acacia flocktoniae* (Flockton Wattle), is considered likely to occur within the vicinity of the Project site. A population of this species is actively conserved within the Blue Mountains National Park. As the Project site sits outside of the Blue Mountains National Park, the Project would not impact on any known habitat of that population. The potential for such impacts were considered further within an assessment of significance (seven part test). The significance assessment showed that no impact is considered likely because no clearing of native vegetation is proposed for the Project.

Threatened fauna

All of the threatened fauna species are highly mobile and are likely to preferentially use fauna habitat in the adjacent Blue Mountains National Park. Assessments of significance (seven part tests) were conducted for threatened fauna that were likely to occur in the Project site. Impacts upon these species as a result of the Project are not considered to be significant because the Project would not affect any declared critical habitat and no clearing is anticipated.

During construction, the Project would involve the movement of plant, machinery and heavy and light vehicles on a regular basis, as such there is the potential for direct interactions/collisions between these items and native fauna. The potential for such interactions is however considered to be low on the basis that the high amount of human activity in these areas is likely to discourage the presence of most mobile fauna in the immediate vicinity whilst works are active.

Disturbance of bat species

The works are unlikely to affect the majority of the existing structures; however the presence of the works, the introduction and presence of noise, vibration, light and site personnel may temporarily disturb their roosting areas, compared with current level of disturbance. The potential for impacts to the four bat species are detailed in Table 29. In the absence of specific bat data identifying the categorical presence of bats it is assumed that they are present. This assumption leads to a temporary but potentially adverse impact for these species, depending on the age and maturity of the bats and their ability to find alternative roosts for the period of disturbance. As the works would largely be undertaken during 48 hour possession periods, temporary disruption to roosting areas may occur, however the potential for impact has been assessed as low. During breeding, bat species would be more sensitive to disturbance. Mitigation measures provided identify potential measures that can lower the impacts to be acceptable.

Table 29 Potential for impacts upon threatened fauna with a high likelihood of occurrence

Scientific name	TSC Act	EPBC Act	Likelihood of occurrence	Potential for impact
Calyptorhynchus lathami Glossy Black-Cockatoo	V	-	Likely	None-low. There are no areas proposed to be cleared that contain large hollow-bearing trees. There is the potential for activities to occur within areas where large hollow-bearing trees occur, though these are not to be cleared, some disturbance may be experienced if occurring between March and August.
Cercartetus nanus Eastern Pygmy-possum	V	-	Likely	None. There would be no removal of areas of important habitat for this species (*Banksia* dominated scrub).
Eulamprus leuraensis Blue Mountains Water skink	E	E	Likely	None. The Project would have no impacts upon habitat for this species (naturally fragmented and permanently wet sedge and shrub swamps with boggy soils).
Miniopterus australis *Little Bentwing-bat*	V	-	Likely	Low. This species occurs in moist eucalypt forest, rainforest or dense coastal banksia scrub. Little Bent-wing Bats roost in caves, tunnels and sometimes tree hollows during the day, and at night forage for small insects beneath the canopy of densely vegetated habitats.
Chalinolobus dwyeri *Large-eared Pied Bat*	V	V	Likely	Low. Roosts in disused mine shafts, caves, overhangs and disused Fairy Martin nests for shelter and to raise young. Also potentially roost in tree hollows. Occurs in low to mid-elevation dry open forest and woodlands, preferably with extensive cliffs, caves or gullies. Pied Bat is largely restricted to the interface of sandstone escarpment (for roost habitat) and relatively fertile valleys (for foraging habitat).
Myotis macropus *Southern Myotis*	V	-	Likely	Low. This species generally roost in groups of 10 - 15 close to water in caves, mine shafts, hollow-bearing trees, stormwater channels, buildings, under bridges and in dense foliage. They forage over streams and pools catching insects and small fish by raking their feet across the water surface.

Scientific name	TSC Act	EPBC Act	Likelihood of occurrence	Potential for impact
Miniopterus schreibersii oceanensis *Eastern Bentwing-bat*	V	-	Likely	Low. Caves are the primary roosting habitat, but also use derelict mines, stormwater infrastructure, buildings and other man-made structures. They form discrete populations centred on a maternity cave that is used annually in spring and summer for the birth and rearing of young. This species tends to hunt in forested areas.

Note: CE – Critically Endangered, E – Endangered, V – Vulnerable

Migratory birds

A total of 12 migratory species were identified in the desktop assessment. Under the EPBC Act, an action is likely to have a significant impact on migratory species if it substantially modifies, destroys, or isolates an area of important habitat for the species. The isolated areas of habitat within the Project site are unlikely to be considered important habitat as they do not contain:

- habitat used by migratory species occasionally or periodically within a region that supports an ecological significant proportion of the population of the species
- habitat that is of critical importance to the species at particularly life-cycle stages
- habitat that is utilised by a migratory species which is at the limit of the species range
- habitat within an area where the species is declining.

Given the above, the Project is deemed unlikely to result in significant impacts upon individuals or habitat of migratory species.

Other biodiversity impacts

Construction activities, unless appropriately managed, can lead to a number of other impacts to biodiversity, including:

- increased potential for the spread of weeds if not adequately controlled
- uncontrolled runoff in cleared areas may result in offsite sedimentation impacts through a reduction in water quality, with the potential to affect local flora and fauna
- additional noise, vibration and light sources during construction can have varying effects on fauna in the Project site particularly nocturnal species. Impacts would be highly localised (within 100 metres) and temporary (up to 48 hours per possession)
- potential impacts from the generation of dust in prolonged periods
- potential impacts from contaminant pollution through inappropriate management/handling of fuels, solvents and other potentially hazardous materials.

Operation

Operation of the Project is not expected to impact on any threatened communities, flora or fauna.

6.7.3 Mitigation measures

The Project site is an active operational area, so to the extent that is safe and practicable, consideration should be given to implementing the management measures in Section 7.2 to protect and enhance existing ecological assets and values. These measures have been determined with view primarily to protecting potential threatened species habitat within the Project site. Measures are largely set out to protect threatened fauna and habitat, native flora and habitat as well as control the spread of weeds and disease.

Refer to Section 7.2 for a full list of mitigation measures.

6.8 Soils and water

6.8.1 Existing environment

Landform

The Project site generally follows a ridge line which forms a boundary between several catchments, all of which ultimately flow to the Hawkesbury-Nepean River. From Faulconbridge to Medlow Bath the ridge line separates the Grose River catchment to the north from the Lake Burragorang catchment to the south. From Medlow Bath to Lithgow the ridge line separates the Grose River catchment to the north from the Coxs River catchment to the south.

The Project site predominantly keeps to the very upper reaches of each catchment. However in several locations it is low enough in the catchment to cross small waterways. Within the Project site, the corridor crosses around 25 small waterways, mainly around the city of Lithgow, to the eastern side of Zig Zag Station and the eastern side of Wentworth Falls. Four of these are named waterways; Ida Falls Creek in Lithgow, Lithgow Valley Gully and Dargans Creek in Clarence and Jamison Creek in Wentworth Falls.

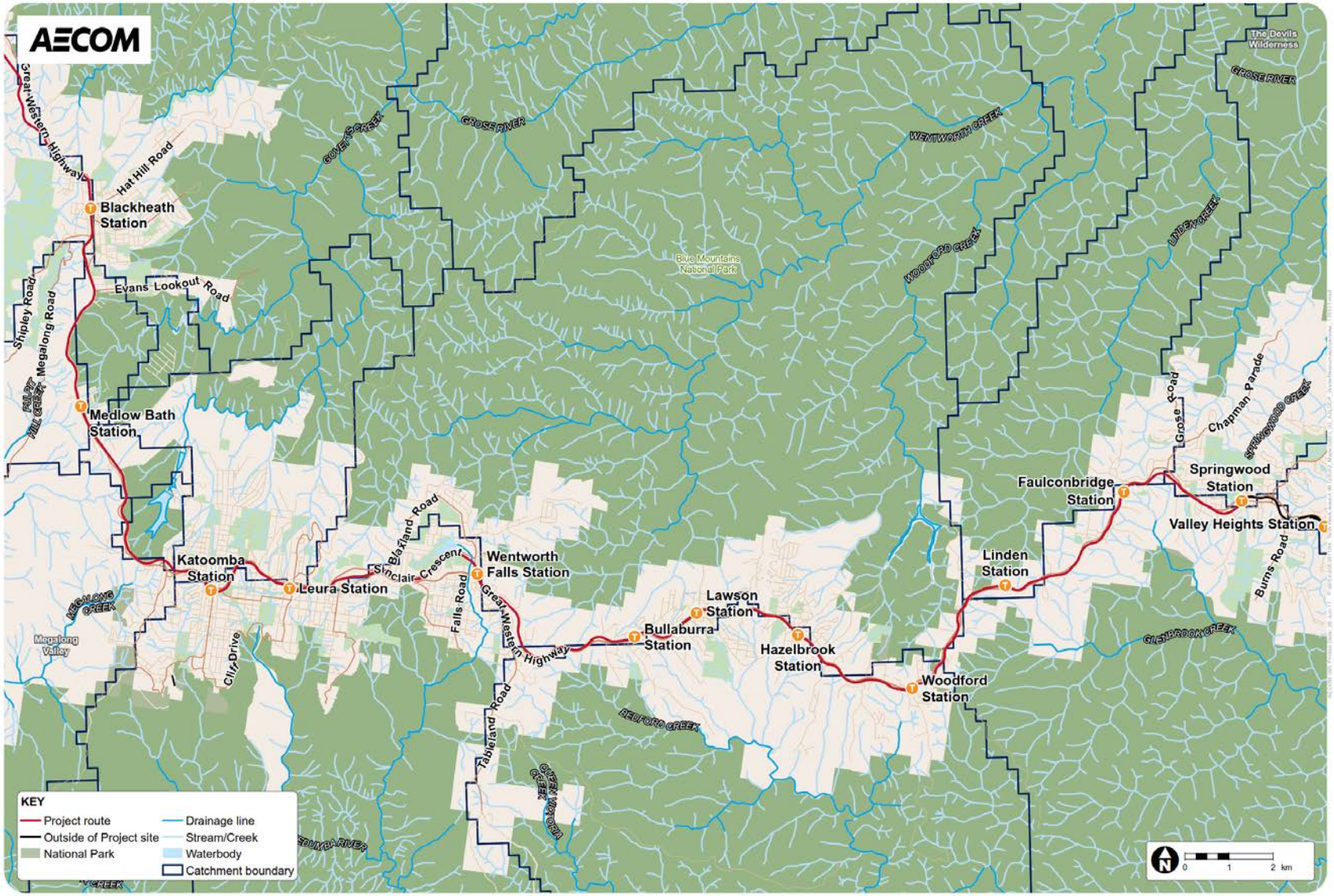
The catchments in the Project site are characterised by steep topography, and large areas of natural bushland interspersed with low density residential areas. Much of the Blue Mountains area lies within SEPP (Sydney Drinking Water Catchment) 2011 drinking water catchments. Hydrologic features can be seen in Figure 15 and Figure 16.

The area immediately surrounding the Project site is a mountainous sandstone region creating steep topographic features.

Hydrogeology and groundwater

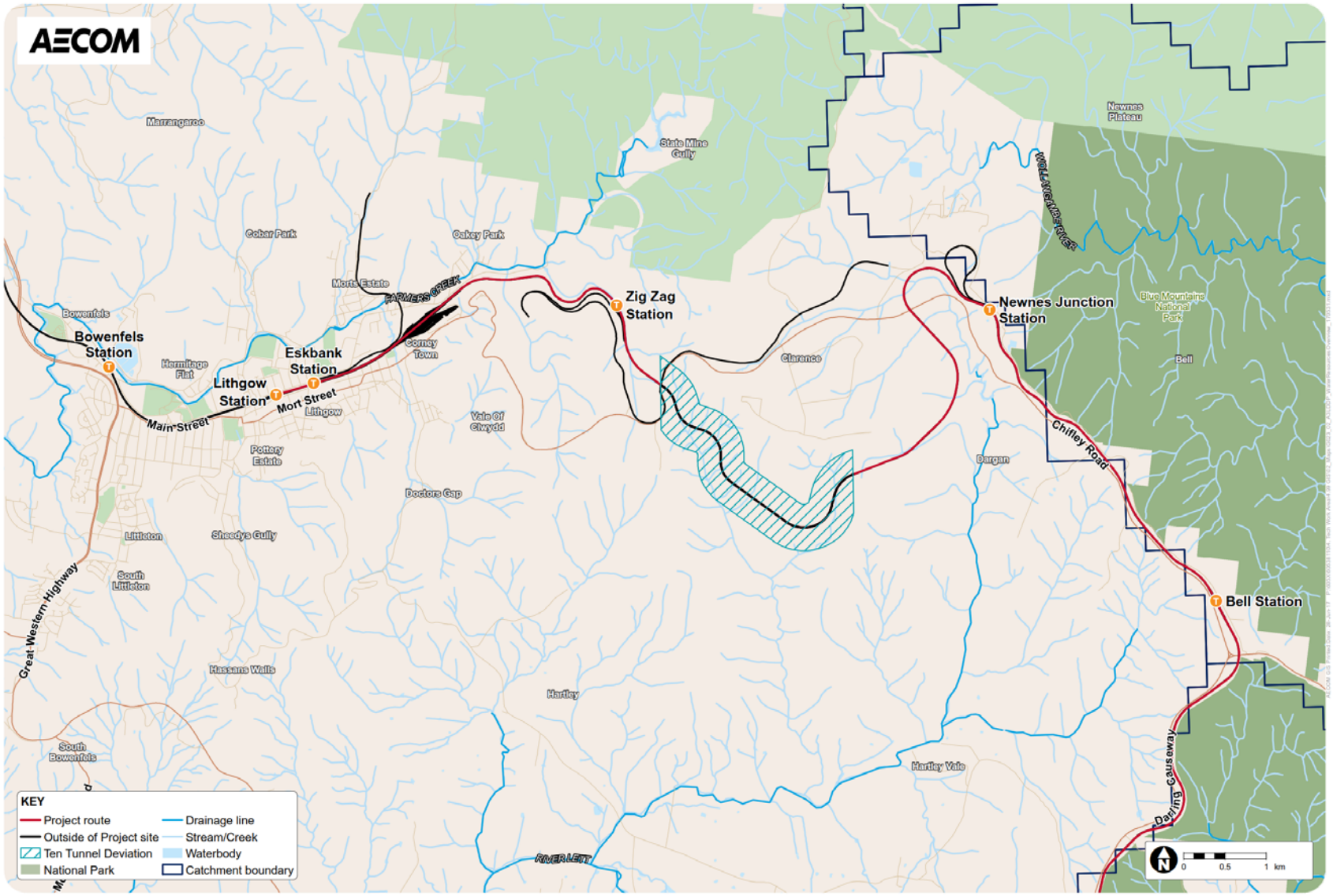
Registered groundwater bore information was obtained from the NSW Department of Primary Industries - Office of Water and the Bureau of Meteorology Australian Groundwater Explorer online database.

Based on a review of available groundwater bore search data, shallow groundwater is anticipated to be present on-site between 0.6 and 2 metres below ground level within fill or 1.5 to 10 metres below ground level in natural materials comprising clayey gravel, clay or silty clay and at depth within shale and sandstone. Based on the drillers logs shale and sandstone appear to be present at depths ranging from one to 18 metres below the ground.



* Works at Mount Victoria Station and Zig Zag Station do not form part of the Project

Figure 15 Hydrologic features (part 1 of 2)



* Works at Mount Victoria Station and Zig Zag Station do not form part of the Project

Figure 16 Hydrologic features (part 2 of 2)

Geology and topography

The rail corridor follows a relatively steep and winding path. The landscape features adjacent to parts of the corridor mean some sections of track are constructed with cuttings, tunnels, bridges, embankments or other structures. By following the ridge line the corridor generally avoids crossing waterways and major overland drainage paths.

The alignment of the Project site overlies Triassic age sedimentary beds of the Grose Subgroup. The *Katoomba 1:50,000 Geological Sheet* (Geological Survey of NSW, 1983) describes these beds as quartz sandstone, slightly lithic, with minor interbedded claystone.

Soils

The Project is underlain by two soil landscape groups as summarised in Table 30.

Table 30 Soil landscape summary

Area	Regional geology
Lithgow	Lithgow residual soil landscape • The Lithgow soil landscape is characterised by flat to undulating rises and broad valleys on the Illawarra Coal Measures and the Berry Formation. Local relief is typically less than 20 metres and slope gradients less than 10 per cent. • Soil profiles are typically moderately deep (<120 centimetres) with dominant soils comprising sandy loam and clay loam. A horizons overlying medium clay. Potential limitations include localised mine subsidence and localised rock fall hazard.
Katoomba	Banks Wall Sandstone of the Triassic Period • The Medlow Bath residual landscape is characterised by narrow crest and moderately inclined sideslopes on Narrabeen Group sandstones. Landforms include gently undulating to rolling rises and low hills on sandstone plateau surfaces. Local relief is typically 20 to 50 metres and slope gradients 10 to 20 per cent. • Soil profiles are typically moderately deep (<100 centimetres) with dominant soils comprising sand and loamy sand A horizons overlying clayey sand. Potential limitations include stony acid soils, moderate erodibility and localised rock outcrops. Foundation hazard is generally low.

Source: eSPADE website, Penrith, Sydney and Wallerawang 1:100,000 soil landscape sheets

The level 5 Australian Soil Classification Soil Order describes the predominant soil features of Medlow Bath (mb), Warragamba (wb), and Wollangambe (wo) as Tenosols, Dermosols, and Tenosols, respectively. Tenosols have a weakly developed soil profile with poor soil retention, poor structure, and infiltration in these soils can range from rapid for sandy soils to slow for hardsetting or clay soils. On steep slopes, the erosion risk would be high with soil creep and water erosion as potential risks. Sandy soils are highly susceptible to soil creep, sheet and rill erosion.

Dermosols are structured soils with free drainage. Hardsetting surfaces can result in large quantities of surface runoff, causing erosion. These soils generally have a slightly acid to neutral surface pH, grading to neutral and moderately alkaline pH in the subsoil. Generally, these soils are non-sodic and hence non-dispersive, and present a lower erosion risk.

The Australian Soil Resource Information System (ASRIS, 2014) indicates that the Project site has a low to extremely low probability of acid sulfate soil occurrence.

Flooding

Two known flood studies in the vicinity of the rail corridor have been carried out: the *Jamison Creek Flood Study, Floodplain Risk Management Study and Plan* (Cardno Willing, 2005) at Wentworth Falls and the *Lithgow Floodplain Management Study (*Greater Lithgow City Council, 1992). The latter study is soon to be updated as part of a more recent review of flooding at Lithgow and surrounding areas. However, detailed flooding investigations have not

been undertaken within all built up areas along the Project site, primarily because flood risk is low due to the proximity to the regional ridge line along the length of the Project site.

Local drainage

There are a number of minor drainage structures and stormwater networks in the vicinity of and under the Project site. The structures and networks generally drain away from rail infrastructure (platforms, tracks, equipment, etc.) to local streams, creeks and channels to the Grose River, Lake Burragorang and Cox's River catchments, depending on location. These three catchments all ultimately drain into the Hawkesbury-Nepean River.

Existing water quality

The existing water quality in the Blue Mountains is relatively good with the majority of waterways in the Blue Mountains City Council's 2015-2016 *Waterways Health Report* classified as being in good or excellent health. There is regular testing of Blue Mountains waterways with the health classification based on aquatic fauna metrics, the levels of salts, nitrogen, phosphorus and bacteria, the turbidity and the levels of dissolved oxygen.

The area south and west of the Project site drains to the drinking water catchments of the Coxs River and Lake Burragorang. Besides the importance of preserving aquatic ecosystems, waterway health, and visual amenity, there are also a variety of uses for water bodies such as Megalong Creek, Yosemite Creek and Wentworth Falls Lake that include primary contact recreation, secondary contact recreation and aquatic foods.

Contamination

A preliminary assessment of contamination was undertaken to assess the potential for contamination to be present at the Project which may present a risk to workers and/or the environment during the construction and operation of the Project.

Based on the review of available information, potentially contaminating activities which may impact on the Project during the construction and operational phase of work have been identified and are described Section 6.8.2.

Activities of potential environmental concern and contaminants of potential concern are identified in Table 31. Considering historical use of the Project site as a rail line, the area of concern for these activities incorporates the entire length of the Project site.

Table 31 Activities of potential environmental concern and contaminants of potential concern

Activity of environmental concern	Contaminants of potential concern	Relevance to the site
Use of the Project site for rail purposes including platforms – historical use of fuel, grease and chemical for train and station maintenance, possible presence of asbestos in old structures and train brake pads, solvents used in grease	Asbestos, Total Petroleum Hydrocarbons (TPH), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), Volatile Organic Compounds (VOCs), Volatile Halogenated Compounds (VHCs), metals	Potential for contamination in surface soils due to current use of the site as an active rail facility. Low to medium risk of encountering contamination during the works.
Use and weathering of hazardous materials, such as asbestos-containing fibre-cement building materials and lead based paints, in buildings within and adjacent to the Project including platforms	Asbestos, lead	Potential for contamination in buildings along the rail alignment and at stations. Works with potential to disturb structures should consider potential to encounter contamination.
Storage and use of pesticides, fuels and /or other agricultural chemicals on rural land within and adjacent to the Project site	Metals, Organo-chlorine and Organo-phosphorus Pesticides (OCPs and OPPs), herbicides, pesticides, TPH, BTEX, PAHs, VOCs, VHCs	Excavation works aren't anticipated to encounter groundwater therefore it is unlikely that these contaminants of concern will be encountered during the works.
Use of fill of unknown origin along the rail line and on adjacent land	TPH, BTEX, PAHs, OCPs, OPPs, Polychlorinated Biphenyl (PCBs), metals, herbicides, pesticides, asbestos	Potential for contamination in surface soils and fill materials located in railway sidings due to the current use of the site as an active rail facility. Low to medium risk of encountering contamination during the works.
Localised disposal or burial of waste materials on rail land	TPH, BTEX, PAHs, PCBs, OCPs, OPPs, metals, herbicides, pesticides, asbestos	Potential for contamination in surface soils and fill materials located in railway sidings due to the current use of the site as an active rail facility. Low to medium risk of encountering contamination during the works.
Spillage of fuel, oil, and potentially hazardous loads from trains and carriages	TPH, BTEX, PAHs, metals	Excavation works aren't anticipated to encounter groundwater therefore it is unlikely that these contaminants of concern will be encountered during the works.

6.8.2 Potential impacts

Construction

The proposed works and construction compound locations are presented in Section 3.2. During construction, activities that would disturb soil have the potential to affect local water quality through erosion and sedimentation. The following construction phase activities have been identified as potentially affecting soils and water:

- Excavation works would expose the underlying soil, increasing the risk of soil being entrained in water runoff and subsequent erosion. This could transport sediment downstream and into adjacent waterways.
- Construction activities may directly impact the underground stormwater network, track drainage and alter surface water runoff flows. However, existing drainage points would be protected during construction to minimise risk of damage to the existing infrastructure during ground disturbing works.
- Pollutants (such as fuel, chemicals, sediments or wastewater) could enter into the stormwater network and/or track drainage, or flow into waterways without appropriate safeguards such as covering stockpiles and the provision of adequate bunding.
- Activities disturbing the soil/ground during construction works may affect local water quality through the release of sediments as a result of erosion. Entrained sediments have the potential to increase turbidity, and this could reduce photosynthetic productivity, reduce channel habitat from sediment deposition and contaminate surface water.
- Establishment of the construction sites may include materials delivery, where materials are stockpiled onsite. This may result in pollutants/particles from these materials leaching into the local water system.
- Track slewing and replacement of crossovers could temporarily affect the local hydrology/flow paths and result in sediments being discharged to the drainage network.

However, given the minor nature and extent of construction at each site, these impacts are considered unlikely to significantly impact soils and water quality at each site.

Track works at Bell Station and Eskbank Station would involve the removal of the existing tracks, ballast and foundation, re-positioning and replacing the track and replacing ballast, sleepers, footings and foundations where appropriate. There would also be minor excavation at Lawson Station, Hazelbrook Station and Woodford Station for signal works and Lithgow Station and Katoomba Station for the platform extensions.

The proposed construction compounds may be used for minor volumes of concrete batching or storage of construction materials, chemicals or fuel. These materials may impact on surface water if not contained and are otherwise transported offsite. This would be particularly important to manage in drinking water catchments. The stations from Wentworth Falls to Lithgow reside within the Coxs River or Lake Burragorang drinking water catchment and both Hazelbrook Station and Woodford Station are in the Lake Woodford drinking water catchment.

As shown in Figure 15 and Figure 16, works at Woodford Station, Hazelbrook Station, Wentworth Falls Station, Leura Station, Blackheath Station, Bell Station, Newnes Junction Station, Eskbank Station and Lithgow Station fall within a drinking water catchment. Since areas of the Project site lie within drinking water catchments, Water NSW requires that any impacts from the Project must result in a neutral or beneficial effect (NoRBE) on water quality. This includes an assessment of the adequacy of the mitigation methods and safeguards to be implemented. The NoRBE assessment (Appendix D) determined that the Project would have a neutral effect on water quality.

Contamination assessment

Construction activities involving any ground disturbance works would require the disturbance of contaminated soils and/or hazardous materials.

Excavation and ground disturbance activities associated with the proposed works, while likely to only involve minor volumes of soil and other fill material, have the highest potential to expose in ground contamination, which if not appropriately managed, can present a health risk to construction workers and the community. Contaminants would also pose an environmental risk if they were to enter nearby waterways through the stormwater infrastructure.

There is also a potential for project construction activities to result in the contamination of soil through accidental fuel or chemical spills from construction plant and equipment.

The proposed modifications and upgrades to infrastructure have the potential to disturb asbestos containing materials and other hazardous substances such as lead paint, which may be present in the ground and in existing structure.

Operation

The operational phase would include the ongoing use and maintenance of the rail line and associated infrastructure including station platforms. Ongoing maintenance activities could result in localised soil and water contamination through the use of potentially contaminating substances such as oils, grease, pesticides and herbicides and through the disturbance of hazardous materials including asbestos containing materials as part of ongoing maintenance works. There is a low likelihood of contaminant concentrations caused by operational impacts exceeding the relevant site assessment criteria. Additionally, any impacts are likely to be limited in extent.

The Project would not result in major changes to impervious areas at any location. Therefore there would not be an increase in stormwater runoff volumes or peak flows due to the works during operation. No drainage works are proposed. The capacity of the existing drainage network is not expected to be impacted by the Project.

6.8.3 Mitigation measures

A number of measures have been developed to address impacts to soil and water, and to reduce the risk of encountering contamination. This includes the preparation and implementation of a site-specific Erosion and Sediment Control Plan for each site in accordance with the ‘Blue Book’ - *Managing Urban Stormwater: Soils and Construction Guidelines* (Landcom, 2004).

Other measures to mitigate potential impacts from any contaminated soil/materials during construction would be developed and implemented through an unexpected contamination finds procedure and Waste Management Plan as part of the CEMP. An environmental risk assessment would be undertaken as part of the CEMP and would include a section on contamination. Chemical testing and visual characterisation would also be undertaken to confirm the suitability of the material for offsite disposal or reuse. Impacts and mitigation for waste is discussed in Section 6.10.1.

Refer to Section 7.2 for a full list of mitigation measures.

6.9 Air quality

A risk assessment was undertaken to assess potential dust impacts resulting from the Project. The assessment was undertaken in accordance with methodology described in the UK Institute of Air Quality Management's (IAQM) *Guidance on the assessment of dust from demolition and construction* (IAQM, 2014). The risk of dust and human health impacts were determined based on the scale of activities and proximity to sensitive receivers using the following four-step process:

- Step 1: screening based on distance to nearest sensitive receptors
- Step 2: assessing the risk of dust impacts from activities based on:
  - the scale and nature of the works, which determines the potential dust emission magnitude
  - the sensitivity of the area
- Step 3: determining site-specific mitigation for dust-emitting activities
- Step 4: reassessing the risk of dust impacts after mitigation has been considered.

Due to the large number of receivers adjacent to the Project site, only areas with the highest risk of dust impacts (i.e. those areas with the largest amount of earthworks and nearby sensitive receptors) were selected to provide a conservative worst case scenario.

6.9.1 Existing environment

There are a mixture of land uses surrounding the Project site, however much of the surrounding land contains remnant bushland that forms part of the Blue Mountains National Park. Other land uses in close proximity to the Project site include numerous residential centres at Hazelbrook, Lawson, Wentworth Falls, Leura, Katoomba, Blackheath, Eskbank and Lithgow Stations.

Results obtained from the closest EPA monitoring stations at Bathurst (about 60 kilometres west of Lithgow) and Richmond (about 20 kilometres north east of Faulconbridge) indicate that the average concentrations of PM_{10} are fairly similar between the two stations, and below the 24-hour average criteria level as shown in Table 32. This coincides with similar land uses in both areas, characterised by a mix of agriculture, light commercial and residential areas. However, considering the Project site is situated at a higher elevation, and is predominantly residential land use, the concentrations of PM_{10} are likely to be slightly lower than Bathurst or Richmond.

Table 32 average PM_{10} concentrations in the vicinity of the Project site

Location	Average 24-hour PM_{10} ($\mu g/m^3$) 2012 - 2016
Bathurst	14.0
Richmond	15.3

Sensitive receivers

Sensitive receivers were identified for further assessment where they are located within close proximity to dust generating works and would be exposed to potential dust emissions for more than eight hours per day (e.g. residences, hospitals, schools or aged care homes).

A number of sensitive receivers within 20 metres from the Project site at Hazelbrook Station and Lithgow Station in close proximity to proposed construction works where there is likely to be a medium risk of dust impacts. Earthworks would be required at Hazelbrook Station where excavation of around two cubic metres of material is required for the installation of

underground cables and relocation of track circuits. Similarly, the platform extension at Lithgow Station would involve dusty construction material (concrete). No sensitive receivers were identified within 20 metres of the other stations within the Project site.

6.9.2 Potential impacts

Construction

The main pollutant of concern for the Project is related to particulate matter emissions, specifically those with an aerodynamic diameter of less than 10 micrometres (µm), referred to as PM_{10}. Particles of this size can enter the pulmonary regions of the respiratory tract.

The Project may also generate other emissions such as odour, exhaust emissions and asbestos fibres. Refer to Section 6.8 for further detail on the potential presence, and likelihood of disturbance of contamination (including asbestos) in the Project site during construction.

The outcome of the qualitative air quality risk assessment indicated that the Project is considered to pose a medium risk for nuisance dust impacts at Hazelbrook Station and Lithgow Station due to the proximity of sensitive receivers to the works, a low risk for nuisance dust impacts at all other locations, and a negligible risk of human health impacts from dust impacts (i.e.PM_{10}) at all locations.

While the platform extension at Katoomba Station would also require use of construction materials with potential for dust generation, the overall sensitivity to human health and dust soiling impacts was classified as low due to the distance of sensitive receivers from the Project site.

However, following the implementation of mitigation measures outlined in Section 7.2, the Project is unlikely to result in significant impacts on sensitive receivers.

Other emissions

There is a potential for the Project to result in odour, exhaust emissions and asbestos fibres. Potential asbestos fibres would typically be associated with works at the platforms and at earthworks areas along the Project site and largely located away from sensitive receivers. Based on the nature of works, these impacts are likely to be minor and temporary provided the measures outlined in Section 7.2 are implemented effectively.

Operation

Overall impacts on air quality during the operation of the Project are considered minimal as the Project would not result in a change in land use.

6.9.3 Mitigation measures

Mitigation measures aimed at reducing the likelihood of emissions from vehicles. Plant and equipment have been developed in accordance with TfNSW's *Air Quality Management Guideline* (2015h). Section 7.2 provides a full list of mitigation measures proposed to manage air quality issues during construction. The measures are largely aimed at maintenance of vehicles and equipment and co-ordinating vehicle and plant movements, and implementing measures for dust suppression including watering, covering loads and progressive rehabilitation of exposed areas.

In addition to the measures outlined in Section 6.8.3, potential asbestos would be managed in accordance with the following relevant guidelines:

- *How to Safely Remove Asbestos Code of Practice* (Safe Work Australia, 2016a)
- *Code of Practice for the Safe Removal of Asbestos 2nd Edition* (NOHSC: 2002 (2005))
- *The National Model Work Health and Safety Regulations* (Safe Work Australia, 2016b).

If asbestos is encountered during the construction, works in that location would cease and a suitably licenced asbestos removal contractor would be engaged to remove, transport and dispose of the materials in accordance with the *Work Health and Safety Regulation 2011*.

6.10 Other impacts

6.10.1 Waste

The Project would require a wide range of materials during construction including steel, bricks, pavers, paints, concrete, ballast, cabling and timber. Opportunities to use recycled and sustainable building materials would be considered at the detailed design and procurement stage, where practicable and feasible to do so.

During construction, the Project would generate various types of waste. Typical types of waste that may be generated by the Project would include:

- asphalt and concrete
- excavated spoil
- building material wastes (including, glass, metals, timbers, plastics, packaging, fencing etc.)
- electrical wiring and conduit waste (from electrical connections)
- waste from the removal of overhead wiring system structures (steel supports and metal cabling)
- potential asbestos and hazardous waste from earthworks
- general litter, including food scraps generated by construction workers
- liquid waste such as oils and chemicals from equipment maintenance, in addition to sewage from construction site facilities.

Appropriate planning of construction activities would ensure that the volume of surplus materials is minimised. Where possible, surplus materials and construction waste would be reused or recycled. Construction waste associated with the Project would be managed in accordance with the *Waste Avoidance and Resource Recovery Act 2001* and any offsite disposal of waste would be classified in accordance with the *Environmental Protection Authority's Waste Classification Guidelines Part 1: Classifying waste* (NSW EPA, 2014).

The operation of the Project is not anticipated to result in changes to current operational waste outputs.

A Waste Management Plan would be prepared as part of the CEMP. Construction waste would be managed through the waste hierarchy established under the *Waste Avoidance and Recovery Act 2001*. In addition, the handling, storage, transport and disposal of any asbestos and hazardous waste that may be encountered during construction, would be in accordance with the requirements of the *Protection of the Environment Operations Act 1997* (POEO Act), *Waste Avoidance Resource Recovery Act 2001* (WARR) and relevant guidelines.

Refer to Section 7.2 for a full list of mitigation measures.

6.11 Cumulative impacts

Cumulative impacts occur when two or more projects are carried out concurrently and in close proximity to one another. The impacts may be caused by both construction and operational activities and can result in a greater impact to the surrounding area than would be expected if each project was undertaken in isolation. Multiple projects undertaken at a similar time/similar location may also lead to construction fatigue, particularly around noise, traffic and air quality impacts, if not appropriately managed.

6.11.1 Existing or potential projects

A search of the Department of Planning and Environment's Major Projects Register, Joint Regional Planning Panel Development and Planning Register, and Blue Mountains and Lithgow Council's Development Application Registers for the Blue Mountains and Lithgow local government areas between 5 and 15 May 2017 identified a number of developments within one kilometre of the Project site. These are outlined in Table 33. In addition, proposed and current Sydney Trains and TfNSW projects were also considered.

Table 33 Development within proximity to the Project site

Register	Development	Timing/status	Location in relation to the Project site
Major Projects Register	Extension of the underground Clarence Coal Mine into a number of new mining lease areas primarily to the west of the existing mine	The project was approved on 19 December 2005	Beneath the Project site at Newnes Junction Station. The Project site forms part of a subsidence protection zone for the mining activities
	Two modifications to the extension of the Clarence Coal Mine involving the establishment of a new reject replacement area and upgrade of the effluent irrigation system, increase in employed personnel, and redirection of road haulage routes via Mount Victoria and the Great Western Highway through Lithgow	The project was approved 17 June 2014	About 250 metres from the Project site near Newnes Junction Station at Clarence Colliery (accessed off Clarence Colliery Road)
	Development of a sand and kaoline mine (Newnes Kaolin Mine)	The project was approved 14 March 2006	Immediately adjacent to the Project site at Newnes Junction Station. Some of the site is located within the Project site.
Joint Regional Planning Panel Development and Planning Register	Demolition and reconstruction of a new multi-dwelling 55 unit residential development and hotel conversion to 17 residential multi-dwelling units	The project has been registered however no further information has been provide on the Joint Regional Planning Panel Development and Planning Register	About 20 metres south, of the Project site and around 230 metres east of Katoomba Station, at 2-10 Apex St, 5 Penault Ave, and 7-9 Penault Ave, Katoomba.
	Applications for redevelopment, alterations and additions to the Hydro Majestic Hotel	The project is not yet determined - Public determination meeting has been scheduled	Immediately west of the Project site, south of Medlow Bath Station at 52-88 Great Western Hwy, Medlow Bath

Register	Development	Timing/status	Location in relation to the Project site
	Part demolition of an existing civic centre building, construction a new civic centre and upgrade of the existing library and car park	The project was approved on 13 December 2012	Around 500 metres east of the Project site at 102 – 104 Macquarie Road Springwood
	Additions to existing retail development and additional car parking	The project was determined on March 2012 (Determination: Deferred Commencement Approval).	Around 300 metres south of Katoomba Station at 30-34 Waratah St and 38-40 Parke St, Katoomba
	Retail development at Leura Mall	The project was approved on 11 March 2010	Around 100 metres south of Leura Station at 152-160 Leura Mall, Leura
	Part demolition of Cooinda Aged Care facility and construction of 144 beds, including earthworks, landscaping, and parking areas	The project was approved 18 April 2016	Around 300 metres south of the Project site, south east of Lithgow Station at Short St, Lithgow
TfNSW projects	Upgrade of Wentworth Falls Station including new lifts, canopies, improved station facilities and forecourts, extension of car park and new kiss and ride facilities	The project was approved and is currently under construction	Within the Project site at Wentworth Falls Station
	Upgrade of Leura Station including new lift and stairs, canopy, toilet facilities, taxi ranks and kiss and ride zone, and access paths and other facilities	The project was approved and is currently under construction	Within the Project site at Leura Station

In addition to the above, a search has been undertaken to determine local developments being undertaken within the vicinity of the Project site. This involved searches of development applications currently on exhibition on the Blue Mountains City Council Development Application Register and developments submitted within the last 28 days on the City of Lithgow Council Development Application Register on 15 May 2017.

The searches identified numerous developments on exhibition within the vicinity of the Project site. These primarily involved alterations or additions to existing developments, aside from a new residential development and filling in part of a dam at 92 Railway Parade, adjacent to the Project Site at Medlow Bath Station.

Potential cumulative impacts may occur as a result of construction activities occurring simultaneously with other construction works in the area. Potential impacts could include:

- increased traffic within the road network surrounding the Project site and associated delays for road users
- increased construction noise and vibration levels

  increased dust
- reduced visual amenity.

In addition, the upgrade of Leura Station would result in minor to moderate impacts to the heritage significance of the station (GHD, 2016). The upgrade of Wentworth Falls Station

would result in only negligible to minor impacts on the heritage significance of the station as the works are be limited to already modified items.

There is a potential for the Project to result in further heritage impacts to both Leura Station and Wentworth Falls Station as a result of the platform modifications. However, considering visual impacts and impacts to fabric resulting from the Project are likely to be negligible at both of these stations, the Project is unlikely to result in cumulative impacts in conjunction with the station upgrade projects. The Project is also unlikely to result in any visual impacts to heritage items adjacent to the Project Site.

Considering the minor and temporary nature of the works at each section of the Project site, and that the majority of works would be undertaken during scheduled rail possessions, the cumulative impacts would likely be negligible, provided that mitigation measures in Section 7.2 are implemented. In addition, some of the works would be restricted to rail possessions outside standard working hours, and are therefore unlikely to coincide with other construction activities in the surrounding area aside from maintenance works to be undertaken along the rail line during the scheduled possessions.

6.11.2 Mitigation measures

The potential cumulative impacts associated with the Project would be further considered as the design develops and as further information regarding the location and timing of potential developments is released. Environmental management measures would be developed and implemented as appropriate.

Consultation with relevant stakeholders including Blue Mountains and Lithgow councils would also be undertaken during construction planning where required, to consider potential cumulative impacts and implement measures required to minimise these impacts.

6.12 Climate change and sustainability

6.12.1 Greenhouse gas emissions

Greenhouse gas emission sources associated with the Project can be categorised into three types depending on the source of the emissions as outlined in Table 34.

Table 34 Greenhouse gas emission categories

Emission Scope	Definition
Scope 1	Direct emissions generated by the Project
Scope 2	Indirect emissions from electricity use generated offsite
Scope 3	Emissions generated during the production of materials used onsite or disposal and maintenance materials

Direct greenhouse gas emissions, primarily carbon dioxide, would be expected during construction of the Project as a result of combustion of fuel in construction equipment and vehicles used to transport materials and personnel to and from site.

The anticipated indirect greenhouse gas emissions would result from:

- electricity used onsite during construction for construction compounds and equipment (generated at a power station offsite)
- disposal and decomposition of waste generated from construction work and staff
- emissions used in the production of materials used on site such as steel and concrete.

The volume of greenhouse gas emissions generated during construction would depend on both the type and quantity of construction equipment, vehicles and materials used.

Due to the small scale of the Project and the short-term temporary nature of the individual construction works, it is considered that greenhouse gas emissions resulting from the construction of the Project would be minimal.

Once operational, the Project would not result in any greenhouse gas emissions, as greenhouse gas emissions would be primarily associated with the operation and maintenance of the new fleet.

The Project may also result in an increase in use of public transport and a relative decrease in use of private motor vehicles by commuters and visitors travelling to and from the Blue Mountains and Lithgow local government areas. A modal shift in transport usage may reduce the amount of fuel consumed by private motor vehicles with a corresponding relative reduction in associated greenhouse gas emissions in the local area.

6.12.2 Climate change

The dynamic nature of our climate system indicates a need to focus attention on how to adapt to the changes in climate and understand the limitation of adaptation.

The NSW Office of Environment and Heritage describes the climate of the Sydney Basin (where a majority of the Project is located) as temperate climate, characterised by warm summers and no dry season (OEH, 2016). However the area around the Blue Mountains falls into a mountainous climate zone, where snow occasionally occurs. Rainfall occurs throughout the year, with wetter areas situated closer to the coast or in higher altitude, such as the area where the Project is situated.

The NSW Climate Impact Profiles (DECCW, 2010b) and Impacts of Climate Change on Natural Hazards Profile – Western Region (DECCW, 2010c) suggests that projected climate change for the Sydney/Coast and Western regions (as representative of the Project site) by 2050 is anticipated to involve:

- increases in daily maximum temperatures by up to three degrees Celsius
- increases in summer rainfall by up to 50 per cent, and a 10 to 20 per cent reduction in rainfall during winter, and associated increases in runoff during summer and autumn
- changes to El Nino – Southern Oscillation (ENSO) cycle.

Impacts on infrastructure resulting from the projected climate change (as a reflection of changes in natural hazards) may include:

- increases in average temperatures
- increase in fire frequency as a result of higher temperatures and changes to rainfall patterns, along with an increase in the number of very high – extreme fire days, and extension of the fire season
- increase in the incidence of flash flooding
- increase in the frequency and intensity of heatwaves due to higher temperatures.

Changes in climate that result in increases in the incidence of flash flooding are unlikely to affect the Project. Refer to Section 6.6 for more information on the potential for flooding to impact on the Project.

Climate change may also lead to an increase in frequency and severity in bushfires. A majority of the Project site is situated on land mapped as bush fire prone (NSW Government, 2017b), however the risk of asset damage from bushfires would be minimised through the implementation of measures outlined in Section 7.2 .

6.12.3 Sustainability

The design of the Project would be based on the principles of sustainability, including the incorporation of the *NSW Sustainable Design Guidelines – Version 3.0* (TfNSW, 2013) and TfNSW's Environmental Management System (EMS). These guidelines require a number of mandatory and discretionary initiatives to be applied. Refer to Section 3.1.3 for more information regarding the application of these guidelines.

Further positive impacts in relation to climate change and sustainability associated with the Project include encouraging a reduction in private vehicle use and increase the use of public transport services.

7 Environmental management

This chapter of the REF identifies how the environmental impacts of the Project would be managed through environmental management plans and mitigation measures. Section 7.2 lists the proposed mitigation measures for the Project to minimise the impacts of the Project identified in Chapter 6.

7.1 Environmental management plans

A CEMP for the construction phase of the Project would be prepared in accordance with the requirements of TfNSW's EMS. The CEMP would provide a centralised mechanism through which all potential environmental impacts relevant to the Project would be managed, and outline a framework of procedures and controls for managing environmental impacts during construction.

The CEMP would incorporate as a minimum all environmental mitigation measures identified below in Section 7.2, any conditions from licences or approvals required by legislation, and a process for demonstrating compliance with such mitigation measures and conditions.

7.2 Mitigation measures

Mitigation measures for the Project are listed below in Table 35. These proposed measures would minimise the potential adverse impacts of the Project identified in Chapter 6 should the Project proceed.

Table 35 Proposed mitigation measures

No.	Mitigation measure
	General
1.	Any modifications to the Project would be subject to further assessment and approval by TfNSW. This assessment would need to demonstrate that any environmental impacts resulting from the modifications have been minimised.
2.	A CEMP would be prepared by the Contractor in accordance with the relevant requirements of *Guideline for Preparation of Environmental Management Plans,* (Department of Infrastructure, Planning and Natural Resources, 2004) for approval by TfNSW, prior to the commencement of construction and following any revisions made throughout construction.
3.	A project risk assessment including environmental aspects and impacts would be prepared by the Contractor prior to the commencement of construction and documented as part of the CEMP.
4.	Site specific Environmental Controls Maps (ECMs) would be developed by the Contractor in accordance with TfNSW's *Guide to Environmental Controls Map* (TfNSW, 2015c) for approval by TfNSW, prior to the commencement of construction and following any revisions made throughout construction.
5.	Prior to the commencement of construction, all contractors would be inducted on the key Project environmental risks, procedures, mitigation measures and conditions of approval.
6.	Site inspections to monitor environmental compliance and performance would be undertaken during construction at appropriate intervals.
7.	Services relocation would be undertaken in consultation with the relevant authority. Contractors would mark existing services on the ECM to avoid direct impacts during construction.

