



Transport
for NSW

Revitalising Newcastle

Wickham Transport Interchange

Review of Environmental Factors - Submissions Report

November 2014



The new state
of business

This report has been prepared by GHD for Transport for NSW and may only be used and relied on by Transport for NSW for the purpose agreed between GHD and the Transport for NSW as set out in section 1.4 of this report.

GHD otherwise disclaims responsibility to any person other than Transport for NSW arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer to section 1.4 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

Contents

Abbreviations.....	iii
Definitions.....	iv
Executive summary.....	v
1. Introduction.....	1
1.1 Background.....	1
1.2 Overview of the Wickham Transport Interchange project.....	1
1.3 Review of environmental factors.....	2
1.4 Purpose and structure of this report.....	3
2. Consultation.....	5
2.1 Consultation prior to REF preparation.....	5
2.2 Stakeholder engagement plan.....	5
2.3 Consultation during REF preparation.....	5
2.4 Public display of the REF.....	6
2.5 Future consultation.....	8
3. Consideration of REF submissions.....	9
3.1 Overview.....	9
3.2 Summary of issues raised.....	9
3.3 Detailed responses to frequently raised matters.....	10
3.4 Responses to community submissions.....	13
4. Additional investigations and modifications to the proposal.....	79
4.1 Overview.....	79
4.2 Additional investigations and studies.....	79
4.3 Modifications to the proposal.....	88
5. Summary of mitigation measures.....	93
6. Conclusion.....	105
6.1 Conclusion.....	105
6.2 Next steps.....	105
7. References.....	107

Tables

Table 2.1	Consultation during REF preparation	6
Table 2.2	Consultation during public display	7
Table 3.1	Overview of key issues raised in submissions	9
Table 4.1	AHIMS sites within 800 metres of the proposal site	80
Table 4.2	Increase in noise levels due to increasing train speeds from 60km/hr to 80km/hr.....	82
Table 4.3	AM peak period traffic modelling results.....	84
Table 4.4	PM peak period traffic modelling results.....	86
Table 4.5	AM peak trip times along Stewart Avenue between Parkway Avenue and Cowper Street North	87
Table 4.6	PM peak trip times along Stewart Avenue between Parkway Avenue and Cowper Street North	87
Table 4.7	AM peak public transport travel times.....	88
Table 4.8	PM peak public transport travel times.....	88
Table 5.1	Summary of mitigation measures	93

Figures

Figure 4-1	AM and PM peak period traffic modelling results summary	85
------------	---	----

Appendices

- Appendix A – Summary of issues raised by submission in Section 3.4
- Appendix B – Heritage Impact Statement for works at Hamilton Station

Abbreviations

Abbreviation	Definition
AHIMS	Aboriginal Heritage Information Management System
CEMP	construction environmental management plan
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
GHD	GHD Pty Ltd
Infrastructure SEPP	<i>State Environmental Planning Policy (Infrastructure) 2007</i>
LoS	level of service
LALC	Local Aboriginal Land Council
NCA	noise catchment area
REF	review of environmental factors
RMS	Roads and Maritime Services
SHR	State Heritage Register

Definitions

Term	Definition
crossover	A track component which provides a connection between two parallel tracks using two sets of points
Down	The direction away from Newcastle Station on the Newcastle Branch Line
head shunt track	A short length of track that allows a locomotive to uncouple from its train, move forward, and then run back past it on a parallel track. Typically installed at a terminal station to allow the locomotive of an arriving train to move to the opposite end of its train, so that it can then haul the same train out of the station in the other direction.
LAE	The 'sound exposure level', which is used to indicate the total acoustic energy of an individual noise event. This parameter is used in the calculation of LAeq values from individual noise events.
LAeq(24 hour)	The 'equivalent continuous noise level', sometimes also described as the 'energy-averaged noise level' LAeq(24hour) may be likened to a 'noise dose', representing the cumulative effects of all the train noise events occurring in one day
LAeq(15 hour)	The daytime 'equivalent continuous noise level' the LAeq(15hour) represents the cumulative effects of all the train noise events occurring in the daytime period from 7.00am to 10.00pm
LAeq(9 hour)	The night-time 'equivalent continuous noise level', the LAeq(9hour) represents the cumulative effects of all the train noise events occurring in the night-time period from 10.00pm to 7.00am
LAeq(1 hour)	The busiest 1-hour 'equivalent continuous noise level', the LAeq(1hour) represents the typical LAeq noise level from all the train noise events during the busiest 1-hour of the assessment period
layover	Putting a train temporarily out of service
level crossing	A place where rail lines and a road cross at the same location
level of service	Defined by Austroads as a qualitative measure for ranking operating road and intersection conditions, based on factors such as speed, travel time, freedom to manoeuvre, interruptions, comfort and convenience
local road	Road used primarily to access properties located along the road
points	A rail track component where a track divides in two
the proposal	The construction and operation of the Wickham Transport Interchange project
proposal site	The construction footprint, including the area that would be directly affected by construction works
sensitive receivers	Land uses which are sensitive to potential noise, air and visual impacts, such as residential dwellings, schools and hospitals
stabling	The act of taking a train out of service and parking it in a siding or stabling yard, usually overnight or longer
study area	The area including and adjacent to the proposal site, with the potential to be impacted by activities on the proposal site
turnout	A point at which a railway track diverges
Up	The direction towards Newcastle Station on the Newcastle Branch Line

Executive summary

Background

In August 2014, a review of environmental factors (REF) for the Wickham Transport Interchange proposal (the proposal) was placed on public display as a key step in the planning, design and project approval process. The public display was preceded by a media release, Ministerial announcement and the distribution of community newsletters.

In summary, the proposal involves:

- Construction and operation of a new station and transport interchange at Wickham, to the west of Stewart Avenue, for heavy rail, local buses, taxis and private vehicles.
- Construction and operation of a new train stabling yard to the east of Hamilton Station.
- The removal of train services between Wickham and Newcastle stations.

The boom gates and manually-controlled train signals at the railway level crossing on Stewart Avenue would be removed. Railway Street would be closed at the location of the existing level crossing.

The proposal forms part of the *Newcastle Urban Renewal and Transport Program* which is being led by UrbanGrowth NSW.

Purpose of this report

This Submissions Report documents and responds to submissions received by Transport for NSW during the public display of the REF.

As part of the Submissions Report process, Transport for NSW undertook consultation with the community and stakeholders. Four community information sessions were held in Newcastle and one in Maitland during the display period. Meetings were held with project stakeholders, including businesses and residents in Hamilton and Wickham. Section 2.4 provides detail of the work undertaken.

The Submissions Report provides details of additional investigations that have recently been completed and proposed modifications to the proposal since the public display of the REF. The impacts of modifications and any additional mitigation measures required are also included in this report.

Overview of submissions

All written feedback received during the public display period along with contact details was recorded in the project consultation database.

A total of 280 submissions were received during the public display period. These comprised 278 submissions from community members and stakeholders and two submissions from State and local government (NSW Heritage Division and the City of Newcastle Council).

Each written submission was assigned a unique submission number and was categorised according to the key issues identified. A letter of acknowledgement has been sent to each party who made a submission to inform them of their unique submission number and where in the Submissions Report a response can be found. Individual submissions have been categorised and grouped with others relating to the issues identified and have not been responded to individually.

Additional investigations

A number of additional investigations have been completed since the public display of the REF including:

- an Aboriginal archaeological survey report
- revised operational noise modelling
- detailed traffic modelling
- journey time estimates
- heritage impact statement for works at Hamilton Station

These investigations have been used in the continued development of the proposal and are outlined in section 4.

Modifications to the proposal

Transport for NSW has made modifications to the proposal including rail infrastructure works, operational facilities for train crews and shelters for the comfort of train passengers.

An assessment of any additional environmental impacts resulting from these modifications has been conducted. This concluded that there would be no significant additional impacts from the proposed modifications.

Transport for NSW propose a number of additional measures to mitigate any likely impacts from the proposed modifications. These are outlined in section 5.

Conclusion and next steps

This Submissions Report documents the consideration of the submissions received and outlines Transport for NSW's response to them.

Transport for NSW will now review the REF and this Submissions Report and determine whether the requirements for assessment under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) have been met. It will then make a determination as to whether or not to proceed with the Wickham Transport Interchange proposal.

Should the Wickham Transport Interchange proposal be approved, Transport for NSW would continue to consult with community members, government agencies and other stakeholders to manage impacts during construction and operation.

1. Introduction

1.1 Background

The Lower Hunter region is experiencing sustained population and economic growth, which in turn will drive growth in Newcastle city centre and surrounding localities. Strategic planning for Newcastle seeks to achieve an additional 10,000 jobs and 6,000 homes in the city centre by 2036. The NSW Government plans to transform and revitalise Newcastle's city centre over the next 25 years to accommodate these changes (Department of Planning and Infrastructure, 2012).

The key issues and requirements for undertaking urban renewal in the Newcastle city centre have been considered by a number of planning studies and reports undertaken by the City of Newcastle Council (Council) and the NSW Government. In December 2012 the NSW Government released the *Newcastle Urban Renewal Strategy* (Department of Planning and Infrastructure, 2012). The key issues identified in the strategy include:

- Physical barriers, including geographical constraints (mainly the existing rail line) have caused the city centre to become elongated and poorly connected, especially to the waterfront.
- The physical and perceived barrier created by the rail line impedes investment and growth, and prevents the centre from functioning in a cohesive manner.
- Newcastle lacks a centre that is capable of generating critical mass, catering for the higher order functions expected of a regional city.

Further to the issues raised, the *Newcastle Urban Renewal Strategy* detailed the key priorities for renewal of Newcastle's city centre.

In December 2012 the NSW Government announced that train services along the Newcastle Branch Line would cease between Wickham and Newcastle stations. In July 2013, it was proposed that a new light rail link between Wickham and the Newcastle city centre would be provided.

The *Hunter Regional Transport Plan* (Transport for NSW, 2014b) was released in April 2014. The removal of the heavy rail line between Wickham and Newcastle stations, and the development of a new transport interchange at Wickham, are key actions provided for under the plan.

1.2 Overview of the Wickham Transport Interchange project

The key elements of the Wickham Transport Interchange project comprise:

- Construction and operation of a new station at Wickham, and a transport interchange for heavy rail, local buses, taxis and private vehicles (short term parking for passenger pick up and drop off) to the west of Stewart Avenue.
- Construction and operation of a train stabling facility to the east of Hamilton Station.
- The removal of train services between Wickham and Newcastle stations.

To continue operating the rail network to the west of the new station at Wickham, a number of modifications to rail infrastructure and services between the new station and Hamilton Station would also be required, including:

- Termination of the Newcastle Branch Line services at Hamilton Station for about two years during construction of the new station at Wickham and the stabling yard.

- Construction and operation of a new head shunt rail track, about 700 metres in length, between the Maitland Road overbridge and the new station at Wickham.
- Installation of new crossovers and turnouts to facilitate the movement of trains between the three rail tracks.
- Installation of ancillary infrastructure, including power supply, signalling and overhead wiring.

Some modifications to the road network would also be required, involving the removal of the railway crossing boom gates and signals at Stewart Avenue and the closure of Railway Street at the rail corridor.

The interchange design makes allowance for the future provision of light rail. The Newcastle Light Rail project will be subject to a separate environmental impact assessment/planning approval process.

1.3 Review of environmental factors

1.3.1 Need for the proposal

The proposal is needed to proceed with the revitalisation program proposed by the *Newcastle Urban Renewal Strategy* and the Newcastle Urban Renewal and Transport Program. It would also enable the key recommendations of the other relevant strategies and plans to be achieved. In summary, the proposal is needed to:

- Allow for the removal of the heavy rail line between Wickham and Newcastle stations, which will provide opportunities to reconnect the city to the waterfront.
- Provide a new transport interchange at Wickham, which is a key area for renewal and future urban development under the renewal strategies.
- Act as a catalyst for urban renewal in the Newcastle city centre, the adaptive reuse of the former rail corridor for public domain improvements, and the supporting development of activity precincts.
- Provide the foundation for introducing light rail within Newcastle.

1.3.2 Likely impacts of the proposal

Environmental investigations were undertaken during the preparation of the REF to assess the potential environmental impacts. Significant environmental impacts are unlikely as a result of the proposal. The main potential impacts that would require further consideration during detailed design, construction and operation are summarised below.

- **Transport and access** – The proposal would change public transport access for residents, workers and visitors travelling within Newcastle. Heavy rail services would not operate east of Wickham Station and existing train passengers wishing to travel to and from the Newcastle city centre would need to change transport modes (to bus and the future light rail system) at the new station at Wickham. The proposal would also result in the closure of the existing Railway Street level crossing which results in changes to traffic and pedestrian flows and access patterns.
- **Noise and vibration** – Construction and operation of the stabling yard has the potential to impact nearby sensitive receivers. Feasible and reasonable mitigation measures would be considered during detailed design.
- **Heritage** – Construction planning would consider measures to protect listed heritage items located within and adjoining the proposal site.

- **Urban design and visual impacts** – The design of the new station and facilities provides an opportunity to reinforce the role of Wickham in the city centre urban renewal process. The interchange design would continue to be refined during detailed design taking into account urban design and visual impacts.
- **Social and amenity impacts** – Amenity impacts during construction and operation, including traffic, noise and air quality impacts, would be managed through the implementation of the measures listed in section 5.

The detailed design for the proposal is being carefully developed with the objective of minimising potential impacts on local residents, businesses and visitors.

1.3.3 Conclusions of the REF

The proposal is needed to enable the urban renewal of Newcastle's city centre. With the implementation of the mitigation and management measures proposed in the REF, the potential environmental impacts of the proposal would be manageable. Having regard to the provisions of section 111 of the EP&A Act, the environmental impacts of the proposal (after mitigation) are not likely to be significant. Consequently an environmental impact statement is not required.

1.3.4 Statutory compliance

Section 3 of the REF outlines the statutory planning and approvals process for the Wickham Transport Interchange project.

Having regard to the provisions of *State Environmental Planning Policy (Infrastructure) 2007* (the Infrastructure SEPP) the proposal is permissible without development consent and is assessable under Part 5 of the EP&A Act.

The construction and operation of the proposal would comply with all relevant legislative requirements identified in section 3 of the REF.

1.4 Purpose and structure of this report

This Submissions Report has been prepared to:

- Summarise and respond to issues raised in submissions.
- Report on additional studies undertaken following the public display of the REF.
- Identify any changes to the proposal and the potential impact of those changes.
- Summarise the mitigation measures for the proposal.

The Submissions Report has a number of key sections. These include:

- Description of community and stakeholder consultation activities undertaken during the REF preparation and public display period (section 2).
- Responses to issues raised in submissions by the community and stakeholder agencies (section 3).
- Details of additional investigations, design changes and modifications to the proposal (section 4).
- Updated mitigation and management measures (section 5).

Conclusions to the report are provided in section 6.

During the public display each submission received was allocated a unique submission number. The relevant submission number was communicated to each individual, group or agency so that they can identify the responses which are relevant to their submission.

2. Consultation

2.1 Consultation prior to REF preparation

Prior to the preparation of REF for the Wickham Interchange project, consultation was undertaken as part of the planning for the Newcastle Light Rail project, which focussed on the light rail route options. A component of this consultation included the provision of some basic information about the Wickham Interchange project. Consultation for the Newcastle Light Rail project was undertaken with the local community, including community organisations, businesses and focus groups in Newcastle and Maitland.

2.2 Stakeholder engagement plan

A Stakeholder Engagement Plan consistent with Transport for NSW's Community Engagement Policy was prepared for the proposal. The plan:

- Provides background information about the proposal.
- Identifies the community and key stakeholders with the potential to be affected by the proposal.
- Identifies the potential nature and extent of stakeholder issues/concerns and relevant strategies to manage these proactively.
- Defines key messages, and identifies the communication tools and techniques to disseminate information and provide opportunities for feedback.
- Documents the policies and procedures implemented to record and respond to enquiries, complaints, and issues.
- Identifies and allocates roles and responsibilities.
- Provides an overview of how the effectiveness of the strategy will be evaluated.

The consultation strategy provides for consultation to be undertaken in two stages:

- During REF preparation.
- During the public display of the REF.

An overview of the activities proposed for each stage of consultation is provided in the following sections, and includes prior relevant consultation undertaken as part of the Newcastle Urban Renewal and Transport Program.

2.3 Consultation during REF preparation

2.3.1 Consultation activities

Table 2.1 lists the key engagement activities and tools, outlines their purpose, and describes how each tool/activity has been used to engage the community and stakeholders.

Table 2.1 Consultation during REF preparation

Activity	Purpose and detail
Stakeholder identification and analysis mapping	A desktop search and site visit was undertaken to identify stakeholders located in close proximity to project.
Community contact and feedback mechanisms	Contact details were established to enable stakeholders to provide feedback on the proposal and ask questions of the proposal team. The following contact mechanisms were advertised in all communication material: Project information phone line: 1800 684 490 E-mail: projects@transport.nsw.gov.au Website: http://www.transport.nsw.gov.au/projects All details of community members and stakeholders who made contact with the proposal team, issues raised, and responses provided have been recorded in the consultation database.
Stabling location workshop	A workshop was held on 2 May 2014 to discuss options and requirements in relation to the location of the new stabling yard. Attendees included: <ul style="list-style-type: none"> • UrbanGrowth NSW • NSW TrainLink • Sydney Trains • Roads and Maritime Services (RMS)
Station precinct workshop	A workshop was held on 6 May 2014 to discuss options and requirements in relation to the location of the new station at Wickham. Attendees included: <ul style="list-style-type: none"> • UrbanGrowth NSW • NSW TrainLink • Sydney Trains • RMS • light rail planning and design team
Meeting with Council	A meeting was held with Council representatives on 16 May 2014 to identify the key groups and individual stakeholders likely to have a direct and/or significant interest in the proposal.

2.3.2 Infrastructure SEPP consultation

Clauses 13 to 17 of *State Environmental Planning Policy (Infrastructure) 2007* (the Infrastructure SEPP) requires consultation with the City of Newcastle Council (Council) and RMS for development that impacts on:

- Council infrastructure or services
- local heritage
- flood liable land.

Prior to public display, correspondence was made with Council and RMS providing information on the proposal and requesting the identification of any issues or concerns. The Infrastructure SEPP specifies that any response received within 21 days must be taken into consideration by Transport for NSW prior to determining to proceed with the proposal.

2.4 Public display of the REF

2.4.1 Public display

The REF was put on public display for a period of four weeks from 30 July 2014 to 30 August 2014. The REF was displayed at the following locations:

- The City of Newcastle City Administration Centre, 282 King Street, Newcastle
- Newcastle City Library, Ground Floor, Laman Street Newcastle
- Hamilton Library, 44 James St, Hamilton

- Maitland Library, 480 High Street, Maitland
- Transport for NSW, Level 5, Tower A, 821 Pacific Highway, Chatswood
- Transport for NSW Community Information Centre, 388 George Street (at the corner of King Street), Sydney.

The REF was placed on the Transport for NSW website and made available for download. The project information phone line and email address was available to the public during the display period for further details.

2.4.2 Consultation activities

Table 2.2 lists the key engagement activities and tools, outlines their purpose, and describes how each tool/activity has been used to engage the community and stakeholders.

Table 2.2 Consultation during public display

Activity	Purpose and detail
Contact mechanisms	The community contact and feedback mechanisms listed in Table 2.1 operated through the display period. All details of community members and stakeholders who contacted the proposal team, issues raised, and responses provided were recorded in the consultation database.
Community newsletter	The flyer included information on the status of the proposal and details of the public display locations and community information sessions. The flyer was distributed to properties along streets within 200 metres of the proposal site between Wickham and Hamilton stations, and was also handed out to train passengers during the morning and afternoon peak periods at Civic and Newcastle stations on 30 and 31 July 2014.
Website	Information about the public display of the REF was posted on the Transport for NSW, 'Have Your Say' and Wickham Transport Interchange websites.
Letter to government agencies and utility providers	A letter was distributed to key agencies to provide them with information on the public display of the REF and invite submissions. Agencies consulted included: <ul style="list-style-type: none"> • Roads and Maritime Services (RMS) • Sydney Trains • NSW TrainLink • Department of Planning and Environment • Mine Subsidence Board • Hunter Water Corporation • utility providers
Letter to the Awabakal Local Aboriginal Land Council (LALC)	A letter was issued to the Awabakal LALC informing them of the preliminary findings of the due diligence assessment and seeking their involvement in further assessments.
Email to Save Our Rail	An email was sent to the Save Our Rail organisation offering a briefing with members of the project team.
Poster	A poster was developed to advertise the community information sessions. The posters were provided for display at Hamilton, Wickham, Civic and Newcastle train stations.
Advertisement	Advertisements were placed in The Newcastle Herald and The Maitland Mercury newspapers to provide information about the display locations and information sessions.
Community information sessions	Five community information sessions were held at the following locations, dates and times: <ul style="list-style-type: none"> • 5 August 2014 4:00 PM – 8:00 PM Croatian Wickham Sports Club, Albert Street Wickham. • 6 August 2014 4:00PM – 8:00PM Southern Cross Hall 841 Hunter Street Newcastle West. • 13 August 2014 3:00PM – 7:00PM Maitland Town Hall. • 14 August 2014 4:00PM – 8:00PM Gallipoli Legion Club

Activity	Purpose and detail
	3-5 Beaumont St Hamilton. <ul style="list-style-type: none"> 16 August 2014 11:00AM – 3:00PM Croatian Wickham Sports Club, Albert Street Wickham. The information sessions were conducted as informal drop-in sessions, staffed by representatives from GHD, Transport for NSW, RMS and UrbanGrowth NSW. The sessions provided participants with the opportunity to speak with the proposal team, discuss issues and concerns and provide feedback on the REF.
Advertisement	An advertisement was placed in local newspapers to provide information about the display locations and information sessions.

2.5 Future consultation

Should Transport for NSW determine to proceed with the proposal, community and key stakeholders would be consulted before and during construction. The consultation activities would ensure that:

- The community and stakeholders have a high level of awareness of all processes and activities associated with the project.
- Accurate and accessible information is made available.
- Timely responses are given to issues and concerns raised by the community.
- Feedback from the community is encouraged.
- Opportunities for input are provided.

The project information line, 24 hour emergency response line and email address would be available during construction. Targeted consultation and communication such as meetings, briefings, letters, notifications, advertisements and signage would continue to occur. The website would also include regular updates on the progress of the project.

3. Consideration of REF submissions

3.1 Overview

All written feedback received during the public display period was recorded on the consultation database. Submissions have been numbered, contact details recorded, and key issues identified in each submission added to the database. A letter of acknowledgement has been sent to people/groups who made submissions to inform them of their submission number and to assist them to find the responses to their queries in the submissions report. Submissions have not been responded to individually.

A total of 280 submissions were received during public display of the REF. These comprised 278 submissions from community members/groups and two submissions from government agencies (NSW Heritage Division and the City of Newcastle Council).

Each submission was given a submission number and was categorised according to the key issues raised. A summary of the issues identified by category is provided in section 3.2. Transport for NSW's responses to the issues are provided in section 3.4. Appendix A provides a summary of all the responses which relate to each submission.

3.2 Summary of issues raised

A breakdown of the key issues raised in submissions is provided in Table 3.1. Since most submissions raised more than one issue, the number of issues identified is greater than the total number of submissions received. Section 3.3 provides more detailed responses to matters frequently raised matters in submissions.

Table 3.1 Overview of key issues raised in submissions

Key issue category	Number of submissions identifying the issue	Percentage of submissions identifying the issue
Strategic justification and scope	197	70
Traffic and transport	122	44
Social impacts	116	41
Issues unrelated to the proposal	86	31
Consultation	62	22
REF document	36	13
Visual and urban design	39	14
Objection	33	12
Support	27	10
Noise and vibration	16	6
Heritage	8	3
Air quality	7	3
Other environmental issues	6	2
Proposal construction	3	1
Sustainability and waste	3	1

3.3 Detailed responses to frequently raised matters

3.3.1 Strategic justification

In 2012, the NSW Government released the *Newcastle Urban Renewal Strategy* and plans to revitalise the Newcastle City Centre, boost economic activity and reinforce the city's role as a regional centre. To achieve these aims, in December 2012, it was decided that the Newcastle Branch Line would be truncated between Stewart Avenue and the existing Newcastle Station. This would involve the closure of the existing stations at Wickham, Civic and Newcastle and the construction of a new station on the western side of Stewart Avenue. The station would operate as the new terminus of the branch line and interchange between transport modes. The truncation would remove the barrier between north south movements in Newcastle and allow for better connectivity between the foreshore and the city centre.

As part of the NSW Government's 2013-2014 Budget, the *Newcastle Urban Renewal and Transport Program* was announced as part of the strategy to drive the economic growth and renewal of Newcastle. The program has two major components – the cessation of rail services to Newcastle city centre and provision of a new transport interchange at Wickham and to provide light rail as a replacement transport solution. Transport for NSW is leading the project development work for the Newcastle Urban Renewal and Transport Program. UrbanGrowth NSW is co-ordinating the implementation of the renewal strategy and the transport program and undertaking public domain works in association with the proposed rail works.

The proposed construction of a new light rail system was announced by the NSW Government in July 2013. In previous projects in Australia and overseas, light rail has been a successful catalyst for urban renewal. The planning and design of the Newcastle Light Rail project is currently ongoing. Further details relating to the light rail project will be presented in a future environmental impact assessment/ planning documents in 2015.

The Wickham Transport Interchange project and heavy rail truncation has been positioned as the priority project so that existing crossings can be improved and new connections established.

3.3.2 Interchange design and parking

The new station and its associated interchange facilities have been designed to cater adequately for existing and expected future patronage. The REF presents historical patronage information collected by the Bureau of Transport Statistics as well as more recent data collected specifically for the project. The patronage demand model developed for the project and used to design the facility considered all transport modes and relevant factors such as proposed future land use, population growth and development in Newcastle. Facilities for rail passengers as well as shuttle buses were designed for the highest recorded peak hour usage plus an allowance for future growth (rather than average or daily historical figures).

Public buses currently operate along Hunter Street which is a short walk from the interchange. Additionally, there is currently limited space for a bus terminus facility on either the northern or southern sides of the railway line. Providing this facility for only a temporary period, before light rail is operational, would not represent good value for money.

Availability of parking is generally a concern for businesses, workers, residents and visitors in the city centre. Parking is not being provided at the Wickham Interchange because, much like the existing Newcastle Station, for inbound journeys, it is designed to be a destination station or end point where the majority of people will journey to for employment, education, recreation and other facilities, or change to light rail. It is not envisaged that commuters will drive to the station

and park to board a train much like the existing stations at Hamilton, Wickham, Civic and Newcastle.

For outbound services on the Hunter and Central Coast Lines, the interchange will provide options for connections to rail by taxis, private vehicles, buses and the future light rail, in addition to walking or cycling to closer destinations. People who currently park at a station and then use rail services would continue to access the existing station they use which provide suitable facilities.

3.3.3 Local traffic changes

Operation of the interchange will result in minor local increases in traffic. These additional traffic movements are outlined in Section 7.3.2 of the REF.

Further detailed traffic modelling of the road network in the city centre and surrounding the Wickham Transport Interchange area was undertaken following the preparation of the REF and the results are provided in Section 4.2.3 of this report.

In summary, during construction of the new interchange in the AM peak period, the intersection performance is either unchanged or improved at all intersections. Most intersections in the Wickham area show no significant difference compared to existing conditions.

In the PM peak period, the level of improvement at the intersections and the reduction in the travel times is not as significant as the AM peak with little difference observed from the existing situation. At the intersection of Thorsby Street/ Hannell Street, a very slight reduction in level of service from A to B is expected.

Following the opening of the Wickham Transport Interchange in 2016, the surrounding road network would continue to operate in a similar manner as during the construction phase.

3.3.4 Potential reduction in public transport use

The REF recognised that changes to travel patterns and increases to journey times of most rail passengers would likely result from the proposal. Section 4.2.4 of this report provides an approximate estimate of these increases. Whether these factors are sufficient to change the behaviour of existing rail passengers is unable to be accurately predicted. However, the interchange design recognises the need to provide convenient access to various transport options and seeks to facilitate interchange between a number of transport modes in a convenient manner.

Removal of the heavy rail line to the east of Stewart Avenue would also result in a substantial improvement in access to bus services in Hunter Street for those who currently drive to businesses in Honeysuckle Drive. Pedestrian access by employees and customers of businesses in Honeysuckle Drive to bus services in Hunter Street is currently inhibited by the rail corridor. The removal of this barrier may attract a mode shift from cars to buses for a journey to work in this location.

Once implemented, the future urban renewal and light rail projects are expected to increase public transport use in Newcastle, as transit-oriented development allows for shorter trips between a more dense set of attractions. This mode shift will reduce the need for parking in the city, as commuters are able to make better use of existing public transport services instead of relying on driving for most trips.

3.3.5 Closure of Railway Street

The Railway Street rail crossing provides pedestrian, cyclist and vehicle access from Hunter Street across the railway corridor to businesses and residential areas in Wickham. This crossing also allows access to the bus network which runs along Hunter Street from areas to the north of the railway. The closure of this crossing would result in increased walking distances for pedestrians crossing the rail corridor in this location.

3.4 Responses to community submissions

Noise and vibration

Item	Summary of issue	Sub. no.	Response
Construction impacts and mitigation			
N1	Concerned about the noise during the two year construction period.	55, 78, 79, 80, 81, 84, 87	<p>Table 9.11 of the REF summarises the locations where construction noise levels are predicted to exceed the construction noise management levels. Only the noise levels at some locations (refer Figure 9.1) and some activities are predicted to exceed the construction noise management levels.</p> <p>The REF noise impact assessment presents a conservative estimate of noise impacts because it is based upon a 'typical' list of construction plant and equipment which may be used. Also, the assessment assumes, as a worst case, that all the listed equipment is operating simultaneously which is unlikely to be the case.</p> <p>Construction noise mitigation is outlined in section 9.5.2 of the REF. A noise and vibration management plan would be prepared as part of the construction environmental management plan which would detail all measures to be implemented.</p> <p>The measures to be included would be those in Section 9.5 of the REF and others from Transport for NSW's Construction Noise Strategy. These measures include respite periods for "highly affected" receivers and others that have been implemented on a wide range of Transport for NSW rail construction projects and have been shown to be effective.</p>
N2	Concerned about damage to our property due to vibration.	55	<p>Vibration impacts during construction are described in section 9.4.1 of the REF and in Table 9.6 which presents safe working distances for specific items of construction equipment. In summary, vibration has the potential to be felt by people within 100 metres of the source. Properties may be subject to 'cosmetic' damage within 25 metres of the site, depending on the equipment used. Vibration impacts would be reduced through the implementation of measures outlines in Section 9.5 of the REF which include vibration measurements and selecting equipment to avoid damage to properties.</p>
Operational impact			
N3	Operation of the stabling yard would result in noise impacts due to the shunting of trains and horn testing.	27, 48, 78, 81, 84, 159, 209	<p>Tables 9.14-9.16 in the REF summarise the potential noise impacts associated with the proposed stabling facility. These tables indicate that without mitigation, exceedances of the noise criteria would result from train stabling and horn testing activities. Technical Paper 3 outlines the range of options available to mitigate the expected levels of noise and the results following the possible implementation of a three metre noise wall as an example of the mitigation effectiveness.</p> <p>Further work is currently being undertaken to investigate the performance of a broader range of reasonable and feasible noise mitigation measures. This additional work would include consultation with the residents in the vicinity of the stabling yard to discuss potential mitigation measures which could be implemented to ensure the issues are adequately addressed.</p> <p>In addition and specific to horn testing, Transport for NSW is investigating options</p>

Item	Summary of issue	Sub. no.	Response
			to relocate the location of horn testing to reduce impacts on residential receivers. The potential benefits of this change to operations will be considered in conjunction with the noise mitigation strategy outlined above. A noise mitigation plan would be included in the conditions of any approval granted for the project to ensure that a resolution of the noise impacts is reached before operations commence.
N4	Noise impacts along the rail corridor during operation would result in disturbance to the surrounding community.	56, 79, 80, 84, 87, 189, 238	Because the proposal maintains the existing passenger timetable (excluding the operation of the stabling yard, which is discussed in Item N3), noise impacts during operation are not expected to exceed the operational noise criteria. Refer also to N11.
N5	Damage to properties through vibration.	189	Section 9.4 of the REF indicates that vibration impacts are not considered likely for properties greater than five metres from the track as a result of the operation of trains. One property at 12 Maitland Road is located approximately four metres from the track, however trains would be operating at low speeds in this location and therefore vibration levels are expected to be below the threshold criteria for damage.
Operational mitigation			
N6	How do you plan to mitigate noise? What are the noise measures? How will noise be addressed? Needs to be more creative ideas to mitigate noise than advising residents to have double glazing and air conditioning. There must be more ideas using aesthetic noise buffers and train technology.	55, 80, 81, 84, 159, 187, 189	Preliminary consideration of a possible noise mitigation option, a three metre noise barrier, is presented in Section 9.4.2 of the REF. Technical Paper 3 outlines the scope of options available for controlling operational noise. Further work has been conducted following public display of the REF to investigate the performance of a broader range of possible measures and combinations. This proposed mitigation will be further reviewed and optimised during detailed design. Nearby residents and businesses would be consulted during the development of mitigation options, to ensure that noise guidelines are met. A noise mitigation plan would be included in the conditions of any approval granted for the project to ensure that a resolution of the noise impacts is reached before operations commence.
Assessment issues – methods and scope			
N7	The noise assessment was done during a time when track work was being done and trains were not running at Hamilton Station. This will clearly provide an unacceptable assessment.	84	Noise baseline monitoring was conducted over the period from 15-23 May. It was noted that rail construction work was undertaken on the weekend of 17-18 May however, as monitoring was conducted over a longer period, any erroneous data was able to be screened out of the assessment process.
N8	Assessment does not indicate if shunting, decanting and train relocation is included. Are predicted noise levels compared against quietness of the area now?	189	The noise assessment for the stabling yard accounts for all potential noise sources likely to occur within the facility. The noise criteria at the stabling yard were determined based on the measured background noise data which measured the existing noise levels of the area.
N9	No allowance for Light Rail.	189	Noise impacts associated with the future light rail project are not within the scope of the Wickham Transport Interchange REF.

Item	Summary of issue	Sub. no.	Response
N10	Traffic and pedestrian noise has not been considered in the document.	189	<p>Traffic noise during both construction and operation has been addressed in the REF (refer Sections 9.4.1 and 9.4.2).</p> <p>During construction traffic noise has the potential to result in noise impacts for vehicles using Station Street, these exceedances of noise levels are largely due to the low numbers on this road currently. All other roads are considered to not experience an increase in noise above the 2 dB(A) criteria due to the existing higher traffic numbers and therefore noise levels. Any traffic noise impacts would be minimised through the implementation of mitigation measures outlined in section 9.5.2 of the REF.</p> <p>During operation traffic noise is considered to be acceptable. Station Street would experience an increase above the criteria, however the traffic levels to be experienced (with the proposal) are not considered to result in any noticeable increase due to relatively low traffic numbers.</p>
N11	Noise modelling does not consider mitigation measures. Modelling should be redone to demonstrate that the project can meet criteria with mitigation.	261	<p>The noise assessment undertaken as part of the REF has identified that no noise and vibration mitigation measures are required by the Rail Infrastructure Noise Guideline (RING) for operational rail movements as future noise emissions are anticipated to be below the RING trigger levels. However, assessment of the proposed stabling operations at Hamilton, which are assessed using the Industrial Noise Policy, indicates that reasonable and feasible noise mitigation measures are required for these activities. Discussion of options for noise mitigation has been included in the report including modelling of scenarios with noise barriers. Further mitigation measures (typically including modelling of subsequent mitigated noise levels) are to be investigated in consultation with affected residences during subsequent design stages.</p>

Social impacts

Item	Summary of issue	Sub. no.	Response
Loss of amenity			
S1	The project turns Newcastle into a gated community and reduces access to the scenic parts of the area (e.g. beach). Amenity is to be enjoyed by everyone not just those located in the area.	4	The proposal is the first stage in delivering the Newcastle Urban Renewal Strategy which has as its principal objective, to improve access to the waterfront. The amenity of a revitalised Newcastle would be able to be enjoyed by all persons who live, work or visit Newcastle. The proposed shuttle bus service and future light rail project will maintain, and potentially improve, access to locations in Newcastle East.
S2	There is no consideration of existing small scale inner city life which will be dwarfed and shadowed. The increase in traffic and proposed taxi and car parking bays near the station would reduce the amenity of an otherwise quiet area. Wickham has a village feel. Cottages on street level. Extra traffic and anti-social behaviour will affect residents. If people are discouraged from the city centre there will be a loss of amenity.	29, 47, 176, 177, 181, 197	The scale of the proposed interchange is in keeping with the scale of surrounding buildings. The interchange is below the height limits of surrounding land which currently apply under Council's planning controls. The REF has adopted conservative assumptions about potential traffic generation and these are not levels which are expected on the day of opening. Wickham is to be located at the western edge of the emerging CBD area and therefore is not expected to be subject to the same scale of renewal as other areas further east. The Newcastle Urban Renewal Strategy has as a core aim to revitalise western Newcastle (in the vicinity of Wickham) to make this area part of an integrated Newcastle city centre by stimulating growth, increasing jobs and boosting economic activity. These activities and the facilities to be provided will attract more people into the new city centre.
Inconvenience/disruption of journey			
S3	The rail was an easy and direct route to Sydney for many residents.	180	The proposal would not change the route to Sydney. The only difference would be that for residents of areas close to Civic and former Newcastle stations, they would first catch light rail (or bus in the interim scenario) and change to heavy rail at the new Wickham Transport Interchange to continue the trip to Sydney (or elsewhere).
S4	Passengers wishing to travel from Newcastle to other areas will be inconvenienced by the proposal due to reduced access to central Newcastle. Removing the train line would result in inconvenience for those using the rail due to the need to change modes and in some cases a distance between modes. Carrying of luggage on buses for some members of the public (elderly and disabled) who live east of the interchange is not feasible. Changing of modes impacts on bike riders, surfers, families with prams, people with luggage, people in wheelchairs, vision impaired and the elderly who need to access the foreshore, beaches and city (and its community facilities) and currently do so by train to Newcastle with relative ease. What provisions would be put in place for all the above to make	1, 4, 11, 13, 14, 15, 16, 17, 19, 26, 27, 28, 61, 73, 74, 95, 98, 100, 103, 110, 113, 121, 122, 126, 130, 134, 137, 139, 149, 158, 164, 166, 167, 173, 179, 180, 183, 185, 186, 187, 189, 190, 192, 197, 199, 202, 204, 205, 206, 207, 210, 213, 214, 217, 219, 220, 223, 225,	The REF identified that rail passengers travelling to Newcastle may find the change of transport mode temporarily inconvenient, particularly the less mobile or those travelling with young children. The shuttle bus schedule has been designed to provide a similar transport service as the existing heavy rail to/from Newcastle, meeting trains and being flexible to match peak travel periods. All train passengers are expected to get a seat on these buses as they alight from the train. During major events such as the Boxing Day Races at Broadmeadow Racecourse, New Year's Eve and the Asian Cup football tournament (in January 2015) there will be extra buses scheduled to ensure supply meets demand. The shuttle buses routes have been designed to minimise the inconvenience to rail passengers and would collect and drop-off passengers from outside Hamilton Station and along Hunter Street/Scott Street. Taxis and kiss and ride facilities would be available in locations as close, or closer, than similar facilities. Passengers would be able to carry surfboards and luggage on to the shuttle buses. The buses to be used will be low-floor buses that are designed to meet the needs of less mobile or elderly passengers.

Item	Summary of issue	Sub. no.	Response
	<p>travelling on the buses (and future light rail) possible and/or easier?</p> <p>This inconvenience will drive people to use their cars. Patronage will decline. Alternatives such as taxis are also not feasible.</p> <p>All impacts involved with changing services would be multiplied for those on longer journeys. The need to change modes to a slower service would add unwanted extra time to already long journeys from areas such as Maitland.</p> <p>Changing of service would severely inconvenience school excursions as getting a group of kids to change modes is difficult.</p>	<p>228, 229, 236, 239, 240, 241, 242, 244, 245, 252, 255, 256, 263, 264, 265, 271, 272</p>	
S5	<p>There would be an inconvenience for students wishing to access the new university building as the new building is located near the existing Civic Station. The need to change modes to get to the university would result in an inconvenience for students wishing to travel between the two university campuses.</p>	<p>11, 14, 58, 130, 150, 192, 197, 198</p>	<p>University students will be able to commute between campuses on the existing bus routes 100 and 226. Alternatively, following completion of the proposal, students will be able commute via heavy rail to Wickham, then light rail to Hunter Street. Should the University be opened prior to the completion of the light rail, students would be required to alight from the train at the Hamilton or Wickham stations and catch the shuttle bus to Civic Station to access the new campus.</p>
S6	<p>Changing transport mode is inadvisable. The inconvenience of changing modes is unnecessary, commuting will become a pain.</p> <p>The proposal would interrupt the seamless journey from Sydney/ Maitland/ Upper Hunter/ Central Coast to Newcastle and vice versa.</p> <p>Reduces transport effectiveness.</p> <p>Mode change within two kilometres of ultimate destination.</p> <p>Inconvenience, delay, extreme problems for the disabled, day tourists, backpackers will not come, loss of patronage.</p> <p>Public is hugely inconvenienced.</p> <p>Day trippers from Sydney, Upper Hunter or Central Coast will be especially inconvenienced.</p> <p>Tourists will not want to visit.</p> <p>Disincentive to using public transport.</p> <p>Customer experience reduced.</p> <p>Travellers will change mode if there is an improvement in time, cost, comfort and reliability. In the case of the proposal, there is unlikely to be improvement in any of these criteria.</p>	<p>78, 85, 86, 87, 89, 94, 100, 101, 102, 107, 114, 115, 117, 121, 124, 167, 179, 189, 197, 198, 208, 218, 221, 225, 228, 235, 251, 255, 256, 263, 265</p>	<p>To reduce inconvenience, walking distances for interchange between heavy rail, the interim shuttle bus, and the future light rail has been designed to be as short as possible. Wayfinding signage and travel guidance will be provided to assist customers between modes and reach their destinations.</p> <p>Accessibility to destinations currently being provided by heavy rail will be maintained by the interim shuttle bus service and future light rail projects.</p>

Item	Summary of issue	Sub. no.	Response
S7	Will affect community events such as Surf Fest, New Year's Eve, fun runs etc.	189	As for any major event, additional bus services will be arranged to limit the inconvenience to rail passengers.
S8	Community organisations such as Two More Trains for Newcastle have been calling for an improved service to the Upper Hunter, however the inconveniences caused by the proposal would reduce the quality of the service.	186, 205, 206, 207, 240, 241, 244, 256, 265	The proposed works do not preclude additional passenger rail services to the Hunter Valley as part of future timetable reviews.
Travel time delays			
S9	Travel times need to improve not increase, particularly for trips to the Upper Hunter and Sydney or even trips between the Upper Hunter and Sydney which rely on smooth connections to make such trips viable in a day. Missing a connection due to delays can result in missed last trains home or flights out of Sydney airport. This will affect people getting to work, particularly for long distance commuters.	11, 122, 133, 166, 179, 189, 204, 205, 206, 207, 219, 225, 265	The REF and updated modelling anticipates that journey times will increase as a result of the need to alight the train, transfer to the shuttle bus, board the bus and depart the station. The design of the shuttle bus connection (as with a future light rail transport) has been developed to be as fast and convenient as possible for passengers.
S10	The proposal would result in an increase in travel times for those accessing part of the Newcastle CBD, due to the need to change modes. Time delays could result in trips up to 30 minutes longer. Details of the time delays is not adequately addressed in the REF. More details are required about the delays we can expect including the delays for different times of the day (e.g. peak vs non-peak). Increased travel time and decreased accessibility. Patronage will be discouraged. Two 20 minute losses of time over a day for people in Newcastle. Takes three minutes to get from Broadmeadow to Hamilton on the train. Will take at least 25 minutes if having to leave the train and get on a bus.	14, 16, 122, 139, 157, 181, 183, 185, 186, 187, 189, 195, 197, 198, 199, 202, 228, 235, 238, 239, 246, 256, 263, 265	During operation of the new interchange, train customers continuing their journey to Civic or Newcastle stations will be required to transfer to a shuttle bus service which will result in increased journey times compared to completion of the journey by heavy rail. This will also be the case during the construction phase. A comparison of the public transport travel times for the existing train customers and the shuttle bus with the opening of the new interchange was conducted using the results from the micro-simulation traffic model. The results for the AM and PM peak periods for the westbound and eastbound directions are provided in Table 4.7 and Table 4.8 respectively. In all cases, the shuttle bus travel time is longer than the train travel times based on the existing train timetable. The additional travel time ranges from four minutes to over seven minutes, these numbers include the two minutes for customers to walk to the shuttle bus from the trains for eastbound services. The shuttle bus travel times are longer in the westbound direction because the shuttle bus will be mostly stopping for boarding passengers, whereas in the eastbound direction passengers are mostly alighting from the bus and consequently, have a much shorter dwell time. It should be noted that the shuttle bus travel times (during operation) are shorter than the existing public bus services in Hunter Street because the shuttle bus will only have stops at Steel Street, Civic, Queens Wharf and at Watt Street, whereas the regular public bus routes currently have nine stops in Hunter Street and Scott Street between Stewart Avenue and Newcastle Station.
S11	Hunter Line passengers will have to change twice adding even more time to journeys.	238	In the interim phase during construction of the proposal, Hunter line passengers will alight at Hamilton and catch the shuttle bus to destinations to the east. Following completion of construction, Hunter line passengers will instead change to bus at the new interchange. There will not be a need to change mode twice.