No.	Mitigation measure
	Non-Indigenous heritage
8.	Works at stations listed on the State Heritage Register (Lawson, Katoomba, Medlow Bath, Blackheath, Eskbank and Lithgow stations) require approval under Section 60 of the *Heritage Act 1977* which would be sought from the Heritage Division. Works would be undertaken in accordance with the requirements of the Section 60 approvals.
9.	Works at Lawson Station require an exception under Section 139(1b) of the *Heritage Act 1977* be obtained prior to works commencing.
10.	A suitably qualified and experienced heritage conservation architect would be engaged to provide ongoing heritage and conservation advice throughout detailed design and any subsequent relevant design modifications. The nominated heritage conservation architect would provide specialist advice throughout the detailed design phase to ensure that the final design adheres to the Sydney Trains *Heritage Platforms Conservation Management Strategy* (Australian Museum Business Services, 2015).
11.	A physical membrane should be installed between the heritage listed platforms and the proposed extensions at Katoomba Station and Lithgow Station to ensure the protection of heritage brickwork in accordance with Strategy 9 of the *Heritage Platforms Conservation Management Strategy.*
12.	The concrete coping of the proposed platform extension and the mortar associated with the brick facade used in the works should adhere to Strategy 7 of the *Heritage Platforms Conservation Management Strategy.*
13.	It is recommended that investigations into the rendering of the length of the corbeled brickwork be undertaken, as appropriate and advised by the heritage conservation architect, to create a consistent presentation.
14.	For canopy modifications at Faulconbridge Station, it is recommended that the bolt heads used to attach the splice plates to the canopy rafters be matched in profile to those evident on the remainder of the canopy. They would be altered in diameter to ensure the new work is distinguishable from the original
15.	Archival recording would be undertaken at the State Heritage Register listed stations (Lawson Station, Katoomba Station, Medlow Bath Station, Blackheath Station, Eskbank Station and Lithgow Station) as described in the heritage assessments in accordance with the relevant NSW Heritage Council guidelines. These archival records and design plans for the proposed works should be lodged with Sydney Trains for their records.
16.	The CEMP would include procedures in accordance with TfNSW's *Unexpected Heritage Finds Guideline* (TfNSW, 2015) to manage activities in the unlikely event that intact archaeological relics or deposits are encountered during ground disturbing activities and construction works.
17.	A heritage induction would be provided to workers prior to construction, informing them of the location of known heritage items and guidelines to follow if unanticipated heritage items or deposits are located during construction.
18.	In the event that any unanticipated archaeological deposits are identified within the Project site during construction, the procedures contained in TfNSW's *Unexpected Heritage Finds Guideline* (TfNSW, 2015a) would be followed, and works within the vicinity of the find would cease immediately. The Contractor would immediately notify the TfNSW Project Manager and the TfNSW Environment and Planning Manager so they can assist in co-ordinating the next steps which are likely to involve consultation with an archaeologist and OEH. Where required, further archaeological work and/or consents would be obtained for any unanticipated archaeological deposits prior to works recommencing at the location.

No.	Mitigation measure
	Indigenous heritage
19.	If unforeseen Indigenous objects are uncovered during construction, the procedures contained in TfNSW's *Unexpected Heritage Finds Guideline* (TfNSW, 2015a) would be followed, and works within the vicinity of the find would cease immediately. The Contractor would immediately notify the TfNSW Project Manager and TfNSW Environment and Planning Manager so they can assist in co-ordinating next steps which are likely to involve consultation with an Aboriginal heritage consultant, the OEH and the Local Aboriginal Land Council. If human remains are found, work would cease, the site secured and the NSW Police and the OEH notified. Where required, further archaeological investigations and an Aboriginal Heritage Impact Permit would be obtained prior to works recommencing at the location.
	Noise and vibration
20.	Prior to commencement of works, a Construction Noise and Vibration Management Plan (CNVMP) would be prepared and implemented in accordance with the requirements of the *Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2009), *Construction Noise Strategy* (TfNSW, 2012b) and the *Noise and Vibration Impact Assessment* for the Project (AECOM, 2017). The CNVMP would take into consideration measures for reducing the source noise levels of construction equipment by construction planning and equipment selection where practicable.
21.	The CNVMP would outline measures to reduce the noise impact from construction activities. Reasonable and feasible noise mitigation measures which would be considered, include: • regularly training workers and contractors (such as at the site induction and toolbox talks) on the importance of minimising noise emissions and how to use equipment in ways to minimise noise • avoiding any unnecessary noise when carrying out manual operations and when operating plant • ensuring spoil is placed and not dropped into awaiting trucks • avoiding/limiting simultaneous operation of noisy plant and equipment within discernible range of a sensitive receiver where practicable • switching off any equipment not in use for extended periods e.g. heavy vehicles engines would be switched off whilst being unloaded • avoiding deliveries at night/evenings wherever practicable, loading and unloading of materials/deliveries is to occur as far as possible from sensitive receivers and loading/unloading areas to be shielded if close to sensitive receivers • no idling of delivery trucks, limit the speed of vehicles and avoid the use of engine compression brakes and delivery vehicles to be fitted with straps rather than chains for unloading, wherever possible • where possible reduce noise from mobile plant through additional fittings including residential grade mufflers, damped hammers and air parking brake engagement is silenced • keeping truck drivers informed of designated vehicle routes, parking locations and acceptable delivery hours for the site • selection of site access points and roads as far as possible away from sensitive receivers., planning traffic flow, parking and loading/unloading areas to minimise reversing movements within the site • minimising talking loudly; no swearing or unnecessary shouting, or loud stereos/radios onsite; no dropping of materials from height where practicable, no throwing of metal items and slamming of doors.

No.	Mitigation measure
22.	The CNVMP would include measures to reduce the construction noise and vibration impacts from mechanical activities. Reasonable and feasible noise mitigation options which would be considered, include: • maximising the offset distance between noisy plant and adjacent sensitive receivers and determining safe working distances • using the most suitable equipment necessary for the construction works at any one time • directing noise-emitting plant away from sensitive receivers regularly inspecting and maintaining plant to avoid increased noise levels from rattling hatches, loose fittings etc • using non-tonal reversing/movement alarms such as broadband (non-tonal) alarms or ambient noise-sensing alarms for all plant used regularly onsite (greater than one day), and for any out of hours works • noise emissions should be considered as part of the equipment selection process. The use of quieter and less vibration emitting construction methods should be implemented where feasible and reasonable • the noise levels of plant and equipment must have operating sound power or sound pressure levels that would meet the predicted noise levels.
23.	The CNVMP would be supported by the Community Liaison Plan to be prepared for the Project, which would detail community notification requirements, for example letter box drops and phone calls. In accordance with TfNSW's *Construction Noise Strategy,* and in consultation with impacted receivers, feasible and reasonable mitigation measures would be implemented to minimise impacts during construction.
24.	Any works outside standard hours may be undertaken if approved by TfNSW and the community is notified prior to these works commencing. An Out of Hours Work application form would need to be prepared by the Contractor and submitted to the TfNSW Environment and Planning Manager for any works outside normal hours. Work generating high noise and/or vibration levels should be scheduled during less sensitive time periods. High noise and vibration generating activities may only be carried out in continuous blocks, not exceeding three hours each, with a minimum respite period of one hour between each block.
25.	To avoid structural impacts as a result of vibration or direct contact with structures, the proposed works would be undertaken in accordance with the safe work distances outlined in the Noise and Vibration Assessment (AECOM, 2017f) and attended vibration monitoring or vibration trials would be undertaken where these distances are required to be challenged.
26.	Vibration resulting from construction and received at any structure outside of the Project would be managed in accordance with: • for structural damage vibration - German Standard *DIN 4150: Part 3 – 1999 Structural Vibration in Buildings: Effects on Structures* and British Standard *BS 7385-2:1993 Guide to Evaluation of Human Exposure to Vibration in Buildings (1 Hz to 80 Hz)* • for human exposure to vibration the acceptable vibration - values set out in the *Environmental Noise Management Assessing Vibration: A Technical Guideline* (Department of Environment and Conservation, 2006) which includes British Standard BS *7385-2:1993 Guide to Evaluation of Human Exposure to Vibration in Buildings (1 Hz to 80 Hz).*
27.	For vibration-intensive activities which occur within the safe working distance for cosmetic damage for heritage station platforms, platform buildings and other station infrastructure, as presented in Table 23, management methods to mitigate these impacts would include, as a minimum: • the use of less vibration-intensive methods of construction or equipment would be used where possible to reduce annoyance and potential for cosmetic damage. All equipment would be maintained and operated in an efficient manner, in accordance with manufacturer's specifications, to reduce the potential for adverse vibration impacts. • attended vibration measurements would be undertaken when work commences, to determine site-specific safe working distances. Vibration intensive work would not proceed within the safe working distances unless a permanent vibration monitoring system is installed around one metre from the building footprint, to warn operators (e.g. via flashing light, audible alarm, SMS) when vibration levels are approaching the peak particle velocity objective. Condition surveys of sensitive heritage structures would also be carried out before construction works commence.

No.	Mitigation measure
	Traffic and site access
28.	Temporary measures informing customers of the extra gap between the train and station platforms would be determined during detailed design and implemented during operations to minimise disruptions to customers while both the existing and new fleet are operating on the Blue Mountains Line. These may include a combination of additional signage, additional station staff, physical platform gap filling solutions and communication strategies.
29.	Prior to the commencement of construction, a construction Traffic Management Plan (TMP) would be prepared as part of the CEMP and would include at a minimum: • identifying traffic management requirements during construction • ensuring adequate road signage at construction work sites to inform motorists and pedestrians of the work site ahead to ensure that the risk of road accidents and disruption to surrounding land uses is minimised • maximising safety and accessibility for pedestrians and cyclists • maintaining a reasonable level of public access across the rail corridor and to public transport services • ensuring adequate sight lines to allow for safe entry and exit from the site • ensuring that disruptions to traffic flows on public streets are minimised and, where unavoidable, managed in consultation with the relevant roads authority • ensuring access to stations, businesses, entertainment premises and residential properties (unless affected property owners have been consulted and appropriate alternative arrangements made) • managing impacts and changes to on and off street parking and requirements for any temporary replacement provision • managing staff travel to and from the site, including ensuring parking locations for construction workers are away from stations during normal access and busy residential areas during rail possession / closure and details of how this will be monitored for compliance • routes to be used by heavy construction-related vehicles to minimise impacts on sensitive land uses and businesses • assessing suitability of local roads providing access to the proposed compound sites • measures to manage traffic flows around the area affected by the Project, including as required regulatory and direction signposting, line marking and variable message signs and all other traffic control devices necessary for the implementation of the TMP • where practicable, avoid delivery of construction material during peak commuter travel periods and school drop off/pick up times • limit off-site construction vehicle parking to designated areas Consultation with the relevant roads authorities would be undertaken during preparation of the construction TMP, as required. The performance of all project traffic arrangements must be monitored during construction.
30.	Communication would be provided to the community and local residents to inform them in advance of changes to parking, pedestrian access and/or traffic conditions including vehicle movements and anticipated effects on the local road network relating to site works.
31.	Road Occupancy Licences for temporary road closures and / or diversions would be obtained, where required.
32.	Construction works would minimise temporary loss of parking particularly during works at the stations (e.g. Katoomba Station and Lithgow Station platform extensions).
	Urban design, landscape and visual amenity
33.	All permanent lighting would be designed and installed in accordance with the requirements of standards relevant to *AS 1158 Road Lighting* and *AS 4282 Controlling the Obtrusive Effects of Outdoor Lighting* to minimise disruption to neighbouring residences.

No.	Mitigation measure
34.	Temporary lighting during construction would be directed away from adjacent residential receivers where possible to minimise light spillage.
35.	Worksite compounds would be screened with shade cloth (or similar material, where necessary) to minimise visual impacts from key viewing locations.
36.	Temporary hoardings, barriers, traffic management and signage would be removed when no longer required.
37.	During construction, graffiti would be removed in accordance with TfNSW's Standard Requirements.
38.	Selection of materials and colour finishes for new elements of the Project to minimise the bulk of structures (e.g. platforms at Katoomba Station and Lithgow Station).
39.	Areas used for site compounds would be selected using the criteria outlined in Section 3.2.7 and would be rehabilitated at the end of construction.
	Socio-economic
40.	Sustainability criteria for the Project would be established to encourage the Contractor to purchase goods and services locally, helping to ensure the local community benefits from the construction of the Project.
41.	Feedback through the submissions process would be encouraged to facilitate opportunities for the community and stakeholders to have input into the Project, where practicable.
42.	A Community Liaison Plan would be prepared prior to construction to identify all potential stakeholders and methods for consultation with these groups during construction. The plan would also encourage feedback and facilitate opportunities for the community and stakeholders to have input into the Project, where practicable.
43.	Contact details for a 24-hour construction response line, Project Infoline and email address would be provided for ongoing stakeholder contact throughout the life of the Project.
44.	The community would be kept informed of construction progress, activities and impacts in accordance with the Community Liaison Plan.
	Biodiversity
45.	No works are to be undertaken within the boundary of the Blue Mountains National Park.
46.	Construction of the Project must be undertaken in accordance with TfNSW's *Vegetation Management (Protection and Removal) Guideline* (TfNSW, 2015d) and TfNSW's *Fauna Management Guideline* (TfNSW, 2015e).
47.	In order to control the potential impacts of weeds and disease, the following measures should be implemented: • control and maintain vehicle hygiene measures at the various site entry/exit points, particularly those passing through areas of native vegetation to reduce the likelihood of introducing or spreading weed or disease infestations within the Project site. Ensure machinery, equipment and other plant are washed down prior to entry to the site to avoid the spread of weeds and other pathogens • minimise the overall disturbance of soils where possible to avoid providing further disturbed ground for colonisation by weeds • minimise the import or export of soil material from the site wherever possible to avoid the inadvertent movement of weed seed and where practical, preserve top soil from excavation for reuse later over the top of excavations areas.
48.	All workers would be provided with an environmental induction prior to commencing work onsite. This induction would include information on the protection measures to be implemented to protect vegetation, penalties for breaches and locations of areas of sensitivity.

No.	Mitigation measure
49.	In the event of any tree to be retained becoming damaged during construction, the Contractor would immediately notify the TfNSW Project Manager and TfNSW Environment and Planning Manager to coordinate the response which may include contacting an arborist to inspect and provide advice on remedial action, where possible.
50.	Should the detailed design or onsite works determine the need to remove or trim any additional trees, which have not been identified in the REF, the Contractor would be required to complete TfNSW's Tree Removal Application Form and submit it to TfNSW for approval. No vegetation would be removed unless further assessment is undertaken and approval is granted by TfNSW.
51.	Weed control measures, consistent with TfNSW's *Weed Management and Disposal Guideline* (TfNSW, 2015f), would be developed and implemented as part of the CEMP to manage the potential dispersal and establishment of weeds during the construction phase of the Project. This would include the management and disposal of weeds in accordance with the *Noxious Weeds Act 1993.*
52.	In order to protection of threatened fauna and habitat the following measures should be implemented: • if unexpected threatened fauna species are discovered, stop works immediately and contact TfNSW environment personnel for advice • visibly demarcate work areas to prevent personnel, materials plant or machinery moving into adjacent areas of grassland, waterway, bushland or other habitat in order to prevent unauthorised clearing. These areas should be visited by a qualified site ecologist to ensure that threatened flora such as the Flockton Wattle and TECs are not affected by the works (unless otherwise approved following completion of additional assessment) • restrict intrusion into areas of vegetation and waterways in the immediate vicinity of the proposed works. Minimise impacts upon downstream fauna and flora habitats (particularly amphibians) through sediment and bank stabilisation measures. Silt fences, sediment traps and placement of stockpiles and stabilisation after vegetation removal should be implemented as needed to assist in minimising upstream and downstream impacts • existing structures to be disturbed should be inspected for the presence of bats, prior to undertaking works. If bats are identified before / during the works, works would cease and the TfNSW project manager and site environmental specialist would be notified.
	Soils and water
53.	Prior to commencement of works, a site-specific Erosion and Sediment Control Plan for each site would be prepared in accordance with the 'Blue Book' *Managing Urban Stormwater: Soils and Construction Guidelines* (Landcom, 2004) and updated throughout construction so it remains relevant to the activities. The Erosion and Sediment Control Plan measures would be implemented prior to commencement of works and maintained throughout construction.
54.	An environmental risk assessment would be undertaken as part of the CEMP and would include a section on contamination. Measures to mitigate potential impacts from any contaminated soil/materials during construction would be developed and implemented through an unexpected contamination finds procedure and Waste Management Plan as part of the CEMP.
55.	Erosion and sediment control measures would be established prior to any clearing, grubbing and site establishment activities and would be maintained and regularly inspected (particularly following rainfall events) to ensure their ongoing functionality. Records of this process should be made and able to be provided upon request. Erosion and sediment control measures would be maintained and left in place until the works are complete and areas are stabilised.
56.	During the construction phase, work areas are to be stabilised and kept in a clean and tidy condition.
57.	Rehabilitation of disturbed areas to be undertaken progressively as construction activities are completed. Disturbed surfaces must be stabilised as soon as possible. Traffic movements on any disturbed areas must be limited.
58.	During construction and operation, any material stockpiles (inclusive of excavated materials that are to be reused on site) are to be covered and contained, with appropriate bunding provided.

No.	Mitigation measure
59.	Vehicles and machinery would be properly maintained and routinely inspected to minimise the risk of fuel/oil leaks. Construction plant, vehicles and equipment would also be refuelled offsite, or in a designated refuelling area.
60.	All fuels, chemicals and hazardous liquids would be stored away from drainage lines, within an impervious bunded area in accordance with Australian Standards, EPA Guidelines and TfNSW's *Chemical Storage and Spill Response Guidelines* (TfNSW, 2015g).
61.	Adequate water quality and hazardous materials procedures (including spill management procedures, use of spill kits and procedures for refuelling and maintaining construction vehicles/equipment) would be implemented in accordance with relevant EPA guidelines and TfNSW's *Chemical Storage and Spill Response Guidelines* (TfNSW, 2015g) during the construction phase. All staff would be made aware of the location of the spill kits and be trained in how to use the kits in the case of a spill. Environmental spill kits containing spill response materials suited to the proposed works shall be kept on site at all times and used in the event of a spill
62.	In the event of a pollution incident, works would cease in the immediate vicinity and the Contractor would immediately notify the TfNSW Project Manager and TfNSW Environment and Planning Manager. The EPA would be notified by TfNSW if required, in accordance with Part 5.7 of the POEO Act.
63.	The existing drainage systems would remain operational throughout the construction phase.
64.	Should groundwater be encountered during excavation works, groundwater would be managed in accordance with the requirements of the *Waste Classification Guidelines* (EPA, 2014) and TfNSW's *Water Discharge and Reuse Guideline* (TfNSW, 2015b).
65.	In order to avoid soil and water impacts that ,may arise from contaminated materials the following should be implemented: • all material for off-site disposal is to be tested and classified in accordance with the *Waste Classification Guidelines* (EPA, 2014). • if evidence is found indicating that contamination in any soil or material is present, it shall be sampled and analysed by an appropriately registered laboratory (NATA) and managed in accordance with the *Waste Classification Guidelines* (EPA, 2014), the *Contaminated Land Management Act 1997* and the *Guidelines on the Duty to Report Contamination* (EPA, 2015). If asbestos is encountered during the construction, works in that location are to cease and a suitably licenced asbestos removal contractor shall be engaged to remove, transport and dispose of the materials in accordance with the Work Health and Safety Regulation 2011.
	Air quality
66.	Air quality management and monitoring for the Project would be undertaken in accordance with TfNSW's *Air Quality Management Guideline* (TfNSW, 2015h).
67.	Methods for management of emissions would be incorporated into project inductions, training and pre-start/toolbox talks.
68.	Plant and machinery would be regularly checked and maintained in a proper and efficient condition. Plant and machinery would be switched off when not in use, and not left idling. Plan deliveries to site and plant movements on site to minimise idling times.
69.	Vehicle and machinery movements during construction would be restricted to designated areas (sealed/compacted surfaces where practicable). Clean and stable site access points and roads would be provided as required, which may include temporary sealing of roads and other exposed areas onsite such as spray sealing or applying a crusting or binding agent and prevent mud and dirt being tracked onto sealed road surfaces. Soil would be removed from vehicle and mobile plant undercarriage and wheels in a designated wash down area.
70.	Appropriately cover loads on trucks transporting material to and from the construction site and securely fix tailgates of road transport trucks prior to loading and immediately after unloading

No.	Mitigation measure
71.	To minimise the generation of dust from construction activities, the following measures would be implemented: • develop a monitoring regime and protocols to respond quickly to unfavourable weather conditions, including restricting activities, covering exposed surfaces / stockpiles and increasing watering • ensure relevant construction plant has effective watering mechanisms to damp down during works. Apply water (or alternate measures) to exposed surfaces (e.g. unpaved roads, stockpiles, hardstand areas and other exposed surfaces), regularly water all exposed surfaces using water sprays or sprinkler systems • minimise the number of stockpiles onsite, avoid stockpiling in exposed areas and ensure long-term stockpiles are covered or stabilised • progressively rehabilitate exposed areas upon completion of different work stages, including providing temporary cover and commencing permanent landscaping as early as possible.
72.	Asbestos would be managed in accordance with the following relevant guidelines: • *How to Safely Remove Asbestos Code of Practice* (Safe Work Australia, 2016) • *Code of Practice for the Safe Removal of Asbestos 2nd Edition* (NOHSC: 2002 (2005)) • *The National Model Work Health and Safety Regulations (*Safe Work Australia, 2016).
	Waste and contamination
73.	A Waste Management Plan would be prepared under the CEMP for the Project. The plan would address waste management and ensure disturbance works, excavation works and the storage and use of plant and machinery within the Project does not result in an increased risk of exposure to contamination. At a minimum it should include the following: • identify all potential waste streams associated with the works and outline methods of disposal of waste that cannot be reused or recycled at appropriately licensed facilities • detail other onsite management practices such as keeping areas free of rubbish • specify controls and containment procedures for hazardous waste and asbestos waste • outline the reporting regime for collating construction waste data.
74.	An appropriate Unexpected Finds Protocol, considering asbestos containing materials and other potential contaminants, would be included in the CEMP. Procedures for handling asbestos containing materials, including licensed contractor involvement as required, record keeping, site personnel awareness and waste disposal to be undertaken in accordance with WorkCover requirements.
75.	All spoil and waste must be classified in accordance with the *Waste Classification Guidelines Part 1: Classifying waste (*EPA, 2014) prior to disposal at an appropriately licensed facility.
76.	Any concrete washout would be established and maintained in accordance with TfNSW's *Concrete Washout Guideline* – draft (TfNSW, 2015i) with details included in the CEMP and location marked on the ECM.
77.	The following key waste mitigation and management strategies would be included in the CEMP: • removal and transport of waste off-site is to be undertaken by a suitably licensed contractor with appropriate approvals obtained under the POEO Act. Disposal of the waste is to occur at a suitably licenced waste facility, which can lawfully accept the waste type in accordance with the POEO Act • construction materials would be purchased in accordance with an established procurement strategy that prioritises the selection of materials that utilise best practice recycled materials and sustainability ratings • where possible, construction wastes would be diverted from landfill and recycled or reused • working areas would be maintained, kept free of rubbish and cleaned up at the end of each working day.
78.	The handling, storage, transport and disposal of any asbestos and hazardous waste that may be encountered during construction, would be in accordance with the requirements of the *Protection of the Environment Operations Act 1997* (POEO Act), *Waste Avoidance Resource Recovery Act 2001* (WARR) and relevant guidelines.

No.	Mitigation measure
	Cumulative impacts
79.	The potential cumulative impacts associated with the Project would be further considered as the design develops and as further information regarding the location and timing of potential developments is released. Environmental management measures would be developed in the CEMP, and implemented as appropriate.
80.	Consultation with relevant stakeholders including Blue Mountains and Lithgow councils would be undertaken during construction planning where required, to consider potential cumulative impacts and implement measures required to minimise these impacts.
	Climate change and sustainability
81.	Detailed design of the Project would be undertaken in accordance with the *NSW Sustainable Design Guidelines – Version 3.0* (TfNSW, 2013).
82.	Measures to manage the risk of bushfire would be incorporated into the CEMP. These may include maintenance of an asset protection zone around the Project site, and ensuring access tracks would be maintained for use in the event of an emergency include bushfire evacuation and defence.
83.	An Emergency Evacuation Plan would be prepared in accordance with the NSW Rural Fire Service Guidelines and included in the CEMP.

8 Conclusion

This REF has been prepared in accordance with the provisions of section 111 of the EP&A Act, taking into account to the fullest extent possible, all matters affecting or likely to affect the environment as a result of the Project.

The Project would ensure adequate width (and associated clearances) for the new trains to travel along the Blue Mountains Line.

The likely key impacts of the Project are as follows:

- potential impacts to State heritage-listed items from the platform coping, platform extensions and other modifications
- temporary noise and vibration impacts during construction
- potential temporary access changes for vehicles, cyclists and pedestrians in and around the station areas during construction
- temporary reduction in the visual environment of heritage listed stations and National Park vistas from the presence of construction sites.

This REF has considered and assessed these impacts in accordance with clause 228 of the EP&A Regulation and the requirements of the EPBC Act (refer to Chapter 6, Appendix A and Appendix B). Based on the assessment contained in this REF, it is considered that the Project is unlikely to have a significant impact upon the environment or any threatened species, populations or communities. Accordingly an EIS is not required, nor is the approval of the Minister for Planning.

The Project would also take into account the principles of ESD (refer to Section 3.1.3 and Section 4.6). These would be considered during the detailed design, construction and operational phases of the Project. This would ensure the Project is delivered to maximise the benefits to the community, is cost effective and minimises any adverse impacts on the environment.

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Appendix A Consideration of matters of National Environmental Significance

The table below demonstrates TfNSW's consideration of the matters of NES under the EPBC Act to be considered in order to determine whether the Project should be referred to Commonwealth Department of the Environment.

Matters of NES	Impacts
Any impact on a World Heritage property? The Greater Blue Mountains World Heritage Area occurs within the locality of the Project site and includes the Blue Mountains National Park. The Greater Blue Mountains World Heritage Area is located immediately adjacent to the Project site at various locations along the Project route, but is not within the Project site. While the Project is located adjacent to the Greater Blue Mountains World Heritage area, the assessment has shown that no impacts would result from the Project, as the Project activities are of a nature and scale that is unlikely to impact the adjacent environment. In addition, no vegetation removal is required.	Nil
Any impact on a National Heritage place? There are no items on the National Heritage list within the Project site.	Nil
Any impact on a wetland of international importance? There are no wetlands of international importance located within or adjacent to the Project site.	Nil
Any impact on a listed threatened species or communities? Based on an ecological assessment of the Project site, no adverse impacts to a listed threatened species or community is anticipated as a result of the Project.	Nil
Any impacts on listed migratory species? Based on an ecological assessment of the Project site, no adverse impacts to a listed migratory species is anticipated as a result of the Project.	Nil
Does the Project involve a nuclear action (including uranium mining)? The Project involves enabling works along the Blue Mountains Line. No nuclear actions are proposed as part of the Project.	Nil
Any impact on a Commonwealth marine area? There are no Commonwealth marine areas located within the vicinity of the Project site.	Nil
Does the Project involve development of coal seam gas and/or large coal mine that has the potential to impact on water resources? The Project involves enabling works along the Blue Mountains Line. No coal seam gas or other coal operations are proposed as part of the Project.	Nil
Additionally, any impact (direct or indirect) on Commonwealth land? The Project involves enabling works along the Blue Mountains Line. No direct or indirect impacts to Commonwealth land would result from the Project.	Nil

Appendix B Consideration of clause 228

The table below demonstrates TfNSW's consideration of the specific factors of clause 228 of the EP&A Regulation in determining whether the Project would have a significant impact on the environment.

Factor	Impacts
(a) Any environmental impact on a community? There would be some temporary impacts to the community during construction, particularly noise, traffic, visual amenity and air quality. There would also be some permanent impacts in relation to heritage (non-indigenous). The Project would facilitate the operation of the New Intercity Fleet which would provide benefit to the local community through increased passenger comfort.	Minor during construction
(b) Any transformation of a locality? The Project would introduce temporary visible new elements during construction such as equipment, machinery and personnel. The Project would also include the introduction of new visible elements in the landscape during operation as a result of the platform extensions at Katoomba Station and Lithgow Station, along with more minor modifications of the landscape associated with rail infrastructure. The appearance of the new elements in the platform extensions would be consistent with the existing station elements and are considered to be common features in urban areas.	Minor during construction and operation
(c) Any environmental impact on the ecosystem of the locality? The Project would not require vegetation removal within the rail corridor and as such, would have a negligible impact to the ecosystem of the locality. Any additional vegetation found to require removal, not assessed in this REF, would be subject to further assessment, and approval from TfNSW. No access to the Blue Mountains National Park is required.	Nil
(d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality? There would be some temporary impacts during construction particularly in relation to noise, traffic and access, air quality, and visual amenity (refer to sections 6.3, 6.4, 6.5, and 0). The platform extensions at Katoomba Station and Lithgow Station would result in a visual change during construction, and impacts to heritage (non-Indigenous). However, only minor impacts are anticipated as the existing platforms have been extended previously, and the proposed extensions would be located on the same sides of the platforms that have undergone previous extensions. The appearance of the new elements in the platform extensions would be consistent with the existing station elements (refer to Section 6.5). Furthermore, each phase of works is expected to be completed over rail possessions. A sensitive approach would also be considered during the development of detailed design, including the selection of materials.	Minor to moderate
(e) Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations? The Project would have a positive contribution to the locality by enabling the New Intercity Fleet to operate on the Blue Mountains Line. Six stations within the Project site are either listed, or fall within the curtilage of a listing on the State Heritage Register. In addition, all 15 stations within the Project site are listed on the RailCorp Section 170 Heritage and Conservation Register, and are also listed on either the Blue Mountains or Lithgow LEPs. The Project would result in some minor to moderate impacts to State listed items, largely as a result of the minor works at all the station locations. However impacts on heritage would be minimised through the implementation of the mitigation measures in the REF.	Moderate

Factor	Impacts
(f) Any impact on the habitat of protected fauna (within the meaning of the *National Parks and Wildlife Act 1974*)? Preliminary searches using the BioNet Atlas, Protected Matters Search Tool and PlantNET, have identified a number of threatened and endangered communities, and flora and fauna within the vicinity of the Project. However, considering the works would be undertaken largely within the rail corridor, and would not require any vegetation removal, the Project is unlikely to impact on ecological values during construction and/or operation. As determined through an ecological assessment, the Project is unlikely to have any impact on the habitat of protected fauna.	Nil
(g) Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air? While a number of threatened and endangered species have been identified within the vicinity of the Project site based on searches conducted, impacts to these species are unlikely due to the minor nature and limited geographical extent of the works that would not require the removal of any vegetation. The Project is unlikely to have any impact on endangering any species of animal, plant or other form of like, whether living on land, in water or in the air though this would be determined through an ecological assessment.	Nil
(h) Any long-term effects on the environment? The Project is unlikely to have any long-term effects on the environment.	Nil
(i) Any degradation of the quality of the environment? The Project is unlikely to have any degradation of the quality of the environment.	Nil
(j) Any risk to the safety of the environment? The Project is unlikely to cause any pollution or safety risks to the environment. Specific management measures would be implemented to manage asbestos and other hazardous materials that may be encountered during construction or demolition works.	Minor
(k) Any reduction in the range of beneficial uses of the environment? The Project is unlikely to have any reduction in the range of beneficial uses of the environment.	Nil
(l) Any pollution of the environment? The Project is unlikely to cause any pollution of the environment provided the recommended mitigation measures are implemented.	Minor
(m) Any environmental problems associated with the disposal of waste? The Project is unlikely to cause any environmental problems associated with the disposal of waste. Hazardous waste and special waste may be generated from the Project. Prior to construction, contamination investigations would be undertaken to confirm the presence of contaminated material, particularly asbestos.	Minor
(n) Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply? The Project is unlikely to increase demands on resources that are, or are likely to become, in short supply.	Nil
(o) Any cumulative environmental effect with other existing or likely future activities? Cumulative effects of the Project have been assessed as part of the REF. Where feasible, project activities and environmental management measures would be co-ordinated to reduce any cumulative construction impacts.	Negligible
(p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions? As the Project is not located within the vicinity of the coast, it would not impact on coastal processes and coastal hazards, including those under projected climate change conditions.	Nil

Transport for NSW

New Intercity Fleet Springwood to Lithgow Rail Corridor Modifications

Review of Environmental Factors Volume 2

August 2017

Appendix C Construction compounds

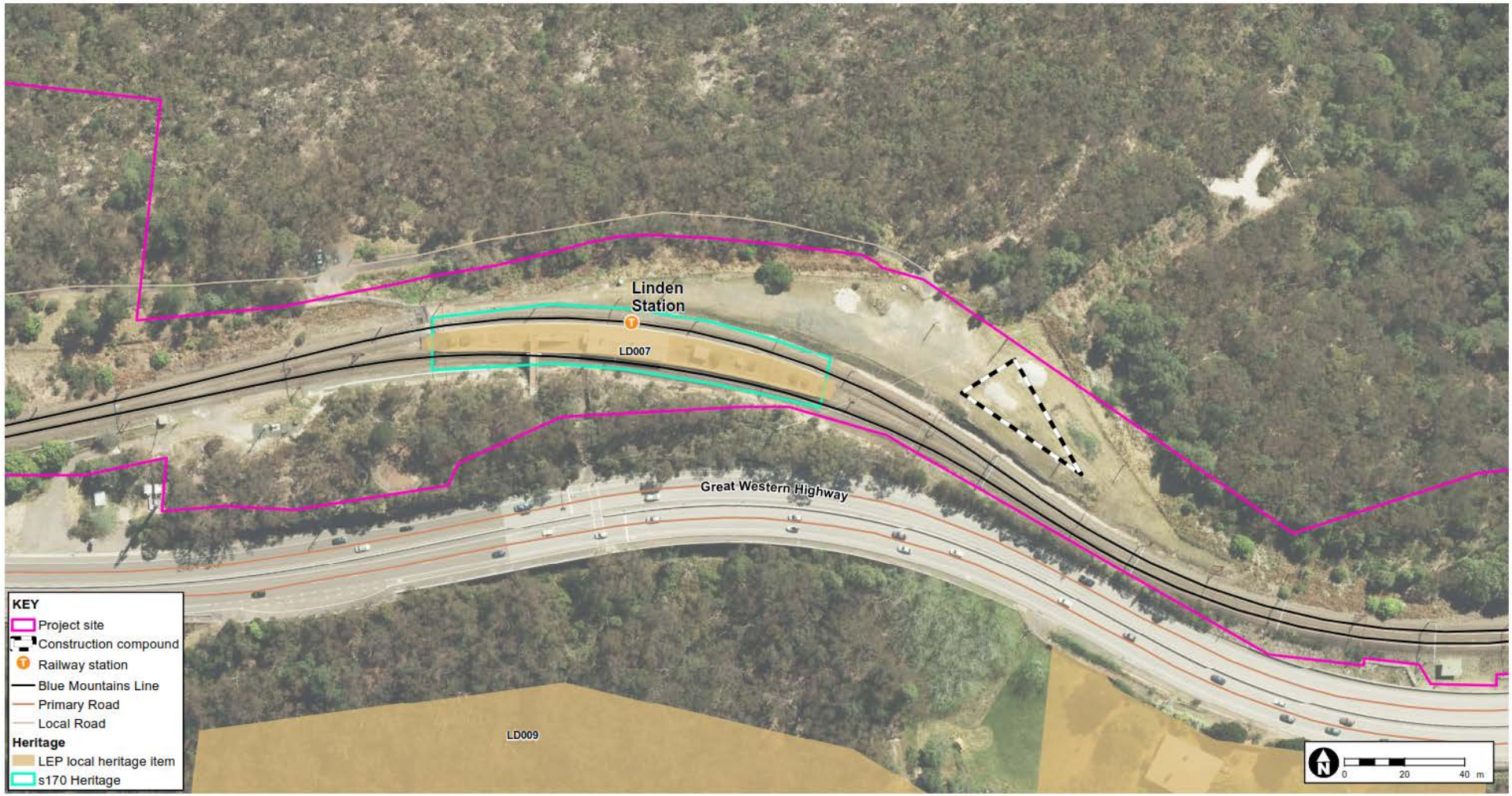


Figure 17 Linden Station - locations of primary construction compounds and registered heritage items

Figure 18 Woodford Station – locations of primary construction compounds and registered heritage items

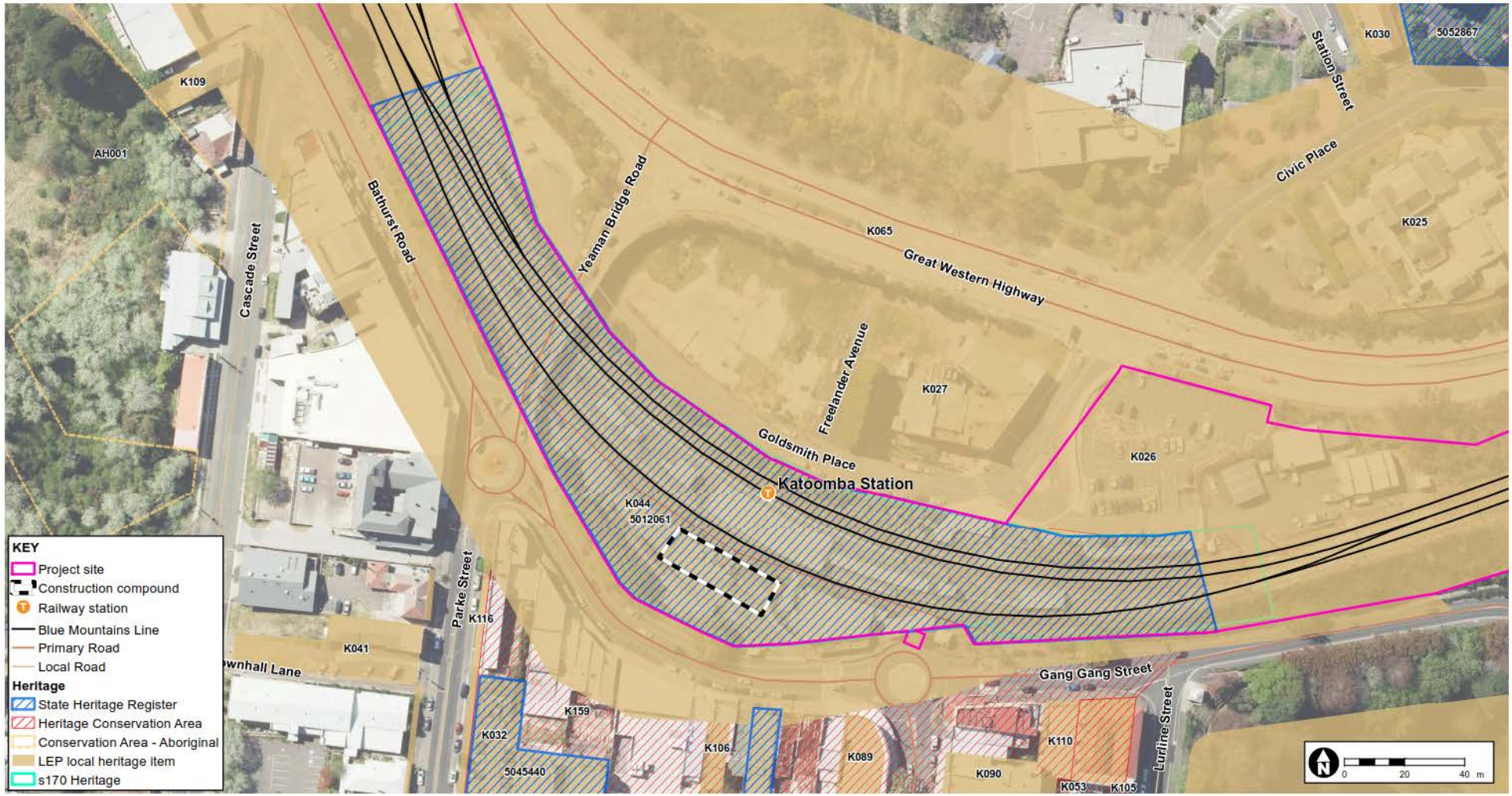


Figure 19 Katoomba Station - locations of primary construction compounds and registered heritage items

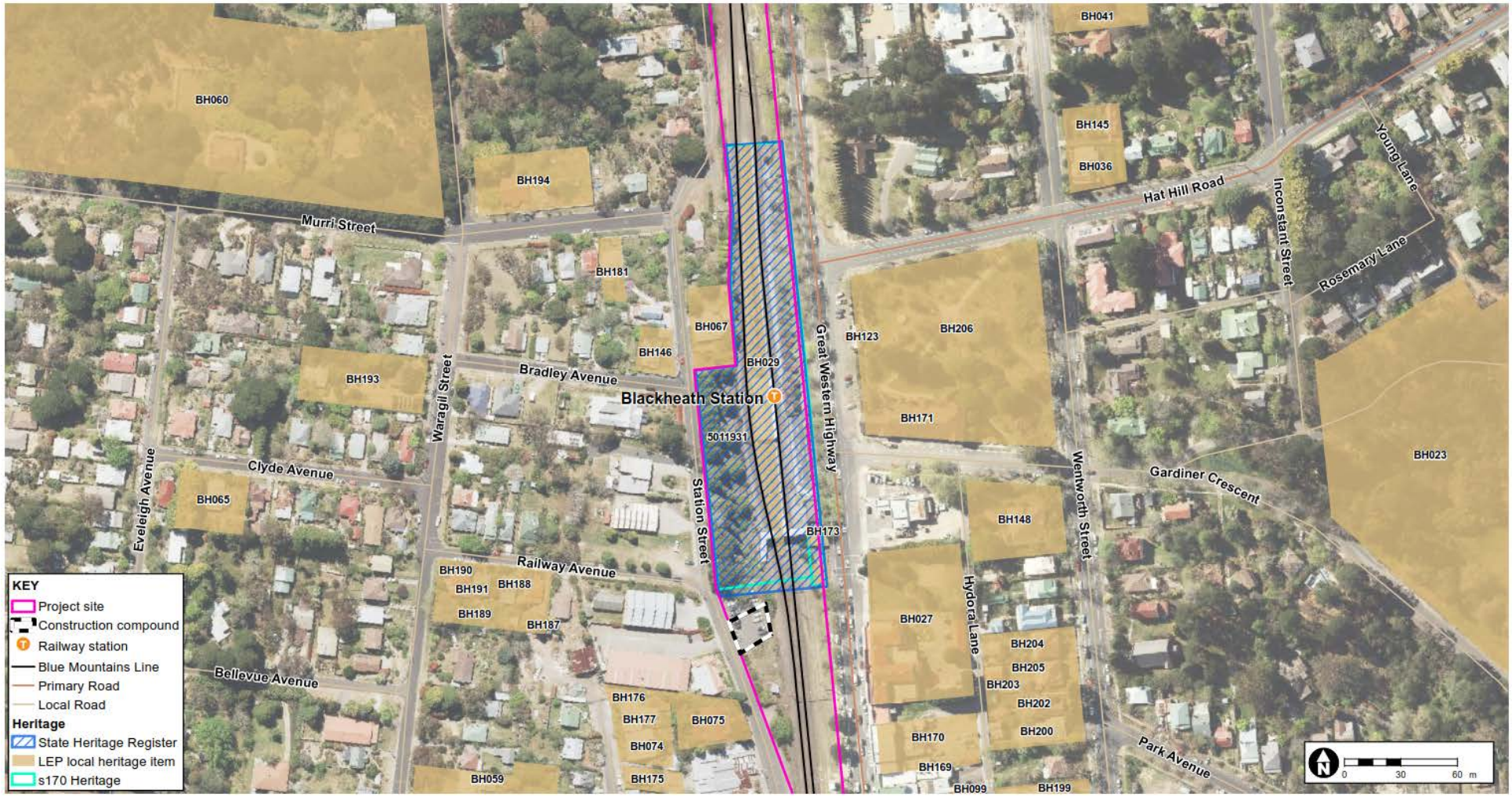


Figure 20 Blackheath Station - locations of primary construction compounds and registered heritage items

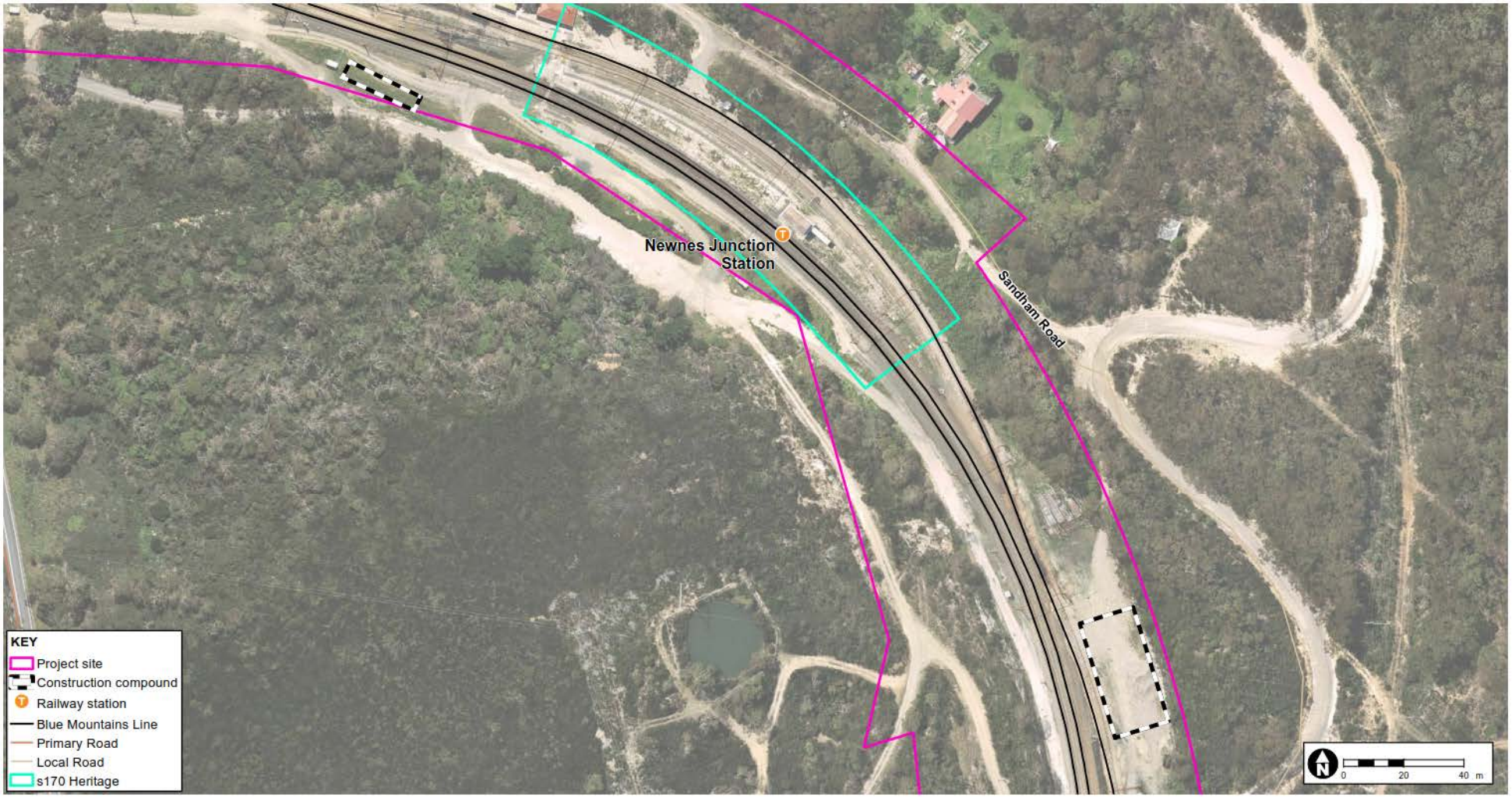


Figure 21 Newnes Junction Station - locations of primary construction compounds and registered heritage items

Figure 22 Construction compound located approximately 1.8 kilometres south west of Newnes Junction Station and registered heritage items

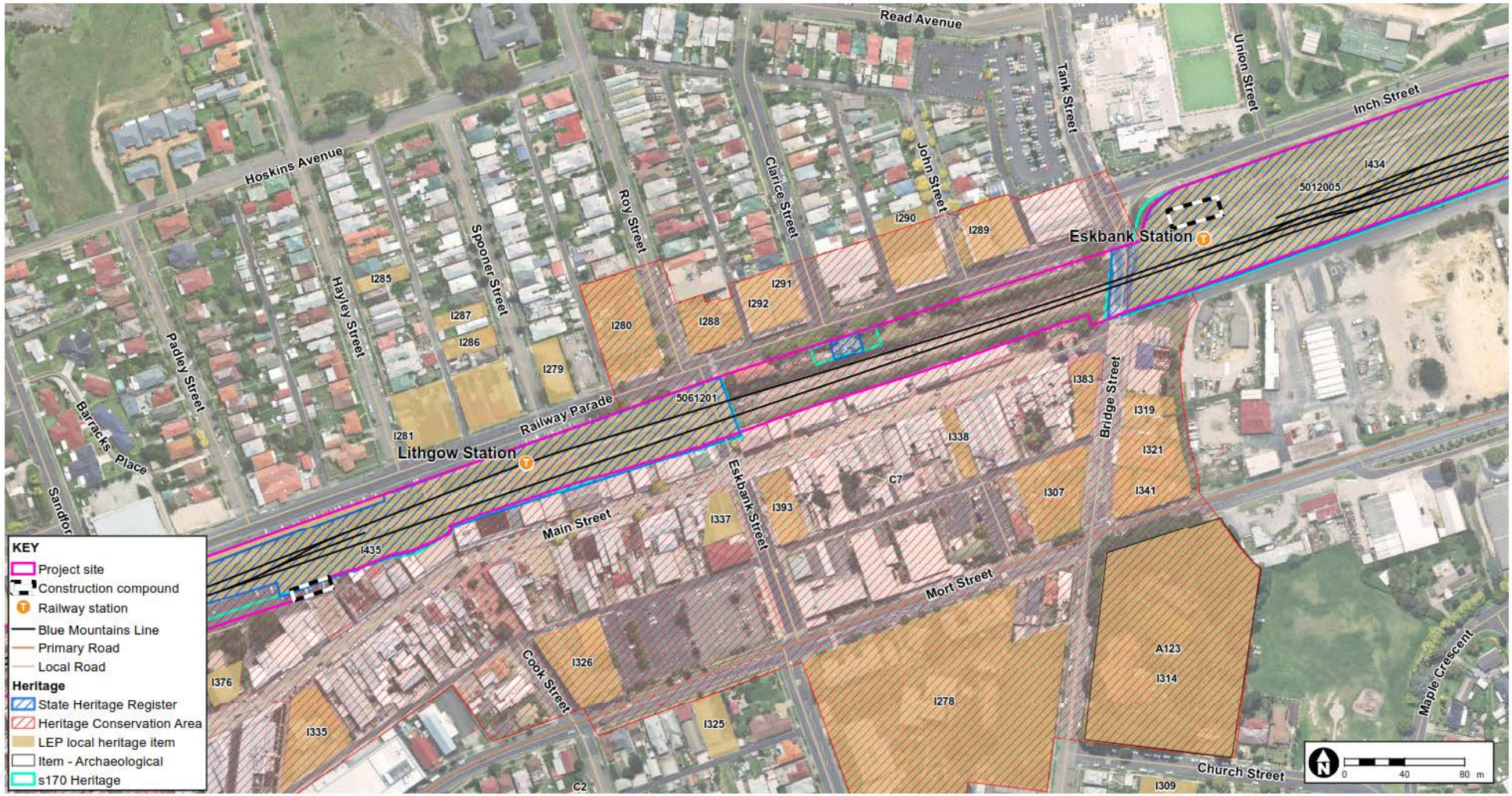


Figure 23 Lithgow Station and Eskbank Station - locations of primary construction compounds and registered heritage items

Appendix D Neutral or beneficial effect assessment

NorBE assessment – will there be a neutral of beneficial effect on water quality?

(Assessment must consider surface and ground waters and must consider construction & operational stages.)

1. Are there any identifiable potential impacts on water quality? What pollutants are likely? Major potential pollutants are sediments (fine and coarse), nitrogen, phosphorus, pathogens and hazardous chemicals and contaminants such as oil/fuel.

During construction and/or post construction?

Potential pollutants during construction include sediments from excavation and ground disturbance, chemicals, materials and fuels from plant and equipment. Furthermore track slewing (moving of ballast, existing tracks and foundations) could temporarily affect the local hydrology/flow paths and results in sediments being discharged to the drainage network. There are a number of minor drainage structures, stormwater networks and track drainage in the vicinity of and under the Project site. Construction activities may also directly impact the underground stormwater network and surface water runoff. However, existing drainage points would be protected during construction to minimise the potential for damage. Post construction, during operation, there would not be significant difference from current operation and hence would not generate any further pollutants, sediments or contaminants that could impact on water quality.

2. For each pollutant list the safeguards needed to prevent or mitigate potential impacts on water quality (these may be Water NSW endorsed current recommended practices and/or equally effective other practices)?

Sediments and potential contaminants generated during excavation and construction would be managed through the following:

- Prior to commencement of works, a site-specific Erosion and Sediment Control Plan for each site would be prepared in accordance with the 'Blue Book' *Managing Urban Stormwater: Soils and Construction Guidelines* (Landcom, 2004) and updated throughout construction so it remains relevant to the activities. The Erosion and Sediment Control Plan measures would be implemented prior to commencement of works and maintained throughout construction.
- Stockpiles would be appropriately maintained, covered and contained which could include covering or regular watering to minimise dust.
- Traffic movements on any disturbed areas would be limited.
- Wash down areas would be appropriately constructed, and the collected material disposed of off-site.
- Disturbed surfaces would be stabilised as soon as possible.
- Wash down of concrete mixers, concreting equipment and trucks would take place in an appropriate area away from drainage lines and stormwater drains.
- If groundwater is encountered during excavation works, it would be managed in accordance with the requirements of the *Waste Classification Guidelines* and *Water Discharge and Reuse Guideline* (TfNSW, 2015b).

For a more in-depth explanation around potential impacts to water quality and for further mitigation measures in relation to soils and water, refer to sections 6.8 and 7.2 in the REF.

Chemicals and fuels from plant and equipment used during construction:

- Chemicals must be appropriately stored and handled in accordance with relevant Safety Data Sheets (SDS).
- Refuelling of vehicles or machinery is to occur within a containment or hardstand area designed to prevent the escape of spilled substances to the surrounding environment. Plant and equipment used during the works would be properly maintained and routinely inspected to minimise the risk of fuel or oil leaks;
- Spill kits containing spill response materials suited to the appropriate to products used on site must be readily available.
- All required chemicals and fuels must be located within a bunded enclosure located away from drainage lines and stormwater drains.
- Plant and equipment must be regularly inspected to check for oil leaks.

3. Will the safeguards be adequate for the time required? How will they need to be maintained?

Given the short length of construction at each site and the minor nature of the works, the safeguards proposed are considered to be adequate. The points of drainage for the sites can be adequately protected with the implementation of standard mitigation measures. Mitigation measures will be implemented and maintained and inspected through a CEMP prepared for the works.

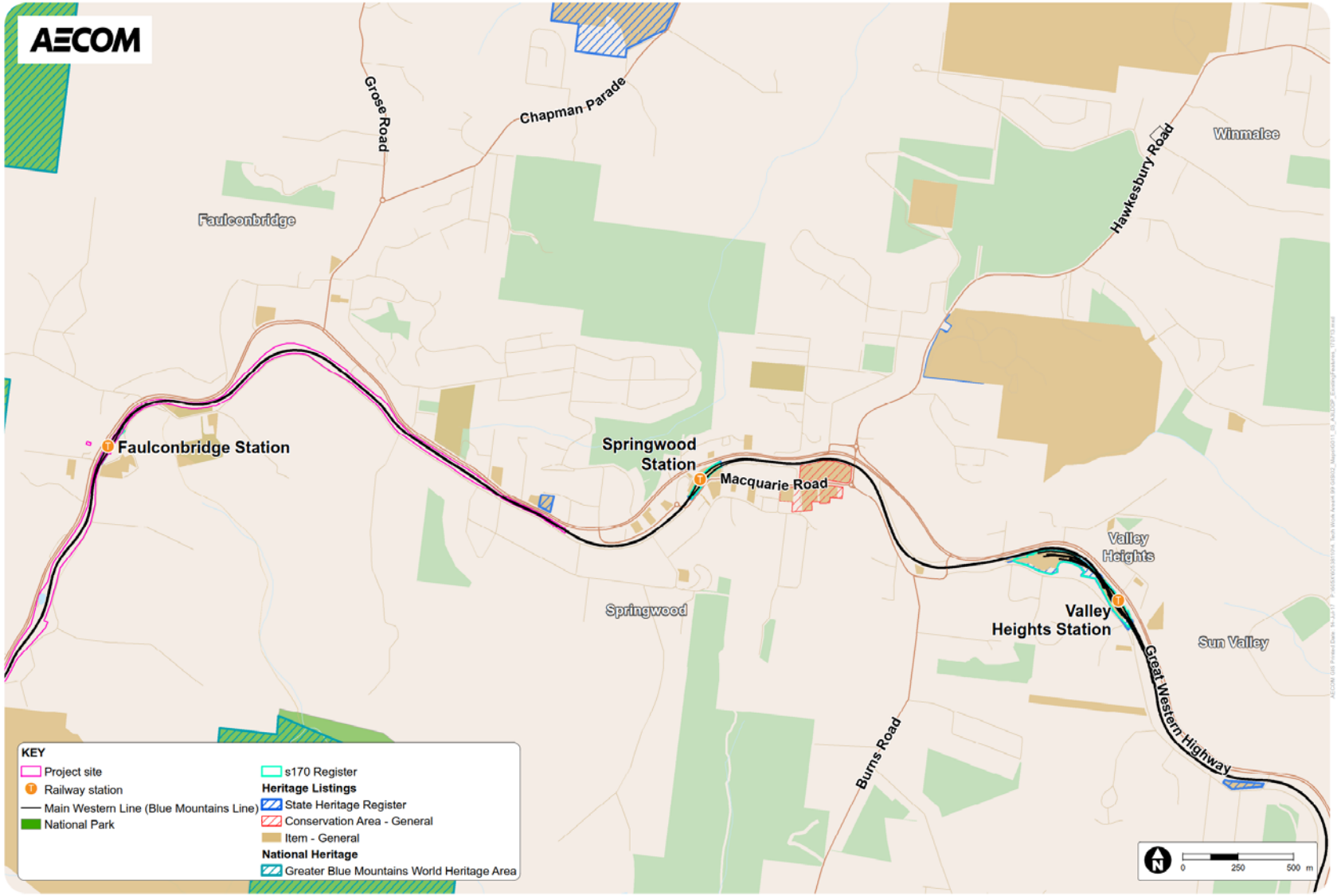
4. Will all impacts on water quality be effectively contained on the site by the identified safeguards (above) and not reach any watercourse, waterbody or drainage depression? Or will impacts on water quality be transferred outside the site for treatment? How? Why?

All impacts on water quality would be effectively contained on the site provided that the mitigation measures are implemented effectively. The implementation of standard erosion and sediment controls would be sufficient to protect the drainage points on site. Implementation of the described mitigation measures would prevent any potential spills or leaks reaching any drainage points or watercourses.

5. Is it likely that a neutral or beneficial effect on water quality will occur? Why?

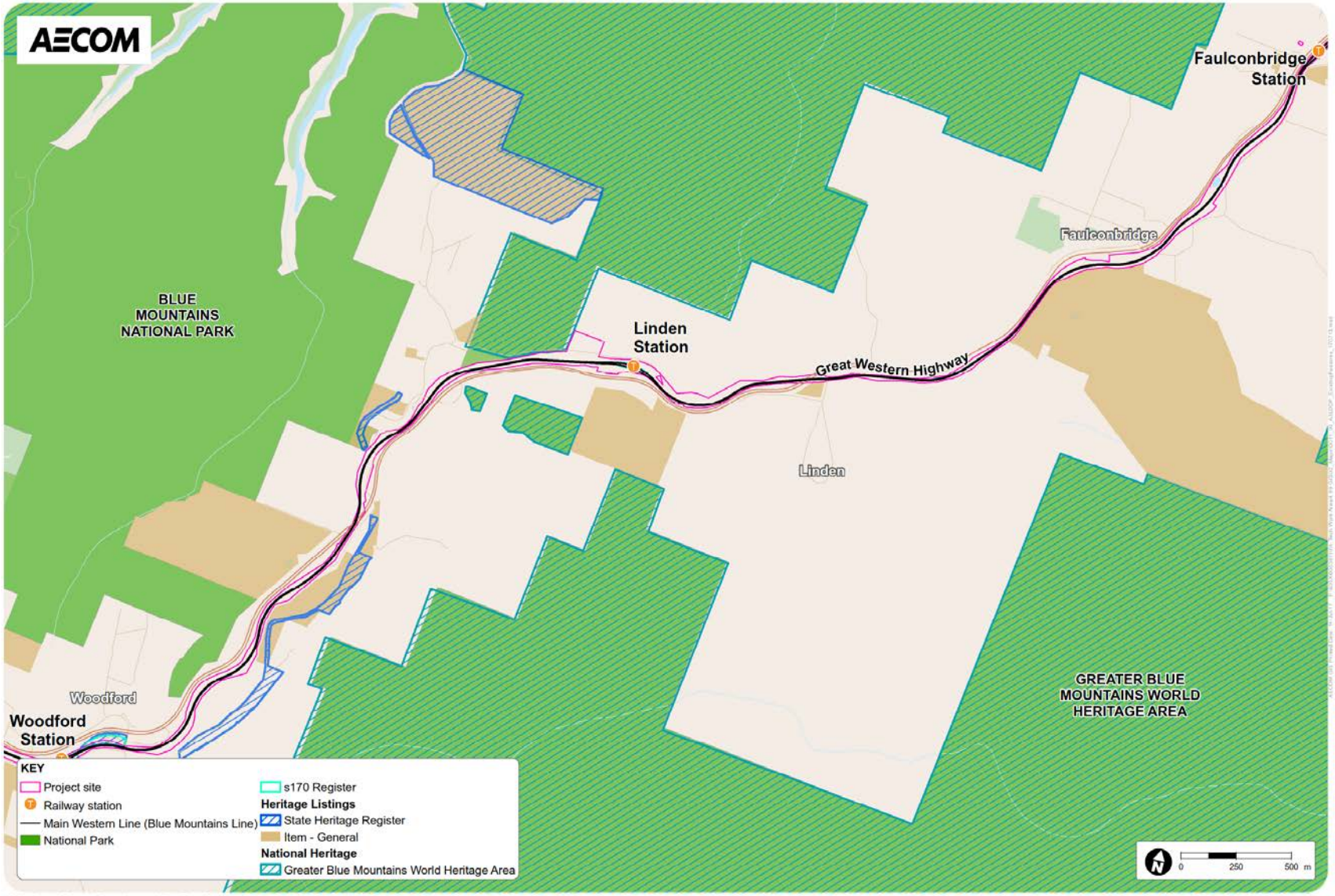
The implementation of the described safeguards would be adequate to prevent contamination of waterways during construction. The Project would not result in major differences from current operations. Hence it is considered that the Project is likely to have a neutral effect on water quality.

Appendix E Non-indigenous heritage maps and database search results



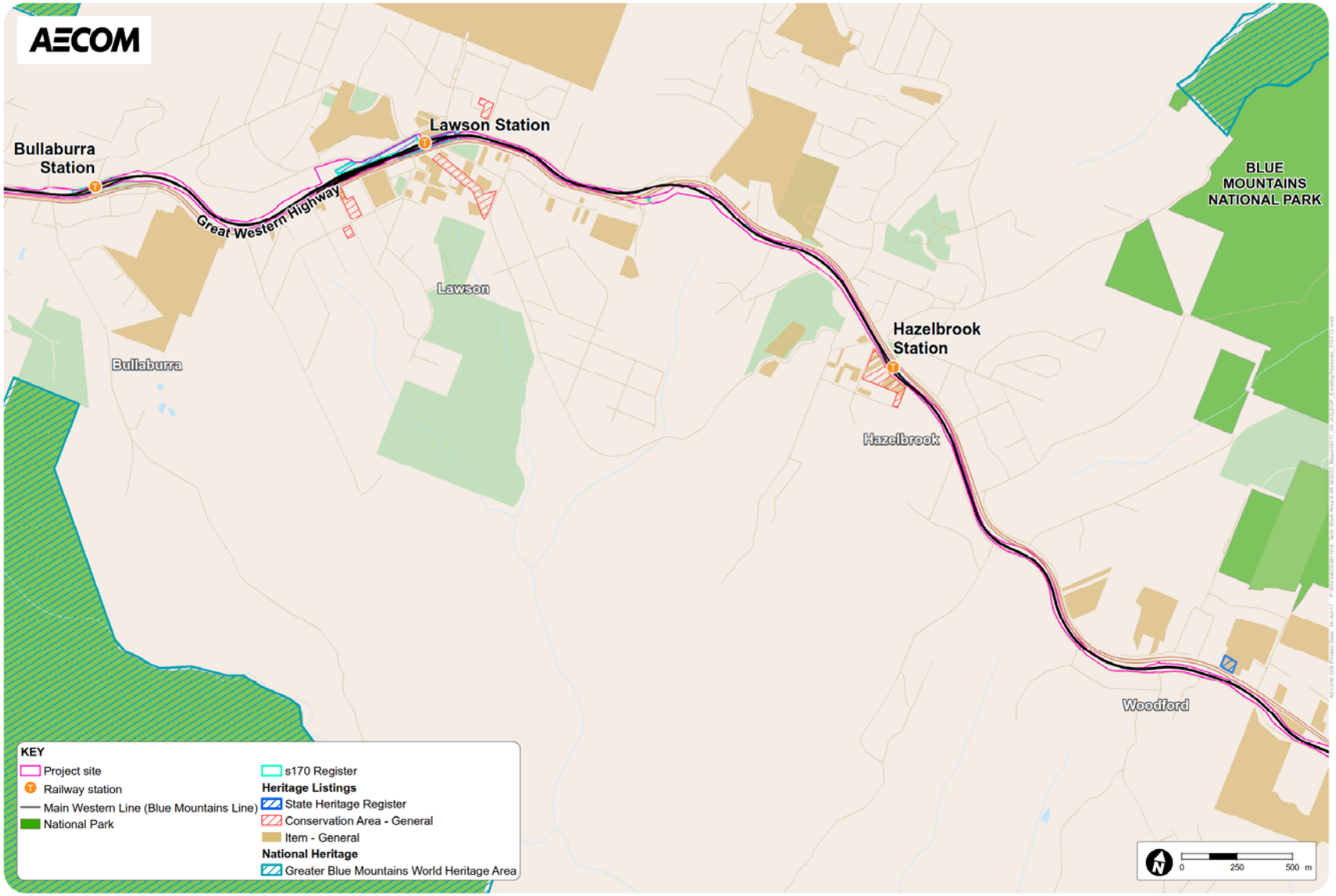
* Works at Mount Victoria and Zig Zag Station do not form part of the Project

Figure 24 Registered heritage items along the Project route (part 1 of 11)



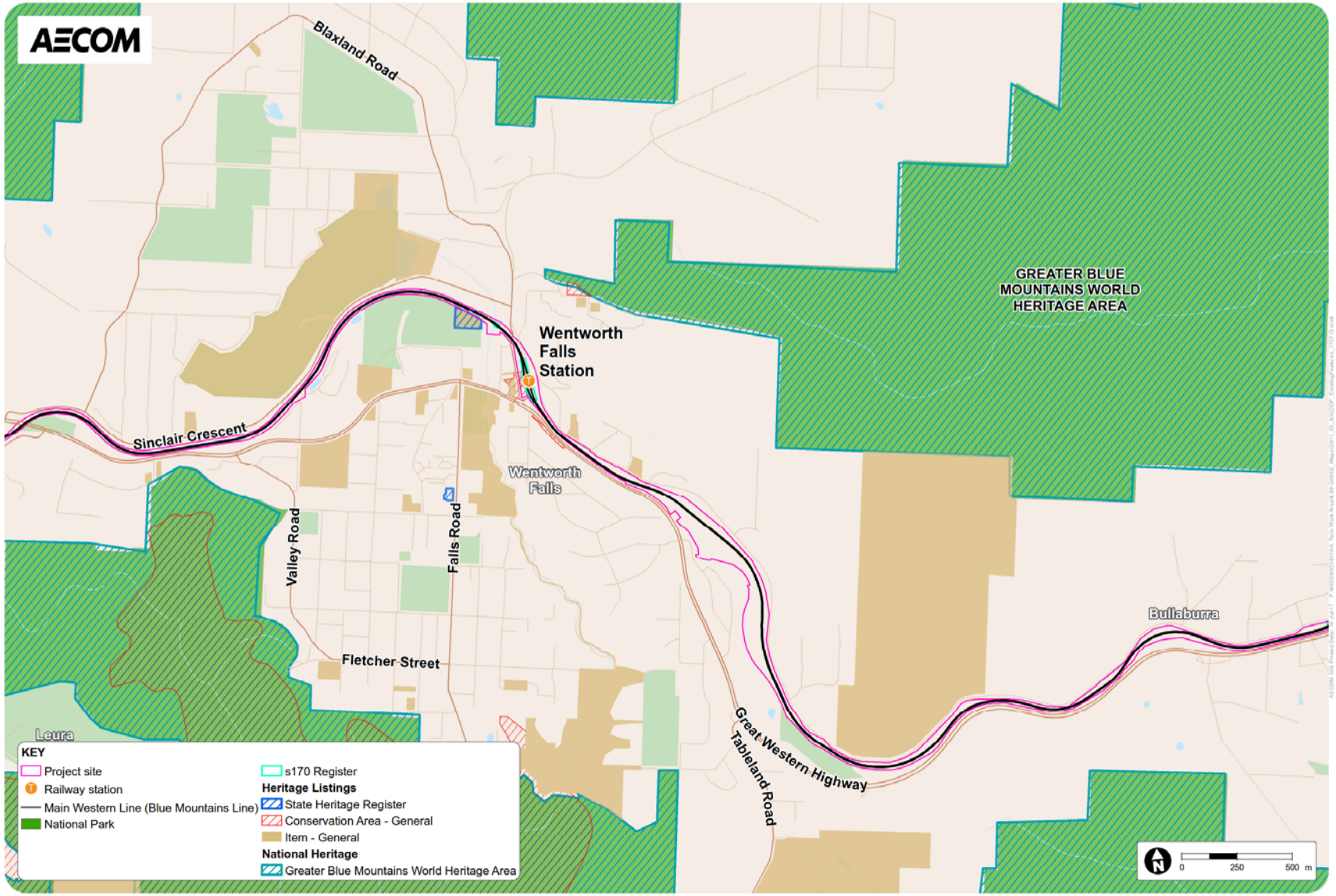
* Works at Mount Victoria and Zig Zag Station do not form part of the Project

Figure 25 Registered heritage items along the Project route (part 2 of 11)



* Works at Mount Victoria and Zig Zag Station do not form part of the Project

Figure 26 Registered heritage items along the Project route (part 3 of 11)



* Works at Mount Victoria and Zig Zag Station do not form part of the Project

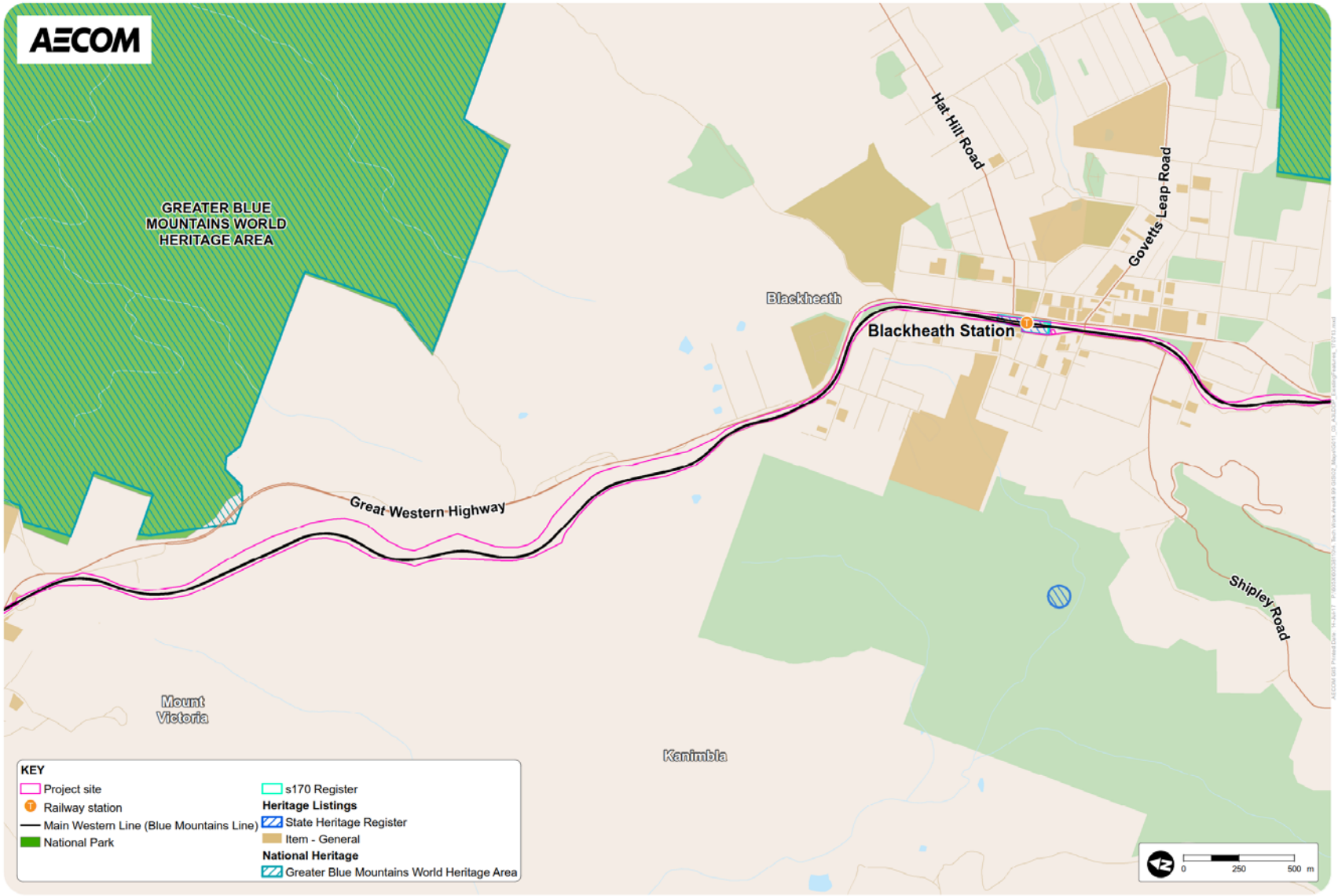
Figure 27 Registered heritage items along the Project route (part 4 of 11)

* Works at Mount Victoria and Zig Zag Station do not form part of the Project

Figure 28 Registered heritage items along the Project route (part 5 of 11)

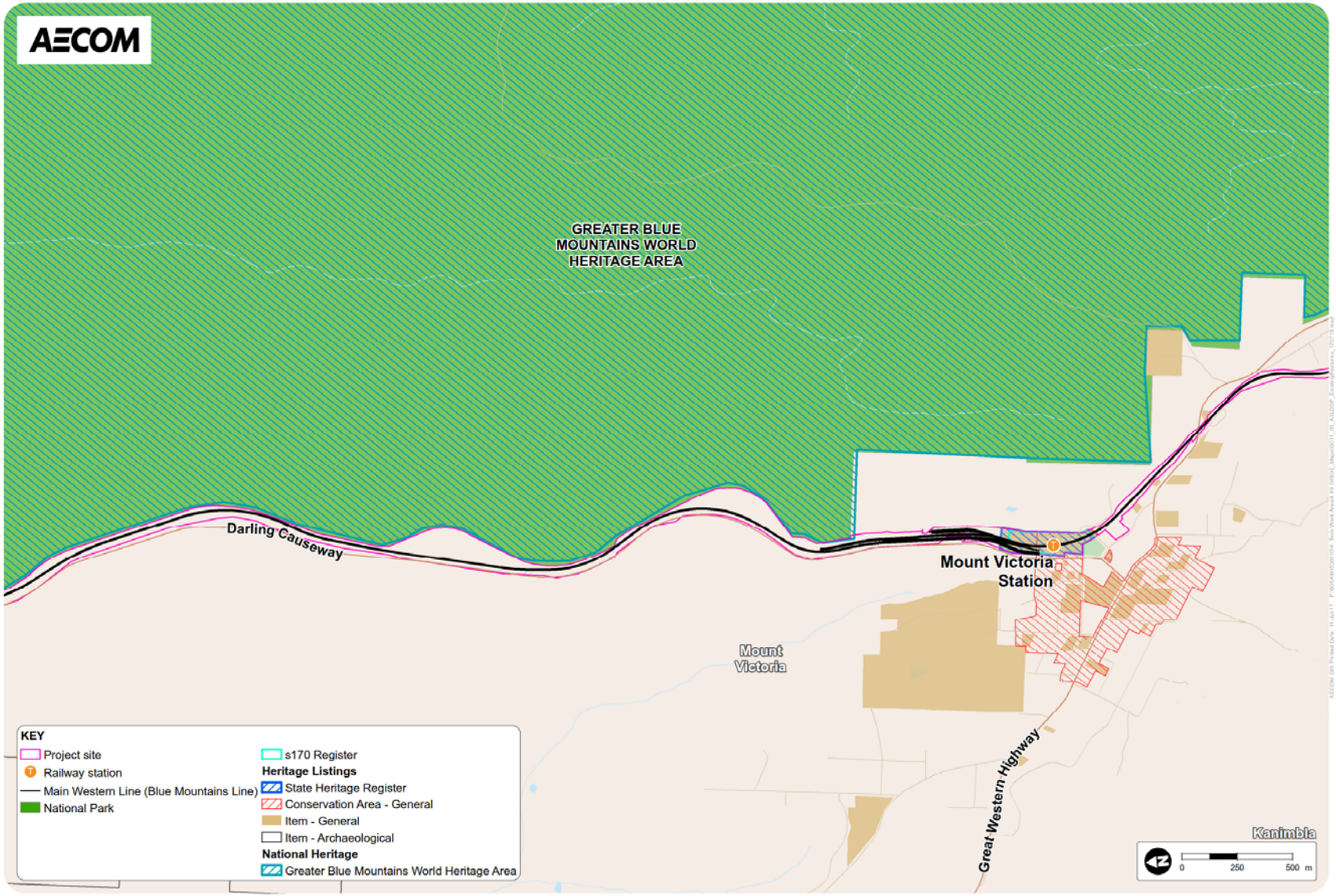
* Works at Mount Victoria and Zig Zag Station do not form part of the Project

Figure 29 Registered heritage items along the Project route (part 6 of 11)



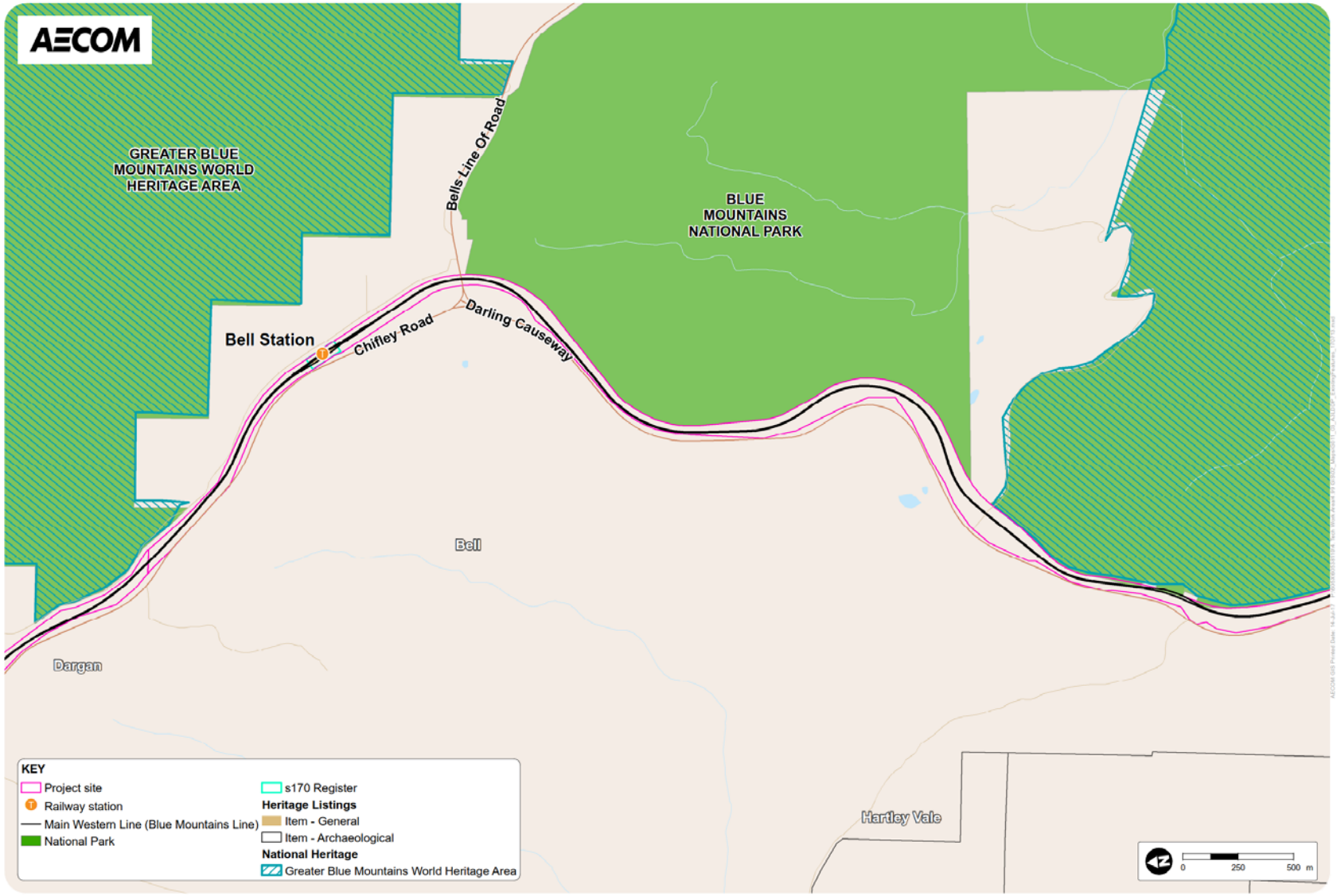
* Works at Mount Victoria and Zig Zag Station do not form part of the Project

Figure 30 Registered heritage items along the Project route (part 7 of 11)



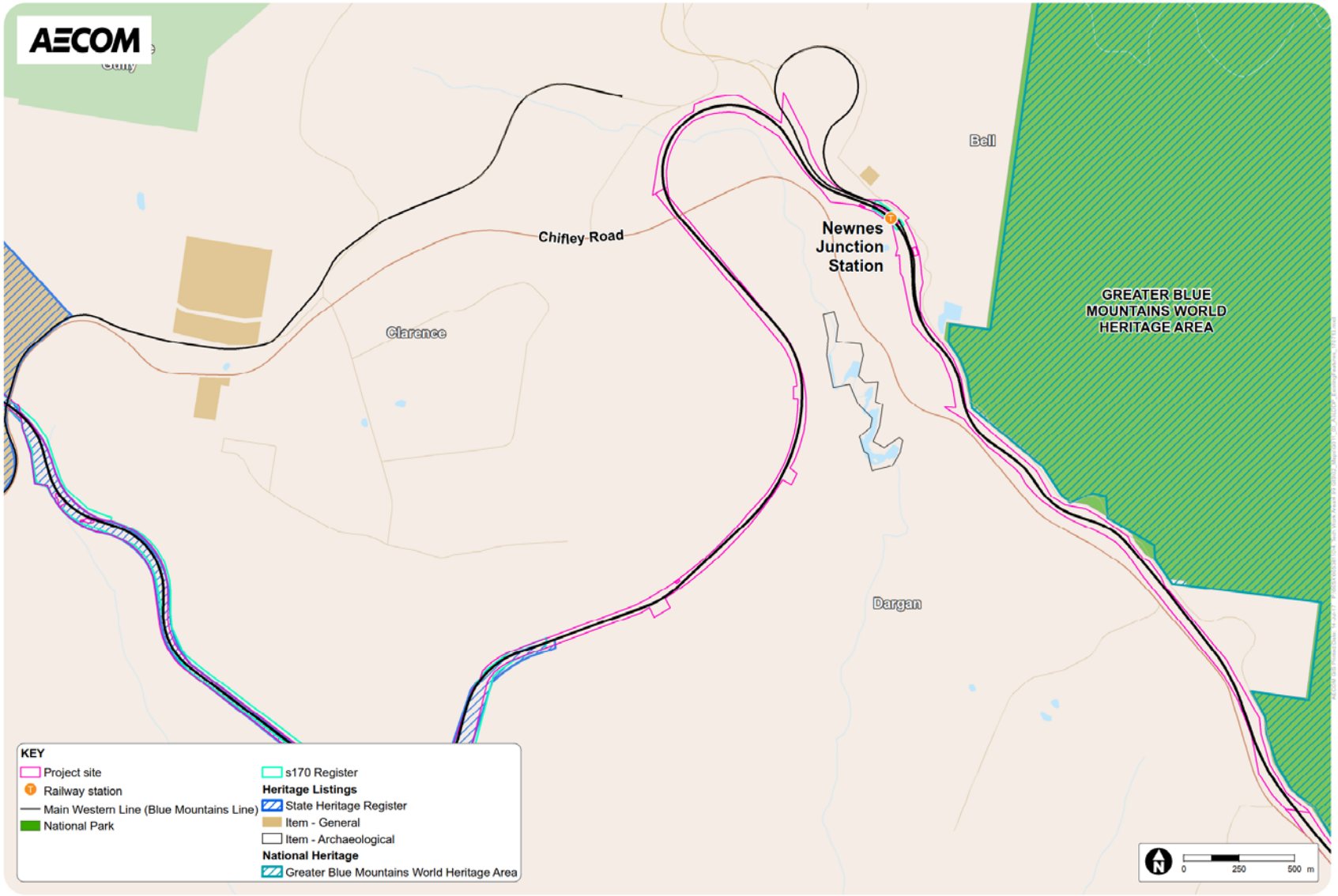
* Works at Mount Victoria and Zig Zag Station do not form part of the Project

Figure 31 Registered heritage items along the Project route (part 8 of 11)



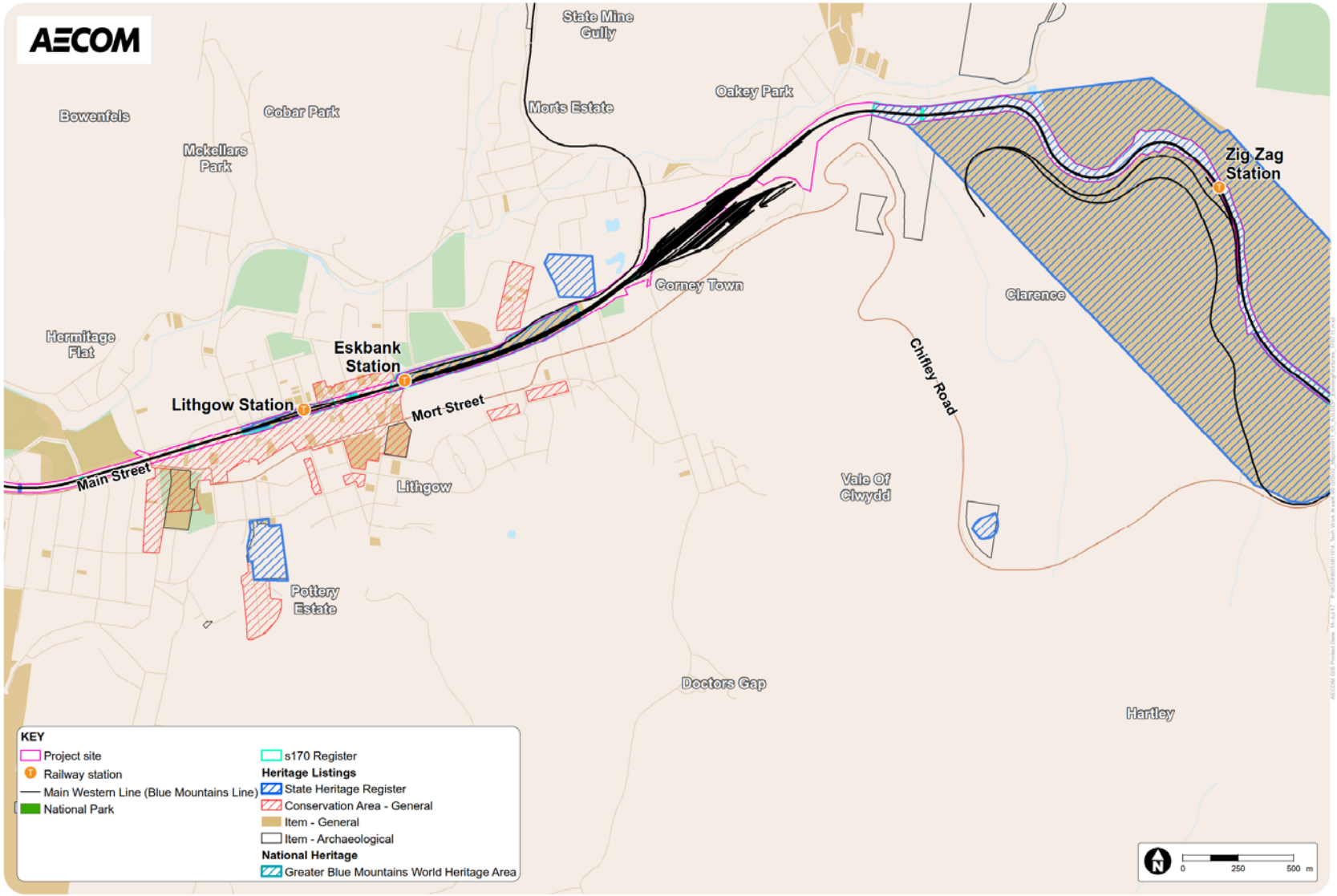
* Works at Mount Victoria and Zig Zag Station do not form part of the Project

Figure 32 Registered heritage items along the Project route (part 9 of 11)



* Works at Mount Victoria and Zig Zag Station do not form part of the Project

Figure 33 Registered heritage items along the Project route (part 10 of 11)



* Works at Mount Victoria and Zig Zag Station do not form part of the Project

Figure 34 Registered heritage items along the Project route (part 11 of 11)

Registered items within the Project site

Heritage item	Item ID	Heritage List	Level of Significance
Eskbank Railway Station group / precinct	01138 I434 4801018	State Heritage Register *Lithgow Local Environmental Plan 2014* Section 170 Register	State
Lawson Railway Station Group / Lawson Railway Station, Residence	01177 LN010	State Heritage Register *Blue Mountains Local Environmental Plan 2015* Section 170 Register	State
Blackheath Railway Station Group	01088 BH029 4801010	State Heritage Register *Blue Mountains Local Environmental Plan 2015** Section 170 Register	State
Medlow Bath Railway Station group	01190 MB003 4801011	State Heritage Register *Blue Mountains Local Environmental Plan 2015* Section 170 Register	State
Great Zig Zag Railway and Reserves	00542 I443	State Heritage Register *Lithgow Local Environmental Plan 2014*	State
Lithgow Blast Furnace	00548	State Heritage Register	State
Mount Victoria Railway Station group	01203 MV027	State Heritage Register *Blue Mountains Local Environmental Plan 2015* Section 170 Register	State
Lithgow Coal Stage Signal Box	01832 I433 4800108	State Heritage Register *Lithgow Local Environmental Plan 2014* Section 170 Register	State
Cooerwull Railway footbridge	01115	State Heritage Register	State
Weatherboard Inn Archaeological Site	00595	State Heritage Register	State
Lithgow (James Street) Underbridge	01831 4801535	State Heritage Register Section 170 Register	State
Lithgow Railway Station Group and Residence	01138 I435 4801025	State Heritage Register *Lithgow Local Environmental Plan 2014* Section 170 Register	State
Katoomba Railway Station and yard group	01174 K044 4801008	State Heritage Register *Blue Mountains Local Environmental Plan 2015* Section 170 Register	State
Cox's Road and Early Deviations - Woodford, Appian Way Precinct	01955	State Heritage Register	State
Rotary Directory	BH174	*Blue Mountains Local Environmental Plan 2015*	Local
Banool	LD011	*Blue Mountains Local Environmental Plan 2015*	Local
Avenue of Radiata Pines	MB015	*Blue Mountains Local Environmental Plan 2015*	Local