Item	Summary of issue	Sub. no.	Response
Safety/ security			
S12	How will you provide safety with the extra people coming to our residential area?	81	The Wickham area is a mixture of commercial, light industrial and residential land uses. The transport interchange would be well lit and security afforded via both active and passive surveillance. The increased activity in the Wickham area will inherently provide for an increased level of surveillance.
S13	The proposal will create a high risk of vandalism, crime and graffiti.	84	It is not considered that the new transport interchange would increase the level of criminal behaviour.
S14	No staff surveillance and security. How will safety be managed in front of the Interchange – buses, trains & light rail?	185, 248	The new transport interchange will have security facilities in accordance with Sydney Trains standards.
Loss of trade (construction)			
S15	Loss of business in Newcastle CBD. If people are discouraged from the city centre there will be a loss of business Will reduce visitors to the museum and Civic Theatre.	197, 238, 242	The proposed shuttle bus service will maintain public transport accessibility to businesses in Newcastle. Public transport patronage is not anticipated to reduce as a result of the proposal. Consequently, there is no forecast reduction in trade for businesses in Newcastle as a result of the construction of the proposal.
Loss of trade (operation)			
S16	Decreased access to businesses and other services in the area that no longer have access to the trains. There is no timeframe for the replacement option leading to decreased confidence in business and investment. Will detract from business and tourism in the East End.	35, 89, 139	The future light rail project will maintain public transport accessibility to businesses in Newcastle. Public transport patronage is not anticipated to reduce as a result of the proposal. Consequently, there is no forecast reduction in trade for businesses in Newcastle as a result of the operation of the proposal.
S17	Pedestrian access across Railway Street is a concern and will affect local businesses. There is no way these businesses could relocate and adjust. Truncation of Railway Street will affect car industry and many other businesses e.g. Bid Jungle. Also the Lass O'Gowrie can no longer be easily accessed by car, pedestrian or cyclist. This may increase driving under the influence of alcohol.	43, 158, 189, 235, 238, 242, 248, 251	Following the closure of Railway Street, vehicles, cyclists and pedestrians will continue to be able to cross the rail corridor at Beaumont Street, Maitland Road and Stewart Avenue. Transport for NSW is investigating options for a pedestrian footbridge near Railway Street.
S18	Newcastle Station is a community destination. What will this mean when the train no longer goes there?	137	Newcastle Station is currently a community destination due to its function as the terminus of the Newcastle Branch Line at this location. Newcastle Station would not be impacted upon by the project with its future use to be determined as part of the Residual Corridor Management Plan to be developed. The implementation of the shuttle bus services would ensure that the Newcastle city centre and the foreshore area would continue to be a community destination.
S19	Will affect business in Hamilton.	238	The proposal is unlikely to adversely affect businesses in Hamilton.

Item	Summary of issue	Sub. no.	Response
S20	<p>Change to one way traffic in Charles Street restricts the functionality of the motor vehicle showroom at 10 Dangar Street.</p> <p>The building on the northern side of the proposed station concourse will block vision of the southern facade and entry of the showroom.</p> <p>The proposed bus stop and queue jump will block visibility of the Hannell Street facade of the showroom.</p> <p>Metered parking will discourage business.</p> <p>The reduction of Station Street between 10 Danger Street and Railway Street would have impacts on the operation of McCarrolls which uses this street as an exit and therefore would impact upon the operation of the dealership. Use of this exit includes large vehicles will large turning circles. Can this width of Station Street be altered?</p>	243	Transport for NSW will seek to minimise impacts on McCarrolls Newcastle at 10 Dangar Street through detailed design and ongoing consultation with the affected business.
S21	Will affect business at the Store and adjacent car park.	246	Transport for NSW will seek to minimise impacts on the former Newcastle Cooperative Store (The Store) through detailed design and ongoing consultation with the affected business.
Compensation/relocation			
S22	How will the cost of fares be impacted? Increased costs will mean people will avoid trips.	79, 89, 239	The operation of the shuttle buses would not result in any increase in or additional fares. Customers travelling on the buses would be treated as if it were part of their train trip.
S23	Provide adequate compensation for the loss of property values, work and quality of life.	84	No compensation is currently proposed.
S24	Compensation for loss of patronage at the Lass O'Gowrie Hotel.	266	No compensation is currently proposed.
Assessment process			
S25	Patronage figures are not true and are much higher for all stations. Passenger counters were not counting some trains.	238	Patronage figures are based on information obtained from Bureau of Transport Statistics (2012) which was supplemented by counts performed in 2013. Both sets of data are presented in the REF.
S26	Travellers from the Upper Hunter, Dungog and Hunter Region are barely addressed in the REF.	239	The impact assessment considers all passengers despite their origin.
S27	Social equality impacts are general, vague and inadequate.	247	Social impact assessments are, by their nature, more subjective than other elements of the environmental impact assessment process which are based on scientific and numerical data. However, the approach taken for the REF follows a contemporary approach which has been used for other similar projects.
S28	Economic assessment required to determine direct and indirect impacts on Wickham businesses.	261	An economic assessment for individual businesses was not considered to be required for the REF. Public transport patronage is not anticipated to reduce as a result of the proposal. Consequently, there is no forecast reduction in trade for businesses in Wickham as a result of the proposal.

Visual and urban design

Item	Summary of issue	Sub. no.	Response
Urban design/architecture			
V1	<p>How does the concept design reflect Newcastle? It is architecturally uninspiring and does not fit well into the surroundings.</p> <p>The materials chosen are not correct.</p> <p>The design is uninspiring and replaces a beautiful station at Wickham.</p> <p>Poorly designed and unattractive.</p> <p>Design is insulting.</p> <p>The artist impression of the interchange is an insult to Newcastle. Surely the government can do better.</p> <p>Doesn't suit the heritage nature of Newcastle.</p> <p>No protection from the weather, taxi ranks.</p> <p>Design is not user friendly.</p> <p>Design needs further planning.</p> <p>Doesn't provide necessary comfort and security.</p> <p>Give a 21st century design for the state's second largest city.</p> <p>Not the entrance to a city of our size and importance. We are the main route to the north and south.</p> <p>The shed might be designed to let in fresh air but it will also let in the weather. It is not great for visitors.</p> <p>Other enclosed terminals in Australia and overseas are pleasant. Are the diesel fumes that bad? Is Newcastle Station harmful?</p> <p>No sense of arrival as at Newcastle Station. Reduces the attractive destination to an 'anywhere' destination with no appealing characteristics.</p> <p>Design would not win any awards. No comparison to the beautiful Newcastle Station.</p> <p>The station will be an important part of encouraging community acceptance and will provide a local anchor point for future transport and renewal opportunities. Should have good amenity and capacity for retail – potential undermined by shed structure.</p> <p>Where is the public art?</p>	<p>5, 13, 19, 26, 36, 43, 51, 55, 59, 78, 87, 88, 89, 94, 97, 102, 103, 110, 120, 125, 131, 137, 146, 161, 165, 185, 191, 201, 202, 212, 224, 235, 236, 242, 248, 249, 263</p>	<p>The artists 'impression' used in REF is indicative only and was developed at an early design stage.</p> <p>The final interchange design to be undertaken by the Design and Construct contractor (that is yet to be appointed) will incorporate the following design principles: iconic and civic place; integration with local and historical context; adaptability and passenger experience.</p> <p>Stakeholder feedback received to date will also be used to help inform the design.</p> <p>The canopy and concourse design is currently being selected through a tender process for the design and construction contract.</p> <p>No public art is currently proposed.</p>

Item	Summary of issue	Sub. no.	Response
V2	Will need a sound wall at Hamilton covered in attractive street art to prevent vandalism and graffiti.	84	Further investigation and modelling is currently underway to determine the noise mitigation options available at the proposed stabling yard. A final decision on the noise mitigation measures (e.g. noise wall) would be confirmed during detailed design and the local community consulted on the proposed options. The finish of the wall including artwork would be confirmed during detailed design.
Lighting			
V3	Include adequate street lighting to prevent crime and unsavoury activity.	84	Appropriate lighting for security and other purposes will be provided in accordance with Sydney Trains standards.
Landscaping			
V4	This is not the nicest looking area for an interchange. Please make Newcastle look like a nice destination, with extra trees, nice design and not the cheapest option. Include trees and landscaping to beautify the area. Additional detail of the design required, including an urban design and landscaping plan. Details of the layout in the REF do not correlate with architectural renderings and landscape and visual assessment report.	43, 84, 261	An urban design and landscaping plan would be developed as part of the next stage of design in concept with detailed design of the station.

Strategic justification and scope

Item	Summary of Issue	Sub no.	Response
Project scope			
ST1	Connectivity between foreshore and Hunter Street can be created with pedestrian/vehicular bridges over the railway and underpasses instead of removing the rail line. Further road crossing can also be opened, potentially as level crossings (e.g. Steel Street or Worth Place). The rail corridor should be placed above or below all roads to avoid conflict. Rail line could be raised just before Civic. Why can crossings be proposed for light rail but not for the existing rail corridor. Justification of the project is the opening of more crossings, however they are not assessed in the documentation. Reopening previously closed level crossings between Wickham and Newcastle would assist in alleviating existing traffic issues.	11, 19, 43, 54, 97, 189, 197, 199, 201, 202, 211, 213, 215, 235, 242, 255, 261, 264, 271, 272	The opening of a number of pedestrian and road crossings east of Stewart Avenue is an opportunity created by the truncation of the heavy rail line which is currently being investigated by Transport for NSW and UrbanGrowth NSW. These crossings do not form part of the Wickham Transport Interchange project and will be assessed as part of future planning approvals for the former rail corridor. Pedestrian and road vehicle crossings of the future light rail corridor can be made at traffic signals. Current rail safety regulations do not allow for the use of traffic lights for vehicle and pedestrian crossings of the heavy rail corridor. Changes in the level of the existing rail corridor, new road overbridges or underpasses, and the reopening of former crossings were not considered as part of the proposal. These options would likely be unfeasible.

Item	Summary of Issue	Sub no.	Response
	Would like an explanation as to why the existing rail cannot be sunk into the ground allowing the area above to be used. Developers and rail commuters (especially from Upper Hunter) would both be winners.		
ST2	<p>Leave the Railway Street level crossing open.</p> <p>What plans will be put in place to ensure that local access routes (such as Railway Street crossing) will be retained or improved rather than sacrificed.</p> <p>Why are the gates being closed with no conclusive findings?</p> <p>Can Railway Street be one way?</p> <p>Access across the rail corridor at Railway Street should be provided for vehicles and/or pedestrians/cyclists via an overbridge or tunnel.</p> <p>An options assessment for access at Railway Street should be undertaken.</p>	4, 39, 44, 57, 59, 60, 67, 79, 80, 82, 83, 137, 138, 187, 211, 235, 237, 248, 266, 276	<p>During the construction period, the temporary train stabling arrangement would require trains to be stored across the current Railway Street crossing. This would render the crossing inoperable to pedestrians and road vehicles. Following construction and during the final operations phase, the frequency of rail movements would lead to the boom gates to be closed most of the time, and allowing pedestrian and road vehicle crossings at this location would be unsafe.</p> <p>The proposal is not considered to result in a substantial adverse effect on local access. Consideration of options to improve cross-corridor connectivity is ongoing in conjunction with local businesses, Newcastle City Council and UrbanGrowth NSW.</p> <p>Vehicular access across (or under) the rail corridor at Railway Street is not considered feasible options due to the restricted space available, the need for land acquisition and the likely capital investment cost.</p>
ST3	<p>There is an opportunity to construct a grade-separated crossing of Stewart Avenue. This could include the following:</p> <p>Overbridge carrying the light rail over Stewart Avenue.</p> <p>Underpass for the existing rail corridor (either with light rail or heavy rail) beneath the road</p> <p>Underpass for Stewart Avenue beneath the rail corridor (either with light rail or heavy rail).</p> <p>Overpass for Stewart Avenue over the rail corridor (either with light rail or heavy rail).</p>	8, 52, 60, 67, 94, 113, 154, 166, 203, 235, 250, 255	<p>The proposal is being implemented to enable urban renewal opportunities in the Newcastle city centre and facilitate movements (pedestrian and vehicles) across the existing rail corridor. Opportunities to changes the grade of Stewart Avenue were not considered as part of the proposal.</p>
ST4	<p>There would still be a level crossing in Hamilton (Beaumont Street).</p> <p>The ability to cross the line between Hamilton and Wickham would be limited to one location. This is unacceptable and needs to be addressed.</p> <p>Has an ALCAM risk assessment been completed for the Beaumont Street crossing? An assessment would show that it would need to be closed as it would not pass the assessment due to: train frequency increasing, buses to use the rail crossing at a rate of at least one per train, volumes on road to increase due to Railway Street closure, increased pedestrian movements due to Hamilton being the end of the line temporarily, half the passengers from trains will cross to connect buses, new signalling hut</p>	106, 189	<p>There are no works proposed to the Beaumont Street level crossing.</p> <p>The proposal is intended to deliver the same frequency of movements and schedule as the current rail timetable. Accordingly, there are no increases to rail movements at Beaumont Street during operation. Bus movements associated with the temporary shuttle bus service in Beaumont Street are not likely to be a significant proportion of vehicles.</p> <p>Passengers joining buses in Beaumont Street will not be required to cross the street.</p>

Item	Summary of Issue	Sub no.	Response
	and infrastructure impairs vision, the crossing is already a high risk crossing.		
ST5	The proposal to open the Steel Street crossing at Merewether is not supported by any information in the document.	189	The opening of the Steel Street crossing is not part of the proposal. Any future crossing at Steel Street will be assessed as part of future planning approvals for the former rail corridor. Steel Street would however be considered to be opened as a temporary footpath.
ST6	Access across the corridor could be provided through carefully positioned plazas which would carry people over the railway, these could include stores and restaurants. Could the development be constructed over the rail line like is proposed for Central to Redfern?	238	Development in the airspace above the rail corridor was not considered as part of the proposal.
ST7	The proposed taxi rank in Station Street is hidden away out of sight and therefore taxis are unlikely to sit and wait in this location meaning taxis would not be there when you arrive. Needs to be in a more visible location with higher foot traffic. Taxi provision is inadequate.	17, 18, 103	Taxis are expected be visible from the unpaid concourse of the proposed interchange. Pedestrian desire lines to and from the northern station entrance are immediately adjacent the proposed taxi and kiss and ride locations. It is expected that taxis would frequent the taxi rank to match demand from passengers. Alternative locations for taxi pick up and drop off would be on Hunter Street.
ST8	The building to the north of the platforms will shade the platforms in winter. It would be better located on the southern side. Could the amenities building at the interchange be moved to the southern side of the concourse, as its current positioning results in views to McCarrolls being blocked. A position on the southern side would also protect the interchange from cold southerly and also open it up to the sun in the winter.	17, 243	Moving the station building south would potentially conflict with the future light rail alignment and stop. The proposed design allows for the accommodation of NSW Trains staff facilities and the maintenance of legible access to patrons through the interchange concourse. The canopy and concourse design is currently being selected through a tender process for the design and construction contract.
ST9	Only the forecourt is covered and not the platform. Consideration should be provided to covering the platforms.	17, 18	The platforms and the station would be covered; however the exact extent of this coverage would be confirmed during detailed design. It is not current Sydney Trains standard to cover 100 percent of the platform.
ST10	The drawings and images show Wickham having 2 or 3 platforms to the existing four at Newcastle. Is the reduction in platforms considered to be able to cater for existing and future patronage numbers? Three sets of trains would be coming into Wickham: Intercity from Sydney, OSCAR from Gosford and Upper Hunter Trains. This leaves three trains for two platforms. How will this work?	11, 17, 18, 106, 189, 191, 242, 248, 250	The proposed Wickham Interchange would have three heavy rail platforms. A detailed model of operational and patronage requirements has been conducted in order to inform the number of platform and tracks required which confirms that it can match the existing operations of Newcastle Station.
ST11	With the stabling yard at Hamilton, why is there a third track at the Wickham Interchange.	164	The third track is required for access to the third platform and for shunting movements between platforms. Without the third track, the new station would not be able to achieve operational requirements.

Item	Summary of Issue	Sub no.	Response
ST12	<p>There does not appear to be any cafes or convenience stores.</p> <p>Where are the waiting rooms, seating, amenities etc?</p> <p>The interchange would be more appropriate as something similar to St Leonards station. It includes a square, shops, cafes and incorporate with the beautiful Store building. Attract private investment.</p>	1, 18, 37, 72, 103, 113, 144, 246, 254	Transport for NSW will investigate opportunities for customer amenities as part of the detailed design of the new interchange. This would include the provision of retail space within the station.
ST13	<p>The inclusion of change rooms, bike storage and lockers in the interchange is a good idea. These 'end of trip' facilities will encourage more people to ride to the station. The interchange should be designed to ensure easy access for cyclists.</p>	237, 276	Bicycle storage will be provided as part of the proposal. Opportunities for publicly accessible change rooms will be considered further as part of the detailed design.
ST14	<p>Where are staff amenities located within the interchange?</p> <p>All staff facilities and other rail related rooms should be placed on the second floor of an amenities building to free up space for retail.</p>	245, 246	<p>An indicative layout of the station buildings was included in Figure 5.4 of the REF. Many of the station facilities shown on the layout are required to be located on the lower floor due to accessibility and other legislative requirements and therefore would not be able to be relocated to a second floor.</p> <p>The canopy and concourse design is currently being selected through a tender process for the design and construction contract.</p>
ST15	<p>Could the interchange be designed so as to allow development above the interchange in the future?</p>	249	The interchange design would not preclude future alteration or modifications to allow for development in the air space above the interchange in the future, however would depend on the scale of the development to be accommodated.
ST16	<p>The adjacent Store building and its car park should be integrated into the interchange where possible. This would include the car park being used as commuter parking to help solve issues with parking in the area. This integration would provide good access to Hunter Street and existing services.</p> <p>Adjacent assets (such as the above mentioned store) should be integrated into the interchange where possible.</p>	31, 32, 43, 59, 76, 79, 81, 246	The former Cooperative Store and multi storey car park are privately-owned and there is currently no proposal to purchase these properties.
ST17	<p>The REF only discussed the 'do nothing option' as the only option considered. This is clearly not the only options considered. Other options considered should be made available to the public and the justification as to why they were not selected.</p> <p>Other options to open up the foreshore also need to be considered, such as pedestrian crossings.</p>	139, 187, 189, 197, 238, 239, 247, 272	<p>During the design development phase, alternative options for the truncation of the railway were considered. Following a multi criteria analysis, it was determined that the preferred design was the most optimal solution.</p> <p>Opportunities for pedestrian access across the former rail corridor, east of Stewart Avenue will be assessed as part of future planning approvals for the former rail corridor.</p>
ST18	<p>An alternative to fix the biggest transport issue in Newcastle is that bus services are underutilised. The project will cause a further reduction in bus use.</p>	189	Operation of the existing bus network does not form part of the Wickham Transport Interchange project. The REF assessment does not indicate that the proposal would likely result in a reduction in bus use.

Item	Summary of Issue	Sub no.	Response
ST19	Could the trains be run at light rail speeds, with the fences etc to be removed to provide access across the rail corridor?	137, 203, 251	Changing operating speed would not allow for the removal of boom gates or fences under rail safety regulations. In addition to rail movements, the need for fencing of the heavy rail corridor is also related to the hazards of other assets located within the rail corridor which include electrocution and crushing injuries from moving parts (e.g. turn outs).
ST20	Clarification that the removal of the existing tracks and the other rail infrastructure between Wickham and Newcastle does not form part of the project.	181	The removal of track and other infrastructure east of Stewart Avenue does not form part of the proposal. Works involving these pieces of infrastructure would be undertaken under a separate planning approval/environmental impact assessment.
ST21	What new crossings (if any) are proposed to be constructed over the disused track?	181	The opening of additional rail crossings east of Stewart Avenue is an opportunity created by the truncation of the heavy rail line and is currently being investigated by Transport for NSW and UrbanGrowth NSW. These crossings will be considered as part of future planning approvals for the former rail corridor.
ST22	What is the distance of track that will be closed? Cannot find this detail in the REF document.	35	The distance is approximately 2.4 kilometres.
ST23	What is going to happen to Wickham Station? If there isn't a plan it will become an anti-social place within the next few years.	36	The security requirements of the former heavy rail stations east of Stewart Avenue will be managed through the development of a Residual Corridor Management Plan, under the conditions of approval of the proposal.
ST24	The proposed station should be called Newcastle, not the Wickham Interchange. Newcastle is a long established City well known in the annals of international travel.	37, 50	The future permanent name of the interchange is still to be determined.
ST25	Newcastle and the Hunter Valley deserve the same consideration as Western Sydney which has large, roomy stations and good access for all modes of transport.	58	The final interchange design will be consistent with recent upgrades across the rail network and meets current standards. It will incorporate the following design principles: iconic and civic place; integration with local and historical context; adaptability and passenger experience. Also, the final design will consider existing and future forecast patronage numbers.
ST26	If the former rail corridor was to be used for parkland objections would be slightly less.	110, 125, 223, 272	Further details relating to land uses within the former rail corridor will be considered as part of future planning approvals/environmental impact assessment.
ST27	No details on the sewage proposed for the interchange.	123	Sewer reticulation for the interchange will be considered as part of detailed design. Current design allows for connection to existing mains.
ST28	Wickham Park needs to be opened as a thoroughfare to the foreshore as it is currently under-utilised.	178	The current proposal does not alter access between Wickham Oval and the foreshore.
ST29	The proposal site assessed should include the areas east of Stewart Avenue which are impacted by the cutting of the railway line.	187	The impacts of the truncation on air quality, noise and heritage, east of Stewart Avenue are assessed in the REF. Further consideration of future land uses and light rail will be considered as part of future planning approvals for the former rail corridor.
ST30	Details of the signalling infrastructure are not included. The new signal shed west of Beaumont Street is a major safety risk to the crossing.	189	The signalling plan will be further developed as part of detailed design.

Item	Summary of Issue	Sub no.	Response
ST31	The hours of operation of the facility are not included in the REF.	189	The proposed stabling yard and interchange will be in use 24 hours a day.
ST32	An EIS should be undertaken as the impacts are significant.	272	The REF considered the likely environmental impact of the proposal in accordance with the provisions of section 111 of the <i>Environmental Planning and Assessment Act 1979</i> . The assessment concluded that there were not likely to be any significant impacts as a result of the proposal, and consequently, an EIS was not required.
Staging of NUR&TP projects/integration			
ST33	There is no clear commitment that light rail will happen. The REF is silent on the light rail. There is no clear timeframes provided as to when light rail will happen. The money will run out before the light rail is introduced. Light rail won't happen as it would be said that patronage figures do not justify it. Is there any funding for light rail?	9, 29, 48, 51, 71, 87, 117, 119, 126, 133, 150, 158, 197, 202, 203, 212, 235, 236, 238, 242, 245, 247, 248, 251, 263, 272	The Newcastle Light Rail project will be considered separately from the Wickham Transport Interchange project and would be subject to a separate planning approvals process in 2015. The light rail project will be funded from the proceeds of the lease of the Port of Newcastle.
ST34	If light rail isn't built we will be left with a less than appropriate system which has history during track work of not working.	158, 164, 202, 203, 236, 245	The Newcastle Light Rail project will be subject to a separate planning approvals process in 2015.
ST35	Timing of light rail after the completion of the interchange will result in further impacts to the people of Newcastle.	250	The Newcastle Light Rail project will be considered as part of future planning approvals for the former rail corridor in 2015. Opportunities to mitigate impacts as a result of the project are being considered.
ST36	Reference to Seattle is incorrect. Seattle its light rail and other modes work with the heavy rail. The heavy rail was not removed to make way for light rail or any other mode.	99	The Seattle streetcar is comparable to the Newcastle Light Rail because it has a relatively short route (of approximately 4.2 kilometres). The Newcastle Light Rail project will be considered as part of a separate planning approvals process in 2015.
ST37	The Wickham Interchange project is an ill-conceived part of a greater ill-conceived plan.	89	The NSW Government is committed to revitalising the Newcastle city centre and has enacted plans to achieve its vision to boost economic activity and reinforce the city's role as a 21st century regional centre.
ST38	Where is the master plan as influenced by Urban Growth? The project described in the REF does not relate to this master plan which is still being developed. The process is spoilt by developers (master plan etc). Process should be halted until it's sorted.	3, 7	The Wickham Transport Interchange project is an integral component of the plan to renew the Newcastle city centre. The concept plan for the renewal of the city centre contains a transport component which comprises the truncation of the heavy rail at Wickham and the implementation of Stage 1 of a light rail network. The urban renewal masterplan is currently being developed and is being led by UrbanGrowth NSW.
ST39	If the project has been integrated with the vision for the area (i.e. revitalisation), it has not been clearly explained to the community and is not transparent. Would like to clearly see how project fits with the work being undertaken by Urban Growth.	3, 5, 7, 255	Planning for urban renewal is currently being undertaken by UrbanGrowth NSW. A concept plan is currently being prepared and will be publicly available in early 2015. The Wickham Transport Interchange project is an integral component of the plan to renew the city centre.

Item	Summary of Issue	Sub no.	Response
ST40	I doubt Wickham residents want the interchange as it would result in multi-story developments blocking their views and an increase in residential properties.	101	Multi-storey development does not form part of the Wickham Transport Interchange project.
ST41	All projects need to be considered as one, as there is a risk of truncation and then no light rail occurring. Construction should only occur when both projects are approved.	187, 197, 248, 250, 272	The REF was prepared to allow for truncation to occur on 26 December 2014 which will provide the opportunity for some new access points between the city centre and the foreshore to be built. Following the announcement of the preferred light rail route in May 2014, design development on the project has continued and planning approvals are underway. During the interim period buses will replace current rail services.
ST42	Why is the railway line being closed on the 26th December? What is the rush when development of light rail is not ready to be built or operated. Why not build the light rail first to provide the seamless interchange between heavy rail and light rail and then remove the heavy rail. Why the two year delay between the projects? Why not construct the interchange and light rail at the same time. Closure of the rail is happening with no other plans in motion. Timing of the closure is bad due to Christmas holiday associated movements, New Year's Eve celebrations and in January Newcastle is holding four Asian Cup Football Games. Why is Hamilton Station being closed over Christmas 2014 for renovations?	9, 13, 14, 16, 19, 22, 24, 28, 51, 58, 106, 109, 110, 126, 128, 130, 137, 139, 143, 158, 165, 183, 185, 197, 218, 224, 235, 238, 239, 242, 245, 247, 248, 253, 272	The Minister for Transport and the Hunter announced on 11 June 2014 that the truncation works would commence on 26 December 2014 to realise the benefits of the removal of the railway, such as the opening of new access points between the city centre and the foreshore. Hamilton Station would only be closed between 26 December 2014 and 5 January 2015 while operational works are completed to allow it to be used as the terminus of the line during the construction of the new Wickham Station. During this period, rail replacement bus services would operate from Broadmeadow Station. After the 5 January 2015, shuttle buses would operate from Hamilton Station.
ST43	Why is closure occurring before detailed assessments such as traffic and business impacts are completed. Closure before REF is approved is not advised. More rigorous assessment should be completed before the rail line is shut.	158, 242	The REF contains the results of detailed assessments of heritage, traffic and transport, noise and vibration, social and visual aspects of the proposal. Additional traffic modelling results are provided in Section 4.2 of this report. Closure will not occur before TfNSW determines to approve the proposal.
ST44	Closure of the line is happening in December, the project is only at the REF stage, how much planning has occurred already for the closure?	191, 196, 197, 202, 272	The REF meets the assessment requirements of section 111 of the <i>Environmental Planning and Assessment Act 1979</i> . Design development will continue to advance prior to the commencement of construction.
Need and justification for project			
ST45	The construction of the Wickham Interchange and the closure of the railway line east of Stewart Avenue (and eventual light rail) would not or is unlikely to lead to the revitalisation of Newcastle. It is likely to have the opposite effect as easy access to the centre of Newcastle would be cut which is currently an attractive situation.	61, 78, 82, 87, 97, 99, 158, 181, 196, 197, 235, 247, 252, 262, 263, 270, 272, 274, 276	Access to Newcastle East will be maintained following truncation through a replacement bus service and future light rail. Opportunities for urban renewal and improved north/south connectivity between Hunter Street and the foreshore would be provided with the removal of the former rail corridor.

Item	Summary of Issue	Sub no.	Response
ST46	<p>The rail line has been there for 150 years; however Hunter Street has only been run down for a relatively short period of time. It is not the railway which has stagnated retail in Hunter Street.</p> <p>One reason for downfall of Hunter Street is the number of abandoned government buildings.</p> <p>All redevelopment funding has been focused on the wharf front and not the CBD.</p> <p>Leave the heavy rail in place and fix areas around the rail to rejuvenate the CBD and Hunter Street.</p> <p>Property development within Newcastle can occur without the removal of the rail, it can be incorporated with the rail.</p> <p>Development in Newcastle is happening already even without the removal of the rail line.</p>	103,166, 180, 192, 196, 223, 234	<p>Opportunities for urban renewal and improved north/south connectivity between Hunter Street and the foreshore would be provided with the removal of the former rail corridor. This increased opportunity for urban renewal and improved connectivity will assist in re-activating the city centre and promote economic activity within the city centre.</p>
ST47	<p>The Newcastle Urban Renewal Strategy document said in three places that all urban renewal could take place with any transport configuration such as the existing transport system or a light rail within the rail corridor. Why spend \$460 million to make transport worse with a terminus at Wickham.</p> <p>The renewal process is currently underway with the rail line in place? Why the change in the strategy that the railway is needed to be removed?</p> <p>The revitalisation of Newcastle has been happening for 20 years and the centre of Newcastle is yet to see significant revitalisation.</p>	15, 85, 127, 234	<p>The Newcastle Urban Renewal Strategy has a vision for revitalising Newcastle using light rail.</p> <p>Consistent with experiences in other parts of Australia and internationally, light rail has a proven record in assisting to revitalise cities. Light rail can travel safely through areas where people live and work, efficiently connecting neighbourhoods, key centres and retail areas.</p> <p>Opportunities for urban renewal and improved north/south connectivity between Hunter Street and the foreshore would be provided with the removal of the former rail corridor. Continued use of the heavy rail as the means of access into the city centre would make urban renewal more difficult and delay the progress of urban renewal would result in the renewal occurring over a longer period of time.</p>
ST48	<p>To revitalise the city centre of Newcastle stop traffic problems and centre it on the beautiful harbour and views.</p>	34	<p>Enhanced access to the harbour and other waterfront areas has been identified as highly desirable element for a revitalised Newcastle. Removal of the existing heavy rail line will help open up this space and enhance access to these areas.</p>
ST49	<p>Newcastle will never be revitalised while outer suburb shopping centres are continually upgraded and therefore drawing away from shopping in the CBD.</p> <p>Parking at these centres is available and without similar parking in the CBD people would continue to use the suburban shopping centres.</p>	117, 158, 185, 196, 223, 234	<p>The Newcastle Urban Renewal Strategy has a vision for revitalising Newcastle which is not reliant on shopping centres or parking facilities. Light rail has demonstrated its ability to support urban renewal in other parts of Australia and internationally. The vision for the city centre will see it become a destination for work, life and play, distinct from the suburban centres.</p>
ST50	<p>Wickham is being touted, as Honeysuckle was, as the new city and heart of Newcastle. Movement of business to Honeysuckle resulted in some decline in the CBD, this is only just recovering now.</p>	263	<p>The aim of the truncation of the heavy rail corridor is to provide better connectivity between Honeysuckle Drive and the city centre, and to allow urban renewal to better integrate land use activity across the two precincts.</p>

Item	Summary of Issue	Sub no.	Response
ST51	<p>How does removing the railway improve the link between the foreshore and the rest of the CBD? How would light rail assist in opening up the waterfront? The new development along the foreshore is part of the reason it's not as accessible. Further development in the future would also further impede access. Foreshore is already accessible via a number of roads and paths. Removing the rail, removes the most direct public transport access to the foreshore. Removing the railway is a clumsy way of improving connection to the foreshore, as the east-west connection would be ruined into the centre of Newcastle.</p>	89, 97, 102, 162, 180, 185, 187, 189, 197, 208, 213, 215, 223, 238, 267, 272	<p>The rail line currently divides the foreshore from the Newcastle city centre due to limited locations where crossing can occur. While there are a number of pedestrian and road crossing points east of Wickham, the removal of the railway will allow for greater accessibility and allow additional crossing locations to be construction in the future. Current crossing locations in this area are restricted by rail or traffic signals and a number of the overhead pedestrian bridges are not accessible for less mobile people.</p>
ST52	The closing of the Railway Street crossing creates a greater divide within Newcastle than the rail line ever has.	185	Pedestrian and vehicle access across the rail corridor will still be available by way of Beaumont Street, Maitland Road and Stewart Avenue between Hamilton and Newcastle West.
ST53	<p>Access to the foreshore has previously been removed such as the dismantled pedestrian bridge from Scott Street across the rail corridor and other rail crossings. Seven crossing between Newcastle and Hamilton were removed and then a campaign commenced about the railway being a divide. 11 new crossings will be put in after the railway is gone.</p>	185, 189, 234, 235	The removal of the rail corridor will allow for at grade pedestrian and vehicle crossings of the former rail corridor. Opportunities for urban renewal will also improve the amenity of the public domain improving the attractiveness of Newcastle as a destination for business, living and recreation.
ST54	<p>Why replace an existing system (railway) which operates efficiently with a similar system that is not as effective (buses and eventually trams). The railway currently operates effectively, efficiently, fast and conveniently and has done for 150 years. No reason why it couldn't continue to. Need some reasons why removal of a good system is proposed. Existing system is very good for people from country as it provides access into the city for entertainment etc.</p>	13, 19, 24, 37, 88, 98, 106, 110, 123, 127, 137, 139, 141, 166, 173, 180, 194, 202, 208, 229, 232, 250, 274, 276	The removal of the rail corridor allows for greater north-south connectivity between the foreshore and the Newcastle city centre. Urban renewal opportunities will also improve the public domain. A future light rail system will allow for greater accessibility to key locations within Honeysuckle and Hunter and Scott streets.

Item	Summary of Issue	Sub no.	Response
ST55	<p>Why remove an existing interchange/Newcastle Station which operates efficiently? It also provides direct access into the CBD.</p> <p>How is the Wickham Interchange better than the existing one in Newcastle?</p> <p>The existing Wickham Station is serving the area very well. How is the new station superior to the existing station?</p>	185, 189, 203, 217, 235, 236, 263, 274, 276	The truncation of the railway requires a new terminus to be created for the Newcastle Branch Line. The new Wickham Transport Interchange provides for the existing rail terminus and interchange facilities of the current Newcastle Station, whilst also providing interchange facilities for the future light rail project.
ST56	<p>Many cities have heavy rail running into their centre (eg Perth and Fremantle) why can't money be spent to alter the existing line to suit requirements.</p> <p>Some cities are spending vast amounts of money to get heavy rail back into the centres of their cities, while we are removing it.</p> <p>Newcastle previously had trams and they were removed as they failed to meet the needs and caused congestion. Nothing has changed so why will trams now generate positive results.</p> <p>Existing light rail vehicles (heavy duty light rail) that run to the Hunter provide a good service which is heavily utilised. They are capable of longer distances.</p> <p>Traffic in Newcastle is now higher than when trams were removed previously.</p>	113, 114, 126, 189, 196, 234, 236, 238	<p>The truncation of the Newcastle Branch Line provides for improved north/south connectivity between the foreshore and Newcastle and allows for urban renewal opportunities to improve the public domain.</p> <p>The potential traffic impacts of the light rail project will be assessed in future EIA/planning approvals.</p>
ST57	The existing line is said to be underutilised. This is not the case during the peak periods.	238	It is noted that patronage increases during the peak periods and in line with major events in the city.
ST58	<p>With the population of Newcastle (both residential and employment) increasing why remove the rail line. This would make the Newcastle CBD a less desirable place to live.</p> <p>Introduction of the university and new courts into the CBD would result in a greater number of people coming to the CBD and would benefit from the presence of the heavy rail.</p>	18, 166, 187, 195, 199, 203, 213, 227, 232, 235, 238, 242, 247, 252, 260	The Newcastle Urban Renewal Strategy, a key component of which is enhancing public transport (including the Wickham Transport Interchange), is being developed to take into account forecast population and economic growth. The proposed shuttle bus service and future light rail project will allow for continued public transport access to the Newcastle city centre.
ST59	<p>Please show the statistics to prove how many people are in favour of the truncation.</p> <p>Those opposed to this have won the argument to not truncate the line on numerous occasions. It seems public opposition counts for nothing against development dollars.</p>	30, 74	No polling has been undertaken during the preparation of the REF.

Item	Summary of Issue	Sub no.	Response
ST60	How many people use the trains versus impact on residents?	79	Recent rail patronage figures are presented in section 2 and 7.1 of the REF. Various sections of Section 7 describe the impacts on sensitive receivers including residents.
ST61	No business case or cost-benefit analysis has been completed (or made available to the public) to help justify the project	85, 196, 197, 198, 203, 220, 239, 247, 252, 270, 272	UrbanGrowth NSW and Transport for NSW have prepared a business case for the Newcastle Urban Renewal and Transport Program for submissions to Cabinet. The business case is commercially sensitive and therefore not publically available.
ST62	Why is Newcastle the only city having infrastructure removed? There is no evidence of other cities worldwide removing train services to revitalise the city.	172, 189, 197, 272	The removal of the railway will allow for better accessibility between the foreshore and the Newcastle city centre and allow for opportunities for urban renewal.
ST63	The documentation includes the statement “as rail volumes are not anticipated to change as a result of the proposal, nor are they foreseeable in the future”. Surely if the revitalisation meets its targets rail volume should also increase.	189	In the short term, it is not clear that public transport patronage would change as a result of the proposal. A key component to this is the proposed opening of a number of new pedestrian and road corridors across the existing rail corridor. With land use change, over time, patronage may increase as a result of natural growth. Intra-urban journeys are more likely to change relative to regional journeys.
ST64	The replacement options to rail need to be quicker and more accessible not slower and less accessible that the existing facilities.	239	Heavy rail is the current primary public transport mode and is the most efficient mode because it is able to run in a dedicated corridor separate from all surrounding transport networks. As all other transport modes share the roadways, journey times for these other modes are inevitably going to be longer. The proposed future light rail project will be more accessible and will deliver customers to more destinations with proposed stops located near Honeysuckle, Hunter Street and Scott Street.
ST65	Public transport needs to be a more attractive service than using a car, to ensure that car usage drops in a region which already experiences high car use.	239, 252, 263, 274, 276, 278	The Newcastle Urban Renewal Strategy seeks to improve the attractiveness of the public domain and public transport within the Newcastle city centre, to increase the mode share of public transport over time.
ST66	A key benefit of the interchange project is that the rail crossing at Stewart Avenue would be removed. There is however an issue as the future light rail would require the same crossing at higher frequency and therefore the traffic benefits from removing the cross would be lost in the future.	57, 138, 180, 187, 203, 208, 234, 235	Light rail movements can be made to coincide with red signals for road traffic, removing the need for additional delays currently experienced by the boom gate closures of Stewart Avenue due to heavy rail movements. The transit times across Stewart Avenue are shorter for light rail, relative to heavy rail, so their movements can be catered to within existing phase lengths.
ST67	Key benefits of removing the rail is to free up traffic on Stewart Avenue. The railway gates aren't necessarily the problem, the three sets of lights which are not necessarily in sequence causes much of the traffic issues.	44, 54, 126, 154, 208, 234, 235, 242, 251, 255	The closure of the boom gates has been demonstrated to lead to delays in traffic flow on Stewart Avenue. Opportunities for better phase timing at key Newcastle intersections can be explored by RMS and Newcastle City Council.
ST68	The project seems to be justified as it improves traffic on the road network. This all appears to subject to traffic data which is not current. It also sees a reduction in people using public transport.	194, 274	The traffic study and the subsequent modelling in the submissions report was conducted in consultation with RMS and Newcastle City Council using the most current available data for the development of the traffic models. The REF does not predict a reduction in public transport use as a result of the proposal.