Heritage item	Item ID	Heritage List	Level of Significance
Bell Railway Station	BELL007 4801013	*Blue Mountains Local Environmental Plan 2015* Section 170 Register	Local
Corridor of Oaks - Jackson Park	FB009	*Blue Mountains Local Environmental Plan 2015*	Local
Toll Bar Inn (site only)	LD004	*Blue Mountains Local Environmental Plan 2015*	Local
Toll Bar House (site only)	LD003	*Blue Mountains Local Environmental Plan 2015*	Local
Bullaburra Railway Station / Bullaburra Railway Station Group	BL002 4800202	*Blue Mountains Local Environmental Plan 2015* Section 170 Register	Local
Former Railway Reservoir	LN026	*Blue Mountains Local Environmental Plan 2015*	Local
Woodford Railway Station	WD002 4801041	*Blue Mountains Local Environmental Plan 2015* Section 170 Register	Local
Gatekeeper's Cottage	MB006	*Blue Mountains Local Environmental Plan 2015*	Local
Gatekeeper's Cottage	MV013	*Blue Mountains Local Environmental Plan 2015*	Local
Linden Railway Station	LD007 4801918	*Blue Mountains Local Environmental Plan 2015* Section 170 Register	Local
Wentworth Falls Railway Station	WF022 4801039	*Blue Mountains Local Environmental Plan 2015* Section 170 Register	Local
The Crushers	K026	*Blue Mountains Local Environmental Plan 2015*	Local
Weemala	FB011	*Blue Mountains Local Environmental Plan 2015*	Local
Weatherboard Cottage	MV067	*Blue Mountains Local Environmental Plan 2015*	Local
War Memorial, Coronation Park	WF097	*Blue Mountains Local Environmental Plan 2015*	Local
Water Lily Pond	FB006	*Blue Mountains Local Environmental Plan 2015*	Local
Sydney Rock	LN009	*Blue Mountains Local Environmental Plan 2015*	Local
Sunnihi	MV071	*Blue Mountains Local Environmental Plan 2015*	Local
Stone Kerbing	K116	*Blue Mountains Local Environmental Plan 2015*	Local
Stone Kerbing	K116	*Blue Mountains Local Environmental Plan 2015*	Local
Gwandoban	BH096	*Blue Mountains Local Environmental Plan 2015*	Local
Hazelbrook Railway Station / Hazelbrook Railway Station Group	H007 4801914	*Blue Mountains Local Environmental Plan 2015* Section 170 Register	Local
Station Master's House	BH067	*Blue Mountains Local Environmental Plan 2015*	Local

Heritage item	Item ID	Heritage List	Level of Significance
Station Master's Cottage Site	MV034	*Blue Mountains Local Environmental Plan 2015*	Local
St Mounts	BH052	*Blue Mountains Local Environmental Plan 2015*	Local
Memorial Park	WD010	*Blue Mountains Local Environmental Plan 2015*	Local
Memorial Park	WD010	*Blue Mountains Local Environmental Plan 2015*	Local
Shops adjacent to the Station	BH173	*Blue Mountains Local Environmental Plan 2015*	Local
Mount Victoria Railway Rest House	MV035	*Blue Mountains Local Environmental Plan 2015*	Local
Leura Railway Station	LA016 4801024	*Blue Mountains Local Environmental Plan 2015* Section 170 Register	Local
Quarry	FB020	*Blue Mountains Local Environmental Plan 2015*	Local
Shops adjacent to the Station	BH173	*Blue Mountains Local Environmental Plan 2015*	Local
Arched Stone Culvert	WF036	*Blue Mountains Local Environmental Plan 2015*	Local
Railway Corridor	LA030	*Blue Mountains Local Environmental Plan 2015*	Local
Railway Culvert	LN067	*Blue Mountains Local Environmental Plan 2015*	Local
Railway Culvert	LN070	*Blue Mountains Local Environmental Plan 2015*	Local
Railway Culvert	LN075	*Blue Mountains Local Environmental Plan 2015*	Local
Railway Overpass	LD014	*Blue Mountains Local Environmental Plan 2015*	Local
1830s Road Alignment	LD020	*Blue Mountains Local Environmental Plan 2015*	Local
Acorn	MV070	*Blue Mountains Local Environmental Plan 2015*	Local
Railway Station	FB005	*Blue Mountains Local Environmental Plan 2015*	Local
Eurama	FB010	*Blue Mountains Local Environmental Plan 2015*	Local
Transport Corridor, Katoomba	K065	*Blue Mountains Local Environmental Plan 2015*	Local
Weatherboard Inn Archaeological Site	WF019	*Blue Mountains Local Environmental Plan 2015*	State
Railway culvert of Ida Falls Creek	A133	*Lithgow Local Environmental Plan 2014*	Local
Newvale Colliery and Coke-Ovans	A140	*Lithgow Local Environmental Plan 2014*	Local
Blast Furnace Site	A125	*Lithgow Local Environmental Plan 2014*	State
Showground Grandstand and Buildings	I340	*Lithgow Local Environmental Plan 2014*	Local

Heritage item	Item ID	Heritage List	Level of Significance
Eskbank Signal Box	I434	*Lithgow Local Environmental Plan 2014*	State
Stone Viaduct James Street	I436	*Lithgow Local Environmental Plan 2014*	State
Station Street Precinct	WF032	*Blue Mountains Local Environmental Plan 2015*	Local
Central Katoomba Urban Conservation Area	K159	*Blue Mountains Local Environmental Plan 2015*	Local
Central Mount Victoria Urban Conservation Area	MV023	*Blue Mountains Local Environmental Plan 2015*	Local
Lithgow Main St	C7	*Lithgow Local Environmental Plan 2014*	Local
Newnes Junction Signal Box	4807638	Section 170 Register	S170
Faulconbridge Railway Station Group	4801064	Section 170 Register	S170
Woodford (Cox's Road) Archaeolog	5063078	Section 170 Register	S170
Lawson Footbridge	4801682	Section 170 Register	S170
Lawson Railway Culvert (Ln070)	4807647	Section 170 Register	S170
Lawson Railway Culvert (Ln067)	4807646	Section 170 Register	S170
Blackheath Station - Shops	4804466	Section 170 Register	S170
	4801023	Section 170 Register	S170
Lawson Railway Culvert (Ln075)	4807648	Section 170 Register	S170
Wentworth Falls Culvert	4807653	Section 170 Register	S170
Rhondda Valley Railway Sign	4807652	Section 170 Register	S170
Bowenfels (George Coates St) Und	4805730	Section 170 Register	S170
Oakey Park Railway Culvert	5062533	Section 170 Register	S170
Bell to Zig Zag Ten Tunnel Railway	4800183	Section 170 Register	S170

Appendix F Landscape and visual impact assessment

LVIA magnitude / sensitivity descriptors

Magnitude				
	High	**Moderate**	**Low**	**Negligible**
Construction	A clearly evident or continuous change in landscape characteristics affecting an extensive area, which is likely to fundamentally change the character of the landscape	A considerable change in landscape characteristics, frequent or continuous and over a wide area or a clearly evident change, but over a restricted area	A barely perceptible change in landscape characteristics over a wide area, or a considerable change over a restricted area, but would not fundamentally change the character of the landscape	No change in landscape characteristics
Operation	Clearly perceptible changes in views at intermediate distances seen for moderate periods of time, or changes in prominent elements seen for long periods of time	Minor changes in views at moderate distances seen for moderate periods of time, or moderate changes in views visible for a short durations	Change which is barely visible, at a very long distance, or visible for a very short duration. The change only makes up a small proportion of the overall view	Change is not visible

Sensitivity				
	High	**Moderate**	**Low**	**Negligible**
Construction	A landscape with distinctive character and low capacity to accommodate the type of change envisaged	A landscape where its character, pattern and scale may have some capacity to accommodate a degree of the type of change envisaged	A landscape where its character, pattern and scale is likely to have the capacity to accommodate the type of change envisaged	A landscape where its character, pattern and scale are tolerant of the type of change envisaged, and the landscape has capacity to accommodate change
Operation	High number of observers, where viewers are specifically focussed on the landscape. Views to and from places with heritage or other significance	Moderate number of viewers where the viewer would be somewhat focussed on the landscape for extended periods of time	Low number of viewers with interest in the landscape, or moderate number of viewers where their attention would not be predominantly focussed on the landscape	Very occasional numbers of viewers with only a passing interest in their surroundings

Magnitude and sensitivity risk matrix

Risk Matrix				
Sensitivity **Magnitude**	**High**	**Moderate**	**Low**	**Negligible**
High	High	Moderate High	Moderate	Negligible
Moderate	Moderate High	Moderate	Moderate-Low	Negligible
Low	Moderate	Moderate-Low	Low	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

Sensitivity and magnitude

The sensitivity of the landscape is assessed based upon the extent to which it can accept change of a particular type and scale without adverse impacts upon its character. Sensitivity varies according to the type of development and nature of the landscape.

The most sensitive receptors may include:

- users of outdoor recreational facilities
- communities where the development results in changes in the landscape setting or valued views enjoyed by the community
- occupiers of residences with views affected by the Project.

The number of viewers is also considered when assessing sensitivity of the landscape.

The magnitude of change affecting landscape character or visual receptors depends on factors such as the nature, scale and duration of the particular change that is expected to occur. In the landscape, the magnitude of change would depend on factors such as the extent of loss, change or addition of a feature, or changes in the backdrop, or outlook from a landscape that affects its character. The impact on a view would depend on factors such as the extent of visibility, degree of obstruction of existing features, degree of contrast with the existing view, angle of view, duration of view and distance from the Project.

LITHGOW CITY COUNCIL
FINANCE COMMITTEE
Terms of Reference

Committee name

Finance Committee

Establishment

The Committee is established under section 355 of the Local Government Act 1993 which states:

> *A function of a council may, subject to this Chapter, be exercised:*
> *(b) by a committee of the council*

Resolutions

Delegations

The Committee has no delegations from the Council.

Financial arrangements

Unless expressly resolved by Council the Committee has no powers to commit nor expend any Council funds.

Term of the Committee

The Committee shall operate for the term of the Council.

The Council reserves the right to dissolve the Committee at any time by a resolution of the Council.

Committee's responsibilities

The principal responsibilities of the Committee are to:

- Monitoring at the aggregate level, MTD, YTD and budget variances.
- Monthly Investment reports.
- Monitoring of External Audit recommendations and resolution.

- Examining different funding policies to be adopted by Council (eg Level of Debt funding).
- Review of the quarterly Financial Reports.

Councillor membership

In September each year, the Council shall nominate 3 Councillors to the Committee.

The Mayor by virtue of holding the office of Mayor, is appointed as a member of all committees established by Council. The appointment of the Mayor as a member of any committee established by the Council need not be taken into account when determining a Quorum for a meeting of the Committee.

Committee membership

The Committee will be comprised of the following representation:

- 3 Councillors
- The Responsible Accounting Officer
- The Chief Financial and Information Officer (CFIO)
- Lithgow City Council General Manager or his nominee

Committee member responsibilities

- Observation and compliance with Council's Code of Conduct.
- Observation and compliance with Council's OHS system objectives and instructions.

Appointment

All members of the Committee will be appointed by a resolution of the Council.

Executive Officer

The Responsible Accounting Officer shall be the Executive officer to the

Committee. The Executive Officer shall:

- provide executive support to the Committee;
- be responsible for preparing the agenda and minutes of Committee meetings;
- be responsible for preparing a report to the Council containing the minutes; and, providing staff comment on the recommendations made by the Committee to the Council; and
- provide to the Committee the outcome and resolutions of the Council regarding each recommendation.

MEETING PRACTICE

Code of Meeting Practice

The meeting procedures outlined in the Council's Code of Meeting Practice shall guide the meeting procedures of the Committee unless otherwise outlined below.

Office holders

The Chair of the Committee shall be a Councillor.

This position shall be determined by an election at the first meeting of a new term of the committee.

Frequency of meetings

Meetings shall be held at least every two months on a day and a time to be determined by the committee.

Meeting protocol

- An agenda will be prepared and distributed 3 working days before each meeting, together with the minutes of the previous meeting.
- A quorum of members is required at all meetings and shall be 50% plus one of all voting members.

Minutes and Reports to Council

- Minutes of meetings will be kept of all meetings and will be reported to the
- Council.
- The Minutes of the meeting will be submitted to the next ordinary meeting of Council.

CENTRAL TABLELANDS ALLIANCE (CTA) AUDIT COMMITTEE

Audit Committee Charter

1 Name

The Committee will be called the Central Tablelands Alliance (CTA) Audit Committee.

2 Status

Established by authority of the Lithgow and Oberon Councils on 20 Sept 2010
Minute 10-402

3 Purpose

The Audit Committee Charter sets out the role, composition, authority, responsibilities and operation for the CTA Audit Committee.

4 Objective

4.1 The main purpose and function of this Committee is to provide independent assurance and assistance to Councils on risk management, control, governance and external accountability responsibilities

4.2 In addition, the purpose and function of this Committee is to ensure that there is an adequate and effective system of internal control throughout Council and to assist in the operation and implementation of the Internal and External Audit Plans

5 Authority

The Councils authorise the Committee, within the scope of its role and responsibilities, to:

i) Obtain any information it needs from any employee or external party (subject to their legal obligation to protect information)

ii) Discuss any matters with the external auditor or other external parties (subject to confidentiality considerations)

iii) Request the attendance of any employee or councillor at Audit Committee meetings

iv) Obtain external legal or other professional advice, as considered necessary to meet its responsibilities

v) Appoint the representatives to the Committee, as per the parameters and procedures outlined in section 7 of this Charter

6 Role and Responsibilities

i) The role of the Audit Committee is to oversight risk, compliance, external accountability and the internal control environment on behalf of Council

ii) The Committee has no executive powers, except those expressly provided by the Council

iii) In carrying out its responsibilities, the Committee must at all times recognise that primary responsibility for management of Councils rest with the Council and the General Manager as defined by the Local Government Act

iv) The responsibilities of the Committee may be revised or expanded by CTA Councils from time to time

Specifically, the Audit Committee's responsibilities are:

6.1 Risk Management – oversight CTA Councils' risk management arrangements and review whether or not:

i) Council complies with relevant risk management standards

ii) Management has in place a current and comprehensive risk management framework, and associated procedures for effective identification and management of business and financial risks, including fraud

iii) A sound and effective approach has been followed in developing strategic risk management plans for major projects or undertakings

iv) A sound and effective approach has been followed in establishing business continuity planning arrangements, including if plans have been tested periodically

6.2 Control Framework - review whether or not:

i) Management has adequate and effective internal controls in place, including over external parties such as contractors and advisors

ii) Management has in place relevant policies and procedures, and if these are periodically reviewed and updated

iii) Appropriate processes are in place to assess if policies and procedures are complied with

iv) Appropriate policies and procedures are in place for the management and exercise of delegations

v) Management has taken steps to embed a culture which is committed to ethical and lawful behaviour

6.3 External Accountability:

i) Being satisfied that the annual financial reports comply with applicable Australian Accounting Standards and are supported by appropriate management sign-off on the statements and the adequacy of internal controls

ii) Reviewing the External Audit opinion, including whether or not appropriate action has been taken in response to audit recommendations and adjustments

iii) Considering contentious financial reporting matters in conjunction with Council's management and External Auditors

iv) Reviewing the processes in place designed to ensure financial information included in the annual report is consistent with the signed financial statements

v) Being satisfied that there are appropriate mechanisms in place to review and implement, where appropriate, relevant State Government reports and recommendations

6.4 Legislative Compliance

i) Determine if management has appropriately considered legal and compliance risks as part of risk assessment and management arrangements

ii) Review the effectiveness of the system for monitoring compliance with relevant laws, regulations and associated government policies

6.5 Internal Audit

i) Act as a forum for communication between the Councils, General Managers, senior management, Internal Audit and External Audit

ii) Review and authorise the annual and long-term Internal Audit Plan as developed by the Internal Auditor including consideration of the Risk Management Plan

iii) Monitor the resources of the Internal Audit function and make recommendations to the General Managers to ensure that the Internal Audit function is sufficient and appropriate

iv) Ensure and support the independence of the Internal Audit function

v) Make recommendations for inclusion and/ or prioritising projects in the Internal Audit Plan/s

vi) Make recommendations to commission audits of any kind, whether to be conducted by the Internal Auditor or otherwise

vii) Review all audit reports and consider significant issues identified in audit reports and action taken on issues raised, including identification and dissemination of better practices

viii) Review and discuss the Internal Auditor's quarterly reports including:

- YTD progress as per the Internal Audit Plan
- Significant variations that have occurred from the Internal Audit Plan
- Any specific concerns the Internal Auditor may have to discuss

ix) Monitor the acceptance and implementation of Internal Audit recommendations by management

x) Approve and periodically review the Internal Audit Charter to ensure appropriate organisational structures, authority, access and reporting arrangements are in place

xi) Periodically review the performance of Internal Audit

6.6 External Audit

i) Review the proposed audit scope and approach, with particular respect to coordination of audit effort with internal audit

ii) Act as a forum for communication between the Council, General Manager, senior management, Internal and External Audit

iii) Provide input and feedback on the financial statement and performance audit coverage proposed by External Audit, and provide feedback on the External Audit services provided

iv) Review all external plans and reports in respect of planned or completed external audits, and monitor management's implementation of audit recommendations

v) Consider significant issues raised in relevant External Audit reports and better practice guides, and ensure appropriate action is taken

6.7 Responsibilities of Members

Members of the Committee are expected to:

i) Understand the relevant legislative and regulatory requirements appropriate to Council

ii) Contribute the time needed to study and understand the papers provided

iii) Apply good analytical skills, objectivity and good judgment

iv) Express opinions frankly, ask questions that go to the fundamental core of issues, and pursue independent lines of enquiry

7 Membership and Tenure of the Audit Committee

7.1 Skills and Experience

i) The members of the Committee, taken collectively, will have a broad range of skills and experience relevant to the operations of Council

ii) At least one member of the Committee shall have accounting or related financial management experience, with understanding of accounting and auditing standards in a public sector environment.

III. Each Council will contribute $25000 per annum to fund the expenses of the independent members appointed to the committee.

IV. Each Independent member will be paid $5000 per annum for attending the four committee meetings planned each year.

V. Reasonable travel expenses of the independent members will be reimbursed by the CTA Councils.

7.2 Membership of the Committee is by virtue of the appointed position; no delegates of the members are permitted

7.3 The Audit Committee shall consist of:

i) <u>Members (voting)</u>

- One Councillor from each of the CTA Councils
- One Independent Chairperson external to the LGA's
- Two independent members with relevant experience external to the LGA's

ii) <u>attendees (non-voting)</u>

- General Managers
- Internal Auditor
- Directors of Corporate Services
- Representative of the External Auditor

iii) <u>Invitees (non-voting) for specific Agenda items</u>

- Other officers may attend by invitation as requested by the Committee

7.4 Selection of Members

The selection criteria and process for the appointment of the independent external members (to the LGA's) shall ordinarily be as follows:

i) The Committee shall seek nominations via media advertisement from persons interested in being appointed to the available position. All nominees who satisfy the conditions of this charter shall be eligible for appointment

ii) The eligible persons will be interviewed by the General Managers of the LGA's , who shall make recommendations to the Committee

iii) Following receipt of recommendations from the General Manager, the Committee may appoint the independent external members by:

- Making a direct appointment based on merit; or
- Determining the representative by the drawing of lots where there are suitable and complying nominations with equal merit

iv) In the event of equal votes the Chair shall have the casting vote

7.5 Term of Office

i) The independent external members will be appointed for the term of Council, after which they will be eligible for extension or re-appointment following a formal review of their performance.

Voting shall be undertaken in accordance with section 13 of this Charter, except that the independent external members seeking reappointment may not vote on the reappointment and will be deemed to be absent for the vote for the purpose of section 9 of this Charter.

This will mean that, if the external member seeking reappointment is usually the Chair, the other independent external member will become the Chair for the purpose of the vote.

ii) The maximum number of terms an independent external member can sit on the committee without the need for further nominations is 2 terms

7.6 Vacancy

In the case of resignation from the committee by an independent external member, the committee is to appoint another independent external member as soon as is practicably possible in accordance with the process set out in 7.4, but no later than one month prior to the next meeting, so that there are always two independent external members on the committee.

8 Code of Conduct

All members of the Audit Committee are to abide by Council's Code of Conduct.

9 Chairperson

i) An independent external member acts as Chair of the Committee for the full term of office; i.e. for the term of Council

ii) In the case of resignation by the Chair, one of the other current serving independent external member will be appointed as Chair

iii) In the absence of the appointed Chair, one of the other current serving independent external member shall serve as the Chair for the period of absence of the duly nominated Chair

iv) Note that this role is an administrative role only with no authority to act or direct action on behalf of the Committee/ Council

10 Quorum

A quorum will consist of a majority of Committee members, including at least two independent external members.

11 Proceedings

11.1 Meetings

i) The Committee shall meet at least four times per year, with one of these meetings to include review and endorsement of the annual audited financial reports and external audit opinion as well as review and endorsement of the annual Internal Audit Plan

ii) The need for any additional meetings will be decided by the Chair, although the other Committee members may make requests to the Chair for additional meetings

iii) Meetings can be held in person, by telephone or by video conference

iv) A forward meeting plan, including meeting dates and agenda items, will be agreed by the Committee each year. The forward meeting plan will cover all Committee responsibilities as detailed in this Audit Committee Charter

NB 1: Where either Internal Audit Plan priorities change between meetings or new urgent issues arise, and where it is not possible to schedule an additional meeting, the Committee will be kept fully informed of all changes via email.

11.2 Attendance of Non-Members:

i) The attendance of non-members is subject to invitation by the Chair

ii) The Internal Auditor will be invited to attend each meeting unless requested not to do so by the Chair

11.3 Venue

Committee meetings will be held on a rotating basis at CTA Councils.

11.4 Conflicts of Interest

i) Committee members must declare any conflicts of interest at the start of each meeting or before discussion of a relevant agenda item or topic. Details of any conflicts of interest should be appropriately minuted

ii) Where members or invitees at Committee meetings are deemed to have a real or perceived conflict of interest, it may be appropriate they be excused from Committee deliberations on the issue where the conflict of interest may exist. The final arbiter of such a decision is the Chair of the Committee

11.5 Minutes

i) The Committee will appoint each CTA Council to provide secretariat support to the Committee on a rotating basis

ii) The Secretariat will ensure the agenda for each meeting and supporting papers are circulated, at least one week before the meeting, and ensure minutes of the meetings are prepared and maintained

iii) Minutes shall be approved by the Chair and circulated to each member within three weeks of the meeting being held

11.6 Induction

New members will receive relevant information and briefings on their appointment to assist them to meet their Committee responsibilities.

12 Reporting

12.1 The Committee shall report at least annually to each CTA Council

12.2 At the first Committee meeting after 30 June each year, the Internal Auditor will provide a performance report of:

i) The performance of Internal Audit for the financial year as measured against agreed key performance indicators

ii) The approved Internal Audit Plan of work for the previous financial year showing the current status of each audit

12.3 The Committee may, at any time, consider any other matter it deems of sufficient importance to do so. In addition, at any time an individual Committee member may request a meeting with the Chair of the Committee

13 Decision Making/Deliverables:

13.1 Decision Making/ Deliverables

i) The Committee is expected to make decisions by consensus but if voting becomes necessary then the details of the vote are to be recorded in the minutes

ii) Each member of the Committee shall be entitled to one vote only. In the case of an equality of votes on any issue the Chair shall have the casting vote

iii) Between meetings the Chair may circulate to members by email specific proposals for adoption by the Committee. Members shall be given a set time – at least 5 (five) days – in which to reply to indicate their agreement with a particular proposal

iv) A member's failure to respond within the timeframe given shall be taken as a vote against the proposal. Any decision taken by the Committee by email is to be noted and minuted at the commencement of the next meeting

NB: The Internal Auditor and the External Auditor representative are not voting members of the Committee.

13.2 Assessment of Committee Performance

i) The Chair will initiate a review of the performance of the Audit Committee at least once every two years

ii) The review will be conducted on a self-assessment basis (unless otherwise determined by the Chair), with appropriate input from management and any other relevant stakeholders, as determined by the Chair

iii) When reviewing the Committee's performance the Chair should be satisfied that an effective, comprehensive and complete service is being provided

14 Review of the Audit Committee Charter

i) At least once every two years the Audit Committee will review this Audit Committee Charter to ensure it remains current and reflects the Committee's role and objectives

ii) The Audit Committee will approve any changes to this Audit Committee Charter

Approved: Audit Committee Meeting

Chair Audit Committee

Lithgow CITY COUNCIL

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10. PROPERTY MANAGEMENT

Policy 10.2

SMOKE FREE ENVIRONMENT

Version 2

10. PROPERTY MANAGEMENT

10.2 SMOKE FREE ENVIRONMENT

OBJECTIVE

To provide a healthy environment for employees and the public alike.

POLICY

1 Smoking is not permitted in any buildings/premises either owned or controlled by Council, nor in any Council plant, machinery or motor vehicles.

2. The *Smoke-free Environment Act 2000* also makes the following settings smoke free:

- Public playgrounds within 10 metres of children's play equipment;
- Open areas of public swimming pools;
- Major sporting facilities and at public sports grounds;
- Public transport stops and stations;
- Within 4 metres of the pedestrian access point to a public building; and
- From 2015, commercial outdoor dining areas.

Maintained by Department:	~~Environment~~Economic Development and Environment	**Approved by:**	Council		
Reference:	Dataworks: Policy Register	**Council Policy No:**	10.2	**Effective Date:**	16/10/2006
Min No:	V1 - 06-349 V2 - 14-211	**Version No:**	2	**Reviewed Date:**	~~Oct 2013~~August 2017
Attachments:					

11. WASTE MANAGEMENT

Policy 11.1

EXEMPTION TO WHEELIE BIN SERVICE

Version 2

11. WASTE MANAGEMENT

11.1 EXEMPTION TO WHEELIE BIN SERVICE

OBJECTIVE:

To allow exemptions to Council's domestic waste collection charge and service when special geographical circumstances exist.

POLICY:

That an owner-occupier of rural residential premises located within the defined garbage collection area may apply to the General Manager for exemption from the garbage collection service where the residence, subject to the service stands at a distance greater than 1,000 metres (measured along the normal internal access roadway) from the Council nominated waste collection point.

Maintained by Department:	Assets	**Approved by:**	Council		
Reference:	Dataworks: Policy Register	**Council Policy No:**	11.1	**Effective Date:**	11/5/09
Min No:	V1 - 06-349 V2 – 09-189 V2 - 14-86	**Version No:**	2	**Review Date:**	Mar 2009 March 14 August 2017
Attachments:					

Lithgow CITY COUNCIL

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11. WASTE MANAGEMENT

Policy 11.2

WASTE DISPOSAL – WASTE DEPOTS – EXEMPTION FROM CHARGES

Version 2

11. WASTE MANAGEMENT

11.2 WASTE DISPOSAL – WASTE DEPOTS - EXEMPTION FROM CHARGES

OBJECTIVE

To provide guidelines to determine whether organisations qualify for exemption from waste disposal charges at the Waste Depot(s).

POLICY

1 Council charge all users of the Waste Depot in accordance with the adopted Waste Depot Fees and Charges Schedule.

2 Exemptions from the Waste Disposal Charges may be granted where organisations can provide evidence that the major function of their business or operation satisfies the following criteria:

(i) a service for the relief of poverty within the Council area; or

(ii) a voluntary service for the betterment of community welfare.

3 The General Manager is delegated the authority to determine exemption from Waste Depot disposal charges in accordance with this policy.

Maintained by Department:	~~Environment & Development~~Economic Development and Environment	**Approved by:**	Council		
Reference:	Dataworks: Policy Register	**Council Policy No:**	11.2	**Effective Date:**	11/5/09
Min No:	V1 - 06-349 V2 – 09-189 V2 - 14-86	**Version No:**	2	**Review Date:**	Mar 2009 March 14 August 2017
Attachments:					

11. WASTE MANAGEMENT

Policy 11.3

DISCHARGE OF LIQUID TRADE WASTE TO THE SEWERAGE SYSTEM

Version 3

11. WASTE MANAGEMENT

11.3 DISCHARGE OF LIQUID TRADE WASTE TO THE SEWERAGE SYSTEM

OBJECTIVE:

This policy sets out how council will regulate sewerage and trade waste discharges to its sewerage system in accordance with the NSW Framework for Regulation of Sewerage and Trade Waste (section 3.1 on page 16). The policy is concerned with the approval, monitoring and enforcement process for liquid trade wastes discharged to Council's sewerage system and the levying of commercial sewerage and liquid trade waste fees and charges. It has been developed to ensure the proper control of liquid trade waste and hence protection of public health, worker safety, the environment, and Council's sewerage system. The policy also promotes waste minimisation, water conservation, water recycling and biosolids reuse.

Sewerage systems are generally designed to cater for waste from domestic sources that are essentially of predictable strength and quality. Council **may** accept trade waste into its sewerage system as a **service** to businesses and industry.

Liquid trade wastes may exert much greater demands on sewerage systems than domestic sewage and, if uncontrolled, can pose serious problems to public health, worker safety, Council's sewerage system and the environment.

Impacts of poor liquid trade waste regulation include:

- Grease, oil, solid material, if not removed on-site, can cause sewer chokes and blockages and the discharge of untreated sewage to the environment.
- Strong waste may cause sewage odour problems and corrosion of sewer mains, pumping stations and sewage treatment works.

A person wishing to discharge liquid trade waste to the sewerage system must, under section 68 of the *Local Government Act 1993*, obtain prior approval from Council. Discharging liquid trade waste without an approval is an offence under section 626 of the Act.

The procedure for approval is governed by Chapter 7 of the Local Government Act and is subject to the *Local Government (General) Regulation 2005*.

Under clause 28 of the Local Government (General) Regulation, a council must not grant an approval under section 68 of the Act to discharge trade waste (whether treated or not) into a sewer of the council unless the Director General of the Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS) has concurred with the approval.

Under section 90 (2) of the Local Government Act, the Director General, DTIRIS, may give the council notice that the concurrence may be assumed (with such qualifications or conditions as are specified in the notice).

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Glossary

Assumed Concurrence: Council may apply to the Director General of the Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS) for authorisation to assume concurrence for Classification B or Classification S activities. Requests for assumed concurrence need to be forwarded to the NSW Office of Water. If granted, Council will no longer need to forward such applications for concurrence.

Automatic Assumed Concurrence: Councils have been authorised to assume concurrence for Classification A activities. Such applications may be approved by Council without forwarding the application for concurrence.

Bilge Water: minor amounts of water collecting in the bilge of a vessel from spray, rain, seepage, spillage and boat movements. Bilge water may be contaminated with oil, grease, petroleum products and saltwater.

Biochemical Oxygen Demand (BOD_5): The amount of oxygen utilised by micro-organisms in the process of decomposition of organic material in wastewater over a period of five days at 20°C. In practical terms, BOD is a measure of biodegradable organic content of the waste.

Biosolids: Primarily organic solid product produced by sewage processing. Until such solids are suitable for beneficial use, they are defined as wastewater solids or sewage sludge.

Bunding: Secondary containment provided for storage areas, particularly for materials with the propensity to cause environmental damage.

Chemical Oxygen Demand (COD): A measure of oxygen required to oxidise organic and inorganic matter in wastewater by a strong chemical oxidant. Wastewaters containing high levels of readily oxidised compounds have a high COD.

Chemical Toilet: Toilet in which wastes are deposited into a holding tank containing a deodorizing or other chemicals; wastes are stored and must be pumped out (and chemical recharged) periodically.

Commercial Kitchen/Caterer: For the purpose of these Guidelines, a commercial kitchen is a premise that is typically a stand-alone operation and prepares food for consumption off-site. These types of businesses typically cater to wedding functions, conferences, parties, etc. This definition would not apply to a food processing factory supplying pre-prepared meals to an airline company or similar.

Concurrence is required before a council may approve an application for the discharge of liquid trade waste (including septic tank and pan waste) to the sewerage system. It is a requirement under section 90(1) of the Local Government Act and clause 28 of the *Local Government (General) Regulation 2005* that council obtain the written concurrence of the Director General of the Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS) prior to approving such waste to be discharged to the council's sewerage system. Such concurrence request is to be provided to the NSW Office of Water.

Contingency Plan: A set of procedures for responding to an incident that will affect the quality of liquid trade waste discharged to the sewerage system. The plan also encompasses procedures to protect the environment from accidental and unauthorised discharges of liquid trade waste to the stormwater drainage system, and leaks and spillages from stored products and chemicals.

Director General: In this document Director General means the Director General of the Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS).

Due Diligence Program: A plan that identifies potential health and safety, environmental or other hazards (eg. spills, accidents or leaks) and appropriate corrective actions aimed at minimising or preventing the hazards.

Effluent: The liquid discharged following a wastewater treatment process.

Effluent Improvement Plan (EIP): The document required to be submitted by a discharger who is not meeting the acceptance limits for discharge waste quality set down in Council's approval conditions and/or liquid trade waste agreement. The document sets out how the discharger will meet the acceptance limits for the discharge of liquid trade waste to the sewerage system within the agreed timeframe.

Galley Waste: In this Policy, a liquid waste from a kitchen or a food preparation area of a vessel; solid wastes are excluded.

Heavy Metals: Metals of high atomic weight which in high concentrations can exert a toxic effect and may accumulate in the environment and the food chain. Examples include mercury, chromium, cadmium, arsenic, nickel, lead and zinc.

Housekeeping: is a general term, which covers all waste minimisation activities connected with the way in which operations within the premises are carried out.

Industrial Discharges: Industrial liquid trade waste is defined as liquid waste generated by industrial or manufacturing processes.

Local Government Regulation: *Local Government (General) Regulation* 2005 under the *Local Government Act 1993.*

Liquid Trade Waste: Liquid trade waste means all liquid waste other than sewage of a domestic nature.

Mandatory Concurrence: For the liquid waste in Classification C, councils will need to obtain concurrence for each discharger. Such concurrence request is to be provided to the NSW Office of Water.

Methylene Blue Active Substances (MBAS): These are anionic surfactants (see Surfactants definition) and are called MBAS as their presence and concentration is detected by measuring the colour change in a standard solution of methylene blue dye.

Minimal Pre-treatment: For the purpose of this Policy includes sink strainers, basket arrestors for sink and floor waste, plaster arrestors and fixed or removable screens.

National Framework for Wastewater Source Management: refer to section 3.2

NSW Framework for Regulation of Sewerage and Trade Waste: refer to section 3.1

NSW Office of Water (NOW): In accordance with the Public Sector Employment and Management (Departments) Order 2011, from 4 April 2011 the NSW Office of Water is a separate office within the Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS). All trade waste matters/applications for concurrence and policies for consent need to be forwarded to NOW.

Open Area: Any unroofed process, storage, washing or transport area potentially contaminated with rainwater and substances which may adversely affect the sewerage system or the environment.

Pan: For the purpose of this Policy "pan" means any moveable receptacle kept in a closet and used for the reception of human waste.

pH: A measure of acidity or alkalinity of an aqueous solution, expressed as the logarithm of the reciprocal of the hydrogen ion (H^+) activity in moles per litre at a given temperature; pH 7 is neutral, below 7 is acidic and above 7 is alkaline.

Premises: Has the same meaning as defined in the Local Government Act Dictionary and includes any of the following:

(a) a building of any description or any part of it and the appurtenances to it

(b) land, whether built on or not

(c) a shed or other structure

(d) a tent

(e) a swimming pool

(f) a ship or vessel of any description (including a houseboat)

(g) a van.

Prescribed Pre-treatment Equipment is defined as standard non-complex equipment used for pre-treatment of liquid trade waste, eg. a grease arrestor, an oil arrestor/separator, solids arrestor, cooling pit (refer to Table 7 of *Liquid Trade Waste Regulation Guidelines, 2009*).

Primary Measurement Device: A device such as a gauging pit, weir tank or flume installed in the liquid trade waste discharge line suitable for installation of instrumentation for flow measurement. In cases of commercial flows this can mean a removable section of pipe (in the fresh water supply to the trade waste area) and the installation of a check meter.

Septage: Material pumped out from a septic tank during desludging; contains partly decomposed scum, sludge and liquid.

Septic Tank: Wastewater treatment device that provides a preliminary form of treatment for wastewater, comprising sedimentation of settleable solids, flotation of oils and fats, and anaerobic digestion of sludge.

Septic Tank Effluent: The liquid discharged from a septic tank after treatment.

Sewage Management Facility: A human waste storage facility or a waste treatment device intended to process sewage and includes a drain connected to such a facility or device.

Sewage of a Domestic Nature: Includes human faecal matter and urine and waste water associated with ordinary kitchen, laundry and ablution activities of a household, but does not include waste in or from a sewage management facility.

Sewerage System: The network of sewage collection, transportation, treatment and by-products (effluent and biosolids) management facilities.

Ship-to-Shore Pump-out: Liquid waste from a vessel that may be considered for disposal to the sewerage system. This includes on-board toilet wastes, galley wastes and dry dock cleaning waste from maintenance activities.

Sullage: Domestic wastewater excluding toilet waste.

Surfactants: The key active ingredient of detergents, soaps, emulsifiers, wetting agents and penetrants. Anionic surfactants react with a chemical called methylene blue to form a blue-chloroform-soluble complex; the intensity of colour is proportional to concentration.

Suspended Solids (SS): The insoluble solid matter suspended in wastewater that can be separated by laboratory filtration and is retained on a filter. Previously also referred to as non-filtrable residue (NFR).

Total Dissolved Solids (TDS): The total amount of dissolved material in the water.

Waste Minimisation: Procedures and processes implemented by industry and business to modify, change, alter or substitute work practices and products that will result in a reduction in the volume and/or strength of waste discharged to sewer.

What is liquid trade waste?

A simple definition of Liquid Trade waste is "*all liquid waste other than sewage of a domestic nature.*"

Liquid trade waste is defined in the *Local Government (General) Regulation 2005* as below:

Liquid trade waste discharges to the sewerage system include liquid wastes from:

- business/commercial premises (eg. beautician, florist, hairdresser, hotel, motel, restaurant, butcher, service station, supermarket, dentist)
- community/public premises (including craft club, school, college, university, hospital and nursing home)
- industrial premises
- trade activities (eg. mobile carpet cleaner)
- any commercial activities carried out at a residential premises
- saleyards, racecourses and from stables and kennels that are not associated with domestic households
- septic tank waste, chemical toilet waste, waste from marine pump-out facilities and established sites for the discharge of pan content from mobile homes/caravans to the sewerage system.

While septic tank, pan and ship-to-shore pump-out waste are defined as trade waste, specific procedures need to be applied to their management as the waste is often transported from its source to the sewerage system. Accordingly, specific references to these wastes are provided in this policy where necessary.

Liquid trade waste excludes:

- toilet, hand wash basin*, shower and bath wastes derived from all the premises and activities mentioned above
- wastewater from residential toilets, kitchens, bathrooms or laundries (ie. domestic sewage)
- common use (non-residential) kitchen and laundry facilities in a caravan park
- residential swimming pool backwash.

** Used for personal hygiene only*

Objectives

The objectives[1] of this policy are:

- to protect public health
- to protect the health and safety of Council employees
- to protect the environment from the discharge of waste that may have a detrimental effect
- to protect Council assets from damage
- to assist Council to meet its statutory obligations
- to provide an environmentally responsible liquid trade waste service to the non-residential sector
- to encourage waste minimisation and cleaner production in the commercial and industrial sectors
- to promote water conservation, water recycling and biosolids reuse
- to ensure compliance of liquid trade waste dischargers with Council's approved conditions
- to provide operational data on the volume and composition of industrial and commercial effluent to assist in the operation of the sewerage system and the design of augmentations or new sewerage systems
- to ensure commercial provision of services and full cost recovery through appropriate sewerage and liquid trade waste fees and charges.

Scope of this Policy

This policy comprises three parts:

- Part 1 specifies the circumstances in which a person is exempt from the necessity to apply for an approval to discharge liquid trade waste to Council's sewerage system
- Part 2 specifies the criteria which Council will take into consideration in determining whether to give or refuse a liquid trade waste approval
- Part 3 specifies the framework for regulation of liquid trade waste, including the NSW Framework for Regulation of Sewerage and Trade Waste, alignment with the *National Framework for Wastewater Source Management*, application procedures, liquid trade waste discharge categories, liquid trade waste services agreements, monitoring of liquid trade waste discharges, liquid trade waste fees and charges, modification or revocation of approvals, prevention of waste of water and contaminated stormwater discharges from open areas.

[1] The above objectives are consistent with the *National Framework for Sewage Quality Management* on page 17 of the *Australian Sewage Quality Management Guidelines, June 2012*, Water Services Association of Australia (WSAA).

1 Part 1 – Exemptions

Exemptions*

For obtaining approval of liquid trade waste discharge

Table 1: Exemptions

This table lists commercial business activities that the Director General has consented to an exemption from the requirement to apply for approval for liquid trade waste discharge to the sewerage system. Each such business must meet the standard requirements specified below. An annual trade waste fee applies to each such discharger.	
Activity	**Requirements**
Beautician	Nil.
Bed and Breakfast (not more than 10 persons including proprietor)	Sink strainers in food preparation areas. Housekeeping practices (see Note 4).
Community hall (minimal hot food)	Sink strainers in food preparation areas. Housekeeping practices (see Note 4).
Day care centre (no hot food prepared)	Sink strainers in food preparation areas. Housekeeping practices (see Note 4). Nappies are not to be flushed into the toilet.
Delicatessen – no hot food prepared	Sink strainers in food preparation areas. Housekeeping practices (see Note 4).
Dental technician (no X-ray)	Plaster arrestor required.
Doctor's surgery (plaster casts, no X-ray)	Plaster arrestor required.
Dog/cat groomer/salon	Floor waste basket and sink strainer required (see Note 3). Animal litter and any waste disposal products may not be discharged to sewer. No organophosphorus pesticides may be discharged to sewer.
Florist	Floor waste basket and sink strainer required. No herbicides/pesticides may be discharged to sewer.
Fruit and vegetable – retail	Floor waste basket and sink strainer required (see Note 3).

Activity	Requirements
Funeral parlour	Floor waste basket required. Formaldehyde is not to be discharged to the sewer.
Hairdressing	Floor waste basket and sink strainer (where available).
Jewellery shop *miniplater* *ultrasonic washing* *precious stone cutting*	 Miniplater vessel to contain no more than 1.5 L of precious metal solution Nil If : < 1000 L/d plaster arrestor required > 1000 L/d general purpose pit required
Mixed business (minimal hot food)	Floor waste basket and sink strainer required (see Note 3). Housekeeping practices (see Note 4).
Mobile cleaning units carpet cleaning garbage bin washing	 20 micron filtration system fitted to a mobile unit. Floor waste basket required. Discharge is via grease arrestor (if available).
Motel (no hot food prepared and no laundry facility)	Floor waste basket and sink strainer required (see Note 3). Housekeeping practices (see Note 4).
Nut shop	Floor waste basket and sink strainer required (see Note 3).
Optical service - retail	Solids settlement tank/pit required.
Pet shop – retail	Floor waste basket and sink strainer required (see Note 2).
Pizza reheating for home delivery	Housekeeping practices (see Note 4).
Sandwich shop, salad bar, juice bar, coffee shop (no hot food prepared)	Floor waste basket and sink strainer required (see Note 3). Housekeeping practices (see Note 4).
Venetian blind cleaning	Nil (see Note 2).

Notes:

1. Where "required" is used it means as required by Council.
2. If activity is conducted outdoors, the work area is to be roofed and bunded to prevent stormwater ingress into the sewerage system.
3. All drainage from floors in food preparation areas is required to pass through a floor waste basket.
4. Food preparation activities need to comply with sound housekeeping practices including:
   (a) Floor must be dry swept before washing.
   (b) Pre-wiping of all utensils, plates, bowls etc. to the scrap bin before washing up.
   (c) Use of a food waste disposal unit is not permitted.

2 Part 2 – Criteria for approval to discharge liquid trade waste into council's sewerage system

2.1 Factors for consideration

Council's decision to accept liquid trade waste into its sewerage system is on the basis of a preventive risk management framework for managing risks to the sewerage system within an integrated water cycle management[2] context. It will be based on the discharge meeting Council's requirements[3]. When determining an application to discharge liquid trade waste to the sewerage system, Council will consider the following factors:

- The potential for the liquid trade waste discharge to impact on public health
- The possible impacts the discharge may pose to the environment (land, water, air, noise, or nuisance factors)
- The potential impacts of the discharge on the health and safety of the Council's employees
- The possible impact of the discharge on Council's sewerage infrastructure or sewage treatment process
- The capability of the sewerage system (both transportation and treatment components) to accept the quality and quantity of the proposed liquid trade waste discharge
- The impact the liquid trade waste will have on the ability of the sewerage scheme to meet its Environment Protection Authority licence requirements
- Compliance of the proposed liquid trade waste discharge with guideline limits in this policy[4]
- The potential impacts of the discharge on the quality of, and management practices for, effluent and biosolids produced from the sewage treatment process
- The adequacy of the pre-treatment process(es) to treat the liquid trade waste to a level acceptable for discharge to the sewerage system, including proposed safeguards if the pre-treatment system fails
- Whether appropriate safeguards are proposed to avoid the discharge of other, non-approved wastes to the sewerage system
- The adequacy of any chemical storage and handling facilities, and the proposed safeguards for preventing the discharge of chemicals to the sewerage system

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2 *Integrated Water Cycle Management Guidelines for NSW Local Water Utilities, DWE, October 2004.*

3 In considering options for waste management to drive resource efficiency, the following order of preference set out on page 80 of the *Australian Sewage Quality Management Guidelines, June 2012*, WSAA will be adopted:

- Avoidance
- Minimisation
- Re-use
- Recovery of energy
- Treatment
- Disposal

4 The quality of trade waste from some low risk commercial activities in Classification A will exceed guideline limits in Council's trade waste policy. As a higher level of pre-treatment is not cost-effective, such waste is acceptable if the discharger installs and properly operates and maintains the required pre-treatment equipment (refer to Table 4 on page 21 and Tables 7 to 9 of *Liquid Trade Waste Regulation Guidelines, 2009*). Similarly, septic and pan waste may exceed some guideline limits.

- Whether prohibited substances are proposed to be discharged
- The potential for stormwater entering the sewerage system and adequacy of proposed stormwater controls
- Waste minimisation and water conservation programs
- The adequacy of the proposed due diligence program and contingency plan, where required.

2.2 Discharge quality

Council has guideline limits for the acceptance of discharges, as set out in Table 2 on pages 12 to 14. Council may vary the guideline limits for a particular sewage treatment works. Where the guideline limits cannot be met, applicants are required to provide justification for exceeding the limits. Based on the type and the proposed contaminant levels, Council may refuse the application, or may approve it subject to an effluent improvement program, or other conditions being implemented.

2.3 Prohibited substances

Some substances are not suitable for discharge to the sewerage system. Table 3 on page 15 sets out those substances which must not be discharged to the sewerage system. Council may not grant approval for the discharge of these substances to the sewerage system unless it is specifically approved under section 68 of the Local Government Act.

2.4 Stormwater discharges from open areas

Stormwater is a prohibited discharge under this policy. The ingress of stormwater into the sewerage system can cause operational problems to the system and result in sewer overflows, as the sewerage system does not have the capacity for such flows. Therefore, Council does not generally accept the discharge of stormwater to the sewerage system.

However, it is recognised that it may not always be possible or practical to prevent all stormwater entering the sewerage system at some liquid trade waste premises. The discharge of limited quantities of first flush stormwater from sealed areas will be considered where roofing cannot be provided because of safety or other important considerations. The discharge from unsealed areas is not permitted.

Before the stormwater will be considered for discharge to the sewerage system, the applicant must provide the following information:

- reasons why the area cannot be fully or partially roofed and bunded to exclude stormwater
- the dimensions and a plan of the open area under consideration
- whether the open area is sealed
- the estimated volume of the stormwater discharge
- information on rain gauging
- where a first-flush system is proposed, details on how the stormwater will be diverted to the drainage system after the first flush is accepted (the first flush to be limited to first 10 mm of storm run off)
- measures proposed for diverting stormwater away from the liquid trade waste generating area
- report on other stormwater management options considered and why they are not feasible.

Note: Trade waste charges for the acceptance of stormwater to the sewerage system are indicated in section 3.7.9 on page 32.

2.5 Food waste disposal units

The use of food waste disposal units (also known as in-sinkerators, in-sink food waste disposers, or garbage grinders) is not permitted. Existing installations in hospitals and nursing homes may be permitted, provided that wastewater is discharged through an adequately sized grease arrestor. For existing premises, a food waste disposal charge will be levied based on the number of beds in the hospital or nursing home (refer to section 3.7.6 on page 29).

If the hospital or nursing home kitchen is refurbished, the food waste disposal unit must be removed.

2.6 Devices that macerate or pulverise waste

Macerators and any other similar devices that are used for pulverising of solid waste are not authorised to connect to Council's sewerage system. Solid waste includes, but is not limited to, sanitary napkin, placenta, surgical waste, disposable nappy, mache bedpan and urine containers.

Therefore Council will not accept any discharges from such devices to its sewerage system.

2.7 Use of additives in pre-treatment systems

Council does not allow solvents, enzymes, bioadditives, and odour control agents to be used in pre-treatment systems (except neutralising chemicals designated for the pre-treatment) except by specific written application and subsequent approval.

Table 2: Guideline limits for acceptance of liquid trade wastes into sewerage system

Parameter*	Limits#
General acceptance guideline limits	
Flow Rate	The maximum daily and instantaneous rate of discharge (kL/h or L/s) is set on the available capacity of the sewer. Large dischargers are required to provide a balancing tank to even out the load on the sewage treatment works.
BOD_5 and Suspended Solids	Normally, approved at 300 mg/L each. Concentration up to 600mg/L and in some cases higher concentration for low mass loadings may be acceptable if the treatment works has sufficient capacity and odour will not be a problem.
COD	Normally, not to exceed BOD_5 by more than three times. This ratio is given as a guide only to prevent the discharge of non-biodegradable waste.
Total Dissolved Solids	Up to 4000 mg/L may be accepted. However, the acceptance limit may be reduced depending on available effluent disposal options and will be subject to a mass load limit.
Temperature	Less than 38°C.
pH	Within the range 7.0 to 9.0.
Oil and Grease	100 mg/L if the volume of the discharge does not exceed 10% of the design capacity of the treatment works, and 50 mg/L if the volume is greater than 10%.
Detergents	All industrial detergents are to be biodegradable. A limit on the concentration of 50 mg/L (as MBAS) may be imposed on large liquid trade wastes.
Colour	No visible colour when the waste is diluted to the equivalent dilution afforded by domestic sewage flow.
Radioactive Substances	The discharge must comply with the *Radiation Control Act 1990*.

cont …

* See Glossary for explanation of terms

Refer to *Australian Sewage Quality Management Guidelines, June 2012*, WSAA for recommended analytical methods

Table 2 (Cont.) – Guideline limits for acceptance of liquid trade wastes into sewerage system

Parameter	Maximum concentration (mg/L)
Acceptance guideline limits for inorganic compounds	
Ammonia (as N)	50
Boron	5
Bromine	5
Chlorine	10
Cyanide	1
Fluoride	20
Nitrogen (total Kjeldahl)	100
Phosphorus (total)	20
Sulphate (as SO_4)	500
Sulphide (as S)	1
Sulphite (as SO_3)	15
Acceptance guideline limits for organic compounds	
Benzene	0.04
Toluene	0.5
Ethylbenzene	1
Xylene	1
Formaldehyde	30
Phenolic compounds (except pentachlorophenol)	5
Petroleum hydrocarbons (non-flammable)*	30
Pesticides general (except organochlorine and organophosphorus)*	0.1
Polynuclear Aromatic Hydrocarbons (PAHs)	5

cont …

* Refer to Table 3

Table 2 (Cont.) – Guideline limits for acceptance of liquid trade wastes into sewerage system

Parameter	Maximum concentration (mg/L)	Allowed daily mass limit (g/d)
Acceptance guideline limits for metals		
Aluminium	100	-
Arsenic	1	2
Cadmium	1	6
Chromium*	3	15
Cobalt	5	15
Copper	5	15
Iron	100	-
Lead	1	6
Manganese	10	30
Mercury	0.01	0.05
Molybdenum	5	30
Nickel	3	15
Selenium	1	15
Silver	2#	6
Tin	5	15
Zinc	5	15
Total heavy metals excluding aluminium, iron and manganese	less than 30 mg/L and subject to total mass loading requirements	

* Where hexavalent chromium (Cr^{6+}) is present in the process water, pre-treatment will be required to reduce it to the trivalent state (Cr^{3+}), prior to discharge into the sewer. Discharge of hexavalent chromium (Cr^{6+}) from chromate compounds used as corrosion inhibitors in cooling towers is not permitted.

This limit is applicable to large dischargers. The concentration of silver in photoprocessing waste where a balancing tank is provided is not to exceed 5 mg/L.

Table 3: Substances prohibited from being discharged into the sewerage system

- organochlorine weedicides, fungicides, pesticides, herbicides and substances of a similar nature and/or wastes arising from the preparation of these substances
- organophosphorus pesticides and/or waste arising from the preparation of these substances
- any substances liable to produce noxious or poisonous vapours in the sewerage system
- organic solvents and mineral oil
- any flammable or explosive substance
- discharges from 'Bulk Fuel Depots'
- chromate from cooling towers
- natural or synthetic resins, plastic monomers, synthetic adhesives, rubber and plastic emulsions
- rain, surface, seepage or subsoil water, unless specifically permitted
- solid matter
- any substance assessed as not suitable to be discharged into the sewerage system
- waste that contains pollutants at concentrations which inhibit the sewage treatment process – refer *Australian Sewage Quality Management Guidelines, June 2012*, WSAA
- any other substances listed in a relevant regulation.

3 Part 3 – Framework for regulation of liquid trade waste

3.1 The NSW framework for regulation of sewerage and trade waste

Due to the *Tragedy of the Commons*[5] in the use of common pool resources, sound regulation of sewerage and trade waste requires implementation of **all** the following integrated measures.

1. Preparation and implementation of a sound trade waste regulation policy, assessment of each trade waste application and determination of appropriate conditions of approval. The conditions must be consistent with the LWU's *Integrated Water Cycle Management Strategy* and demand management plan. In addition, execution of a liquid trade waste services agreement is required for large dischargers to assure compliance.
2. Preparation and implementation of a sound *Development Servicing Plan*[6], with commercial sewerage developer charges to ensure new development pays a fair share of the cost of the required infrastructure.
3. Full cost recovery with appropriate sewer usage charges[7] and trade waste fees and charges[8] in order to provide the necessary pricing signals to dischargers. These charges must include non-compliance trade waste usage charges and non-compliance excess mass charges in order to provide the necessary incentives for dischargers to consistently comply with their conditions of approval.
4. Monitoring, mentoring and coaching of dischargers in order to achieve cleaner production and assist them to comply with their conditions of approval.
5. Enforcement, including appropriate use of penalty notices under section 222 of the *Protection of the Environment Operations Act 1997*. Orders may also be issued and penalties imposed for offences under sections 626, 627 and 628 of the *Local Government Act 1993*.
6. Disconnection of a trade waste service in the event of persistent failure to comply with the LWU's conditions of approval.

Together, the above six measures comprise the NSW framework for regulation of sewerage and trade waste. The framework involves a preventive risk management approach, which has been developed to address the use of common pool resources by providing economic incentives for dischargers to minimise their waste and to consistently comply with their conditions of approval.

[5] In the absence of appropriate controls and measures (such as conditions of approval, a sewer usage charge, a trade waste usage charge, a non-compliance trade waste usage charge, excess mass charges, non-compliance excess mass charges and penalty notices), it would be in the economic interest of each trade waste discharger to minimize their efforts and expenditure on control and pre-treatment of their trade waste before discharging it to the sewerage system. In the past, failure to implement these measures has caused multi-million dollar damage to sewerage networks, pumping stations and treatment works (refer to the examples shown on pages 30, 47 and 48 of the *Liquid Trade Waste Regulation Guidelines, 2009*).

[6] In accordance with the *NSW Developer Charges Guidelines for Water Supply, Sewerage and Stormwater, 2002*.

[7] In accordance with page 29 of the *NSW Water Supply, Sewerage and Trade Waste Pricing Guidelines, 2002*.

[8] In accordance with Appendices D and I of the *Liquid Trade Waste Regulation Guidelines, 2009*.

3.2 Alignment with the national framework for wastewater source management

The NSW framework for regulation of sewerage and trade waste is outlined in section 3.1. The NSW framework is driven by the NSW Government's *Best-Practice Management of Water Supply of Sewerage Guidelines, 2007* and is consistent with that in the *National Framework for Wastewater Source Management*.[9]

In particular, under the *Best-Practice Management Guidelines* each LWU is required to achieve the following outcomes:

- Prepare and implement a 30-year Integrated Water Cycle Management Strategy, demand management plan, pay-for-use water supply pricing and community and customer involvement (Elements 1, 6, 8)
- Annual performance monitoring, including an annual triple bottom line (TBL) Performance Report and Action Plan to identify and address any areas of under-performance (Elements 5, 6, 9, 10, 11, 12)
- Achieve full cost recovery for water supply, sewerage and trade waste services and apply an appropriate non-residential sewer usage charge (Elements 3, 8)
- Prepare and implement a sound trade waste regulation policy and issue an appropriate approval to each trade waste discharger, including waste minimisation and cleaner production (Elements 1, 2, 3, 4, 7, 8)
- Appropriate trade waste fees and charges (including incentives to comply with LWU's approval conditions through non-compliance trade waste usage charges and non-compliance excess mass charges) (Elements 3, 8)
- Trade waste services agreement for large dischargers to assure compliance (Elements 3, 8)
- Appropriate training of LWU staff and monitoring, mentoring and coaching of trade waste dischargers (Elements 1, 4, 5, 7, 8)
- Enforcement, including appropriate use of penalty notices or orders (Elements 3, 8)

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[9] The following 12 elements of the *National Framework for Sewage Quality Management* are set out on page 18 of the *Australian Sewage Quality Management Guidelines, June 2012*, WSAA:

COMMITMENT

1. Commitment to Wastewater Source Management

SYSTEM ANALYSIS and MANAGEMENT

2. Assessment of the Wastewater System
3. Preventive Measures for Wastewater Input Quality Management
4. Operational Procedures and Process Control
5. Verification of Wastewater Inputs Quality
6. Management of Incidents/Complaints and Emergencies

SUPPORTING REQUIREMENTS

7. Employee Awareness and Training
8. Customer and stakeholder involvement and awareness
9. System Validation and Research and Development
10. Documentation and Reporting

REVIEW

11. Evaluation and Audit
12. Review and Continual Improvement

- Disconnection of a trade waste service in the event of persistent failure to comply with the LWU's conditions of approval (Element 8).

3.3 Application Procedures

To obtain Council's approval to discharge liquid trade waste to Council's sewerage system, a discharger must lodge an application in writing. Application forms are available from Council. If a person wishes to discharge liquid trade waste to the sewerage system but is not the owner of the premises, the person must obtain the owner's consent to the application.

The applicant must provide the following information:

- site owner's full name, address, contact telephone number
- address of the business/industry where discharge to the sewerage system will occur
- name of contact person for the premises and telephone contact for the business/industry
- type of process/activity generating the liquid trade waste
- normal hours of business operation
- rate of discharge, including
  - the average per day, maximum per day and per hour, and
  - hours of the day during which discharge will take place
- characteristics of wastes, including
  - nature of source
  - expected maximum and average concentrations of pollutants

    (Where sampling and testing are required to establish the quality of the liquid trade waste, the testing should be carried out in accordance with the procedures set out in the *Standard Methods for the Examination of Water and Wastewater* published by the American Public Health Association, American Water Works Association and Water Pollution Control Federation.)
- chemicals to be used – supply Material Safety Data Sheets
- details of any proposed pre-treatment facilities, location and site plan. Details should include:
  - pre-treatment process details
  - internal wastewater drainage
    - pump size
    - rising main size, length and profile
  - system operational characteristics
  - operational procedures
  - provisions for sampling and flow measurement, where required
  - proposed connection point to the sewerage system
- flow diagram and hydraulic profile of proposed liquid trade waste pre-treatment facilities
- maintenance schedule for pre-treatment equipment, including contractor's details
- stormwater drainage plan
- measures for prevention of stormwater ingress into the sewerage system

- location, nature and chemical composition of all substances stored/used on site
- justification for disposing of the waste into the sewerage system over other possible options (if any)
- methods of disposal for other wastes that are not discharged to the sewerage system
- any relevant environmental impact assessments
- any additional information as requested by Council.

The following information needs to be provided in regard to the discharge of septic tank and pan waste to the sewerage system:

- identification of the pump out service provider
- proposed method of discharge including plans and drawings if appropriate
- details of any proposed facilities for a disposal point, location and site plan (if applicable). Details should include the proposed connection point to the sewerage system
- security arrangements at the proposed disposal site (if applicable)
- the provision of freshwater for hosing down where needed
- bunding and measures to prevent the ingress of stormwater at the proposed dump point, if applicable
- the use of odour inhibiting or other chemicals, if any, and their dosage rates
- statement that septic effluent will not be mixed with septage or grease trap pump out, ie. dedicated tankers will be used for each type of waste
- for boat/marina facility – the type and number of vessels either moored at the marina and/or would utilise the pump-out facility on a regular basis:
  - private
  - commercial.

Council may, under section 86 of the Local Government Act, request an applicant to provide more information to enable it to determine the application.

3.4 Approval of applications

Where an application is approved, Council will notify the applicant as soon as practical of the approval and any conditions of the approval. The duration of the approval will be as stated in the approval. In cases where Council requires a discharger to enter into a liquid trade waste services agreement (refer to section 3.9 on page 34), Council will issue a deferred commencement approval under section 95 of the Local Government Act requesting the discharger to do so within the time specified in Council's letter. In such cases, the approval will not be operative until the agreement has been executed by the discharger.

An applicant may make a minor amendment or withdraw an application before it is approved by Council. An applicant may also apply to Council to renew or extend an approval, in accordance with section 107 of the Local Government Act.

If an application is refused, Council will notify the applicant of the grounds for refusal.

An approval to discharge liquid trade waste to Council's sewer is not transferable. A new application must be lodged and a new approval obtained if there is a change of the approval holder or the

activity. Council must be notified of change of ownership and/or occupier in all cases, whether a new approval is required or not, to allow updating of records.

3.5 Concurrence

If Council supports an application and has a notice stating that concurrence of the Director General, Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS), can be assumed for the waste relevant to the application, Council will approve the application. Otherwise, Council will seek concurrence in accordance with the requirements of section 90(1) of the Local Government Act.

All such concurrence requests will be provided to the NSW Office of Water.

Liquid trade waste discharges are divided into four (4) classifications for the purpose of the concurrence process:

- Concurrence Classification A – liquid trade waste dischargers for which Council has been authorised to assume concurrence to the approval subject to certain requirements
- Concurrence Classification B – liquid trade waste dischargers whereby Council may for authorisation to assume concurrence to the approval subject to certain requirements
- Concurrence Classification S – the acceptance of septic tank, pan waste and ship-to-shore pump-out. Council may apply for authorisation to assume concurrence to the approval subject to certain conditions
- Concurrence Classification C – all other liquid trade waste dischargers that do not fall within Concurrence Classification A, B or S, and therefore require Council to forward the application for concurrence.

All councils have been authorised to assume concurrence for Concurrence Classification A liquid trade waste discharges. These are listed in Table 4 and Council will not need to seek concurrence for approval of trade waste applications for these activities.

Table 4: Liquid trade waste discharges with automatic assumed concurrence

Commercial retail food preparation activities	Other commercial activities
Bakery (retail)	Animal wash (pound, stables, racecourse, kennels, mobile animal wash and veterinary with no X-ray)
Bed and Breakfast (<10 persons)	Beautician
Bistro	Boiler blowdown
Boarding house/hostel kitchen	Car detailing
Butcher shop (retail)	Cooling tower
Café/coffee shop/coffee lounge	Craft activities (making of clay pottery, ceramics, cutting and polishing of gemstones or making of jewellery at clubs, cottage industries)
Canteen	Dental surgery/dental specialist
Cafeteria	Dental technician
Chicken/poultry shop (only fresh chickens/game sold)	Doctor's surgery, medical centre - plaster casts (no X-rays)
Chicken/poultry shop (retail BBQ/charcoal chicken)	Florist
Club (kitchen wastes)	Funeral parlour, morgue
Commercial kitchen/caterer	Hairdressing (includes barbers)
Community hall/civic centre	Jewellery shop
Day care centre	Laboratory (pathology/analytical)
Delicatessen	Laundry or laundromat (coin operated)
Doughnut shop	Lawnmower repairs
Fast food outlet (McDonalds, KFC, Burger King, Pizza Hut, Red Rooster, etc.)	Mechanical repairs/workshop
Fish shop (retail – fresh and/or cooked)	Mobile cleaning units
Food caravan	Optical service
Fruit and vegetable shop (retail)	Pet shop (retail)
Function centre	Photographic tray work/manual development
Hotel	Plants retail (no nursery)
Ice cream parlour	School (Primary and Secondary)
Juice bar	Stone working
Mixed business	Swimming pool/spa/hydrotherapy

Motel	Vehicle washing (by hand/wand, automatic car wash, external truck wash or underbody/engine degrease only)
Nightclub	Venetian blind cleaning
Nursing home kitchen	Veterinary /animal kennels with X-ray
Nut shop	Waterless minilab
Patisserie	
Pie shop	
Pizza shop	
Restaurant	
Salad bar	
Sandwich shop	
School canteen	
Supermarket (with butcher/delicatessen/ seafood/or charcoal chickens)	
Take-away food outlet	

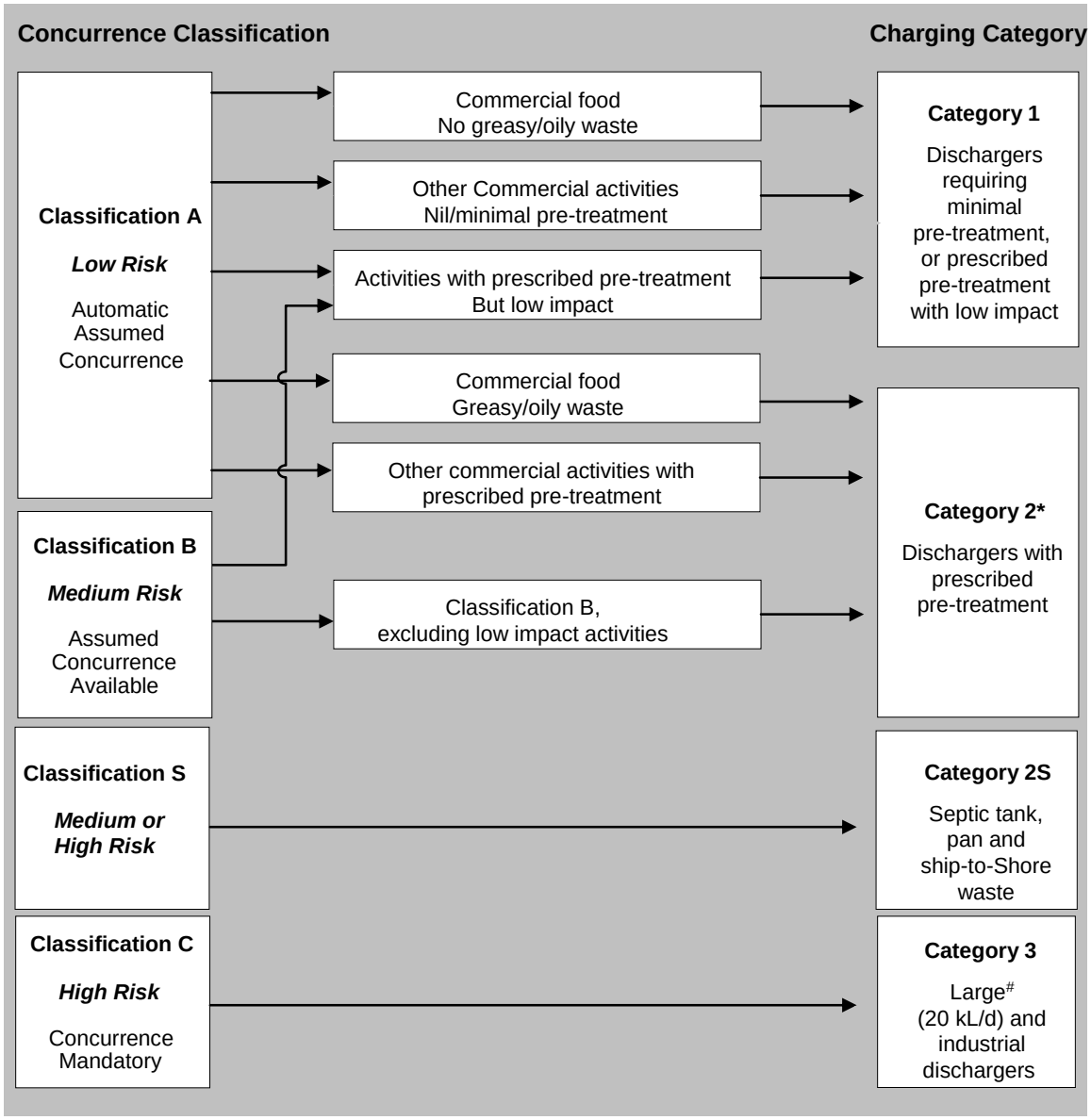
Notes:

The volume of liquid trade waste must not exceed 5 kL/d or 1000 kL/a except in the case of commercial retail food preparation activities, where up to 16 kL/d is included in this category. If the waste discharged to the sewer exceeds these volumes, the application must be treated as Concurrence Classification B. Discharges over 20 kL/d must be treated as Classification C.

3.6 Liquid trade waste charging categories

Four (4) classifications of liquid trade waste have been established for concurrence purposes, Classification A, B, C and S (refer section 3.5 on page 20). For trade waste charging purposes there are also four (4) charging categories, Category 1, 2, 2S and 3 (pages 23 and 25).

Figure 1 below shows that Classification A dischargers fall into Charging Category 1 or Category 2. Classification B dischargers fall into Charging Category 2, except for a few dischargers with low impact on the sewerage system which fall into Category 1. Classification S dischargers fall into Charging Category 2S. Classification C dischargers fall into Charging Category 3.



Category 1 Discharger

Category 1 liquid trade waste dischargers are those conducting an activity deemed by Council as requiring nil or only minimal pre-treatment equipment and whose effluent is well defined and of a relatively low risk to the sewerage system. In addition, Category 1 includes dischargers requiring prescribed pre-treatment but with low impact on the sewerage system.

Classification A activities – Commercial retail food preparation activities that do not generate an oily/greasy waste: bakery (only bread baked on-site), bistro (sandwiches, coffee only), café/coffee shop/coffee lounge, canteen, community hall (minimal food), day care centre, delicatessen, fruit and vegetable shop, hotel, ice cream parlour (take away only), juice bar, mixed business, motel, nightclub, nut shop, pizza cooking/reheating (no preparation or washing up on-site, pizza heated and sold for consumption off-site), potato peeling (small operation), sandwich shop/salad bar, take away food outlet.

Classification A activities – Other commercial activities: animal wash, beautician/hairdressing, crafts < 1000 L/d, dental surgery (plaster casts, no X-ray unless digital), doctor's surgery and medical centre (plaster casts, no X-ray), florist, funeral parlour, mobile cleaning units, morgue, jewellery shop, optical service (retail), pet shop, plants retail (no nursery), public swimming pool, photographic (tray work/manual development), venetian blind cleaning, veterinary (no X-ray).

Classification A or B activities – dischargers with prescribed pre-treatment with low impact on the sewerage system: boiler blowdown, cooling tower, industrial boilers, laboratory (analytical/pathology/tertiary institution), laundry, primary and secondary school[10], vehicle washing.

Category 2 Discharger

Category 2 liquid trade waste dischargers are those conducting an activity deemed by Council as requiring a prescribed type of liquid trade waste pre-treatment equipment and whose effluent is well characterised.

Trade Waste dischargers with prescribed pre-treatment[11] include:

Classification A activities: Premises that **prepare and/or serve hot food or foods that generate an oily/greasy waste:** bakery (pies, sausage rolls, quiches, cakes, pastries with creams or custards), bistro, boarding house/hostel kitchen, butcher, café/coffee shop/coffee lounge, cafeteria, canteen, fast food outlet, chicken/poultry shop, club, community hall[12], commercial kitchen/caterer, nursing home, patisserie, supermarket, doughnut shop, fish shop (cooking on-site), function centre, hotel, ice cream parlour, motel, nightclub, pizza cooking, restaurant, sandwich shop/salad bar, take away food outlet.

Other commercial Classification A activities: car detailing, craft activities > 1000 L/d, dental surgery with X-ray, lawnmower repairs, mechanical workshop, stone working, veterinary (with X-ray), waterless mini-lab.

Classification B activities: auto dismantler, bus/coach depot, construction equipment maintenance and cleaning, equipment hire, maintenance and cleaning, glass cutting and grinding, graphic arts, hospital (with or without X-ray), medical centre (with X-ray), optical services (at medical or educational facilities, workshops), oyster processing – shucking, panel beating, photographic lab, radiator repairer, screen printing, service station forecourt, shopping complex, water wash mini-lab, X-ray radiologist.

Other Classification A activities: fish shop (fresh fish for retail).

[10] If significant hot food preparation is carried out, Category 2 charges may be levied by Council.

[11] Excludes low impact activities, listed under Category 1.

[12] If the type and size of kitchen fixtures installed enable catering for large functions.

Category 2S Discharger

Category 2S dischargers are those conducting an activity of transporting and/or discharging septic tank or pan content waste into the sewerage system.

Trade waste dischargers include the following Classification S activities:

Classification S activities: bus/rail coaches/caravan/motor home/caravan park waste dump points, mooring/marina dump points, pan waste, portable chemical toilet waste, septage, septic tank effluent, ship-to-shore pump-outs (galley waste and toilet waste).

Category 3 Discharger (large or industrial waste dischargers)

Category 3 liquid trade waste dischargers are those conducting an activity which is of an industrial nature and/or which results in the discharge of large volumes (over 20 kL/d) of liquid trade waste to the sewerage system. Any Category 1 or 2 discharger whose volume exceeds 20 kL/d becomes a Category 3 discharger, except shopping complexes and institutions (eg. hospitals, educational facilities, correctional facilities, etc.)

Large trade waste dischargers and other Classification C activities include: abattoir, bakery (wholesale), brewery, cooling towers, cosmetics/perfumes manufacture, dairy processing (milk/cheese/yoghurt/ice cream etc.), food processing (cereals/cannery/condiments/ confectionary/edible oils/fats/essence/ flavours/fish/fruit juice/gelatine/honey/meat/pickles/ smallgoods/tea and coffee/vinegar/yeast manufacture etc.), fruit and vegetable processing, flour milling, glue manufacturer, egg processing, pet food processing, plants nursery (open areas), potato processing, poultry processing, saleyards, seafood processing, soft drink/cordial manufacture, starch manufacture, sugar refinery, tanker washing, tip leachate, transport depot/ terminal, water treatment backwash, wholesale meat processing, winery, wine/spirit bottling.

Dischargers of industrial waste include the following Classification C activities: acid pickling, adhesive/latex manufacture, agricultural and veterinary drugs, anodising, bitumen and tar, bottle washing, cardboard and carton manufacture, carpet manufacture, caustic degreasing, chemicals manufacture and repackaging, contaminated site treatment, cyanide hardening, detergent/soaps manufacture, drum washing, electroplating, engine gearbox reconditioning, extrusion and moulding (plastic/metal), feather washing, fellmonger, felt manufacture, fertilisers manufacture, fibreglass manufacture, filter cleaning, foundry, galvanising, glass manufacture, ink manufacture, laboratories (excluding those in Category 2), liquid wastewater treatment facility (grease trap receival depot and other pump-out waste depot), metal finishing, metal processing (refining/rumbling/ non-cyanide heat treatment/phosphating/ photo engraving/printed circuit etching/sheet metal fabrication etc.), mirrors manufacture, oil recycling (petrochemical) and refinery, paint stripping, paint manufacture, paper manufacture, pharmaceuticals manufacture, plaster manufacture, powder coating, printing (newspaper, lithographic), sandblasting, slipway, tannery, timber processing (joinery and furniture/plywood/hardwood), textile manufacture (wool dyeing/ spinning/scouring), truck washing (internal), waxes and polishes.

Phasing-in of charges

As indicated on page 24 of the *Best-Practice Management of Water Supply and Sewerage Guidelines, 2007*, the non-residential sewerage bills for customers facing a large increase as a result of implementing best-practice pricing are to be phased in over a period of five (5) years. Large increases in trade waste fees and charges may be phased in over a period of up to three (3) years.

3.7 Liquid trade waste fees and charges

Council provides sewerage and liquid trade waste services on a commercial basis, with full cost recovery through sewerage and liquid trade waste fees and charges. Council's proposed fees and charges are advertised annually for public comment in its draft Management Plan. In addition to the trade waste fees and charges described below, Council may elect to include any trade waste charges shown in Appendix I of the *Liquid Trade Waste Regulation Guidelines, 2009*. Any fee or charge indicated in this policy is reviewed annually as part of Council's annual fees and charges process and the updated fee or charge will apply for the relevant year. Council will index the charges shown annually on the basis of the change in the Consumer Price Index for Sydney in the 12 months to the previous December, as recommended for NSW local water utilities. Council will adopt the NSW Office of Water update of the above indexation: values and charges in April each year.

Liquid trade waste discharged to the sewerage system from industrial, commercial or other non-residential customers can impose significant costs on sewage transport and treatment facilities. To recover these costs and to ensure removal of existing significant cross-subsidies from residential customers, in addition to a two-part tariff with an appropriate **sewer usage charge/kL** for non-residential sewerage, appropriate fees and charges are levied for liquid trade waste.

Council's liquid trade waste fees and charges may include:

- Application fee
- Annual trade waste fee
- Re-inspection fee
- Trade waste usage charge
- Septic tank and pan waste disposal charge
- Excess mass charges
- Food waste disposal charge
- Non-compliance trade waste usage charge
- Non-compliance excess mass charge and pH charge
- Non-compliance penalty.

3.7.1 Application fee

The application fee recovers the cost of administration and technical services provided by Council in processing applications for approval to discharge liquid trade waste to the sewerage system. The application fee will be allocated on the basis of the category into which the discharger is classified and reflects the complexity of processing the application. Application fees will be set annually by Council.

3.7.2 Application renewal fee

Application fees apply for the renewal of an existing liquid trade waste approval, and in instances where change of ownership requires the conditions of an existing approval to be changed.

3.7.2 Annual trade waste fee

The purpose of this fee is to recover the cost incurred by Council for administration and the scheduled inspections each year to ensure a liquid trade waste discharger's ongoing compliance with the conditions of their approval.

As part of an inspection, Council or its agents may undertake monitoring of the liquid trade waste discharges from premises or business. Such monitoring may include but is not limited to, flow measurement and the sampling of the liquid trade waste. **Where more than one (1) instance**[+] of such monitoring is undertaken by Council, or its agents, in a financial year, the cost involved may be recovered from the discharger.

Annual liquid trade waste fees are determined on the basis of the category of the discharger and are proportionate to the complexity of their inspection and administration requirements. Annual trade waste fees will be set by Council. Where the discharger is required to pay for monitoring this will be charged on the basis of full cost recovery[#].

+ In view of the adverse impact of wastes with a high concentration of oil and grease on Council's sewage transportation system such as grease arrestors Council should carry out inspections of commercial premises preparing hot food at least four (4) times per annum. Although, Lithgow Council has a waste tracking system in place, and will conduct an annual inspection prior to pump-out. The discharger is required to produce evidence that the pre-treatment equipment has been properly serviced between the inspections, eg. pump-out dockets, invoices from a service contractor, etc on request.

The annual trade waste fee for Category 3 dischargers may be set on a case by case basis depending on the complexity of monitoring required (for charging purposes and other administrative requirements).

3.7.3 Re-inspection fee

Where non-compliance with the conditions of an approval has been detected and the discharger is required to address these issues, Council will undertake re-inspections to confirm that remedial action has been satisfactorily implemented. Council will impose a fee for each re-inspection. The re-inspection fee will be set annually by Council on the basis of full cost recovery. A re-inspection may include the monitoring of liquid trade waste discharges, the cost of which may be recovered from the discharger.

3.7.4 Trade waste usage charge

The trade waste usage charge is imposed to recover the additional cost of transporting and treating liquid trade waste from Category 2 dischargers.

Trade Waste Usage Charge ($) = Q x $1.~~62~~80*/kL (201~~3~~7/1~~4~~8$)

Where Q = Volume (kL) of liquid trade waste discharged to sewer.

* These charging rates are in 201~~3~~7/1~~4~~8$ and will be updated annually as part of Council's fees and charges process

3.7.5 Excess mass charges

Excess mass charges will apply for substances discharged in excess of the deemed concentrations in domestic sewage shown in Table 5 below. For excess mass charge calculation, equation (1) below will be applied.

Table 5: Deemed concentration of substances in domestic sewage

Substance	Concentration (mg/L)
Biochemical Oxygen Demand (BOD_5)	300
Suspended Solids	300
Total Oil and Grease	50
Ammonia (as Nitrogen)	35
Total Kjeldahl Nitrogen	50
Total Phosphorus	10
Total Dissolved Solids	1000
Sulphate (SO_4)	50[#]

[#] The concentration in the potable water supply to be used if it is higher than 50mg/L.

NB. Substances not listed above are deemed not to be present in domestic sewage.

$$\text{Liquid Trade Waste Excess Mass Charge (\$)} = \frac{(S-D)\times Q\times U}{1{,}000} \qquad (1)$$

Where: S = Concentration (mg/L) of substance in sample.

D = Concentration (mg/L) of substance deemed to be present in domestic sewage.

Q = Volume (kL) of liquid trade waste discharged to the sewerage system.

U = Charging rate ($/kg) for discharge of substance to the sewerage system.

Charging rates (U) used in equation (1) are as shown in Council's Annual Management Plan.

With regard to BOD, equation (1) applies for BOD_5 up to 600 mg/L.

Excess mass charges for BOD exceeding 600mg/L

If Council approves the acceptance limits for BOD_5 higher than 600mg/L, an exponential type equation will be used for calculation of the charging rate U_e ($/kg) as shown in equation (2). Equation (2) provides a strong incentive for dischargers to reduce the strength of waste. In addition, equation (5) on page 31 will be used where the discharger has failed to meet their approved BOD limit on two (2) or more instances in a financial year.

U_e is the excess mass charging rate for BOD ($/kg).

$$U_e = 2C \text{ x } \frac{(\text{Actual BOD} - 300\text{mg/L})}{600\text{mg/L}} \text{ x } 1.05^{\frac{(\text{Actual BOD} - 600\text{mg/L})}{(600\text{mg/L})}} \qquad (2)$$

Where C = the charging rate ($/kg) for BOD_5 600mg/L.

Actual BOD = the concentration of BOD_5 as measured in a sample

For example if C = $0.623/kg, equation (2) would result in the following excess mass charging rates:

$0.623/kg for BOD_5 600mg/L

$1.96/kg for BOD_5 1200mg/L

$5.05/kg for BOD_5 2400mg/L

The excess mass charge for BOD is calculated using equation (1):

Excess Mass Charge for BOD ($) = $\frac{(S-D)\times Q\times U_e}{1{,}000}$

3.7.6 Food waste disposal charge[13]

Where Council has permitted the use of a food waste disposal unit for an existing hospital, nursing home or other eligible facility, the following additional food waste disposal charge will be payable annually.

Food Waste Disposal Charge ($) = B x UF

Where B = Number of beds in hospital or nursing home.

UF = Annual charging rate ($/bed) for a food waste disposal unit at a hospital or nursing home.

***Note**: The recommended annual charging rate is $2~~7~~9/bed (201~~3~~7/1~~4~~8$).*[14]

[13] For existing installations only. New installations are not permitted.

[14] These charging rates will be updated annually as part of Council's fees and charges process

3.7.7 Non-compliance charges

Category 1 and 2 Dischargers

If the discharger has not installed or maintained appropriate pre-treatment equipment, the following trade waste usage charges will be applied for the relevant billing period:

Category 1 Discharger - $1.80~~62~~*/kL (2017~~3~~/18~~4~~$)

Category 2 Discharger - $19~~7~~*/kL (2017~~3~~/18~~4~~$)

(*These charging rates will be updated annually as part of Council's fees and charges process)

Category 3 Discharger

Non-compliance pH charge

Equation (3) is used for waste with pH being outside the approved range. This equation provides an incentive for dischargers to apply appropriate pH correction so their waste remains within the approved pH limits. Council may require industrial and large dischargers to install and permanently maintain a pH chart recorder or data logger as control of pH is critical to minimising odour and corrosion problems in the sewerage system.

Charging rate for pH where it is outside the approved range for the discharger =

$$K \times (\text{actual pH} - \text{approved pH})^{\#} \times 2^{(\text{actual pH} - \text{approved pH})\#} \qquad (3)$$

absolute value to be used.

K = pH coefficient = 0.4~~41~~[15] (2013~~7~~/14~~8~~$) and needs to be adjusted in accordance with changes in the CPI.

Example: Council has approved the pH range 8.0 to 9.0 for a large discharger generating high strength trade waste in order to prevent corrosion and odour problems in the sewerage system.

Case 1: pH measured 7.0

Charging rate ($/kL) = 0.38 x [7 – 8] x 2 [7 - 8] = $0.76/kL

Case 2: pH measured 11.0

Charging rate ($/kL) = 0.38 x [11-9] x 2 [11-9] = $3.04/kL

Non-compliance excess mass charges

Where a discharge quality fails to comply with the approved concentration limits of substances specified in Council's approval conditions (or the acceptance criterion listed in Council's trade waste policy), Council incurs additional costs in accepting and treating that waste. Council may also face problems with the effluent and biosolids management.

([15] These charging rates will be updated annually as part of Council's fees and charges process)

In order to recover Council's costs, equation (4) shall apply for non-compliance excess mass charges, except for BOD where equation (5) shall apply.

Non-compliance Excess Mass Charges ($) = $$\frac{(S-A)\,x\,Q\,x\,2U}{1{,}000} + \frac{(S-D)\,x\,Q\,x\,U}{1{,}000} \qquad (4)$$

Where:

S = Concentration (mg/L) of substance in sample.

A = Approved maximum concentration (mg/L) of pollutant as specified in Council's approval (or liquid trade waste policy).

Q = Volume (kL) of liquid trade waste discharged for the period of non-compliance.

U = Excess mass charging rate ($/kg) for discharge of pollutant to sewerage system, as shown in Council's Annual Management Plan.

D = Concentration (mg/L) of substance deemed to be present in domestic sewage.

Non-compliance excess mass charges for BOD

If a discharger has failed to meet the approved maximum concentration of BOD on two or more instances in a financial year, the non-compliance excess mass charging rate for BOD U_n will be levied on the basis of equation (5):

U_n is the BOD non-compliance excess mass charging rate.

$$U_n = 2C\,x\,\frac{(A-300mg/L)}{600mg/L}\,x\,1.05^{\frac{(A-600mg/L)}{600mg/L}} + 4C\,x\,\frac{(Actual\,BOD-A)}{600mg/L}\,x\,1.05^{\frac{(Actual\,BOD-A)}{600mg/L}} \qquad (5)$$

For example, if C = $0.623/kg, BOD_5 actual (measured) level is 2400mg/L and the approved maximum concentration of BOD (A) is 1000mg/L, equation (5) would result in a non-compliance excess mass charging rate of $8.02/kg.

Non-compliance Excess Mass Charge for BOD is calculated using equation (1):

Non-compliance Excess Mass Charge ($) = $$\frac{(S-D)\times Q\times U_n}{1{,}000}$$

The non-compliance excess mass charges shown above are in lieu of the excess mass charges in section 3.7.5.

NB*. Council will continue applying the above non-compliance excess mass charge until the quality of discharge complies with Council's approved quality (or the trade waste policy) limits, within the time frame determined by Council for remedying the problem. If the discharger fails to rectify the problem within this time frame, the discharger may be required to cease discharging liquid trade waste into Council's sewerage system and may also be required to pay a 'non-compliance penalty' as indicated in the following section.*

3.7.8 Non-compliance penalty

The non-compliance penalty covers instances where Council may seek compensation for its costs relating to legal action, damage to infrastructure, incurred fines and other matters resulting from illegal, prohibited or unapproved liquid trade waste discharged to the sewerage system. Also included are fines under:

- *Protection of the Environment Operations Act 1997*, section 120(1) (Pollution of any waters by a discharger who fails to comply with the conditions of approval for discharge of liquid trade waste to sewer)
- *Local Government Act, 1993*, section 627 (Failure to comply with an approval), section 628 (Failure to comply with an order). Non-compliance penalties will be pursued by legal action.

3.7.9 Discharge of stormwater to the sewerage system

The discharge of stormwater, surface and subsoil waters to the sewerage system is prohibited under this policy. As indicated in section 2.4, the acceptance of first flush stormwater runoff may be permitted. A charge of $1~~7~~9/kL[16] (201~~3~~7/1~~4~~8$) will be applied to Category 3 dischargers in accordance with the non-compliance trade waste usage charge, if approval is granted to accept the above waters. Excess mass charges will be also applied in accordance with section 3.7.5.

3.7.10 Septic and pan waste disposal charge

This charge is imposed to recover the cost of accepting and treating septic tank and pan waste.

Septic tank and pan waste disposal charge ($) = Q x S

Where: Q = Volume (kL) of waste discharged to sewer.

S = Charging rate in $/kL for septic tank effluent, septage or chemical toilet waste as indicated in Council's Annual Management Plan.*

3.7.11 Responsibility for payment of fees and charges

Property (land) owners are responsible for the payment of fees and charges for water supply, sewerage and liquid trade services provided by Council. This includes property owners of marina, caravan park, etc., if a dump point located at their premises is connected to the sewerage system. Where another party (lessee) leases premises any reimbursement of the lessor (property owner) for such fees and charges is a matter for the lessor and the lessee.

Council will charge a septic tank and pan waste disposal charge for services it provides to transporters of septic tank and pan waste tankered and discharged to the sewerage system.

* Appropriate excess mass ~~charging rates~~elements ~~-~~for these wastes are provided in Appendix I. The charging rates ~~charges are in 2013/14$ and~~ will be indexed on the basis of the Consumer Price Index and published annually in Councils fees and charges.

[16] These charging rates will be updated annually as part of Council's fees and charges process

Table 6: Summary of trade waste fees and charges[14]

CHARGING CATEGORY	APPLICATION FEE	ANNUAL NON-RESIDENTIAL SEWERAGE BILL WITH APPROPRIATE SEWER USAGE CHARGE/kL	ANNUAL TRADE WASTE FEE	RE-INSPECTION FEE (when required)	TRADE WASTE USAGE CHARGE/kL	SEPTIC WASTE DISPOSAL CHARGE	EXCESS MASS CHARGES/kg	NON-COMPLIANCE TRADE WASTE USAGE CHARGE/kL	NON-COMPLIANCE EXCESS MASS/kg and pH CHARGES/kL (if required)	NON-COMPLIANCE PENALTY (if required)
1	Yes[15]	Yes	Yes	Yes	No	No	No	Yes[16]	No	Yes
2	Yes	Yes	Yes	Yes	Yes	No	No	Yes[16]	No	Yes
2S	Yes	Yes[17]	Yes	Yes[17]	No	Yes	No	No	No	Yes
3	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes

All dischargers of liquid trade waste to Council's sewerage system should be aware that they are subject to prosecution and imposition of fines under the *Local Government Act 1993* and the *Protection of the Environment (Operations) Act 1997* and Regulations. In addition to fines, Council may recover costs of damages and fines incurred by Council as a result of an illegal liquid trade waste discharge.