Item	Summary of Issue	Sub no.	Response
ST69	Cannot say that the proposal improves transport as the main benefit when it is located about one kilometre short of where it is needed, in the vicinity of the new university.	196	The proposed shuttle bus service will maintain access to currently accessible locations on the Newcastle Branch Line. The future light rail project will increase accessibility to locations within Hunter and Scott Streets and will likely extend further east beyond the existing rail corridor.
ST70	The project contravenes the principles of NSW 2021 and the Long Term (Transport) Master Plan due to the following: Discourage public transport use instead of promoting it. Destroying public infrastructure instead of promoting the use of it. Not growing patronage on public transport by making it a more attractive choice. Not planning for and managing strong demand for car travel and solutions for the low levels of public transport use. Not providing better public transport connectively across the city Increase the proportion of commuter trips on public transports to the Newcastle city centre.	139	The REF does not predict a change in mode share away from public transport as a result of the proposal. The proposed shuttle bus service will maintain access to currently accessible locations on the Newcastle Branch Line. The future light rail project will increase accessibility to locations within Hunter and Scott Streets and will likely extend further east beyond the existing rail corridor.
ST71	No proof that the Hunter and the State of NSW will be well served by the proposal in the documentation.	189	The proposal will improve north/south connectivity between the foreshore and the Newcastle city centre and provide opportunities for urban renewal. The future light rail project will maintain public transport in the Newcastle city centre and improve accessibility to locations in Honeysuckle, Hunter Street and Scott Street. These works would result in Newcastle becoming more attractive for business, living and recreation and therefore further enhance Newcastle's standing as the gateway to the Hunter and to enhance its position as NSW's second largest city.
ST72	The Newcastle Urban Renewal Strategy was prepared based on the rail line being present. There is evidence this report was changed to reflect the change in the status of the rail corridor.	235	The potential for truncation of the Newcastle Branch Line was considered in the preparation of the Newcastle Urban Renewal Strategy. The strategy refers to providing new and enhanced connections across the rail corridor and these are also referenced in the updated 2014 Newcastle Urban Renewal Strategy .

Item	Summary of Issue	Sub no.	Response
ST73	<p>The following goals, targets and priority actions are relevant to the project and should be considered when deciding its viability:</p> <ul style="list-style-type: none"> Reduced travel times Minimise public transport waiting times for customers Improve co-ordination and integration between transport modes Grow patronage on public transport Improve public transport reliability Improve customer experience with transport services. 	248	These targets and goals have been considered in the preparation of the REF.
ST74	<p>The interchange does not allow for development resulting from the LEP. It would therefore not fit or support future development.</p> <p>The development is not consistent with the DCP which envisages the area consisting of low rise residential/commercial use. A new retail area in Throsby Street will be impacted by the proposal and its associated traffic impacts due to Railway Street crossing closure and uncontrolled traffic on Hannell Street.</p>	254, 263	<p>The proposed interchange does not preclude future development within the vicinity of the proposal site.</p> <p>There is no direct impact on Throsby Street by the proposal. The closure of Railway Street would reduce direct access to Throsby Street from Hunter Street, although alternative routes via Maitland Road/Albert Street or Hannell Street would still be available.</p>
ST75	The revised Newcastle Community Strategic Plan was adopted in 2013.	261	Noted.
ST76	The existing stations at Civic and Newcastle are central to the existing plans to urban renewal in Newcastle.	272	<p>The proposed shuttle buses and future light rail project will maintain access to locations in the vicinity of Civic and Newcastle stations.</p> <p>The community will be consulted on the possible future uses of Civic and Newcastle stations as part of UrbanGrowth NSW's revitalisation of Newcastle.</p>
ST77	Many previous studies have been undertaken into the cutting of the Newcastle railway line, these all concluded that it should not happen. Why the change in the results of these studies?	215, 234	The NSW Government wants to improve north south connectivity between the foreshore and Newcastle city centre, and provide opportunities for urban renewal with the removal of the rail corridor.
ST78	<p>This is not an integrated transport/ development/ living plan which respect's the whole-of-city needs for all citizens. It does not recognise the changes that are coming in energy use, car travel, and multiple and sustainable forms of transport.</p> <p>Is there an overall transport plan?</p>	26, 29, 125, 255	The Newcastle Urban Renewal Strategy is the overarching strategy in which the Wickham Transport Interchange project is a key part. The various transport and strategic documents which the proposal is consistent with are outlined in Section 4.1 of the REF.

Item	Summary of Issue	Sub no.	Response
ST79	Replacement of trains with buses (and eventually light rail) is not sufficient as these services are low volume services and will struggle at peak times and during special events (such as New Year's Eve). During these events trains, are standing room only beyond Hamilton.	125, 234, 276	During special events, future bus and light rail services will be increased to match demand.
ST80	A rigorous REF would show that this project, as a standalone project, is very difficult to justify.	181	The REF concluded that the proposal had no significant environmental impacts and recommended that TfNSW determine to proceed with proposal, subject to conditions to mitigate environmental impacts. The REF is not intended to demonstrate the feasibility of the proposal.
ST81	The project has the potential to impact upon tourism.	216, 263	The proposed shuttle bus services and future light rail maintain access to the Newcastle city centre. Improved north-south connectivity and urban renewal opportunities may increase tourism in Newcastle.
Interchange options			
ST82	<p>Placing the interchange next to (in close proximity to) the intersection of the main north/south and east/west roads is not a good idea. This positioning will not assist with creating a modern pedestrianised CBD.</p> <p>Positioning of the interchange is poor with little or no consideration of the surrounding neighbourhood or the needs of the area.</p> <p>The interchange is located in the wrong location. It is not located in close proximity to the beach, backpacker hostels, harbourside amenities and the CBD.</p> <p>Could the interchange be placed at the Railway Street Crossing? Streets around Stewart Street are residential, while there is space and no residential around Railway Street.</p> <p>Could the interchange be positioned west of Railway Street where there is space for bus parking and turnaround and park and ride facilities?</p> <p>Locate the interchange at or closer to Broadmeadow as Broadmeadow is already one of the major stops in the Newcastle area.</p> <p>Locating the interchange at Woodville Junction, west of Hamilton Station would be a better option as it would be less congested and allow for greater expansion, including interstate coaches.</p> <p>Interchange here on the government land would allow for parking which can be used for car users to drive to here and then get light rail to city. At Wickham they are more likely to just drive to their</p>	3, 11, 12, 26, 47, 48, 50, 58, 73, 78, 79, 80, 81, 106, 137, 139, 160, 197, 198, 211, 212, 217, 232, 235, 272, 276	The preferred location for the new interchange and stabling facilities was based upon a multi criteria analysis which considered functional requirements, capital investment costs, social/environmental impacts and long term management/maintenance requirements. A summary of the key considerations is provided in Section 4.3 of the REF.

Item	Summary of Issue	Sub no.	Response
	<p>destination.</p> <p>Interchange at this location would promote growth along the whole existing corridor, where Wickham location may stagnate growth west of Wickham.</p> <p>The interchange should be located at the Old Marrow Park Bowling Club site.</p> <p>The rail line should be redeveloped on the western side of Hamilton Station.</p> <p>Hamilton would appear to be a much better terminus location.</p> <p>Could Wickham Park be used for a new interchange?</p>		
ST83	<p>There is no room at Wickham for an interchange which can provide for all the modes necessary.</p> <p>Wickham is highly constrained due to existing buildings. There is no room for increase in capacity if required.</p> <p>Narrow site means optimal interchange situation rail and light rail on opposite platforms is not feasible.</p> <p>Would require property acquisition.</p> <p>Space for light rail is limited for a major light rail stop.</p>	9, 11, 43, 80, 130, 139, 154, 182, 197, 238, 246, 270, 272	The design of the proposed interchange would not require any private property acquisition and can be constructed within the space available.
ST84	Stopping the railway line west of Stewart Avenue is imperative for traffic issues.	72	The truncation location seeks to maximise improvements to north/south vehicle flow in the Newcastle city centre.
ST85	How effective would the proposed interchange be? The interchange does not account for an increase in public transport use.	113, 270	The proposed interchange design allows for the existing NSW Trains timetable and allows for future passenger growth across all modes.
ST86	A transport interchange should promote development around it. The land around the site is undermined and on the flood plain.	139	The Newcastle Urban Renewal Strategy provides strategic guidance for land use change and urban renewal across the Newcastle city centre. The proposed interchange will not preclude future development in this location.
ST87	<p>The proposed interchange does not provide good connection between modes. Interchange locations are located away from the heavy rail.</p> <p>The interchange should all be in one spot and should include park and ride and taxi facilities.</p> <p>Where possible all connections should be undercover and a short distance from one another.</p> <p>Facilities at Newcastle Station are an example of a good interchange with rail, buses and ferry in close proximity.</p> <p>No details of pedestrian and cyclist interaction at the interchange.</p>	33, 58, 88, 122, 125, 139, 154, 165, 182, 189, 191, 197, 198, 202, 203, 218, 220, 224, 235, 236, 239, 248, 249, 252, 272, 276	<p>The proposed design provides for interchange between heavy rail, taxis, private vehicles (kiss and ride) and the future light rail project.</p> <p>Bicycle storage facilities would be provided at the interchange.</p> <p>Weather protection will be provided by the station canopy for patrons of the interchange.</p> <p>Operation of the interchange including pedestrian and bus route information is shown in Figure 5.8 of the REF.</p>

Item	Summary of Issue	Sub no.	Response
	<p>Interchange seems to be mainly trains to some buses.</p> <p>More detail of location of interchanges needed.</p> <p>All the detail relating to the transfer of passengers is missing.</p>		
ST88	<p>For a transport interchange, the proposed interchange between trains and buses is very fragmented. Distances to bus services is large and inconvenient with no/limited bus areas located at the interchange, this is particularly the case for elderly or less mobile passengers.</p> <p>The interchange between trains and the existing bus services along Hunter Street (ie from southern Newcastle) involves a walk of at least one block to stops on Hunter Street.</p> <p>The interchange with interstate or Port Stephen's buses is very disjointed as they are to remain at Newcastle Station requiring another journey between the interchange and Newcastle Station bus interchange.</p> <p>Local buses using the interchange would be positioned in such a way that they would be facing away from their destinations when leaving the interchange.</p> <p>Need details of how the buses will work including how they will wait at interchange and then exit the interchange.</p>	16, 17, 18, 19, 32, 44, 46, 52, 122, 139, 181, 182, 189, 195, 197, 198, 237, 247, 248, 250, 263, 270, 272, 276	<p>Shuttle buses are currently proposed to pick up/ drop-off passengers along Hunter Street near the intersection of Stewart Avenue during construction of the interchange and also in the interim period until light rail is constructed. These stops would be approximately 100 metres from the proposed interchange. Shuttle bus services would commence at Hamilton Station.</p> <p>In the interim period until light rail is built, shuttle bus services would operate from Hamilton Station east to destinations in the Newcastle city centre for passengers travelling from the west.</p> <p>The routing details of the shuttle buses have been designed to be convenient and safe for passengers alighting at the interchange. To avoid unnecessary turnarounds and increased congestion, the route to Newcastle will be via Hunter and Scott streets.</p>
ST89	<p>While the replacement buses are an interim measure for at least two years, a temporary structure to allow all weather access to the buses would be a benefit to all.</p>	32	Noted.
ST90	<p>Given the large increase in bus travel, there is inadequate space allocated for bus arrival and departures and for passengers waiting.</p> <p>Clarification that the interchange would only provide for the interim shuttle buses.</p>	1, 181, 182	<p>The bus timetable has been designed to ensure that adequate buses are provided to match demand, particularly during peak hours. Passengers also have the additional options of transferring to taxi from the northern side of the interchange or walking to Hunter Street to catch a local bus if they do not want to catch the shuttle bus.</p>
ST91	<p>The interchange does not include any bus layover area.</p> <p>Where would layover areas for interim buses be at Hamilton and Broadmeadow Stations.</p>	85, 238	<p>There would be no layover space provided for buses at the Wickham Transport Interchange. The shuttle bus would operate on a continuous loop, removing the need for layover. Following further investigations there is no longer a requirement for shuttle buses to use Broadmeadow Station.</p>

Item	Summary of Issue	Sub no.	Response
ST92	An expanded bus interchange is required and would require acquisition of adjacent properties. Another alternative would be the vacant land on the opposite side of Stewart Avenue, however this does not translate to a seamless interchange.	182	The proposed design caters to forecast bus passenger demand.
ST93	How would event buses be handled at the new interchange?	189	Specific arrangements would be put in place to manage bus activities associated with special events in the city centre, as the need arises.
ST94	Interim buses are to use Hunter Street, during light rail construction. Won't Hunter Street be a construction site and therefore buses will be stuck in traffic?	238	The construction methodology of the future light rail project is yet to be confirmed, but it is likely to be undertaken incrementally. Where light rail construction activities conflict with the shuttle bus route, temporary alternative routes would be used as required.
ST95	How does the light rail fit into the interchange? Documentation provided does not provide a great deal of information on how light rail fits into the interchange. The interchange with light rail needs to be convenient and undercover.	15, 53, 163, 164, 165, 197, 203, 218, 239, 242, 246, 253, 270, 272	The Wickham Transport Interchange project has been designed to be integrated with the future light rail project. Passengers would join light rail vehicles at a platform on the southern side of the interchange in the current location of Beresfield Street. The station canopy would provide weather protection to light rail passengers. Further details relating to the future light rail project will be provided in future planning approvals.
ST96	What is the traffic management plan for areas around the interchange? Cars, trains, light rail appear to be accessing through existing narrow roads. Passenger drop-off and pick-up facilities (i.e. kiss and ride facilities) are not included in the interchange design or are less than desirable. They are also shared with the taxi's rank.	55, 87, 129, 130, 182, 197, 248, 272	A number of the streets in Wickham are sufficiently large to accommodate parking on both sides of the existing street. The REF does not indicate that large volumes of traffic will result from the proposal. Figure 5.8 of the REF indicates the location of taxis and private vehicle drop-off and pick-up areas located to the north of the transport interchange in Station Street.
ST97	Access to and from the interchange is difficult for vehicles (private and taxi's) due to the existing street network and proposed no left or right turn and one way streets and the closure of Railway Street crossing. Taxis from the stand shown in the documentation will not be able to turn left onto Stewart Avenue to access Hunter Street, resulting in longer and more expensive trips. People coming from Carrington would find it difficult to access the interchange.	182, 191, 238, 248, 251, 270	Access for taxis and private vehicles to the interchange is possible by a number of streets including Railway Street (on the north side) and Throsby Street. Taxis and other vehicles would have a means of turning either right or left onto Stewart Avenue from the traffic lights on Throsby Street. People coming from Carrington could use routes comprising Cowper Street/ Branch Street/ Railway Street or Cowper Street/ Hannell Street/ Throsby Street.
ST98	How big is the taxi rank at the proposed interchange, and what facilities will it have? Documents suggest 100 taxi's for the 220 trains, is this a reasonable prediction?	189	The taxi rank will accommodate up to three taxis.
ST99	No government car parking at the interchange.	60	No additional parking for any vehicles is proposed at the interchange.

Item	Summary of Issue	Sub no.	Response
ST100	Should have park and ride located outside the city to keep traffic out, like in the Uniting Kingdom.	63	Park and ride facilities outside of Newcastle are outside of the scope of this proposal.
ST101	There should be a very large car park at the terminus.	40	Park and ride facilities are best located in outer suburban locations, not within the city centre.
ST102	No short term parking areas for people waiting to pick-up people is available at the interchange.	182	Proposed kiss and ride facilities are located in Station Street.
ST103	Is the Wickham Transport Interchange permanent?	34	The proposed Wickham Interchange would be permanent and would become the terminus for all Newcastle train services. Light rail would then be constructed in the future to assist with getting people into the Newcastle city centre. In the meantime, shuttle buses would provide transport in to the city centre.
Stabling yard options			
ST104	<p>The trains could be stabled closer to Clyde Street where the residential density is less.</p> <p>The location of the stabling yards and decant facilities are far too close to the Islington residents and business.</p> <p>If the interchange is located at the Woodville Junction, trains could be stabled at Broadmeadow using the two existing tracks to Newcastle.</p> <p>Stabling should be west of Hamilton Station</p> <p>Stabling at Hamilton is not correct. It should be at Wickham with four lines coming into the station.</p> <p>Has RailCorp (now Sydney Trains/Transport for NSW) undertaken an options assessment for stabling options?</p> <p>Has any consideration for stabling of trains occurred.</p>	48, 58, 108, 153, 160, 189, 203, 245	The preferred location for the new interchange and stabling facilities was based upon a multi criteria analysis which considered functional requirements, capital investment costs, social/environmental impacts and long term management/maintenance requirements. A summary of the key considerations is provided in Section 4.3 of the REF.
ST105	Would electric trains only be stabled within the proposed stabling yard? Or would diesel trains potentially be stored in the future.	153, 208	At this stage it is the intention only to stable electric trains overnight in the stabling facility. However diesel trains may use the yard for short periods during the daytime or under contingency conditions.
ST106	The REF states that trains will be stabled between Hamilton and Wickham but there will be fewer trains crossing Beaumont Street. How is this possible?	18, 110	During the construction period, all train services will terminate at Hamilton Station and therefore train volumes at Beaumont Street would not change. Following completion of the new interchange and stabling facilities, the existing timetable/frequency of services will resume, such that there is no net change in passenger train movements at Beaumont Street.
ST107	Stabling of diesel trains at Broadmeadow will add to the train traffic using the Beaumont Street crossing, which would further add to the crossing failing the ALCAM assessment.	189	Stabling movements at the start and end of services will largely occur outside of peak road traffic periods, and as a consequence, are unlikely to affect the performance of Beaumont Street.

Item	Summary of Issue	Sub no.	Response
Value for money/cost/funding for proposal			
ST108	What will the fare structure be?	89, 253	There will not be a separate fare charged for the shuttle bus trip. Whether using Opal or a paper ticket, customers' travel on these buses will be treated as part of their train trip and they will pay one fare that is the same as current train fares.
ST109	Once light rail is operational, would passengers be required to pay two fares (train and light rail)?	158, 187, 199, 253	Future ticketing arrangements for light rail will be made available during the planning approvals/environmental impact assessment phase of the Newcastle Light Rail project.
ST110	Cost of public transport would increase the cost of living.	210	The cost of public transport journeys is not proposed to increase as part of the proposal. Whether using Opal or a paper ticket, customers' travel on these buses will be treated as part of their train trip and they will pay one fare that is the same as current train fares.
ST111	What will happen to the fare free zone currently operating in the Newcastle CBD.	189, 255, 276	No changes to the fare free zone are proposed under the Wickham Transport Interchange proposal.
ST112	Where is the funding for the project coming from?	92, 248	The government has committed \$340 million in funding from the lease of the Port of Newcastle to achieving a new vision for Newcastle. This is in addition to the \$120 million the NSW Government has committed for revitalising Newcastle.
ST113	What is the capital investment of the following components of the program: Wickham interchange Implementation of the rail corridor management plan Light rail.	187, 248	The indicative cost of the Wickham Transport Interchange will be determined following the award of a tender for the design and construction of the project.
ST114	The money would be better spent on other infrastructure which we need such as: Glendale interchange. Freight rail bypass from Fassifern to Hexham. Overpass or underpass at Adamstown gates. Better public transport (e.g. light rail) to John Hunter Hospital and Williamtown Airport. More trains on the Hunter Line. Stewart Avenue overpass possibly passing over King Street, Hunter Street and Honeysuckle Drive Community infrastructure such as hospitals Clarence Town has no public transport Lifts at Victoria Street and Waratah New station at Aberglasslyn. The money from the project could be better spent on improving services to Sydney and the Hunter Valley, such as new trains and carriages. Improve Sydney services so that travel times are quicker and back to what they were in the 1940's.	18, 19, 41, 92, 94, 104, 121, 128, 141, 170, 196, 198, 235, 236, 238	The REF is only required to consider feasible alternatives that achieve the same objectives as the proposal.

Item	Summary of Issue	Sub no.	Response
	<p>Money could be spent on improving public transport in the Hunter Valley.</p> <p>Money could be spent on modification of the existing rail to make it work more efficiently.</p>		
ST115	Money spent on the interchange and any improvements to level crossing at Clyde Street and Glebe Road are only band-aid solutions.	5	These works are outside the scope of the REF.
ST116	Destruction of existing infrastructure (with a value of \$500 million) is not economically, socially and environmentally a good idea.	6, 64, 78, 166, 215	<p>The Government has prioritised the investment of funds from the lease of the Port of Newcastle to revitalise the Newcastle city centre, boost economic activity and reinforce the city's role as a 21st century regional centre.</p> <p>The REF considers the environmental, economic and social benefits and impacts of the project and determined that the impacts would not be significant.</p>
ST117	<p>Total waste of taxpayers' money and the government should show accountability for the money which is available to be spent.</p> <p>High cost of unnecessary infrastructure.</p> <p>What's the additional cost of running shuttle buses?</p>	6, 11, 24, 64, 74, 82, 87, 104, 113, 115, 121, 123, 127, 128, 170, 173, 181, 189 202, 203, 235, 238, 245, 248, 252, 272	<p>The cost of the proposal will be known following acceptance of a tender to complete the design and construction. This process was not complete at the time of writing.</p> <p>The NSW Government strictly applies relevant financial and economic planning and procurement guidelines to ensure value for money outcomes are achieved for NSW taxpayers. Accountability for the costs of the proposal are not normally evidenced through the planning approvals process but through other processes.</p>
ST118	How can the expenditure of half a billion dollars be justified when almost a quarter of passengers would be lost to public transport into Newcastle.	189	The REF does not conclude that there would be a change in public transport patronage as a result of the proposal.
Design elements, process and functionality			
ST119	<p>The interchange building lacks protection from wind, sun and rain. This includes protection of the light rail interchange.</p> <p>Westerly winds look like it would create a wind tunnel.</p> <p>Can't this interchange be enclosed; other cities in Australia have interchanges which are largely enclosed.</p> <p>Design also has security issues.</p> <p>The proposed interchange, in particular the roof, are poorly designed and generate a poor first impression to visitors. The roof gives off the appearance of a hay shed or barn and is not at all attractive visually.</p> <p>The forecourt area is a disgrace.</p> <p>The roof of the interchange appears that it may amplify noise within the structure.</p>	1, 5, 11, 17, 21, 24, 27, 31, 37, 44, 46, 51, 54, 55, 58, 59, 61, 78, 85, 88, 94, 97, 102, 103, 119, 120, 125, 144, 162, 165, 185, 189, 191, 203, 236, 253	<p>The open nature of the current preliminary design for the proposed interchange is a key principle of its design, allowing ventilation and solar access. The key urban design considerations which have shaped the design and presentation of the structure are outlined in Section 5.2 of the REF. These considerations would also be considered in the design during subsequent stages of the design.</p> <p>The final roof design would provide protection from the rain. Additionally, the operations building on the northern side of the concourse will provide shelter from the wind.</p> <p>Security issues have been considered as part of the design to date and will continue to be progressed through the next phase of design also.</p> <p>The interchange design is currently being selected through a tender process for the design and construction contract.</p>

Item	Summary of Issue	Sub no.	Response
ST120	The final plan should be prepared before the design is presented.	40	Transport for NSW considers it is important that the public are provided with an impression of the key design elements of the proposal at the time feedback is being sought. However, the process of design will be ongoing beyond the public display of the planning approvals document and further engineering design, architectural and urban design studies will be completed prior to construction. Feedback from display of the REF will be considered as part of this ongoing design process and where possible, integrated into refinements of the proposal.
Benefits of Wickham Transport Interchange			
ST121	<p>The project does not have any benefits for the local community. Evidence of the benefits described in the documentation is limited and vague.</p> <p>Such a project is considered to only benefit developers/urban growth as it would free up the rail corridor for future growth.</p> <p>The project appears to be poorly planned and ill conceived.</p> <p>No benefits for users of the train services, including the Sydney or Hunter Valley services.</p> <p>No benefits to the travelling public.</p> <p>No benefits to Maitland, Central Coast or Lake Macquarie residents.</p> <p>How would the project benefit surrounding regions?</p> <p>The benefits of the project seem to change from different presentations provided.</p> <p>Cutting the heavy rail line could open up access to the river from the city if the land is kept for open recreational or low rise purposes.</p>	2, 4, 9, 12, 15, 16, 18, 19, 20, 25, 28, 29, 43, 51, 52, 56, 58, 61, 64, 78, 79, 80, 81, 82, 85, 87, 90, 91, 92, 96, 97, 98, 99, 100, 102, 103, 104, 105, 111, 115, 116, 117, 118, 119, 121, 123, 124, 126, 127, 128, 129, 130, 134, 158, 171, 172, 215, 220, 221, 223, 227, 238, 239, 251, 264, 271	<p>The Wickham Transport Interchange project is a precursor to achieving the objectives of the Newcastle Urban Renewal Strategy.</p> <p>The benefits of the Newcastle Urban Renewal Strategy would be available to anyone for works, lives or visits Newcastle in the future.</p> <p>A master plan for future urban renewal aspects of the strategy is currently under preparation but is not part of the scope of the Wickham Transport Interchange.</p>
ST122	There is opportunity for a multi-purpose corridor along the rail corridor.	246	Noted. The reuse of the residual rail corridor is being managed by UrbanGrowth NSW.
Benefits of NURTP			
ST123	Terminus and light rail are being looked at individually. What are the benefits of the whole project?	15	The objectives of the Newcastle Urban Renewal Strategy are to revitalise the Newcastle city centre, boost economic activity and reinforce the city's role as a 21st century regional centre.
ST124	The benefits of having a light rail are only felt if it actually gets built.	19	The Newcastle Light Rail project will be considered as part of a separate planning approvals process in 2015.
ST125	The benefits offered by the increased access to the harbour are overshadowed by the uncertainty over the protection of the rail corridor as public space.	26	A masterplan for the urban renewal aspects of the Newcastle Urban Renewal Strategy is currently under preparation but is not part of the scope of the Wickham Transport Interchange. The reuse of the residual rail corridor is being managed by UrbanGrowth NSW.

Item	Summary of Issue	Sub no.	Response
Public transport arrangements during construction			
ST126	<p>Where will the heavy rail terminate from the 26 December 2014 until the construction interchange at Wickham is complete?</p> <p>With services from Sydney, Gosford and Upper Hunter arriving in the morning around the same time, how will Wickham cope as it only has two platforms?</p> <p>Clarification of which services will terminate at Broadmeadow and which would terminate at Hamilton during construction of the interchange.</p>	33, 108, 187, 199, 250	<p>During the construction period, all trains will terminate Hamilton. Transport for NSW has released detailed timetable information which available here: http://www.transportnsw.info/ (Transport InfoLine).</p>
ST127	Impacts of bus congestion on Beaumont Street during construction period.	11	The REF concludes that the number of shuttle buses is unlikely to result in significant additional traffic on existing roadways (including Beaumont Street). The proposed route of the shuttle buses uses main roads wherever possible to ensure that adequate capacity exists and proportional traffic increases are negligible.
ST128	Where are buses, taxis and cars going to park at Hamilton for the construction period?	128	There is no proposal to provide additional parking at Hamilton during construction or operation of the Wickham Transport Interchange project.
ST129	How will people transfer from Sydney Trains to Maitland/Scone/Dungog trains? Are they expected to use the Broadmeadow shuttle into town and the Hamilton Shuttle back out.	17, 250	The shuttle buses will circulate in a continuous loop between Hamilton, Wickham and stations to the east. All passengers arriving from Sydney or the Hunter Valley would catch the bus upon arrival at Hamilton and transfer into Newcastle. The same would apply in reverse outbound from Newcastle. Transport for NSW has released detailed timetable information which is available on its website: http://www.transportnsw.info/ (Transport InfoLine).
ST130	<p>The Social Impact Assessment states that 2,500 people use the rail line. This equates to approximately 40 buses. Staff at session did not believe that 2500 people need to transfer to bus during the 1 hour long peak which results in a bus every 1.5 minutes which would interrupt traffic flow. Six buses an hour will not cope during peak hour or special events. Only the trains can meet this demand.</p> <p>There is not enough space at the interchange for buses to line up to meet the trains. There will be a need for many buses to be ready to meet each train. What about catering for additional residents, workers and university students which are currently not in the CBD.</p> <p>A full V set train would require 29 buses.</p> <p>The volume of buses required would result in traffic impacts.</p>	20, 24, 51, 123, 139, 181, 187, 189, 191, 196, 197, 199, 215, 238, 242, 245	<p>The REF identifies that 2,500 people a day use the railway east of Wickham. This flow of passengers is spread across the day, not within a one hour interval. The proposed bus servicing pattern matches existing/forecast demand and adequate measures have been incorporated within the design to cater to these movements. However it is important to note that the expected population and demand growth will not occur overnight. Both the shuttle bus and future light rail will be flexible to accommodate the expected growth in patronage over time.</p>

Item	Summary of Issue	Sub no.	Response
ST131	<p>Although the replacement buses are an interim measure, Honeysuckle Drive is not suitable for regular bus traffic as it is too narrow and there are many tight turns. With the rail line truncated, access to Hunter Street from Honeysuckle Drive buildings becomes easy and direct.</p> <p>Hunter Street is a good bus route with adequate capacity for any number of buses. The bus interchange would be better placed on Hunter Street, through the Store Building perhaps?</p>	32	Honeysuckle Drive is no longer being used for replacement bus services. All rail replacement bus services will now operate between Newcastle and Hamilton via Hunter and Scott streets.
ST132	<p>The interim bus service from Broadmeadow and/ or Hamilton needs to be timely and connect with the heavy rail trains (particularly with those from Maitland and the Hunter). If people miss the for example 5.25pm Dungog train there are no other options to get home.</p> <p>Would buses wait for passengers before leaving? Will trains wait for passengers who are on delayed buses?</p>	33, 122, 189, 195, 218, 219	The proposed bus servicing strategy aims to match bus services with timetabled train services. All trains would now terminate at Hamilton Station and therefore shuttle buses would only be operating from this station.
ST133	<p>How long will the buses be in place during both: Construction of the interchange. The interim period prior to light rail commencing.</p>	128	Shuttle buses would be in place until the future light rail project is operational.
ST134	<p>Would like more details of the interim bus arrangements during construction and operation of the interchange.</p> <p>How frequently will the interim bus services connect? Can timetables be provided? Will they meet the train timetable?</p> <p>Where will the buses stop? Where will people catch the buses? How far will people have to walk? It appears that they will operate on a loop around Honeysuckle Drive and up Hunter Street. Does this mean people wanting to access Hunter Street need to travel further while they wait for bus to go to Hunter Street.</p> <p>How long would trips be from Broadmeadow/Wickham to Newcastle take? The REF seems to assume Steel Street and Worth Place crossings will be open.</p>	33, 43, 51, 128, 139, 181, 189, 208, 218, 219, 242, 248, 255, 261	<p>Details of bus operations, including timetabling, during construction of the interchange would be available on Transport for NSW's website (http://www.transportnsw.info/) closer to the date of the implementation of the shuttle buses.</p> <p>During construction of the transport interchange, the buses would stop at Hamilton, Wickham, Civic and Newcastle stations on the route into the city centre and additionally at a new stop at Queens Wharf.</p> <p>The opening of Steel Street and Worth Place are outside of the scope of the Wickham Transport Interchange project.</p>

Item	Summary of Issue	Sub no.	Response
ST135	Will people with luggage have easy ways to transfer from buses to light rail? Many people go by train to get to the airport and have large suitcases. Can these be accommodated on the shuttle bus?	43, 51	Passengers would be able to carry surfboards and luggage on to the shuttle buses. The buses to be used will be low-floor buses that are designed to meet the needs of less mobile or elderly passengers.
ST136	Inconsistency between information, with the REF stating service to terminate at Hamilton for the next two years, while the public display talked of terminating at Broadmeadow.	139	The terminus of trains during construction of the transport interchange at Wickham would be at Hamilton only, the need to terminate trains at Broadmeadow has been removed. Detailed timetabling information and "How to" guides will be published prior to the truncation in December 2014, should the project be approved. These details would be available on Transport for NSW website (http://www.transportnsw.info/).
ST137	Rail usage data needs to be looked at as numbers mentioned seem to be low and therefore shuttle buses may not be sufficient to meet the demand.	181	The rail patronage data is the most current available and has been sourced from recognised sources. Shuttle buses will be responsive to the patronage demands of rail passengers.
ST138	Are there any details of the fleet of buses to be used. They should provide a reliable, convenient and quick transport of passengers.	181	The buses will be a modern fleet of low-floor, accessible buses which would allow for surfboards and luggage to be carriage on board. They will provide a reliable and convenient service for passengers.
ST139	Shuttle buses would only drop passengers one stop further than the Newcastle Station.	185	Shuttle buses will stop at locations matching the existing heavy rail stations plus an additional stop at Queens Wharf.
ST140	The operation of the shuttle buses should be included in all assessments; this would involve a wider study area.	187	The number of the shuttle buses is not expected to result in significant additional traffic due to the low number of buses relative to existing road traffic.
ST141	Has consideration been made for a trial period for the shuttle bus services prior to the closure of the line?	245	This is not proposed at this stage.
ST142	What are people supposed to do after Boxing Day to get into town, especially in the morning?	28	To make a trip into Newcastle after 26 December 2014, passengers should continue to use the heavy rail service as normal and transfer to the shuttle buses at Hamilton Station. The exception to this would be for between the 26 December 2014 and 5 January 2015, when services will terminate at Broadmeadow during necessary works at Hamilton Station. Shuttle buses would be provided from Broadmeadow during this period.
ST143	Do not want young mums having to walk to Hunter Street during the construction period.	37	A shuttle bus service will be provided for journeys east of Stewart Avenue following 26 December 2014.
ST144	A moving footpath (travelator) could solve a lot of issues in providing an affordable interim transport option with little environmental impact. This option could be utilised well in the area and is great for universal access (disabled, aged people)	35	A travelator was not considered as part of the REF.
ST145	On the 27 December 2014, the Newcastle and Hunter railway systems will be put into complete chaos. Temporary interchange at Hamilton will inconvenience everyone.	108, 250	The REF assessment concluded that with the proposed mitigation measures, the proposal was unlikely to have a significant environmental impact.

Item	Summary of Issue	Sub no.	Response
ST146	Access to Hamilton Station during construction will be compromised.	90	Access to Hamilton Station would not be impacted during the construction of the interchange. Prior to the closure of the rail line east of Hamilton, works would be undertaken at the station to ensure that the users of the station are not impacted upon. This would include way finding signs to shuttle buses.

Traffic and Transport

Item	Summary of issue	Sub. no.	Response
Existing traffic levels			
T1	<p>Being a regular rail user I doubt the figure provided in the REF document regarding patronage number past Wickham. Believe the service is seriously underutilised.</p> <p>The railway carries reasonable loads at peak hour but very few off peak.</p> <p>At Civic Station at peak hour there are 130 people waiting to catch the train to the Central Coast and Hunter lines.</p>	66, 129, 160	Patronage figures are based on proprietary information sources, in this case from the Bureau of Transport Statistics in 2012. More recent patronage information for 2013 was also obtained and presented in the REF.
T2	<p>Residents of Wickham have raised a number of traffic and parking issues in their area to be considered as part of the Wickham Transport Interchange.</p> <p>Access to residential driveways is difficult due to narrow lanes and parking.</p> <p>Parking on footpath near tyre business.</p> <p>Residents cannot find on-street parking including aged and disabled people.</p> <p>New development in Dixon street will add to parking requirements.</p> <p>Not enough loading zones. Trucks park in Station Street and other streets in Wickham.</p> <p>Some areas have no footpaths.</p> <p>Unregistered cars parking for long periods.</p> <p>No parking signs on corners and insufficient drop off areas for the day care centre.</p> <p>Faded parking signs in Indus Street.</p>	163, 173, 175, 176, 251	The resolution of existing local traffic concerns is outside of the scope of the REF. The City of Newcastle Council is the responsible authority for these issues.

Item	Summary of issue	Sub. no.	Response
	<p>No truck restrictions on residential streets.</p> <p>No drainage or footpath maintenance on Throsby Lane.</p> <p>Insufficient parking in Matthew Talbot Centre.</p> <p>Insufficient parking in Throsby Street.</p> <p>Union Street should be one way.</p> <p>No off street parking for many residencies of Bishopsgate Street and Dickson Street.</p> <p>Large vehicles exit Hannell Street and Railway Street into one-way streets crossing through the suburb.</p> <p>At Wharf Road intersection the left turn lane can block the Hannell Street through traffic and result in delays for left turning vehicles.</p>		
T5	Beaumont Street crossing is not simply for local traffic. It is a major corridor that services an extended area and acts as an arterial road.	189	In terms of the road hierarchy adopted by RMS, Beaumont Street performs a local road function whereas Maitland Road and Hannell Streets are primary roads.
T6	<p>Current rail crossing at Stewart Avenue causes chaos with traffic flow during peak hours due to:</p> <p>The gates close at least one minute before train arrives adding journey time</p> <p>The traffic lights on Hunter Street and King Street are not coordinated with railway crossing signals.</p> <p>Stewart Avenue railway crossing is a level crossing with creates road/ rail conflict.</p> <p>The delays at the rail crossing have improved with technology. Barriers are only causing 20% of delays which leave the rest to traffic.</p>	215, 242, 251, 263, 276	The REF concludes that the removal of the boom gates at Stewart Avenue is likely to improve traffic flows.
T8	<p>At Hunter Street lights when gates are down the traffic lights continue to cycle through when cars cannot move and sometimes miss the right turn traffic completely. Can they be co-ordinated?</p> <p>No cars can turn left into Hunter Street when the inside lane has through traffic blocking its path which causes grid lock.</p>	11, 251	Railway boom gates and traffic signals operate on separate systems, which is a complicating factor for improving traffic congestion.
T9	<p>The Railway Street gates are heavily used, especially by large car movers which service the motor distribution business.</p> <p>Peak hour traffic is heavy through the Railway Street gates.</p>	263	<p>We understand that Railway Street is a crossing which is commonly used by residents and business in the area and from further afield. As a result of the proposal it cannot remain in place due to safety reasons.</p> <p>The traffic implications of this change are presented in Section 4.2 of this report.</p>
T10	We have no bus services in Newcastle.	260	There are many public bus services provided by Newcastle Buses.

Item	Summary of issue	Sub. no.	Response
T11	People will stop using public transport due to the interchange, buses and potential future light rail and the need to change modes.	276, 278	The REF concludes that there is not likely to be a decrease in public transport usage as a result of the proposal.
T12	Current traffic situation on Hunter Street is appalling.	71, 251	Hunter Street is outside the scope of the REF.
Impacts on public transport			
T13	Proposed system would be unable to service major events such as New Years Eve or festivals. How would the buses handle such increased influxes in passengers?	16, 74, 187, 196, 199, 238	Additional buses would be scheduled for special events, as required.
T14	Shuttle buses arriving and departing the interchange will cause traffic impacts.	154, 181	It is not expected that noticeable additional traffic congestion would result from the shuttle bus movements alone. Shuttle buses are expecting to be timetabled to depart up to approximately every 10 minutes, subject to more detailed planning which is currently underway. This more detailed planning may result in more buses running during the peak periods for example. The traffic implications of this change are presented in Section 4.2 of this report.
T15	What connections to the ferry service. What connections to Newcastle and Nobby's Beach.	27, 139	The shuttle bus is designed to replace the existing heavy rail service. No direct connections to the ferry service is provided as the ferry at Queens Wharf is outside the REF study area. However the shuttle bus will include a stop at Queens Wharf. The shuttle bus is designed to replace the existing heavy rail service. No direct connections to Newcastle or Nobby's Beach are proposed, however these destinations will be accessible from the Newcastle stop in Watt Street.
T16	The interchange will have a negative impact on the quality of public transport services for those who live, work or recreate in the CBD.	269	The proposed shuttle bus service and future light rail project will maintain, and potentially improve, access to locations in Newcastle East.
T17	Interrupts the seamless journey from Sydney to Newcastle and vice versa.	89, 250	The proposed shuttle bus service and future light rail project will maintain, and potentially improve, access to locations in Newcastle East.
T18	The report says that buses will transfer passengers from Hamilton and Broadmeadow to town. How will people travelling from Maitland to Sydney get to Broadmeadow? Will trains to/from Sydney terminate at Hamilton during construction? If not how will passengers arriving/ departing on Hunter trains connect with Sydney trains?	242	Trains travelling to and from Sydney and Maitland will depart from Hamilton during construction period. Following the opening of the new interchange, shuttle buses would continue to operate from Hamilton until light rail is operational.
T19	Negative impacts for people travelling through Wickham interchange. Large number of buses required frequently to cope with peak periods. These buses will queue across and block Stewart Avenue.	123, 154, 181, 191	Movement about the station and interchange area is being designed to be as easy and convenient as possible for all passengers, regardless of how they arrive at the interchange. A shuttle bus service is planned to connect with trains at Wickham Station. The shuttle bus frequency is currently being developed, but it will be designed to cater to the maximum patronage demand in the peak periods.

Item	Summary of issue	Sub. no.	Response
T20	By reducing transport to Newcastle from the Upper Hunter, access and connectivity to the city are decreased.	218	Passengers will be required to change mode at Wickham (during operation) (or at Hamilton (during the construction phase)in order to access Newcastle in the future. This is to maximise the success of the urban renewal strategy.
T21	Should the shuttle service involve another fare or rail fares increase, people are likely to abandon the rail network. The fare arrangements for shuttle bus are not identified.	164, 187, 189, 197, 199, 253, 272	Rail passengers will be able to use a valid train ticket/Opal cards to board the shuttle buses and ride for free.
T22	How long is the shuttle bus from Broadmeadow going to be in place? What is the route? How long is the bus trip from Broadmeadow to Newcastle going to take? Has traffic delays been taken into consideration? How will trains be coordinated to the bus timetable? Where will the layover for buses be at Hamilton and Broadmeadow? Need to clarify what trains will terminate at Broadmeadow compared to Hamilton. Need to understand rail patronage data in order to understand trends and better estimate shuttle bus requirements. The type and size of the shuttle bus fleet required is not discussed. The construction phase requires more buses and parking. The REF and TTA are silent on this issue. Will the shuttle buses proposed cope with the volumes coming off trains?	128, 139, 181, 187, 189, 191, 195, 208, 218, 219, 238, 255, 261, 270, 272, 275	Following further work into the train operations during construction, it has been identified that there is no requirement to terminate trains at Broadmeadow and therefore all services are to terminate at Hamilton. Details of the proposed shuttle buses are available on the Transport for NSW website (http://www.transportnsw.info/). In order to construct the new facilities at Wickham, trains will be terminated west of Wickham station in the vicinity of Railway Street. There they will change tracks and reverse their journey. Hamilton is the closest station in a westerly direction and therefore it makes sense for some trains to terminate there. Section 4.2 presents details of the estimated travel times from various stations to Newcastle via the shuttle bus. These average journey times have been based on modelling which has included consideration of traffic congestion. There is good data upon which to estimate shuttle bus requirements, however the arrangements will be flexible so that if additional capacity is required for any reason, additional buses can be provided. The fleet of buses would include modern, low floor buses which would allow for surfboards and luggage to be carried on board. The Government is in the process of tendering for the purchase of the new shuttle buses, hence details of the type and size of the fleet is not yet available. Transport for NSW are aware of the criticality of providing sufficient buses to accommodate demand and to provide a service which replaces the needs of the existing service as far as possible.
T23	It is not proposing a sustainable increase in public transport use. Project fails to take into account projections for major growth in public transport use associated with continued development to the East of Wickham. Students require public transport to access University. Why are we planning to stop students using train that conveniently links university campuses? Significant further population growth is predicted. Potential rapid growth in large residential towers.	139, 156, 197, 218, 220, 278, 280	A patronage demand model was used to forecast the future passenger demand at Wickham Station and it included the university campus expansion development in the city centre. In addition to the train services between the Warabrook to Wickham Stations, students will have a frequent shuttle bus service that will operate along Hunter Street, or alternatively they can travel via the existing Routes 100/226 between the two campuses of the University of Newcastle at Callaghan and city centre.

Item	Summary of issue	Sub. no.	Response
T24	<p>The REF acknowledges indirectly an expected 23% loss of public transport patronage once heavy rail is terminated. However the expected loss is not specifically revealed.</p> <p>How could an almost 25% loss of patronage be an improvement or progress towards TNSW goals and result in an improved public transport network for Newcastle.</p>	183, 197, 202, 203, 235, 247, 255, 263, 270, 272	<p>This is a misrepresentation of information provided in the REF. The figure quoted refers to the proportion of passengers who currently board/ or alight the train at Wickham Station and who, assuming they live or work in the area around Wickham, would therefore not be potential light rail passengers.</p> <p>The REF does not present any quantification of the potential patronage of public transport but indicates that increased journey times and changes to transport patterns and access may affect some decisions regarding the continued use of the rail service.</p> <p>Conversely, the opening of a number of new cross-corridor pedestrian and road crossings in parallel with the construction of the Wickham Transport Interchange is expected to provide improved access to public transport services along Hunter Street for a large number of workers and visitors to the Honeysuckle precinct for example.</p>
T25	<p>An example of reduced patronage numbers is the closing of the railway spur from Fassifern to Toronto.</p> <p>Tennyson (1989) shows that closure of rail lines and their replacement by buses resulted in a loss of transit patronage of between 30 and 40%. This level of loss would inevitably lead to the closure of all passenger rail services between Newcastle, Maitland, the Upper Hunter and the Central Coast.</p>	198, 272	<p>It is acknowledged that due to the predicted increase in journey times and the changes to transport patterns and access, there is potential for a reduction in rail patronage. This shift is intended to be minimised through the implementation of shuttle buses services. However, the opening of a number of new cross-corridor pedestrian and road crossings in parallel with the construction of the Wickham Transport Interchange is expected to provide improved access to public transport services along Hunter Street for a large number of workers and visitors to the Honeysuckle precinct for example.</p> <p>The success of the future urban renewal and the light rail is expected to drive an increase in public transport use, along with those people who currently work north of the railway corridor and who, following removal of heavy rail corridor fencing, will now have access to public transport services and may choose therefore not to use their cars any longer.</p>
T26	How many additional stops will normal buses make in Hunter Street as a result of the interchange?	189	There will be no additional stops required for existing bus services on Hunter Street. These buses will be unaffected by the proposal.
T27	There is not sufficient consideration of the impacts at Hamilton train station during the two year construction period. Hamilton train station will be required to cater for passengers which are currently spread across four stations.	199	<p>Passengers who would have previously alighted at Wickham, Civic and Newcastle will now stop at Hamilton where their journeys will continue via bus to these destinations. Shuttle buses will be scheduled to meet trains where possible and the bus pick-up locations have been designed to be as convenient as possible. Patronage information for Hamilton Station (as well as others) was presented in the REF.</p> <p>The proposed works at Hamilton Station are outlined in Section 4.3 of this document.</p>
T28	The comment on the shuttle bus service in the REF seems to assume the rail crossing is open at Steel Street or Worth Place, but the document is silent on these crossings.	261	These crossings are outside the scope of the REF.,
T29	What will happen to the present bus layover area at Newcastle Station?	248	The future use of the bus layover area at Newcastle Station is not part of the scope of the REF.

Item	Summary of issue	Sub. no.	Response
T30	No examination of the public transport system under long term traffic and patronage forecasts.	254	The traffic and transport impacts of the proposal have been assessed during the construction phase and for the opening of the new station and interchange at Wickham. The traffic modelling shows no significant adverse impact on traffic performance during the construction period and with the interchange operational. In particular, north-south traffic movements in Stewart Avenue and through the intersections will operate with less delay, mostly resulting from the removal of the boom gates across Stewart Avenue. Public transport demand forecasting was also undertaken based on future population, employment and student activity in the city centre.
T31	Impact on service reliability which can affect patronage.	263	Reliability is not anticipated to be affected by the proposal.
T32	Further analysis is required to quantify the likely impacts of increased journey time on public transport levels.	261	The likelihood of modal shift away from public transport is based on behavioural factors which are not readily able to be modelled.
T33	How will the Nelson Bay buses be affected by the proposal? People will leave public transport to private vehicles due to impacts of the interchange.	279, 252, 263	Nelson Bay services will continue to operate out of the existing bus layover area at Newcastle Station. Passengers for these services will be required to board shuttle buses at Hamilton or Wickham (once operational) to travel to Newcastle Station. Once light rail is constructed they would use it to access the layover area at Newcastle Station.
Impacts on pedestrian/cyclists			
T34	Many pedestrians use the Railway Street crossing. The Railway Street crossing should not be shut as it is used by pedestrians to access Hamilton, Wickham, the foreshore and buses along Hunter Street. It is also used by locals in motorised wheelchairs and the disabled. The closure will also force pedestrians into the traffic at Stewart Avenue. What are the predicted delays from the extra pedestrians who currently get off at Wickham Station and would need to cross the Pacific Highway by foot instead of by train?	22, 59, 60, 85, 138, 171, 187, 194, 197, 199, 203, 212, 215, 235, 237, 238, 251, 272	As outlined in the REF, with the storage of trains along the mainline at the Railway Street level crossing during construction and the movements to and from the Hamilton stabling yard and new transport interchange at Wickham during operation, it is not feasible to keep the Railway Street level crossing open. The impact to pedestrian movements from the closure of the level crossing was documented in the traffic impact assessment. With the opening of the new station at Wickham, pedestrians will be directed to walk either north to the crossings at Honeysuckle Drive/Hannell Street or south to Hunter Street/Stewart Avenue. With higher volumes of pedestrians at these crossings, the traffic signal phases may need to be adjusted. These traffic lights provide a safe means of crossing Stewart Avenue/ Hannell Street for pedestrians. The additional time for train passengers to cross from the interchange to the east side of Stewart Avenue would add an extra 180 metres walk with up to an extra three minutes to walk from the west side to the east side of the Stewart Avenue.
T35	Closure of Railway Street would remove access to a safe cycling route, with cyclists being pushed onto the busiest street (Hunter Street) and through the busiest intersection (Stewart Avenue) as of December 2014. There is no plan for safe access to Honeysuckle, other than by car. Cyclists have been disregarded in terms of getting to interchange and accessing trains with bikes. The TIA has not studied the movement of cyclists.	4, 14, 16, 31, 51, 57, 82, 139, 156, 194, 237, 278	Cyclists and pedestrians wanting to access Honeysuckle Drive are encouraged to cross Stewart Avenue/ Hannell Street in a safe manner at the existing traffic lights. The REF and Traffic Impact Assessment both include description of cyclist facilities and potential impacts of the proposal. No cycle paths are proposed to be provided as part of the proposal. The provision of a cycleway is an opportunity to be investigated by Council and RMS.

Item	Summary of issue	Sub. no.	Response
	<p>No cyclist counts exist for the area.</p> <p>Cycle routes need to be considered. Will cycle paths be provided? Consideration needs to be given to provide alternate cycling routes.</p> <p>No account for Newcastle City Council's Cycling Plan, RMS own targets for increasing cycling uptake, Transport NSW and the State Government proclaimed aim to increase active transportation.</p>		
T36	<p>Impacts of closure of Railway Street for cyclists and pedestrians would not be acceptable.</p> <p>Loss of access to Wickham (via Railway Street) for cars, pedestrians and cyclists.</p> <p>Closure of Railway Street would create and unacceptably long distance between crossings for pedestrians and cyclists.</p> <p>750 metre detour required for pedestrians as a result of the closure.</p> <p>It is considered that distances greater than 400 metres will be difficult for pedestrians who are elderly, disabled, or those travelling with young children. The REF needs to address this issue and propose appropriate mitigation measures.</p>	82, 85, 88, 125, 139, 187, 194, 199, 235, 237, 238, 247, 261, 263, 272	<p>The effect on pedestrians and cyclists from the closure of Railway Street is acknowledged in the traffic and social impact assessment reports in the REF.</p> <p>For pedestrians and cyclists, the closure would require the re-routing of these trips to one of the other available crossing points at either Maitland Road or Hannell Street/ Stewart Avenue.</p>
T37	Unsafe access via footpaths in Charles Street	142	It is not clear why the proposed Charles Street footpath access to the interchange is considered unsafe. Additional safety is considered to result from the increased passive surveillance as a result of more people moving about the area.
T38	More crossings at Hannell Street are required as this is currently a safety issue. The lights are sequenced so that crossing takes excessive time.	71	The duration of pedestrians crossings at lights are managed by RMS. No changes to signal phasing are proposed under this REF.
T39	What areas are designated for pedestrian access? The Store car park for example?	59	Figure 5.8 of the REF indicates expected pedestrian circulation routes. These do not include The Store car park.
Impacts from heavy vehicles during construction/operation			
T40	What are the impacts of heavy vehicles through the residential areas? How many heavy vehicles? What routes would they take?	76, 79, 171, 243	The project does not involve extensive bulk earthworks therefore significant heavy vehicle movements are not expected. However the transfer of machinery to/from the site, deliveries and other requirements will mean that heavy vehicles will regularly access to nominated site entry points. Estimates of heavy vehicle movements during construction are provided in Section 7.3.1 of the REF. The routes to be taken by these vehicles will be identified as part of the construction traffic management planning to be completed prior to construction. Selection of the most appropriate routes will consider the capacity of the existing road, efficiency of movements as well as safety and noise considerations. Similarly, heavy vehicle movements during operation will typically be via the most direct route and using roads with the highest capacity/ adequate space.

Item	Summary of issue	Sub. no.	Response
T41	Poorly maintained road surface, kerb and gutter in Charles Street. Further consideration required.	142	The REF is not intended to resolve existing local traffic issues. The road surface in Charles Street is the responsibility of Council.
T42	During peak times there is an anticipated 47 vehicles accessing the construction site from Station Street. This will create congestion in this area.	243	The REF concluded that construction traffic is not likely to significantly affect local traffic conditions.
Traffic congestion/impact			
T43	What are the predicted future traffic changes? How would the project integrate with local streets?	5, 66	The impact of the proposal on traffic is considered and analysed in Section 7 of the REF and Technical Paper 1 of the REF. Additional results of traffic impact assessment are provided in Section 4.2 of this report. Figure 5.6 of the REF shows the proposed road works in local streets to accommodate the proposal.
T44	Question the long term need for buses to turn right from Stewart Avenue onto Honeysuckle Drive. Duplication of bus routes should be kept to minimum once light rail is operating. Instead bus resources should be directed to improve bus access in surrounding suburbs or improve the frequency of existing routes.	237	It is not intended that the shuttle buses would continue to operate following implementation of the light rail.
T45	Cannot understand how the closure of Railway Street will not have an impact on traffic from Hannell Street back to Cowper Street.	54	Detailed traffic modelling of the road network in the city centre and surrounding the Wickham interchange area was undertaken and the results are provided in section 4.2 of this report. The results show that during AM peak period, the intersection performance at the Cowper Street roundabout would improve from Level of Service C to B during construction of the interchange. The results in the PM peak period are very similar to the existing situation. These modelling results are considered to be representative of both the construction and operational phase of the proposal.
T46	Can the rail crossing timing be improved as they stay down too long. Also they need to be timed with nearby traffic lights.	194, 197, 215, 272	Unfortunately, it is not possible to optimise the phasing of the traffic lights with the railway gate closures. These two systems are completely independent systems, with the rail system having particular requirements which makes timing with the traffic lights very difficult.
T47	Is there potential to add speed bump to on Albert Street to discourage heavy vehicles using this street to access to the industrial area of Wickham.	68, 152	The inclusion of traffic calming measures on Albert Street does not form part of the scope of the project. Council is the responsible authority for local traffic issues.
T48	Remove the Hannell Street roundabout and replace with traffic lights	79	The removal of the Hannell Street roundabout does not form part of the scope of the project.
T49	Are the traffic gates at Civic to be opened? If so impacts of this should be considered.	187	The truncation of the heavy rail creates the opportunity for new accesses to be opened across the heavy rail corridor for cars and pedestrians. The removal of the boom gates at Merewether Street and these other corridor crossings will be subject to separate planning approvals.

Item	Summary of issue	Sub. no.	Response
T50	Dangar Street could be opened up to the intersection at Stewart Avenue/Hannell Street/Honeysuckle Drive to ease traffic in Station and Charles Streets.	243	The opening of Dangar Street is not required for the operation of the proposal.
T51	Documentation identifies that Bishopsgate Street and Charles Street will require some works. These works are not described. The assessments should identify any widening works.	261	As identified in section 3.1.1 of the Traffic Impact Assessment, adjustments would be required to Charles Street to make it one way only between Dangar Street and Railway Street. These alterations are shown on Figure 5.6 of the REF. No alterations would be required on Bishopsgate Street. No road widening is proposed for any of the other surrounding streets as part of the proposal.
T52	The diversion of traffic will impact on residential areas. Concern about the increase in traffic in residential streets in Wickham, in particular Albert Street. Existing traffic hazard will worsen at the intersection of unnamed laneway and Albert Street. Limit laneway traffic to one way only with no right turn off Albert Street for westbound traffic. Concern about the proposed taxi and car parking bays in the one way section of road on Station Street. The proposal would result in increased traffic in Charles Street. Plans to cater for increased traffic, particularly in the Wickham Industrial area, particularly to counter the loss of the Railway Street crossing. Consideration of rat runs through Wickham need to be considered.	27, 47, 62, 66, 67, 68, 142, 152, 165, 181, 189, 242, 251, 255, 261	Additional traffic will be generated in the area of the interchange as a result of the interchange development. These additional traffic movements are outlined in section 7.3.2 of the REF. The detailed traffic modelling shows that as a result of the closure of Railway Street, there will be less through traffic within the Wickham industrial area with the majority of traffic diverted from Railway Street to either Beaumont Street or Stewart Avenue/Hannell Street.
T53	Changes in the road network near Stewart Avenue (including reallocation of traffic from Railway Street) would not reduce traffic congestion. It may possibly increase the delays at this intersection.	2, 43, 46, 63, 79, 82, 97, 127, 138, 156, 171, 189, 194, 196, 197, 212, 215, 238, 242, 247, 263, 270, 272	The results of more detailed, regional traffic modelling are presented in section 4.2 of this report and indicate that there is no adverse effect on traffic congestion levels following the truncation of the railway in December 2013 including closure of Railway Street. Journey time estimates also confirm that there is a reduction in travel time between key nodes on Stewart Avenue/ Hannell Street following removal of the Stewart Avenue boom gates. Following completion of the interchange and prior to the commencement of light rail, conditions are considered to be similar to the construction phase.
T54	REF fails to record the delay caused by 440 bus movements to and from Station Street and from Stewart Avenue.	189	Changes to Route 440 bus operations do not form part of the proposal.

Item	Summary of issue	Sub. no.	Response
T55	What is the difference between waiting times for cars in traffic at Stewart Avenue now vs during the future light rail. This is important due to the urban growth occurring in the Newcastle area.	3	Section 4.2.3 of this report presents the results of travel times along Stewart Avenue in the AM and PM peak periods, resulting from the introduction of shuttle buses. During the AM peak, travel time reductions between 30 seconds and 1 minutes is achieved and in the PM peak, between 14 seconds and 24 seconds approximately. Travel times resulting from the construction of the light rail would be investigated during further assessments for the light rail project.
T56	Increased bus traffic will put major stress on already inadequate roads, in particular Honeysuckle Drive.	4, 88, 139, 164	Honeysuckle Drive is no longer being used for replacement bus services. All rail replacement bus services will now operate between Newcastle and Hamilton via Hunter and Scott streets. Bus routes 106 and 107 already operate along Honeysuckle Drive with no issues with the road width or roundabouts.
T57	<p>Congestion in area near the interchange would increase due to increased cars (people avoiding public transport due to inconvenience) and buses required to ferry people until light rail is constructed. Increased traffic congestion for Mayfield, Mayfield East, Hamilton (Beaumont Street), Broadmeadow and Tighes Hill areas.</p> <p>Shuttle buses along Hunter Street will create congestion as part of Hunter Street will be closed during construction of the light rail.</p> <p>Closure of Railway Street will add traffic to Stewart Avenue/ Hannell Street which will increase congestion (as in predicted in the Bitsios Report), particularly in the morning and afternoon peak periods.</p> <p>Additional traffic is not acceptable for residents and workers of the area.</p> <p>There will be congestion on all other streets. Where will all the cars go?</p> <p>What will be the likely traffic routes to access the station and Stewart Avenue.</p> <p>This closure will increase traffic on Stewart Avenue by 20 per cent.</p> <p>The REF makes no reference to the fact that the three road intersections delay north south traffic greater than 50% of the time.</p> <p>During peak times traffic becomes congested from Hunter Street back to Cowper Street roundabout.</p> <p>Temporary closures to Railway Street crossing to carry out track work increases congestion in this area.</p> <p>The traffic at present along Hannell//Stewart Avenue is chaotic between 8-10am. Light sequencing is as problematic as the rail crossing.</p>	1, 13, 14, 15, 16, 24, 40, 43, 44, 54, 57, 58, 59, 60, 61, 62, 63, 67, 68, 71, 76, 78, 79, 80, 85, 87, 90, 99, 137, 138, 139, 154, 156, 162, 164, 181, 183, 187, 189, 190, 191, 194, 195, 196, 197, 199, 202, 208, 212, 215, 219, 220, 235, 238, 245, 247, 248, 249, 250, 251, 252, 255, 261, 263, 270, 272	<p>Detailed traffic modelling on the road network in the city centre and surrounding the Wickham interchange area was undertaken and the results are provided in Section 4.2 of this report.</p> <p>During construction of the new interchange, the intersection performance in the AM peak period is improved at some intersections. Most intersections in the Wickham area show no significant difference compared to the existing conditions.</p> <p>In the AM peak period, the key intersections of Hunter Street/Stewart Avenue and Hannell Street/Honeysuckle Drive have a reduced average delay from 54 to 41 seconds and 37 to 29 seconds respectively. At Hunter Street / Stewart Avenue, this gives an improved performance changing from Level of Service D to C. Similar improvements to the intersections in Hannell Street north of Honeysuckle Drive will also result with improvements from Level of Service C to B. Consequently, an overall reduction in travel time of about one minute along Stewart Avenue between Cowper Street North and Parkway Avenue is achieved in the northbound direction.</p> <p>In the PM peak period, the level of improvement at the intersections and the reduction in the travel times is not as significant with little difference observed from the existing situation.</p> <p>During the operation of the new interchange, the road network impacts are considered to be the same as the above as there would be no changes to the network as a result of the proposal.</p>

Item	Summary of issue	Sub. no.	Response
	<p>Closure of Railway Street is absurd. This will have a disastrous effect.</p> <p>There is no benefit to closing the Railway Street crossing.</p> <p>The report does not demonstrate any benefits of removing the rail gates.</p> <p>There is a safety issue regarding the use of Hannell Street roundabouts with increasing traffic on Stewart Avenue.</p> <p>Closure of Railway Street will restrict current access to the foreshore from residents at Islington.</p> <p>No tracks should be removed until traffic surveys are undertaken to confirm the traffic flow improvements, if any, at Stewart Avenue.</p> <p>Claims traffic flows will be better without factoring in increased traffic resulting from rail closure.</p> <p>Would like to learn more about traffic modelling and how this is going to be addressed.</p> <p>Traffic modelling is incomplete.</p> <p>No comprehensive traffic study has been done. When will a detailed study be done?</p> <p>The whole system should be assessed, not just one part. Failure to model traffic flows in construction and operational scenarios.</p> <p>Insufficient information to assess local impacts.</p> <p>Detailed modelling of the traffic being diverted from Railway Street is being investigated and the results need to be provided. Will this include consideration of impacts of additional traffic volumes on the operation of the Selma Street/ Hunter Street intersection in peak traffic?</p> <p>The claimed improvements in car transit times at Stewart Avenue are unsubstantiated.</p> <p>The REF fails to adequately assess Stewart Avenue.</p> <p>Statements about improved traffic flows are only based on provisional studies with detailed studies to come.</p> <p>It is unclear how there will be improved traffic at Stewart Avenue with the addition of traffic from Railway Street, light rail, buses and pedestrians.</p> <p>There is no accounting for increased traffic with new University, residential, Law courts etc.</p>		

Item	Summary of issue	Sub. no.	Response
	<p>Quantify impact of construction and operation phases of the interchange on traffic flows in Hannell Street and Stewart Avenue using rigorous modelling.</p> <p>Include right hand priority bus signals (at Honeysuckle Drive).</p> <p>Predictions of improved traffic flow from the proposed removal of the level crossing signals must be balanced by factoring in the new signalling required for the buses.</p> <p>Model impacts on local traffic and parking in Wickham, taking into account the closure of Railway Street and demand for kiss-and-ride, taxis and parking at interchange.</p> <p>The TIA should carry out an assessment of the suitability of the existing road network (carriageway width/ parking restrictions/ visual condition assessment) to identify what upgrading requirements and additional car parking restrictions should be put in place to cater for additional traffic and parking demand</p> <p>Concerns are raised regarding the likely impacts on the Railway Street/ Albert Street intersection and the Albert Street/ Branch Street intersection approaching the Branch Street/ Hannell Street roundabout. An assessment of these intersections should be included in the TIA.</p>		
T58	<p>The bus stop at the Interchange needs to accommodate at least 2,500 people in the morning peak.</p> <p>How do you plan to transfer 2,500 people onto one bus at a time?</p> <p>Why are you assuming that 6 buses would be needed to carry those 2,500 people that your consultants didn't know about?</p> <p>Bus space provided is inadequate</p>	191	<p>The REF identifies that there are currently 2,500 passengers per day using Wickham, Civic and Newcastle stations. Based on the existing passenger alighting activity from the trains at Civic and Newcastle Stations, a maximum of 90 passengers per train are estimated to need to board the shuttle bus service at Wickham. This number of train customers can be easily accommodated with three buses at the Wickham Transport interchange.</p> <p>In order to adequately cater to the AM peak demand from the trains arriving at Wickham, an estimated shuttle bus service frequency of every 10 minutes or 6 buses per hour is being planned. Since the train arrivals at Wickham from the Maitland and Sydney/Central Coast lines do not arrive at even intervals, the shuttle bus timetable will be designed with a schedule to accommodate the expected loading patterns throughout the peak hour.</p>

Item	Summary of issue	Sub. no.	Response
T59	Traffic will be chaotic as people choose to drive into Newcastle. Major increase in motor vehicle traffic.	116, 125, 154, 191, 197, 235, 250, 272	The shuttle bus service to be provided post 26 December 2014 will provide a replacement service for the existing heavy rail. Its frequency and timing will be adequate to match the changing level of demand throughout the day and train arrivals and it will stop at similar locations at both the existing heavy rail stations and future light rail stops. Because of this, there is not expected to be a major increase in people driving into Newcastle.
T61	The lights on King Street and Hunter Street are not synchronised which impacts traffic movements on Hannell Street. Synchronise the lights at King Street, Hunter Street and Honeysuckle Drive.	60, 138, 160, 242, 251, 263	The removal of the heavy rail corridor provides RMS an opportunity to consider the phasing for these signals.
T62	Traffic in the vicinity of the new interchange does not appear to be adequately planned, as this is already an issue on these streets. Management of taxis, buses and other transport will result in bottlenecks, congestion and frustration for residents. Traffic routes through the Wickham area from the interchange need to be identified.	29, 43, 59, 79, 152, 181, 242	The Traffic Impact Assessment with the REF concludes that there are no significant impacts to local traffic in Wickham. Refer to Section 7 of the REF.
T63	A high proportion of the increased traffic in Wickham will be heavy vehicles accessing industrial businesses on Throsby Street and Railway Street. Measures must be taken to discourage an increase in heavy vehicle use along Albert Street which is 98 per cent residential.	67, 68	Following construction, the proposal is unlikely to increase heavy vehicle traffic in Wickham.
T64	Any consideration for traffic delays?	128	Impacts on traffic congestion were considered in Section 7.1 of the REF. Section 4.2 of this report outlines potential delays at key intersections both before and after implementation of the proposal during both the AM and PM peaks.
Parking (operation)			
T65	How is parking to be addressed as part of the interchange? Parking in this area (Wickham, Civic, Hamilton and Broadmeadow) is an issue particularly on the streets as Honeysuckle workers park here to utilise the free parking. The design is very quiet on parking. Is new parking to be provide due loss in other streets, in particularly to replace the 75 spaces lost in Station Street. Have parking restrictions been considered. There will be a loss of car parking spaces in Railway Street. Where will the extra parking be? Future development in the area will further place pressure on parking. There may be parking losses in Hunter Street associated with the extension of bus zones, in Beresford Street where construction starts and	4, 14, 16, 29, 43, 44, 46, 62, 63, 66, 70, 76, 78, 79, 80, 81, 82, 85, 87, 103, 124, 125, 129, 130, 139, 142, 144, 156, 181, 183, 187, 189, 195, 197, 199, 203, 208, 235, 242, 243, 245, 248, 250, 255, 261, 263, 272	There is no loss of parking in Railway Street as a result of the proposal. The REF documents the loss of about 75 on-street parking spots on Station Street as a result of the proposal. As detailed in section 7.3.2 of the REF, this loss is considered to be covered by available spots located elsewhere in the Wickham area. Council is currently developing a car parking policy/strategy to be implemented in parallel with the proposal which may involve time restrictions or paid parking. Following the truncation of train services on 26 December 2014, removal of the heavy rail corridor fencing will provide easy access for employees working on Honeysuckle Drive to public transport located on Hunter Street. This may help ease the parking availability in this area. There are not proposed parking changes in Hunter Street, Beresford Street or Bishopsgate Street.

Item	Summary of issue	Sub. no.	Response
	possibly in Station Street and Bishopgate Street to facilitate in/out movements of traffic.		
T66	Potential for increased competition for parking in the vicinity of Hamilton Station.	183	There is limited parking in the vicinity of Hamilton Station currently. It is not expected that parking demand will substantially increase as a result of the proposal since arrangement to replace existing heavy rail services in the eastward direction are being provided.
T67	Parking will be chaotic as people choose to drive into Newcastle.	116, 223, 263	This is not necessarily the case. The choice to drive into Newcastle is based on behavioural factors, and the cost and availability of car parking. As outlined earlier, providing additional options for entry and movement around Newcastle (including the shuttle bus and taxi pick-up point at the interchange) will limit the need for most people to drive into Newcastle.
T68	AECOM document estimates that thousands of more car parking spaces are required.	139	Additional parking does not form part of the proposal.
T69	There will be no park-n-ride due to cost of resuming adjacent private land	197, 272	Additional parking does not form part of the proposal.
T70	The McCarroll's Newcastle operation and customers uses on-street parking. Loss of parking spaces will increase competition for remaining spots.	243	Short term parking is still available in Dangar and Charles Street.
T71	Has any provision been made for staff parking near the station?	248	No staff parking is currently proposed to be provided at the new Wickham Transport Interchange.
T72	What is the impact on the Newcastle CBD parking situation when the University's new CBD campus and the new Law Courts open? Both of these are located within walking distance of existing stations. This may result in people driving.	252, 263	Parking management for these developments is outside of the scope of this REF.
T73	Where will the passengers park at Broadmeadow? Nothing has been prepared to cope with passengers arriving here.	260	No additional parking is proposed at Broadmeadow Station.
Assessment issues – methods and scope			
T74	Stockton residents arriving in the city via the ferry have not been considered in terms of train access.	1	Shuttle buses to be put in place during construction of the interchange and prior to light rail would service Queens Wharf. Passengers would be required to cross the rail corridor to Scott Street to meet the shuttle buses.
T75	No survey has been completed on who and for what reasons passengers use trains beyond Stewart Avenue (Wickham, Civic and Newcastle stations) Need to collect data on potential new users of connections across railway. Research the intentions of current train travellers if the proposal goes ahead.	1, 181, 189, 194	Section 4 of the REF provides the strategic context for the existing constraints of the area and the justification for the proposed urban renewal strategy.
T76	In regards to the Railway Street crossing, is the 285 pedestrian count based on one count? The report claims that the pedestrian traffic around	194	Pedestrians were counted in both directions crossing the railway on two days between the hours of 7am and 9pm on a weekday and on a Saturday. Passengers at Wickham arrive by train as well as by walking from the local

Item	Summary of issue	Sub. no.	Response
	the interchange consists of three main groups including 'bus and train passengers walking to and from Broadmeadow, Hamilton and Wickham stations'. Given the distance to these stations this is unlikely.		pedestrian catchment.
T77	The TIA is based on counts conducted by others in recent years. The last count for Stewart Avenue was 2010. There is no date on the traffic count done on Railway Street. The traffic count was not conducted with a coordinated objective of the project.	194, 272	The 2010 data for Stewart Avenue and other streets were the most recent available. During the preparation of the REF, the traffic team worked closely with RMS and Council to ensure the information used and the analysis conducted with accurate and representative of existing conditions as far as possible.
T78	TIA is only done on current traffic modelling. This has led to recommendations which focus on car movements and ignoring difficulties with other modes.	237	The traffic assessment considered all traffic movements including pedestrians, cyclists, buses, trains as well as private vehicles. The traffic modelling was conducted considering existing, construction phase and day of opening scenarios. The impact on key arterial roads was a key issue for the project resulting from the truncation of the railway and provision of shuttle buses.
T79	A proper bus layout is required at the front of the station with adequate seating and shelter.	248	People wishing to access bus services or the proposed shuttle buses would be required to walk to Hunter Street to meet the buses which travel along this road.
T80	The operational road movements stated at Station Street (600 per day) appears to be an underestimation given that one bus meets each train movement (440 bus movements) plus 100 taxis (200 movements) and 1000 private vehicles (2000 movements).	189, 251	No buses will use the interchange facilities in Station Street.
T81	The TIA indicates that there are 3,600 journeys to Newcastle and Civic per day on trains. The assumption is that this is about 1,800 people per day. However as not all will be return journeys it is likely to be more than 1,800 people. Buses will run every 10 minutes from Wickham. What modelling has been done to prove this will be adequate? This will not carry the train passengers in peak times.	187, 242	The provision of shuttle buses has used this information as an indicator of likely capacity, however more detailed, peak hourly analysis was also conducted to determine the number of shuttle buses likely to be required.
T82	How have the passenger numbers per day been counted? The absolute minimum transport statistics should include a typical weekday timetable showing train capacity and anticipated passenger numbers. A full V set train will require 29 buses to transport its passengers from Wickham to Newcastle Station.	81, 189	The data used in the REF included both historical (statistical) counts conducted by others as well as specific boarding and alighting counts conducted in November 2013. The frequency of the bus services was determined based on the highest 10 minute peak demand during the peak hour on a typical weekday to ensure adequate capacity would be provided.

Item	Summary of issue	Sub. no.	Response
T83	Does the REF include the following details regarding pedestrian counts undertaken by URS: How many days were counts taken? What were the dates? What were the weather conditions?	187	The pedestrian count data undertaken by URS was made available as background information for the REF.
T84	The modelling ignores the negative points relating to the Wickham transport interchange.	123	The modelling includes all foreseeable changes anticipated as a result of the proposal.
T85	Has a transport or origin/ destination study been done?	126	A transport origin/destination study has not been undertaken as part of the proposal.
T86	No counts of cyclist movements have been undertaken.	194	Observations made during the preparation of the REF suggest that very low numbers of cyclists use this route.
T87	Model impacts on areas served by the Hunter Line, including commuters, seniors, visitors and students.	181	This was generally included as part of the social impact assessment.
T88	Quantify inhibitory effect of crossing rail line on activity in Newcastle. Develop evidence based scenarios to support the assertion that removal of the rail line will revitalise the city.	181	The objective of the proposal is to reconnect the city centre with the waterfront. Government has decided that the removal of the heavy rail and the implementation of light rail will maximise the chance of revitalisation succeeding based on examples in other parts of Australia as well as overseas.
T89	Station barrier counts stated in the REF are different to those recorded in the NSW Bureau of Traffic Statistics. Quality of the barrier count data is questioned.	181	In addition, to the historical ticketing data used from the Bureau of Transport Statistics, specific boarding and alighting counts were conducted for the project were conducted at each station for a typical weekday in 2013. Both sets of data were synthesised to determine potential impacts.
T90	The TIA does not mention the impact of Mayfield wharf development and the potential for 200,000 truck movements in Stewart Ave.	189	Consideration of this development is outside the scope of the REF, however we would note that the routes chosen for truck movements would depend upon their destination and that alternatives to Stewart Avenue are potentially available.
T91	Passenger counts in TIA Table 3.1 are likely to be very inaccurate. No weekend figures. No estimates of future patronage. No indication of the data source or the date of the count.	189, 203, 254, 270	These counts were commissioned by Transport for NSW in 2013. Future patronage estimates were based on future land use and known developments in a passenger demand model.
T92	A plan showing the station and access to short term parking and taxi bays would be helpful.	195	Please refer to Figure 5.6 of the REF.
T93	The results of the detailed regional traffic model are too late for public display. When will we see evidence?	195	The results of the detailed traffic model are provided in Section 4.2 of this report.
T94	TIA page iii should state 'four' instead of 'three' key intersections.	195	Noted.
T95	Comments and amendments made to the TIA	195	The amendment was made to correct the location of a road crossing.

Item	Summary of issue	Sub. no.	Response
T96	The TIA has not satisfactorily assessed the suitability of the local road network likely to be affected by the proposal including Bishopsgate Street, Charles Street, Station Street, Railway Street, Albert Street and Branch Street.	261	The traffic volumes using these local streets will be reduced as a result of the closure of Railway Street (3,500 less vehicles per day), however additional traffic volumes are expected to use Station Street, Charles Street and Bishopsgate Street as a result of interchange traffic movements (estimated up to 600 vehicles per day). In addition to this, Council's future parking policies may further influence the numbers of vehicles using these local streets.

Heritage

Item	Summary of issue	Sub. no.	Response
Impacts on non-Indigenous heritage			
H1	The heritage study states the design of the interchange will be sympathetic to Newcastle City Centre conservation area and nearby heritage items. More detail should be provided to demonstrate how new station's design will moderate the size and scale of the new building and its impact on the settling of nearby heritage items.	174	The proposed new station buildings will be of an appropriate scale and form to satisfy railway operational requirements. The proposed design of the interchange would be contemporary, however sympathetic to the conservation area and nearby heritage items. While the interchange is adjacent to the locally listed former Newcastle Cooperative Store, the significant architectural elements of this item are located on its Hunter Street elevation. The interchange is located at the rear and cannot be seen in the same view lines as the Hunter Street facade. Through detailed design development, further design definition will be available to demonstrate how the new interchange design responds to local heritage values.
H2	Concern about the impact to heritage buildings. Newcastle has many older buildings which give it its unique character, and while some of these older structures may be not listed on a heritage register they contribute to inner Newcastle's sense of history, and are valuable assets. It would be vandalism to remove the Former Newcastle Co-operative Store or the old Wickham School of Arts building.	235, 248	As detailed in Section 8 of the REF and in the Heritage Impact Statement, the removal of heritage items is not proposed. The proposal is not considered to result in any direct impacts on any adjacent heritage items. Some minor indirect impacts were identified, however mitigation measures specified in Section 9.5 of the REF have been proposed to minimise these impacts.
H3	The existing rail line has heritage significance as it has been in use since 1857. The impacts on the line should be considered as part of the REF. The removal of the line has negative implications for Newcastle and Civic Railway Stations, which are both working stations and listed on the State Heritage Register. Impacts of the closure of these stations should be addressed in the REF and not the Residual Corridor Management Plan. This is because the use of these stations plays a large role in their significance. Sympathetic reuse of the stations is welcomed, however it is difficult to see how this would occur	174, 187, 262, 267, 268, 269	As detailed in Section 8 of the REF and the Heritage Impact Statement, the heritage values of the railway have been considered in the impact assessment. Transport for NSW acknowledges the potential for impacts on heritage values in the rail corridor east of Stewart Avenue following cessation of rail services. Transport for NSW proposes to work with Sydney Trains, NSW Trainlink and the Heritage Division to manage heritage impacts ongoing with the design and construction of the project. The Residual Corridor Management Plan is a governance tool to coordinate and manage responsibilities across a diverse group of stakeholders.

Item	Summary of issue	Sub. no.	Response
	while maintaining their heritage significance.		
H4	<p>Are there likely impacts on the Hamilton Railway Station Group (State Heritage Register, includes the signal box) as a result of the upgrade of services infrastructure? Visual impacts are also likely on the station due to the presence of the stabling yard.</p> <p>The REF does not address these issues in any detail or provide sufficiently detailed mitigation measures to demonstrate that there is protection to the item. If impacts are likely, approval under s60 of the Heritage Act is required.</p> <p>Detailed work method statements describing work practices needs to be prepared to ensure protection of these sites.</p>	174	<p>As detailed in Section 8 of the REF, the potential for impacts to the Hamilton Railway Station Group during the construction of the project have been assessed. Section 8.4 of the REF proposes appropriate mitigation measures to manage likely impacts.</p> <p>An application under section 60 of the <i>Heritage Act 1977</i> has been prepared for potential impacts on the Hamilton Railway Station Group. This application is accompanied by a more detailed heritage impact assessment.</p>
Assessment issues – methods and scope			
H5	The Heritage Impact Statement states that only a small portion of the Newcastle City Centre Heritage Conservation Area falls within the eastern area of the proposal site. In fact a large part falls within the project area between Wickham and Newcastle Stations.	268, 269	It is acknowledged that much of the corridor between Wickham and Newcastle is located within the conservation area.
H6	The REF does not describe any detailed excavations or archaeological assessment, particularly the Hamilton Rail Depot and Triangle, the 1853 railway corridor itself and the former Tramway Substation. For sites not included on the State Heritage Register, an application to the Heritage Council is required under s139 of the Heritage Act 1977, if excavation is proposed that is likely to impact archaeological remains. The railway between Newcastle, Civic and East Maitland has existed since 1858. An archaeological assessment is required and should be used to inform the detailed design of the project.	174	Transport for NSW is receiving ongoing advice with respect to the need for section 139 permits. Should excavation be required which is likely to impact archaeological remains, Transport for NSW will seek the necessary permits.
H7	Newcastle and Hamilton Stations as State Heritage Register listed items, require conservation management plans to be prepared and submitted to the Heritage Council when major works are contemplated for State Heritage Register items.	174	Transport for NSW has applied to the Heritage Division for approval under section 60 of the <i>Heritage Act 1977</i> for potential impacts on the Hamilton Railway Station Group.

Air Quality

Item	Summary of issue	Sub. no.	Response
Construction impacts and mitigation			
AQ1	Concern about air quality impacts during the construction period and the impacts on health and damage to property. How will air quality be monitored on an ongoing basis?	79, 80, 81, 84, 189	Substantial changes to air quality from the proposal are not expected as there is not a large volume of earthworks to be undertaken. Mitigation measures outlined in Section 10.4 of the REF would minimise the impacts of dust generation and other potential sources of air pollution. Air quality is proposed to be visually monitored during construction.
AQ2	No detail about emissions from motor vehicles caused by the proposal.	189	The project site is located within a highly modified urban environment and is located in close proximity major roads with high vehicle volumes and railways which currently operate diesel services. The use of additional plant and machinery during construction is not considered to significantly increase local air quality.
Operational impacts and mitigation			
AQ3	The removal of diesel trains and their replacement with buses is not likely to reduce emissions or improve air quality. The smaller carrying capacity of buses and the anticipated increase in cars entering the city will increase, not decrease air quality.	137, 235	The cessation of rail services is likely to improve local air quality due to the removal of diesel train emissions east of Stewart Avenue. Whilst it is acknowledged that buses have their own exhaust emissions, these emissions are not likely to significantly affect air quality. The REF does not conclude that increased car use would result from the proposal.

Sustainability

Item	Summary of issue	Sub. no.	Response
Approach			
SU1	The construction of new infrastructure when existing infrastructure exists is contrary to the principles of ecologically sustainable development. Sustainability also requires providing transport solutions that are not car based and contributes to long term quality of life.	239	The design of the Wickham Transport Interchange proposal has been developed in accordance with the Transport for NSW Sustainable Design Guidelines. Opportunities for reuse of existing infrastructure and materials are a target of the guidelines. The proposed shuttle bus services and future light rail project will maintain public transport accessibility to the Newcastle city centre.
Effectiveness/outcomes			
SU2	The project is not sustainable due to increased car use and therefore CO2 production.	16	The REF does not conclude that increased car use would result from the proposal.
SU3	Passengers are going to be taken off the most sustainable transport option and put onto buses which rank third for sustainability.	235	The proposed shuttle buses will comprise contemporary vehicles that meet exhaust emissions standards.
SU4	The Wickham interchange will waste public infrastructure and does not contribute to the sustainability of the city or its region. This is not considered in the REF.	239	The do nothing scenario is considered in Section 4.3.3 of the REF. The design of the Wickham Transport Interchange project has been developed in accordance with the Transport for NSW Sustainable Design Guidelines.

Other environmental issues

Item	Summary of issue	Sub. no.	Response
Flooding and drainage			
FD1	The drainage design needs to be reviewed due to poor operating drainage in the Wickham area in particular in Charles Street where ponding occurs.	142, 176	Section 14.2 of the REF identifies existing flooding conditions at the proposal site. The drainage design would ensure stormwater is efficiently and effectively discharged and would not worsen existing flooding conditions. The resolution of existing flooding issues in the area is not within the scope of the proposal.
FD2	During the 2007 flood, the interchange site was flooded. The proposal is not considered to significantly alter flood levels; however the interchange should be designed to be above 3.00m AHD to put it above the flood levels.	261	Detailed design of the infrastructure would be undertaken in accordance with relevant building and engineering design standards and in consultation with Newcastle City Council.
Land use and property			
LU1	Who will benefit because they own the land? Who stands to benefit?	43, 44	The proposal is contained wholly on land which is owned by Government and no private property is required to build and operate the proposal.
LU2	Devaluation of property	79	There is no evidence that the proposal would result in a reduction in property values.