3.8 Monitoring

Council will carry out inspections of the premises of all liquid trade waste dischargers and their treatment facilities at least once per annum. Inspections of commercial premises preparing hot food may be carried out at least four (4) times per annum (refer to page 27 in section 3.7.2). Monitoring of the large and industrial dischargers is to be carried out as specified in the approval conditions.

The applicant may be required to monitor the liquid trade waste discharge as a condition of an approval or agreement. They may also be required to pay for any sampling and testing of liquid trade waste undertaken by Council.

For this purpose, an inspection/sampling point, where the waste can be inspected and sampled, will be specified in the approval and/or agreement. This point will normally be located after the pre-treatment facility. The discharger may need to install a suitable method of flow measurement.

[14] In addition, a Food Waste Disposal Charge will apply where Council has approved the use of an existing food waste disposal unit for a hospital, nursing home or other eligible facility (refer to section 3.7.6 on page 29).

[15] Not applicable for dischargers exempted in Table 1.

[16] Non-compliance trade waste usage charge, if the discharger fails to install or properly maintain appropriate pre-treatment equipment:

Category 1 - $1.~~62~~80/kL (201~~3~~7/1~~4~~8$)
Category 2 - $1~~7~~9/kL (~~2013~~2017/1~~4~~8$)

[17] Only applicable if the discharger has a dump point located at their premises which is connected to the sewerage system

Council may require the discharger to:

- install a permanent primary measurement device
- measure the volume and flow rate using the permanently installed flow measurement system (such as a flow metering system)
- install a flow measurement device on a temporary basis and obtain enough data to determine a basis for assessing the flow rate and volume
- provide a system which allows obtaining a flow weighted composite sample.

Testing of samples is to be undertaken by a NATA-registered or other laboratory recognised by the NSW Office of Water (NOW) to ensure reliable and accurate results. Where the discharger is sampling the effluent, Council may randomly take duplicates to confirm the waste characteristics.

3.9 Liquid trade waste services agreement

In addition to its approval under the Local Government Act, Council may require certain dischargers, including those who wish to discharge liquid trade waste in large volumes (discharge >20 kL/d) or industrial waste (Concurrence Classification C discharges) or Classification S into its sewerage system to execute a liquid trade waste services agreement (refer to Attachment 1). The agreement will set out the conditions associated with the discharge and execution of the agreement will be a condition of the approval issued by Council (refer to section 3.4 on page 19). The conditions will be binding on the applicant and the Council. The agreement will be for a period of up to five (5) years. No discharge is to be made to Council's sewerage system until an agreement or an interim agreement has been executed.

Provision can be made in the agreement for (in addition to Council's approval conditions):

- additional conditions for discharge of liquid trade waste
- cancellation of the agreement and/or order to cease the discharge if the discharger is found to be in breach of the agreement or the liquid trade waste approval or, in the opinion of Council, the waste is adversely affecting the sewerage system or the environment
- entry by Council officers to inspect the liquid trade waste collection, treatment, monitoring and disposal systems
- the applicant to notify Council in advance of any changes that may affect the quality and quantity of the liquid trade waste
- the amount of bond/security to be lodged with Council prior to discharging to the sewerage system.

3.10 Enforcement of approvals and agreements

(see the attached sample agreement at Attachment 1 on page 37)

Any person who fails to obtain Council's approval to discharge liquid trade waste into the sewerage system, or fails to comply with the conditions of the approval, may be liable to a penalty as provided under the *Local Government Act 1993* (sections 626 to 628 and 634 to 639).

Polluting of any waters by a discharger of liquid trade waste who does not have a Council approval or who fails to comply with the conditions of the approval is an offence under section 120 (1) of the *Protection of the Environment Operations Act 1997*. In addition, under section 222 of this Act, Council may issue a penalty notice (ie. an on-the-spot fine) to such a discharger.

Any person who fails to comply with the terms or conditions of a liquid trade waste services agreement (ie. there is a breach of the agreement) will be required to indemnify the Council against any resulting claims, losses or expenses in accordance with section 8 of the agreement. Suspensions may also apply and may include a notice to cease the discharge.

3.11 Modification and revocation of approvals

Council reserves the right to modify or revoke an approval to discharge liquid trade waste to the sewerage system in any of the following circumstances:

- if the approval was obtained by fraud, misrepresentation or concealment of facts
- for any cause arising after the granting of the approval which, had it arisen before the approval was granted, would have caused the council not to have granted the approval
- for failure to comply with a requirement made by or under the *Local Government Act 1993* relating to a condition of the approval
- for failure to comply with a condition of the approval.

3.12 Prevention of waste of water

Water must be used efficiently and must be recycled where practicable. It is an offence under section 637 of the *Local Government Act 1993* and its Regulation (refer to Attachment 2) to waste or misuse water.

Dilution of trade waste with water from any non-process source including Council's water supply, bore water, groundwater and/or stormwater as a means of reducing pollutant concentration is therefore strictly prohibited.

3.13 Effluent improvement plans

Where the existing liquid trade waste discharged does not meet Council's requirements, the applicant may be required to submit an Effluent Improvement Plan setting out how Council's requirements will be met. The proposed plan must detail the methods/actions proposed to achieve the discharge limits and a timetable for implementation of the proposed actions. Such actions may include more intensive monitoring, improvements to work practices and/or pre-treatment facilities to improve the effluent quality and reliability.

3.14 Due diligence programs and contingency plans

For *Concurrence Classification A,* a discharger is not required to submit either a due diligence program or a contingency plan.

A discharger may be required to submit a due diligence program and a contingency plan for *Concurrence Classification B or Classification S* where it is considered that the discharge may pose a potential threat to the sewerage system. If required, a due diligence program and contingency plan must be submitted to Council within six (6) months and three (3) months respectively of receiving a liquid trade waste approval.

For *Concurrence Classification C,* a discharger may need to provide a due diligence program and contingency plan to Council within six (6) months and three (3) months respectively of receiving a liquid trade waste approval.

It should be noted that:

1. If the discharger has an accredited environmental management system in place, a due diligence program and contingency plan may not be required. However, proof of accreditation must be provided to Council with the application. The EMP may not include all necessary provisions in regard to trade waste. In such cases Council may require that a suitable due diligence program and contingency plan be developed and submitted to Council.
2. Where Council considers there is potential risk to the sewerage system from a discharge, it may request a due diligence program and contingency plan to be submitted prior to commencing the discharge.

Attachment 1

Sample Liquid Trade Waste Services Agreement between [Council] and [Applicant]

Liquid Trade Waste Services Agreement

Between

1. The Council

and

2. The Applicant

Recitals

A. The Council is the owner and operator of a sewerage system within the _____ area.

B. The Applicant has made application to the Council to discharge liquid trade waste from the Premises into the Council's sewerage system.

C. The application has been approved by the Council on certain conditions ("the Approval"), including the condition that the Council and the Applicant enter into this Agreement.

D. The Director General of the Department of Trade and Investment, Regional Infrastructure and Services has concurred in the Approval in accordance with clause 28 of the *Local Government (General) Regulation 2005*.

E. The Approval does not operate until this Agreement has been executed by both parties.

F. The parties enter this Agreement in consideration of the mutual promises contained herein.

Operative Part

1. Definitions and interpretation

1.1 In this Agreement, unless the context otherwise requires:

"Act" means the *Local Government Act 1993* (NSW).

"Annexure" means the annexure to this Agreement.

"Annual Management Plan" means the annual management plan of the Council, as adopted by the Council from time to time.

"Applicant" means the entity named as such in the Annexure.

"Approval" means the approval described in Recital C.

"Council" means the council named as such in the Annexure.

"Liquid Trade Waste Services" mean the making available by the Council of its sewerage system for connection to the Premises, for the purpose of discharge by the Applicant of its liquid trade waste.

"Premises" means the premises described in the Annexure.

1.2 Unless the context otherwise requires:

(a) A reference to this Agreement is a reference to this Agreement, including the Annexure, as amended from time to time in accordance with its terms

(b) A reference to the discharge of liquid trade waste means the discharge of liquid trade waste by the Applicant from the Premises to the Council's sewerage system

(c) A reference to any legislation is a reference to such legislation as amended from time to time

(d) Where the Applicant is comprised of more than one person, each obligation of the Applicant will bind those persons jointly and severally and will be enforceable against them jointly and severally.

2. Liquid Trade Waste Services

The Council will provide the Liquid Trade Waste Services to the Applicant on the terms of this Agreement.

3. Additional conditions for discharge of liquid trade waste

3.1 The Applicant may discharge liquid trade waste to the Council's sewerage system in accordance with the Approval and subject to this Agreement.

3.2 The Applicant must comply with all applicable Acts, regulations, by laws, proclamations and orders and with any lawful direction or order given by or for the Council or any other competent authority.

3.3 The Applicant must not discharge liquid trade waste contrary to this Agreement or the Approval or in any manner which may have an adverse effect on any person or property (including the sewerage system and the ecological system in the waters, land or area receiving sewage treatment works effluent or biosolids), or which may cause the Council to be in breach of any applicable Act, regulation, by law, proclamation or order or of any lawful direction given by or for any competent authority.

3.4 The Applicant must at its own cost monitor its discharges in accordance with the requirements set out in the Approval and must maintain records of such monitoring for inspection by the Council for such period as may be specified in the Approval.

3.5 The Council will carry out routine sampling and testing of the waste stream.

3.6 Where any flow-metering device is installed, the Applicant must at its own cost cause the device to be calibrated at least annually by a person or company approved by the Council. The Applicant must obtain a calibration certificate and provide a copy of the certificate to the Council within one month of receiving it.

3.7 If the Applicant is required to cease discharging liquid trade waste for any period, then the Applicant must cease discharging such waste for the period specified.

3.8 Where the Applicant ceases to discharge waste in the circumstances prescribed in clause 3.7, the Council may, at its discretion, elect to refund part of the annual trade waste fee on a pro rata basis, calculated according to the period of suspension.

3.9 If this Agreement is terminated, the Applicant must immediately cease to discharge liquid trade waste.

4. Fees and charges

4.1 In accordance with the section 560 of the *Local Government Act 1993*, Council will levy all water supply, sewerage and liquid trade waste fees and charges on the owner of the property.

4.2 In consideration of provision of the Liquid Trade Waste Services, the fees and charges as specified in the Council's Annual Management Plan and notified by Council to the owner and the Applicant must be paid to the Council, including fees for sampling and testing by Council in accordance with the Approval.

4.3 Fees and charges payable will include both non-residential sewerage charges and liquid trade waste fees and charges.

4.4 All monies payable to the Council must be paid within the time specified in the notice of charge.

5. Term

5.1 This Agreement will commence from the date it is signed on behalf of the Council, and will continue until the Applicant's Approval is revoked or the Applicant permanently ceases to discharge liquid trade waste pursuant to the Approval, whichever is the earlier. Upon such revocation or permanent cessation of the approved activity this Agreement shall automatically terminate by operation of this clause.

5.2 Termination of this Agreement is without prejudice to any accrued rights or obligations of either Party.

6. Powers of the Council

6.1 The Council may enter the Premises at a reasonable hour in the daytime or at any hour during which business is in progress or is usually carried on at the Premises for the purpose of conducting any inspection, examination, testing, monitoring or sampling to determine whether the Applicant is complying with the conditions of this Agreement.

6.2 The Applicant acknowledges that the Council has statutory powers available to it under the *Local Government Act 1993* and other Acts to issue orders and directions to the Applicant in relation to the discharge of liquid trade waste. The Applicant undertakes to comply with each such order or direction that may be notified by the Council to the Applicant within the time specified for compliance in that order or direction.

6.3 The Applicant releases the Council from any liability to the Applicant for any loss or damage due to the disruption of the Applicant's business arising out of the exercise of Council's rights pursuant to this clause.

7. Information supplied by the Applicant

7.1 The Applicant warrants that all information in its application for approval is true, complete and accurate to the best of its knowledge.

7.2 The Applicant must immediately notify the Council in writing of any error or omission in that information or any change to the information of which the Applicant becomes aware.

7.3 The Applicant must not provide any false or misleading information to the Council.

8. Indemnity

8.1 The Applicant indemnifies the Council from and against any claims, losses or expense (including legal costs on a solicitor and client basis) which the Council pays, suffers, incurs or is liable for as a result of:

(a) any unlawful, negligent, reckless or deliberately wrongful act or omission of the Applicant or its personnel or agents in connection with the discharge of liquid trade waste, including (without limitation) such acts or omissions which cause damage to property, personal injury or death

(b) a breach of this Agreement by the Applicant.

8.2 The Applicant's liability to indemnify the Council shall be reduced proportionally to the extent that any unlawful, negligent, reckless or deliberately wrongful act or omission of the Council caused or contributed to the liability or loss.

9. Insurance

The Applicant must effect and maintain for the term of this Agreement a public risk policy of insurance in the minimum of the sum specified in the Annexure and must, upon request by the Council, produce evidence of such insurance to the Council.

10. Bond

10.1 The Applicant must pay to the Council a bond in the sum specified in the Annexure.

10.2 The Council may at any time and without prior notice to the Applicant have recourse to the bond for the recovery of any sum due and owing by the Applicant to the Council.

10.3 Where the applicant fails to cease discharging trade waste as prescribed in clause 3.7, the Council may require the applicant to forfeit 50% of the bond.

10.4 The Council must return the bond to the Applicant, less any amount deducted by the Council under this clause, upon termination of this Agreement.

11. No assignment

The Applicant may not assign or otherwise transfer its rights and/or obligations under this Agreement.

12. Notices

12.1 A notice under this Agreement must be:

(a) in writing, directed to the representative of the other party as specified in the Annexure

(b) forwarded to the address, facsimile number or the email address of that representative as specified in the Annexure or the address last notified by the intended recipient to the sender.

12.2 A notice under this Agreement will be deemed to be served:

(a) in the case of delivery in person - when delivered to the recipient's address for service and a signature received as evidence of delivery

(b) in the case of delivery by post - within three business days of posting

(c) in the case of delivery by facsimile – at the time of dispatch if the sender receives a transmission report which confirms that the facsimile was sent in its entirety to the facsimile number of the recipient

(d) in the case of delivery by email, on receipt of confirmation by the recipient that the recipient has received the email.

12.3 Notwithstanding the preceding clause 12.2, if delivery or receipt of a communication is on a day which is not a business day in the place to which the communication is sent or is later than 5 pm (local time in that place) it will be deemed to have been duly given or made at 9 am (local time at that place) on the next business day in that place.

13. Variation

13.1 If the Applicant's Approval to discharge liquid trade waste from the Premises is varied, this Agreement shall be deemed to be varied in accordance with the variation made to that approval or to the fees, by operation of this clause.

13.2 In addition to automatic variation under clause 13.1, this Agreement may be varied by written agreement of the parties, provided that a variation to this Agreement that is inconsistent with:

(a) the Approval, including rights granted under, and conditions attached to, the Approval

(b) any applicable legislation; or

(c) Council's Annual Management Plan in respect of applicable fees and charges,

shall have no force or effect.

14. Severability

If any part of this Agreement is prohibited, void, voidable, illegal or unenforceable, then that part is severed from this Agreement but without affecting the continued operation, so far as possible, of the remainder of this Agreement.

15. Applicable law

15.1 This Agreement is governed by, and must be construed in accordance with, the laws in force in the State of New South Wales.

15.2 Each party submits to the exclusive jurisdiction of the courts exercising jurisdiction in the State of New South Wales and the courts of appeal there from.

16. Rights cumulative

The rights and remedies provided under this Agreement are in addition to, and not exclusive of, any other rights or remedies provided by law.

Executed as an agreement

Execution by the Council:

THE COMMON SEAL OF	)	(Corporate Seal)
…….. was affixed this	)	
	)	
……day of …….. 20…….	)	
	)	
in the presence of:	)	
	)	
……	)	……..
General Manager	)	[signature of General Manager]
	)	
and	)	
	)	
…….	)	
[print name of witness]	)	

Executed by the Applicant (corporate entity):

		…….
		…….
		[signature of witness]
	)	
	)	
The **COMMON SEAL** of…….	)	
	)	
……PTY LIMITED	)	
	)	
was affixed this ……day of	)	
	)	
……20….. in the	)	
	)	
presence of:	)	
	)	
……	)	……
[name of Director]	)	[signature of Director]
	)	
……		……
[name of Director/Secretary]		[signature of Director/Secretary]
	)	

Executed by the Applicant (individual):

Signed by: ……

[name of Applicant]

This……day of……20…..

in the presence of:

……

[print name of witness]

)
)
)
)
)
)

…….

[signature of Applicant]

…….

[signature of witness]

Annexure

A. The Council

1. Full Name of Council _____
2. ABN _____
3. Address _____

_____

4. Telephone _____
5. Emergency Contact _____

   Telephone _____

B. The Applicant

1. Full Name of Applicant _____
2. ABN _____
3. Business or Trading Name _____
4. Address _____

_____

5. Telephone _____
6. Emergency Contact _____

   Telephone _____

C. The Premises

1. Lot and DP Number: Lot(S) _____ DP _____
2. Location _____

_____

3. Description _____
4. Nature of Business _____

D. Notices

Applicant's Representative _____

Postal Address _____

_____

Facsimile _____

Email _____

Council's Representative _____

Postal address _____

_____

Facsimile _____

Email address _____

E. PUBLIC LIABILITY INSURANCE

Minimum cover: $_____

F. BOND $_____

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Attachment 2

Provisions in the *Local Government (General) Regulation 2005* in regard to acceptance of liquid trade waste into the sewerage system

Clause 25 Matters to accompany applications relating to discharge into sewers

An application for approval to discharge trade waste into a sewer under the control of a Council or that connects with such a sewer must be accompanied by the information required by Table 1 to the Liquid Trade Waste Management Guidelines[#].

Clause 28 Approval to discharge waste into sewers: concurrence required

A council must not grant an approval under section 68 of the Act to discharge trade waste (whether treated or not) into a sewer of the council unless the Director General of the Department of Energy, Utilities and Sustainability* has concurred with the approval.

Note: Section 90 (2) of the Act permits any person or authority whose concurrence is required before an approval can be granted to give the council notice that the concurrence may be assumed (with such qualifications or conditions as are specified in the notice).

Clause 32 Disposal of trade waste

(1) An approval to dispose of trade waste into a sewer of the council is subject to such conditions (if any) as the council specifies in the approval.

(2) In imposing any such conditions, the council is to have regard to the matter set out in Table 5 to the Liquid Trade Waste Management Guidelines[#].

Clause 159 Prevention of waste and misuse of water

The owner, occupier or manager of premises to which water is supplied by the council must:

(a) prevent waste of water by taking prompt action to repair leaking taps, pipes or fittings located on the premises

(b) take any other action that is reasonable to prevent waste and misuse of water.

[#] "Liquid Trade Waste Management Guidelines" means the Guidelines of that name produced by the Department of Energy, Utilities and Sustainability in March 2005, as in force from time to time. The 2005 Guidelines have now been superseded by *Liquid Trade Waste Regulation Guidelines, April 2009*.

* From 4 April 2011 a reference to the Director General of the Department of Energy, Utilities and Sustainability is to be construed as a reference to the Director General of the Department of Trade and Investment, Regional Infrastructure and Services.

Attachment 3 - Excess Mass Prices

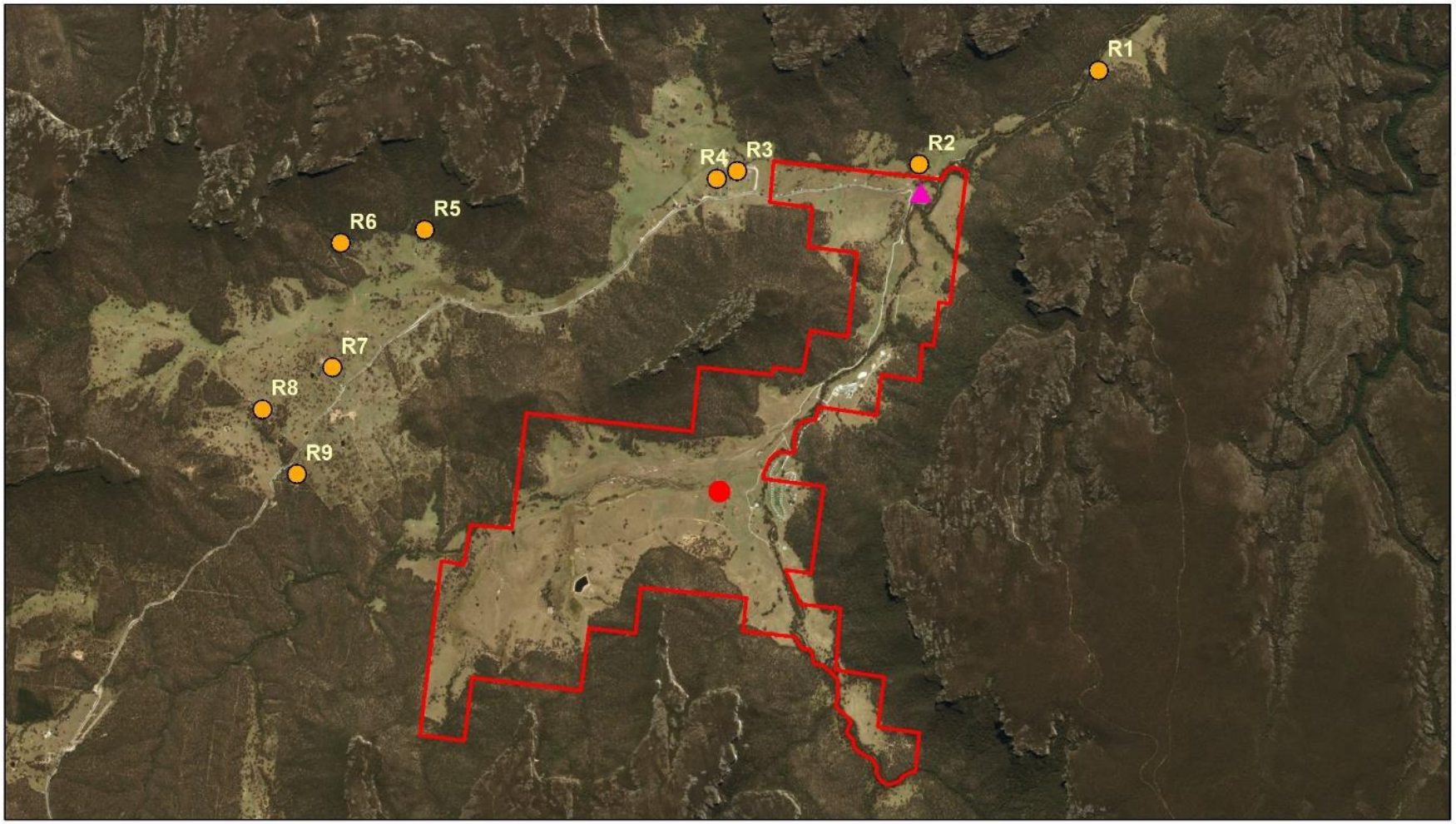
All charges are reviewed each year as part of Council's annual fees and charges process. Once adopted the reviewed prices ~~will be inserted into this table~~ for the upcoming year ~~and~~ will be published in Councils annual fees and charges.

	Year
Aluminium	
Ammonia* (as N)	
Arsenic	
Barium	
Biochemical oxygen demand* (BOD)	
Boron	
Bromine	
Cadmium	
Chloride	
Chlorinated hydrocarbons	
Chlorinated phenolics	
Chlorine	
Chromium	
Cobalt	
Copper	
Cyanide	
Fluoride	
Formaldehyde	
Oil and Grease* (Total O&G)	
Herbicides/defoliants	
Iron	
Lead	
Lithium	
Manganese	
Mercaptans	
Mercury	
Methylene blue active substances (MBAS)	
Molybdenum	
Nickel	
Nitrogen* (Total Kjeldahl Nitrogen – Ammonia) as N	
Organoarsenic compounds	
Pesticides general (excludes organochlorines and organophosphates)	
Petroleum hydrocarbons (non-flammable)	
Phenolic compounds (non-chlorinated)	
Phosphorous* (Total P)	

Polynuclear aromatic hydrocarbons	
Selenium	
Silver	
Sulphate* (SO_4)	
Sulphide	
Sulphite	
Suspended Solids* (SS)	
Thiosulphate	
Tin	
Total dissolved solids* (TDS)	
Uranium	
Zinc	

Maintained by Department:	~~Environment~~ Economic Development and Environment ~~& Development~~	Approved by:	Council		
Reference:	Dataworks: Policy Register	Council Policy No:	11.3	Effective Date:	2004
Min No:	V1 - 05/04 V2 - 10/08 V3 - 14-86	Version No:	3	Reviewed Date:	March 2014 August 2017
Attachments:					

Attachment 1-



Legend

- Wolgan Valley Site
- Proposed New Helipad Location
- Existing Helipad
- Receiver locations (neighbours)

1:50,000

0 2 4

Kilometers

Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia,

N

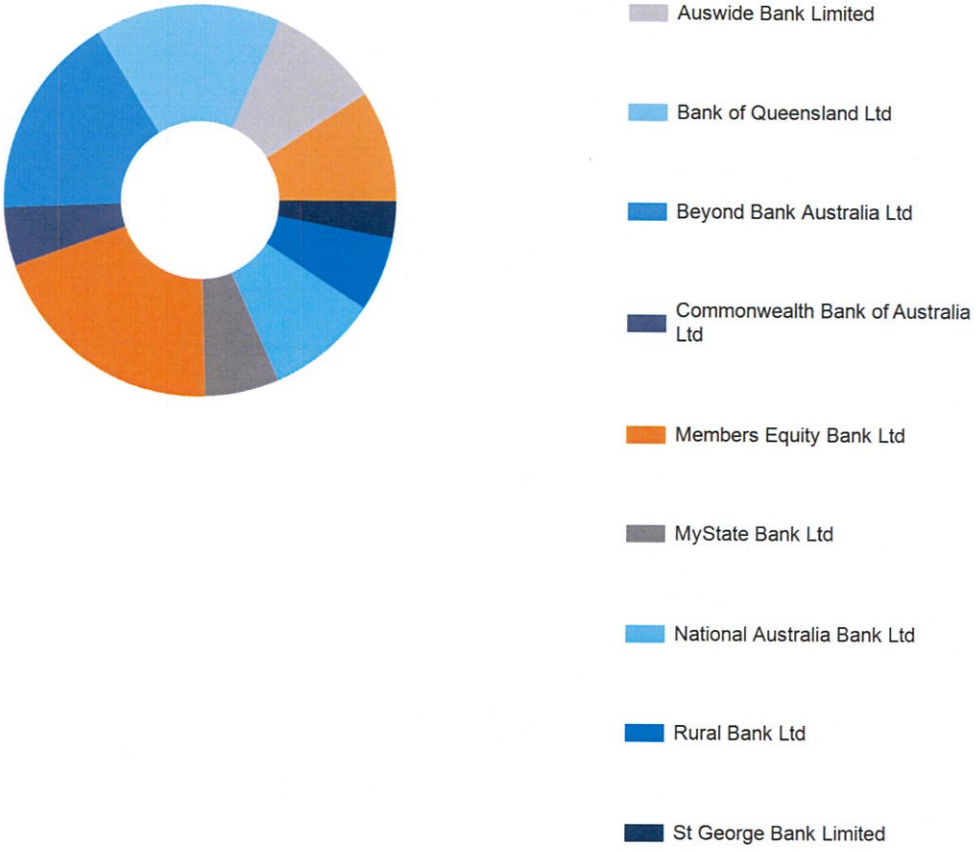
Flight paths based on information supplied by Sydney Helitours

GDA 1994 MGA Zone 56
UTM / GDA 1994

Map by KMH/pitt&sherry
19 June 2017

Issuer	Market Value	% Total Value
AMP Bank Ltd	3,021,773.98	9.22%
Auswide Bank Limited	3,027,846.57	9.24%
Bank of Queensland Ltd	5,014,732.88	15.31%
Beyond Bank Australia Ltd	5,536,337.00	16.90%
Commonwealth Bank of Australia Ltd	1,600,000.00	4.88%
Members Equity Bank Ltd	6,523,614.24	19.91%
MyState Bank Ltd	2,014,942.47	6.15%
National Australia Bank Ltd	3,002,816.72	9.17%
Rural Bank Ltd	2,015,528.76	6.15%
St George Bank Limited	1,000,281.64	3.05%
Portfolio Total	32,757,874.25	100.00%

Market Value by Issuer



Lithgow CITY COUNCIL

Surrounded by Nature · Steeped in History

8. FINANCE

Policy 8.4

DEBT RECOVERY

Version 3

8. FINANCE

8.4 DEBT RECOVERY

Objective of this Policy

The objective of this Debt Recovery Policy is to ensure consistency, fairness, integrity and confidentiality of all proceedings for both Council and the relevant debtor as well as to maximize the collection of outstanding debts and optimize Council's cash flow.

Council's aim is to be sympathetic and helpful to debtors suffering genuine financial hardship.

Council at all times will comply with relevant legislation, including the *Local Government Act 1993 (NSW)*("the Act").

Scope of this Policy

This policy relates to all parties that owe monies to Council (debtors), including but not limited to:

- Ratepayers (including other charges linked to the property); and
- Sundry Debtors

Some aspects of the debt recovery procedure will differ according to the type of debtor so they are treated separately in this policy.

Rates and Charges

Payment of Rates and Charges

Council will levy rates and charges by service of a rates notice in accordance with section 546 of the Act. Council will endeavour to serve those rates notices in the month of July of every year.

If the rates notice is served in July, under section 562(3) of the Act ratepayers have the option of making payment of the amounts owing in those rates notices by one lump sum (which is to be paid by 31 August) or by four quarterly instalments due on the last day of the following months:

- August
- November
- February
- May

If Council serves the rates notice after 1 August then the provisions of section 562(4) of the Act apply.

Instalment Reminder Notices

Under section 562(5) of the Act, Council must send instalment reminder notices to each person who is paying their rates and charges by instalment on or before 31 October, 31 January and 30 April.

Final Notice

A Final Notice (in a form to be approved) is to be sent to any ratepayer who has not, within fourteen days of the due date:

(a) Paid the amount of any instalment; or

(b) Come to an arrangement for payment of the instalment by instalments; or

(c) Made written application for waiver, credit or reduction of the instalment; or

(d) Taken some action to dispute that the amount is payable.

The Final Notice will:

(a) Set out the amount of the instalment;

(b) Demand payment of the instalment within fourteen days of the date of the notice (though fourteen days will actually be allowed);

(c) Urge the ratepayer to contact Council if they believe that the instalment has been paid or is not payable; and

(d) Urge the ratepayer to contact Council to come to a suitable arrangement if they are unable to make payment of the instalment amount within the time allowed.

Demand Letter

A Demand Letter is to be sent to any ratepayer who has not, within fourteen days of the Final Notice:

(a) Paid the amount of any instalment; or

(b) Come to an arrangement for payment of the instalment by periodical payments; or

(c) Made written application for waiver, credit or reduction of the instalment; or

(d) Taken some action to dispute that the amount is payable.

As Council has retained the services of an external law practice to assist them with the debt recovery function that law practice is to prepare and send the Demand Letters on their letterhead.

The Demand Letter will:

(a) Set out the amount of the instalment;

(b) Demand payment of the instalment within seven days of the date of the notice;

(c) Urge the ratepayer to contact Council's external law practice if they believe that the instalment has been paid or is not payable; and

(d) Urge the ratepayer to contact Council's external law practice to come to a suitable arrangement if they are unable to make payment of the instalment amount within the time allowed.

Commencement of Legal Action

Council is to instruct the external law practice to commence legal action with the issue and service of a statement of claim against any ratepayer who is not a pensioner, with an instalment (or instalments) unpaid and owing greater than $500.00 (including any accrued interest); and who has not:

(a) Come to an arrangement for payment of the instalment by periodical payments; or

(b) Made written application for waiver, credit or reduction of the instalment; or

(c) Taken some action to dispute that the amount is payable.

Service of Statements of Claim

Council's lawyers are to be instructed to serve statements of claim by post where possible. If postal service is unsuccessful for any reason personal service is to be attempted.

Costs of Legal Action

Council is to ensure that the costs of any legal action taken are legally recoverable as a charge on the property pursuant to section 550 of the Act and to upload those costs to the property as required.

Obtaining Judgement

Council is to instruct their external law firm to make application for judgment if, within the time allowed by the relevant legislation (currently twenty-eight days after service of the statement of claim), the ratepayer has not:

(a) Paid the debt and costs claimed; or

(b) Filed a defence; or

(c) Filed an acknowledgement of claim; or

(d) Come to an arrangement to pay by instalments; or

(e) Taken any other action that means Council is unable to apply for judgment.

Enforcing Judgement

Council is to instruct their external law firm to enforce any judgment obtained by one or more of the following methods as advised by their external law firm:

(a) Writ against property;

(b) Examination;

(c) Garnishee of bank accounts;

(d) Garnishee of wages or other debts;

(e) Bankruptcy;

(f) Winding up of companies;

(g) "Rent for Rates" under section 569 of the Act; or

(h) Such other method as Council is advised.

Duplicate Matters

As ratepayers who have not paid instalments as required will be referred for action quarterly, in the interest of keeping the costs they have to pay should legal action be required to a minimum, Council adopts the following:

1. If legal action has already commenced to recover the previous instalment then no further legal action is to be taken on later instalments until such time as the amount claimed in those legal proceedings (including costs) have been paid.

2. If legal action has not already commenced to recover the previous instalment then the amount of any later instalment is to be added to the earlier instalment for the taking of that legal action.

Payment of Debt and not Costs

If, after the commencement of legal proceedings, a ratepayer makes payment of the instalment claimed but not the costs of those proceedings, Council's external law firm is to send the relevant ratepayer a letter setting out the amount payable for costs and demanding payment of same within seven days (though fourteen days will be allowed).

If the ratepayer does not make payment of those costs within fourteen days of the sending of the letter legal action is to be continued for the recovery of those costs.

Arrangements

Under section 564 of the Act Council is able to come to an arrangement for the payment of amounts owing by way of periodical payment.
Council is to negotiate such arrangements with the aim to be that, where possible, all arrears (including any costs incurred in legal proceedings) are to be paid within the current rating year – together with the current year's rates and charges. Where the calculated arrangement payment would cause the ratepayer to suffer hardship, the arrangement payments should be calculated over the 12 month period from the date of the arrangement, with the arrangement period not to exceed 24 months from the date of the arrangement.

Any arrangement is to be confirmed in writing to the address for service of the ratepayer. The confirmation is to:

1. Set out the amount payable under the arrangement;

2. Confirm that the arrangement only applies to that amount payable;

3. Set out the arrangement itself;

4. If applicable, confirm that it is a condition of the arrangement that all future rates and charges will be paid when due;

5. Urge the ratepayer to contact Council prior to the due date for payment should they be unable to comply with the arrangement; and

6. Advise that Council reserves the right to continue action without notice should the ratepayer default on the arrangement.

Council is to send the confirmation letter on its letterhead - unless the matter has already been referred to its external law firm for action, in which case the external law firm is to send the confirmation letter.

Council is to record the arrangement in the System and Property file for each relevant property.

Defaulted Arrangements

Should a ratepayer default on a payment arrangement then:

(a) If the ratepayer has not been referred to the external law firm for action, recovery action will continue from the last stage it reached; and

(b) If the ratepayer has been referred to the external law firm for action, that external law firm will send a letter demanding payment of the missed instalment within seven days and if it is not complied with, unless the ratepayer has taken some step that delays the process, recovery action will be continued from the last stage it reached.

Hardship

The Act provides a number of circumstances where a discretion is available to Council to release ratepayers from some (or all) of their obligations due to what has come to be termed hardship. The sections include:

- Section 567 – writing off accrued interest
- Section 577 – concessions for pensioners
- Section 582 – waiver or reduction of amounts owing by pensioners

Any application by a ratepayer on the grounds of hardship, which must be written, are to be referred to the Chief Financial and Information Officer (CFIO) following a recommendation from the Financial Services Manager for consideration by Council in accordance with Council's adopted procedures.

Sale of Land for Rates

Council is to avail itself of the procedure for sale of land for rates and charges provided by Part 2 Division 5 of the Act where appropriate.

Interest

In accordance with section 566 of the Act, interest will accrue daily on any overdue rates and charges at the maximum allowable rate.\

Sundry Debtors

Invoicing & Statements

Council will issue invoices to sundry debtors weekly.
Council will provide a monthly statement to sundry debtors.

Due Date for Payment

Invoices sent to sundry debtors are due for payment thirty days from the date of issue of the invoice.

Reminder Letter

A Reminder Letter is to be sent to any sundry debtor who has not made payment of any invoice within fourteen days of the due date for payment. The Reminder Letter, which is to be on Council letterhead, will set out the amount owing and demand payment of same within seven days.

Demand Letter

A Demand Letter is to be sent by Council's legal firm to any sundry debtor who has not made payment of the amount owing within fourteen days of the date of the Reminder Letter. The Demand Letter will demand payment within seven days and advise that Council may take legal action to recover the amount without further notice if it is not paid within that time.

Commencement of Legal Action

Council is to instruct its external law practice to commence legal action with the issue and service of a statement of claim against any sundry debtor with an amount owing greater than $500.00 and who has not:

(a) Come to an arrangement for payment of the debt; or

(b) Made written application for waiver, credit or reduction of the debt; or

(d) Taken some action to dispute that the amount is payable.

Service of Statements of Claim

Council's lawyers are to be instructed to serve statements of claim by post where possible. If postal service is unsuccessful for any reason personal service is to be attempted.

Obtaining Judgement

Council is to instruct their external law firm to make application for judgment if, within the time allowed by the relevant legislation (currently twenty-eight days after service of the statement of claim), the ratepayer has not:

(a) Paid the debt and costs claimed; or

(b) Filed a defence; or

(c) Filed an acknowledgement of claim; or

(d) Come to an arrangement to pay by instalments; or

(e) Taken any other action that means Council is unable to apply for judgment.

Enforcing Judgement

Council is to instruct their external law firm to enforce any judgment obtained by one or more of the following methods as advised by their external law firm:

(a) Writ against property;

(b) Examination;

(c) Garnishee of bank accounts;

(d) Garnishee of wages or other debts;

(e) Bankruptcy;

(f) Winding up of companies;

(g) Such other method as Council is advised.

Arrangements

Council is able to come to an arrangement with any sundry debtor for payment of the amount owing (including any costs and interest).

Any request for an instalment arrangement from a sundry debtor must be in writing and Council will not consider any request until it has been submitted in writing.

Whether or not Council agrees to any arrangement proposal is entirely at the discretion of Council and the following should be taken into account:

(a) The debt size;

(b) The debt age;

(c) The time it will take to pay;

(d) The conduct of the debtor, including any previous arrangements and their outcome;

(e) The amount of costs incurred;

(f) The financial circumstances of the debtor, to the extent that Council is aware of them; and

(g) Any other matter Council considers relevant.

If Council accepts a proposal from a sundry debtor for payment of a debt by instalments, that acceptance is to be confirmed in writing. The confirmation is to:

1. Refer to the written offer to pay by instalments received;
2. Set out the amount payable under the arrangement;
3. Confirm that the arrangement only applies to that amount payable;
4. Set out the arrangement itself;
5. Urge the debtor to contact Council prior to the due date for payment should they be unable to comply with the arrangement; and
6. Advise that Council reserves the right to continue action without notice should the debtor default on the arrangement.

Council is to send the confirmation letter on its letterhead - unless the matter has already been referred to its external law firm for action, in which case the external law firm is to send the confirmation letter.

Defaulted Arrangements

Should a sundry debtor default on a payment arrangement then recovery action is to continue from the last stage it reached prior to the arrangement being entered into.

Interest

If the agreement by which Council provided the services that led to the sundry debt being incurred does not provide for interest to be charged, Council is to claim interest in any legal proceedings taken as allowed under relevant legislation at the applicable rate.

If the agreement by which Council provided the services that led to the sundry debt being incurred provides for interest to be charged, Council is to charge the interest under the agreement to the sundry debtor. However, Council at its discretion may choose to alternatively claim interest in any legal proceedings taken as allowed under relevant legislation at the applicable rate.

Inbound Contact

To avoid confusion, double-handling and adverse legal issues, once a matter has been referred to Council's external law firm for collection all inbound contact from debtors is to be handled by them. Council staff are to advise such debtors to deal directly with Council's external law firm and, if necessary, provide appropriate contact details for same.

Delegation of Authority

Council hereby expressly authorises its General Manager, CFIO, Financial Services Manager or such person as any of them delegates such authority to take such action as they deem fit to achieve the purposes of this policy with the adherence to same.

Maintained by Department:	Corporate & Community	**Approved by:**	Council		
Reference:	Dataworks: Policy Register	**Council Policy No:**	8.4	**Effective Date:**	21 Oct 2008
Min No:	V1- 06-349 V2-O08-165 V3 - 14-367	**Version No:**	3	**Reviewed Date:**	Oct 2009 August 2013 September 2014
Attachments:					

Lithgow CITY COUNCIL

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8. FINANCE

Policy 8.5

PENSION REBATES

Version 4

8. FINANCE

8.5 PENSION REBATES

OBJECTIVE

To provide assistance to eligible pensioners with the payment of their rates and charges.

POLICY

Council will provide a rebate of rates to eligible pensioners under Section 575 of the Local Government Act 1993.

1. Guidelines

For the purpose of the Local Government Act (1993) and consequently, this policy an eligible pensioner is defined as;

(a) persons who receive a pension, benefit or allowance under Chapter 2 of the Social Security Act 1991 of the Commonwealth, or a service pension under Part III of the Veterans' Entitlements Act 1986 of the Commonwealth, and who are entitled to a pensioner concession card issued by or on behalf of the Commonwealth Government,

(b) persons who receive a pension from the Commonwealth Department of Veterans' Affairs as:

(i) a war widow or war widower within the meaning of the Veterans' Entitlements Act 1986 of the Commonwealth, or

(ii) the unmarried mother of a deceased unmarried member of the Australian Defence or Peacekeeping Forces, or

(iii) the widowed mother of a deceased unmarried member of the Australian Defence or Peacekeeping Forces, and does not have income and assets that would prevent them from being granted a pensioner concession card (assuming they were eligible for such a card),

(b1) persons who have received a lump sum mentioned in section 234 (1) (b) of the Military Rehabilitation and Compensation Act 2004 of the Commonwealth or are receiving a weekly amount mentioned in that paragraph, and do not have income and assets that would prevent them from being granted a pensioner concession card (assuming they were eligible for such a card),

(c) persons who receive a general rate of pension adjusted for extreme disablement under section 22 (4) of the Veterans' Entitlements Act 1986 of the Commonwealth, or a special rate of pension under section 24 of that Act,

(d) persons who receive, or who at some point in their life have been eligible for, a Special Rate Disability Pension under the Military Rehabilitation and Compensation Act 2004 of the Commonwealth."

The rebate available to eligible pensioners is set out in Section 575(3) of the Local Government Act (1993). The total amount by which:

(a) all ordinary rates and charges for domestic waste management services levied on any land for the same year are reduced is not to exceed $250, and
(b) all water supply special rates and charges so levied are reduced is not to exceed $87.50, and
(c) all sewerage special rates or charges so levied are reduced is not to exceed $87.50

An application for pensioner rebates is to be made on a form approved by the Director General of the Office of Local Government.

The rebate will be shown on the Rates and Charges notice and will be deducted from the total amount payable.

On land that is jointly owned and the liability for payment of the rates is shared with ratepayers who are not eligible pensioners, the rebate amount will be calculated proportionally according to the ratio that the eligible pensioners bears to the total number of owners. There will be an exception where a legal agreement exists that makes the eligible pensioners solely liable for payment of the rates. In this case the full rebate will apply.

If an eligible pensioner becomes ineligible for any reason, the Council rebate will be written back proportionally according to the number of full quarters left in the rating year (Section 58 of the Local Government Act 1993).

2. Hardship

Eligible pensioners can apply to Council for assistance at any time within the current rating year if they are suffering financial hardship and are having difficulty paying their rates and charges. The procedure to apply is set out in the Council's Hardship Policy.

Maintained by Department:	Finance	**Approved by:**	Council		
Reference:	Dataworks: Policy Register	**Policy No:**	8.5	**Effective Date:**	21 Oct 08
Min No:	V1 - 06-349 V2 - O08-165 V3- 14-367	**Version No:**	4	**Review Date:**	Oct 2009 Aug 2011 Sept 2014
Attachments:					

Lithgow CITY COUNCIL

Surrounded by Nature · Steeped in History

8. FINANCE

Policy 8.6

HARDSHIP POLICY

Version 3

8. FINANCE

8.6 HARDSHIP POLICY

OBJECTIVE:

To provide assistance to ratepayers suffering financial hardship, with outstanding debts due to council and to provide an administration process to determine applications promptly.

POLICY:

A debtor who cannot pay a debt due to Council for the reason of financial hardship can apply for assistance at any time.

Each individual case will be considered on its merits. The criteria for assessment is contained in the Hardship Application form, attachment 1, including but not limited to, the following:

- The amount of any rate increase when compared to the average rate increase for the rate category
- Income from all sources
- Living expenses
- Reason for financial hardship
- Length of occupancy

The assistance provided will be determined under the legal requirements of the Local Government Act 1993.

DEFINITIONS

- LGA, 1993 - refers to the Local Government Act 1993.
- Pensioner - means an eligible pensioner as defined in clause 135 of the Local Government (General) regulations 2005.
- Hardship Application form will be used for the purpose of applying for assistance under this policy.
- Hardship Committee will review hardship applications and will include the Finance Manager and a Rating Officer.
- The workgroup will make recommendations to the Chief Financial and Information Officer (CFIO) and prepare reports to Council if amounts exceed the General Manager's delegations.