Proposal construction

Item	Summary of issue	Sub. no.	Response
Construction hours			
PC1	Working on public holidays is a disruption of community who work long hours. Peace will be shattered.	79, 81	Most works would be undertaken during standard work hours where possible (refer to section 5.3.2 of the REF). However for safety, scheduling and other reasons, some works would be required outside of standard working hours (e.g. on weekends, public holidays and night time), particularly during scheduled rail shutdowns.
Construction program			
PC2	The program should include an additional stage to implement the interim arrangements.	261	Table 5.1 of the REF outlines the indicative construction program and key work stages.

REF and EIA process

Item	Summary of issue	Sub. no.	Response
EIA process			
R1	Why has there been no study on the impacts done first?	127	The REF and associated specialist studies assess the impacts of the proposal in accordance with the provisions of section 111 of the <i>Environmental Planning and Assessment Act 1979</i> .
R2	Proposal states it is the first of a larger project. Shouldn't the entire project have been approval first?	181	The Newcastle Light Rail project, and future land use within the former rail corridor will be considered as part of future planning approvals for the former rail corridor

Item	Summary of issue	Sub. no.	Response
R3	ARTC is required to prepare an EIS when there is capital investment of \$50million for determination by Minister for Planning or their delegate due to provisions of the State Environmental Planning Policy (State and Regional Development) 2011. Where are the environmental impact statement documents?	187, 235	As detailed in Section 3 of the REF, the proposal is permissible without consent <i>under State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)</i> . Clause 8 of the State Environmental Planning Policy (<i>State and Regional Development</i>) 2011, the project is not deemed State significant development, and as a consequence, an environmental impact statement is not required.
R4	REF does not address the key purpose – whether the proposal is ‘likely to significantly affect the environment’. An environmental impact statement should be prepared in accordance with the act.	189, 198, 239	The key conclusion of the REF is that the environmental impacts resulting from the proposal are not significant and that an EIS is not required.
R5	Will the revised version of the REF form part of the submissions report?	258	The submissions report includes all necessary additional environmental impact assessment.
REF document			
R6	The REF should clearly define the three tiers of areas which should be considered in the REF, these include: Area directly impacted by the construction of the project Area impacted by vehicles using the interchange (eg shuttle buses etc) Area in which is serviced by the rail line, including the Hunter region. The study area for the REF should include: all areas where passengers come from (eg Maitland and Central Coast) and the area of traffic modelling.	134, 181,189, 261	The REF includes consideration of the potential benefits and impacts of the proposal in all these areas. The REF includes consideration of impacts from both the construction and operation of the project which includes the area directly impacted by construction and the areas impacted by vehicles as suggested. The latter is specifically addressed by the traffic and transport assessment of the REF. The area serviced by the rail line (the last bullet point) is shown in Figure 1.2 and 2.1 (and discussed in related sections) as well as the traffic and transport and social impact assessments. Both the traffic and transport and social impact assessments consider regional impacts including the benefits and impacts on people from areas surrounding Newcastle including the Central Coast and Hunter Valley.
R7	There are no details of the railway station design.	44	Section 5 of the REF describes the proposal in detail, including the indicative designs which are also shown in the relevant figures.
R8	No estimates of less mobile people, people with surfboards etc who use the trains and therefore may experience issues with the buses.	189	Usage statistics of the existing train service are provided both in the main REF document as well as the accompanying specialist reports. Less mobile people and persons with disabilities, are acknowledged in the REF (particularly as part of the social impact assessment). The specific proportion of total passengers that these groups represent was not available at the time of the preparation of the REF.

Item	Summary of issue	Sub. no.	Response
R9	<p>The REF document is not a complete document with many impacts not adequately addressed, in some case information is said to be provided at a later date. When would this information be available?</p> <p>Some impacts are inconclusive, while others are high level impacts.</p> <p>The REF tends to be biased towards the interchange project and does not adequately justify the project.</p> <p>The REF does not adequately address: parking, noise, safety of residents, economic consequences, strategic consequences.</p> <p>The documents on exhibition represent a concept, rather than a final proposal, and are inadequate for serious comment.</p>	1, 4, 5, 15, 56, 58, 76, 80, 146, 181, 189, 195, 197 198, 203, 238, 239, 272	<p>The REF fulfils the requirements of section 111 of the <i>Environmental Planning and Assessment Act 1979</i> and relevant guidelines. A traffic and transport impact assessment was completed in accordance with contemporary standards, however it was noted that more detailed regional traffic modelling was also underway and the results of this study would be presented separately. These results are included in Section 4.2 of this submissions report.</p> <p>The focus of the REF is on the truncation of train services beyond Stewart Avenue, the construction of a stabling yard at Hamilton and of the new station and transport interchange at Wickham.</p> <p>The need and strategic justification for the proposal is outlined in Section 4.1 and Section 16.1.</p>
R10	It is unclear what exactly is within the scope of the REF.	181	The scope and study area used in the REF is clearly outlined in a number of places in the REF including Section 1.2, 2.3 and Section 5.
R11	REF should not be approved until it is considered in a document with the assessment of the light rail and the ceasing of trains running to Newcastle.	181, 239	The Wickham Transport Interchange and Newcastle Light Rail projects are being progressed as separate projects following announcements by the NSW Government. Transport for NSW is leading the project development work for the transport services components of the Newcastle Urban Renewal and Transport Strategy which is led by UrbanGrowth NSW. The future light rail project will subject to separate planning approvals/environmental impact assessment.
R12	<p>Reports were missing from the REF.</p> <p>What studies have been completed to determine if this project will work?</p>	5, 24	<p>Physical copies of the main REF document only were placed on display at six display locations in Newcastle and Sydney. Electronic copies of the main REF document and detailed technical papers were made available on the Transport for NSW website. These documents are still available on the website. The technical papers were not made physically available however a summary was included in the main REF document. The detailed technical papers which support the REF and were published electronically were:</p> <ul style="list-style-type: none"> • Traffic and transport • Non-Aboriginal heritage • Noise and vibration • Socio-economic • Visual and urban design.
R13	Project seems to be changing. Light rail was all of a sudden shown on some information at the sessions.	16, 19, 238	The light rail project is being developed separately from the Wickham Transport Interchange project and is not part of the REF documentation. Light rail information was made available to the public at information sessions to assist broader understanding of the program.

Item	Summary of issue	Sub. no.	Response
R14	<p>There are some questionable statistics, such as: Average income of West End residents is \$547/week, and that the number of residents is 1500 plus. Cityrail train from Hamilton to Newcastle is described as the Newcastle Branch Line, which is misleading. Issues of incorrect terminology and historical dates. The branch Line didn't open in 1857. Newcastle is the second biggest city in NSW it only has 4000 people.</p>	37, 112, 146, 189	<p>Average income and population statistics were obtained using Australian Bureau of Statistics data from the 2011 census. Because the names of census districts do not have the same names and boundaries as suburbs, it can sometimes result in confusion.</p> <p>The railway line between Hamilton and Newcastle is referred to as a 'branch line' as it is a short stretch of track which is located off the Main North Line which travels through Broadmeadow. This is the correct name as used by NSW Trains.</p> <p>As documented in the State Heritage Inventory Database, the first section of the branch line, from Honeysuckle (near existing Civic Station) to East Maitland was opened in 1857, with the rest of the line to Newcastle Station opening in 1858. Separately, the line between Newcastle and the northern bank of the Hawkesbury River (near present day Wondabyne) was opened in August 1887.</p> <p>Reference to Newcastle being the second largest city relates to the cumulative population of the greater Newcastle area, not just the suburb of Newcastle to which the smaller figure relates.</p>
R15	<p>There needs to be explanatory notes on how to read the tables. We were assisted at the session but this needed to be more widely available.</p>	55	<p>Some of the tables are more complicated than others and because of the complexity of the information, it is often not possible to just read the tables without the preceding information as well. We have tried to simplify the information using tables as far as possible using differential text formatting to highlight important information.</p>
R16	<p>The REF document concentrates on justifying the closure of Railway Street. The document fails to consider what will happen if Railway Street crossing is closed.</p>	61	<p>Both the traffic and transport and social impact assessments address the potential impacts from the proposed closure of Railway Street. Vehicular traffic would redirect to other routes. Impacts on pedestrians and cyclists would potentially involve longer walks and rides, depending upon the origin and destination. Routes to nearby businesses may also need to change.</p>
R17	<p>The GHD REF report contains considerable fundamental errors. Only three crossings were mentioned at Beaumont Street, Stewart Avenue and Merewether Street. Where is Railway Street and Maitland Road? What about all the other crossings?</p>	146	<p>There was a typographic error in the REF where Merewether Street was incorrectly mentioned in place of Railway Street. The only three at-grade road crossings within the study area are: Beaumont Street, Railway Street and Stewart Avenue. Maitland Road is an overpass and Merewether Street is outside of the REF study area (as are other crossings not mentioned).</p>
R18	<p>The signage is inconsistent. It originally was Newcastle (misspelled) and now it says Wickham.</p>	147	<p>Noted. The typographical errors on the early works site signage were rectified by the contractor.</p>
R19	<p>REF does not adequately examine the risks to success. Should give more attention to negative impacts on commuters.</p>	164	<p>Impacts on commuters are mentioned in the REF, particularly in the social impact assessment. Changes to public transport access points during and following construction, and travel time increases for passengers travelling beyond Wickham are identified. These impacts may be felt more by those passengers who are less mobile or those travelling with young children.</p>
R20	<p>Anticipated patronage figures for the Wickham Station are not shown in the REF. Again core fundamental information is not provided.</p>	189, 191	<p>Broad patronage details are provided in Section 2.1 while further details (based on 2012 barrier counts) are given in Section 7.2.2. More recent (2013) patronage data is presented in Figure 3.1 and Figure 3.2 of Technical Paper 1.</p>
R21	<p>Beresford Lane does not extend between Stewart Avenue to railway as shown in REF.</p>	191	<p>Noted, Beresford Street does not extend beyond Cooper Street on the southern side of the railway line at Wickham. This is a minor graphical error which has not affected the assessment or design development.</p>

Item	Summary of issue	Sub. no.	Response
R22	Prevailing winds are actually from west and north west in an offshore wind and the prevailing wind is from the north east to east in an onshore wind.	212	The information presented in the REF was based on historical readings of wind direction measured at the Nobby's Head weather station managed by the Bureau of Meteorology.
R23	Objection to GHD being commissioned to write this report and to having an advisory role in the future of Newcastle. GHD wrote the Economic assessment for the previous proposal to cut the rail line. This assessment approach was criticised by independent reviewer, Professor Graham Currie (Monash University).	235	GHD were commissioned to undertake the REF as a result of a fully transparent and competitive tendering process overseen by a probity advisor.
R24	The REF states that the additional sidings at Hamilton are to be used for train stabling and carriage re-arrangement. Normal timetabled passenger trains do not need to re-arrange their carriages, or for 'locos' to run around trains, as one of the documents suggest.	238	Noted. However, the stabling yard may also be used for this purpose under contingency conditions or when there is a malfunction on the network. Some timetabled services require the making and breaking of trains.
R25	Contrary to the disclaimer on page 69 of the REF, GHD does have an obligation and responsibility to update the report to account for changes. GHD has a liability regarding this report.	238	It is standard practice for most consultancy reports to contain a disclaimer of some form. This standard disclaimer is only relevant to GHD's client for the project, Transport for NSW.
R26	The conclusion in the REF did not explain how the finding that the proposal would not have a significant effect on train passengers and the human environment of Newcastle was reached.	187	The conclusion is based on the findings of the various technical assessments presented in Sections 7-14 of the REF and in view that the mitigation measures outlined in Section 15 would reduce the impacts identified. The effect on train passengers was considered as part this conclusion, primarily on the basis that an alternate interim form of transport to destinations beyond Stewart Avenue would be provided.

Consultation

Item	Summary of issue	Sub. No.	Response
Community sessions			
C1	No Urban Growth personnel at presentation.	4	UrbanGrowth NSW personnel did attend some of the community sessions and provided information on the broader Newcastle Urban Renewal and Transport Strategy.
C2	There was no one writing anything down at the sessions Sessions were not held on the Central Coast, Lake Macquarie or Upper Hunter. Holding the sessions in Newcastle and Maitland can be difficult for some people.	7, 189, 197, 235, 259, 272	Physical copies of the REF were placed on display in Maitland, Newcastle and Sydney, and all documentation was available on the Transport for NSW project website. Four community information sessions were carried out in Newcastle and one in Maitland. All information available at the drop-in sessions was also available on the website project web site and a project infoline was established for people who may have had questions or who required further information. The purpose of the community information sessions was to provide an opportunity for the community to ask questions about the project and to encourage written feedback.

Item	Summary of issue	Sub. No.	Response
			<p>Project team members at the sessions were not writing anything down, as REF submissions must be written by the person making the submission. The submission forms available at the information sessions also contained the project email and address details in case people wished to take the forms away and send feedback later.</p> <p>Submissions could be posted using regular mail or submitted via email so attendance at the community sessions was not necessary in order to provide feedback.</p>
C3	One of the community sessions (or more) should include a visual presentation which is then followed by a Q&A session.	15, 140,148, 151, 172, 263	<p>We received several requests for a presentation and Q&A session by a number of people attending the final public information session on Saturday 16 August. In light of this, a presentation that included frequently asked questions was prepared and displayed continuously at the final information display. This enabled people to drop in at any time and see the same information presented. The presentation also referred people to speak with members of the project team if they had further questions.</p> <p>Previous experience has shown that people are more comfortable with a drop-in session and are able to gain better quality information when they can ask questions one-on-one. They can also attend at a time that suits them.</p>
C4	Staff at sessions struggled to provide answers with many saying 'I don't know'. They struggle to show how the project would help Wickham.	189, 238	Many of the questions asked at the information session were outside of the scope of the REF i.e. about light rail or urban renewal and others were about information not presented in the REF. Accordingly, not all queries were able to be answered.
C5	Copies of the main report were not made available to be taken home to be properly studied but feedback forms offered for completion.	235	Copies of the REF document were made available in hardcopy at the community information sessions. We asked that these copies not be taken home by individuals to ensure everyone attending the session had an opportunity to view the document. On some occasions, our team mailed copies of the REF document to individuals upon request. The main document was also put on display in five local and two Sydney locations and these locations were advertised. All the REF documentation was made available on the Transport for NSW website during the exhibition period and remains on the website for people to review.
Consultation process/objectives			
C6	<p>The public have not been made aware of the REF and the project as a whole.</p> <p>Consultation to date has been lacking and has made it appear non-transparent and that a decision has already been made. This has led to community opposition.</p> <p>Consultation should have commenced years ago. Community input to date has been ignored.</p> <p>What opportunity has the community had for input? There is no evidence of community contact and feedback mechanisms.</p>	2, 3, 9, 27, 56, 70, 82, 84, 100, 121, 128, 159, 203, 208, 235, 238, 262, 263, 267	<p>Section 6 of the REF provides a summary of the community and stakeholder consultation conducted prior to, during and post display of the REF.</p> <p>The REF public display and consultation sessions were advertised in local and regional newspapers and online. The Minister also distributed a media release which resulted in stories in local media. To provide the best opportunity for people to attend and provide feedback on the REF, the public information sessions were held at varying times over several weeks and were attended by representatives from Urban Growth, Roads and Maritime Services, Transport for NSW and GHD.</p> <p>Section 6.4 of the REF presents a summary of the issues arising from public consultation to date. This report also acknowledges and responds to feedback received to date.</p> <p>Contact details have been provided on all documentation to date. All contact is recorded in Transport for NSW's system with responses provided where possible or required.</p>

Item	Summary of issue	Sub. No.	Response
C7	Who are the key stakeholders the brochure refers to? Surely commuters from outside the CBD are stakeholders? What about Save Our Rail? Why is Newcastle Council the only council consulted?	58, 128, 235	<p>The key stakeholders referred to in the project newsletter are listed in Section 6 of the REF and include RMS, Newcastle City Council, UrbanGrowth NSW, Sydney Trains, NSW Trainlink and the light rail planning team.</p> <p>Consultation has been carried out both during the preparation of the REF and public display period. The project team gave a briefing to Maitland City Council councillors and members of the Executive Leadership Team on 26 August 2014. Save Our Rail were offered a face to face briefing, and representatives were spoken to on multiple occasions at the community information sessions.</p>
C8	<p>What confidentiality applies to a person making a submission? Will their name be made public in the submissions report unless specifically requested not to be published?</p> <p>For interests of transparency, request all submissions be published in full online.</p>	145, 198	<p>The submission report will not include any names or copies of submissions for privacy reasons. Individual submissions will also not be made public. Each submission is provided with an identification number which would be made aware to only the person who has made the submission.</p>
C9	<p>There has been no consultation with landowners in the vicinity of the proposed stabling yard.</p> <p>Why have businesses been consulted and not residents. Residents of Wickham need more consultation. Save Our Rail leaflets were the first many heard of this project.</p> <p>Meetings with businesses and residents should have occurred long ago.</p>	84, 146, 153, 160, 181, 189, 203	<p>Unfortunately due to the project timeline to prepare the REF documentation, an opportunity to consult directly with individual landowners in the project area was not possible before to public display.</p> <p>All residents and businesses within approximately 200m of the study area were letterbox dropped a project newsletter (approximately 2,000 newsletters), with details of the project phone and email contact details before public display. Businesses in Wickham with potential to be impacted by the closure of Railway Street were offered an opportunity for a project briefing during the public display period.</p>
C10	Train staff would like to know what is going on with train services from December.	157	<p>Detailed timetabling and other information relating to train services is currently being developed and briefings will be held with rail staff in the lead up to the truncation. Train staff should contact their manager if they have specific questions about the effect of the proposal on train services.</p>
C11	Consultation with the community outside of Newcastle and Maitland has not occurred. Rail commuters have not been told of the closure of the line.	179, 186, 190, 203, 205, 206, 207, 214, 235, 253, 265, 240, 241, 244, 256	<p>During preparation of the REF, posters were placed at Newcastle, Civic, Wickham and Hamilton railway stations and newsletters were handed out to rail commuters at Newcastle and Civic stations during the morning and afternoon peak periods prior to the public display. The Minister has also made a number of media announcements during 2013 and 2014 regarding the truncation project that were covered by a number of print and digital media outlets.</p> <p>The REF public display and community information sessions were also advertised in local and regional newspapers and online.</p>
C12	None of the bus operators have been involved in consultation activities during the REF preparation.	182	<p>Representatives of Transport for NSW have been liaising with bus operators. A contract has been awarded to operate the shuttle buses until the future light rail project.</p>
C13	Submission times need to be extended.	183, 200	<p>The advertised closing date for submissions to the REF was, Saturday 30 August 2014; however, TfNSW continued to accept late submissions until 30 September 2014 as a courtesy.</p>

Item	Summary of issue	Sub. No.	Response
C14	The brochure provided did not include a mailing address or details of the submission period.	184, 185, 259	The mailing address was included in the Feedback Forms provided at each of the public information sessions, as well as on Transport for NSW's website. Details of the submission period were provided on the front page of the project newsletter, and the project telephone number, email address and website address were also provided.
C15	We have had no responses to date on our questions. When will I received an acknowledgement of receipt of submission and when will a response be provided to each issue in my submission?	185, 238, 257	Responses have been provided to date where possible, although normally detailed questions and responses are provided as part of the submissions report (this report). All people who made a submission will be provided with a unique submission number to assist them in identifying the responses to their submissions.
C16	Put a survey in the next Newcastle rates notice and ask residents to vote on the removal of the heavy rail.	251	The Government has prioritised investment in revitalising Newcastle and the project is necessary to support this objective.
C17	When will a revised version of the REF be on public display? Will the community be able to make further comment?	257, 258	The REF will not be revised. This submissions report will include any changes to the investigations outlined in the REF and will also include assessments of any new scope since the public display period.
C18	How has the feedback been collected? Where does the community feedback go, and what is its purpose?	259	All feedback received via the project information line, email address or by letter is collected and entered into a project database which records the name and contact details and the feedback provided. Each feedback item received is reviewed and allocated to a relevant person for response. During the public display of the REF, formal submissions where received from the community, these were in the form of letters, feedback forms and emails. All phone calls and emails (which did not raise any issues) were not considered to be formal submissions as part of the REF display period. All feedback received in the formal submissions during the public display period is reviewed and a response provided (in this submissions report). Depending on the issues raised, additional information or changes to the project could result. Any additional information or changes to the project would be outlined in this submissions report.
Request for additional information			
C19	Would like to see the traffic flow studies on which the project is based.	2	As noted in the REF, at the time of publication, regional traffic modelling was being undertaken to support the analysis contained in the REF. The results of the updated traffic modelling are provided in Section 4.2 of this document.

Item	Summary of issue	Sub. No.	Response
C20	Would like to learn more about the different stages of development.	34	<p>Early enabling works to prepare for the start of the main construction are proposed to be carried out from October this year. The main construction phase would start with the closure of the railway line east of Stewart Avenue on 26 December 2014. The railway line would be terminated just east of Railway Street and trains stabled there in the interim while the new stabling yard at Hamilton and new interchange at Wickham are constructed. Following completion of these works, the new facilities at Wickham would be opened.</p> <p>During the construction period access to Newcastle and Civic would be via shuttle buses from Hamilton.</p> <p>The tender process for a detailed design and construction contractor will be undertaken during September and October 2014. If the project is approved, the contract would be awarded later in this year.</p> <p>Please contact the project information line if you require further information or clarification.</p>
C21	Would like to learn about planning for viable alternatives to the trains.	35	<p>Detailed community and passenger information regarding alternative transport arrangements during construction of the Wickham Transport Interchange are currently being prepared and will be distributed before construction commences.</p> <p>Please contact the project information line if you require further information or assistance in the meantime.</p>
C22	<p>It has not been possible to write a comprehensive, fully considered response to the proposal because requested information held by TfNSW has been refused without reason.</p> <p>On 7 August 2014, for instance, the documents referred to in the list of references on page 33 of the Traffic Impact Assessment were refused. This is not the first time key information on decisions related to the rail truncation has been denied.</p>	247, 262, 267	<p>Most documents used to develop the REF are available to members of the public. We suggest you either reiterate your request for the information or submit a request in accordance with the public access to Government information (GIPA) legislation.</p>

Unrelated to the project

Item	Summary of issue	Sub. No.	Response
Light rail			
UR1	<p>Would like more information on where to view the environmental assessment documents completed for the Newcastle Light Rail project.</p> <p>What is the timing of the light rail, including REF, construction and operation?</p> <p>What is the planned route for light rail?</p> <p>How will it integrate with the interchange?</p> <p>How big would the light rail vehicles be? Light rail vehicles would not be as effective as trains.</p> <p>How many light rail vehicles would be required?</p>	<p>3, 9 15, 19, 27, 31, 37, 38, 39, 41 45, 51, 55, 58, 61, 62, 63, 66, 67, 68, 71, 85, 89, 92, 94, 96, 97, 101, 103, 107, 111, 113, 116 126, 128, 132, 138, 139, 144, 163,</p>	<p>The light rail project will be assessed under a separate planning/EIA process. The preferred route for Newcastle light rail was announced in May 2014 and detailed planning of the project is well underway. Consultants have been appointed to undertake the planning approvals process and further consultation with key stakeholders will take place in coming months.</p>

Item	Summary of issue	Sub. No.	Response
	<p>Would the power supply on poles or below ground? Or can they be solar powered?</p> <p>How would passengers alight from the vehicles?</p> <p>Would there be a safety risk?</p> <p>What are the operating hours of the light rail? Trains run 24 hours a day, are there alternative late at night travel to get to Wickham Station?</p> <p>Who will operate the line rail system?</p> <p>Why is it proposed to run the light rail parallel to the existing corridor and then only extend it about two blocks further east than the existing rail line?</p> <p>What are the impacts of light rail in particular traffic and business impacts along Hunter Street.</p> <p>How are impacts to be managed?</p> <p>Would the light rail have the flexibility of trains in terms of allowing bikes and surfboards for example? The light rail system would not be effective and does not increase access compared to the existing line unless it is expanded into other areas of Newcastle region, such as around the Newcastle CBD, John Hunter Hospital, Jesmond, Wallsend, Williamstown or the airport and possibly even Maitland, Wyong and Morisset or if it runs in parallel with the rail line.</p> <p>When will the contracts be finalised for light rail.</p> <p>What are the penalties for late construction dates?</p> <p>Where would light rail be located? How would it be secured and what are the impacts of the stabling yard?</p> <p>Use the existing rail line to run the light rail.</p> <p>The light rail should be an independent service which runs in parallel to the railway. It should run out from the rail stations.</p> <p>It should extend beyond Newcastle Station to the east and further to the west along Hunter Street.</p> <p>Light rail is designed for moving people short distances around a city, not like a train which has high capacities.</p> <p>If light rail is constructed to the beach, the existing bus terminus at Newcastle Station should remain to service all incoming and outgoing suburban public buses.</p> <p>There is no business case for light rail.</p>	<p>167, 180, 183, 185, 187, 189, 202, 211, 213, 215, 222, 230, 231, 232, 235, 242, 245, 248, 251, 255, 268, 270, 272</p>	

Item	Summary of issue	Sub. No.	Response
	Light rail should not replace heavy rail. The light rail should operate free for the city centre section as per the bus system.		
Operation of existing rail network			
UR2	Needs to be an improvement of rolling stock. This could include carriages with business facilities or simple breakfast options for those travelling to/from Gosford.	11, 135	Changes to rolling stock are outside of the scope of this proposal.
UR3	Service on the rail line need to be increased due to the growth population in the Hunter Valley. Extensions of services to Taree, Tamworth and Dubbo should be considered.	121, 189, 260	The proposed works have been designed for the existing timetable. Future timetable changes will adapt to forecast growth in the Hunter Valley surround areas.
Road network changes			
UR4	Make Hunter Street one way in and King Street one way out.	193	Changes to traffic in Hunter Street and King Street are outside of the scope of the proposal.
UR5	A pedestrian bridge would be of value at the large roundabout at Carrington. It is a challenge for pedestrians to cross at present as it is very dangerous. There have been a number of accidents at this site.	71	The inclusion of a pedestrian bridge at the roundabout at Carrington is outside the scope of the proposal.
Status of the rail corridor following closure of the line			
UR6	What is proposed along the rail corridor east of Stewart Avenue? What becomes of Civic and Newcastle Stations and their employees? Sell the air rights over the railway line between Wickham and Newcastle and allow buildings that retain the railway line. The existing rail corridor could be used as a beneficial walk and garden space, like the Hi Line The railway corridor is not undermined and therefore it is an attractive piece of land for developers, due to the restrictions place on undermined land. Newcastle residents do not want high rise along the corridor in New York. Newcastle Station would be upgrade to include a new plaza at the head of the tracks.	3, 18, 19, 21, 25, 41, 43, 51, 55, 97, 101, 121, 125, 164, 166, 185, 189, 203, 235	Future use of the corridor east of Stewart Avenue will be subject to separate planning approvals/EIA.
Other rail projects			
UR7	Suburban lines should be freight free.	5, 197, 272	Changes to freight access are outside the scope of the proposal.
UR8	The Western Freight Rail bypass would completely change the position of the interchange.	5	Future freight railways are unlikely to affect the location of Wickham Transport Interchange.

Item	Summary of issue	Sub. No.	Response
UR9	High speed rail or faster options to Sydney should be looked at as an alternative as this is able to attract more people onto rail. A high speed rail stop is proposed for Broadmeadow Station. Newcastle Station would be better suited to handle the increase in passengers wanting to use the high speed rail at Broadmeadow.	167, 213, 216	High Speed Rail is outside the scope of this proposal.
Miscellaneous			
UR10	No reference to requirements of new port lease.	189	While proceeds from the port lease are proposed to be used to fund the proposal, there are no further requirements under the lease.
UR11	Will there be a ferry to Carrington?	49	A ferry to Carrington is outside the scope of the proposal.
UR12	The Threadneedle Lane sign has recently been removed thereby destroying major heritage items.	189	The replacement of the Threadneedle Lane sign is outside of the scope of the proposal.
UR13	Can the rail crossing timing be improved as they stay down too long. Also they need to be timed with nearby traffic lights.	194, 197, 215, 272	The duration of rail crossing gate closures are subject to safety requirements. Because the rail operations run independent of the road signals, they are unable to be synchronised.
UR14	Question the long term need for buses to run right from Stewart Avenue onto Honeysuckle Drive. Duplication of bus routes should be kept to minimum once light rail is operating. Instead bus resources should be directed to improve bus access in surrounding suburbs or improve the frequency of existing routes.	237	The shuttle bus service would no longer operate following the implementation of the future light rail project.
UR15	As developers are to benefit from the project, a special levy or fund should be put in place to help improve the CBD.	189	Value capture, levy or rates schemes are outside the scope of the proposal.
UR16	Failure to integrate with the existing Stockton Ferry at Queens Wharf to continue to operate as it currently does. A new Ferry stop at Wickham should be considered to be located close to the new interchange. This could be an extension of the existing service from Stockton. The existing stop would be located further from transport as the light rail is located further south than the existing rail line.	16, 139, 197, 199, 203, 218, 235, 249, 272	The proposed shuttle bus service would maintain access to Queens Wharf. The future light rail project would also maintain access to Queens Wharf.

Support

The following submissions stated their entire or partial support of the proposal or the NURTP: 21, 31, 43, 52, 65, 66, 68, 69, 71, 72, 77, 104, 111, 131, 135, 136, 142, 152, 155, 164, 212, 233, 243, 246, 249, 251 and 260.

Objection

The following submissions stated their entire or partial objection to the proposal or the NURTP: 27, 30, 42, 87, 96, 98, 105, 106, 107, 117, 119, 123, 124, 127, 166, 170, 185, 188, 191, 192, 202, 215, 220, 223, 224, 227, 231, 262, 264, 267, 268, 271 and 272.

4. Additional investigations and modifications to the proposal

4.1 Overview

Additional investigations have been undertaken for the proposal since the preparation of the REF. The key findings of these investigations are summarised in section 4.2.

Transport for NSW has identified modifications to the proposal that improve its constructability and operation. Section 4.3 outlines these modifications and potential environmental impacts are assessed in section 4.4. Any new mitigation measures developed since the preparation of the REF, or in response to the proposed modifications, are identified in section 4.5.

4.2 Additional investigations and studies

4.2.1 Aboriginal archaeological survey

Introduction

The REF contained a commitment to undertake an archaeological survey with the participation of the Awabakal Local Aboriginal Land Council. The investigation report is summarised below.

Methodology

The Aboriginal archaeological survey report was prepared by Artefact Heritage in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010a). The report provides:

- Description of the proposal and the extent of the study area.
- Description of Aboriginal community involvement and Aboriginal consultation.
- Discussion of the environmental context of the study area.
- Discussion of the Aboriginal historical context of the study area.
- Summary of the archaeological context of the study area including a discussion of previous archaeological work in the area.
- Development of an archaeological predictive model.
- Description and analysis of Aboriginal sites located within the study area.
- development of a significance assessment for sites addressing archaeological values
- Impact assessment.
- Recommendations for management and mitigation measures for Aboriginal sites in the context of the proposal.

Site survey

A site survey was conducted on 19 August 2014 by Artefact Heritage and GHD under the supervision of protection officers. A representative from the Awabakal Local Aboriginal land Council was invited to attend but declined.

The proposal is located within the existing rail corridor and as such, full survey coverage was not possible with all exposed areas surveyed (i.e. land under ballast was not searched). Survey was inhibited in areas where hard surfaces overlay the soil and where structures stand. As

such, visibility ranged from nil to 100 percent (in small areas of exposure). Vegetation was minimal, with few grassed areas observed throughout and the occasional young tree.

Existing environment

An extensive search of the Aboriginal Heritage Information System (AHIMS) database was conducted on 8 August 2014 for sites registered within a four kilometre radius of the proposal. Artefact sites and sites of potential archaeological deposit (PAD) were predominant. The remaining site types include midden with PAD, artefact with midden and PAD, artefact with midden and Aboriginal ceremony/ritual site. No previously recorded sites are located within the proposal site. Six sites are located within 800 metres of the proposed works. These sites are summarised in Table 4.1.

Table 4.1 AHIMS sites within 800 metres of the proposal site

AHIMS site	General location	Site type	Description
38-4-1223	800 metres east of the eastern end of the proposal	Artefact with possible PAD	Open site on flat dune within an urban context Stone artefact find
38-4-1222	800 metres east of the eastern end of the proposal	Artefact with possible PAD	Open site with stone artefact material Located on flat dune within an urban context
38-4-0544	700 Hunter Street, 350 metres east of the eastern end of the proposal (Ibis Hotel)	Artefact and midden	Subsurface deposits on slightly raised dunes of Newcastle Harbour foreshore Catholic cemetery and large area (50m ²) of Aboriginal archaeological material
38-4-0832 & 38-4-0831	643-651 Hunter Street, 450 metres southeast of the eastern end of the proposal	Artefact, midden and PAD	Likely extends to above site 48m ² of Aboriginal archaeological material including artefacts, marine shell and local/ exotic raw material European agricultural material also found
38-4-0952	738 Hunter Street, 250 metres southeast of the eastern end of the proposal	PAD	Redevelopment of site including subsurface disturbance Permit acquired

Based on review of the landscape, previous investigations and historical records, the following archaeological material is predicted likely to exist in the study area:

- Stone artefacts/artefact scatters and middens will be the most likely Aboriginal site types.
- Where in situ deposits remain, artefact densities may be moderate to high.
- Where in situ deposits remain, midden material is likely to be present.
- Where deposits have been extensively disturbed, artefact densities are likely to be lower, and any artefacts found are likely to have been introduced with foreign fill.

No new sites were recorded during the site survey. Disturbances across the corridor of proposed works are predominately associated with the railway and its associated infrastructure. Overall, the area is extensively disturbed and modified. However, previous investigations in the locality have shown that intact subsurface deposits may remain beneath layers of introduced fill, modified topsoil, hard surfaces and structures.

Geotechnical investigations undertaken as part of the project indicate that below a layer of fill which is generally between 0.3 metres and 1 metre in depth, soils are undisturbed and therefore there is potential for impacts on Aboriginal items from deeper excavation works at the eastern end of the study area.

Further investigation and assessment

In light of the potential for archaeological material to exist in parts of the site and potentially be impacted by the proposal, a limited suite of intrusive archaeological test excavations are proposed to be undertaken in areas where there is a high likelihood of this material being present. The test excavations would either confirm the presence of Aboriginal objects and they would be recovered as part of the excavation process or, if no Aboriginal objects are discovered, confirm that the area has a low archaeological potential. If test excavations locate Aboriginal objects, further investigation would be undertaken as part of the test excavation program by opening up additional pits to ascertain the extent of the archaeological deposit. If Aboriginal objects (including midden material) are located during test excavations, a second Aboriginal Heritage Impact Permit (AHIP) would be required prior to construction to allow impacts to any Aboriginal objects remaining after the test excavation programme is completed.

An AHIP, under the *National Parks and Wildlife Act 1974*, is currently being prepared for the proposed test excavation work.

Mitigation measures

As part of the AHIP application process, a cultural heritage assessment report will be prepared in accordance with the *Guide for investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (DECCW, 2010b). The report will be updated after the excavations are completed to provide the results from archaeological test excavations and to make data available on the nature and extent of the archaeological deposit in the study area.

4.2.2 Revised noise modelling of increased train speeds on the mainline between Hamilton Station and Wickham

Introduction

The REF noise and vibration assessment considered the noise of trains travelling between Hamilton Station and the future station at Wickham in section 9.4.2 and in Technical Paper 3. This assessment assumed a train speed of 60 km/h on this section of track. Transport for NSW has revised the design train speed to 80 km/h for this section of track. The noise modelling has therefore been updated to predict the related worst case potential noise impact at adjacent receivers. The assessment methodology adopted is consistent with the modelling conducted in the REF and in accordance with the requirements of the Rail Infrastructure Noise Guideline (RING; EPA 2013).

Existing environment and assessment criteria

Existing noise levels were outlined in Table 9.2 of the REF which was obtained from a period of on-site noise measurements conducted during May 2014.

Operational rail noise goals applicable for the operation of trains between Hamilton Station and Wickham Station were outlined in Table 9.8 of the REF.

Table 4.2 Increase in noise levels due to increasing train speeds from 60km/hr to 80km/hr

Receiver		60km			80km			Change in noise levels		
ID	NCA	LAeq Day	LAeq Night	LAmx	LAeq Day	LAeq Night	LAmx	LAeq Day	LAeq Night	LAmx
R1 to R4	NCA 1	45 to 46	42 to 44	67 to 71	48 to 49	45 to 47	71 to 75	3	3	4
R5 to R7	NCA 2	51 to 52	49 to 50	75 to 75	54 to 55	52 to 53	79 to 79	3	3	4
R8 to R20	NCA 5	47 to 57	45 to 55	74 to 80	47 to 58	45 to 56	74 to 80	0 to 1	0 to 1	0
R21 to R23	NCA 6	36 to 38	34 to 36	50 to 52	36 to 39	34 to 37	54 to 55	0 to 1	0 to 1	2 to 3
R24	NCA 8	49 to 49	47 to 47	73 to 73	52 to 52	50 to 50	76.5 to 77	1	3	3.5 to 4
R25 to R38	NCA 9	45 to 50	43 to 48	64 to 73	48 to 53	46 to 51	69 to 78	1	3	5

Impact assessment

The results of the revised modelling are shown in Table 4.2. The results show that:

- Increasing the train speed to 80 km/h in scenario 2 will increase LA_{eq} rail noise levels for most receivers adjacent to the track by approximately 3 dB(A).
- Increasing the train speed to 80 km/h in scenario 2 will increase LA_{max} rail noise levels for most receivers by up to approximately 5 dB(A).

The results in Table 4.2 were assessed against the rail trigger noise levels at the previously identified sensitive receivers adjacent to the proposal. None of these receivers are anticipated to exceed the RING (EPA 2013) airborne noise trigger levels.

Mitigation measures

As there are not predicted to be any exceedances of the RING criteria resulting from the increase in train design speed, no additional mitigation measures are required.

4.2.3 Detailed traffic modelling

Introduction

The REF traffic and transport impact assessment of the redistribution of traffic from the closure of Railway Street and removal of the boom gates on Stewart Avenue was preliminary in nature. The REF identified that detailed traffic modelling was in progress and the results of this study would be provided in the Submissions Report. This section contains a summary of the findings of this additional study.

Methodology

Transport for NSW has developed a detailed traffic model (Paramics) for Newcastle. The model was developed for the purposes of investigating potential impacts of the light rail but has also recently been used to investigate the Wickham Transport Interchange project. The model has been developed in conjunction with RMS, Council, and UrbanGrowth NSW to ensure it correctly captures the most up to date existing traffic conditions as well as foreseeable future changes in population, development, and the road network.

The following three scenarios were evaluated:

- Existing road network in 2014 (base case).
- Road network as of 26 December 2014 with cessation of train services east of Stewart Avenue, Railway Street closed at the level crossing and the removal of boom gates across Stewart Avenue. Additionally, the shuttle bus service was assumed to be operating between Hamilton and Newcastle stations via Hunter Street during the construction period. This scenario is also considered to be representative of the network following the opening of the interchange.

The traffic model was calibrated and validated based on traffic counts obtained in 2014.

Impact assessment

Removal of the boom gates across Stewart Avenue and closure of Railway Street at the level crossing would result in a redistribution of traffic flows in and around the Wickham and Newcastle West area.

During construction of the interchange, other road network changes are expected to provide additional improvements to north-south access across the former rail corridor. As noted above, one such change which has been included in the modelling, but does not form part of the

proposal, is the removal of the boom gates at Merewether Street. Other proposed road and pedestrian crossings are currently being investigated and would be considered under separate planning approvals to be undertaken during 2015.

AM peak period

Table 4.3 outlines the results of the network traffic modelling of the study area undertaken for the AM peak period at the key intersections. The results in terms of Level of Service (LoS) and average delay are also summarised in Figure 4-1.

Table 4.3 AM peak period traffic modelling results

Scenario Intersection	Existing (2014)		December 2014 (construction of the interchange)	
	LoS ¹	Average Delay (sec)	LoS ¹	Average Delay (sec)
Honeysuckle Drive / Stewart Avenue / Hannell Street	C	37	C	29
Hunter Street / Tudor Street / Railway Street	E	62	E	59
Hunter Street / Stewart Avenue	D	54	C	41
Parry Street / Tudor Street	B	27	B	28
King Street / Stewart Avenue	D	52	D	43
Maitland Road / Albert Street	C	33	C	35
Hannell Street / Throsby Street	C	39	B	26
Hannell Street / Cowper Street North / Albert Street	C	29	B	15

Note 1: LoS ranges from A to F with the following categories for the average seconds of traffic delay: A < 14; B > 14, C > 28, D > 42, E > 56 and F > 70

Following truncation in December 2014, the Level of Service and/or average delay is slightly improved at all the identified key intersections with the exception of Parry Street/Tudor Street and Maitland Road/Albert Street. In both these cases, the change is an increase in average delay of one and two seconds respectively and this is not considered to be significant.

This demonstrates that the capacity of surrounding arterial roads is sufficient to offset the diverted traffic from Railway Street consistent with the conclusions of the REF.

Additionally, even with the inclusion of shuttle buses, the improvement resulting from removal of the Stewart Avenue boom gates is sufficient to result in a noticeable reduction in delays (13 seconds at Hunter Street/ Stewart Avenue and 8 seconds at Honeysuckle Drive/ Hannell Street).

Again, the closure of Railway Street, as evidenced at the intersections of Hunter and King Streets with Stewart Avenue indicates an improvement relative to the existing 2014 situation (11 seconds and 7 seconds respectively).



4.1 AM and PM peak period modelling results

PM peak period

Table 4.4 outlines the result of the updated traffic modelling undertaken for the PM peak at a number of key intersections in the vicinity of the proposal. The LoS and average traffic delays shown in Table 4.4 for the three scenarios in the PM peak period show that road performance is slightly worse at the Honeysuckle Drive/Hannell Street/Stewart Avenue intersection with the initial rail truncation in December 2014, but that it improves with the opening of the new interchange in late 2016. Most of the other intersections have improved traffic performance or no significant differences with the rail truncation in 2014 and the interchange opening in 2016.