HARDSHIP PROVISIONS

The Local Government Act 1993 provides Council with three (3) options for providing assistance to ratepayers who are finding it difficult to pay their rates and charges because of financial hardship. A summary of the options is as follows:

Section 601 LGA 1993
Any ratepayer who incurs a rate increase in the first year following a revaluation of land values can apply to Council for rate relief if the increase in the amount of rates payable would cause them substantial hardship.

Council has discretion to waive, reduce or defer the payment of the whole or any part of the increase in the amount of the rate payable.

Council can set the period of time for when applications can be made under this Section.

Applications under Section 601 LGA 1993 must be made during the first year a new land value is used for rating purposes. Where an application is made in the first year, an application can also be made in subsequent years of the valuation base date.

Section 582 LGA 1993
Council can provide assistance to pensioners under this Section. Council may defer payment of all or part of the rates and charges payable after rebates have been deducted.

Sections 564 and 567 LGA 1993
Council can enter into payment agreements with rate payers, who cannot meet their normal instalment payments as provided by the LGA 1993.

- Council will provide an application form for the purpose of applying for assistance
- The Hardship Committee will review the application and recommend to the CFIO any offer of assistance as provided by the Local Government Act 1993 having regard to the circumstances of the applicant
- The CFIO can approve or not approve the Committee's recommendation
- The ratepayer will be informed of Council's decision in writing and if not satisfied with the outcome can request the Council to reconsider its decision
- After the Council considers the application and makes a decision the ratepayer has no further right to appeal.

Delegated Officers of Council can enter into payment agreements with ratepayers (Sections 564 and 567 LGA 1993).

Accrued interest on rates and charges may be written off where payment of the accrued interest would cause the person hardship. The Hardship Committee may request the ratepayer to come to an interview if it is necessary to understand the issues causing hardship.

HARDSHIP RESULTING FROM A GENERAL REVALUATION GOVERNMENT AREA

In accordance with Section 601 of the Local Government Act a rate payer that suffers substantial hardship as the consequence of the making and levying of a rate on the most recent valuation, may apply to Council for relief. Assistance is only available in the first year new valuations are used to calculate rates.The criteria used to determine eligibility are:

- The rates payable must be more than 5% of the gross household income
- The applicant must be an owner and an occupier of the property to which the rates relate and the dwelling must be the applicants sole or principle place of living

- The ordinary rate increase must be more in percentage terms than the amount determined by Council at each revaluation. The ordinary rate increase is calculated as the ordinary rates payable for the new rating year (being the first year in which revaluations are used) minus the ordinary rates payable in the previous rating year increased by the allowed rate pegging increase for the year

- The maximum amount of assistance in aggregate for all ratepayers is $20,000.

Only applications on the approved Hardship Application form, attachment 1, with certified supporting documentation will be considered. Applications with insufficient documentation will be referred back to the applicant. Completed applications will be assessed within 10 working days from lodgement with Council. Applications will be considered by the Hardship Committee. A ratepayer dissatisfied with a decision of the CFIO- may have that decision reviewed by the General Manager . If an application is refused, the applicant will be provided with reasons for such refusal by the CFIO. Applicants may appeal, in writing, to the General Manager.

PRIVACY

Privacy in relation to any consideration of hardship will be preserved in accordance with Council's Privacy Management Plan.

ATTACHMENTS

1 Hardship Application Form

Maintained by Department:	Corporate & Community	**Approved by:**	Council		
Reference:	Dataworks: Policy Register	**Council Policy No:**	8.6	**Effective Date:**	21 Oct 2008
Min No:	V1 - 06-349 V2 - O08-165 V3 - 12-49 V4 - 14-367	**Version No:**	4	**Review Date:**	Oct 2009 Aug 2011 Feb 2013 Oct 2013 Sept 2014
Attachments:					

Business Address: 180 Mort Street Lithgow
Postal Address: PO Box 19 Lithgow NSW 2790
Phone: (02) 63549999
Fax: (02) 63514259
Email: council@lithgow.nsw.gov.au
Web: www.council.lithgow.com
ABN: 59 986 092 492

RATES & CHARGES HARDSHIP APPLICATION

I _____ (Ratepayer Name)
of _____ (Ratepayer Address)
hereby make application to council for relief from payment of rates and charges upon the basis of hardship with respect to the following property:

Property Address: _____

Property Assessment Number: _____

The relief I seek is as follows (set out the specific relief sought – examples include extension of time to pay and waiver/deferral of interest for a specified period):

The grounds relied upon for this application are:

- Financial (in which case complete the Financial Questionnaire that follows and provide council with supporting documents);
- Non-financial (in which case provide the relevant information on the following page and provide council with supporting documents);
- Both financial and non-financial (in which case provide the information and documents for both categories above).

SIGNATURE OF RATEPAYER

The information contained in this application is true. I understand that information provided in this application will be better supported if I provide documents to council proving same and I have attached copies of all documents I want council to consider to this application.

Signature

Date of signature

Telephone

Email Address

Pensioner Allowance Information (if applicable)

Do you have a current Pensioner Concession Card (PCC) issued by the Commonwealth Government?

☐ Yes
☐ No

If 'Yes', type of pension or benefit

If 'Yes', PCC Number (attach copy)

Date of Grant

Have you claimed a Pension Concession on any other property this year in any other local government area?

☐ Yes
☐ No

If 'Yes', state the address of the property

Information for Non-financially Based Applications (if applicable)

I put forward the following information for Council's consideration

(if there is not enough space please attach further information as desired)

Financial Questionnaire for Financially Based Applications (if applicable)

INCOME (weekly unless otherwise stated)

Your average weekly income after tax from salary or wages	$
Social security benefits/pensions (include family payments etc)	$
All other income (eg self-employed income, interest, dividends, rent or trust distributions)	$
TOTAL	**$**
Income of your spouse or partner	$

EMPLOYMENT DETAILS

What is the name of your principal employer?

What is the address of your principal employer?

SUBURB POSTCODE

What is the institution name, branch, BSB and account number of the account into which your salary or wage is paid by your employer (if applicable)?

PROPERTY OWNED BY YOU

		CURRENT VALUE
Home	Property Address Value of equity, if any $	$
Other property	Property Address Value of equity, if any $	$
Funds in banks/ financial institutions, including funds held in off-set accounts	Institution, branch, BSB and account number	$
	Institution, branch, BSB and account number	$
Investments	Name and type of investment	$
Motor vehicle	Year Make Model Registration	$
Household contents	Description	$
Other personal property	Description and location	$
TOTAL VALUE OF PROPERTY OWNED BY YOU		**$**

LIABILITIES

Average weekly expenses:

ITEM	WEEKLY AMOUNT
Food	$
Household supplies	$
Mortgage/rent	$
Gas	$
Electricity	$
Heating fuel	$
Rates/levies	$
Telephone	$
Motor vehicle	
• Petrol	$
• Maintenance	$
• Registration/insurance	$
Medical/hospital funds	$
Other insurance (specify)	$
Fares	$
Clothing and shoes	$
Entertainment/hobbies	$
Education/childcare expenses, including fees and levies	$
Medical/chemist /pharmaceutical	$
Hire purchase payments	$
Credit cards	$
Other necessary commitments, including weekly payments on other liabilities, listed above (specify)	$
TOTAL WEEKLY EXPENSES	**$**

Other liabilities:

LIABILITIES	NAME OF BANK/INSTITUTION	TOTAL AMOUNT OWED
Home mortgage		$
Other loans		$
Credit cards		$
Credit cards		$
Other liabilities (specify)		$
TOTAL		**$**

Does anyone contribute to paying these liabilities (eg your spouse/partner)? If yes, give the person's details:

Name of person

Amount of contribution per week

Do you have any dependants? If yes, give details:

ADDITIONAL QUESTIONS REGARDING FINANCIAL CIRCUMSTANCES

Do you have any income, assets or liabilities not disclosed in this financial questionnaire?

☐ Yes

☐ No

If you answered yes to the previous question, give details of the other income, assets (including their location) or liabilities.

What arrangements are you prepared to make to pay council?

Additional Information for consideration by council

PRIVACY AND PERSONAL INFORMATION PROTECTION NOTICE

By completion of this form you may be providing Council with personal information. Council will collect the information only for a lawful purpose directly related to the function of Council. Information provided to Council may be used in conjunction with any of Council's business operations. We will take reasonable care not to disclose personal information. Exempt documents may come under the Government Information (Public Access) Act 2009.

Lithgow CITY COUNCIL

Surrounded by Nature . Steeped in History

8. FINANCE

Policy 8.7

INVESTMENT POLICY

Version 5

8. FINANCE

8.7 INVESTMENT POLICY

OBJECTIVE

1. To undertake investment of surplus funds.
2. To maximise earnings from authorised investments.
3. To ensure the security of Council funds.

POLICY

1. AUTHORITY FOR INVESTMENT

All investments are to be made in accordance with:

a) Local Government Act 1993 – Section 625
b) Local Government Act 1993 – Order (of the Minister) dated 12 January 2011
c) The Trustee Amendment (Discretionary Investments) Act 1997
d) Local Government (General) Regulation 2005.

2. DELEGATION OF AUTHORITY

The General Manager is given delegated authority under the Local Government Act to invest temporary surplus funds in accordance with Council policy.

This authority may be sub-delegated by the General Manager.

3. AUTHORISED INVESTMENTS

All of the Council's investments must be denominated in Australian Dollars. The council may only invest money in the forms of investments, as taken directly from the Local Government Act 1993 – Order (of the Minister) Circular No: 11-01 gazetted on 11 February 2011.

(a) Any public funds or securities issued by or guaranteed by, the Commonwealth, any State of the Commonwealth or a Territory

(b) Any debentures or securities issued by a council (within the meaning of the Local Government Act 1993 (NSW))

(c) Interest bearing deposits with, or any debentures or bonds issued by, an authorised deposit-taking institution (as defined in the Banking Act 1959 (Cwth)), but excluding subordinated debt obligations

(d) Any bill of exchange which has a maturity date of not more than 200 days; and if purchased for value confers on the holder in due course a right of recourse against a bank which has been designated as an authorised deposit-taking institution by the Australian Prudential Regulation Authority (APRA)

(e) A deposit with the New South Wales Treasury Corporation or investments in an Hour-Glass investment facility of the New South Wales Treasury Corporation.

All investment instruments (excluding short term discount instruments) referred to above include principal and investment income (interest).

Prohibited Investments

This investment policy prohibits any investment carried out for speculative purposes including, but not limited to:

i. Derivative based instruments
ii. Principal only investments or securities that provide potentially nil or negative cash flow and
iii. Stand-alone securities issued that have underlying futures, options forward contracts or swaps of any kind.

This policy also prohibits the use of leveraging (borrowing to invest) of an instrument. However, nothing in this previous paragraph will limit the grandfathering clause pertaining to already purchased investments.

4. GUIDELINES

Diversification

Deposits with any one financial institution shall be limited to 50% of Council's total portfolio, with investments held with a minimum of three financial institutions.

The Diversification limit above shall be assessed at the time of making a new investment. Any subsequent reduction in portfolio size shall be disregarded in relation to assessing diversification limits of existing investments where there are likely to be significant costs or losses for terminating or disposing of an investment.

Term to Maturity Framework

The investment portfolio is to be invested within the following maturity constraints:

Maturity Profile	Minimum Percentage	Maximum Percentage
Maturity < 1 year	40%	100%
Maturity > 1 year < 3 years	0%	50%
Maturity > 3 year < 5 years	0%	50%
Maturity > 5 year	0%	10%

5. REPORTING

A monthly report shall be provided to Council, detailing the investment portfolio including individual amounts invested, financial institution name, maturity date, interest rate, percentage exposure within the total portfolio and current market value. The report is to include a certificate as to whether or not the investments have been made in accordance with the Act, regulations and Council's investment policy.

For audit purposes certificates must be obtained from banks and investment brokers confirming the amounts of investments held on Council's behalf and their current market value as at 30 June each year.

6. VARIATION TO POLICY

The General Manager be authorised to approve variations to this policy if the investment is to Council's advantage and/or due to revised legislation.

All changes to this policy are to be reported to Council.

7. REVIEW

This Policy will be reviewed as required and at a minimum at least once during the term of Council.

Maintained by Department:	Finance	**Approved by:**	Council		
Reference:	Dataworks: Policy Register	**Council Policy No:**	8.7	**Effective Date:**	21 Oct 2008
Min No:	V1 - 06-349 V2 - 008-165 V3 - 12-49 V4 - 14-428	**Version No:**	4	**Reviewed Date:**	Oct 2009 Aug 2011 13 Feb 2012 Oct 2014
Attachments:					

LITHGOW CITY COUNCIL

9. GOVERNANCE

Policy 9.8

RECORDS MANAGEMENT POLICY

Version 5

Maintained by Department:	Finance	**Approved by EMT:**	23 July 2012	**Approved by CMT:**	
Reference:	ECM Policy Register	**Council Date:**		**Effective Date:**	
Min No:	V1:Min 06-349 V2:Min 07-542 V3:Min O 08-165 V4: Min 13-64 Min 13-132 V5:	**Version No:**	5	**Review Date:**	
Attachments:	Nil				

9. GOVERNANCE

9.12 RECORDS MANAGEMENT POLICY

OBJECTIVES:

- To establish the framework for, and accountabilities of, Lithgow City Council's Records Management Program;
- To ensure compliance with relevant legislative requirements.

RELATED REFERENCES, POLICIES & PROCEDURES

Lithgow City Council's:

- Records Strategic Plan
- Access to Information Held Policy 9.17
- Various Recordkeeping Standard Working Procedures/SWPs
- Code of Conduct
- ECM User Manual
- ECM Procedures
- Legal Documents Manual
- Appendices A and B of the Records Management Policy

AUTHORITY OF THIS POLICY

This policy has been authorised by Council and is available to all staff. It has been developed in consultation with staff and will be revised as required and at a minimum at least once during the term of Council. Ownership of the policy rests with the delegated Corporate Records Manager/s, being the Group Manager Corporate and Community and the Finance Manager, who are responsible for Council's Records Management Program, ensuring compliance with legislative requirements and recordkeeping standards.
All staff must comply with this policy, and associated Records Management Procedures, in their conduct of official business for Council. This policy applies to records in all formats, including electronic records.

RECORDS AS A RESOURCE

Lithgow City Council recognises that records are a vital asset to:

- facilitate information accessibility, and enhance business by supporting program delivery, management and administration
- deliver customer service in an efficient, fair and equitable manner
- provide evidence of actions and decisions and precedents for future decision making, and
- protect the rights and interests of Government, Council and its clients and citizens.

A small percentage of Council's records will become archives, part of the cultural resources of the State.

PROCEDURE:

1. GENERAL

RECORDS MANAGEMENT PROGRAM

OBJECTIVES OF THE RECORDS MANAGEMENT PROGRAM

A records management program is a planned, co-ordinated set of policies, procedures, people, systems and activities that are required to manage records.
Lithgow City Council's Records Management Program seeks to ensure that:

- it has the records it needs to support and enhance ongoing business and customer service, meet accountability requirements and community expectations
- these records are managed efficiently and can be easily accessed and used for as long as they are required
- records are stored as cost-effectively as possible and, when no longer required, they are disposed of in a timely and efficient manner
- all staff are educated in their responsibilities under legislation and Government directives.
- this policy applies across a number of corporate systems (e.g. those used for storing property and finance information) and to information in applications such as email and faxes. The changing nature of the corporate information systems requires the ability to deliver records management in an adaptive manner.
- as a significant part of Lithgow City Council's corporate memory, records enable informed decisions based on precedents and organisational experience. Records management principles support consistency, efficiency and productivity in program delivery, management and administration.
- the Council is committed to managing its records effectively and efficiently to promote informed decision-making, better performance of business activities, improved customer service, and protection and support in litigation and management of risk.
- Council complies with all requirements concerning records and records management practices including the NSW Government's objectives for recordkeeping (see Appendix A)
- records of longer term value are identified and protected for historical and other research.

A goal of particular note is that the organisation is committed, through its Records Management Program, to maintaining digital and other technology dependent records in authentic and accessible form for as long as they are required in accordance with s.14 of the State Records Act 1998 (NSW).

ELEMENTS OF THE RECORDS MANAGEMENT PROGRAM

Creation and Capture

Council has endorsed the use of a number of standard, open source file formats outlined in the ECM User Manual. These formats have been chosen to streamline the ongoing management of Council's records and should be the only formats used for the creation of records.
Staff should ensure that they create official records of all decisions and actions made in the course of their official business. For example, if business is transacted by telephone, file notes of the key points in the conversation should be documented. Official meetings should include the taking of minutes.
To assist in promoting the responsible creation of records, the capture of essential information and the management of records over time, Council has developed the following:

- paper and electronic templates
- definition of recordkeeping requirements and business rules

- procedures, standard creation rules and other guidelines

All records defined by the organisation as important to create should be captured into ECM, Council's electronic recordkeeping system, so they can be managed appropriately. The information required to be recorded about each record on capture is described in the *ECM User Manual.*
Records are registered in ECM and automatically assigned a unique number. They are indexed to the relevant subject/s and the document is assigned a meaningful précis.

Storage

Current hardcopy records scanned in ECM are filed in day boxes and stored in the Records Office while older hard copy ECM records are stored in the locked Archives Room in day boxes. Other current hard copy records are filed on Development Application, Building Application and Septic Tank Application Files.
State Archive, Confidential and Legal documents are stored in the Hartley Building strongroom.
Digital records should be stored and maintained in ECM until they can be disposed of. Records of short term value will be disposed of regularly by the Senior Records Officer. Records of long term or archival value should be retained online wherever possible and managed in accordance with the *Records Management Procedures.*
Removable media should be forwarded to the Senior Records Officer when rarely or no longer used for official purposes.

Maintenance and Monitoring

The location of each record needs to be recorded and updated at every movement of the record. This ensures that records, as assets, can be accounted for in the same way that the other assets of Council are. Staff members should notify a Records Officer when passing hard copy files on to another officer.
The Senior Records Officer is responsible for ensuring that records and environmental conditions are monitored regularly to protect records. This includes checking temperature and humidity levels in dedicated records storage areas for paper records and ensuring that digital records are refreshed or replicated when scheduled, when new storage devices and media are being installed or when degradation is detected.
Maintenance of digital records can also entail the migration of data. Migrations must be authorised by the Corporate Records Manager/s and must produce authentic, complete, accessible and useable records. For more information on procedures for migration, see the State Records NSW *General Retention and Disposal Authority – Source Records that have been Migrated* (GA33)
Council has implemented a number of security and counter disaster measures for safeguarding its information assets. Staff should abide by these measures at all times.

Disposal

Council has authorised Retention and Disposal Authorities (GA39 - *General Authority for Local Government and GA 36 – Imaged Records*) covering records relating to its core functions and activities. Council recommends that disposal actions are assigned to records in all formats on creation to ensure they are managed appropriately.

No Council records can be disposed of unless in accordance with GA39. Any sentencing of records must be supervised by the Senior Records Officer. Approval and signed authorisation for destruction of records must be sought from the General Manager before any disposal takes place.

Transfer

The transfer of records required as State archives in GA39 to State Records NSW when no longer in use for official purposes will be managed by the Senior Records Officer.
In the event of administrative change, e.g. the transfer of functions from Council to another organisation, the Senior Records Officer will advise staff on transfer procedures for records.

Access

Records must be available to all authorised staff that require access to them for business purposes. All access to Council's records by members of the public, including Government Information (Public Access) or GIPA requests, will be in accordance with Lithgow City Council's Policy 9.17 - Access to Information Held and State Records Access Directions.

Contractors and Outsourced Functions

All records created by contractors performing work on behalf of Council belong to Council and are State records under the *State Records Act 1998 (NSW)*. This includes the records of contract staff working on the premises as well as external service providers.
Contracts should clearly state that ownership of records resides with Council, and instructions regarding creation, management, and access to the records created. The Corporate Records Manager/s should be consulted during the formulation of the contract.

2. ACCOUNTABILITY REQUIREMENTS

- Lithgow City Council records are ***state records***.
- The requirements and regulations of the State Records Act 1998 (NSW), which set out specific practices with which we must comply and will be audited against, bind Council.
- Other standards and legislation, such as the Evidence Act 1995, Government Information Public Access Act 2009 (commonly referred to as the GIPA Act), etc, will be complied with.
- A corporate standard will be set for records management that can be monitored and audited throughout Council that complies with AS ISO 15489 – Records Management.

3. RESPONSIBILITIES

GENERAL MANAGER

- Ensures that Council complies with the requirements of the State Records Act 1998 (NSW) and the standards and requirements issued under the Act. This includes the requirement for the public office to ensure that any records requiring technology to be read and understood remain readable and available for as long as they are required.
- Authorises disposal of records, in accordance with legislation.

CORPORATE RECORDS MANAGER/S (Chief Financial and Information Officer & Finance Manager)

- Has ownership of the Records Management Policy
- Develops strategic and operational plans for the Records Management Program
- In liaison with the IT Manager, ensures that the essential characteristics of digital records are identified prior to any preservation process taking place
- Provides support and infrastructure to ensure that records kept in electronic form are managed so that they are accessible, readable, inviolate, complete, comprehensive, and authentic for as long as required

FINANCE MANAGER

- Ensures the overall management of the Records Department

- Holds the role of Senior Responsible Officer for records management matters, including responding to requests for information on conformity with legislative requirements (i.e. responding to State Records records management surveys)
- Ensures that Council complies with the State Records Act 1998 (NSW) and other legislation relating to records management and recordkeeping
- Ensures that Records Management is adequately resourced
- Reports to the Executive on Records Management

COUNCILLORS

- All Councillors must comply with the Records Management for Councillors Standard Working Procedure in their conduct of official business for Council. Official business includes business relevant to the performance of the function and duties of the office of Councillor. The Standard Working Procedure applies to records in all formats, including electronic records.

SENIOR RECORDS OFFICER

- Provides leadership, supervision and co-ordinates Council's Records Unit and reports to the Finance Manager
- Provides strategic focus for recordkeeping and monitors/audits compliance with legislative requirements that impact upon the management of the Records Unit, including Equal Opportunity and WHS, whilst keeping abreast of new developments and technologies in the records and archives field
- Responsible for the conduct of records management operations, supervising the efficient and effective day to day management of records and daily work tasks to ensure that performance standards are met
- Oversees the effective operation, administration and development of Council EDRMS whilst maintaining the capture, retention, storage, retrieval, disposal, protection and preservation of Council Records and archives in a timely, confidential and accurate manner, in accordance with the State Records Act NSW 1998, other legislative requirements and best practice
- Develops policies, procedures, plans and standards in relation to all aspects of records management
- Acts as the Appropriate Person to manage the process of ensuring Tenders are placed in the Tender box and that the process to open Tenders is conducted in accordance with the Local Government Act and its associated Regulation(s)
- Maintains the functional disposal schedule to ensure that is up to date and reflects Council business needs
- Ensures preservation of confidentiality at all times
- Ensures that systems are in place to provide adequate security for and the appropriate access to, current and archived records
- Ensures the preservation of digital records is addressed in policy, planning and implementation of the public office's records management program
- Ensures levels of customer service for the Records Unit are met and maintained whilst overseeing effective team based philosophy to promote an effective service environment
- Ensures provision for the education/training of all Council officers in relation to recordkeeping responsibilities and when necessary, co-ordinates and delivers records management training
- Efficiently responds to requests for information, assistance and files to promote support for the recordkeeping system and to demonstrate its efficiency
- In conjunction with IT staff, establishes and maintains a customised recordkeeping metadata schema and business rules regarding how metadata is to be managed
- Provides reports and undertakes audits requested by management
- Organises the disposal of records, in liaison with relevant authorising manager
- Formulates and maintains vital records lists and counter disaster plans
- Coordinates and when necessary, delivers the records management training program

- Maintains ECM administration security
- Assists other Records officers as workload and/or special projects dictate

- Assists the Group Manager Corporate and Community, in ensuring robust governance systems related to the processing of requests for information under GIPA legislation, providing advice and recommendations in relation to the release of information
- Coordinates and delivers the records management training program
- Ensures that all staff are aware of their recordkeeping responsibilities
- Ensures preservation of confidentiality at all times
- Maintains GA39 specifically for Lithgow City Council
- Maintains Council's Legal Documents
- Minutes Index entry for both current and older Council meeting minutes
- Regularly check, capture or distribute emails from Council
- Efficiently responds to customer requests for information, assistance and files, to promote support for the recordkeeping system and to demonstrate its efficiency
- Creates new customers in Customer Index
- Undertakes allocated ECM audits which include: To be indexed, Pending items, Note headings, Personnel Classifications, Confidential Classifications, incorrect Index level links, spell check and End of day audit
- Link all documents to the functional Subject Index, including Council Meeting reports
- Prepare acknowledgement letters for complaints and submissions

RECORDS OFFICER

- Contributes to the development of Council's records management policies, procedures, plans and standards
- Makes recommendations for the improvement or modification of practices
- Supports and contributes to the efficient and effective provision of consistently high quality records information management services, in the capture, maintenance, storage and distribution of records in a timely, confidential and accurate manner.
- Undertakes the accurate opening, sorting, coding, scanning, registering, summarising, tasking, storing, distributing incoming correspondence and internal emails and facsimiles
- Ensures preservation of confidentiality at all times
- Ensures and assists in monitoring of compliance with legislative requirements for recordkeeping within Council and other legislation, policies and practices that impact upon the management of the Records Unit, including Equal Opportunity and WHS
- Ensures levels of service for the Records Unit are met and maintained
- Maintains Council's Legal Documents
- Regularly check, capture or distribute emails from Council
- Maintains Council's Electronic Document and Records Management System (EDRMS), ECM.
- Undertakes allocated ECM audits which include: To be indexed, Pending items, Note headings, Personnel Classifications, Confidential Classifications, incorrect Index level links, spell check and End of day audit
- Link all documents to the functional Subject Index, including Council Meeting reports
- Minutes index entry for both current and older Council meeting minutes
- Creates new customers in Customer Index
- Prepare acknowledgement letters for complaints and submissions
- Efficiently responds to customer requests for information, assistance and files, to promote support for the recordkeeping system and to demonstrate its efficiency
- Assists other Records officers as workload and/or special projects dictate
- When required, undertakes position/duties of Senior Records Officer
- When required, assists in delivering the records management training
- When required, files documents in day boxes

MANAGERS

- Ensure that records are created and managed within their program in a way which complies with the Records Management Policy and Procedures.
- Provide feedback on the successful migration processes to help ensure that records remain authentic, complete, accessible and useable
- Ensure that staff are trained in how to create and manage records
- Determine legislative requirements for records relating to their specific activities. E.g. Environmental Planning and Assessment Act 1979, Food Act 2003, etc.
- Ensure that contracts with service providers contain records management clauses in accordance with this Records Management Policy

IT STAFF

- Network management
- Management of Council's recordkeeping systems to ensure Council can deliver its programmed activities in an optimal manner
- Manages data integrity management including back ups and internal audit procedures
- Maintenance of Council's hardware ensuring it meets all of Council's recordkeeping needs
- Management, maintenance and control of all peripherals (printers, scanners, photocopiers)
- Management and optimisation of remote access to improve performance and timeliness of officers working external to main administration building

ALL STAFF

- Comply with Records Management Policy and Procedures
- Create full and accurate records of their business activities, including records of all decisions and actions made in the course of their official business
- Ensure that all business related records are saved into the organisation's business recordkeeping systems. (e.g. ECM, GIS, TI Property, T1 Financials)
- Prioritise and complete allocated recordkeeping activities within specified time frames

CONTRACTORS

- Manage records that they create on behalf of Council according to the terms of their contract

REVIEW

This Policy will be reviewed as required and at a minimum at least once during the term of Council.

APPENDIX A

Legislative and Government Requirements for Recordkeeping

- State Records Act 1998 (NSW) – including standards and retention and disposal authorities issued under the Act
- Government Information (Public Access) Act 2009
- Privacy and Protection of Personal Information Act 1998
- Evidence Act 1995
- Electronic Transactions Act 2000
- Environmental Planning and Assessment Act 1979
- Local Government Act 1993
- Public Sector Employment and Management Act 2002
- Public Finance and Audit Act, 1983
- Commonwealth Copyright Act 1968
- NSW Public Sector Code of Conduct
- NSW Treasurer's Directions
- Good Conduct and Administrative Practice: Guidelines for Public Authorities and Officials (NSW Ombudsman)
- Premier's Memoranda and Circulars, including M1998-16, C2003-17, M2004-14, M2007-08

Note: This list is not exhaustive. It is the responsibility of managers to examine legislation and government directions which govern their activities, and ensure that records arising from these activities conform with recordkeeping requirements.

APPENDIX B – GLOSSARY OF TERMS

This glossary has been compiled from the *State Records Glossary of Recordkeeping Terms.* Sources of terms include Australian and international standards on records management.

Access

Right, opportunity, means of finding, using or retrieving information. *AS ISO 15489 Part 1 Clause 3.1*

Appraisal

The process of evaluating business activities to determine which records need to be captured and how long the records need to be kept, to meet business needs, the requirements of organisational accountability and community expectations. *AS 4390 Part 1 Clause 4.3*

Archives

Those records that are appraised as having continuing value. *AS 4390 Part 1 Clause 4.5*

Classification

Systematic identification and arrangement of business activities and/or records into categories according to logically structured conventions, methods and procedural rules represented in a classification system. *AS ISO 15489 Part 1 Clause 3.5*

Counter Disaster Plan

A plan for measures to be taken for disaster prevention, disaster response and recovery and vital records protection.

Disposal

A range of processes associated with implementing appraisal decisions. These include the retention, deletion or destruction of records in or from recordkeeping systems. They may also include the migration or transmission of records between recordkeeping systems, and the transfer of custody or ownership of records. *AS 4390 Part 1 Clause 4.9*

Recordkeeping

Making and maintaining complete, accurate and reliable evidence of business transactions in the form of recorded information. *AS 4390 Part 1 Clause 4.19*

Recordkeeping Requirements

Requirements arising from regulatory sources, business needs and community expectations that identify the types of records that should be created and the management framework needed in order to have, and accountably manage, all the business information that is necessary for an organisation.

Recordkeeping Systems

Recordkeeping systems are business information systems capable of capturing, maintaining and providing access to records over time.

Records

Information created, received, and maintained as evidence and information by an organisation or person, in pursuance of legal obligations or in the transaction of business. *AS ISO 15489 Part 1 Clause 3.15*

Any document or other source of information compiled, recorded or stored in written form or on film, or by electronic process, or in any other manner or by any other means. State Records Act 1998 (NSW)

Records Management

Field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records. *AS ISO 15489 Part 1 Clause 3.16*

Records Management Program

A records management program encompasses the management framework, the people and the systems required within an organisation to manage full and accurate records over time. This includes the identification and protection of records with longer-term value that may be required as State archives.

Retention and Disposal Authority

Documents authorised by the Board of State Records NSW that set out appropriate retention periods for classes of records. There are two main types:

- **Functional retention and disposal authorities** authorise the retention and disposal of records unique to a specific organisation.
- **General retention and disposal authorities** authorise the retention and disposal of records common to more than one organisation. Such records may include general administrative records, common records that relate to unique functions and records relating to the unique functions of like organisations such as local councils, universities and public health services.

State Archive

A State record that State Records Authority NSW has control of under the State Records Act, 1998 (NSW).

Vital Records

Those records that are essential for the ongoing business of an agency, and without which the agency could not continue to function effectively. The identification and protection of such records is a primary object of records management and disaster planning. Ellis (ed), Keeping Archives, p. 480.

Wallerawang War Memorial Restoration Committee
Care Post Office Box 2
Wallerawang N.S.W. 2845

General Manager
Greater Lithgow City Council
Mort Street
Lithgow N.S.W. 2790

RE FUNDS HELD IN TRUST

Dear Sir

I take this opportunity to request funding which council has held in trust for above (see attached advice of 24.10.2013) to be transferred in favour of account 06 2566 10171260 Commonwealth Bank in the name of Wallerawang ANZAC Day March Committee either by way of direct transfer or cheque to above

Thanking you in anticipation

D.J. Whitty O.A.M. JP
President

24 October 2013

Wallerawang War Memorial Committee
C/ - D Whitty
PO Box 2
WALLERAWANG NSW 2845

Dear Sir

RE: WALLERAWANG WAR MEMORIAL REFURISHMENT

Further to your telephone enquiry of 24 October 2013 I wish to advise the funds held by Council for the above project, as an 'Externally Restricted Asset' is $11,354.05.

Should additional information be required please contact Mrs Carol Farnsworth on 02 6354 9939 or email Carol.Farnsworth@lithgow.nsw.gov.au.

Yours sincerely

Mrs Carol FARNSWORTH
FINANCE MANAGER

(02) 6354 9999
(02) 6351 4259
www.lithgow.nsw.gov.au
council@lithgow.nsw.gov.au
ADDRESS CORRESPONDENCE
TO GENERAL MANAGER
PO BOX 19, LITHGOW NSW 2790

Refugee Council of Australia

REFUGEE WELCOME ZONES

An initiative of the Refugee Council of Australia

Who is the Refugee Council of Australia?

The Refugee Council of Australia (RCOA) is the national peak body for refugees and the organisations and individuals who support them. RCOA promotes the adoption of flexible, humane and constructive policies towards refugees and asylum seekers through conducting policy analysis, research, advocacy and public education on refugee issues.

What is a Refugee Welcome Zone?

A Refugee Welcome Zone is a Local Government Area which has made a commitment in spirit to welcoming refugees into the community, upholding the human rights of refugees, demonstrating compassion for refugees and enhancing cultural and religious diversity in the community.

This public commitment is also an acknowledgment of the tremendous contributions refugees have made to Australian society in the fields of medicine, science, engineering, sport, education and the arts. By making this Declaration it is hoped that local government will be encouraged in their continuing efforts to support the men, women and children who make the difficult journey to Australia to seek our protection.

The Refugee Welcome Zone initiative began in June 2002 as part of Refugee Week celebrations. At the time, 15 local Councils in Victoria, New South Wales and South Australia were declared Refugee Welcome Zones. Today, with more than 120 Local Government Areas having declaring themselves Refugee Welcome Zones, the initiative has proven to be a great success in connecting local governments with the issues facing refugees and asylum seekers.

What is the process for becoming a Refugee Welcome Zone?

The process for becoming a Refugee Welcome Zone is very straightforward. It simply involves the Council signing the Refugee Welcome Zone Declaration, which is "a commitment in Spirit to welcoming refugees into our community, upholding the human rights of refugees, demonstrating compassion for refugees and enhancing cultural and religious diversity in our community". An example of the Declaration is included at the end of this document.

To mark the occasion of becoming a Refugee Welcome Zone, many Councils choose to hold public signing ceremonies. These provide an opportunity to highlight the initiative and acknowledge the work of local groups and individuals that support refugees and asylum seekers. If possible, a representative from the Refugee Council of Australia will attend the ceremony to present a Certificate of Appreciation.

Why become a Refugee Welcome Zone?

Local Government has historically played an important role in assisting refugee settlement and promoting community harmony. Since Federation in 1901, Australia has become home to over 800,000 refugees and we have a proud history of settling refugees from all over the world who have gone on to make an

Sydney office:
Suite 4A6, 410 Elizabeth Street
Surry Hills NSW 2010 Australia
Phone: (02) 9211 9333 ● Fax: (02) 9211 9288
admin@refugeecouncil.org.au
Web: www.refugeecouncil.org.au ●Twitter: @OzRefugeeCounc

Melbourne office:
Level 2, 313-315 Flinders Lane
Melbourne VIC 3000 Australia
Phone: (03) 9600 3302
melbourne@refugeecouncil.org.au
Incorporated in ACT ● ABN 87 956 673 083

enormous contribution to our economic, social and cultural life. Becoming a Refugee Welcome Zone is a way to continue this proud tradition of supporting the settlement of refugees.

Signing the Declaration can also promote harmony, social cohesion and respect for human rights in your local community. It is a great way to demonstrate support for refugees and take a strong stand against racism and discrimination. It can help to raise awareness about the issues affecting refugees, foster a culture of mutual respect and promote an appreciation of cultural diversity.

Becoming a Refugee Welcome Zone can also encourage the development of a more coordinated approach to supporting refugee settlement. It can motivate Local Government and local organisations and support groups to work together more effectively so as to improve settlement outcomes for refugees.

What are the obligations and responsibilities of Refugee Welcome Zones?

The Refugee Welcome Zone Declaration does not confer any formal obligations and Refugee Welcome Zones are not required to uphold any statutory responsibilities or financial commitments. The signing of the Declaration is a simply a way of demonstrating broad support for the principles it contains. Any actions or activities undertaken by Refugee Welcome Zones to implement the Declaration are voluntary.

However, while signatories to the Refugee Welcome Zone Declaration are not required to undertake any specific activities, any initiatives which help to create a welcoming atmosphere and assist the settlement of refugees and their communities are welcomed and encouraged.

How can Refugee Welcome Zones support refugees?

There are many simple things that your Local Government Area can do to welcome refugees to your community:

- Develop a Local Government policy relating to refugees and asylum seekers or review existing policies.
- Offer funding for community-based projects which support the settlement of refugees.
- Hold community picnics and gatherings to encourage families from different backgrounds and community organisations to meet.
- Build partnerships and work collaboratively with local community groups and service providers to enhance support for refugees settling in your area.
- Organise an event during Refugee Week, such as a street fair of festival.
- Host a community meeting with newly arrived refugees and guest speakers from refugee support organisations to find out how your Council can best support refugees in your community.
- Hold a multicultural film festival.
- Coordinate with local libraries in the area to develop an English tutoring program for newly arrived refugees.
- Liaise with the Red Cross to run information sessions for newly arrived refugees who have been separated from family members and relatives.
- Hold a public forum to enable guest speakers from refugee backgrounds to share their stories.

How has your organisation, community or council welcomed refugees?
Send in your past and upcoming events and initiatives to media@refugeecouncil.org.au
We'd like to hear about program or event, big or small!

Current Refugee Welcome Zones

There are currently 124 Refugee Welcome Zones in Australia.

Australian Capital Territory: ACT government

New South Wales: Albury City Council, Armidale Dumaresq Council, Ashfield Council, Auburn City Council, Ballina Shire Council, Bankstown City Council, Bathurst Regional Council, Bega Valley Shire Council, Blacktown City Council, Blue Mountains City Council, Burwood Council, Byron Shire Council, Campbelltown City Council, City of Canterbury, Coffs Harbour City Council, Cowra Council, Dubbo City Council, Fairfield City Council, Gosford City Council, Goulburn Mulwaree Council, Griffith City Council, Hawkesbury City Council, Hornsby Shire Council, Kiama Municipal Council, Kogarah City Council, Ku-ring-gai Council, City of Lake Macquarie, Leeton Shire Council, Leichhardt Council, Lismore City Council, Liverpool City Council, Manly Council, Marrickville Council, Moree Plains Shire Council, Mosman Council, North Sydney Council, Palerang Council, Parkes Shire Council, Penrith City Council, Port Macquarie-Hastings Council, Randwick City Council, Rockdale City Council, City of Ryde, Shellharbour City Council, Sutherland Shire Council, City of Sydney, Wagga Wagga City Council, Warringah Council, Waverley Council, Willoughby City Council, Wollongong City Council

Northern Territory: City of Palmerston

Victoria: Ararat Rural City Council, City of Ballarat, Banyule City Council, Bass Coast Shire Council, Brimbank City Council, Shire of Campaspe, Cardinia Shire Council, City of Casey, City of Darebin, City of Greater Bendigo, Colac Otway Shire, City of Greater Dandenong, Greater City of Greater Geelong, Hepburn Shire Council, Hindmarsh Shire Council, Hobsons Bay City Council, Horsham Rural City Council, Hume City Council, La Trobe City Council, Manningham City Council, Maribyrnong City Council, Maroondah City Council, City of Melbourne, Mildura Rural City Council, Moira Shire Council, City of Monash, City of Moonee Valley, Moreland City Council, Mornington Peninsula Shire, Mount Alexander Shire Council, City of Port Phillip, Borough of Queenscliffe, Greater Shepparton City Council, Surf Coast Shire, Swan Hill Rural City Council, City of Whittlesea, Wyndham City, City of Yarra, Yarra Ranges Council

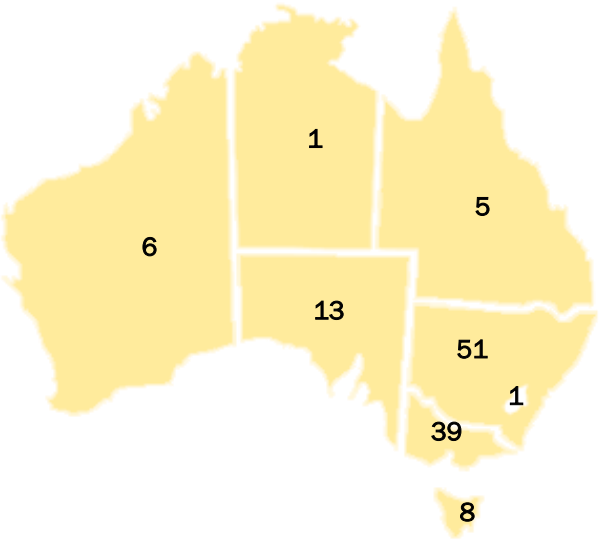
South Australia: Adelaide City Council, Adelaide Hills Council, Campbelltown City Council, Town of Gawler, City of Marion, City of Mitcham, City of Mount Gambier, Rural City of Murray Bridge, City of Norwood, Payneham and St Peters, City of Onkaparinga, City of Port Adelaide Enfield, City of Prospect, City of West Torrens

Queensland: Brisbane City Council, Diamantina Shire Council, Flinders Shire Council, Toowoomba Regional Council, Townsville City Council

Tasmania: Break O'Day Council, Clarence City Council, Derwent Valley Council, Hobart City Council, Kingborough Council, La Trobe Council, Launceston City Council, West Tamar Council

Western Australia: City of Fremantle, Shire of Katanning, Shire of Augusta-Margaret River, City of Subiaco, Town of Victoria Park, City of Vincent.

Map of Refugee Welcome Zones in Australia



The Refugee Welcome Zone Declaration

(Council crest/logo)

The _____ Council,

Declares the Council of _____ a

Refugee Welcome Zone

This Declaration is a Commitment in Spirit to

***Welcoming** refugees into our community,*

*Upholding the **Human Rights** of refugees,*

*Demonstrating **Compassion** for refugees and*

*Enhancing cultural and religious **Diversit**y in our community.*

_____

[name and title of signatory]

Date: _____

This Declaration is proudly supported and endorsed by the

Refugee Council of Australia

The Refugee Council of Australia is a national umbrella organisation representing over 1,000 organisational and individual members. The aim of the Refugee Council is to promote the adoption of flexible, humane and constructive policies toward refugees and asylum seekers by the Australian and other Governments and their communities.

To obtain an editable copy of the Declaration for signing by your Council, please contact us on (02) 9211 9333 or media@refugeecouncil.org.au

9. GOVERNANCE

9.13 Policy

WORK HEALTH AND SAFETY

Version 2

9. GOVERNANCE

9.13 WORK HEALTH AND SAFETY POLICY

PURPOSE

The purpose of this policy is to document Council's commitment to Work, Health and Safety (WHS) and to ensure that adequate resources are made available to comply with Council's legal WHS obligations. This policy also sets out responsibilities and accountabilities in relation to the management of WHS.

OBJECTIVES

The objectives of this policy are to:

a) ensure that council complies with the 'reasonably practical' standard, which is intended to be a very high one;
b) give the highest level of protection from hazards and risks arising from work so far as is 'reasonably practicable';
c) provide for consultation, co-operation and co-ordination between all 'persons conducting a business or undertaking' (PCBUs) and workers and others at a workplace; and
d) Ensure that any workplace under Council management or control is, as far as is reasonably practicable, without risk to the health and safety of any person.