Table 4.4 PM peak period traffic modelling results

Scenario	Existing 2014		December 2014 (construction of the interchange)	
	LoS	Average Delay (sec)	LoS	Average Delay (sec)
Honeysuckle Drive / Stewart Avenue / Hannell Street	B	28	B	25
Hunter Street / Tudor Street / Railway Street	C	33	B	28
Hunter Street / Stewart Avenue	D	51	D	50
Parry Street / Tudor Street	B	27	B	23
King Street / Stewart Avenue	E	60	E	59
Maitland Road / Albert Street	C	34	C	36
Hannell Street / Throsby Street	A	14	B	15
Hannell Street / Cowper Street North / Albert Street	B	16	B	15

Note 1: LoS ranges from A to F with the following categories for the average seconds of traffic delay:
A < 14; B > 14, C > 28, D > 42, E > 56 and F > 70

Vehicle trip times along Stewart Avenue

The Paramics traffic model was also used to investigate the change in vehicle trip times along Stewart Avenue following truncation of train services on 26 December 2014.

Table 4.5 and Table 4.6 outline the modelled time savings which are expected for north-south travel along Stewart Avenue between Parkway Avenue and Cowper Street. It can be seen in these tables that time savings would be experienced during both peak periods for both the north- and southbound directions with a minimum reduction in time of 14 seconds during the PM peak southbound and a maximum reduction in time of one minute and three seconds during the AM peak northbound.

These results confirm that the closure of Railway Street coupled with the removal of the boom gates in Stewart Avenue would improve the road network performance. The traffic volumes for specific turning movements at the intersection of Hunter Street/Stewart Avenue would increase with the closure of Railway Street as follows:

- Eastbound left turn from Hunter Street north into Stewart Avenue.
- Southbound right turn from Stewart Avenue into Hunter Street.

However, the intersection performance at this location would be improved with additional time for the vehicles to queue in Stewart Avenue following removal of the boom gates.

Table 4.5 AM peak trip times along Stewart Avenue between Parkway Avenue and Cowper Street North

Scenario	Northbound (m:ss)	Southbound (m:ss)
Existing road network	4:40	5:22
With the closure of Railway Street	3:37	4:49
Travel time saving	1:03	0:33

Table 4.6 PM peak trip times along Stewart Avenue between Parkway Avenue and Cowper Street North

Scenario	Northbound (m:ss)	Southbound (m:ss)
Existing road network	3:51	5:24
With the closure of Railway Street	3:27	5:10
Travel time saving	0:24	0:14

Mitigation measures

Transport for NSW (in consultation with RMS and Council) will investigate minor enhancements to the existing local road network in Wickham prior to the closure of the Railway Street railway crossing to identify potential improvements to traffic flows and travel times for motorists. These works will be subject to separate planning approval/environmental impact assessment.

4.2.4 Journey time estimate

During operation of the new interchange, train customers continuing their journey to Civic or Newcastle stations will be required to transfer to a shuttle bus service which will result in increased journey times compared to completion of the journey directly by heavy rail. This will also be the case during the construction phase.

A comparison of the public transport travel times for the existing train customers and the shuttle bus with the opening of the new interchange was conducted using the results from the micro-simulation traffic model. The results for the AM and PM peak periods for the westbound and eastbound directions are provided in Table 4.7 and Table 4.8 respectively.

In all cases, the shuttle bus travel time is longer than the train travel times based on the existing train timetable. The additional travel time ranges from four minutes to over seven minutes. These numbers include the two minutes for customers to walk to the shuttle bus from the trains for eastbound services. The shuttle bus travel times are longer in the westbound direction because the shuttle bus will be mostly stopping for boarding passengers, whereas in the eastbound direction passengers are mostly alighting from the bus and consequently, have a much shorter dwell time.

It should be noted that the shuttle bus travel times (during operation) are shorter than the existing public bus services in Hunter Street because the shuttle bus will only have stops at Steel Street, Civic, Queens Wharf and at Watt Street, whereas the regular public bus routes currently have nine stops in Hunter Street and Scott Street between Stewart Avenue and Newcastle station.

Table 4.7 AM peak public transport travel times

Public transport travel times	Westbound (m:ss)	Eastbound (m:ss)
Via train	4:00	4:00
Via shuttle bus	8:19	9:30 *
Travel time increase	4:19	3:30

* Includes average of 2 minutes for walking and waiting from trains

Table 4.8 PM peak public transport travel times

Public transport travel times	Westbound (m:ss)	Eastbound (m:ss)
Via train	4:00	4:00
Via shuttle bus	7:44	11:15 *
Travel time increase	3:44	7:15

* Includes average of 2 minutes for walking and waiting from trains

Mitigation measures

Shuttle buses will be provided in sufficient quantity to manage demand during the peak periods with the intention to match train arrivals to minimise the wait time. This is a key component of the travel time increases expected.

4.3 Modifications to the proposal

The following modifications to the proposal have been made since the exhibition of the REF:

- Installation of additional NSW Trainlink staff facilities at Broadmeadow and Hamilton stations and Hamilton Junction.
- Provision of bus shelters at Hamilton.
- Extension of anti-throw screens on the Maitland Road overpass.

A description of each modification can be found in sections 4.3.1 to 4.3.3.

4.3.1 Operational facilities and associated works to allow for operation from Hamilton Station

Description of modification

Additional facilities for operational staff would be required during the two year construction period until the new interchange is completed.

Works at Hamilton Station would involve the installation of temporary buildings (either demountable or constructed structures) within the rail corridor and on adjacent Council land. The temporary buildings would accommodate the following facilities:

- Offices and personal storage buildings for train crew and guards, full time employees and administration staff.
- First aid room.
- Meal room.
- Toilets and shower block.
- Access road (road base) from the existing access point on Donald Street to provide for vehicle movement, three parking spaces and a turning circle for a garbage truck.

- Covered walkway from the access road to the buildings and secure walkway access from the buildings to Platform 1.
- Communications room and shunters room to accommodate equipment.

Buildings would be a mix of demountable structures and buildings erected on-site; where possible facilities would also be located in existing station buildings. A wide range of minor works would be undertaken around the station to minimise impacts to passengers.

An extension to the east of the existing Platform 2 at Hamilton Station is also required to meet the anticipated increase in patronage that would result from proposal. The extension would be approximately 24 metres in length. The design would be consistent with the existing station platforms. No works are proposed to the existing platforms.

Works would also be required on Sydney Trains land located at the Hamilton Junction, northwest of the Hamilton Station. Works in this area would include installation of demountables to provide:

- Offices for management and administrative support staff.
- Meal room including kitchen.
- Meeting room.
- Store room.

Limited on-site car parking would also be provided.

Assessment of impacts

The impacts of constructing and operating the above facilities would be minor and generally consistent and within the envelope of impacts identified in the REF. These minor impacts are addressed below.

Heritage impacts

The works at Hamilton Station would occur within the curtilage of the Hamilton Station Group which is listed on the State Heritage Register (SHR). A heritage impact statement has been completed for all works at Hamilton Station and has been submitted as part of an application under section 60 of the *Heritage Act 1977* to the NSW Heritage Office. A copy of this report can be found in Technical Paper 1 and a short summary of the key outcomes below.

The proposed modifications have been assessed for their impacts to the heritage significance of the Hamilton Station Group. Overall the proposed modifications are not considered to result in any detrimental impact on the stations heritage significance (either physically or visually). Many of the modifications (eg the demountable buildings) would be temporary and the impacts are easily reversible.

The works are generally minor (and in some cases temporary), and would predominately occur outside of the SHR curtilage. The exception to this is the extension of Platform 2 which would occur within the curtilage (along with some other minor works). The impacts of these works are considered to have a negligible impact on the station's built fabric, and result in no impact on the station's overall heritage significance or visual setting.

There is also a timber relic which was identified during previous investigations which is located outside the SHR curtilage near the Donald Street corridor entrance. This item has the potential to be part of the early train system. Regardless, the proposed modifications would not impact on the heritage significance of the timber relic.

Visual impacts

During operation, the demountable buildings would only be used as offices and would be visually similar to surrounding railway buildings and land and therefore are not considered to result in any visual impact.

Land use impacts

The works at Hamilton Junction would be located on railway land and would therefore be consistent with the surrounding land uses. These structures would only be temporary as these facilities would be relocated to the new interchange following its completion.

Impacts on passengers

At all times, the works and work areas would be cordoned off from the public and kept secure. No public access to any of the premises would be allowed. Where necessary, hoardings would be erected and revised access routes provided to limit inconvenience to train passengers.

Mitigation measures

Detailed work method statements and/or a conservation management plan would be prepared by the contractor or principal in conjunction with the heritage consultant prior to construction works commencing. Any other measures agreed with the NSW Heritage Office would also be implemented.

No other mitigation measures are considered necessary.

4.3.2 Provision/upgrade of bus shelters at Hamilton Station

Description of modification

In order to provide for passenger comfort at the proposed shuttle bus stops at Hamilton Station, an upgrade or provision of bus shelters would be required.

The exact positioning of these structures would be identified during the detailed design. If new structures are required in new locations, they would be positioned to minimise inconvenience to passengers.

Access impacts

Impacts of these bus shelters are considered minimal as they would be positioned to minimise inconvenience to pedestrians and be in close walking distance from the train station. Impacts would be reduced where possible through positioning the shelters at existing shelter locations (upgrade of structures).

Visual impacts

The visual impacts of the new bus structures are not considered to be significant as they would be similar to other shelters used across Newcastle. Structure locations would be selected to minimise any visual impacts.

Mitigation measures

- Shelters to be positioned according to the following criteria:
 - Position shelters in the location of existing shelters where possible, which can then be upgraded.
 - Position to minimise distance to the train station.
 - Position to avoid impacts on pedestrian flows on the foot path.

- Shelters would be selected to minimise visual impacts on the surrounding area. Where possible existing shelter locations would be used except where additional number of shelters are necessary to be provided.

4.3.3 Extension of anti-throw screens on Maitland Road overpass

Description of modification

The anti-throw fencing on Maitland Road overpass would be extended by six metres on the northern side (both east and west) of the bridge. The fencing would be similar to the existing fencing at this location.

In addition, a gap identified in the existing fence would be repaired and works would be undertaken to make the fence compliant with current design guidelines. This would involve additional fastenings to secure the mesh to the vertical poles.

The southbound footpath and northbound footpath on the Maitland Road overpass would be closed off at separate times to install the anti-throw fencing during the daytime period on a Saturday and Sunday.

A traffic management plan would be prepared to provide pedestrian control, with footpath closures alternating across the southbound footpath and northbound footpath on the overbridge. The northbound and southbound cycle ways are not likely to be closed off.

Assessment of impacts

There would be a minor impact to traffic (cyclist and pedestrian access) during the works. This would be minimised by conducting the works over the weekend.

Visual impacts associated with the extension of screens are considered to be minimal as the bridge currently contains similar screens and the extension of these screens will not significantly alter the existing visual amenity.

Mitigation measures

The mitigation measures provided in the REF would adequately address potential traffic and other impacts from the works.

5. Summary of mitigation measures

Environmental management for the proposal would be carried out as detailed in the REF. A construction environmental management plan (CEMP) would be prepared to include all specific environmental mitigation measures that have been identified in the REF and in this Submissions Report.

Additional environmental management and mitigation measures for the proposal having regard to submissions received and the investigations and modifications outlined in section 4.2 and 4.3 of this report are described in the relevant sections in section 4.2 and 4.3.

Table 5.1 outlines the revised set of mitigation measures for the proposal. This list includes any changes to mitigation measures that are now proposed in response to submissions received during the public display period or due to additional investigations undertaken since the completion of the display. New mitigation measures have been underlined. Removal of mitigation measures (or text removed from measures) has been shown with a ~~strike through~~.

The mitigation measures numbers have been adjusted to account for the inclusion or removal of particular mitigation measures.

Table 5.1 Summary of mitigation measures

Issue	ID number	Mitigation measure
General		
Environmental management	A.1	An environmental controls map (ECM) would be developed prior to commencement of construction in accordance with Transport for NSW's guide to preparing ECMs. The ECM would be implemented for the duration of construction.
	A.2	A Construction Environmental Management Plan (CEMP) would be prepared for the works. This would include a project risk assessment of environmental aspects and impacts. The CEMP must be prepared and approved by Transport for NSW prior to the commencement of construction.
	A.3	Regular inspections to monitor environmental compliance and performance would be undertaken by Transport for NSW and the Contractor during construction.
	A.4	Prior to the commencement of construction, all contractors would be inducted on the key project interfaces and associated environmental risks. The environmental induction would include reference to all items of environmental sensitivity, and the measures proposed to manage the impacts on these items.
	A.5	The final location of any storage/stockpile site would be confirmed by the contractor during development of the detailed construction methodology. The site location would be subject to negotiations with the landowner (Council).
Detailed design		
Non-Aboriginal heritage	B.1	Potential impacts on the significance of Wickham, Civic and Newcastle stations as a result of ceasing rail operations at these stations would be addressed as part of the Residual Corridor Management Plan.
	B.2	Detailed design of the new station at Wickham, including materials selection would be sympathetic to the surrounding heritage items/elements and the significance of the Newcastle City Centre Heritage Conservation Area, while clearly marking the building as contemporary.

Issue	ID number	Mitigation measure
Noise from operation of the stabling yard	C.1	The acceptability of any operational limitations associated with the use of 'barrier' trains to shield noise from other trains within the stabling yard would be confirmed.
	C.2	Other feasible and reasonable operational measures to minimise noise emissions (such as the use of horns, powering down trains overnight) would be assessed.
	C.3	Detailed analysis of any potential noise barriers would be undertaken, including location, structural considerations, and a cost-benefit analysis.
	C.4	The effectiveness of architectural treatments on noise affected premises would be assessed.
	C.5	An assessment of the potential for sleep disturbance impacts would be undertaken in accordance with Sydney Trains' Environmental Management System.
Noise from operation of the new station at Wickham	D.1	Public address systems would be designed to comply with the operational noise criteria. The use of measures such as speaker selection, orientation and placement would be considered.
	D.2	Mechanical plant would be designed to comply with the operational noise. Placement of plant, acoustic enclosures, silencers and acoustic barriers and treatments would be considered.
Socio-economic impacts	E.1	The design of the proposal would have regard to crime prevention through environmental design features, and the design features recommended by the socio-economic impact assessment report (Technical Paper 4).
	E.2	During detailed design, local businesses and the community would continue to be consulted regarding the potential impacts of the proposal. Where practicable, measures to address these impacts would be incorporated into the design.
	E.3	<u>Passenger bus shelters at Hamilton Station to be positioned following the following criteria:</u> <ul style="list-style-type: none"> <u>position new shelters in the location of existing shelters where possible</u> <u>position shelters to minimise distance to the train station</u> <u>avoid impacts on pedestrian flows on the footpath.</u>
Urban design and visual	F.1	An urban design and landscaping plan would be developed during the design phase to address the following: <ul style="list-style-type: none"> Strategic use of materials that blend, enhance and/or complement existing surfaces and minimise additional visual clutter. Materials, finishes, colour schemes and maintenance procedures including graffiti control for new walls, barriers and fences. Directional lighting mounted to avoid unnecessary direct light spill into sensitive receivers such as residences. Preservation of trees, landscape treatments and street tree planting to integrate with surrounding streetscape design detail that is sympathetic to the amenity and character of the local heritage items. Strategic location of signage and lighting to avoid unnecessary impact on views. Total water management principles to be integrated into the design where considered appropriate. Barriers, railings, fences and walls would be design to complement the visual environment. Heritage significance of the Newcastle City Centre Heritage Conservation Area. Design measures included to meet the <i>NSW Sustainable Design Guidelines</i> (Transport for NSW, 2014a).
	F.2	<u>Shelters are to be selected to minimise visual impacts on the surrounding area.</u>
Hydrology, water quality and groundwater	G.1	The retaining walls and/or embankments would be designed to minimise the potential loss of flood storage.
	G.2	All track drainage would be designed to meet relevant Transport for NSW standards and the requirements of <i>Australian Rainfall and Runoff</i> (Engineers Australia, 1999).

Issue	ID number	Mitigation measure
Geology and soils	H.1	Those aspects of the proposal located within the Newcastle Mine Subsidence District would be designed in accordance with any requirements provided by the Mine Subsidence Board.
	H.2	Further geotechnical assessment, including subsurface investigation, would be undertaken to provide geotechnical information and recommendations for design. Investigations would address: <ul style="list-style-type: none"> groundwater levels and variations in response to rainfall effect of groundwater extraction on settlement and groundwater quality where dewatering is proposed ground vibration propagation and attenuation where vibrations are likely to be experienced in close proximity to sensitive features the potential for acid sulphate soil conditions to be experienced founding conditions for proposed structures, including retaining walls excavation conditions, stability and shoring requirements pavement and formation subgrade conditions subsurface conditions as appropriate for design and construction of the proposal constraints to development associated with abandoned coal mining and the risk of future mine subsidence.
	H.3	<u>An acid sulphate soils management plan would be prepared, as part of the CEMP, prior to construction.</u>
Contamination and hazardous materials	I.1	Further contamination investigations would be undertaken as an input to the detailed design in accordance with the findings of this REF and the recommendations of URS (2014).
	I.2	<u>An asbestos management plan would be prepared, as part of the CEMP, prior to construction as a contingency for work conducted in any areas of previous contamination.</u>
Aboriginal heritage	J.1	An archaeological survey report would be prepared in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (OEH, 2010). The survey report would provide information and recommendations on areas which may require further investigation, such as archaeological test excavation to determine the nature and extent of areas of sub-surface archaeological potential. <u>A cultural heritage assessment report will be prepared in accordance with report would be prepared in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010). The report will provide results from archaeological test excavations to determine the nature and extent of areas of sub-surface archaeological potential.</u>
<u>Flora and fauna</u>	K.1	<u>A Bat Management Plan would be prepared, as part of the CEMP for the proposal, to minimise the potential for any impacts on bats particularly those that use the Maitland Road overpass.</u>
Cumulative impacts	L.1	The potential for cumulative impacts would be further considered as the proposal methodology develops and as further information regarding the location and timing of other potential developments is released.
	L.2	Transport for NSW would consult with the proponents of other major projects in the area (including internally) to develop strategies to address potential cumulative traffic and transport impacts.

Issue	ID number	Mitigation measure
Construction		
Traffic and transport	M.1	<p>Prior to the commencement of construction, a construction traffic management plan would be prepared in consultation with relevant stakeholders as part of the CEMP. It would address the following as a minimum:</p> <ul style="list-style-type: none"> • Adequate road signage to inform motorists and pedestrians of the work and ensure that the risk of accidents and disruption to surrounding land uses is minimised. • A pedestrian management plan to maximise safety and access for pedestrians and cyclists, including details of alternative access arrangements. • Adequate sight lines to allow for safe entry and exit from the site. • Impacts and changes to on and off street parking and requirements for any temporary replacement provision. • Routes to be used by heavy construction-related vehicles to minimise impacts on sensitive land uses and businesses. • Details for the relocation of kiss-and-ride, taxi ranks and bus stops if required, including appropriate signage to direct patrons, in consultation with the relevant operator. • Measures to manage traffic flows around the area affected by the proposal, including required regulatory and directional signposting, line marking and variable message signs and all other traffic control devices necessary. • Traffic and access would be managed in accordance with <i>Traffic Control at Work Sites</i> (RTA, 2010) and in consultation with Roads and Maritime Services and Council. • Construction vehicles would park within the construction compound/rail corridor safe zone. • The timing of deliveries accessing the site would need to be considered to ensure there is sufficient space within the proposal site to accommodate deliveries. • The queuing and idling of construction vehicles in residential streets would be minimised.
	M.2	Road occupancy licences would be obtained from Council <u>and RMS</u> for any works within the road reserve of local roads <u>and state roads</u> respectively.
	M.3	Access to all private properties adjacent to the proposal site would be maintained during construction, unless otherwise agreed by relevant property owners.
	M.4	Adequate signage would be provided at Broadmeadow and Hamilton Station to direct users to shuttle buses. Signage would also be provided at all stops along the bus routes to clearly show the location of stops and routes.
	M.5	Consultation with regional and interstate bus operators would be undertaken to determine their requirements, including any rerouting of services to either Broadmeadow and/or Hamilton Station.
Non-Aboriginal heritage	N.1	All heritage items in the immediate vicinity of the proposal site would be marked on site plans, fenced off where appropriate, and avoided.
	N.2	The construction noise and vibration management plan prepared as part of the CEMP would define the construction methods to be used in the vicinity of heritage listed items and the measures to minimise the likelihood of vibration impacts.
	N.3	Vibration management measures provided in section 9.5 of the REF would be implemented to minimise the potential for structural vibration impacts to heritage items.
	N.4	Dilapidation surveys would be undertaken for heritage buildings/structures located on or within 25 metres of the proposal site.
	N.5	If previously unidentified heritage/archaeological items are uncovered during the works, all works would cease in the vicinity of the material/find and Transport for NSW would be contacted immediately. Works in the vicinity of the find would not re-commence until clearance has been received from Transport for NSW.

Issue	ID number	Mitigation measure
	N.6	Sufficient protection including temporary fencing would be installed around built heritage items where works are to be undertaken in close proximity to these items, or where a thoroughfare or construction access is required.
	N.7	<u>Obtain approval under Section 60 of the NSW Heritage Act 1977 prior to work commencing at Hamilton Station and implement any consent conditions.</u>
Noise and vibration	O.1	A noise and vibration management plan would be prepared as part of the CEMP in accordance with the <i>Construction Noise Strategy</i> (Transport for NSW, 2012). The noise and vibration mitigation measures detailed in Table 9.17 of the REF would be incorporated in the CEMP and implemented.
	O.2	Where the noise levels are predicted to exceed the criteria after implementation of the general work practices, the additional mitigation measures detailed in Table 9.18 of the REF would be implemented.
	O.3	The recommended safe working distances for vibration-intensive plant in the <i>Construction Noise Strategy</i> would be implemented.
	O.4	Temporary hoarding would be installed close to the stabling areas to minimise noise levels at residential receivers within noise catchment area 9.
	O.5	The use of train horns would be minimised during the night, or alternative warning systems would be used.
Air quality	P.1	An air quality management sub-plan would be prepared as part of the CEMP. It would include the following measures: <ul style="list-style-type: none"> • All plant and machinery would be fitted with emission control devices complying with relevant Australian Standards. • Machinery would be turned off when not in use and not left to idle for prolonged periods. • Vehicle movements would be limited to designated entries and exits, haulage routes (to be determined during preparation of the traffic management plan, and in consultation with RMS and Council) and parking areas. • Dust generation would be monitored visually, and where required, dust control measures such as water spraying would be implemented to control the generation of dust. • Materials transported to and from the site would be covered to reduce dust generation in transit. • Access points would be inspected to determine whether sediment is being transferred to the surrounding road network. If required, sediment would be promptly removed from roads to minimise dust generation. • Shade cloth would be fastened to the perimeter fence on the proposal site to minimise dust transported from the site during construction. • Daily inspections and regular surveillance would be undertaken to identify any vehicle, plant or equipment that is causing visible emissions. If any defective vehicles, plant or equipment are identified, operation of this machinery would cease and service/maintenance would be undertaken. • Works (including the spraying of paint and other materials) would be suspended during strong winds or in weather conditions where high levels of dust or airborne particulates are likely. • Any exposed surfaces would be stabilised, and final landscaping implemented, as soon as practicable.
Socio-economic impacts	Q.1	<u>The community and stakeholders consultation would continue to be informed of the proposal</u> in accordance with the Community and Stakeholder Engagement Strategy.
	Q.2	<u>Keep key stakeholders informed of shuttle bus route finalisation. The shuttle bus routes would be finalised in consultation with key stakeholders.</u>
	Q.3	Further consultation with relevant stakeholders would be undertaken during development of the detailed construction methodology.

Issue	ID number	Mitigation measure
	Q.4	Further consultation with the Transport for NSW Accessible Transport Advisory Committee would be undertaken during development of the detailed methodology.
	Q.5	Potentially impacted stakeholders, and those with an interest in the proposal, would continue to be <u>consulted and informed</u> in accordance with the community and stakeholder engagement strategy developed for the proposal. This would include notifications and advice regarding alternative arrangements to address accessibility.
	Q.6	Contact details for a 24-hour project response line and email address would be provided for ongoing stakeholder contact throughout the proposal.
Visual impacts and urban design	R.1	<p>The following measures would be incorporated into the CEMP and implemented during construction:</p> <ul style="list-style-type: none"> • Work sites would be screened by fencing or placement of hoardings where practicable. Machinery, plant and equipment would be contained within these hoardings where practicable. • Work sites would be maintained in a clean and tidy condition at all times. • Work methods for excavation and other works with the potential to impact on trees would be developed to avoid street trees and their roots where practicable. • Any pruning or removal of trees would be undertaken by a qualified arborist. • Any trees requiring removal would require an approval through the Transport for NSW Application for Removal or Trimming of Vegetation. • In the event that trees are removed, they are to be replaced in accordance with Transport Project Division's vegetation offset guide and in consultation with Council as required. • Directional lighting would be mounted to avoid light spill into adjoining residences.
Sustainability	S.1	Sustainable design and construction of the proposal would be in accordance with the <i>NSW Sustainable Design Guidelines</i> . Initiatives recommended by the sustainability assessment (URS, 2014a) to achieve a rating level of 'silver' would be implemented.
	S.2	The sustainability initiatives would be regularly reviewed, updated and implemented throughout the design development and construction phases.
	S.3	The detailed design of the proposal would aim to achieve an 'excellent' rating using the Infrastructure Sustainability Council of Australia's infrastructure sustainability rating tool.
Waste management	T.1	A waste management plan would be prepared as part of the CEMP and in accordance with the <i>Waste Classification Guidelines</i> (DECCW, 2009a). The plan would set targets for waste diversion, demonstrate how targets can be achieved, and outline how waste diversion would be tracked and reported. The plan would include the measures outlined below.
	T.2	Resource management hierarchy principles would be followed: <ul style="list-style-type: none"> • avoid unnecessary resource consumption as a priority • avoidance is followed by resource recovery (including reuse of materials, reprocessing, recycling and energy recovery) • disposal is undertaken as a last resort.
	T.3	Waste material would not to be left on site once the works have been completed.
	T.4	Working areas would be maintained, kept free of rubbish and cleaned up at the end of each working day.
	T.5	Waste material, including soil and spoil that taken off site would be classified and managed in accordance with the Waste Classification Guidelines (DECCW, 2009a) and would be disposed of in accordance with the <i>Protection of the Environment Operations Act 1997</i> . All waste documentation would to be collated in accordance with these guidelines and provided to Transport for NSW as requested.

Issue	ID number	Mitigation measure
	T.6	At least 90 per cent of construction waste generated during site preparation and construction would be diverted from landfill and either recycled or reused in accordance with Transport for NSW's Sustainability Targets.
	T.7	100 per cent of useable spoil material would be beneficially reused in accordance with Transport for NSW's Sustainability Targets.
	T.8	Any waste material identified as being contaminated would be managed in accordance with the <i>Contaminated Land Management Act 1997</i> and other relevant legislation.
	T.9	The removal, handling and disposal of any asbestos containing materials would be undertaken by an appropriately licensed contractor, and in accordance with: <ul style="list-style-type: none"> • <i>Code of Practice for the Safe Removal of Asbestos 2005</i> • <i>Code of Practice for the Management and Control of Asbestos in Workplaces 2005</i>.
Climate change and greenhouse gases	U.1	A carbon footprinting exercise, compliant with ISO 14064 Part 2 (Greenhouse gases – project level), would be undertaken in accordance with Transport for NSW's Greenhouse Gas Inventory Guide for Construction Projects and the NSW Sustainable Design Guidelines. The carbon footprint would be used to inform decision-making in design and construction. Standard carbon coefficient values would be used for construction material and fuel usage.
	U.2	Opportunities to reduce operational greenhouse gas emissions would be investigated during detailed design. These would include the initiatives documented in the sustainability assessment (URS, 2014a).
Water quality	V.1	An erosion, sediment control and water quality management plan would be prepared as part of the CEMP. It would include the following measures: <ul style="list-style-type: none"> • Sediment and erosion control devices would be installed to minimise mobilisation and transport of sediment in accordance with <i>Managing Urban Stormwater, Soils and Construction</i> (Landcom, 2004). • Maintenance and checking of the erosion and sedimentation controls would be undertaken on a regular basis and any subsequent records retained. Sediment would be cleared from behind barriers/sand bags on a regular basis as required and all controls would be managed to ensure they work effectively at all times. • Any exposed surfaces would be stabilised, and final landscaping implemented, as soon as practicable. • Erosion control devices would be removed as part of final site clean-up. This would include removing any sediment in drainage lines which has been trapped by erosion control devices, and restoring disturbed areas. • Upstream water flows would be diverted around the worksite in accordance with <i>Managing Urban Stormwater, Soils & Construction</i>. • Spill kits would be maintained on-site at all times. • Machinery would be checked daily to ensure that no oil, fuel or other liquids are leaking. • Refuelling of plant and equipment would be undertaken within designated areas with appropriate controls. • Visual monitoring of local water quality (i.e. turbidity, hydrocarbon spills/slicks) will be undertaken on a regular basis to identify any potential spills. • Vehicle wash down and/or cement truck washout would occur in a designated bunded area or off-site.
Hydrology and flooding	W.1	The existing drainage systems would remain operational during construction.
	W.2	A flood evacuation plan would be prepared and included in the CEMP.
	W.3	No stockpiles of materials or storage of fuels or chemicals would be located within high/medium flood risk areas or flow paths.

Issue	ID number	Mitigation measure
	W.4	Where practicable, site offices and facilities would be located above the 100 year average recurrence interval flood level.
Groundwater/ dewatering	X.1	If dewatering is required during construction, the water would be tested (and treated if necessary) prior to re-use, discharge or disposal in accordance with the testing results.
	X.2	All water discharges would be undertaken in accordance with Transport for NSW's Water Discharge and Re-use Guideline (2012a).
Geology and soils	Y.1	<p>The following measures would be incorporated in the erosion, sediment control and water quality management sub-plan to be prepared as part of the CEMP:</p> <ul style="list-style-type: none"> • Where acid sulphate soils are identified, an acid sulphate soils management plan would be developed and implemented in accordance with the Acid Sulfate Soil Planning Guidelines (Department of Urban Affairs and Planning, 1998). • Stockpiles would be managed by implementing sediment and erosion control devices in accordance with <i>Managing Urban Stormwater, Soils and Construction, Volume 1</i> (Landcom, 2004). • The area of exposed surfaces would be minimised. Disturbed areas would be stabilised progressively to ensure that no areas remain unstable for any extended length of time. • Soil and sediment that accumulates in erosion and sediment control structures would be reused where practicable during site restoration, unless it is contaminated or otherwise inappropriate for reuse. • Work would cease during heavy rainfall events when there is a risk of sediment loss off site or ground disturbance due to waterlogged conditions. • Equipment, plant and materials would be placed in designated lay-down areas where they are least likely to cause erosion. • Following completion of work, land disturbed as a result of construction would be restored to its pre-existing conditions. A photographic survey would be undertaken prior to the work to provide a record of the baseline and ensure rehabilitation achieves the required outcome.
Contamination and hazardous materials	Z.1	An 'unexpected finds protocol' would be prepared and included in the CEMP to assist with the identification, reporting, assessment, management, health and safety implications, remediation and/or disposal (at an appropriately licensed facility) of any potentially contaminated soil and/or water. This would include specifying appropriate reporting requirements in accordance with the EPA's Guidelines on the Duty to Report Contamination under the <i>Contaminated Land Management Act 1997</i> (DECC, 2009b).
	Z.2	In the event that indicators of contamination are encountered during construction (such as odours or visually contaminated materials), work in the affected area would cease immediately, and the procedures detailed in the unexpected finds protocol would be implemented.

Issue	ID number	Mitigation measure
	Z.3	<p>Construction hazard and risk issues associated with the use and storage of hazardous materials would be addressed through risk management measures developed as part of the CEMP, in accordance with relevant Department of Planning and Environment guidelines, Australian and ISO standards, and Transport for NSW's Chemical Storage and Spill Response Guideline. These measures would include:</p> <ul style="list-style-type: none"> the storage of hazardous materials, and refuelling/maintenance of construction plant and equipment would be undertaken in clearly marked designated areas that are designed to contain spills and leaks spill kits, appropriate for the type and volume of hazardous materials stored or in use, would be readily available and accessible to construction workers. all hazardous materials spills and leaks would be reported to site managers and actions would be immediately taken to remedy spills and leaks training in the use of spill kits would be given to all personnel involved in the storage, distribution or use of hazardous materials machinery would be checked daily to ensure that no oil, fuel or other liquids are leaking. refuelling of plant and equipment would not be undertaken within the proposal site.
	Z.4	<p>Any hazardous materials that are to remain on site would be surveyed and recorded on a hazardous building material register. A risk assessment would be undertaken and a management plan implemented (including any remediation measures). The register and management plan would be maintained and updated in accordance with the relevant WorkCover codes of practice.</p>
Flora and fauna	AA.1	<p>The extent of vegetation clearing/trimming would be restricted to the proposal site as identified in Figure 2.2 of the REF.</p>
	AA.2	<p>Approval would be obtained in accordance with Transport for NSW's Application for Removal or Trimming of Vegetation for the trimming, cutting, pruning or removal of trees or vegetation where the impact has not been identified in this REF.</p>
	AA.3	<p>All cleared vegetation would be replaced and/or offset in accordance with Transport for NSW Biodiversity Offset Guidelines.</p>
	AA.4	<p>All vegetation planted on-site would consist of locally endemic native species, unless otherwise agreed with Transport for NSW, following consultation with Council where relevant.</p>
	AA.5	<p>The vegetation proposed to be removed or trimmed and the proposed offset arrangements would be specified as part of the landscape plan which would be prepared as part of the detailed design process.</p>
	AA.6	<p>Immediately prior to the commencement of clearing, a suitably qualified ecologist would check the area that would be cleared that day for any resident fauna, and if any is found, a suitably qualified wildlife handler or ecologist would relocate that fauna into suitable habitat nearby. If no habitat is present or there is concern over impacts of a day-time release of a nocturnal species, the animal would be released into the care of WIRES.</p>
	AA.6	<p>Weeds would be managed and disposed of in accordance with the requirements of the <i>Noxious Weeds Act 1993</i> and/or the Weeds of National Significance Weed Management Guide.</p>
Aboriginal heritage	AB.1	<p>Should Aboriginal heritage items be uncovered all work in the vicinity will cease and the Project Manager and Transport for NSW staff will be notified immediately. The Department of Planning and Environment will be notified in accordance with the <i>National Parks and Wildlife Act 1974</i>. The Awabakal Local Aboriginal Land Council will be notified and an assessment by an archaeologist will be arranged to determine the significance of the objects and any other requirements before work resumes.</p>

Issue	ID number	Mitigation measure
Infrastructure and services	AB.2	Measures to minimise impacts to services would be developed in consultation with service providers, including: <ul style="list-style-type: none"> marking services on plans and on-site, and avoiding undertaking works in the vicinity of these services service relocation temporary connections.
	AB.3	Construction planning would take into consideration the potential for impacts on all infrastructure and services. Construction methods would be developed in consultation with service providers, and works would be scheduled to minimise the potential for impacts to or on the use of infrastructure and services.
	AB.4	Any impacts to infrastructure and services would be made good by the contractor at the completion of works.
	AB.5	Work being undertaken on or around infrastructure would be clearly signposted and appropriately fenced.
Operation		
Noise and vibration	AC.1	Transport for NSW would liaise with NSW TrainLink to revise their horn testing procedure such that horns would be tested east of Maitland Road, west of Railway Street, remote from sensitive receivers.
	AC.2	Additional options for managing the potential noise impacts of the stabling yard would be considered in accordance with Sydney Trains' <i>Environmental Management System Guide Noise and Vibration from Rail Facilities</i> (Sydney Trains, 2013), which provides best practice options for managing noise emissions from stabling facilities. Potential options include: <ul style="list-style-type: none"> ensure that horns are used only to the extent required to meet safety and engineering procedures and criteria (i.e. no excessive use of horns) educating employees to bear in mind neighbouring properties (keep voices down, stand away from receivers to talk) the use of alternative horn test and warning procedures or removing the requirement to test the horn altogether powering down trains whenever possible, rather than idling the use of 'barrier trains' where shown to be feasible scheduling noisy activities to less sensitive times, such as day or evening times
Air quality	AD.1	All trains, particularly those that are diesel-powered, would be regularly maintained to ensure efficient operation.
	AD.2	Diesel-powered trains that layover within the stabling yard would use siding 1, which is furthest away from the sensitive receivers.
	AD.3	Where practicable, the layover duration of diesel-powered trains would be minimised.
Socio-economic impacts	AE.1	The shuttle bus routes would be finalised refined in consultation with key stakeholders to maximise passenger transfer efficiencies and safety.
	AE.2	The Residual Corridor Management Plan would be developed with consideration of the recommendations of the socio-economic assessment to enhance future access within the city centre.
Sustainability	AF.1	The sustainability initiatives would be regularly reviewed, updated and implemented throughout operation.
Waste management	AG.1	Waste would be managed in accordance with NSW Trains operating procedures and the <i>Waste Classification Guidelines</i> (DECCW, 2009a).
Hydrology, water quality and groundwater	AH.1	The proposal would be managed in accordance with NSW TrainLink's existing environmental management system

Issue	ID number	Mitigation measure
Geology and soils	AI.1	For remedial or maintenance work where soils are exposed, sediment and erosion control devices would be installed to minimise transport of sediment in accordance with <i>Managing Urban Stormwater, Soils and Construction</i> (Landcom, 2004).
Contamination and hazardous materials	AJ.1	Potential operational impacts would be managed in accordance with NSW TrainLink's existing environmental management system.

6. Conclusion

6.1 Conclusion

The Wickham Transport Interchange REF included a comprehensive assessment of the likely environmental impacts as a result of the proposal. Potential impacts were identified and addressed in the REF and mitigation measures have been recommended where appropriate.

The REF was placed on public display from 30 July to 30 August 2014.

A total of 280 submissions were received which included 278 submissions from the community and two submissions from government agencies. This Submissions Report has documented and considered the submissions received and outlined Transport for NSW's response.

Since display of the REF, additional investigations have been completed and modifications to the proposal have been identified. This Submissions Report has assessed the findings of the investigations and the potential environmental impacts of the intended modifications.

Some additional management measures have been identified in this report. The management of all other impacts would be consistent with the management and mitigation measures detailed in the REF. All mitigation measures for the proposal are summarised in Table 5.1.

6.2 Next steps

Transport for NSW will review the REF and Submissions Report prepared for the proposal and determine whether the requirements for assessment under Part 5 of the EP&A Act have been met. Transport for NSW will also determine whether issues raised by stakeholders and the community have been appropriately addressed and considered in the Submissions Report.

Following this review, Transport for NSW will make a determination as to whether or not to proceed with the proposal, in accordance with the provisions of Part 5 of the EP&A Act.

Should the proposal be approved, Transport for NSW will continue to consult and inform community members, government agencies and other stakeholders during the pre-construction and construction phases. An overview of the consultation activities that will be undertaken by TfNSW during the pre-construction and construction phases of the proposal is provided in section 2.5.

7. References

- Department of Environment and Climate Change (DECC), 2009, *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997*, DECC, Sydney
- Department of Environment, Climate Change and Water (DECCW), 2009, *Waste Classification Guidelines*, DECCW, Sydney
- DECCW, 2010a, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, DECCW, Sydney.
- DECCW, 2010b, *Guide for investigating, assessing and reporting on Aboriginal cultural heritage in NSW*, DECCW, Sydney.
- Department of Planning and Infrastructure, 2012, *Newcastle Urban Renewal Strategy*
Department of Planning and Infrastructure, Sydney
- Department of Urban Affairs and Planning, 1998, *Acid Sulfate Soil Planning Guidelines*,
Department of Urban Affairs and Planning, Sydney
- Engineers Australia, 1999, *Australian Rainfall and Runoff*, Engineers Australia, Sydney
- Environment Protection Authority (EPA) 2013, *Rail Infrastructure Noise Guideline*, EPA, Sydney
- Landcom, 2004, *Managing Urban Stormwater, Soils and Construction*, Landcom, Sydney
- RTA, 2010, *Traffic Control at Work Sites*.
- Sydney Trains, 2013, *Environmental Management System Guide Noise and Vibration from Rail Facilities*, Sydney Trains, Sydney
- Transport for NSW, 2012, *Construction Noise Strategy*, Transport for NSW, Sydney
- Transport for NSW, 2012a, *Water Discharge and Re-use Guideline*, Transport for NSW, Sydney
- Transport for NSW, 2014a, *NSW Sustainable Design Guidelines*, Transport for NSW, Sydney
- Transport for NSW, 2014b, *Hunter Regional Transport Plan*, Transport for NSW, Sydney
- URS Australia Pty Ltd (URS), 2014, *Preliminary Environmental Review - Newcastle Urban Renewal and Transport Program*, report prepared for Transport for NSW
- URS Australia Pty Ltd (URS), 2014a, *Preliminary Environmental Review, Newcastle Urban Renewal and Transport Program*, Prepared for Transport for NSW, April 2014

Appendices

Appendix A – Summary of issues raised by submission in Section 3.4

Abbreviations

N	Noise and vibration	SU	Sustainability
S	Social impacts	FD	Flooding and drainage
V	Visual and urban design	LD	Land use and property
ST	Strategic justification and scope	PC	Proposal construction
T	Traffic and transport	R	REF and EIA process
H	Heritage	C	Consultation
AQ	Air quality	UR	Unrelated to the project

Submission	Response number
1	S4, ST12, ST90, ST119, T57, T74, T75, R9
2	ST121, T53, C6, C19
3	ST38, ST39, ST82, T55, C6, UR1, UR6
4	S1, S4, ST2, ST121, T35, T56, T65, R9, C1
5	V1, ST39, ST115, ST119, T43, R9, R12, UR7, UR8
6	ST116, ST117
7	ST38, ST39, C2
8	ST3
9	ST33, ST42, ST83, ST121, C6, UR1
10	No comments related to the project or its scope
11	S4, S5, S9, ST1, ST10, ST82, ST83, ST117, ST119, ST127, T8, UR2
12	ST82, ST121
13	S4, V1, ST42, ST54, T57
14	S4, S5, S10, ST42, T35, T57, T65
15	S4, ST47, ST95, ST121, ST123, T57, R9, C3, UR1
16	S4, S9, S10, ST42, ST88, ST121, T13, T35, T57, T65, SU2, R13, UR16
17	S4, ST7, ST8, ST9, ST10, ST88, ST119, ST129
18	ST7, ST9, ST10, ST12, ST58, ST88, ST106, ST114, ST121, UR6
19	S4, V1, ST1, ST42, ST54, ST88, ST114, ST121, ST124, R13, UR1, UR6
20	ST121, ST130
21	ST119, UR6, Support
22	ST42, T34
23	No comments related to the project or its scope
24	ST42, ST54, ST117, ST119, ST130, T57, R12
25	ST121, UR6
26	S4, V1, ST78, ST82, ST125
27	N3, S4, ST119, T15, T52, C6, UR1, Objection
28	S4, ST42, ST121, ST142
29	S2, ST33, ST78, ST121, T62, T65
30	ST59, Objection
31	ST16, ST119, T35, UR1, Support
32	ST16, ST88, ST89, ST131
33	ST87, ST126, ST132, ST134
34	ST48, ST103, C20
35	S16, ST22, ST144, C21

Submission	Response number
36	V1, ST23
37	ST12, ST24, ST54, ST119, ST143, R14, UR1
38	UR1
39	ST2, UR1
40	ST101, ST120, T57
41	ST114, UR1, UR6
42	Objection
43	S17, V1, V4, ST1, ST16, ST83, ST121, ST134, ST135, T53, T57, T62, T65, LU1, UR6, Support
44	ST2, ST67, ST88, ST119, T57, T65, LU1, R7
45	UR1
46	ST88, ST119, T53, T65
47	S2, ST82, T52
48	N3, ST33, ST82, ST104
49	UR11
50	ST24, ST82
51	V1, ST33, ST42, ST119, ST121, ST130, ST134, ST135, T35, UR1, UR6
52	ST3, ST88, ST121, Support
53	ST95
54	ST1, ST67, ST119, T45, T57
55	N1, N2, N6, V1, ST96, ST119, R15, UR1, UR6
56	N4, ST121, R9, C6
57	ST2, ST66, T35, T57
58	S5, ST25, ST42, ST82, ST87, ST104, ST119, ST121, T57, R9, C7, UR1
59	V1, ST2, ST16, ST119, T34, T39, T57, T62
60	ST2, ST3, ST99, T34, T57, T61
61	S4, ST45, ST119, ST121, T57, R16, UR1
62	T52, T57, T65, UR1
63	ST100, T53, T57, T65, UR1
64	ST116, ST117, ST121
65	Support
66	T1, T43, T52, T65, UR1, Support
67	ST2, ST3, T52, T57, T63, UR1
68	T47, T52, T57, T63, UR1, Support
69	Support
70	T65, C6
71	ST33, T12, T38, T57, UR1, UR5, Support
72	ST12, ST84, Support
73	S4, ST82
74	S4, ST59, ST117, T13
75	No comments related to the project or its scope
76	ST16, T40, T57, T65, R9
77	Support
78	N1, N3, S6, V1, ST45, ST82, ST116, ST119, ST121, T57, T65

Submission	Response number
79	N1, N4, S22, ST2, ST16, ST60, ST82, ST121, T40, T48, T53, T57, T62, T65, AQ1, LU2, PC1
80	N1, N4, N6, ST2, ST82, ST83, ST121, T57, T65, AQ1, R9
81	N1, N3, N6, S12, ST16, ST82, ST121, T65, T82, AQ1, PC1
82	ST2, ST45, ST117, ST121, T35, T36, T53, T65, C6
83	ST2
84	N1, N3, N4, N6, N7, S13, S23, V2, V3, V4, AQ1, C6, C9
85	S6, ST47, ST61, ST91, ST119, ST121, T34, T36, T57, T65, UR1
86	S6
87	N1, N4, S6, V1, ST33, ST45, ST96, ST117, ST121, T57, T65, Objection
88	V1, ST54, ST87, ST119, T36, T56
89	S6, S16, S22, V1, ST37, ST51, ST108, T17, UR1
90	ST121, ST146, T57
91	ST121
92	ST112, ST114, ST121, UR1
93	No comments included in submission.
94	S6, V1, ST3, ST114, ST119, UR1
95	S4
96	ST121, UR1, Objection
97	V1, ST1, ST45, ST51, ST119, ST121, T53, UR1, UR6
98	S4, ST54, ST121, Objection
99	ST36, ST45, ST121, T57
100	S4, S6, ST121, C6
101	S6, ST40, UR1, UR6
102	S6, V1, ST51, ST119, ST121
103	S4, V1, ST7, ST12, ST46, ST119, ST121, T65, UR1
104	ST114, ST117, ST121, Support
105	ST121, Objection
106	ST4, ST10, ST42, ST82, Objection
107	S6, UR1, Objection
108	ST104, ST126, ST145
109	ST42
110	S4, V1, ST26, ST42, ST106
111	ST121, UR1, Support
112	R14
113	S4, ST3, ST12, ST56, ST85, ST117, UR1
114	S6, ST56
115	S6, ST117, ST121
116	ST121, T59, T67, UR1
117	S6, ST33, ST49, ST121, Objection
118	ST121
119	ST33, ST119, ST121, Objection
120	V1, ST119
121	S4, S6, ST114, ST117, ST121, C6, UR3, UR6

Submission	Response number
122	S4, S9, S10, ST87, ST88, ST132
123	ST27, ST54, ST117, ST121, ST130, T19, T84, Objection
124	S6, ST121, T65, Objection
125	V1, ST26, ST78, ST79, ST87, ST119, T36, T59, T65, UR6
126	S4, ST33, ST42, ST56, ST67, ST121, T85, UR1
127	ST47, ST54, ST117, ST121, T53, R1, Objection
128	ST42, ST114, ST117, ST121, ST128, ST133, ST134, T22, T64, C6, C7, UR1
129	ST96, ST121, T1, T65
130	S4, S5, ST42, ST83, ST96, ST121, T65
131	V1, Support
132	UR1
133	ST33
134	S4, ST121, R6
135	UR2, Support
136	Support
137	S4, S18, V1, ST2, ST19, ST42, ST54, ST82, T57, AQ3
138	ST2, ST66, T34, T53, T57, T61, UR1
139	S4, S9, S10, S16, ST17, ST42, ST54, ST70, ST82, ST83, ST86, ST87, ST88, ST130, ST134, ST136, T15, T22, T23, T35, T36, T56, T57, T65, T68, UR1, UR16
140	C3
141	ST54, ST114
142	T37, T41, T52, T65, FD1, Support
143	ST42
144	ST12, ST119, T65, UR1
145	C8
146	V1, R9, R14, R17, C9
147	R18
148	C3
149	S4
150	S5, ST33
151	C3
152	T47, T52, T62, Support
153	ST104, ST105, C9
154	ST3, ST67, ST83, ST87, T14, T19, T57, T59
155	Support
156	T23, T35, T53, T57, T65
157	S9, S10, C10
158	S4, S17, ST33, ST34, ST42, ST43, ST45, ST49, ST109, ST121
159	N3, N6, C6
160	ST82, ST104, T1, T61, C9
161	V1
162	ST51, ST119, T57
163	ST95, T2, UR1
164	S4, ST11, ST34, ST95, T21, T56, T57, R19, UR6, Support

Submission	Response number
165	V1, ST42, ST87, ST95, ST119, T52
166	S4, ST3, ST46, ST54, ST58, ST116, UR6, Objection
167	S4, S6, UR1, UR9
168	No comments related to the project or its scope
169	No comments related to the project or its scope
170	ST114, ST117, Objection
171	ST121, T34, T40, T53
172	ST62, ST121, C3
173	S4, ST54, ST117, T2
174	H1, H3, H4, H6, H7
175	T2
176	S2, T2, FD1
177	S2
178	ST28
179	S4, S6, C11
180	S3, S4, ST46, ST51, ST54, ST66, UR1
181	S2, S9, S10, ST20, ST21, ST45, ST80, ST88, ST90, ST117, ST130, ST134, ST137, ST138, T14, T19, T22, T52, T57, T62, T65, T75, T87, T88, T89, R2, R6, R9, R10, R11, C9
182	ST83, ST87, ST88, ST90, ST92, ST96, ST97, ST102, C12
183	S4, S9, S10, ST42, T24, T57, T65, T66, C13, UR1
184	C14
185	S4, S9, S10, S14, V1, ST42, ST49, ST51, ST52, ST53, ST55, ST119, ST139, C14, C15, UR1, UR6, Objection
186	S4, S8, S9, S10, C11
187	N6, S4, S9, S10, ST2, ST17, ST29, ST41, ST51, ST58, ST66, ST109, ST113, ST126, ST130, ST140, T13, T21, T22, T34, T36, T49, T57, T65, T81, T83, H3, R3, R26, UR1
188	Objection
189	N4, N5, N6, N8, N9, N10, S4, S6, S7, S9, S10, S17, ST1, ST4, ST5, ST10, ST17, ST18, ST30, ST31, ST51, ST53, ST55, ST56, ST62, ST63, ST71, ST87, ST88, ST93, ST98, ST104, ST107, ST111, ST117, ST118, ST119, ST130, ST132, ST134, T5, T21, T22, T26, T52, T53, T54, T57, T65, T75, T80, T82, T90, T91, AQ1, AQ2, R4, R6, R8, R9, R14, R20, C2, C4, C9, UR1, UR3, UR6, UR10, UR12, UR15
190	S4, T57, C11
191	V1, ST10, ST44, ST87, ST97, ST119, ST130, T19, T22, T57, T58, T59, R20, R21, Objection
192	S4, S5, ST46, Objection
193	UR4
194	ST54, ST68, T34, T35, T36, T46, T53, T57, T75, T76, T77, T86, UR13
195	S9, S10, ST58, ST88, ST132, T22, T57, T65, T92, T93, T94, T95, R9
196	ST44, ST45, ST46, ST49, ST56, ST61, ST69, ST114, ST130, T13, T53, T57
197	S2, S4, S5, S6, S9, S10, S15, ST1, ST17, ST33, ST41, ST42, ST44, ST45, ST51, ST61, ST62, ST82, ST83, ST87, ST88, ST95, ST96, ST130, T21, T23, T24, T34, T46, T53, T57, T59, T65, T69, R9, C2, UR7, UR13, UR16
198	S5, S6, S9, S10, ST61, ST82, ST87, ST88, ST114, T25, R4, R9, C8
199	S4, S9, S10, ST1, ST58, ST109, ST126, ST130, T13, T21, T27, T34, T36, T57, T65, UR16

Submission	Response number
200	C13
201	V1, ST1
202	S4, S9, S10, V1, ST1, ST33, ST34, ST44, ST54, ST87, ST117, T24, T57, UR1, Objection
203	ST3, ST19, ST33, ST34, ST55, ST58, ST61, ST66, ST87, ST95, ST104, ST117, ST119, T24, T34, T65, T91, R9, C6, C9, C11, UR6, UR16
204	S4
205	S4, S8, C11
206	S4, S8, C11
207	S4, S8, C11
208	S6, ST51, ST54, ST66, ST67, ST105, ST134, T22, T57, T65, C6
209	N3
210	S4, ST110
211	ST1, ST2, ST82, UR1
212	V1, ST33, ST82, T34, T53, T57, R22, Support
213	S4, ST1, ST51, ST58, UR1, UR9
214	S4, C11
215	ST1, ST51, ST77, ST116, ST121, ST130, T6, T34, T46, T53, T57, UR1, UR13, Objection
216	ST81, UR9
217	S4, ST55, ST82
218	S6, ST42, ST87, ST95, ST132, ST134, T20, T22, T23, UR16
219	S4, ST132, ST134, T22, T57
220	S4, ST61, ST87, ST98, T23, T57, Objection
221	S6, ST121
222	UR1
223	S4, ST26, ST46, ST49, ST51, ST121, T67, Objection
224	V1, ST42, ST87, Objection
225	S4, S6
226	S24
227	ST58, ST121, Objection
228	S4, S6, S9, S10
229	S4, ST54
230	UR1
231	UR1, Objection
232	ST54, ST58, ST82, UR1
233	Support
234	ST46, ST47, ST49, ST53, ST56, ST66, ST67, ST77, ST79
235	S6, S9, S10, S17, V1, ST1, ST2, ST3, ST33, ST42, ST45, ST53, ST55, ST58, ST66, ST67, ST72, ST82, ST87, ST114, ST117, T24, T34, T36, T57, T59, T65, H2, AQ3, SU3, R3, R23, C2, C5, C6, C7, C11, UR1, UR6, UR16
236	S4, V1, ST33, ST34, ST55, ST56, ST87, ST114, ST119
237	ST2, ST13, ST88, T34, T35, T36, T44, T78, UR14
238	N4, S9, S10, S11, S15, S17, S19, S25, ST6, ST17, ST33, ST42, ST51, ST56, ST57, ST58, ST83, ST91, ST94, ST97, ST114, ST117, ST121, ST130, T13, T22, T34, T36, T53, T57, R9, R13, R24, R25, C4, C6, C15

Submission	Response number
239	S4, S9, S10, S22, S26, ST17, ST42, ST61, ST64, ST65, ST87, ST95, ST121, SU1, SU4, R4, R9, R11
240	S4, S8, C11
241	S4, S8, C11
242	S4, S15, S17, V1, ST1, ST10, ST33, ST42, ST43, ST58, ST67, ST95, ST130, ST134, T6, T18, T52, T53, T61, T62, T65, T81, UR1
243	S20, ST8, T40, T42, T50, T65, T70, Support
244	S4, S8, C11
245	S4, ST14, ST33, ST34, ST42, ST104, ST117, ST130, ST141, T57, T65, UR1
246	S9, S10, S21, ST12, ST14, ST16, ST83, ST95, ST122, Support
247	S27, ST17, ST33, ST42, ST45, ST58, ST61, ST88, T24, T36, T53, T57, C22
248	S14, S17, V1, ST2, ST10, ST33, ST41, ST42, ST73, ST87, ST88, ST96, ST97, ST112, ST113, ST117, ST134, T29, T57, T65, T71, T79, H2, UR1
249	V1, ST15, ST87, T57, UR16, Support
250	ST3, ST10, ST35, ST41, ST54, ST88, ST126, ST129, ST145, T17, T57, T59, T65
251	S6, S17, ST19, ST33, ST67, ST97, ST121, T2, T6, T8, T12, T34, T52, T57, T61, T80, C16, UR1, Support
252	S4, ST45, ST58, ST61, ST65, ST87, ST117, T33, T57, T72
253	ST42, ST95, ST108, ST109, ST119, T21, C11
254	ST12, ST74, T30, T91
255	S4, S6, ST1, ST3, ST39, ST67, ST78, ST111, ST134, T22, T24, T52, T57, T65, UR1
256	S4, S6, S8, S9, S10, C11
257	C15, C17
258	R5, C17
259	C2, C14, C18
260	ST58, T10, T73, UR3, Support
261	N11, S28, V4, ST1, ST75, ST134, T22, T28, T32, T36, T51, T52, T57, T65, T96, FD2, PC2, R6
262	ST45, H3, C6, C22, Objection
263	S4, S6, S9, S10, V1, ST33, ST45, ST50, ST55, ST65, ST74, ST81, ST88, T6, T9, T24, T31, T33, T36, T53, T57, T61, T65, T67, T72, C3, C6
264	S4, ST1, ST121, Objection
265	S4, S6, S8, S9, S10, C11
266	ST2
267	ST51, H3, C6, C22, Objection
268	H3, H5, UR1, Objection
269	T16, H3, H5
270	ST45, ST61, ST83, ST85, ST88, ST95, ST97, T22, T24, T53, T57, T91, UR1
271	S4, ST1, ST121, Objection
272	S4, ST1, ST17, ST26, ST32, ST33, ST41, ST42, ST44, ST45, ST51, ST61, ST62, ST76, ST82, ST83, ST87, ST88, ST95, ST96, ST117, T21, T22, T24, T25, T34, T36, T46, T53, T57, T59, T65, T69, T77, R9, C2, UR1, UR7, UR13, UR16, Objection
273	No comments related to the project or its scope
274	ST45, ST54, ST55, ST65, ST68
275	T22

Submission	Response number
276	ST2, ST13, ST45, ST54, ST55, ST65, ST79, ST82, ST87, ST88, ST111, T6, T11
277	No comments related to the project or its scope
278	ST65, T11, T23, T35
279	T33
280	T23

Appendix B – Heritage Impact Statement for works at Hamilton Station



Heritage Impact Statement

Hamilton Railway Station Group

16 October 2014

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Stephen Davies, B Arts Dip. Ed., Dip. T&CP, Dip. Cons. Studies
Associate Director	Kate Paterson, B Arts (Architecture), B Architecture
Senior Consultant	Fiona Binns, B Arts, M Arts (Curatorial Studies)
Job Code	SH473
Report Number	02

© Urbis Pty Ltd
ABN 50 105 256 228

All Rights Reserved. No material may be reproduced without prior permission.

You must read the important disclaimer appearing within the body of this report.

URBIS
Australia Asia Middle East
urbis.com.au

TABLE OF CONTENTS

Executive Summaryi

1 Introduction3

1.1 Background.....3

1.2 Site Location3

1.3 Methodology4

1.4 Author Identification4

1.5 The Proposal4

2 Site Description8

2.1 The Hamilton Railway Station Group8

2.2 The Timber Relic12

3 Historical Overview13

3.1 Area History13

3.2 Site History13

4 Significance.....16

4.1 What is Heritage Significance?.....16

4.2 Significance Assessment.....16

4.3 Statement of Significance.....18

5 Impact Assessment19

5.1 Heritage Listing.....19

5.2 Statutory Controls.....21

5.3 Heritage Division Guidelines21

5.4 Statement of Potential Construction Impacts24

6 Conclusion and Recommendations25

7 Bibliography and References26

7.1 Bibliography26

7.2 References26

Disclaimer27

FIGURES:

Figure 1 – Location of the proposal site (red boundary)3

Figure 2 – View of Hamilton Railway Station Group showing the location of the proposed extension to Platform 2 (red boundary)5

Figure 3 – Hamilton Station8

Figure 4 – Southern station entrance – Platform 18

Figure 5 – View of Platform 2 from the pedestrian footbridge, facing northeast9

Figure 6 – Hamilton Railway Station signage and footbridge, looking south from Beaumont Street.....10

Figure 7 – Hamilton Junction Signal Box11

Figure 8 – Timber relic.....12

Figure 9 – Relic location12

Figure 10 – Hamilton Railway Station 190614

Figure 11 – Parish of Newcastle 1959 Map with Hamilton Station indicated15

Figure 12 – Heritage Map Number 4FA 201219

Figure 13 – Heritage Council of NSW map showing SHR curtilage20

PICTURES:

Picture 1 – View of station platforms from Platform 2, facing southeast 8
Picture 2 – View of platforms from footbridge, facing southeast 8
Picture 3 – View of timber relic in relation to its surrounding context 12
Picture 4 – Close detail of timber relic 12

TABLES:

Table 1: Proposed works to maintain amenity and functionality during the Program 5
▪ Table 2 – URS Drawings 6
Table 3: Statement of Heritage Impact for Hamilton Railway Station Group, as recorded on the State
Heritage Register listing for the item 16
Table 4 – Heritage Division considerations 21

Executive Summary

Urbis has been engaged by GHD on behalf of Transport for New South Wales (NSW) to prepare the following Heritage Impact Statement to accompany the section 60 application for proposed works to the Hamilton Railway Station Group (the 'proposal site').

The Hamilton Railway Station Group is a listed heritage item on the following heritage registers:

- State Heritage Register (SHR) – Item No. 01165
- Newcastle Local Environmental Plan (LEP) 2012
- Railcorp's Section 170 (s170) Heritage and Conservation Register

As part of the overall Newcastle Urban Renewal and Transport Program and Wickham Transport Interchange (WTI) works specifically, the following works are being proposed for Hamilton Station:

- To provide facilities for operational staff for the duration of the Program (approximately two years), temporary demountable buildings are proposed to be erected at Hamilton Station. These buildings will be used as offices, a first aid room, a meal room, toilets and a shower block.
- The removal of two contemporary storage buildings to the north of Platform 2 and outside of the Station's SHR curtilage.
- Constructing and operating a new train stabling facility comprising four sidings to the north of Hamilton Station, within the existing rail corridor.
- Minor works are required at the Station to ensure that the accessibility, functionality and amenity of the Station are not adversely affected by the WTI works. To facilitate this, it is proposed to undertake minor works on both of the Station platforms.
- To facilitate an anticipated increase in patronage, it is also proposed to extend Platform 2 to the east by approximately 24 metres. The extension will be surfaced with concrete to be clearly definable from the existing asphalt platform section, and will be of structural steel with a precast and in situ concrete platform slab. Platform furniture and general infrastructure will be installed along the extension, including fencing, signs, seating and gated stairs.
- An archaeological assessment has been prepared by a specialist archaeological consultant and is included as part of this S60 application.

It should be noted that in addition to assessing proposed works within the Station's SHR curtilage, this HIS has assessed proposed works that will occur outside of but in proximity to this curtilage.

The proposal has been assessed in relation to relevant questions posed in the Heritage Division's *Statements of Heritage Impact* guidelines (Heritage Office 2002), and the following conclusions drawn:

- The proposed works have been assessed and it has been determined that they will have no negative impact on the Station's heritage significance (either physical or visual). With the exception of the Platform 2 extension, the works are minor and/or temporary, and will predominately occur outside of the Station's SHR curtilage. Works that will occur within the curtilage, including the extension of Platform 2, will at most have a negligible impact on the station's built fabric, and no impact on the Station's overall heritage significance or visual setting;
- the timber relic is outside the station and works curtilage and will not be impacted by any of the proposed works;
- None of the proposed works will have an impact (either physical or visual) on any heritage items in the vicinity. Works will be wholly confined to either the rail corridor or Council owned land, and will be either minor in nature or, in the case of the demountables, temporary and reversible; and

- The works are considered to be necessary to facilitate the use of the Station during the WTI works, and to enhance the overall customer and staff experience for the duration of the WTI works.
- Excavation works to establish or upgrade electrical and other services. Refer to separate Archaeological Assessment included in the S60 application for an assessment of the potential impacts associated with these works.

Based on these conclusions, general recommendations have been made to mitigate any potential impacts associated with the proposed works. The proposal has been developed in consultation with heritage advice and is recommended for approval.

1 Introduction

1.1 BACKGROUND

Urbis has been engaged by GHD on behalf of Transport for New South Wales (NSW) to prepare the following Heritage Impact Statement (HIS) for proposed works to the Hamilton Railway Station Group (the 'proposal site').

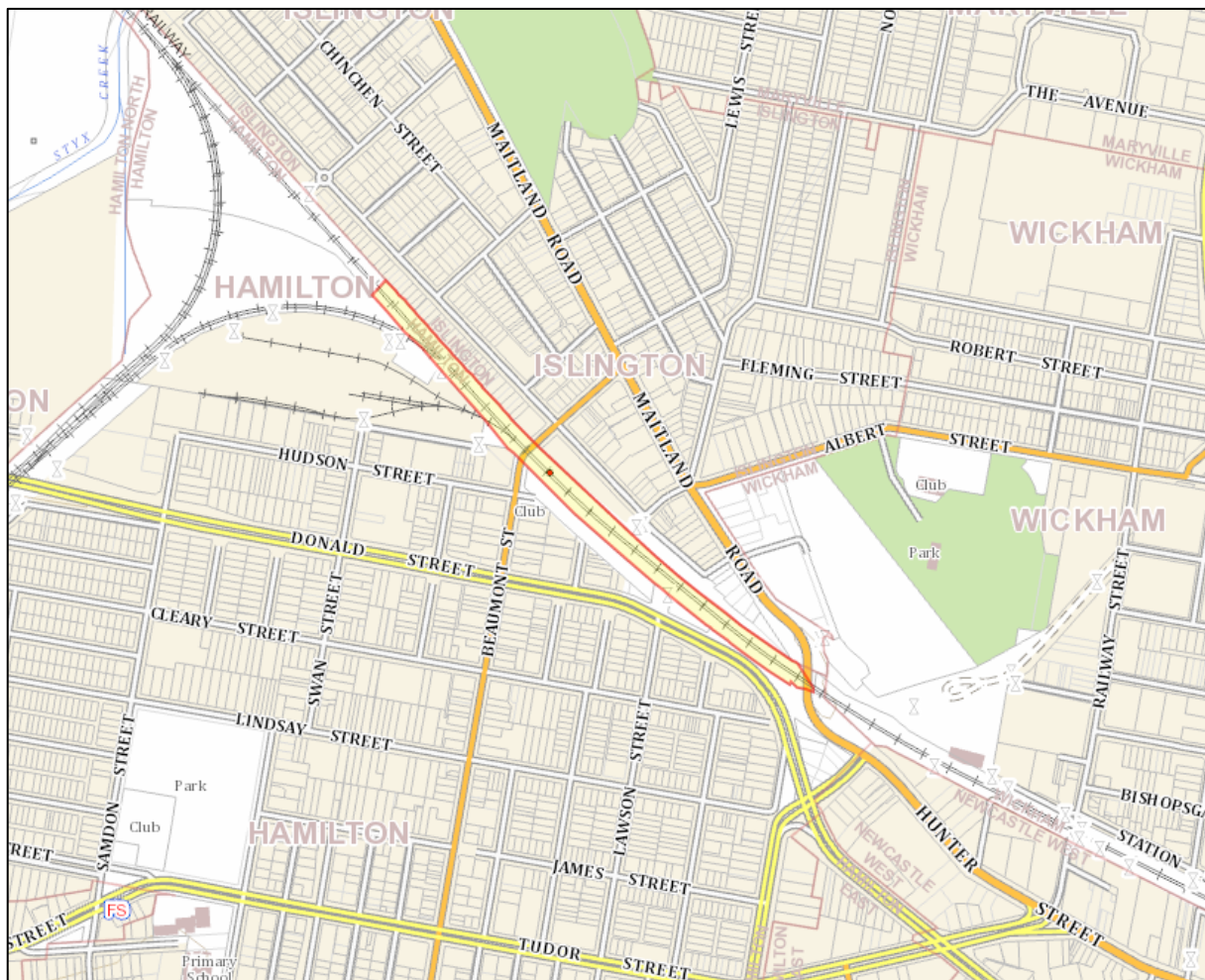
The Hamilton Railway Station Group is a listed heritage item on the following heritage registers:

- State Heritage Register (SHR) – Item No. 01165
- Newcastle Local Environmental Plan (LEP) 2012
- Railcorp's Section 170 (s170) Heritage and Conservation Register

1.2 SITE LOCATION

The primary address for the Station is listed on the SHR as Great Northern Railway, Hamilton, and its location is shown in Figure 1, below. It comprises Lot 1, DP 1192377.

FIGURE 1 – LOCATION OF THE PROPOSAL SITE (RED BOUNDARY)



[Source: Six Maps 2014]

1.3 METHODOLOGY

This Heritage Impact Statement has been prepared in accordance with the NSW Heritage Manual 'Statements of Heritage Impact' (2002) and 'Assessing Heritage Significance' (2001) guidelines. The philosophy and process adopted is that guided by the *Australia ICOMOS Burra Charter* 1999.

This proposal does not require consent under Part 4 of the *Environmental and Planning Assessment Act 1979*. Therefore, assessment against the relevant provisions of the Newcastle LEP 2012 and Newcastle Development Control Plan (DCP) is not required.

1.4 AUTHOR IDENTIFICATION

The following report has been prepared by Kate Paterson (Associate Director/ Architect). Stephen Davies (Director) has reviewed and endorsed its content.

Unless otherwise stated, all drawings, illustrations and photographs are the work of Urbis.

1.5 THE PROPOSAL

The Newcastle Urban Renewal Strategy, released in 2012, included a range of initiatives to revitalise Newcastle and improve links between the city centre and the waterfront. One of the major renewal initiatives currently underway is Newcastle Light Rail which includes the delivery of a new transport interchange at Wickham, referred to as the Wickham Transport Interchange (WTI). Together, these initiatives are set to revitalise Newcastle and are part of the Newcastle Urban Renewal and Transport Program ('the Program').

It is anticipated that the Program and the WTI works specifically, will have an impact on the functioning of the State Heritage Register listed Hamilton Station, and may affect accessibility and amenity. In response to this, the works described below are proposed:

- To provide facilities for operational staff for the duration of the Program (approximately two years), temporary demountable buildings are proposed to be erected at Hamilton Station. These buildings will be used as offices, a first aid room, a meal room, and toilets and a shower block.
- The removal of two contemporary storage buildings to the north of Platform 2 and outside of the Station's SHR curtilage.
- Constructing and operating a new train stabling facility comprising four sidings to the north of Hamilton Station, within the existing rail corridor.
- Minor works are required at the station to ensure that the accessibility, functionality and amenity of the Station are not adversely affected by the WTI works. To facilitate this, it is proposed to undertake minor works on both of the station platforms, as detailed in Table 1, below.
- To facilitate an anticipated increase in patronage, it is also proposed to extend Platform 2 to the east by approximately 24 metres. The extension will be surfaced with concrete, to be clearly definable from the existing asphalt platform section, and will be of structural steel with a precast and in situ concrete platform slab. Platform furniture and general infrastructure will be installed along the extension, including fencing, signs, seating and gated stairs. The location of the proposed eastern extension to Platform 1 is indicated in Figure 2, below.
- Excavation works to establish or upgrade electrical and other services. Refer to separate Archaeological Assessment included in the S60 application for an assessment of the potential impacts associated with these works.

TABLE 1: PROPOSED WORKS TO MAINTAIN AMENITY AND FUNCTIONALITY DURING THE PROGRAM

LOCATION	PROPOSED WORKS
Platform 1 area	<ul style="list-style-type: none"> ▪ Utilisation of the existing Station Building as a meal and personal storage room ▪ Erection of a demountable building on the platform for use as a cleaner’s storeroom; ▪ Relocation of the Station operation monitors from Newcastle to Hamilton; ▪ Creation of a designated space for a large skip bin and Otto waste bins; ▪ Installation of timing devices (digital and Kronos clocks).
Platform 2 area	<ul style="list-style-type: none"> ▪ Erection of several demountable buildings to the north of the platform and to the east of existing buildings for use as a supervision room, personal needs facility, cleaners storeroom and toilet facilities; ▪ Installation of adequate and appropriate signage for bus/taxi services; ▪ Upgrade of communication equipment to current standards along both platforms; ▪ Upgrade of lighting services to current standards; ▪ Installation of CCTV services to current standards; ▪ Installation of timing devices (digital and Kronos clocks).

FIGURE 2 – VIEW OF HAMILTON RAILWAY STATION GROUP SHOWING THE LOCATION OF THE PROPOSED EXTENSION TO PLATFORM 2 (RED BOUNDARY)



This report was written with reference to the following architectural overview drawings by Urbis:

- A3.00 Drawing Schedule 07.10.14
- A3.01 Site plan & heritage curtilage 07.10.14
- A3.02 Proposed works S60 application 07.10.14

This report was written with reference to the following drawings by Novorail:

- WTI-NOVO-CI-564177 General Arrangement Plan -
- WTI-NOVO-CI-564178 General Arrangement Plan -
- WTI-NOVO-CI-564179 General Arrangement Plan 18/08/2014
- WTI-NOVO-CI-564180 General Arrangement Plan 18/08/2014
- WTI-NOVO-CI-564181 General Arrangement Plan -
- WTI-NOVO-CI-564182 General Arrangement Plan -

This report was written with reference to the following drawings by URS as outlined in Table 2;

- TABLE 2 – URS DRAWINGS

HEADER TEXT	HEADER TEXT	HEADER TEXT	HEADER TEXT
NHRT-URS-TR-010000-A	Rev-A	General Arrangement	30/06/2014
NHRT-URS-TR-010100-B	Rev B	Horizontal Arrangement - Up Newcastle Main and Down Newcastle Main	30/06/2014
NHRT-URS-TR-010200-A	Rev A	Horizontal Alignment – Siding No. 1 and No. 2	30/06/2014
NHRT-URS-TR-010300-A	Rev A	Horizontal Alignment – Siding No. 3 and No. 4	30/06/2014
NHRT-URS-CI-000501-A	Rev A	Road Plan – Sheet 1	30/06/2014
NHRT-URS-DR-003221-B	Rev B	Drainage Plan – Sheet 2	30/06/2014
NHRT-URS-RE-004001-A	Rev A	Plan – Sheet 1 - Pavement	30/06/2014
NHRT-URS-SI-026001-A	Rev A	Plan – Sheet 1 – Signage and Wayfinding	30/06/2014
NHRT-URS-SU-037001-A	Rev A	Plan – Sheet 1 - Survey	30/06/2014
NHRT-URS-UT-006200-B	Rev B	Utilities Plan – Sheet 1 - Utilities	30/06/2014
NHRT-URS-UT-006201-B	Rev B	Utilities Plan – Sheet 2 - Utilities	30/06/2014
NHRT-URS-CO-008101-A	Rev A	Stabling Yard and Drivers Change Walkway	30/06/2014
NHRT-URS-TP-016503-A	Rev A	Traction Power – 1500V DC Positive	30/06/2014

HEADER TEXT	HEADER TEXT	HEADER TEXT	HEADER TEXT
NHRT-URS-TP-016503-A	Rev A	Traction Power – 1500V DC Positive	30/06/2014
NHRT-URS-OH-015501-B	Rev B	Railways Overhead Wiring Layout	30/06/2014
NHRT-URS-OH-015501-B	Rev B	Railways Overhead Wiring Layout	30/06/2014
NHRT-URS-HV-012102-A	Rev A	Proposed 11kV Cable Route – Sheet 2	30/06/2014
NHRT-URS-UT-006301-A	Rev A	Ausgrid Plan – Sheet 1	30/06/2014
NHRT-URS-LV-013508-A	Rev A	Low Voltage Electrical LV Cable Route	30/06/2014

2 Site Description

2.1 THE HAMILTON RAILWAY STATION GROUP

Hamilton Station has a two sided platform configuration. The platforms have modern precast concrete side wall faces and asphalt pavement. All furniture, lights and bins are standard late twentieth century State Rail Authority specification.

The train station also contains a level crossing on Beaumont Street, which is considered to be a key feature of the station. It features an early twentieth century boom gate, imported from the United States. The crossing is operated by the adjacent signal box. Views of the Hamilton Station are provided in Figure 3, below.

FIGURE 3 – HAMILTON STATION



PICTURE 1 – VIEW OF STATION PLATFORMS FROM PLATFORM 2, FACING SOUTHEAST



PICTURE 2 – VIEW OF PLATFORMS FROM FOOTBRIDGE, FACING SOUTHEAST

The station building on Platform 1 is a single storey face brickwork building with gabled corrugated iron roof. The building is thought to be the original c.1875 third-class station building, which was modified in 1898 to its current configuration (Figure 4).

FIGURE 4 – SOUTHERN STATION ENTRANCE – PLATFORM 1



The awning is supported on curved cast iron brackets and has been extended to the east where it forms a large sheltered seating area adjacent to the ticket office. The roof form of this enclosed seating area follows the form of the station building. Three brick chimney stacks with corbelled string courses are located at the northern end of the station building. Both ends of the station have retained their original timber scrolled bargeboards and finials, which adds greatly to the otherwise utilitarian structure. The easternmost wall of the station building (seating area) features a corrugated iron wall.

The building is typical of the suburban and regional railway stations constructed during the last decades of the nineteenth century. Consistent with these architectural styles, all windows are timber framed double hung sash windows. Doors are four panelled generally with glazing in the upper panels.

A small brick toilet block exists at the eastern end of Platform 1. The building has a tiled floor and corrugated iron gabled roof, and is likely to be the most recent building to have been constructed on the platforms at Hamilton Station. A small store room is located at the Newcastle (eastern) end of the Platform 1 building. The building is square in plan and is of brick construction with a corrugated iron hipped roof. Access is by a door in the eastern wall, while the northern wall features a small window. A storage box for a wheelchair ramp is attached to the northern wall.

Internally the station building on Platform 1 still retains its original joinery. The walls comprise painted plaster, and its floor finishes are generally modern. The ceilings are modern plasterboard with cornices, although some of its original board ceilings remain. The Station Master's office features a timber mantelpiece and a blocked fireplace.

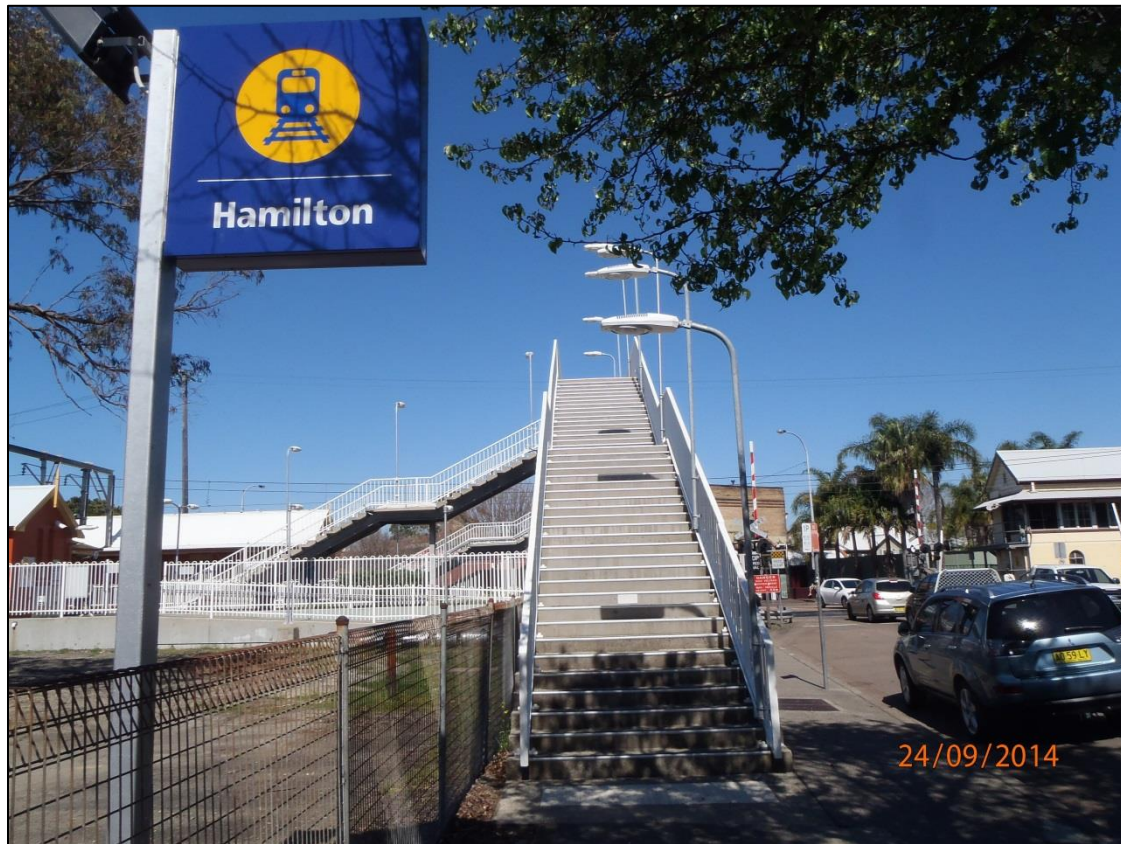
The station building on Platform 2 is very similar to the building on Platform 1, being of brick construction with a corrugated iron gabled roof (Figure 5). This building replaces an earlier building on Platform 2. The roof features bargeboards (not scrolled) and timber finials. There is a central double breasted chimney stack with corbelled brick string course. A small awning (not the whole length of the building) is supported on arching cast iron brackets and features timber valances. All external original joinery is still extant, including double hung sash windows. The eastern end of the building features an attached brick toilet block with gabled roof (slightly lower than the station building), also with bargeboards and finial. The toilet block wall presents three recessed lower bays and six sets of air vents to the platform side, and is entered by an arched brick opening.

FIGURE 5 – VIEW OF PLATFORM 2 FROM THE PEDESTRIAN FOOTBRIDGE, FACING NORTHEAST



The original steel framed footbridge was replaced in 1976 by a steel beam structure over the main line at the level crossing. The footbridge spans over the land formerly occupied by sidings on the northern side of the Platform 2 building (Figure 6).

FIGURE 6 – HAMILTON RAILWAY STATION SIGNAGE AND FOOTBRIDGE, LOOKING SOUTH FROM BEAUMONT STREET



Hamilton Junction Signal Box is located adjacent to the main Sydney to Newcastle rail line and Beaumont Street at the Sydney-end of Hamilton Station. The signal box is a two-storey Type E2 structure. The ground floor is of brick construction and features four six pane arched windows on the northern (railway line) elevation. The southern (The Esplanade) elevation is of brick construction to roof height with two timber framed sash windows, while the northern wall is brick to sill height, above which sliding timber-framed six pane glazed windows extend around the perimeter. The gabled roof is corrugated fibre cement sheeting with gables of tongue-and-groove timber horizontal boarding. Original timber bargeboards and finials have been removed, as has the original stair and balcony on the eastern (Beaumont Street) elevation which has been replaced with a utilitarian steel structure. A corbelled brick chimney has been removed from the centre of the rear elevation. The building has been painted cream in colour (Figure 7).

Internally, the signal box's ground floor contains interlocking levers and rodding, a separate relay room and signal control wiring. The upper floor (operating level) contains a large mechanical lever frame with 56 large-type signal/point levers, track/signal diagrams, telephones and other equipment necessary for the functioning of an important signal box. Control equipment for the adjacent level crossing gates and warning lights are located at the Newcastle-end of the signal box. Sliding, timber-framed six pane glass windows are located in the front (northern) wall and both end walls to assist with natural lighting, although the windows at the north-east corner have been replaced with aluminium framed single panes. A fireplace has been filled in the centre of the southern wall. The upper floor has a timber floor and timber tongue-and-groove panelling on the walls. The ceiling (originally tongue-and-groove but since covered over) is of plasterboard.

FIGURE 7 – HAMILTON JUNCTION SIGNAL BOX



In addition to the landscaping on the platforms, a large number of mature trees are located on the southern side of the eastern end of Platform 1, extending through to Donald Street. The trees include Camphor Laurels, palms and eucalypts, and form a picturesque background to the curving station platforms. Most of this landscaping is not contained within the rail corridor but provides an attractive setting for the station.

The Newcastle Field Depot for Sydney Trains Communications and Control Systems is located at 4 Fern Street, on the northern side of Hamilton Station (excluded from the listing). This large, hip-roofed, brick building is of modern construction and stands on the site formerly occupied by sidings. The area surrounding 4 Fern Street was a former goods yard and siding. Some tracks remain, but mostly this area is unused.

2.2 THE TIMBER RELIC

Transport for NSW advises there is a timber relic in close proximity to Hamilton Station outside of the State heritage listing curtilage (Figure 8). The item is located approximately 40 meters south east of Platform 1, adjacent to the chain wire fence (Figure 9). It is possible that this is a relic is from the early rail system; however, the historical origin of this timber relic is uncertain.

FIGURE 8 – TIMBER RELIC



PICTURE 3 – VIEW OF TIMBER RELIC IN RELATION TO ITS SURROUNDING CONTEXT



PICTURE 4 – CLOSE DETAIL OF TIMBER RELIC

FIGURE 9 – RELIC LOCATION



3 Historical Overview

3.1 AREA HISTORY

The following is taken from the State Heritage Register listing for The Hamilton Railway Station Group (Item No. 01164) and is listed on the NSW Transport S170 Heritage Register Item No. 4801020.