POLICY STATEMENT

1.	**Application** This policy applies to PCBUs' workers and other persons affected by Lithgow City Council activities at Council workplaces.
2.	**Legislation** Council recognises that it has a legal obligation to ensure the health and safety of workers, and other persons affected by Council activates. In meeting this obligation Council shall comply, so far as it is reasonably practicable, with all work health and safety laws including (but not limited to) the *Work Health and Safety Act 2011* and the *Work Health and Safety Regulation 2011.*
3	**WHS Goal** The work health and safety goal of the Council is: "For Council, senior management and workers to continually improve work systems that ensure the health and safety of personnel, contractors, volunteers and the community whilst maintaining the competitiveness and long term employment prospects of the workforce".
4	**Duty of Care** Council's primary 'duty of care' is to ensure the health and safety of workers while they are at work that the work carried out does not carry risks to the health and safety of these workers and others. To achieve this, Council will adopt a systematic risk management approach to the management of work health and safety.
5.	**Responsibilities**

	Responsibilities of the PCBU (Council), Officers, and Workers are as described below:
5.1	**Council** *(PCBU)* shall demonstrate continued commitment in meeting its moral and legal obligation by ensuring that adequate human and financial resources are made available so that the objectives of this policy are met. Council must also consult, coordinate and cooperate with other PCBUs working for or on behalf of Council.
5.2	**Councillors** *(Workers*), while conducting business for Council, have a responsibility to ensure that they take reasonable care for their own safety and that their general interaction with Council workers and others does not adversely affect the health, safety or welfare of these people. They must comply with reasonable instructions to assist Council in complying with the WHS Legislation
5.3	**The General Manager** *(Officer)* as the Council's most senior management representative is responsible, and accountable to the Council, for ensuring that the objectives of this policy are met. The General Manager is responsible for ensuring that a Work Health and Safety Management System (WHSMS), including return to work provisions is developed, implemented, reviewed and maintained. The General Manager shall: • approve all work health and safety policies • regularly review and document organizational WHS performance • support and encourage Group Managers in the application of the WHSMS and hold them accountable for their specific WHS responsibilities • actively support the integration of WHS as part of normal management practices • seek and consider the views of workers when making decisions o issues, which may affect their health, safety and welfare
5.4	**Managers** *(officers)* are responsible for ensuring that the requirements of the WHSM system are communicated to workers and implemented at all workplaces within their area of responsibility. Managers shall: • actively support the integration of WHS as part of normal management practices • Support and encourage workers with supervisory responsibilities the application of the WHSMS and hold them accountable for specific WHS responsibilities. • Ensure that adequate provisions are made in their annual budget estimates to meet WHS requirements. • Identify, develop and implement any necessary WHS procedures or safe systems of work required to comply with WHS legislative requirements • Seek and consider the views of workers when making decisions o issues which may affect their health and safety

	• Refer to executive management any WHS matter or concern that falls outside their area of responsibility or authority • Regularly report to the General Manager on WHS initiatives implemented and the WHS performance of their area of responsibility • Regularly report on WHS initiatives implemented and the WHS performance of their areas to the Health and Safety Committee • Ensure that system of work are regularly reviewed and provide areas for continuous improvement • Ensure all hazard reports raised are dealt with in a timely manne • Actively maintain current WHS knowledge as applicable to area o responsibility improvement will be measured via annual performance appraisals.
5.6	**Workers with supervisory responsibilities** *(workers)* are responsible for ensuring that the requirements of the WHSMS are communicated to employees and are implemented at all workplaces within their area of responsibility. In line with their supervisory roles, workers with supervisory responsibilities shall: • support and encourage workers, and hold them accountable for their specific WHS responsibilities • ensure that WHS policies, procedures and work methods are complied with • Ensure adequate supervision, training and information is provide to enable employees to carry out tasks safely. • Notify the divisional manager of budgetary requirements to meet WHS obligations • Refer to an officer any WHS hazard, incident or risk • Seek and consider the views of workers when making decisions c issues that affect health and safety • Identify, report and rectify workplace hazards, and act on hazard reported in a timely manner • Investigate accidents and incidents and report the outcome of th investigation to the responsible officer. • respond in a timely manner to issues raised by WHS representatives • ensure that work systems are reviewed and provide areas for continuous improvement • regularly report to the responsible officer on the WHS performan of the section The commitment, implementation and continuous improvement to work health and safety matters by Workers with supervisory responsibilities will be measured via annual performance appraisals.
5.7	**Workers without supervisory responsibilities** *(workers)* have a responsibility to take reasonably practicable care for their own safety and that of other people at the workplace, which may be affected by the work being done. Workers without supervisory responsibilities shall: • co-operate with other workers and management to ensure that legal WHS requirements are met

	• actively participate in WHS initiatives at both team and organizational level • actively participate in WHS consultation • immediately report all accidents, injuries, incidents, hazards, dangerous occurrences, unsafe conditions and near misses to management • not intentionally interfere with or misuse anything provided in the interests of health and safety • Carry out their work activities in accordance with all policies, procedures and approved work methods. • Comply with any lawful WHS directive Workers' commitment to WHS, its implementation and continuous improvement will be measured as follows: • *For Employees:-* via annual performance appraisals. • *For Contractors/ Sub contractors:-* through contractor performance reviews • *For Volunteers:-* via on the job review
5.8	**Other persons at the workplace** have a responsibility to take reasonable care for their own health and safety, and take reasonable care to ensure their acts or omissions do not adversely affect the health and safety of others. Other persons at the workplace shall comply so far as reasonably practicable with any reasonable instruction.

IMPLEMENTATION

Requirements		Responsibility
1	**Authorisation** This policy is the overriding WHS policy of Lithgow City Council. The policy is approved by Council and administered by the General Manager. The General Manager shall sign the policy. A summary of this policy shall be prominently displayed at all permanent workplaces and available electronically for reference by officers and workers	General Manager
2	**Compliance** Failure by any of Council-employed person to comply with this policy is likely to result in disciplinary action in accordance with Council's current discipline procedures. Contractors that fail to comply with this policy shall be stood down until such time as the site supervisor or other authorised person is satisfied that the contractor will not commit any further breaches. Any serious or continued non-	Officers

	compliance shall be considered a breach of the contract and grounds for termination of that contract. The participation of volunteers in Council activities is conditional upon compliance with Council's policies and procedures. Any serious or continued non-compliance with this policy will result in the volunteer being instructed to leave the site and refused permission to participate in further volunteer activities. Visitors that fail to comply with this policy shall be required to leave the premises or worksite.	
3	**Staff** Staff, where appropriate trained and instructed, are required to comply with Council policy and to ensure that the provisions of those policies are adhered to within their work area.	Council Officers
4	**Concerns** Concerns and requests received regarding WHS will be recorded on Council's Customer Service Request (CSR) or records system and handled in accordance with Council's Customer Service policy. This information will be used to analyse the history of concerns and requests and to help determine follow up actions	Council Officers
7	**Consultation** The Health and Safety Committee ensures that regular ongoing WHS consultation occurs throughout Council. Consultation regarding this policy will occur as relevant with key stakeholders and may include legislative bodies and other agencies. It will occur in response to changes in relevant legislation, codes of practice, industry guidelines, standards and any organizational or legislative requirements.	As applicable.

REVIEW

The policy will be automatically revoked at the expiration of twelve months after the declaration of the poll for the next general NSW local government election, unless Council revokes it sooner.

NOTE: *Automatic revocation of the policy is provided for by section 165(4) of the Local Government Act 1993. The next general local government election is expected to be held in September 2020.*

The General Manager in consultation with officers and workers shall review this policy every 3 years and after any reportable serious incident. This policy

may also be reviewed and updated as necessary when legislation requires it; or Council's functions, structure or activities change; or when technological advances or new systems change the way that Council manages WHS. Where the review indicates any changes to the policy the General Manager shall refer the policy to Council for adoption.

Reviews of the effectiveness of this policy could include the following:

Performance indicator	Data source(s)
Number of breaches (hazards and incidents)	Council records
Concerns or requests regarding WHS	Council records
Employee Feedback Survey Responses	Surveys
Commitment to WHS, its implementation and continuous improvement measured via: • Annual Performance Appraisals • Contractor Performance Review • On the Job Review	Council records
Audit records • The current written and dated policy, signed by the General Manager • Induction training content and induction records • Tool box/ team meeting minutes or other documentation indicating communication of the policy.	Council records
Internal and external review	Audit
Compliance with Council's WHS Strategy.	Council Records

GOVERNANCE

This policy should be read in conjunction with any related legislation, codes of practice, relevant internal policies, and guidelines.

Related legislation and policies

Name	Link
Work Health and Safety Act 2011	http://www.legislation.nsw.gov.au/#/view/act/2011/10
Work Health and Safety Regulation 2011	http://www.legislation.nsw.gov.au/#/view/regulation/2011/674
Local Government Act 1993	http://www.austlii.edu.au/au/legis/nsw/consol_act/lga1993182/
WHS Codes of Practice (SafeWork Australia)	https://www.safeworkaustralia.gov.au/law-and-regulation/model-whs-laws#model-codes-of-practice

Related External references

Name	Link
SafeWork NSW	http://www.safework.nsw.gov.au/

Supporting Documents

Name	Link
Appendix 1	Definitions and Responsibilities per *WHS Act 2011*

Definitions

Word / Term	Short Definition – See appendix 1 for long definition
PCBU	Person Conducting a Business or Undertaking (i.e. Council)
Officers	The persons within Council who make or participate in making decisions that affect the whole or a significant part of the organisation. Council's officers are the General Manager, all Group Managers and all Managers. The officers are required to exercise "Due Diligence" in ensuring Council meets its obligations under the Act.
Workers	Anyone carrying out work, in any capacity for or on behalf of Council. This includes employees, contractors and their employees, sub-contractors and their employees, labour hire employees engaged to work for Council, outworkers, apprentices, trainees, work experience students and volunteers
Other persons at the workplace	Any person present at a place where Council carries out work, who is not conducting work for or on behalf of Council (e.g. members of the public, visitors not performing work).
Due Diligence	To take every precaution reasonable in the circumstances to protect the health, safety and welfare of workers and other persons at the workplace
Reasonably Practicable	Doing what is effective and possible at a particular time to ensure the health and safety of workers and others. All people must be given the highest level of health and safety protection from hazards arising from work, so far as is reasonably practicable.
Duties / Responsibilities	The principles applicable to duties are that:- • Duties are not transferable, and • Duties cannot be delegated to another person, and • A person can have more than one duty (i.e. Officers also have duties as Workers), and • More than one person can have the same duty.

General Manager
Lithgow City Council.

Reference:	Policy Register	**Council Policy No:**	9.13	**Effective Date:**	
Min No:		**Version No:**	2	**Review Date:**	3 years

Appendix 1 – Definitions and Responsibilities per WHS Act 2011

DEFINITIONS

Duties / Responsibilities

The principles applicable to duties are that:-

- Duties are not transferable, and
- Duties cannot be delegated to another person, and
- A person can have more than one duty (i.e. Officers also have duties as Workers), and
- More than one person can have the same duty.

Duty of Care:

1. A person conducting a business or undertaking must ensure, so far as is reasonably practicable, the health and safety of:
    a. Workers engaged, or caused to be engaged by the person, and
    b. Workers whose activities in carrying out work are influenced or directed by the person, while the workers are at work in the business or undertaking.
2. A person conducting a business or undertaking must ensure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work carried out as part of the conduct of the business or undertaking.

Due Diligence

The WHS Act sets out a non-exhaustive list of steps which officers are expected to take in order to exercise due diligence. Due Diligence includes taking reasonable steps:

- To acquire and keep up-to-date knowledge of work health and safety matters and
- To gain an understanding of the nature of the operations of the business or undertaking and of the hazards and risks associated with those operations; and
- To ensure that the person conducting the business or undertaking has available for use, and uses, appropriate resources and processes to eliminate or minimise risks to health and safety from work carried out as part of the conduct of the business or undertaking; and
- To ensure that the person conducting the business or undertaking has appropriate processes for receiving and considering information regarding incidents, hazards and risks and responding in a timely way to that information; and
- To ensure that the person conducting the business or undertakings has, and person conducting the business or undertaking under this Act; and
- To verify the provision and use of these resources and processes.

Reasonably Practicable:

What is reasonably practicable to be done at a particular time in relation to ensuring the work health and safety of others. It takes into account and weighs up all matters, including:

- The likelihood of the hazard (identified) or the risk concerned occurring; and
- The degree of harm that might result from the hazard or the risk; and
- What the person concerned knows or ought 'reasonably' to know about the hazard, the risk and ways of eliminating or minimising the risk; and
- The availability and suitability of ways to eliminate or minimise the risk; then finally
- The cost associated with controlling the risk must also be considered, including whether the cost is grossly dis-proportionate to the risk.

Responsibilities

PCBU – *(WHS ACT 2011 divisions 2 and 3)*

Council's primary 'duty of care' is to ensure the health and safety of workers while they are at work and that the work carried out does not carry risks to the health and safety of others. Additionally the PCBU, must consult, coordinate and cooperate with other PCBUs working for or on behalf of Council.

To meet these duties Council will, as far as is reasonably practical:

- Provide and maintain a safe work environment
- Provide and maintain safe plant and structures.
- Provide and maintain safe systems of work
- Ensure the safe use, handling and storage of plant, structures and substances.
- Provide adequate facilities (and ensure access is maintained).
- Provide instruction, training, information and supervision.
- Monitor the health of workers and conditions at Council workplaces.

Officers *(WHS Act 2011 section 27)*

Officers are required to exercise due diligence to ensure the PCBU meets it's duties.

They must take reasonable steps to:

- Gain and update knowledge of WHS matters.
- Understand the nature of Council's operations, and the general hazards and risks involved.
- Ensure Council has and uses appropriate resources for eliminating or minimising risks.
- Ensure Council has processes for receiving, reviewing and responding to information about incidents, hazards and risks.
- Ensure Council implements processes for complying with its duties including consultation, providing training and instruction and reporting of notifiable incidents.

Workers *(WHS Act 2011 section 28)*

Workers shall, as far as is reasonably practicable:

- Take reasonable care for his or her own health and safety, and
- Take reasonable care to ensure their acts or omissions do not adversely affect the health and safety of others, and

- Comply so far as reasonably able with reasonable instructions from the PCBU to assist in complying with the WHS ACT, and
- Cooperate with any reasonable policy and procedure of the PCBU relating to health or safety at the workplace that the workers have been informed of.

Other persons at the workplace (WHS Act 2011 section 29)
Others must as far as is reasonably practicable:

- Take reasonable care for their own health and safety, and
- Take reasonable care to ensure their acts or omissions do not adversely affect the health and safety of others, and
- Comply so far as the person is reasonably able with any reasonable instructions from the PCBU to assist in complying with the WHS Act.

Minutes

Strategic Land Use Planning Projects Steering Committee
12 September 2017
4.00pm Council Committee Room

Item	Agenda
1	Welcome/present/ apologies
2	Presentation- Oculus- Marrangaroo Masterplan/DCP Project
3	Update – Lithgow Rural and Rural Residential Strategy Review
4	General Business
5	Next meeting

MINUTES – STRATEGIC LAND USE PLANNING PROJECTS STEERING COMMITTEE- 12 SEPTEMBER 2017

ITEM: 1 PRESENT AND APOLOGIES

PRESENT: Mayor Stephen Lesslie, Clr Thompson, Clr McAndrew, Clr Ring, Keith Stead (Oculus Project Manager)

APOLOGIES: Katrine O'Flaherty (NSW Planning and Environment Representative)

OFFICERS: General Manager - Graeme Faulkner; Director Economic Development and Environment – Andrew Muir; Strategic Land Use Planner – Sherilyn Hanrahan

DECLARATION OF INTERESTS: Nil

ITEM: 2 PRESENTATION- OCULUS- MARRANGAROO MASTERPLAN/DCP PROJECT

SUMMARY

The project is currently three months behind the last reported project program. This delay has been due to the need to commission further work by Cardno to sufficiently address the servicing needs and future staging and costs of providing water and wastewater services to the Study Area.

Since last reported to the Committee the following work has been completed by Oculus/Cardno and submitted for review:

- Draft Employment Lands Development Guide (May 2017)
- Draft Marrangaroo Master Plan Report (July 2017)
- Revised Marrangaroo Servicing Report - Cardno (August 2017)
- Revised Draft Marrangaroo Master Plan Report (September 2017)

Oculus presented to the Committee a high level presentation of the three key documents to the meeting and provided an overview of the next recommended stages of the community engagement/consultation program to be undertaken.

ACTION/RECOMMENDATION

THAT

1. The Committee notes the presentation by Oculus and endorse the following three documents, including any identified amendments, to move forward with the next stage of Landowner/Stakeholder and Community Engagement:
   - Draft Employment Lands Development Guide (May 2017)
   - Marrangaroo Servicing Report
   - Draft Marrangaroo Masterplan Report (September 2017)

2. The Committee endorse a further round of “kitchen table” individual landowner/stakeholder consultations prior to full public exhibition of the Master Plan and DCP.

3. A full Council Briefing session is held prior to public exhibition phase of the project.

MOVED: Clr Ring **SECONDED:** Clr Mc Andrew

ITEM: 3 UPDATE – LITHGOW RURAL AND RURAL RESIDENTIAL STRATEGY REVIEW

SUMMARY

The Committee was provided with an update of the project by Council’s Project Manager - Sherilyn Hanrahan including its current status and options to address current project management issues and concerns.

The Committee was advised that Council had accepted an offer from NSW Department of Planning and Environment (DP & E) to participate in a pilot project to map Agricultural Lands across the Central West and Orana Region commencing with the Lithgow Local Government Area. It is expected that this project would be completed by February/March 2018.

A brief overview of the DP & E/ DPI Agriculture - Agricultural Lands Mapping Pilot Project was provided. The project is intended to provide strategic justification for land use planning directions to support regional agriculture within each LGA based on:

- An analysis of the nature of agriculture in the region
- Mapping of areas important to the long-term future of regional agriculture
- Identifying and responding to industry opportunities and issues faced
- Preparing policy recommendations to promote and facilitate growth in the sector.

The Committee was advised that the outcomes of this project should be incorporated into any Rural and Rural Residential Strategy review. However, such would be considered outside the scope of the current project contract with Edge Land Planning.

ACTION/RECOMMENDATION

THAT

1. The Committee defer finalisation (including the public exhibition phase) of the Draft Rural & Rural Residential Strategy pending completion of the DP&E Agricultural Lands Mapping Pilot Project and incorporation of its outcomes. This is expected to be February /March 2018.

2. The Committee request Edge Land Planning to address the matters raised by Council and NSW DP& E in Council's letter dated 20th June 2017 as best as can be using current available information and revise and submit a final Draft Strategy.
3. A further report be provided to the Committee once Edge Land Planning has submitted a final Draft Strategy to wind up the current project contract.

MOVED: Clr Thompson **SECONDED:** Clr Ring

ITEM 4: GENERAL BUSINESS

SUMMARY

There were no items of General Business.

ITEM 5: NEXT MEETING:

Next Meeting: To be confirmed at a later date based on project milestones and need.

There being no further business the meeting closed at 5.40pm.

MINUTES

Youth Council
Wednesday 20 September 2017
Lithgow City Council
Committee Room
4.30 – 5.30 pm

Youth Council	
Item Number	**Agenda**
1	Welcome, Present & apologies
2	Confirmation of Minutes
3	Business Arising
4	Work Program
5	Youth Scholarships
6	New members
7	Skate Parks Update
8	General Business
9	Next Meeting

Minutes
Youth Council
20 September 2017

ITEM: 1 WELCOME, PRESENT AND APOLOGIES

Present: Clr Cassandra Coleman (Chairperson), Clr Stephen Lesslie, Lauren Corney (Deputy Chairperson), Oliva Corney (Member), Jessica Alexander (Member), Katie Coleman (Guest).

Apologies: Chloe Hosa (Member), Meg Benson (Organisational Rep).

Officers: Viktoria Gulabovski (Executive Officer and representing the General Manager).

Declaration of Interests: None

ITEM: 2 CONFIRMATION OF THE PREVIOUS MINUTES

SUMMARY
Confirmation of the minutes for the meeting held on 19 July 2017.

COMMENTARY
The minutes for the 19 July 2017 Youth Council meeting were ratified by members and endorsed at the 27 August 2017 Council meeting.

ACTION

THAT the reporting of the 19 July 2017 Youth Council minutes to Council be noted.

MOVED: Olivia Corney **SECONDED:** Lauren Corney
Carried

ITEM: 3 BUSINESS ARISING

SUMMARY
An update on the Batyr Youth Mental Health Group was provided.

COMMENTARY
Batyr Youth Mental Health Group works with young people in schools to break down the stigma that surrounds mental health. Batyr aims to engage, educate and empower young people by fostering an environment where talking about mental health issues and getting help is not only accepted, but is encouraged and supported. The Youth Council agreed to support Batyr to work with local high school students. A letter of endorsement will be drafted and sent to the local high schools promoting and supporting the program.

ACTION

Draft and send letter of endorsement to local high schools supporting and promoting Batyr Youth Mental Health Group.

THAT The discussion on Batyr Youth Mental Group be noted.

MOVED: Olivia Corney **SECONDED:** Clr Coleman
Carried

ITEM: 4 DRAFT WORK PROGRAM

SUMMARY
A draft work program for the Youth Council has been developed.

COMMENTARY
The Draft Work Program 2017/18 for the Youth Council has been developed. It includes the following tasks:

- Youth Week 2018
- Further Education Scholarship Program/ Youth Scholarships
- Youth Grants for additional activities for young people
- Volunteering for Young People
- Youth Council Facebook Page
- Youth Programs and activities at the library

ACTION
Members to review the Draft Work Program and provide feedback at the next meeting.

THAT The discussion on the Draft Work Program be noted.

MOVED: Lauren Corney **SECONDED:** Clr Lesslie
Carried

ITEM: 5 YOUTH SCHOLARSHIP PROGRAM

SUMMARY
Youth Council discussed the administration of the Further Education Scholarship Program.

COMMENTARY
Youth Council has a budget of $8,500 for a Youth Scholarship Program. It was agreed at the last meeting that applicants would receive a maximum of $500 each to support them with costs related to further study, for example, financial support for internet usage, books, travel and other materials. There was discussion around the administrative infrastructure for the scholarship program. Council staff will meet with WSU, Notre Dame and Lithgow Tafe to discuss possible approaches to administer the program. Another alternative is to develop an application form and promote it on the Council website. Youth

Council will assess applications and successful applicants will be advised in writing.

ACTION
Council staff to meet with WSU, Notre Dame and Lithgow Tafe to set up administrative infrastructure for the Youth Scholarship Program.

THAT the discussion on the Youth Scholarship Program be noted.

MOVED: Lauren Corney **SECONDED:** Olivia Corney
Carried

ITEM: 6 NEW MEMBERS

SUMMARY
A discussion regarding membership of the Youth Council.

COMMENTARY
Chloe Hosa's membership with Youth Council has now been endorsed by Council. Katie Coleman attended the Youth Council meeting as a guest and expressed her interest in being a member of Youth Council.

ACTION
Make a recommendation to Council to officially endorse Katie Coleman's membership with Youth Council.

THAT The discussion around new members be noted.

MOVED: Clr Lesslie **SECONDED:** Lauren Corney
Carried

ITEM: 7 SKATE PARKS

SUMMARY
An update was provided on the skate park/s development at Wallerawang and Portland.

COMMENTARY
The Skate Park Survey is now closed. Over 100 surveys were received. Council staff will now host a community forum on 4 October 2017 in Wallerawang and Portland to go over the survey results with the community and listen to further ideas concerning the development of the skate parks.

THAT the discussion under Skate Parks be noted.

MOVED: Clr Coleman **SECONDED:** Olivia Corney
Carried

ITEM: 8 GENERAL BUSINESS

SUMMARY
Youth Council discussed possible activities that could be undertaken as part of Youth Week 2018.

COMMENTARY
Youth Council would like to host a “Big Sleepout” event as part of Youth Week 2018. The event will include an outdoor cinema experience featuring a family friendly new release film, DJ music, food and drink. The event is designed to focus on raising vital funds and awareness for young people experiencing homelessness. It will also provide a unique recreational opportunity for young people in Lithgow.

THAT the discussion under general business be noted.

MOVED: Clr Coleman **SECONDED: Olivia Corney**
Carried

Meeting Closed 5.20pm

NEXT MEETING
18 October 2017
Upstairs Council Committee Room, 180 Mort St, Lithgow.

Minutes

Sports Advisory Committee
26th September 2017
5.00pm

Item	Agenda
1	Welcome/Present/Apologies
2	Confirmation of Minutes
3	Business Arising From The Minutes
4	Financial Assistance Requests
5	2017 LJ Hooker Reg Cowden Sports Star Of The Year Awards
6	Booking Requests
7	New Members
8	General Business
9	Next Meeting

MINUTES – SPORTS ADVISORY COMMITTEE- 26/09/2017

ITEM: 1 PRESENT AND APOLOGIES

PRESENT: Clr J Smith, Clr D Goodwin, L Stevens, G Ryan, D Fardell, D Whitty, R Whitty, J Kearney, R Marjoram, S Morris, P Glasson, O Kay

APOLOGIES: P Hughes, M Wren

OFFICERS: J Edgecombe, T Nolan, E Trudgett

DECLARATION OF INTERESTS:

ITEM: 2 CONFIRMATION OF MINUTES FROM THE PREVIOUS MEETING

The minutes from 29th August 2017 were presented to the Council on 25th September 2017.

MOVED: R Marjoram **SECONDED:** J Kearney

ITEM: 3 BUSINESS ARISING FROM THE MINUTES

ITEM: 4 FINANCIAL ASSISTANCE REQUESTS

SUMMARY

There were no complying financial assistance requests received in September 2017.

ACTION

THAT that the information regarding financial assistance be noted.

MOVED: P Glasson **SECONDED:** J Kearney

ITEM: 5 2017 LJ HOOKER REG COWDEN MEMORIAL SPORTS STAR OF THE YEAR AWARDS

SUMMARY

Junior nominations for the month of August 2017 were received from:

- Tully Howell (Rugby League Touch Football) – Tully has been successful in making the U/11 Western Rugby League team which competed at the State Championships in Penrith. He was also successful in making the Senior PSSA touch football team which participated at State, Tully also won the coaches award for player of the tournament.

- Holly Beecroft (Futsal) – Holly was selected as the Australian Futsal U/16's Goal Keeper to compete in Pearl River Cup China. This selection came from her performance in the NSW Academy Squad. Throughout the tour Holly also played up for the Australian Futsal Open Women's team. She scored two goals in the last game of the tournament.
  She has now been selected in the Australian Futsal Youth Team and will tour Spain and the UK in November/December

- Emily Watts (Running) – In preparation for cycling season and representing the Scots School, Emily competed in the Bathurst Edgell Jog and was the first female across the line.

Senior nominations for the month of August 2017 were received from:

- Cheryl Rutherford (Hockey) – Australia were a guest nation at the IMHA European Masters Hockey Championships. The Australian team that Cheryl was part of competed in the Over 50 age group and was a combination of Over 50 and Over 55 team members. They played 6 preliminary games, drew 3 and lost 3, and drew the final placing match. They competed against Netherlands, Wales, Ireland and England, and were awarded with a 'participation medal' during the closing ceremony.

- Ken Poppet (Lawn Bowls) - The Lithgow boys achieved a strong win of 25-15. Lithgow now go on to represent the Zone at State level to be held at Ettalong on October 21-22.

MONTH	JUNIOR RECIPIENT(S)	SENIOR RECIPIENT(S)
December/January	Ethan Corney (Downhill) & Emmerson Banning (Tennis)	Richard Forbes (Table Tennis, Lawn Bowls, Darts, Petanque and Archery) & Roxanne Van Veen (Cricket)
February	Lucy Green (Tennis)	Cheryl Schram (Bowls) & Lesley Townsend (Bowls)
March	Morgan Watts (Triathlon)	Lithgow Lightning (Cricket)
April	Brenna Crocker (Hockey) Rylee Miller (Hockey)	Andrew Burton (Golf)
May	Sara Lane (Baseball)	No Nominations Received

	Lithgow U15 Girls Hockey Team (Hockey)	
June	Ryan O'Donnell (Boxing)	Lithgow Open Women's Hockey Team (Hockey)
July	Alice Kingston (Goalball)	No Nominations Received
August	Holly Beecroft (Futsal)	Cheryl Rutherford (Hockey)
September		
October		
November		

ACTION

THAT

1. The 2017 LJ Hooker Reg Cowden Memorial Junior Sports Star of the Year Award for August 2017 be awarded to Holly Beecroft (Futsal);
2. The 2017 LJ Hooker Reg Cowden Memorial Senior Sports Star of the Year Award for August 2017 be awarded to Cheryl Rutherford (Hockey); and
3. Merit certificates to be awarded to all other nominees.

MOVED: R Marjoram **SECONDED:** D Whitty

ITEM: 6 BOOKING REQUESTS

SUMMARY

The following bookings were received between 25th July 2017 and 29th August 2017, and do not conflict with any other approved bookings.

Saville Park, Portland			
User	**Dates / Times**	**Purpose**	**Comments**
Portland Touch Football Association	Between 5pm and 7.30pm on Tuesdays and Wednesdays and between 4pm and 7.30pm on Thursdays from 10th October 2017 to 30th March 2018	2017/18 Touch Season Competition	Approved subject to standard condition.
Portland Touch Football Association	Between 7am and 7pm from Saturday, 4th February 2018 to Sunday, 5th February 2018	2018 Nick Way Memorial Knock Out	Approved Subject to standard condition.
Tony Luchetti Sportsground			
User	**Dates / Times**	**Purpose**	**Comments**
Lithgow Touch Football Association	Between 4pm and 9.15pm on Mondays from 9th October 2017 to 19th March 2018.	2017/18 Touch Football Senior Mixed Competition	Approved subject to standard condition.
Lithgow Bears Rugby League Club	Between 6pm and 7pm on Tuesday and Thursday from 1st January 2018 to 30th September 2018	Lithgow Bears 2018 Training	Tentative booking until satisfactory arrangement with other football teams.
JM Robson Aquatic Centre, Lithgow			
User	**Dates / Times**	**Purpose**	**Comments**
Lithgow Public School	Between 1.30pm and 2.30pm on Monday - Friday from 16th October 2017 to 27th October 2017	Lithgow Public Swim School	Approved subject to standard condition.
Lithgow High School	Between 8.30am and 3.30pm on Friday 16th February 2018	Lithgow High School Swimming Carnival	Approved subject to standard condition.
Cullen Bullen School	Between 1pm and 2pm on Fridays from 10th November 2017 to 1st December 2017.	Learn to Swim Program	Approved subject to standard condition.
Marjorie Jackson Oval, Lithgow			

User	Dates / Times	Purpose	Comments
Lithgow Public School	Between 11.30am to 12.30pm on Friday, 15th September 2017	Touch Football Game	Approved subject to standard condition, Lithgow District Football has also confirmed this booking.
Watsford Oval, Lithgow			
User	**Dates / Times**	**Purpose**	**Comments**
Cooerwull Public School	Between 9am and 3pm on Thursday, 7th September 2017	PSSA Cricket Match	Approved subject to standard condition.
Western Wildfire Senior Cricket Club	Between 12.00pm and 4.30pm on Sunday 24th September 2017.	Trial Game	Approved subject to standard condition.

The approved bookings calendars are updated after each Sports Advisory Committee meeting, and can be viewed and / or downloaded from Council's website http://www.council.lithgow.com/recreationFacilities.html

CANCELLATIONS
NIL

FINANCIAL IMPLICATIONS

- **Budget approved -**
- **Cost centre -**
- **Expended to date -**
- **Future potential impact -**

ACTION

THAT

1. All bookings detailed in Item 7 be approved; subject to satisfactory arrangement being made between the conflicting bookings, and;
2. Lithgow Bears, Storm and Wolves liaise together to organize satisfactory arrangement for 2017/18 season.

MOVED: Clr D Goodwin **SECONDED:** S Morris

ITEM 7: NEW MEMBERS

NIL

ITEM 8: GENERAL BUSINESS

SUMMARY

1. **Lithgow Community Health Team**

The health care representative discussed his overview of what he is trying to achieve with regard to suicide prevention awareness. He asked to have a brief conversation with each individual sporting team within the Lithgow area to give advice of the assistance available in relation to suicide prevention. The Mental Health Line was distributed to all sporting bodies – 1800 011 511.

2. **Support from WRAS**

The Western Region Academy of Sport has sent an email to Council to offer written letters of support to any funding applications for sporting infrastructure within the Lithgow Region.

3. **Reg Cowden Memorial Sports Star of the Year Awards Presentation Night**

There have been numerous discussions regarding the future of the annual Reg Cowden Memorial Sports Star of the Year Awards. It should be noted that the Council is having difficulty attracting nominations and attendance for the awards. It has been proposed that suggestions for revitalizing the awards evening be taken from the committee.

It was discussed that the awards need to be revitalized to help attract people to come to the event. Suggestions included; holding the awards seasonally, organizing a Charity Round Robin Day - where all sports come together and play each other in all the different sports, holding a Sportsman's Ball and also making it a more family and team orientated presentation.
It was advised all ideas be written submissions to be discussed at the October Meeting.

4. **Portland Cricket Upgrades**

It was advised that the practice wickets at Portland were inspected and Council is waiting on a quote to replace the synthetic turf. It was also mentioned that the conveyor belt around the nets needs replacing and this will be considered for the 2018/19 finances.

5. **Golf Club A-Fold**

It was advised that the netting at the Golf Club is beginning to deteriorate and fall apart. Council will organise a contractor to inspect and replace if required.

6. **Tony Luchetti Sportsground Incident**

There has been no legal action taken yet in relation to the change room damage. It was advised that the repairs have been completed, but the investigation is ongoing.

7. **Appreciations**

- Thank you to Council from Workies Rugby League for all their support throughout the season.
- Thank you to Council from the Lithgow Basketball Association for their support with the grants submission for funding for upgrades of the Stadium.
- Congratulations to Panthers Men's Hockey, Workman's Club, Wallerawang Warriors and Lithgow Junior Storm for their grand final wins.

FINANCIAL IMPLICATIONS

- **Budget approved -**
- **Cost centre -**
- **Expended to date -**
- **Future potential impact -**

ACTION

THAT appropriate actions and reporting be undertaken in relation to the items raised during general business.

MOVED: G Ryan **SECONDED:** J Kearney

ITEM 9: NEXT MEETING:

Next Meeting: Tuesday 31st October 2017 at 5:00pm
Council Chambers, Administration Building
180 Mort Street LITHGOW NSW 2790

There being no further business the meeting closed at 5.45pm

Minutes

Traffic Advisory Local Committee
31st August 2017

MINUTES – TRAFFIC ADVISORY LOCAL COMMITTEE- 31 AUGUST 2017

ITEM 1: PRESENT AND APOLOGIES

PRESENT: Clr Stephen Leslie (Council), Prue Britt (RMS)

APOLOGIES: Michelle McGrath (Representative – Local Member), Glen Crawford (NSW Police)

OFFICERS: Elias Shirt, Jonathon Edgecombe, Iain Stewart, Erin Trudgett

DECLARATION OF INTERESTS: Nil

ITEM 2: CONFIRMATION OF MINUTES FROM PREVIOUS MEETING

RECOMMENDATION

THAT the Minutes of the meeting of 18th May 2017 be taken as read and confirmed.

For: All voting members

Against: Nil

ITEM 3: LITHGOW CBD REVITALISATION – TRAFFIC CONTROL DEVICES

As part of the first stage in the implementation of Lithgow City Council's CBD Revitalisation Action Plan upgrades are planned in Cook Street Plaza. These upgrades are designed to improve pedestrian amenity in the CBD and to improve the plaza as an event space. As part of the upgrade works the following modifications to existing traffic control devices are proposed:

- Relocation of restrictive parking signage on Main St adjacent to the existing (raised) pedestrian crossing
- Relocation of the existing bus zone on Main St as shown in the attached plans
- Extension of the existing bus zones to the required 30m length
- Extension of the existing raised pavement on Main St
- New raised pavement treatment adjacent the plaza at the intersection of Burns Lane and Cook St

A detailed report on the suitability of the traffic control modifications is included in the attachments.

FINANCIAL IMPLICATIONS

- **Budget approved** – Yes
- **Cost centre** – 100007 **–** Lithgow CBD Revitalisation
- **Expended to date** – N/A
- **Future potential impact** – N/A

RECOMMENDATION

THAT Council

1. Extend the existing raised pedestrian threshold on Main Street
2. Relocate existing No stopping signage adjacent to the existing raised pedestrian crossing
3. Extend West bound bus stop to 30m
4. Relocate East bound bus stop to the opposite side of the crossing and extend to 30m
5. Construct new raised threshold treatment at intersection of Cook St, Cook St Plaza and Burns Lane

For: All voting members

Against: Nil

ITEM 4: ZIG ZAG PUBLIC SCHOOL BUS ZONE

Correspondence has been received from Zig Zag Public School regarding parking restrictions during the pick-up/drop-off time at the school. An on-site meeting involving representatives from Council, RMS and the school was held on 26 April 2017 during the afternoon pick-up time (2:30pm – 3:00pm).

To improve traffic flow and student safety the following changes to parking restrictions are proposed (see attachments for location of proposed parking restrictions):

- Installation of No Stopping signage
- Installation of No Parking signage with times 8.30am to 9.30am and 'SCHOOL DAYS'
- Installation of No Stopping Signage with times 8.30am to 9.30am and 2.30 to 4pm and 'SCHOOL DAYS'

A detailed report on the concerns raised and the proposed changes to restricted parking is included in the attachments.

FINANCIAL IMPLICATIONS

- **Budget approved** – No
- **Cost centre** – 2011 **–** Lithgow Urban Sealed Roads
- **Expended to date** – Nil
- **Future potential impact** –$1,200

RECOMMENDATION

THAT Council

1. Replace the existing 'No Parking' signs with 'No Parking – 8.30am to 9.30 am SCHOOL DAYS' signs
2. Install 'No Stopping' signs at the end of Victoria Avenue and in front of the school entrance
3. Install 'No Stopping – 8.30am to 9.30 am and 2.30pm to 4.00pm SCHOOL DAYS' signs at the end of Victoria Avenue opposite the school entrance.
4. Consult with Zig Zag Public School and the Police regarding on-going compliance with the parking restrictions

For: All voting members

Against: Nil

ITEM 5: NO STOPPING SIGNAGE – KIRKLAND LINK/LITHGOW STREET INTERSECTION AND HASSANS WALLS ROAD/MAIN STREET INTERSECTION

Lithgow Council's ranger has raised concerns regarding compliance with Road Rules 2014 – Reg 170 which prevents vehicles from parking within 10m of an Unsignalised Intersecton.

To improve compliance and increase safety and traffic flow at these intersections the installation of No Stopping and No Parking signage is proposed.

FINANCIAL IMPLICATIONS

- **Budget approved** – No
- **Cost centre** – 2011 **–** Lithgow Urban Sealed Roads
- **Expended to date** – Nil
- **Future potential impact** – $800

RECOMMENDATION

THAT Council

1. Installs 'No Stopping' signs on the East side of Hassans Walls Road at the intersection with Main St (10m parking restriction)
2. Installs 'No Stopping' signs on the West side of Kirkland Link at the intersection with Lithgow St (10m parking restriction)
3. Installs 'No Parking' signs on the West side of Kirkland Link from the intersection with Valley Drive to the No Stopping signs proposed in 2.

For: All voting members

Against: Nil

ITEM 6: GENERAL BUSINESS

1. **Local Government Area Crash Statistics**

Issue: The RMS provides reports to Council detailing all casualty crashes that have occurred in the Local Government Area over the past month.

Discussion: Council receives monthly reports from the RMS which detail all casualty crashes that have occurred in the LGA. To help Council respond where possible it is proposed that the report be regularly discussed during General Business at future TALC Meetings. This would only apply to local roads which are owned and maintained by Council.

Outcome: Monthly Casualty Crash Report to be regularly discussed during general business at future TALC meetings to identify possible action to reduce crash occurrence and severity.

Meeting Closed 12:35pm

Minutes

Operations Committee
3rd October 2017
4.00pm

Operations Committee	
Item Number	**Agenda**
1	Welcome/Present/Apologies
2	Confirmation of Minutes
3	Business Arising From The Minutes
4	Wallerawang Overbridge Pedestrian and Vehicular Traffic Issues
5	Water Restrictions
6	Cullen Bullen Sewerage Upgrade
7	General Business
8	Next Meeting

ITEM: 1 PRESENT AND APOLOGIES

PRESENT: G Faulkner, Clr S Ring, Clr R Thompson, Clr McAndrew, Clr S Lesslie

APOLOGIES:

OFFICERS: R Brownlow, I Stewart, E Trudgett

DECLARATION OF INTERESTS:

ITEM: 2 CONFIRMATION OF MINUTES FROM THE PREVIOUS MEETING

The minutes were presented to the Council on 25th September 2017.

ACTION

> **THAT** the Minutes of the meeting of 22nd August 2017 be taken as read and confirmed.

ITEM: 3 BUSINESS ARISING FROM THE MINUTES

1. 16 LOCKYER STREET LITHGOW

A site inspection was undertaken on 22nd August 2017 at the rear of 16 Lockyer Street Lithgow, which has been subject to surcharging of sewerage from a manhole located in the property following periods of heavy rain or breakdowns to the adjacent Tweed Mills Pump Station. The option to install temporary storage tanks will just prolong the issue of overflow to this area. After further investigation into different options, the purchase and installation of a diesel powered pump will alleviate the issue more efficiently. Costs for the pump and installation have been received and are currently under review. The owner has been informed of progress to date.

RECOMMENDATION

> **THAT** the proposal to increase the pumping capacity at Tweed Mills Pump Station during wet weather, be implemented with the installation of an appropriate diesel stand by pump to reduce surcharge at 16 Lockyer Street

MOVED: Clr S. Lesslie **SECONDED:** Clr S. Ring

ITEM: 4 WALLERAWANG OVERBRIDGE PEDESTRIAN AND VEHICULAR TRAFFIC ISSUES

SUMMARY

This report is to provide potential solutions to the footpath issue on the western side of the Wallerawang Rail Overbridge and detail associated approximate budget commitments for proposed improvements.

Sight Distance.
Discussions took place on the construction of a concrete traffic island on the Pipers Flat Road and Main Street, Wallerawang intersection.

Pedestrian Issues
The construction of a walkway/ pedestrian access on the western side of the bridge and possible structural issues will continue to be investigated .Discussions with John Holland regarding purchasing the adjacent land to further extend the footpath, will be included in the review process.

FINANCIAL IMPLICATIONS

- **Budget approved -** NIL
- **Cost centre -** NIL
- **Expended to date -** NIL
- **Future potential impact -** $102,500.00 (excluding GST)

ACTION/RECOMMENDATION

THAT the Committee
1. Note the report; and
2. The continuation of the feasibility and associated costs with providing a pedestrian walkway on the western side of the Bridge. be the subject of further reports to future Operations Committee meetings

MOVED: Clr R Thompson **SECONDED:** Clr S Ring

ITEM: 5 WATER RESTRICTIONS

SUMMARY

This report is to update Councillor's on the current level of water restrictions in force throughout the Lithgow Local Government Area.

The two vehicles located in Farmer's Creek No. 2 Dam have been removed safely and all pre-start meetings have been completed for the Clarence Water Transfer System. The plant will be operational from 10am on 4th October 2017. Full operation per day was 14mL but the system will instead be providing 10mL per day, this change to the volume of water that can be delivered by the system was caused by modifications to the original construction and the need to modify the route of the pipeline following the bushfire that destroyed sections of the pipeline.

It was noted that the quality of water received from the Clarence Transfer System is continually assessed by Clarence Colliery and also treated by Council's Water Treatment Plant to ensure it complies with health code standards.

The unreliability of the Fish River Water Supply Scheme was also discussed and it was noted that there have been significant periods where the Lithgow reticulation system has been utilized to supply the villages normally supplied from the Fish River Supply. This includes the need to operate the Clarence Water Transfer System to alleviate some pressure if the FRWSS is unable to supply water to the towns and villages. This issue will be kept under review by the provision of regular reports to the Operations Committee.

FINANCIAL IMPLICATIONS

- **Budget approved -** NIL
- **Cost centre -** NIL
- **Expended to date -** NIL
- **Future potential impact –** Decrease in revenue, offset by decrease in operational costs from purchase of water from WaterNSW

ACTION/RECOMMENDATION

THAT

1. Operations Committee note the report and;
2. Council's General Manager raise the lack of continuity of supply from the Fish River Scheme with appropriate authorities.

MOVED: Clr R Thompson **SECONDED:** Clr S Ring

ITEM: 6 CULLEN BULLEN SEWERAGE UPGRADE

SUMMARY

This report is to update the Operations Committee on the status of the Cullen Bullen Sewerage Scheme funding deed.

The draft funding deed is currently being completed by Council staff including the determination of appropriate milestones for inclusion in the Deed.

FINANCIAL IMPLICATIONS

- **Budget approved -** Yes
- **Cost centre -** 300034
- **Expended to date -** NIL
- **Future potential impact -**

ACTION/RECOMMENDATION

THAT

1. Operations Committee note the report and;

2. A timeframe be presented to the next Operations Committee outlining the events associated with the project and the submission of the draft deed and;
3. A meeting be held to advise the Cullen Bullen Community of the appropriate milestones for the project following finalization of the Draft Deed of Agreement.

MOVED: Clr R Thompson **SECONDED:** Clr S Lesslie

ITEM 7: GENERAL BUSINESS

SUMMARY

1. **Bells Road Bank Erosion**

Following flood erosion to a property located at the end of Bells Road, substantial efforts have been made to assist the owner in contacting the adjacent owner upon whose land the watercourse is located in. Council has now approached Le Fevre & Co. to contact the owner seeking some commitment to repairing the erosion and is awaiting a response.

2. **McKanes Falls Road & Cox's River Road Upgrades**

A complaint has been received regarding the loose sealing metal following the contract roadworks on McKanes Falls Road and Cox's River Road. issue. The brooming of the loose material has not yet been undertaken and will rectify the problem upon completion. Warning signs have been erected to advise motorists of the potential hazard.

3. **Curtin Place Sewerage Problem**

Problems have been experienced with sewer surcharge from a manhole located at the intersection of Enfield Ave and Curtin Place. Despite a CCTV survey of the sewer network at this location, no obvious fault has been identified. Smoke testing has been undertaken in the area upstream of this location and a significant number of illegal stormwater connections have been identified and notified to the responsible owners. Rectification of these illegal connections is being closely monitored and following completion it is anticipated that the current surcharge during wet weather will be significantly reduced. Council will maintain contact with the complainant and monitor the success of the smoke testing exercise.

4. **Mobile Depot Remediation Works**

An update on the remediation works on the old Mobile Depot in Main Street is to be provided to the next Operations Committee.

5. **Willowvale Lane Completion**

Following a complaint regarding the need to complete the last section of Willowvale Lane, provision to seal the last section will be included in the 2018/19 draft works program for consideration.

6. **Drainage at La Salle Academy**

Following receipt of a complaint concerning drainage issues at the rear of properties adjacent to La Salle improvement works are in progress to rectify the problem.

7. **McKanes Falls Road Bridge**

Roads and Maritime Services have advised that the load limit on the McKanes Falls Bridge has been altered from 4.5 tonne to 15 tonne.

8. **Roadkill on Highways**

The problems associated with the cleanup of roadkill along the Great Western Highway and other arterial roads were discussed. Whilst Council crews are available to clean up road kill in urban areas and some rural areas, the issue of roadkill on the highways is more difficult. The RMS do not appear to be providing a cleanup service judging by the amount of road kill being left at the roadside and Council crews are not always available. Discussions should be held with RMS to improve the cleanup rate and maintain a reasonable image for motorists.

FINANCIAL IMPLICATIONS

- **Budget approved -**
- **Cost centre -**
- **Expended to date -**
- **Future potential impact -**

ACTION/RECOMMENDATION

THAT appropriate actions and reporting be undertaken in relation to the items raised during general business

MOVED: Clr W. McAndrew **SECONDED:** Clr S Ring

ITEM 8: NEXT MEETING:

Next Meeting: Monday 6th November 2017 at 4:00pm
Committee Room, Administration Building,
180 Mort Street LITHGOW NSW 2790

There being no further business the meeting closed at 5.20pm