The Main Northern line between Sydney and Newcastle was constructed in two distinct stages and in the earliest years, was worked as two separate railway systems. The line between Sydney (actually the junction at Strathfield) and the Hawkesbury River was opened on 5 April 1887, with the terminus being on the southern bank of the Hawkesbury River. The line between Newcastle and the northern bank of the Hawkesbury River (near present day Wondabyne) was opened in January 1888. The line was completed through between Sydney and Newcastle with the opening of the massive rail bridge over the Hawkesbury River in 1889.

Hamilton is located on the Northern line, between Broadmeadow and Newcastle. In 1857, the railway was opened in the Newcastle area when a line was opened from Honeysuckle Point (near present-day Civic Station) to East Maitland. Unfortunately, neither of these locations were near sea ports, one of the main reasons for the establishment of rail transport in the Newcastle area.

By 1858, the Newcastle-end had been extended to the sea port and the East Maitland-end had been extended into the town of Maitland. By the 1870s, the Great Northern Railway (GNR) had been extended further up the Hunter Valley and into Murrurundi. Initially, single lines were laid in the area, but by the 1860s, most lines had been duplicated.

3.2 SITE HISTORY

The following is taken from the Department Environment & Heritage State Heritage Register listing for The Hamilton Railway Station group (SHR Item Listing No. 01164) and is listed on the NSW Transport S170 Heritage Register Item No. 4801020.

Hamilton Railway Station was opened in 1872, between Newcastle and Waratah.

In January 1888, a line had been constructed from Hamilton, south to the Hawkesbury River. The railway junction between the GNR and the new main line toward the Hawkesbury River was named Hamilton Junction. A signal box was built at Hamilton Junction in 1888, later being replaced by a new elevated brick, standard style signal box in 1898.

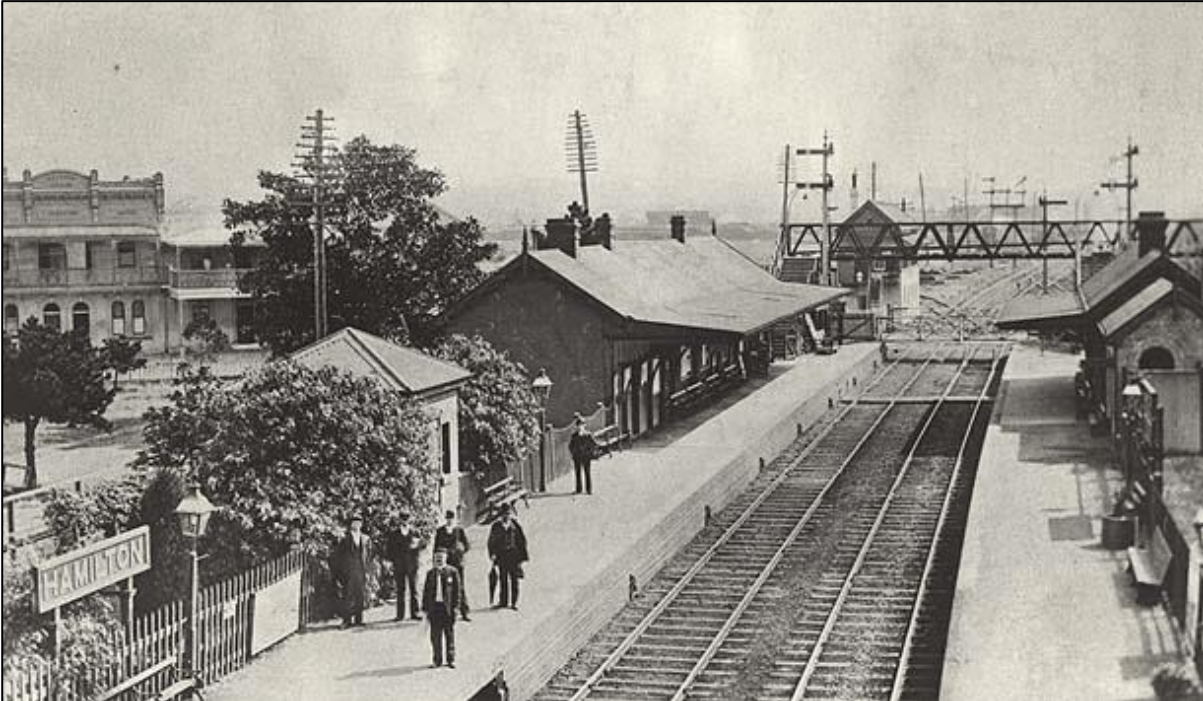
In 1892, a locomotive depot was built in the triangular area of land formed by the line from Newcastle toward Maitland, the line from Hamilton toward the Hawkesbury River and the line between Waratah and Broadmeadow, which in effect joined the GNR to the line to Sydney. The locomotive depot replaced the first depot in the Newcastle area - Honeysuckle Point. Hamilton locomotive depot was itself replaced by the much larger Broadmeadow locomotive depot in 1924.

At Hamilton, two side platforms were built, one for the Up main line and one for the Down main line. A goods yard was laid in behind the Down (northern side) platforms. A number of station buildings (in brick) were constructed on each platform.

At the Sydney-end of the platforms, Beaumont Street crossed the main lines and part of the goods yard, and a footbridge (parallel to Beaumont Street) spanned the main lines allowing access to the platforms. Pedestrians normally crossed the railway tracks using the Beaumont Street level crossing, but when a train was due in either direction, and the level crossing gates were closed, the same pedestrians could use the station footbridge to cross the tracks.

Hamilton Junction signal box (also at the Sydney-end of the platforms and adjacent to the level crossing) controlled the main lines, the level crossing gates and access to the nearby Substation / Electrical and Mechanical depot sidings. Up until 1924, Hamilton Junction signal box also controlled the entry and departure (by locomotives) to Hamilton locomotive depot, situated in the triangle.

FIGURE 10 – HAMILTON RAILWAY STATION 1906



[Source: State Records of New South Wales File No. 17420_a014_a014000788]

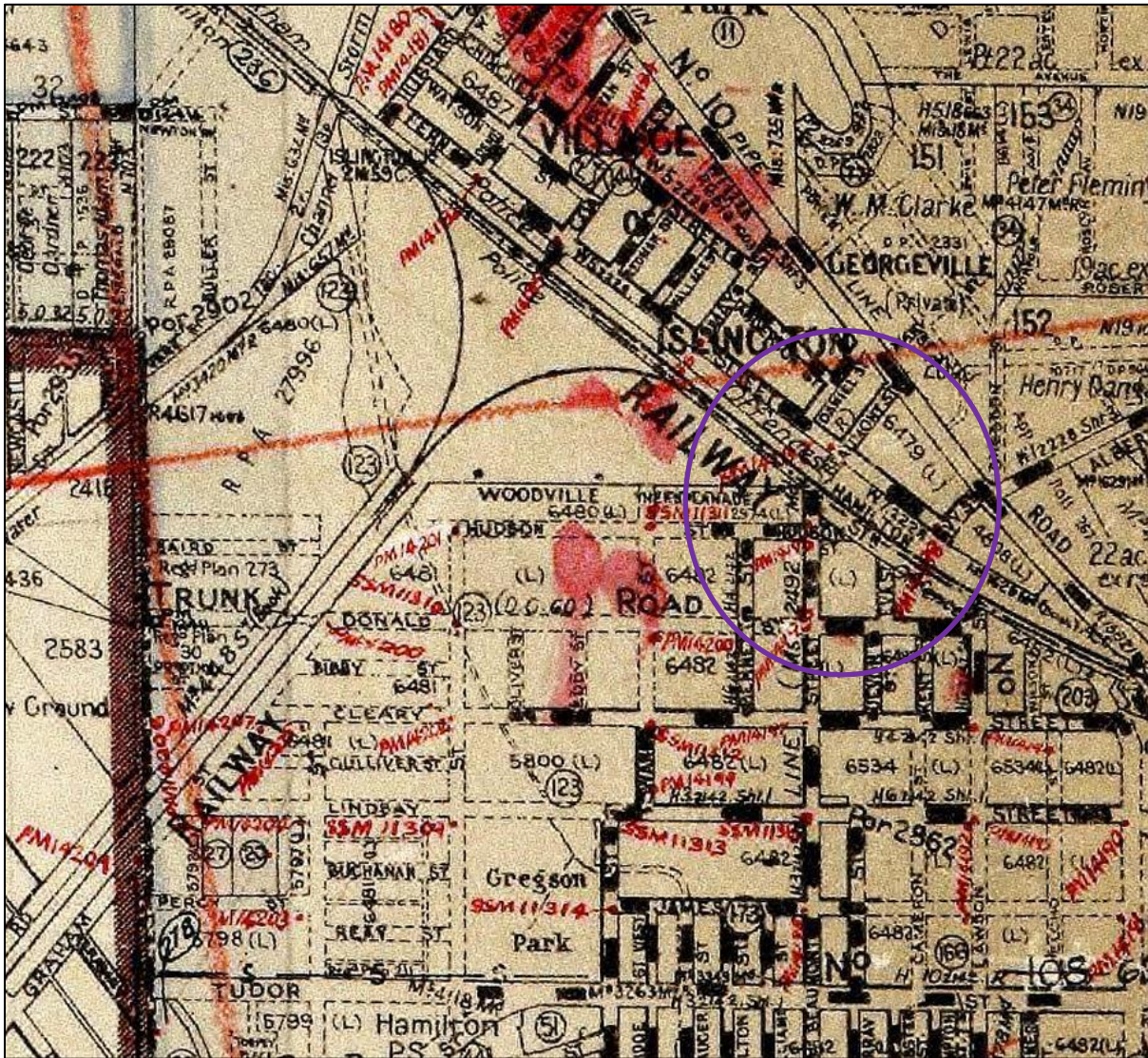
Between c. 1890 and the 1970s railway gardens proliferated, with competitions and prizes for the best ones. A Railway Nursery was set up at Homebush station in Sydney in 1923 and another smaller one at Hamilton Station although most plants were sourced from staff's home gardens or donations by residents (Longworth, 2012, 4).

Electrification of the main line between Gosford and Newcastle was opened in May 1984, an extension of the Sydney-Gosford electrification which had been completed in 1960. The new electrification project involved new or rebuilt platforms, station buildings, footbridges, overbridges and underbridges, line side buildings, sidings and myriad structures in that section in order to permit the operation of the wider electric passenger rolling stock and electric locomotives.

Accordingly, some upgrading was undertaken at Hamilton, and that included total replacement of the original footbridge. Some station buildings on each platform have been upgraded, but the original brick main station buildings on each platform are extant, albeit with some modern features. The goods sidings behind the down main line platform have been removed. The existing Hamilton Junction signal box retains control of the main lines and Beaumont Street level crossing.¹

¹ NSW Department of Environment and Heritage, State Heritage Register, Database No. 5012049 Hamilton Railway Station Group, accessed 17 September 2014 at: <<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5012049>>

FIGURE 11 – PARISH OF NEWCASTLE 1959 MAP WITH HAMILTON STATION INDICATED



[Source: Land Titles NSW Parish Maps HLRV 2014]

4 Significance

4.1 WHAT IS HERITAGE SIGNIFICANCE?

Before making decisions to change a heritage item, it is important to understand its values. This leads to decisions that will retain these values in the future. Statements of heritage significance summarise a place's heritage values – why it is important, why a statutory listing was made to protect these values.

4.2 SIGNIFICANCE ASSESSMENT

The Heritage Council of NSW has developed a set of seven criteria for assessing heritage significance, which can be used to make decisions about the heritage value of a place or item. There are two levels of heritage significance used in NSW: state and local.

The heritage significance of Hamilton Railway Station Group has previously been assessed accordance with the 'Assessing Heritage Significance' (2001) guidelines. This assessment, as it appears in the State Heritage Register listing for the Railway Group, is shown in Table 3, below.

TABLE 3: STATEMENT OF HERITAGE IMPACT FOR HAMILTON RAILWAY STATION GROUP, AS RECORDED ON THE STATE HERITAGE REGISTER LISTING FOR THE ITEM

CRITERIA	SIGNIFICANCE ASSESSMENT
<p>A – Historical Significance</p> <p><i>An item is important in the course or pattern of the local area's cultural or natural history.</i></p>	<p><i>Hamilton Railway Station has historical significance at a state level. Hamilton Railway Station forms a major part of the wider Hamilton railway precinct, formerly one of the most important railway junctions in NSW. It was established in 1873 before the construction of the Short North and as such has direct associations with operation of the Great Northern Railway, which was one of the first railway lines in Australia. While there was some limited settlement in the area prior to this date, the construction of the railway station encouraged rapid subdivision and development of the township. Hamilton railway station has historical significance as the junction station between the Great Northern Railway and the Short North and for its association with the former Hamilton locomotive depot between 1892 and 1924.</i></p>
<p>B – Associative Significance</p> <p><i>An item has strong or special associations with the life or works of a person, or group of persons, of importance in the local area's cultural or natural history.</i></p>	<p>No associative significance has previously been attributed to Hamilton Railway Station.</p>
<p>C – Aesthetic Significance</p> <p><i>An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.</i></p>	<p><i>Hamilton Railway Station has aesthetic significance at a state level. The platform buildings are good examples of late nineteenth century railway station buildings. Although the original Platform 1 building underwent early alterations and additions, the two platform buildings remain largely intact with relatively minor exterior alterations and in their original 1898 setting. Hamilton Railway Station forms an important component of a wider railway precinct and the level crossing in particular has a direct relationship with the signal box and adjacent hotels on Beaumont Street.</i></p> <p><i>Hamilton Junction signal box has aesthetic significance at a state level. The signal box is a good example of a Type E2 signal box, or what was later to become known as a 'Standard Signal Box'. The building has undergone relatively few alterations since its construction and remains in original condition. The building occupies a prominent position not only within the Hamilton railway junction, but also within the wider railway precinct along</i></p>

CRITERIA	SIGNIFICANCE ASSESSMENT
	<p><i>Beaumont Street that includes the two adjacent railway hotels. The signal box has landmark status within the town, adjacent to the level crossing at the 'gateway' to Hamilton.</i></p> <p><i>The signal box has technical significance at a state level as a fully operational example of a late nineteenth century mechanical lever frame signal box, one of very few such signal boxes still in operation in the state. Hamilton Junction signal box contains a relatively large mechanical lever frame (56 levers) and over the past 100 years has exercised control over one of the busiest railway junctions in the state. In the past, Hamilton Junction signal box controlled train operations at the station, the nearby road level crossing, the goods yard, a number of nearby industrial sidings, and between 1892 and 1924, also controlled access to and from Hamilton locomotive depot.</i></p>
<p>D – Social Significance</p> <p><i>An item has strong or special association with a particular community or cultural group in the local area for social, cultural or spiritual reasons.</i></p>	<p><i>The place has the potential to contribute to the local community's sense of place and can provide a connection to the local community's history.</i></p>
<p>E – Research Potential</p> <p><i>An item has potential to yield information that will contribute to an understanding of the local area's cultural or natural history.</i></p>	<p><i>Hamilton Junction signal box has research significance at a local level. The signal box and its frame remains in close to original condition and is a fully operational example of late nineteenth century signalling and railway technology. It is an important reference site for its type</i></p> <p><i>The archaeological research potential of the site is low.</i></p>
<p>F – Rarity</p> <p><i>An item possesses uncommon, rare or endangered aspects of the local area's cultural or natural history.</i></p>	<p><i>Hamilton Railway Station is considered to be rare within the metropolitan north region as a relatively intact example of a late nineteenth century railway junction. Hamilton Junction signal box, in particular, is considered to be historically rare at a State level. Signal boxes are (or were) exceptionally important installations as far as railway operations are concerned. Safe and reliable handling of passenger and goods trains was paramount and the signal box and its operators were a major part of that task. Over recent years many installations, including railway signal boxes, have been removed and/or replaced by modern technology. Hamilton Junction signal box is an excellent example of a historic signalling installation. The signal box was constructed in 1898 and is a good representative of a style which the New South Wales railways termed as a 'Standard Signal Box'. More than 80 of this style were built, but demolitions and removal of many examples means that few examples of this style remain. Hamilton signal box is rare as a fully operational signal box in a prominent suburban context still using the original mechanical lever signal frame.</i></p>
<p>G – Representative</p> <p><i>An item is important in demonstrating the principal characteristics of a class of NSWs (or the local area's):</i></p> <ul style="list-style-type: none"> ▪ <i>cultural or natural places; or</i> ▪ <i>cultural or natural environments.</i> 	<p><i>Hamilton Railway Station, together with the Hamilton signal box and depot, is an excellent representative example of a late nineteenth century suburban railway junction, because it has a high degree of integrity with a range of buildings still intact from the late nineteenth and early twentieth centuries including station building, level crossings, signal box, sidings, and surrounding hotels and shops. The remnants of the Hamilton depot are also close by. Hamilton Junction signal box is an excellent representative example of a 'standard' type signal box. The signal box is a good example of both late nineteenth century railway architecture and technology, and represents over 100 years of continuous signalling operation at Hamilton Junction.</i></p>

4.3 STATEMENT OF SIGNIFICANCE

Based on the above assessment, the State Heritage Register listing for the Railway Station Group contains the following statement of significance:

Hamilton Railway Station Group has significance at a state level as part of the wider Hamilton and Woodville Junction railway precinct, formerly one of the most important railway junctions in the State. It was established in 1873 before the construction of the Short North and as such has direct associations with operation of the Great Northern Railway, which was one of the first railway lines in Australia. While there was some limited settlement in the area prior to this date, the construction of the railway encouraged the rapid subdivision and development of the township. Hamilton Railway Station is significant as the junction station between the Great Northern Railway and the Short North, and for its association with the former Hamilton locomotive depot between 1892 and 1924. The platform buildings are good examples of highly intact Victorian railway buildings in their original setting which form part of an excellent example of a late 19th century suburban railway junction, with a range of items still intact including signal box, level crossing, sidings, depot and surrounding hotels and shops. The signal box is considered to be historically rare as an excellent example of a historic signalling installation and retains much original fabric, including the signal lever frame, and has been in constant use for over 110 years.

5 Impact Assessment

5.1 HERITAGE LISTING

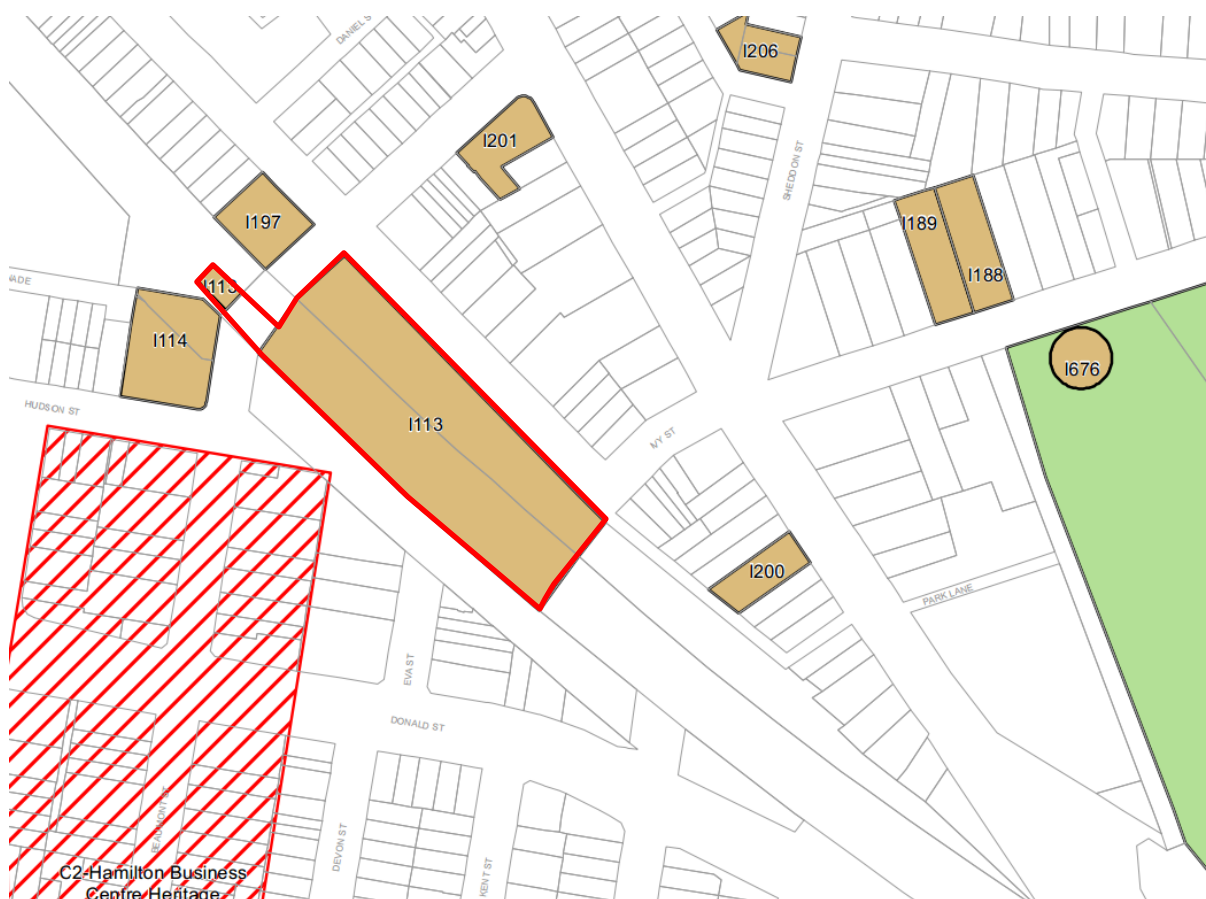
The subject property is heritage listed under the Newcastle LEP 2012 (Item No. I113), the State Heritage Register (Item No. 01164) and the Railcorp s170 Heritage and Conservation Register. It is also located in the immediate vicinity of a number of other listed heritage items including:

- | | | |
|--|-------------------|---------------|
| • Hamilton Station Hotel | 6 Fern Street | Item No. I197 |
| • Sydney Junction Hotel | 8 Beaumont Street | Item No. I114 |
| • Residence | 22 Maitland Road | Item No. I200 |
| • Former Regent Picture Theatre | 80 Maitland Road | Item No. I201 |
| • Hamilton Business Centre Heritage Conservation Area—C2 | | |

The location of the Station in relation to these items is shown in Figure 12, below. The SHR curtilage for Hamilton Station is shown in Figure 13, also below.

It should be noted that the curtilage of the subject property as identified in the Newcastle LEP 2012 differs from the curtilage of the subject property as it appears in the SHR; the LEP curtilage is wider than the SHR curtilage, and encompasses the former Bullock branch line rail yards located between Platform 2 and Fern Street (refer to and compare Figures 12 and 13).

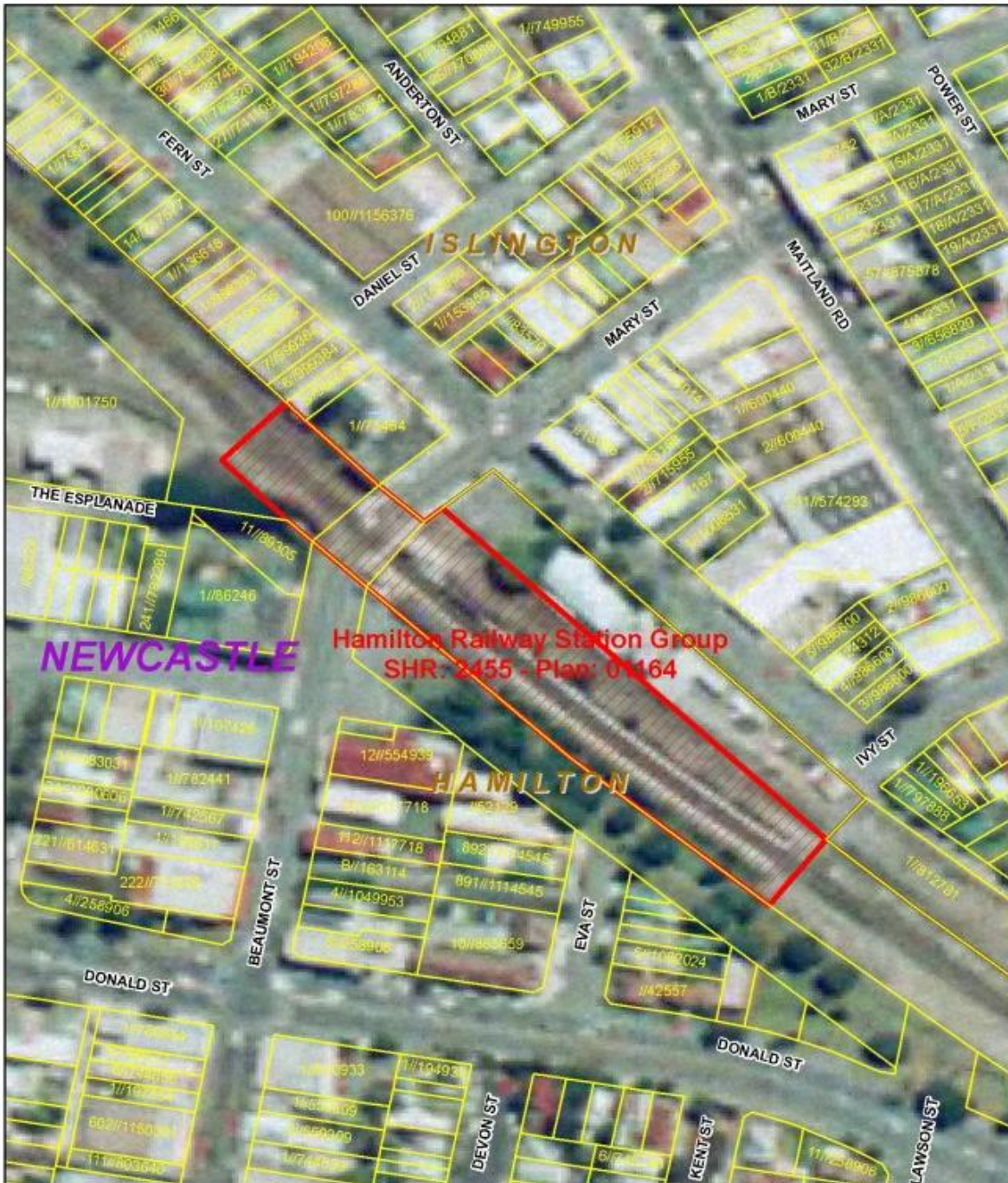
FIGURE 12 – HERITAGE MAP NUMBER 4FA 2012



[Source: Newcastle City Council LEP 2012]

FIGURE 13 – HERITAGE COUNCIL OF NSW MAP SHOWING SHR CURTLAGE

Heritage Council of New South Wales



State Heritage Register

Gazettal Date: 02 April 1999



Scale: 1:2,000

Produced by: Michelle Galea

Legend

- SHR Curtilage
- Land Parcels
- LGAs
- Suburbs

[Source: NSW Department of Environment & Heritage]

5.2 STATUTORY CONTROLS

This proposal does not require consent under part 4 of the *Environmental and Planning Assessment Act 1979*. Therefore, as previously stated, assessment against the provisions of the LEP and DCP is not required.

5.3 HERITAGE DIVISION GUIDELINES

The proposal is addressed in Table 4 in relation to relevant questions posed in the Heritage Division's *Statements of Heritage Impact* guidelines (Heritage Office 2002).

TABLE 4 – HERITAGE DIVISION CONSIDERATIONS

QUESTION	DISCUSSION
The following aspects of the proposal respect or enhance the heritage significance of the item or conservation area for the following reasons:	The proposed works will respect and/or enhance the heritage significance of the item for the reasons outlined below.
The following aspects of the proposal could detrimentally impact on heritage significance.	Refer below.
The following sympathetic solutions have been considered and discounted for the following reasons:	Not applicable.
<p>Minor additions</p> <p>How is the impact of the addition on the heritage significance of the item to be minimised?</p> <p>Can the additional area be located within an existing structure? If no, why not?</p> <p>Will the additions visually dominate the heritage item?</p> <p>Is the addition sited on any known or potentially significant archaeological deposits? If so, have alternative positions for the additions been considered?</p> <p>Are the additions sympathetic to the heritage item? In what way (e.g. form, proportions, design)?</p>	<p>Extension of Platform 2 and Installation of Platform Furniture</p> <p>It is proposed to extend the eastern end of Platform 1 by approximately 24 metres. Except for the point of connection with the existing platform, the extension will occur outside of the SHR curtilage of the Station.</p> <p>No resurfacing of the existing platform is proposed, and the extension will have only a negligible impact on the existing platform's eastern end at the point of connection. The proposed extension will have no impact on any other built elements of the Station.</p> <p>The design of the proposed extension will be consistent with the existing Platform 2 design, and will marry the existing platform with a 'smooth transition'. In addition to this, the surface proposed extension will be easily distinguished from the existing platform surface as it will have a contemporary concrete finish whilst the existing is asphalt.</p> <p>Platform 1 has previously been extended on its eastern end. The proposed extension of Platform 2 will mirror the Platform 1 extension; it will match it in terms of form and design, and will feature a similar concrete finish. Additionally, the extension will be located around a slight curve in the rail line, effectively reducing the visibility of the extension as viewed from the Station buildings and further mitigating any potential visual impact on the Station's setting (refer Figure 2).</p> <p>Platform furniture, including fences, seating and signs, will be consistent with existing furniture on the equivalent Platform 1 extension.</p> <p>The proposed extension will therefore have a negligible physical impact on the built fabric of the Station. The extension will be consistent in terms of scale and design with the existing platforms as well as with the adjacent Platform 1 extension, and will be located at the easternmost end of the platform around a</p>

QUESTION	DISCUSSION
	<p>slight curve; the construction of the extension will therefore have a negligible visual impact on the Station's setting.</p> <p>The proposed extension is therefore considered to have no impact on the overall heritage significance of the Station.</p> <p>Constructing and Operating a New Train Stabling Facility</p> <p>The proposed track realignment at Hamilton Station will have no effect on the heritage significance of the Hamilton Railway Station and Station Group as no building works are proposed to alter the extant buildings and platforms.</p> <p>The realignment will consist of adjusting existing railway tracks to accommodate train stabling, and will not impact the Station's built fabric or heritage significance.</p> <p>Construction and operation of the new train stabling facility will require the installation of new tracks and associated services infrastructure, including power, signalling and wiring. This service infrastructure is located to 'the rear' of the stations visual setting, will be visually consistent with existing historically associated service infrastructure at Hamilton Station, as well as with service infrastructure featured at other station sites. Its installation will therefore have a negligible visual impact on the Station's setting .</p> <p>In addition to this, services infrastructure is considered necessary for the Station to function safely and effectively, and forms an integral part of the overall operation of the Station. It is therefore considered that any new service infrastructure will both allow for and contribute to the functionality of Hamilton Station and its ongoing use as a railway station, and will not have an impact on its heritage significance.</p> <p>Use of the Existing Platform 1 Station Building as a Meal and Personal Storage Space</p> <p>The existing Platform 1 Station building will be temporarily used as a meal and personal storage space for the duration of the proposed works. This will involve the internal rearrangement of furniture only; no changes are proposed to the building fabric and no new structural elements will be introduced.</p> <p>This superficial change of use will therefore have no impact on the Station's building fabric or structure. The heritage significance of the Station will not be impacted.</p> <p>Erection of Demountable Buildings On/Near to the Platforms</p> <p>As part of the WTI upgrade works, the temporary erection of demountable buildings is required to provide additional facilities for both staff and customers.</p> <p>The majority of these demountables will be erected to the south of Platform 1 and to the east of Platform 2, within the rail corridor and on adjoining Council owned land. The erection of demountable buildings to the south of Platform 1 will be temporary only, and will have no impact on any of the built fabric of the Station.</p> <p>The erection of demountables on the platforms themselves will also be temporary only. Their installation does not require any ground surface disturbance, and will therefore not interfere with or impact any of the Station's built fabric, including the platform</p>

QUESTION	DISCUSSION
	<p>surfaces.</p> <p>It is therefore considered that the erection of demountable buildings on or in the vicinity of the Station platforms will not have any impact on the Station's built fabric or heritage significance.</p> <p>Relocation of Station Operation Monitors from Newcastle to Hamilton</p> <p>It is proposed to relocate Station operation monitors from Newcastle Station to Hamilton Station as part of the WTI works. The operation monitors are considered to be a necessary amenity in improving the customer experience and overall functioning of the Station.</p> <p>Their installation will have no impact on the Station buildings; they will be wholly suspended from the underside of existing awnings, and will have a negligible physical and visual impact on the fabric of these awnings.</p> <p>The installation of the monitors will have no impact on the heritage significance of the Station.</p> <p>Creation of a Designated Space for Large Skip Bin and 'Otto' Waste Bins</p> <p>A designated space will be created for a large skip bin and 'Otto' waste bins. The designated space will be wholly located outside of the SHR curtilage, at the south-easternmost corner of Platform 1.</p> <p>The creation of the space and use of skip/Otto bins will have no visual or physical impact on the Station, and will not require ground surface disturbance.</p> <p>This creation of the space and its subsequent use will therefore have no impact on the Station's built fabric or structure. The heritage significance of the Station will not be impacted.</p> <p>Upgrading Communication Equipment, Lighting Services and CCTV Services to Current Standards</p> <p>It is proposed to upgrade communication equipment, lighting services and CCTV services at the Station. This will involve either the replacement of existing services, or the installation of new services.</p> <p>The upgrading of these services is considered necessary for the overall functioning and amenity of the Station. Any new/replacement equipment will be consistent with previous and/or retained equipment in terms of scale and general design. Additionally, any installed equipment will be generally consistent with equipment currently in use at other stations.</p> <p>Any new equipment will therefore not visually dominate the Station or detract from its aesthetic significance. The installation of this equipment will have a negligible impact on the Station's built fabric and no impact on its heritage significance.</p> <p>Installation of Timing Devices</p> <p>It is proposed to install timing devices at each platform to improve the amenity of the Station and enhance the customer and staff experience.</p> <p>As is the case with the abovementioned communication, CCTV and lighting services, the timing devices are considered to be</p>

QUESTION	DISCUSSION
	<p>necessary for the functioning and amenity of the Station.</p> <p>Their installation will have a negligible impact on the Station's built fabric, and no impact on its heritage significance.</p>
<p>New development adjacent to a heritage item</p> <p>How does the new development affect views to, and from, the heritage item?</p> <p>What has been done to minimise negative effects?</p> <p>How is the impact of the new development on the heritage significance of the item or area to be minimised?</p> <p>Why is the new development required to be adjacent to a heritage item?</p> <p>How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?</p> <p>Is the development sited on any known, or potentially significant archaeological deposits?</p> <p>If so, have alternative sites been considered? Why were they rejected?</p> <p>Is the new development sympathetic to the heritage item?</p> <p>In what way (e.g. form, siting, proportions, design)?</p> <p>Will the additions visually dominate the heritage item?</p> <p>How has this been minimised?</p> <p>Will the public, and users of the item, still be able to view and appreciate its significance?</p>	<p>None of the proposed works are considered to have an impact on Hamilton Railway Station or any heritage items located in the Station's vicinity.</p> <p>Much of the proposed work will occur outside, but in the vicinity of, the Station's SHR curtilage. These works have been assessed and it has been determined that they will have no impact on the Station's built fabric or heritage significance (as discussed above).</p> <p>None of the proposed works will have an impact (either physical or visual) on any heritage items in the vicinity. Works will be wholly confined to either the rail corridor or Council owned land, and will be either minor in nature or, in the case of the demountables, temporary and reversible.</p> <p>The works are considered to be necessary to facilitate the use of the Station during the WTI works, and to enhance the overall customer and staff experience for the duration of the WTI works.</p> <p>The removal of two contemporary storage buildings to the north of Platform 2 will have no physical or visual impact on the heritage significance of the Station; the buildings are located outside of the SHR curtilage, are contemporary, and do not comprise any significant building fabric.</p>
<p>New signage</p> <p>How has the impact of the new signage on the heritage significance of the item been minimised?</p> <p>Have alternative signage forms been considered (e.g. free standing or shingle signs). Why were they rejected?</p> <p>Is the signage in accordance with section 6, 'Areas of Heritage Significance', in Outdoor Advertising: An Urban Design-Based approach? (1) How?</p> <p>Will the signage visually dominate the heritage item/ heritage conservation area or heritage streetscape?</p> <p>Can the sign be remotely illuminated rather than internally illuminated?</p>	<p>Installation of Adequate and Appropriate Signage for Bus/Taxi Services</p> <p>The proposed signage to be erected at the Station is considered necessary to improve public amenity and use of the Station. The signage will be erected along Fern Street, and wholly outside of the Station's SHR curtilage.</p> <p>The signs will be free-standing, and will be of an appropriate size and design for both the Station and Fern Street streetscape.</p> <p>The installation of this signage will have no impact on the Station's built fabric or heritage significance.</p>

5.4 STATEMENT OF POTENTIAL CONSTRUCTION IMPACTS

The state and locally listed Hamilton Railway Station Group is located within the proposal site and could potentially be inadvertently impacted during construction, as works will be located in close proximity to the significant buildings. Appropriate management measures are provided in Section 6, below.

6 Conclusion and Recommendations

Urbis was engaged by GHD on behalf of Transport for New South Wales (NSW) to prepare this HIS for proposed works to the proposal site.

The proposal has been addressed in relation to relevant questions posed in the Heritage Division's *Statements of Heritage Impact* guidelines (Heritage Office 2002), and the following conclusions drawn:

- The proposed works have been assessed and it has been determined that they will have no detrimental impact on the Station's heritage significance (either physical or visual). With the exception of the Platform 2 extension which is minor and acceptable, the works generally are minor and/or temporary, and will predominately occur outside of the Station's SHR curtilage. Works that will occur within the curtilage, including the extension of Platform 2, will at most have a negligible impact on the Station's built fabric, and no impact on the Station's overall heritage significance or visual setting;
- It is not anticipated that the timber relic will be impacted by any of the proposed works;
- None of the proposed works will have an impact (either physical or visual) on any heritage items in the vicinity. Works will be wholly confined to either the rail corridor or Council owned land, and will be either minor in nature or, in the case of the demountables, temporary and reversible; and
- The works are considered to be necessary to facilitate the use of the Station during the WTI works, and to enhance the overall customer and staff experience for the duration of the WTI works.

To mitigate any potential impacts associated with the proposed works, the following measures are recommended:

- A heritage induction should be provided to all workers before construction begins informing them of the location of heritage items within and adjoining the proposal site, and guidelines to follow if unanticipated heritage items or deposits are located during construction.
- If previously unidentified heritage/archaeological items are uncovered during the works, all works must cease in the vicinity of the material/find and Transport for NSW contacted immediately. Works in the vicinity of the find should not re-commence until clearance has been received from Transport for NSW.
- Sufficient protection including temporary fencing should be installed around built heritage items whilst construction works are underway where works are to be undertaken in close proximity to built items, or where a thoroughfare or construction access is required.
- Detailed work method statements and mitigation measures and or construction management plans should be prepared by the contractor or principal in conjunction with the heritage consultant prior to construction works commencing approved by the NSW Heritage Division.
- In the event that any potential moveable heritage items are identified on site, they should be managed in accordance with the NSW Heritage Office's *Moveable Heritage Principles* guide. The identification and management of moveable heritage should be undertaken in accordance with appropriate professional heritage advice.

The proposal has been developed in consultation with heritage advice and is recommended for approval.

7 Bibliography and References

7.1 BIBLIOGRAPHY

Department of Lands 2011, Spatial Information eXchange, Department of Lands, Sydney, available at: <<http://imagery.maps.nsw.gov.au/>>.

Google Maps 2011, Aerial view of proposal site, available at: <<http://maps.google.com.au/maps?hl=en&tab=wl>>.

7.2 REFERENCES

Apperly, R., Irving, R. and Reynolds, P. (eds) 2002, *A Pictorial Guide to Identifying Australian Architecture: Styles and Terms from 1788 to the Present*, Angus and Robertson, Pymble.

Australia ICOMOS 1999, *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*, Australia ICOMOS, Burwood.

NSW Department of Environment and Heritage, State Heritage Register, Database No. 5012049 Hamilton Railway Station Group, accessed 17 September 2014 at: <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5012049>.

NSW Heritage Office, 2000, *Moveable Heritage Principles*, NSW Heritage Office: Parramatta.

NSW Heritage Office, 2001, *Assessing Heritage Significance*, NSW Heritage Office: Parramatta.

NSW Heritage Office, 2002, *Statements of Heritage Impact*, NSW Heritage Office: Parramatta.

NSW Heritage Office and Department of Urban Affairs & Planning 1996, *NSW Heritage Manual*, Heritage Office and Department of Urban Affairs & Planning (NSW), Sydney.

[Note: Some government departments have changed their names over time and the above publications state the name at the time of publication.]

Disclaimer

This report is dated 16 October 2014 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd's (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of GHD on behalf of Transport for NSW (**Instructing Party**) for the purpose of a Heritage Impact Assessment (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

In preparing this report, Urbis may rely on or refer to documents in a language other than English, which Urbis may arrange to be translated. Urbis is not responsible for the accuracy or completeness of such translations and disclaims any liability for any statement or opinion made in this report being inaccurate or incomplete arising from such translations.

Whilst Urbis has made all reasonable inquiries it believes necessary in preparing this report, it is not responsible for determining the completeness or accuracy of information provided to it. Urbis (including its officers and personnel) is not liable for any errors or omissions, including in information provided by the Instructing Party or another person or upon which Urbis relies, provided that such errors or omissions are not made by Urbis recklessly or in bad faith.

This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

Sydney

Tower 2, Level 23, Darling Park
201 Sussex Street Sydney, NSW 2000
t +02 8233 9900
f +02 8233 9966

Melbourne

Level 12, 120 Collins Street
Melbourne, VIC 3000
t +03 8663 4888
f +03 8663 4999

Brisbane

Level 7, 123 Albert Street
Brisbane, QLD 4000
t +07 3007 3800
f +07 3007 3811

Perth

Level 1, 55 St Georges Terrace
Perth, WA 6000
t +08 9346 0500
f +08 9221 1779

Australia • Asia • Middle East
w urbis.com.au e info@urbis.com.au

GHD

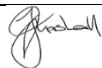
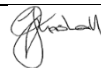
Level 3 GHD Tower 24 Honeysuckle Drive Newcastle NSW 2300
PO Box 5403 Hunter Region Mail Centre NSW 2310
T: (02) 4979 9999 F: (02) 4979 9988 E: ntlmail@ghd.com

© GHD 2014

This document is and shall remain the property of GHD. The document may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

g:\22\17295\WP\107249.docx

Document Status

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	B James L King	G Marshall		G Marshall		6/11/14

